HELIX Environmental Planning

# Municipal Groundwater Improvement Project

## Initial Study/Mitigated Negative Declaration

September 2023 | 08444.00002.001


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# Acronyms and Abbreviations

| | |
|---|---|
| A-2-10 | General Agriculture, 10-acre minimum |
| AB | Assembly Bill |
| ACE | Altamont Commuter Express |
| Amsl | above mean sea level |
| APE | Area of Potential Effects |
| APN | Assessor's Parcel Number |
| BART | Bay Area Rapid Transit |
| Basin Plan | Water Quality Control Plan |
| bcf/year | billion cubic feet per year |
| BMP | Best management practices |
| BPS | best performance standards |
| BRA | Biological Resources Assessment |
| CAA | Clean Air Act |
| CAAQS | California ambient air quality standards |
| CAL FIRE | California Department of Forestry |
| CalEEMod | California Emissions Estimator Model |
| CalEPA | California Environmental Protection Agency |
| CAP | Climate Action Plan |
| CAPCOA | California Air Pollution Control Officers Association |
| CARB | California Air Resources Board |
| CBC | California Building Code |
| CCAA | California Clean Air Act |
| CCIC | Central Information Center |
| CCR | California Code of Regulations |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| $CH_4$ | methane |
| CHRIS | California Historical Resources Information System |
| City | City of Modesto |
| CNDDB | California Natural Diversity Database |
| CNEL | Community Noise Equivalent Level |
| CNPS | California Native Plant Society |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalents |
| County | Stanislaus County |
| CRHR | California Register of Historical Resources |
| CUP | Conditional Use Permit |
| CWA | Clean Water Act |
| CY | cubic yard |

# Acronyms and Abbreviations (cont.)

| | |
|---|---|
| DOC | California Department of Conservation |
| DPM | diesel particulate matter |
| DPR | Department of Parks and Recreation |
| DTSC | Department of Toxic Substances Control |
| EIR | Environmental Impact Report |
| EO | Executive Order |
| EPA | Environmental Protection Agency |
| EQ Zapp | Earthquake Hazards Zone Application |
| ESA | Endangered Species Act |
| FAAST | Financial Assistance Application Submittal Tool |
| FEMA | Federal Emergency Management Agency |
| FHSZ | Fire Hazard Severity Zone |
| FTA | Federal Transit Administration |
| GHG | greenhouse gas |
| GLO | General Land Office |
| GWh | gigawatt hours |
| GWP | Global Warming Potential |
| HFC | hydrofluorocarbons |
| IPaC | Information for Planning and Consultation |
| IPCC | Intergovernmental Panel on Climate Change's |
| IS/MND | Initial Study/Mitigated Negative Declaration |
| ITP | Incidental Take Permit |
| kWh | kilowatt hours |
| LCL | La Coste Lane |
| LRA | Local Responsibility Area |
| MAR | Managed Aquifer Recharge |
| MAX | Modesto Area Express |
| MGD | million gallons per day |
| MID | Modesto Irrigation District |
| MMRP | Mitigation Monitoring and Reporting Program |
| MRWTP | Modesto Regional Water Treatment Plant |
| MRZ | Mineral Resource Zone |
| MT | metric tons |
| MU | Mixed Use |

# Acronyms and Abbreviations (cont.)

| | |
|---|---|
| $N_2O$ | nitrous oxide |
| NAAQS | national ambient air quality standards |
| NAHC | Native American Heritage Commission |
| $NO_2$ | nitrogen dioxide |
| $NO_X$ | nitrogen oxides |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSLU | noise-sensitive land uses |
| NWI | National Wetland Inventory |
| | |
| $O_3$ | ozone |
| OEHHA | Office of Environmental Health Hazard Assessment |
| OHP | Office of Historic Preservation |
| OSHA | Occupational Safety and Health Administration |
| | |
| P1 | Parcel 1 |
| P2 | Parcel 2 |
| PFCs | perfluorocarbons |
| PG&E | Pacific Gas and Electric |
| $PM_{10}$ | coarse particulate matter |
| $PM_{2.5}$ | fine particulate matter |
| PPV | peak particle velocity |
| PRC | Public Resources Code |
| | |
| QSD | Qualified SWPPP Developer |
| | |
| R-1 | Low-Density Residential |
| RCNM | Roadway Construction Road Model |
| RIFS | Remedial Investigation and Feasibility Study |
| ROG | Reactive Organic Gases |
| RWQCB | Regional Water Quality Control Board |
| | |
| SB | Senate Bill |
| $SF_6$ | sulfur hexafluoride |
| SIP | State Implementation Plan |
| SJVAB | San Joaquin Valley Air Basin |
| SJVAPCD | San Joaquin Valley Air Pollution Control District |
| SLCP | short-lived climate pollutants |
| SLF | Sacred Lands File |
| SMAQMD | Sacramento Metropolitan Air Quality Management District |
| SMARA | Surface Mining and Reclamation Act |
| $SO_2$ | sulfur dioxide |

# Acronyms and Abbreviations (cont.)

| | |
|---|---|
| SP | Specific Plan |
| SPRR | Southern Pacific Railroad |
| SR | State Route |
| StaRT | Modesto Dial-A-Ride, Stanislaus Regional Transit |
| SUVs | sport utility vehicles |
| SWPPP | Stormwater Pollution Prevention Plan |
| SWRCB | State Water Resource Control Board |
| TAC | toxic air contaminant |
| TCR | Tribal Cultural Resource |
| USDA | U.S. Department of Agriculture |
| USDOT | U.S. Department of Transportation |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| UWMP | Urban Water Management Plan |
| VMT | vehicles miles traveled |
| VOC | volatile organic compounds |
| VR | Village Residential |
| WEAP | Workers Environmental Awareness Training |
| WWTP | wastewater treatment plant |

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# 1.0 Introduction

## 1.1 Initial Study Information Sheet

| | | |
|---|---|---|
| 1. | Project title: | Municipal Groundwater Improvement Project |
| 2. | Lead agency name and address: | City of Modesto<br>Utilities Department, Water Services Division<br>1010 10 Street, 2nd Floor<br>Modesto, CA 95354 |
| 3. | Contact person and phone number: | Jim Alves, PE, Senior Civil Engineer<br>(209) 571-5557 |
| 4. | Project location: | City of Modesto, Stanislaus County |
| 5. | General plan designation: | Village Residential (VR); Mixed Use (MU) |
| 6. | Zoning: | Specific Plan (SP); Low-Density Residential (R-1); General Agriculture, 10-acre minimum (A-2-10) |

7. Description of project:

The proposed Municipal Groundwater Improvement Project (proposed project) would construct five Managed Aquifer Recharge (MAR) basins and associated water conveyance in the City of Modesto (City). The five MAR basins would include: (1) Merle Avenue MAR Basin; (2) Well 65 MAR Basin; (3) Ustach Park MAR Basin; (4) La Coste Lane (LCL) Parcel 1 (P1) North MAR Basin; and (5) LCL Parcel 2 (P2) South MAR Basin. Water conveyance would include construction of above ground and/or subterranean pipelines, canal turnouts, outfall structures, and pump stations to transport water to the MAR basins. The proposed project is intended to address non-point source groundwater contamination from arsenic, nitrate, and uranium in the City. The proposed project consists primarily of: (1) modification of water supply well field pumping operations, i.e., wellfield optimization, to reduce contaminant levels in raw pumped groundwater; and (2) construction of MAR basins to increase the volume, i.e., recharge of uncontaminated water within the aquifer system.

8. Surrounding land uses and setting:

The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin are located within City limits. The LCL P1 North and LCL P2 South MAR Basins are located outside City limits; however, the two basins are located within the City General Plan Boundary and Sphere of Influence (City 2019a). The five MAR basin site locations and their surrounding land uses are described in detail below.

### Merle Avenue MAR Basin Site

The proposed Merle Avenue MAR Basin Site is approximately 5.50 acres and is located directly south of Merle Avenue on Assessor's Parcel Number (APN) 085-004-006. The site is an existing stormwater retention basin adjacent to Modesto Irrigation District's (MID) Moulton Lateral Three. The site is

surrounded by single-family residential homes to the north, east, and west and single-family residential homes and the MID Moulton Lateral Three to the south.

### Well 65 MAR Basin Site

The proposed Well 65 MAR Basin Site is approximately 0.75 acre and is located directly south of Merle Avenue on APN 077-007-021. The site is an existing stormwater retention basin adjacent to MID Moulton Lateral Three. The site is surrounded by Orchard Elementary School and an existing water tank to the west, Orchard Elementary School and single-family residential homes to the north, single-family residential homes to the east, and commercial development, single-family residential homes, and the MID Moulton Lateral Three to the south.

### Ustach Park MAR Basin Site

The Ustach Park MAR Basin Site is approximately 3.00 acres and is located in the northeastern corner of the intersection of Kodiak Drive and Bear Club Lane on APN 077-009-053. The site is an existing stormwater retention basin. The site is surrounded by Ustach Park and single-family residential homes to the north, Ustach Middle School to the west, and single-family residential homes to the east and south.

### La Coste Lane MAR Sites

#### La Coste Lane Parcel 1 North

The LCL P1 North MAR Basin Site is approximately 12.00 acres and is located north of La Coste Lane and west of Frazine Road. The site is located on APN 014-037-056. The site is comprised of fallowed agricultural lands that were formerly irrigated with water from MID Lateral Two. The site is surrounded by single-family residential homes and agricultural fields to the north and east, the existing MID Tank and booster pump station, and open space to the west, and Alice Stroud Elementary School and open space to the south.

#### La Coste Lane Parcel 2 South

The LCL P2 South MAR Basin Site is approximately 7.00 acres and would be located south of La Coste Lane, east of Norseman Drive, and north of Garst Road. The site is located on APN 014-037-063. The site is comprised of fallowed agricultural lands. The site is surrounded by the existing MID Tank and booster pump station, and open space to the north, agricultural fields to the west, Alice Stroud Elementary School to the east, and agricultural fields, Dan Gonsalves Stadium, and the MID Lateral Two to the south.

9. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

    - State Water Resources Control Board (SWRCB) Division of Financial Assistance

10. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Formal invitations to participate in tribal consultation under the California Environmental Quality Act (CEQA) on the proposed project were sent by the City to two tribal representatives on April 3, 2023. The formal invitations sent to the representatives below are included in Attachment A within Appendix F. The tribal representatives were given 30 days to request or decline consultation in writing for the proposed project. The formal invitations noted that if no response was received within 30 days that consultation would be considered closed. The representatives included:

- Randy Yonemura, Ione Bank of Miwok Indians
- Katherine Erolina Perez, Northern Valley Yokuts

As of August 4, 2023, no responses have been received and consultation pursuant to PRC Section 21080.3.1 has been concluded. Therefore, on May 3, 2023, 30 days after formal invitations were mailed to tribal representatives, consultation was formally terminated.

# 2.0 Project Background

The Municipal Groundwater Improvement Project proposes to implement the Proposition 1 Groundwater Grant Program Implementation Concept Proposal submitted to the State Water Resources Control Board (Financial Assistance Application Submittal Tool [FAAST] No. 48098). The proposed project is the recommended alternative from a Remedial Investigation and Feasibility Study (RIFS) completed in August 2021 for the City's contiguous water service area, including the City and portions of Salida to the north and Ceres to the south.

This Initial Study/Mitigated Negative Declaration (IS/MND) addresses the construction of five MAR basins and associated water conveyance structures proposed by the project applicant, the City of Modesto. The Initial Study has been prepared to satisfy the requirements of the California Environmental Quality Act (CEQA; Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that all State and local government agencies consider the environmental consequences of projects over which they have discretionary authority before they approve or implement those projects.

The Initial Study is a public document used by the decision-making Lead Agency to determine whether a project may have a significant effect on the environment. The project is proposed by the City (project applicant), who will also act as the Lead Agency. The City will use the Initial Study to determine whether the proposed project has a significant effect on the environment. This Initial Study relies on CEQA Guidelines Sections 15064 and 15064.4 in its determination of the significance of the environmental impacts. Per Section 15064, the finding as to whether a project may have one or more significant impacts shall be based on substantial evidence in the record, and that controversy alone, without substantial evidence of a significant impact, does not trigger the need for an Environmental Impact Report (EIR).

The following technical reports, quantified analysis and/or surveys were used in preparation of this Initial Study and are incorporated by reference:

- Air Quality/Greenhouse Gas Emission Analysis Report (HELIX Environmental Planning, Inc [HELIX) 2023).
- Biological Resources Evaluation (Trihydro Corporation 2023)
- Cultural Resources Assessment (HELIX 2023)
- Noise Analysis Report (HELIX 2023)
- Tribal Cultural Resources Memo (HELIX 2023)

# 3.0 Project Purpose and Need

The purpose of the proposed project is to improve groundwater sustainability and resiliency by addressing non-point source groundwater contamination from arsenic, nitrate, and uranium within the City. The proposed project consists primarily of: (1) modification of water supply well field pumping operations (i.e., wellfield optimization, to reduce contaminant levels in raw pumped groundwater); and (2) construction of MAR basins to increase the volume (i.e., recharge) of uncontaminated water within the aquifer system.

The proposed project would address the City's need to protect current groundwater supply from future contamination. Groundwater from the City's supply wells account for almost 60 percent of the annual average water demand, with the other 40 percent being supplied from treated surface water provided by the MID. The groundwater supply is currently sourced from approximately 100 active wells throughout the City and is distributed through approximately 74,000 service connections. In 2020, 23 former City water supply wells, representing over 16 million gallons per day (MGD) of the system's total groundwater production capacity (50 MGD), were inactivated, abandoned, destroyed, or removed from potable use due to contamination. The proposed project would improve groundwater quality and protect existing supply wells from future contamination and subsequent decommissioning.

# 4.0 Project Setting

## 4.1 Project Location

The proposed project is located in the City of Modesto, Stanislaus County, California. The five proposed MAR basins would include: Merle Avenue MAR Basin Site; Well 65 MAR Basin Site; Ustach Park MAR Basin Site; LCL P1 North MAR Basin Site; and, LCL P2 South MAR Basin Site. The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin are located within City limits. The LCL P1 North and LCL P2 South MAR Basins are located outside City limits; however, the two basins are located within the City General Plan Boundary and Sphere of Influence (City 2019a). The MAR basin sites are located within Sections 11, 13, 14, and 19, Township 3 South, Range 9 and 10 East (Mount Diablo Base and Meridian, United States Geological Survey 7.5-minute "Riverbank Quadrangle"). Refer to Figure 1, *Regional Vicinity Map* (Note: all Figures are in Appendix A). The MAR basin site locations and their surrounding land uses are described below.

### Merle Avenue MAR Basin Site

The proposed Merle Avenue MAR Basin Site is approximately 5.50 acres and is located directly south of Merle Avenue on APN 085-004-006. The site is an existing stormwater retention basin adjacent to MID

Moulton Lateral Three. The site is surrounded by single-family residential homes to the north, east, and west and single-family residential homes and the MID Moulton Lateral Three to the south.

### Well 65 MAR Basin Site

The proposed Well 65 MAR Basin Site is approximately 0.75 acre and is located directly south of Merle Avenue on APN 077-007-021. The site is an existing stormwater retention basin adjacent to MID Moulton Lateral Three. The site is surrounded by Orchard Elementary School and an existing water tank to the west, Orchard Elementary School and single-family residential homes to the north, single-family residential homes to the east, and commercial development, single-family residential homes, and the MID Moulton Lateral Three to the south.

### Ustach Park MAR Basin Site

The Ustach Park MAR Basin Site is approximately 3.00 acres and is located in the northeastern corner of the intersection of Kodiak Drive and Bear Club Lane on APN 077-009-053. The site is an existing stormwater retention basin. The site is surrounded by Ustach Park and single-family residential homes to the north, Ustach Middle School to the west, and single-family residential homes to the east and south.

### La Coste Lane MAR Basin Sites

La Coste Lane Parcel 1 North

The LCL P1 North MAR Basin Site is approximately 12.00 acres and is located north of La Coste Lane and west of Frazine Road, on APN 014-037-056. The site is comprised of fallowed agricultural lands that were formerly irrigated with water from MID Lateral Two. The site is surrounded by single-family residential homes and agricultural fields to the north and east, the existing MID Tank and booster pump station, and open space to the west, and Alice Stroud Elementary School and open space to the south.

La Coste Lane Parcel 2 South

The LCL P2 South MAR Basin Site is approximately 7.00 acres and is located south of La Coste Lane, east of Norseman Drive, and north of Garst Road, on APN 014-037-063. The site is comprised of fallowed agricultural lands . The site is surrounded by the existing MID Tank and booster pump station, and open space to the north, agricultural fields to the west, Alice Stroud Elementary School to the east, and agricultural fields, Dan Gonsalves Stadium, and the MID Lateral Two to the south.

## 4.2 Environmental Setting

### Merle Avenue MAR Basin Site

The Merle Avenue MAR Basin Site is an existing stormwater retention basin adjacent to MID Moulton Lateral Three. The site includes a gated, paved access driveway off Merle Avenue that runs south towards the basin. Existing block walls are located along the northern, eastern, and western boundaries of the site to provide visual screening to the surrounding single-family residential homes. An existing chain link fence is located along the southern boundary of the site, parallel to the MID Moulton Lateral Three. Concrete and asphalt road surfacing runs along the top bank of the existing basin and along the

driveway ramp. Elevations of the bottom of the basin vary from a low of 70 feet above mean sea level (amsl) (in the southeast corner) to a high of 78 feet amsl (in the northeast corner).

### Well 65 MAR Basin Site

The Well 65 MAR Basin Site is an existing stormwater retention basin adjacent to MID Moulton Lateral Three. The parcel includes a gated, paved accessed driveway off Merle Avenue that runs south towards the existing basin. Existing chain link fencing is located along all boundaries of the site. Asphalt road surfacing runs along the top bank of the basin and along the driveway ramp. The ground surface elevations of the bottom of the basin vary from a low of 69 feet amsl (in the southeast corner) to a high of 71 feet amsl (near the mid-point of the east side of the bottom).

### Ustach Park MAR Basin Site

The Ustach Park MAR Basin Site is an existing stormwater retention basin. The parcel includes a concrete surfaced road that extends partway around the perimeter of the existing basin, and an existing driveway ramp that leads to the southeastern corner of the basin. Existing chain link fencing is located along all boundaries of the site. Elevations on the bottom of the basin vary from 84 feet to 85 feet amsl.

### LCL a Coste Lane MAR Basin Site

#### Parcel 1 North

The LCL P1 North MAR Basin Site is comprised of City-owned, fallowed agricultural lands that formerly were irrigated with water from MID Lateral Two. This parcel is adjacent to the MID Treated Water Storage Tank One (also known as the Terminal Reservoir or MID Water Tanks). Existing fencing is located around the MID Treated Water Storage Tank One, along the western site boundary. The site is relatively flat and has an elevation that ranges from 10- feet to 108 feet amsl.

#### Parcel 2 South

The LCL P2 South MAR Basin Site is comprised of City-owned, fallowed agricultural lands . This parcel is adjacent to MID Water Storage Tank One (also known as Terminal Reservoir or MID Water Tanks). Existing fencing is located along the eastern and western site boundaries, and an existing sidewalk is located along the northern and southern site boundaries. The site is relatively flat and has an elevation of 105 feet amsl.

# 5.0 Project Description

The proposed project would include the construction of five MAR basins in the City. The proposed project would construct conveyance structures to transport clean surface water to each of the developed MAR basins for infiltration into subsurface aquifers. Groundwater recharge using clean surface waters would improve long-term groundwater sustainability and resiliency. The MAR basins would be expected to operate for a minimum of 20 years (2025 through 2045). The basins' water conveyance structures are described in more detail below. See Figures 2 through Figure 5 for site plans of the five MAR basins.

## 5.1 Water Conveyance

### Merle Avenue MAR Basin Site

The Merle Avenue Site would include construction of water conveyance to the basin by connecting a proposed 12-inch pipeline to an existing storm drain manhole located on the southeastern corner of the site. The proposed pipeline would begin at the existing storm drain manhole and move southeast until it reaches a proposed canal turnout off the MID Moulton Lateral Three.

### Well 65 MAR Basin Site

The Well 65 Site would include construction of water conveyance to the basin by connecting a proposed 12-inch pipeline to an existing storm drain manhole located on the southeastern corner of the site. The proposed pipeline would begin at the existing storm drain manhole and move southeast until it reaches the proposed canal turnout off the MID Moulton Lateral Three.

### Ustach Park MAR Basin Site

The Ustach Park Site would include construction of water conveyance to the basin by connecting a proposed 12-inch pipeline to an existing outfall structure located on the northeastern corner of the site. The proposed 12-inch diameter pipeline would begin at the existing outfall structure and move north along the eastern boundary of Ustach Park until it reaches Hillglen Avenue. The pipeline would then move east along Hillglen Avenue until it reaches Roselle Avenue. The pipeline would then move north along Roselle Avenue until it reaches the proposed pump station located in the northeastern corner of the intersection of Roselle Avenue and Sylvan Avenue. The proposed pump station would deliver water from the existing MID pipeline to the Ustach Park MAR Basin.

An alternative water conveyance to the Ustach Park MAR Basin would include construction of a pipeline that moves northeast through the southern border of Ustach Park to the existing MID Cavil Drain, located along the western border of Ustach Park and Ustach Middle School, along Aria Way. This connection or tie-in to the MID Cavil Drain would provide an opportunity to reduce construction costs and schedule by shortening the conveyance distance and eliminating most of the right of way (ROW) roadwork to bury piping. No pump station would be required under this alternative.

### La Coste Lane MAR Basin Site

#### Parcel 1 North

The LCL P1 North Site would include construction of water conveyance to the basin by connecting a proposed above ground, 30-inch pipeline to a proposed outfall structure located on the southwestern corner of the site. The proposed pipeline would begin at the proposed outfall structure and move southwest until it reaches the proposed turnout and pump station off MID Lateral Two. The pump station would deliver water from the MID Lateral Two.

#### Parcel 2 South

The LCL P2 South Site would include the construction of a water conveyance to the basin by connecting the above-described 30-inch above ground pipeline to a proposed outfall structure located on the southeastern corner of the site. The proposed pipeline would begin at the proposed outfall structure

and move south until it reaches the proposed turnout and pump station off the MID Lateral Two. The pump station would deliver water from the MID Lateral Two.

## 5.2 Access and Security

### Merle Avenue MAR Basin Site

The Merle Avenue Site would be accessed via an existing gated, paved driveway off Merle Avenue. The site includes existing chain link fencing, existing cinder-block walls, and locked gates that would be used to prevent unauthorized entry.

### Well 65 MAR Basin Site

The Well 65 Site would be accessed via an existing gated, paved driveway off Merle Avenue. The paved driveway is an existing City park driveway. The site includes existing chain link fencing and locked gates that would be used to prevent unauthorized entry.

### Ustach Park MAR Basin Site

The Ustach Park Site would be accessed via an existing paved walkway off Bear Club Lane. The paved walkway is currently used for Ustach Park and storm drainage basin access. The site includes existing chain link fencing, driveway gates, and walkway gates that would be used to prevent unauthorized entry.

### La Coste Lane MAR Basin Site

Parcel 1 North

The LCL P1 North Site would be accessed via Frazine Road. The site includes existing fencing along the western site boundary. The project proposes to install fencing and locked gates along the northern, eastern, and southern site boundaries to prevent unauthorized entry.

Parcel 2 South

The LCL P2 South Site would be accessed via an existing dirt path along Garst Road. The site proposes to install fencing and locked gates along the northern and southern site boundaries to prevent unauthorized entry.

## 5.3 Operation, Staff, and Maintenance

Periodic repairs and maintenance would be required during the proposed project operation. Operational tasks associated with the MAR basins and conveyance structures would include the following:

- Operating the turnouts, pump stations, and meters at the applicable site;
- Required repairs for proposed project components as needed; and
- Providing periodic maintenance checks.

Staff that currently run the City's water system and/or storm drainage system would perform the operation and maintenance (O&M) tasks required for the proposed project within their service areas. In the instance that existing staff would not be able to perform all tasks required for proposed project O&M, the City's Water Division would increase staffing and/or equipment as practicable.

## 5.4 Construction Staging and Schedule

### Staging

- Merle Avenue MAR Basin Site: The construction staging and materials storage area would be located southwest of the basin. Remnants of asphalt paving material exist in the area.

- Well 65 MAR Basin Site: The construction staging and materials storage area would be located in a previously disturbed area, northwest of the basin.

- Ustach Park MAR Basin Site: The construction staging and materials storage area would be located in an area with an existing storm drainage pump station, southeast of the basin.

- La Coste Lane Parcel 1 North and Parcel 2 South MAR Basin Sites: The construction staging and materials storage area would be located directly south of the LCL P2 South Site, in an area with existing fallowed agriculture.

### Schedule

Construction of the proposed project would begin during the fourth quarter 2024 and would be anticipated to complete in second quarter 2025. Construction modeling assumes the longest anticipated schedule reported by the project applicant for the following MAR basins:

- Merle Avenue MAR Basin: demolition 5 days; site preparation 5 days; paving 5 days; and trenching (underground utilities) 10 days.

- Well 65 MAR Basin: demolition 5 days; site preparation 5 days; paving 5 days; and trenching (underground utilities) 10 days.

- Ustach Park MAR Basin: demolition 3 days; site preparation 5 days; paving 3 days; and trenching (underground utilities) 10 days.

- LCL P1 North and LCL P2 South: demolition 10 days; site preparation 10 days; grading 20 days; trenching (underground utilities) 25 days; and paving 10 days. Grading and trenching (underground utilities) would occur concurrently, and paving would begin directly after trenching (underground utilities) is complete.

## 5.5 Regulation of Urban Development

### General Plan Land Use Designation

According to the City General Plan, the Merle Avenue MAR Basin and Ustach PAR MAR Basin are designated as Village Residential (VR); the Well 65 MAR Basin site is designated as Mixed Use (MU).

The LCL P1 North MAR Basin and LCL P2 South MAR Basin are located outside designed City limits; however, the two basins are located within the City General Plan Boundary and Sphere of Influence (City 2019a). According to Land Use Element AL-4 in the City General Plan EIR, development, other than agricultural uses and churches, which requires discretionary approval shall be referred to the City for preliminary approval (City 2019b). According to the City General Plan, the LCL P1 North MAR Basin and LCL P2 South MAR Basin are both designated as VR.

### Zoning Designation

The Merle Avenue MAR Basin and Ustach Park MAR Basin are zoned Specific Plan (SP) and the Well 65 MAR Basin is zoned Low-Density Residential (R-1).

As previously mentioned, the LCL P2 South MAR Basins are located outside designed City limits but are located within the City General Boundary and Sphere of Influence (City 2019a). However, the City zoning does not cover the LCL P1 North MAR Basin and LCL P2 South MAR Basin. According to Stanislaus County zoning map, the two basins are zoned General Agriculture, 10-acre minimum (A-2-10; County 2023a). Table 1 outlines the land use designation and zoning district for the five APN's associated with the proposed project.

**Table 1: LAND USE DESIGNATION AND ZONING DISTRICTS OVERVIEW**

| Assessor's Parcel Number (APN) | 2019 General Plan Land Use Designation | City of Modesto Zoning District | Stanislaus County Zoning District | Current Use |
|---|---|---|---|---|
| 085-004-006 | VR | SP | Not Applicable (N/A) | Stormwater retention basin |
| 077-007-021 | MU | R-1 | N/A | Stormwater retention basin |
| 077-009-053 | VR | SP | N/A | Stormwater retention basin |
| 014-037-056 | VR | N/A | A-2-10 | City-owned fallowed agricultural land |
| 014-037-063 | VR | N/A | A-2-10 | City-owned fallowed agricultural land |

# 6.0 Required Approvals

The City is the Lead Agency, as defined by CEQA, for the proposed project. Table 2 summarizes the potential permits and/or approvals that may be required prior to construction of the proposed project. Additional local approvals and permits may also be required.

**Table 2: SUMMARY OF POTENTIAL PERMITS AND/OR APPROVALS**

| Agency | Type of Approval |
|---|---|
| California Division of Occupational Safety and Health | Construction activities in compliance with California Division of Occupational Safety and Health safety requirements |
| San Joaquin Valley Air Pollution Control District | Authority to Construct, Permit to Operate, Dust Control |
| State Water Resources Control Board | California Water Code Section 1211 Change in Point of Discharge |
| City of Modesto; Stanislaus County | Grading Permit |

# 7.0 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

# 8.0 Determination

On the basis of this initial evaluation:

| | |
|---|---|
| ☐ | I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. |
| ☒ | I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. |
| ☐ | I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. |
| ☐ | I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect I) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. |
| ☐ | I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. |

Signature

Date

Printed Name

For

# 9.0 Environmental Initial Study Checklist

The lead agency has defined the column headings in the environmental checklist as follows:

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

B. "Less Than Significant with Mitigation Incorporated" applies where the inclusion of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." All mitigation measures are described, including a brief explanation of how the measures reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be cross-referenced.

C. "Less Than Significant Impact" applies where the project does not create an impact that exceeds a stated significance threshold.

D. "No Impact" applies where a project does not create an impact in that category. "No Impact" answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project specific screening analysis).

The explanation of each issue identifies the significance criteria or threshold used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significance. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [CEQA Guidelines Section 15063(c)(3)(D)]. Where appropriate, the discussion identifies the following:

a) Earlier Analyses Used. Identifies where earlier analyses are available for review.

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

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

# I. Aesthetics

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

## Environmental Setting

The City is located in Stanislaus County, which is located in central San Joaquin Valley, approximately 95 miles east of San Francisco and 80 miles south of Sacramento. The Tuolumne River runs along the southern edge of the City, and the Stanislaus River runs roughly parallel to the northern boundary of the City's urban area (City 2019a). The City is intersected by State Route (SR) 99 along a north-south alignment and by SR 132 along an east–west alignment. There are no State-designated scenic highways in the City of Modesto (Caltrans 2023). In a larger context, the County is bounded by San Joaquin County to the north; Calaveras, Tuolumne, and Mariposa Counties to the east; Merced County to the south; and Santa Clara and Alameda Counties to the west (City 2019a).

There are no designated scenic vistas within the City or directly beyond City limits. The region surrounding the City is visually characterized by the many agriculturally and industrially based elements that are seen along the SR 99 and by the Southern Pacific Railroad (SPRR) routes that run northwest to southeast. The landform in the area is naturally quite flat, but parts of it have been leveled for agricultural production. Areas of topographic relief can be found on the valley floor near major waterways in the form of bluffs, terraced floodplains, and remnant channel beds (City 2019b).

## Impact Analysis

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

**No impact.** A scenic vista is defined as a viewpoint that provides an expansive view of a highly valued landscape for the benefit of the general public. According to the City General Plan Master EIR, there are no designed scenic vistas within the City or directly beyond City limits (City 2019b). The proposed project would construct a total of five MAR basins and water conveyance structures connecting those basins

with existing surface water sources. Three of the proposed MAR basins would be constructed within existing stormwater retention basins, and the other two basins would be constructed on fallowed agricultural lands. Therefore, the construction of the MAR basins and associated water conveyance would have no impact on scenic vistas.

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

**No impact.** The City is intersected by SR 99 along a north–south alignment and by SR 132 along an east–west alignment. There are no officially designated State scenic highways within the City (Caltrans 2023). Therefore, there would be no impact to scenic resources within a State scenic highway.

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

**Less than significant impact.** The proposed project would construct five MAR basins with associated water conveyance structures. The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin would convert existing stormwater retention basins to MAR basins. The LCL P1 North MAR Basin and the LCL P2 South MAR Basin would be constructed on City-owned fallowed agricultural land. Water conveyance structures would include construction of above ground and/or subterranean pipelines, canal turnouts, outfall structure, and pump stations in order to transport water to the MAR basins. Canal turnouts, pump stations, and pipelines are common in the irrigated agricultural land that surrounds the City of Modesto. Staging of construction equipment would temporarily alter the visual character of the site and surrounding areas; however, the staging areas would mainly be located in previously disturbed or open areas, and equipment staging would be limited to the short-term construction period for each site.

According to the City General Plan, the Merle Avenue MAR Basin, Ustach Park MAR Basin, LCL P1 North Basin, and the LCL P2 South Basin are designated as VR, while the Well 65 MAR Basin site is designated as MU. The Merle Avenue MAR Basin and Ustach Park MAR Basin are zoned SP, the Well 65 MAR Basin is zoned R-1, and the LCL P1 North Basin and LCL P2 South Basin are zoned by Stanislaus County as A-2-10. The MAR basin sites would comply with the City's General Plan land use designation and zoning requirements regarding scenic quality for each location. The proposed MAR basins would not constitute a change of land use or zoning. Therefore, the proposed project would have a less than significant impact on the existing visual character of the site and surrounding areas.

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

**Less than significant impact.** The proposed project would not introduce new lighting or create a new source of glare for sensitive receptors. An evening security light would operate at the LCL P2 South pump station. The pump station would be located in the southeastern portion of LCL P2 South in a remote location away from residential dwellings (approximately 1,000 feet from the nearest dwelling with a mature orchard in between). The pump station would be located in proximity to an existing elementary school which already utilizes artificial lighting. The outdoor lighting would be of sufficient intensity to allow safe access by City personnel to conduct evening O&M activities and to deter potential vandalism and would be consistent with existing artificial lighting in the vicinity. The City has adopted

*Design Guidelines for Commercial & Industrial Development* that include standards for the design of outdoor lighting fixtures (City 2019b). These standards limit the size of fixtures and require that fixtures focus their light to avoid spilling onto nearby properties. Adherence to these design guidelines would reduce the potential for light and glare impacts from construction and implementation of the proposed project. With adherence to the City's existing design guidelines, impacts to daytime or nighttime views in the area as a result of artificial lighting for the proposed project would be less than significant.

## II. Agriculture and Forestry Resources

| | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☒ | ☐ |
| b) | Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☒ | ☐ |
| c) | Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? | ☐ | ☐ | ☐ | ☒ |
| d) | Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| e) | Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non- forest use? | ☐ | ☐ | ☒ | ☐ |

### Environmental Setting

As in other parts of the Central Valley, the City is located in the center of rich agricultural lands. This means that urban expansion almost inevitably results in conversion of agricultural land to urban uses. Most of the agricultural land in the City General Plan Area is found outside the City's corporate limits. A wide variety of crops are grown, and predominant among them are fruits and nuts, with almonds representing a major share (City 2019a).

According to the California Department of Conservation (DOC) Important Farmland Mapper, the Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin are all mapped as Urban and Built-Up Land (DOC 2023a). The LCL P1 North MAR Basin is mapped as Prime Farmland and the LCL P2 South MAR Basin is mapped as Vacant or Disturbed Land (DOC 2023a). The five MAR basins are not under a Williamson Act contract.

## Impact Analysis

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

**Less than significant impact.** The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin are mapped as Urban and Built-Up Land and therefore would not convert existing farmland to a non-agricultural use. Additionally, the Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin are all designed under the Baseline Development Area of the City (City 2019a). According to Agricultural Element AL-12 in the City General Plan EIR, if a project is within the Baseline Developed Area, it is considered that the project would have minimal effect on the conversion of agricultural lands, and no mitigation for that impact would be required (City 2019b).

The LCL P1 North MAR Basin and the LCL P2 South MAR Basin are located outside of designated City limits; however, the two basins are located within the City General Plan Boundary and Sphere of Influence. According to Land Use Element AL-4 in the City General Plan EIR, development, other than agricultural uses and churches, which requires discretionary approval shall be referred to that City for preliminary approval (City 2019b). As the two MAR basins are within the City General Plan Boundary and Sphere of Influence, the City would have authority for preliminary approval. According to the DOC Important Farmland Mapper, the LCL P1 North MAR Basin is mapped as Prime Farmland and the LCL P2 South MAR Basin is mapped as Vacant or Disturbed Land (DOC 2023a). As the LCL P2 South MAR Basin is mapped as Vacant or Disturbed Land, the basin would not convert existing farmland to non-agricultural use.

The proposed project would construct the LCL P1 North MAR Basin on City-owned fallowed agricultural land that was formerly irrigated with water from MID Lateral Two. The City does not intend to use the land for agricultural purposes. Irrigation activities were terminated in 2019. Construction would include grading on the site to obtain the desired depth of the MAR basin. The proposed MAR basin site was removed from irrigated agricultural use before the Project was envisioned, and the MAR basin is expected to operate for a minimum of 20 years (2025 through 2045) pursuant to the SWRCB Proposition 1 grant agreement. However, continued MAR basin operation beyond 20 years is anticipated to maintain the groundwater quality (i.e., reduction of nitrate, arsenic, and uranium impacts).

During proposed project construction and operation, the undeveloped portions of each parcel would be maintained following existing City standards. Maintenance activities may include weed abatement, debris removal, and/or vector control. Undeveloped portions of the LCL P1 North and LCL P1 South parcels would not be impacted as a result of the proposed project and would maintain their existing agricultural capability. Upon termination of the proposed MAR basin operational period, the basins would return to their pre-MAR basin status (non-irrigated, fallow agricultural land) with the potential use for a future park site and/or stormwater retention/detention basin. Construction of the proposed MAR Basin would not result in an irreversible change to the existing agricultural capability of surrounding lands. Impacts would be less than significant.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

**Less than significant impact .** The proposed MAR basins are not located under a Williamson Act contract. The Merle Avenue MAR Basin and Ustach Park MAR Basin are zoned SP, and the Well 65 MAR Basin is zoned R-1. As previously mentioned, the LCL P1 North MAR Basin and LCL P2 South MAR Basin are located within the City General Boundary and Sphere of Influence (City 2019a). However, the City zoning does not cover the LCL P1 North MAR Basin and LCL P2 South MAR Basin. According to Stanislaus County zoning map, the two basins are zoned A-2-10 (County 2023a). Pursuant to guidelines in the Stanislaus County Zoning Code, the district regulations exist to support and enhance agriculture as the predominant land use in unincorporated areas of Stanislaus County. Implementation of the proposed project would improve groundwater quality for the City and surrounding areas, ultimately benefiting proximate agricultural practices reliant upon groundwater for irrigation.

The County Zoning Code General Provisions specifies that facilities for public utilities, including water wells, are permitted in A-2 districts provided they are connected to the approval of a use permit (County 2016). Additionally, Stanislaus County generally designates unincorporated lands within a city's Sphere of Influence as designated Agriculture (A-2) until officially annexed by a city or special district. As the property is owned by the City pending formal annexation, located within the City's Sphere of Influence and thereby subject to preliminary approval from the City for CUP and other use permitting requirements, a CUP would likely not be required (County 2015a). With authority for development and urban growth dependent on City approval, implementation of the proposed project would support the City's continued growth and service the existing population. Therefore, all the MAR basin sites would comply with the City's and County's zoning requirements. As the proposed MAR basins would be located on City-owned land and would be built on lands that are already serving a recharge function and/or were a recipient of MID surface water, a CUP would not be required. The proposed MAR basins would not require a change of land use or zoning and would not conflict with existing zoning for agricultural use upon formal annexation of the LCL P1 and P2 properties. Therefore, the impact would be less than significant.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

**No impact.** The Merle Avenue MAR Basin and Ustach Park MAR Basin are zoned SP, and the Well 65 MAR Basin is zoned R-1. According to Stanislaus County zoning map, the LCL P1 North MAR Basin and LCL P2 South MAR Basin are zoned A-2-10 (County 2023a).

The project site is not located in an area zoned for forest land, timberland, or timberland production. The proposed project would not conflict with existing zoning for forest or timberlands. Additionally, According to the City General Plan EIR, there is no forest land or timberland within the General Plan Boundary (City 2019b). No impact would occur for questions c) and d).

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

**Less than significant impact.** No forest lands occur in the proposed project area. The proposed project would convert approximately 19 acres of zoned agricultural lands within Stanislaus County into two MAR Basins. This conversion would serve to improve groundwater quality within the City of Modesto's Sphere of Influence and proximate unincorporated areas, dependent on groundwater for agricultural and domestic use. During proposed project construction and operation, the undeveloped portions of each parcel would be maintained following existing City standards. Maintenance activities may include weed abatement, debris removal, and/or vector control. Undeveloped portions of the LCL P1 North and LCL P1 South parcels would not be impacted as a result of the proposed project and would maintain their existing agricultural capability. Upon termination of the proposed MAR basin operational period, the basins would return to their pre-MAR basin status (non-irrigated, fallow agricultural land) with the potential use for a future park site and/or stormwater retention/detention basin.

The zoned agricultural lands are located within the City's existing Sphere of Influence and, as such, are zoned A-2 by Stanislaus County until developed with City approval. Neither of the two parcels zoned A-2 are actively cultivated or would become actively cultivated in the future. While the proposed project would require development within designated farmland, implementation of the proposed project would stimulate and otherwise promote continuation of agricultural cultivation proximate to the City through improvement of groundwater quality. Aside from the construction of two MAR basins within farmland and water conveyance structures connecting those basins to proximate surface water supply, the proposed project would involve no other changes that could result in the conversion of Farmland to non-agricultural use. Therefore, the project would result in a less than significant impact.

## III. Air Quality

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

An Air Quality and Greenhouse Gas Emission Analysis Report was prepared by HELIX on May 15, 2023 (HELIX 2023a). The letter is included as Appendix B.

## Environmental Setting

The City of Modesto lies within the San Joaquin Valley Air Basin (SJVAB). The San Joaquin Valley Air Pollution Control District (SJVAPCD) is responsible for implementing emissions standards and other requirements of federal and State laws in the project area. As required by the California Clean Air Act (CCAA), SJVAPCD has published various air quality planning documents, as discussed below, to address requirements to bring the SJVAB into compliance with the federal and state ambient air quality standards. The Air Quality Attainment Plans are incorporated into the State Implementation Plan (SIP), which is subsequently submitted to the U.S. Environmental Protection Agency (EPA), the federal agency that administrates the Federal Clean Air Act of 1970, as amended in 1990.

The air pollution potential of the San Joaquin Valley is very high. The San Joaquin Valley has one of the most severe air pollution problems in the State and the Country. Surrounding elevated terrain in conjunction with temperature inversions frequently restrict lateral and vertical dilution of pollutants. Abundant sunshine and warm temperatures in late spring, summer, and early fall are ideal conditions for the formation of ozone, where San Joaquin Valley frequently experiences unhealthy air pollution days. Low wind speeds, combined with low inversion layers in the winter, create a climate conducive to high $PM_{10}$ concentrations (City 2018).

## Regulatory Setting

### Criteria Pollutants

Criteria pollutants are defined and regulated by State and federal law as a risk to the health and welfare of the public and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources, including carbon monoxide (CO); reactive organic gases (ROGs), also known as volatile organic compounds (VOCs); nitrogen oxides ($NO_X$); sulfur dioxide ($SO_2$); coarse particulate matter ($PM_{10}$); fine particulate matter ($PM_{2.5}$); and lead. Of these primary pollutants, CO, $SO_2$, $PM_{10}$, $PM_{2.5}$, and lead are criteria pollutants. ROGs and $NO_X$ are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. The principal secondary criteria pollutants are ozone ($O_3$) and nitrogen dioxide ($NO_2$).

Ambient air quality is described in terms of compliance with State and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The USEPA has established national ambient air quality standards (NAAQS) for criteria pollutants. As permitted by the Clean Air Act (CAA), California has adopted the more stringent California ambient air quality standards (CAAQS) and expanded the number of regulated air pollutant constituents.

The CARB is required to designate areas of the State as attainment, nonattainment, or unclassified for any State standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once. The project site is located within the SJVAB and, as such, is in an area designated as “nonattainment” for certain pollutants that are regulated under

the CAA. Table 3 lists the federal and State attainment status of the SJVAB for the criteria pollutants. As shown in Table 3, the SJVAB is designated as attainment for $PM_{10}$; attainment/unclassified for CO, $NO_2$, $SO_2$; no designation/classification for lead; and in nonattainment for 8-hour ozone and $PM_{2.5}$ with respect to federal air quality standards. The SJVAB is designated as nonattainment for 1-hour and 8-hour ozone, $PM_{2.5}$, and $PM_{10}$ with respect to State air quality standards (SJVAPCD 2012).

**Table 3: SAN JOAQUIN VALLEY AIR BASIN – ATTAINMENT STATUS**

| Pollutant | Federal Standards | State Standards |
|---|---|---|
| Ozone – One hour | No Federal Standard | Nonattainment/Severe |
| Ozone – Eight hour | Nonattainment/Extreme | Nonattainment |
| PM 10 | Attainment | Nonattainment |
| PM 2.5 | Nonattainment | Nonattainment |
| Carbon Monoxide | Attainment/Unclassified | Attainment/Unclassified |
| Nitrogen Dioxide | Attainment/Unclassified | Attainment |
| Sulfur Dioxide | Attainment/Unclassified | Attainment |
| Lead (Particulate) | No Designation/Unclassified | Attainment |
| Hydrogen Sulfide | No Federal Standard | Unclassified |
| Sulfates | No Federal Standard | Attainment |
| Visibility Reducing Particles | No Federal Standard | Unclassified |
| Vinyl Chloride | No Federal Standard | Attainment |

Source: SJVAPCD 2012

## Toxic Air Contaminants

Toxic air contaminants (TAC) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs can cause long-term chronic health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe, and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

The Health and Safety Code (§39655[a]) defines TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." All substances that are listed as hazardous air pollutants pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Sec. 7412[b]) are designated as TACs. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

### Diesel Particulate Matter

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is referred to as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is 2.5 microns or less in diameter (CARB 2023). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a notable effect on California's population—it is estimated that about 70 percent of the total known cancer risk related to air toxins in California is attributable to DPM (CARB 2023).

### Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015).

Residential areas are considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children and infants are considered more susceptible to health effects of air pollution due to their immature immune systems, developing organs, and higher breathing rates. As such, schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities.

The closest existing residential sensitive receptors to the Merle Avenue MAR Basin Site are single-family residential homes located 120 feet east and 100 feet west of the site. The closest existing sensitive receptors to the Well 65 MAR Basin Site are single-family residential homes located 25 feet east of the site and Orchard Elementary School located approximately 300 feet northwest of the site. The closest existing sensitive receptors to the Ustach Park MAR Basin Site are single-family residential homes located 25 feet east and 125 feet south of the site. The closest existing sensitive receptors to the LCL P1 North and LCL P2 South MAR Basin Sites are single-family residential homes located 50 feet east of the LCL P1 North MAR Basin Site and 650 feet northwest of the LCL P2 South MAR Basin Site.

The nearest school to the Merle Avenue MAR Basin Site is Savage Middle School located approximately 1,500 feet northeast of the site. The nearest school to the Well 65 MAR Basin Site is Orchard Elementary School located approximately 300 feet northwest of the site. The nearest school to the Ustach Park MAR Basin Site is Ustach Middle School, located approximately 150 feet west of the site. The nearest school to the LCL P1 North MAR Basin Site and the LCL P2 South MAR Basin Site is Alice Stroud Elementary School, located approximately 150 feet directly south of the LCL P1 North MAR Basin Site and 25 feet east of the LCL P2 South MAR Basin Site.

## Methodology and Assumptions

Criteria pollutant and precursor emissions, and GHG emissions for the project construction activities and long-term operation were calculated using the California Emissions Estimator Model (CalEEMod),

Version 2022.1.1.12. CalEEMod is a Statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The model calculates emissions of criteria pollutants, ozone precursors, and GHGs, including $PM_{10}$, $PM_{2.5}$, ROGs, $NO_X$, and $CO_2e$. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, C, and D (CAPCOA 2022). The input data and subsequent construction and operation emission estimates for the proposed project are discussed below.

Construction Assumptions

Construction of the proposed MAR basins would be anticipated to begin during the fourth quarter 2024 and be completed in by the second quarter 2025. The construction schedule assumptions have been pushed out by 10 to 11 months since project modeling was completed. The revised construction schedule would result in slightly lower pollutant emissions than shown in the modeling results due to phased implementation of CARB and USEPA engine emissions standards, resulting in older construction equipment assumed in the modeling being replaced by newer, lower emissions equipment. Construction modeling assumes the longest anticipated schedule reported by the project applicant for the following MAR basins:

Merle Avenue MAR Basin: demolition 5 days; site preparation 5 days; paving 5 days; and trenching (underground utilities) 10 days.

Well 65 MAR Basin: demolition 5 days; site preparation 5 days; paving 5 days; and trenching (underground utilities) 10 days.

Ustach Park MAR Basin: demolition 3 days; site preparation 5 days; paving 3 days; and trenching (underground utilities) 10 days.

LCL P1 North and LCL P2 South: demolition 10 days; site preparation 10 days; grading 20 days; trenching (underground utilities) 25 days; and paving 10 days. Grading and trenching (underground utilities) would occur concurrently, and paving would begin directly after trenching (underground utilities) is complete.

Construction equipment assumptions for the proposed MAR basins were based on estimates from the project applicant and CalEEMod defaults. The estimated volume of vegetation that would either be exported off-site or spread on-site during site preparation and the number of dump truck loads that would remove debris during demolition were provided by the project engineer:

Merle Avenue MAR Basin: An estimated 1,412-cubic yards (CY) of vegetation to be spread on-site, and an estimated 1,412-CY of vegetation to be exported to a wastewater treatment plant (WWTP) approximately 15 miles off -site. Additionally, approximately 109 truckloads (or 218 one-way trips) of other cleared materials would be exported during site preparation, and approximately one truckload of demolition debris would be hauled off-site during demolition.

Well 65 MAR Basin: An estimated 101 CY of vegetation to be spread on-site, and an estimated 101-CY of vegetation to be exported to a WWTP approximately 6.5 miles off-site. Additionally, approximately eight

truckloads (or 16 one-way trips) of other cleared materials would be exported during preparation, and approximately two truckloads of demolition debris would be hauled off-site during demolition.

Ustach Park MAR Basin: An estimated 645-CY of vegetation to be spread on-site, and an estimated 645-CY of vegetation to be exported to a WWTP approximately eight miles off-site. Additionally, approximately 50 truckloads (or 100 one-way trips) of other cleared materials would be exported during site preparation, and approximately two trucks of demolition debris would be hauled off-site during demolition.

LCL P1 North and LCL P2 South MAR Basins: An estimated 3,429-CY of vegetation to be spread on-site, and an estimated 3,429-CY of vegetation to be exported to a WWTP approximately 8.5 miles off-site. Additionally, approximately 264 truckloads (or 528 one-way trips) of other cleared materials would be exported during site preparation, and approximately 82 trucks of demolition debris would be hauled off-site during demolition.

Construction of the LCL P1 North and LCL P2 South MAR Basins would require grading. During grading, approximately 43,000 CY of cut/fill is expected to be spread on-site and would not require any export of soil. In accordance with SJVAPCD Regulation VIII, *Fugitive PM10 Prohibition*, Rule 8021*, Construction, Demolition, Excavation, Extraction, and other Earth Moving Activities*, fugitive dust control measures, including the use of an on-site water truck to wet down active grading areas and roads at least twice daily, are incorporated into the project design (SJVAPCD 2004).

Construction of the Ustach Park MAR Basin and the LCL P1 North and LCL P2 South MAR Basins would include the installation of pipelines along City streets and would therefore require paving repair. ROG emissions from asphalt repair and repainting of traffic lines were calculated using CalEEMod defaults.

### Operational Assumptions

Operational tasks associated with the MAR basins would include operating the turnouts, pump stations, and meters at the applicable site, providing maintenance checks as needed, and seasonal vegetation management. Maintenance activities and vegetation management would be performed by existing City staff and were assumed to be similar to existing activities and would not result in new criteria pollutant or GHG emissions. Water provided for the MAR basins would be sourced from existing MID laterals and is not anticipated to result in new water/wastewater source GHG emissions over existing conditions. The only new operational emissions would be indirect GHG energy source emissions (resulting from electricity use) for the Ustach Park MAR Basin and the LCL P1 North and LCL P2 South MAR Basins, as these basins would require energy usage to operate new pump stations. The pump stations would be required to transport water from the MID laterals to the MAR basins. The Merle Avenue MAR Basin and Well 65 MAR Basin would not require construction of new pump stations and therefore, operational energy source emissions were not calculated. Operational emissions resulting from energy use were based on estimates from the project engineer. Operational energy emissions assume the estimated electrical consumption for the following proposed MAR Basins:

Ustach Park MAR Basin: The MAR basin would require 13,899 kilowatt hours (kWh) per year of electricity.

LCL P1 North and LCL P2 South: The MAR basins would require 52,120 kWh per year of electricity.

Although the alternative Ustach Park MAR Basin water conveyance connection to the Cavil Drain was not analyzed, the impacts from this alternative would be less than what was analyzed with the proposed ROW roadway pipe burying and proposed pump station. The Cavil Drain connection would shorten the conveyance distance and would not require a pump station; therefore, not generating operational energy source emissions.

## Standards of Significance

Appendix G of the State CEQA Guidelines states that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. The SJVAPCD has established significant thresholds to assess the impacts of project-related air pollutant emissions. The significance thresholds are updated, as needed, to appropriately represent the most current technical information and attainment status in the SJVAB. Table 4 presents the most current significance thresholds, including thresholds for construction and operational emissions and maximum incremental cancer risk and hazard indices for TACs. A project with emission rates and risk values below these thresholds is generally considered to have a less than significant impact on air quality.

As set forth in the SJVAPCD *Guidance for Assessing and Mitigating Air Quality Impacts*, any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. Impacts of local pollutants (CO, TACs) are cumulatively significant when modeling shows that the combined emissions from the project and other existing and planned projects would exceed air quality standards.

**Table 4: SJVAPCD AIR QUALITY SIGNIFICANCE THRESHOLDS**

| Mass Daily Thresholds (tons per year) | | |
|---|---|---|
| **Pollutant** | **Construction** | **Operation** |
| ROG | 10 | 10 |
| $NO_X$ | 10 | 10 |
| CO | 100 | 100 |
| $PM_{10}$ | 15 | 15 |
| $PM_{2.5}$ | 15 | 15 |
| $SO_X$ | 27 | 27 |
| **Toxic Air Contaminants** | | |
| TACs[1] | Maximum Incremental Cancer Risk ≥ 10 in 1 million<br>Chronic & Acute Hazard Index ≥ 1.0 (project increment) | |

Source: SJVAPCD 2015b

[1] TACs (carcinogenic and noncarcinogenic)

## Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

**No impact.** The SJVAPCD has established thresholds of significance for a project's criteria pollutant and precursor emissions for both temporary construction-related emissions and long-term operational-related emissions. According to the SJVAPCD, these significant thresholds have been established to assist lead agencies in determining whether a project may have a significant air quality impact. A project with emissions lower than the thresholds would not conflict with or obstruct implementation of the

district's air quality plans for attainment of the applicable NAAQS and CAAQS (SJVAPCD 2015a). As discussed below, the project would not exceed the temporary construction-related or long-term operational-related thresholds of significance for criteria pollutants and precursor emissions. In addition, control measures in the air quality plans adopted by the SJVAPCD, including the *2016 Ozone Plan* and the *2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards* are based in part on growth projections in local planning documents such as the County and City General Plans. The proposed project would not require a change of General Plan land use designation and the project would not result in population or employment growth in the County or City. Therefore, the project would not conflict with or obstruct implementation of the applicable air quality plans and no impacts would be anticipated.

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

**Less than significant impact.** The SJVAB is designated as attainment for $PM_{10}$; attainment/unclassified for CO, $NO_2$, $SO_2$; no designation/classification for lead; and in nonattainment for 8-hour ozone and $PM_{2.5}$ with respect to federal air quality standards. The SJVAB is designated as nonattainment for 1-hour and 8-hour ozone, $PM_{2.5}$, and $PM_{10}$ with respect to State air quality standards. The proposed project's emissions of these criteria pollutants and precursors during construction and operation are evaluated below.

Construction Emissions

CalEEMod was used to quantify project-generated construction emissions, as discussed in *Methodology and Assumptions*, above. Construction of the proposed MAR basins would be anticipated to begin during the fourth quarter 2024 and be completed in by the second quarter 2025. The construction schedule assumptions have been pushed out by 10 to 11 months since project modeling was completed. The revised construction schedule would result in slightly lower pollutant emissions than shown in the modeling results due to phased implementation of CARB and USEPA engine emissions standards, resulting in older construction equipment assumed in the modeling being replaced by newer, lower emissions equipment. Therefore, the air quality and greenhouse gas emissions analysis, included in Appendix B, does not require revision as a result of the updated construction schedule assumptions. The quantity, duration, and intensity of construction activity influence the amount of construction emissions and related pollutant concentrations that occur at any one time.

As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction activity is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of: (1) a more modern and cleaner-burning construction equipment fleet mix than assumed in CalEEMod; and/or, (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

The proposed project's construction period emissions of ROG, $NO_X$, $PM_{10}$, and $PM_{2.5}$ are compared to the SJVAPCD construction thresholds in Table 5**.** Table 4 presents the most current significance thresholds, including thresholds for construction and operational emissions and maximum incremental cancer risk and hazard indices for TACs. As shown in Table 5, the proposed project's construction period emissions of ROG, $NO_X$, $PM_{10}$, and $PM_{2.5}$ would not exceed the SJVAPCD thresholds. Impacts related to construction-generated emissions of ROG, $NO_X$, $PM_{10}$, and $PM_{2.5}$ would be less than significant.

**Table 5: CONSTRUCTION CRITERIA POLLUTANT AND PRECURSOR EMISSIONS**

| MAR Basin Sites | ROG (tons/year) | $NO_X$ (tons/year) | $PM_{10}$ (tons/year) | $PM_{2.5}$ (tons/year) |
|---|---|---|---|---|
| Merle Avenue MAR Basin 2024 | <0.1 | 0.1 | <0.1 | <0.1 |
| Well 65 MAR Basin 2024 | <0.1 | 0.1 | <0.1 | <0.1 |
| Ustach Park MAR Basin 2024 | <0.1 | <0.1 | <0.1 | <0.1 |
| LCL P1 North and P2 South MAR Basins 2024 | <0.1 | 0.1 | <0.1 | <0.1 |
| **2024 Total** | **<0.1** | **0.4** | **0.1** | **<0.1** |
| Merle Avenue MAR Basin 2025 | <0.1 | <0.1 | <0.1 | <0.1 |
| Well 65 MAR Basin 2025 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ustach Park MAR Basin 2025 | <0.1 | <0.1 | <0.1 | <0.1 |
| LCL P1 North and P2 South MAR Basins 2025 | <0.1 | 0.4 | <0.1 | <0.1 |
| **2025 Total** | **0.1** | **0.4** | **<0.1** | **<0.1** |
| ***SJVAPCD Thresholds*** | *10* | *10* | *15* | *15* |
| ***Exceed Thresholds?*** | ***No*** | ***No*** | ***No*** | ***No*** |

Source: CalEEMod
ROG = reactive organic gases; $NO_X$ = nitrogen oxides; $PM_{10}$ = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

## Operational Emissions

As discussed in *Methodology and Assumptions*, above, the only new operational emissions would be energy source emissions from the Ustach Park MAR Basin and the LCL P1 North and LCL P2 South MAR Basins as these basins would require electricity to operate new pump stations. Criteria pollutant emissions from electricity use are limited to off-site emissions generated at the power plant(s) and are not included in the proposed project's emissions inventory.

The proposed project's maximum daily construction or operational emissions would not exceed the SJVAPCD's thresholds. Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment, and the impact would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

**Less than significant impact.** The closest sensitive receptor to each MAR basin site is: single-family residential homes located 100 feet west of the Merle Avenue MAR Basin Site; single-family residential homes located 25 feet east of the Well 65 MAR Basin Site; single-family residential homes located 25 feet east of the Ustach Park MAR Basin Site; single-family residential homes located 50 feet east of the LCL P1 North MAR Basin Site; and Alice Stroud Elementary School located 25 feet east of the LCL P2 South MAR Basin Site.

The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has to the substance; a longer exposure period to a fixed quantity of emissions would result in higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from OEHHA) and are best suited for evaluation of long-duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are

based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA 2015). Construction of the proposed MAR basins is anticipated to take between one month and three months. In addition, concentrations of mobile source DPM emissions disperse rapidly and are typically reduced by 70 percent at approximately 500 feet (CARB 2005). Considering the short duration of proposed project construction, the highly dispersive nature of DPM, and the fact that construction activities would occur at various locations in the City and on the MAR Basin sites, it is not anticipated that construction of the proposed project would expose sensitive receptors to substantial DPM concentrations.

Therefore, the proposed project would not expose sensitive receptors to substantial pollutant concentrations, and the impact would be less than significant.

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

**No impact.** The proposed project could produce odors during construction activities resulting from heavy diesel equipment exhaust and VOC released during application of asphalt. The odor of these emissions is objectionable to some; however, emissions would disperse rapidly from the proposed project site and therefore should not be at a level that would affect a substantial number of people. Any odors emitted during construction activities would be temporary, short-term, and intermittent in nature, and would cease upon completion of construction. As a result, impacts associated with temporary odors during construction are not considered significant.

The SJVAPCD has developed screening distances for common sources of operational odors, including Wastewater Treatment Facility; Sanitary Landfill; Transfer Station; Composting Facility; Petroleum Refinery; Asphalt Batch Plant; Chemical Manufacturing; Fiberglass Manufacturing; Painting/Coating Operations (e.g., auto body shops); Food Processing Facility; Feed Lot/Dairy; and Rendering Plant (SJVAPCD 2015a). As the proposed project would consist of MAR basins, which do not have developed screening distances implemented by the SJVAPCD, operation of the proposed project would not be anticipated to result in odors affecting a substantial number of people.

Construction and operation of the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, and no impact would occur.

## IV. Biological Resources

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |

| | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| b) | Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service? | ☐ | ☐ | ☐ | ☒ |
| c) | Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☐ | ☒ |
| d) | Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☐ | ☒ |
| e) | Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☐ | ☒ |
| f) | Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan? | ☐ | ☐ | ☐ | ☒ |

A Biological Resources Assessment (BRA) was prepared by Trihydro Corporation on July 28, 2023 (Trihydro 2023). The BRA is included as Appendix C.

## Environmental Setting

Merle Avenue MAR Basin

At the time of the survey, standing water was observed within the basin. Active vegetation management in the form of surface mowing conducted regularly by the City is evident. A maintained gravel path borders the perimeter of the basin, permitting access to all sides. The dominant plant community identified on site is that of a highly disturbed urban grassland associated with the wild oats and annual brome (*Avena* spp., *Bromus* spp.) grasslands herbaceous semi natural alliance. There are no trees or shrubs within the maintained areas and the site is predominantly herbaceous perennial and annual grasses and forbs, with cattail marshes (*Typha angustifolia*) observed near the wetted areas in the center of the detention basin. Animals observed include killdeer (*Charadrius vociferus),* Canada geese (*Branta canadensis*), ground squirrels (*Otospermophilus beecheyi*), and mallards (*Anas platyrhynchos).*

Well 65 MAR Basin

At the time of the survey, standing water was observed within the large swale. Active vegetation management in the form of surface mowing conducted regularly by the City is evident. A paved driveway that leads down into the middle of the basin provides access. The dominant plant community identified on site is that of a highly disturbed urban grassland (wild oats and annual brome grasslands). There are no trees or shrubs within the maintained areas and the site is predominantly herbaceous

perennial and annual grasses and forbs with cattail marshes observed in the wetted areas of the basin. Animals observed include Canada geese and songbirds. There is a public park adjacent to the stormwater retention basin which is maintained as a recreation land for the public.

Ustach Park MAR Basin

At the time of the survey, standing water was observed within the large swale. Active vegetation management in the form of surface mowing conducted regularly by the City is evident. A paved driveway that leads down into the middle of the basin provides access. The dominant plant community identified on site is that of a highly disturbed urban grassland (wild oats and annual brome grasslands). There are no trees or shrubs within the maintained areas and the site is predominantly herbaceous perennial and annual grasses and forbs with cattail marshes observed near the wet areas of the basin. Animals observed include turtles (unknown species), bullfrogs (*Lithobates catesbeianus*), mallards, Canada geese, and white moths. There is a public park adjacent to the stormwater basin which is maintained as a recreation land for the public.

La Coste Lane P1 North and P2 South

The northern parcel historically supported an orchard which has since been razed. The understory is characterized as a highly disturbed urban grassland and is composed of predominantly herbaceous perennial and annual grasses and forbs (wild oats and annual brome grasslands). The southern parcel contains an overgrown agricultural field that is predominantly herbaceous perennial and annual grasses and forbs (wild oats and annual brome grasslands) and fiddleneck fields (*Amsinka menziesii, tessellata, Phacelia* spp.) herbaceous alliance. Ground nesting birds were observed here with the most common species being killdeer. A buried concrete pipe supplies irrigation water from east to west through the P1 North and surface flows (i.e., flood irrigation) were historically controlled by multiple irrigation valve boxes spaced periodically along the pipeline, which have since been closed and remain inactive. However, the concrete irrigation pipe remains active and maintained by the City to supply irrigation water down slope. The concrete pipe and valve boxes are not included as part of the project and will remain in their current state. Irrigation canal MID Lateral Two runs parallel to the P2 South parcel but does not support any water dependent species within the parcel itself.

## Methodology and Assumptions

Database and Literature Review

Prior to conducting field surveys, Trihydro initiated a query of the CDFW California Natural Diversity Database (CNDDB; CDFW 2023a) and the USFWS Information for Planning and Consultation (IPaC; USFWS 2023a) website to identify reported and potential occurrences of sensitive resources within the project area and adjoining U.S. Geological Survey (USGS) quadrangle maps (Avena, Escalon, Oakdale, Salida, Riverbank, Waterford, Brush Lake, Ceres, and Denair). The California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants of California (CNPS 2023) online was also reviewed to provide additional information on rare plants known to occur in the area.

A review of the U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey (NRCS 2023a) was conducted to identify the existing soil types within the project area in order to determine areas with suitable habitat for special-status plant species. The online USFWS National Wetland Inventory (NWI) Wetlands Mapper was also reviewed to identify potential waters and wetlands mapped within the project area (USFWS 2023b).

Vegetation and habitat types recorded during the survey were classified based on the CNPS A Manual of California Vegetation (Sawyer et al. 2009) and the CDFW List of California Terrestrial Natural Communities Recognized by the CNDDB (CDFW 2019).

### Critical Habitat Review

Critical habitat as defined by under the Endangered Species Act (ESA) refers to a specific geographic area that contains features essential for the conservation of a threatened or endangered species which may include an area that is not currently occupied by a species but that will be needed for its recovery. The USFWS critical habitat map tool was reviewed to determine if critical habitat is present in the Project area (USFWS 2023a).

### Field Surveys

Following the literature review, Trihydro biologist Georgia Hamer conducted field surveys of the MAR basin study areas associated with the project activity areas on April 18 and 19, 2023. The study areas include the project footprint and associated access and staging for each of the four proposed MARs.

The surveys were focused on identifying the presence of special-status and sensitive plant species, identifying signs of habitat utilization by common, special-status, and sensitive wildlife species, documenting habitat elements that may support special-status wildlife and plant species, and identifying habitat types within the study areas. All wildlife species observed, including their signs (e.g., scat, tracks, feathers, burrows), were recorded in field notes. Plant species observed within the study areas were identified to the lowest taxon to determine special-status or sensitive classification and documented. Observations or evidence of special-status and sensitive species within the study areas and within the buffer were documented in field notes and via photographs, and their location recorded.

## Existing Conditions

### Watershed and Drainages

The City of Modesto is located at the confluence of the Tuolumne River and Dry Creek, and south of the Stanislaus River. The Tuolumne River drains an 1,800-square-mile watershed, and Dry Creek drains an area of about 190 square miles. Dry Creek flows east to west and then north to south to drain into the Tuolumne River. La Coste Lane P1 North and P2 are directly south of Dry Creek. Merle Avenue and Well 65 are located directly north of the MID Moulton Lateral Three, which is one of the main canals flowing east to west through the City. All the existing MAR stormwater retention basins within the study areas are manmade features and are regularly maintained by the City. Standing water and emergent vegetation was observed at Merle Avenue MAR Basin, Ustach Park MAR Basin, and Well 65 MAR Basin at the lowest portion of the basins near the inlet culverts. Sources of the water in the stormwater retention basins include roadway runoff, urban development runoff, and stormwater. No direct connectivity to the MID Moulton Lateral Three irrigation canal from Well 65 occurs. A small irrigation ditch runs with a buried concrete pipe supplies irrigation water from east to west through the La Coste Lane P1 North parcel and was used to irrigate the almond orchard which has since been razed. The pipeline is a manufactured feature that was historically maintained by multiple valve boxes spaced periodically along the pipeline, which have since been closed. However, the pipeline is still used to irrigate orchards down slope from the project. Access along the pipeline is maintained by the City and is not included as part of the project.

A review of the NWI did not identify any wetland or aquatic habitats within the Merle Avenue MAR Basin, Ustach Park MAR Basin, or La Coste Lane P1 North and P2 South Basin project survey areas. Based on the 2023 revised definition of Waters of the United States under the Clean Water Act (CWA; the 2023 Rule), these basins and the La Coste Lane P1 North irrigation ditch are not directly tied with a navigable water and are not adjacent to another established or permanent federally jurisdictional wetland with continuous surface connection, and therefore would not be considered aquatic features subject to federal jurisdiction. The stormwater retention basins and the La Coste Lane P1 North concrete pipeline would not be considered waters of the state.

### Soils

The following soils are located within the study area: Dinuba fine sandy loam, 0 to 1 percent slopes, (DmA), Hanford sandy loam, 0 to 3 percent slopes (HdA), Hanford fine sandy loam deep over silt, 0 to 1 percent slopes, (HbsA), Madera sandy loam, 0 to 2 percent slopes, (Mda), Meikle clay, 0 to 1 percent slopes, (MkA), Modesto clay loam, 0 to 1 percent slopes (MmA), and Snelling sandy loam, 0 to 1 percent slopes, (SnA).

### Vegetation Communities

Vegetation communities within the study areas were classified per the *Manual of California Vegetation,* Second Addition (MCV2; Sawyer et al. 2009). Plant communities within the survey area consisted of highly disturbed urban grassland composed of predominantly herbaceous perennial and annual grasses and forbs associated wild oats and annual brome grasslands, cattail marshes, and fiddleneck fields alliances. Habitat types and acreages by MAR basin are presented in Table 6.

**Table 6: HABITAT TYPES AND ACRES BY MAR BASIN**

| MAR Basin | Habitat Type | Acres |
|---|---|---|
| Merle Avenue MAR Basin | Annual Grassland | 8.45 |
| | Cattail Marshes | 0.35 |
| | **Total** | 8.80 |
| Well 65 MAR Basin | Annual Grassland | 1.63 |
| | Cattail Marshes | 0.20 |
| | Developed | 0.15 |
| | **Total** | 1.98 |
| Ustach Park MAR Basin | Annual Grassland | 1.57 |
| | Cattail Marshes | 1.11 |
| | Developed | 0.40 |
| | **Total** | 3.08 |
| La Coste Lane P1 North MAR Basin | Annual Grassland | 12.42 |
| | Cattail Marshes | 0.12 |
| | **Total** | 12.58 |
| La Coste P2 Lane South MAR Basin | Annual Grassland | 5.05 |
| | Fiddleneck | 1.95 |
| | **Total** | 7.00 |

## Special-Status Species

### Special-Status Plant Species

Based on a query of the CNDDB, CNPS Electronic Inventory of Rare and Endangered Plants of California, and USFWS IPac; a total of 8 special-status plant species have been documented in the project vicinity. Trihydro Biologist evaluated the listed species to identify which special-status plant species have the potential to occur on the project site. This analysis compared the known habitat requirements of those eight species to the project site's existing conditions, elevation, and soils. In addition, a botanical survey was conducted during the appropriate bloom period to determine if any of the special status-species occurred within the project areas.

The only documented occurrences of a special-status plant species in the CNDDB within a 5-mile radius of the survey areas is prairie wedge grass (*Sphenopholis obtusata*), which is found in cismontane woodlands, meadows, and deep seeps with a range of 985 feet to 6,560 feet. The project is located below the elevation range and therefore this species has no potential to occur.

The habitats for the remaining special-status plant species including legenere (*Legenere limosa*), heartscale (*Atriplex cordulata* var. *cordulata*), subtle orache (*Atriplex subtilis*), beaked clarkia (*Clarkia rostrata*), Colusa grass (*Neostapfia colusana*), San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), and Greenes tuctoria (*Tuctoria greenei*) were also evaluated; however, based on the soil types, elevations and range, these species have no potential to occur within the study areas. Additionally, a botanical survey confirmed no special-status plant species occur within the project areas.

### Special-Status Animal Species

Based on a CNDDB and IPaC query, 27 sensitive wildlife species have been documented in the project vicinity. Because this list of species is considered regional, an analysis of the range and habitat preferences of those wildlife species was conducted by the Trihydro Biologist to identify which sensitive wildlife species have the potential to occur within the study areas. Additionally, a wildlife survey was conducted to determine the presence of any special-status animal species and if the project areas provide suitable habitat. Trihydro's Biologist determined that the following five special-status animal species have the potential to occur within, or directly adjacent to the survey area: Swainsons hawk (*Buteo swainsoni*), burrowing owl (*Athene cunicularia*), Crotch bumble bee (*Bombus crotchii*), Northern California legless lizard (*Anniella pulchra*) and western pond turtle (*Emys marmorata*).

Based on the literature review and field surveys conducted in April 2023, the study areas may provide suitable habitat to support several special-status wildlife species

#### *Swainson's Hawk*

There are no known or recorded Swainson's hawk nests within or near the project sites or in the City, with the nearest recorded nest approximately 15 miles north (CDFW 2023a). While there is a low potential and it is unlikely for Swainson's hawk to nest near any of the basins, suitable nesting trees occur adjacent to La Coste Lane P1 North and P2 South MAR basin, where the nearest documented CNDDB occurrence is approximately 0.5 miles northeast of the study area adjacent to Dry Creek. Additionally, these areas provide potential foraging habitat. Therefore, the species has a moderate potential to occur. Trees surrounding the other basins are smaller, ornamental trees that are maintained by the City or adjacent residents and do not provide suitable nesting habitat.

*Burrowing Owl*

Suitable open grassland habitat and California ground squirrel burrows occur occurs within the study area (all basins). The nearest CNDDB occurrence documented approximately 3 miles north of Merle Avenue MAR basin. Therefore, the species has a moderate potential to occur within the study area.

*Crotch Bumble Bee*

Food plants (Eschscholzia) are present and a CNDDB occurrence has been documented in the study area; however, the occurrence was documented in 1968. No recent occurrences of the species have been documented; therefore, the species has a moderate potential to occur at Merle Avenue basin, La Coste Lane P1 North and P2 South MAR Basins.

*Northern California Legless Lizard*

Suitable sandy soils with soil moisture required by the species occurs at Ustach Park MAR Basin, Well 65 MAR Basin, and Merle Avenue MAR Basin; however, vegetation is dense. No CNDDB occurrences have been documented within 5 miles of the study area. Therefore, the species has a low potential to occur.

*Western Pond Turtle*

Although suitable basking sites occur at Ustach Park MAR Basin, Well 65 MAR Basin, and Merle Avenue MAR Basin, suitable aquatic habitats within the study area are marginal. No CNDDB occurrences have been documented within 5 miles of the study area. An unknown species, mostly likely a box turtle or Red-eared slider, of turtle was observed in Ustach Park; however, the Western Pond Turtle has a low potential to occur given the marginal site conditions and no documented CNDDB occurrences within 5 miles.

Habitat Connectivity

Ephemeral creeks and open grasslands can provide wildlife movement corridors and are important in linking noncontiguous or fragmented wildlife habitats. There are no known or identified migration corridors within the study areas. There are no creeks directly within the project area; however, several of the study areas are near Dry Creek.

## Impact Analysis

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

**Less than significant impact with mitigation.**

Raptors, Migratory Birds, and Nesting Birds

The proposed project site supports foraging habitat for special-status bird species, in addition to common nesting birds which are protected by the MBTA and California Fish and Game Code Section 3503. The proposed project site supports ground nesting and burrowing habitat. No tree nesting habitat is present within the project site; however, tree nesting habitat may be present nearby. These species may be affected by equipment, noise, dust, and increased human presence. If any migratory bird

(common species, raptors, or other special-status birds) nests in areas where direct disturbance would occur, work during the breeding season (typically February 1 to August 31) could result in the destruction or abandonment of nests, eggs, or young. Active nests could be removed, trampled, or crushed by project activities and use of access roads during project activities; in addition, the noise, vibration, and movement of equipment and personnel proximate to active nests could cause adults to abandon eggs or young. Indirect impacts could also result from noise and disturbance associated with proposed project activities, which could alter perching, foraging, and/or nesting behaviors. Implementation of Mitigation Measure BIO-1 through BIO-7 would reduce the potential for adverse effects to nesting bird species during project activities. Therefore, impacts to raptors, migratory birds, and nesting birds would be less than significant with mitigation.

Special-Status Species

The proposed project has the potential to result in direct or indirect impacts to special-status species including the crotch bumble bee, northern California legless lizard, western pond turtle, burrowing owl, and Swainson's Hawk. Implementation of Mitigation Measure BIO-8 through BIO 10 would reduce the potential for adverse effects to special-status species during project activities. Therefore, impacts to special-status species would be less than significant with mitigation.

**Mitigation Measure BIO-1: WEAP Training**

Prior to initiation of proposed project construction activities including staging and mobilization), all personnel associated with project shall attend Workers Environmental Awareness Training (WEAP) training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the proposed project area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of disturbance and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with the project. All employees shall sign a form documenting that they have attended WEAP training and understand the information presented to them.

**Mitigation Measure BIO-2: Avoidance of Nesting Birds and Raptor Nests**

To avoid take of nesting birds, and raptor nests at any time of year (including inactive nests), vegetation disturbance, site access, and initial ground disturbance shall occur outside the nesting season, which is typically February 1 to August 31, if possible, to avoid birds that may be nesting within areas of disturbance during or just prior to project activities.

**Mitigation Measure BIO-3: Movement or Disturbance of Nests, Eggs, or Young of Birds**

Nests, eggs, or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code shall not be moved or disturbed until the end of the nesting season or until young fledge, whichever is later, nor shall adult birds be killed, injured, or harassed at any time.

**Mitigation Measure BIO-4: Nesting Bird Pre-Disturbance Survey**

If proposed project activities must begin within the bird breeding season, then no more than two weeks prior to initiation of ground disturbance and/or vegetation removal, a nesting bird pre-disturbance

survey shall be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer. Pre-disturbance nesting bird surveys shall be conducted during the time of day when birds are active and shall be of sufficient duration to reliably conclude presence/absence of nesting birds and raptors onsite and within the designated vicinity. If no nests are observed no further mitigation is required.

**Mitigation Measure BIO-5: Burrowing Owl Survey**

Prior to proposed project construction activities, a burrowing owl survey will be conducted in areas where suitable burrowing habitat may be present (i.e., grassland habitat) during breeding season (March through August). At least two surveys should be conducted within two weeks of ground disturbance and should be conducted two hours before sunset to one hour after sunset, or one hour before sunrise to two hours after sunrise. If proposed project activities occur overwinter or during the non-breeding season (typically December through January), then surveys should be conducted when the owls are likely to be present, typically near dusk or dawn, but not when temperature are cold or freezing, high winds, dense fog, or rain. If the presence of burrowing owls is confirmed, the following avoidance measures shall be implemented:

- Occupied burrows shall not be disturbed during the nesting season (typically March through August) unless a qualified biologist verifies, through noninvasive methods, that either (1) the burrow is not being used for breeding; (2) a previously active nest has failed and the burrow is no longer active; or (3) all juveniles from the occupied burrow are foraging independently and capable of independent survival and the burrow is no longer an active nest burrow. Owls present after February 1 shall be assumed to be nesting unless evidence indicates otherwise. Nest protection buffers described below shall remain in effect until August 31 or until the nest has failed or all juvenile owls are foraging independently, based on monitoring evidence as determined by a qualified biologist.

- Site-specific, no-disturbance buffer zones shall be established and maintained between proposed project activities and occupied burrows, using the distances recommended by CDFW.

- Occupied burrows should not be disturbed during the nesting season. If proposed project activities have the potential to impact active burrowing owl burrows, then a passive relocation or exclusion plan will be developed in coordination with and approved by CDFW. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 50-meters from the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls. Relocation of owls should only be implemented during the non-breeding season.

**Mitigation Measure BIO-6: Swainson's Hawk Nesting Survey**

Prior to proposed project construction activities during the nesting season at the La Coste Lane P1 North and P2 South MAR Basin sites, a Swainson's Hawk nesting survey will be conducted in the immediate project area to determine presence. Surveys should be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee, 2002). Surveys should be completed for two survey periods prior to the project's initiation per the following survey dates and timing: Period I: January to March 20 (optional), all day, 1 survey; Period II: March 20 to April 5, sunrise to 1000 and 1600 to sunset, 3 surveys; Period III: April 5 to April 20, sunrise 1200 and 1630 to sunset, 3 surveys; Period IV: surveys not recommended; Period V: June 10 to July 30, sunrise to 1200 and 1600 to sunset, 3 surveys. If a nest is

identified within a half-mile of project activities, a monitoring plan detailing avoidance measures shall be prepared in coordination with CDFW.

**Mitigation Measure BIO-7: Avoidance of Work within Active Bird Nests or Raptor Nests**

Work activities shall be avoided within 100 feet of active bird nests and 250 feet of active raptor nests until young birds have fledged and left the nest. Readily visible exclusion zones shall be established in areas where nests must be avoided. No ground disturbance shall occur within this exclusion area until the qualified biologist confirms that the breeding/nesting is completed, and all the young have fledged. If exclusion zones are determined to be infeasible, a full-time qualified biological monitor must be onsite to monitor project activities within the buffer zones to ensure active nests and nesting birds are not impacted.

**Mitigation Measure BIO-8: Special-Status Bumble Bee Pre-Disturbance Survey**

A pre-disturbance survey of the proposed project area for special-status bumble bees including crotch bumble bee shall be conducted by a qualified biologist to confirm no special-status bumble bees are present in the work area if construction activities are proposed within the colony active period, typically between April and August.

At least two on-site surveys shall take place prior to the MAR basin construction. Surveys would not be required during the 20-year project operational period. Ideally, each survey shall be spaced 2-4 weeks apart during the Colony Active Period to ensure that they cover a range of dates and account for variability in resource use by the candidate species and floral resource phenology within the site. Separate surveys shall not be conducted on sequential days or in the same week as the species may not be using the site during those days. Surveys shall occur during the day (at least an hour after sunrise and at least two hours before sunset, though ideally between 0900 and 1300) on warm, but not hot, sunny days (65-90 degrees F), with low wind (less than 8 mph). A pre-disturbance memo documenting observations shall be prepared and made available to the City, and CDFW, if a special-status bumble bee species is detected.

**Mitigation Measure BIO-9: Special-Status Amphibians Pre-Disturbance Survey**

A pre-disturbance survey of the proposed project area for special-status amphibians including northern California legless lizard and western pond turtle shall be conducted by a qualified biologist within 48 hours prior to the start of project activities to confirm no special-status amphibians are present in the work area. A pre-disturbance memo documenting observations shall be prepared and made available to the City.

**Mitigation Measure BIO-10: Flagging and Avoidance of Special-Status Species**

If a special-status species is observed in the proposed project area, then those areas shall be flagged and avoided and CDFW shall be notified. Other avoidance measures may be determined or applied per specific species as identified in the WEAP training and/or a in coordination with CDFW. Observations of special-status species should be documented on California Natural Diversity Database forms and submitted to the CDFW upon completion of proposed project construction.

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

**No Impact.** CDFW evaluates the sensitivity of natural communities by using NatureServe's Heritage Methodology, the same system used to assign global and state rarity ranks for plant and animal species in the CNDDB. For rarity, the ranking involves the knowledge of range and distribution of a given type of vegetation, and the proportion of occurrences that are of good ecological integrity. Threat scope (typically assessed within a 20-year timeframe for vegetation) and severity are used to calculate an overall threat score, which is added to the overall rarity score for a single rank of 1 through 5. Evaluation is done at both the Global (full natural range within and outside of California) and State (within California) levels resulting in a single G (global) and S (state) rank ranging from 1 (very rare and threatened) to 5 (demonstrably secure). Natural Communities with ranks of S1-S3 are considered Sensitive Natural Communities to be addressed in the environmental review processes of CEQA and its equivalents.

Based on the sensitivity evaluation, the survey areas do not include any sensitive communities or USFWS designated critical habitat. Cattail marshes have G5-S5 rarity ranking and are not considered a sensitive natural community. Therefore, no impact would occur.

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

**No Impact.** A review of the NWI did not identify any wetland or aquatic habitats within the Merle Avenue MAR Basin, Ustach Park MAR Basin, or La Coste Lane P1 North and P2 South MAR Basin project survey areas. Based on the 2023 revised definition of Waters of the United States under the CWA (the 2023 Rule), these basins and the La Coste Lane P1 North irrigation ditch are not directly tied with a navigable water and are not adjacent to another established or permanent federally jurisdictional wetland with continuous surface connection, and therefore would not be considered aquatic features subject to federal jurisdiction.

Additionally, the SWRCB *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material of Waters of the State* states that wetlands are not waters of the sate if they are used for the detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program. Based on the SWRCB definition, the stormwater retention basins and the La Coste Lane P1 North concrete pipe would not be considered waters of the State. Therefore, no impacts to State or federally protected wetlands would occur.

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

**No impact.** The proposed project would not require construction or installation near or within any streams that would impede migratory fish. Minor disturbance to grassland habitat may occur as a result of the proposed project; however, no effects on wildlife movement are expected to occur during construction or O&M activities because suitable corridors around the site would remain intact. Therefore, no impact would occur.

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

**No impact.** The City of Modesto General Plan Environmental Resources, Open Space and Conservation Element (Chapter VII) does not include a tree preservation policy (City 2019a). There are no trees located within the project sites of the Merle Avenue MAR Basin, Well 65 MAR Basin, Ustach Park MAR Basin, and La Coste Lane P1 North and P2 South MAR Basins. Suitable nesting trees occur adjacent to La Coste Lane P1 North and P2 South MAR Basins. Trees surrounding the other basins are smaller, ornamental trees that are maintained by the City or adjacent residents and do not provide suitable nesting habitat. As such, no trees on or adjacent to the MAR basins are proposed for removal. Therefore, there would be no conflict with local tree policy or ordinance, and there would be no impact to biological resources as a result of the proposed project.

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

**No impact.** There are no habitat conservation plans or natural community conservation plans that apply to the proposed project area. Therefore, no impacts would be anticipated**.**

# V. Cultural Resources

| | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? | ☐ | ☒ | ☐ | ☐ |
| b) | Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | ☐ | ☒ | ☐ | ☐ |
| c) | Disturb any human remains, including those interred outside of dedicated cemeteries? | ☐ | ☒ | ☐ | ☐ |

A Cultural Resources Assessment (CRA) was prepared by HELIX on May 12, 2023 (HELIX 2023b). The CRA is included as Appendix D.

## Area of Potential Effects

The Area of Potential Effects (APE) for the proposed project is defined as the geographic area where proposed project activities may directly or indirectly cause changes in the character or use of historic properties of prehistoric or historic age, if any such properties exist. The approximately 28.25 acres of combined APE for this project includes the area of permanent impacts associated with the proposed project.

## Archival Records Search

On March 23, 2023, an archival records search in support of the proposed project was conducted by the Central Information Center (CCIC) of the California Historical Resources Information System (CHRIS),

located at California State University, Stanislaus. The records search addressed all portions of the APE plus a 0.25-mile radius around the APE (hereafter referred to as the study area). Sources of information examined through this records search included previous survey and cultural resources files; the National Register of Historic Places (NRHP); the California Register of Historical Resources (CRHR); the Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility; the OHP Directory of Properties in the Historic Property Data File; historical topographic maps; and historical aerial photographs.

## Previous Studies

The CCIC records search identified six studies that have previously been conducted within 0.25 mile of the APE, but none of these studies included the current APE as part of their survey area. These studies are described briefly in Table 7.

**Table 7: PREVIOUS STUDIES CONDUCTED WITHIN 0.25 MILE OF THE APE**

| Report | Year | Author(s) | Title | Affiliation | Includes APE? |
|---|---|---|---|---|---|
| ST-00933 | 1980 | Rondeau, M. F. | A Cultural Resource Assessment of the Proposed Oakdale-Sylvan Road Widening Project, Stanislaus County, California | Caltrans District 10 | No |
| ST-01644 | 1980 | JHK and Associates | Historic Property Survey Report, Oakdale Road and Sylvan Avenue Modesto | JHK and Associates, for Caltrans District 10 | No |
| ST-05072 | 2001 | Homsey, J. | Letter Report Regarding the Proposed Cricket Communications Wireless Facility Referred to as Orchard School, Stanislaus County, California (MOD-011-B, Merle Avenue, APN 077-07-21) | ATC Associates, Inc. | No |
| ST-05783 | 2005 | Billat, L. | New Tower (“NT”) Submission Packet, FCC Form 620, Project Name: Beyer, Number: CA-3237B, 2300 E. Briggsmore Avenue, Modesto, Stanislaus County, California | EarthTouch Inc. | No |
| ST-05864 | 2005 | Losee, C. | Collocation Submission Packet, FCC Form 621, Cota Colima, FS-034-02, 1608 Wisdom Way, Modesto, Stanislaus County | Archaeological Resource Technology | No |
| ST-08139 | 2014 | Wills, Carrie D. and Cher L. Peterson | Cultural Resources Records Search and Site Visit Results for Verizon Wireless Candidate West Basin, Hillglen Avenue at Ustach Park, Modesto, Stanislaus County, California | Michael Brandman Associates, Inc. for EBI Consulting | No |

## Previously Documents Resources

The CCIC records search identified one previously recorded cultural resource within a 0.25-mile radius of the APE, but no previously recorded cultural resources were identified within the APE itself. The previously recorded cultural resource within a 0.25-mile radius of the APE is described in Table 8.

**Table 8: PREVIOUSLY RECORDED CULTURAL RESOURCE WITHIN 0.25 MILE OF THE APE**

| Primary | Trinomial | Year | Recorder | Description | In APE? |
|---|---|---|---|---|---|
| P-50-002006 | CA-STA-000424H | 2014 | Vallaire, Katie, and Amanda Rose of LSA Associates, Inc. | Burlington Northern & Santa Fe (1996 to present); Atchison Topeka and Santa Fe Railroad, including railroad line, ancillary buildings, and bridge | No |

**Resource P-50-002006**, also known as the Burlington Northern & Santa Fe Railroad line, and associated ancillary buildings and bridge system, is located nearly 0.25 mile east of the La Coste Lane P1 North MAR Basin. When last recorded in 2014, this resource was found ineligible for listing on the NRHP, CRHR, or local designation through survey evaluation. Regardless, the activities associated with the proposed project are not anticipated to impact this resource.

Historic Maps and Aerial Photographs

Historic maps and historic aerial photographs were examined to provide an understanding of the APE's historic period land use. Historic topographic maps analyzed included a General Land Office (GLO) Plat Map for Township 3 South Ranges 9 and 10 East from 1854, a Stanislaus County Map from 1906, and USGS Quadrangle Maps for Riverbank from 1953 and 1969. The 19th century GLO maps and 1906 Stanislaus County Map did not show any signs of development within the APE. The USGS Quadrangle Maps from 1953 and 1969 show the Ustach Park MAR Basin Site, Merle Avenue MAR Basin Site, La Coste Lane Parcel 1 North MAR Basin Site, and La Coste Lane Parcel 2 South MAR Basin Sites in use as orchards. These maps also depict a few small individual structures in the vicinity of the Merle Avenue MAR Basin Site, La Coste Lane Parcel 1 North MAR Basin Site, and La Coste Lane Parcel 2 South MAR Basin Site, which were likely ancillary structures associated with agricultural efforts in these areas. A few small structures were also seen in the vicinity of the Ustach Park MAR Basin Site within the 1953 and 1969 quadrangle maps.

Historic aerial photographs from 1957, 1967, 1984, 1985, 1998, 2002, 2005, 2009, 2010, 2012, 2014, 2016, 2018, and 2020 were examined for the five different areas within the proposed project's broader APE. The results of the analyses of these photographs are described separately for each of the five proposed basin improvement locations in Appendix D.

Native American Heritage Commission Sacred Lands File Search

On March 23, 2023, HELIX requested that the NAHC conduct a search of their Sacred Lands File (SLF) for the presence of Native American sacred sites or human remains in the vicinity of the APE. On March 30, 2023, HELIX received a response from the NAHC that indicated the SLF search returned negative results but that the absence of specific site information in the SLF does not necessarily indicate the absence of cultural resources within the project vicinity. As a result, the letter recommended that HELIX reach out to 13 Native American tribal representatives who may also have knowledge of cultural resources in the project vicinity. The recommended points of contact with Native American Tribes included:

- Gloria Grimes, Chairperson, Calaveras Band of Mi-Wuk Indians
- Debra Grimes, Cultural Resources Specialist, Calaveras Band of Mi-Wuk Indians
- A representative of the California Valley Miwok Tribe
- A representative of the California Valley Miwok Tribe/Sheep Rancheria of Me-Wuk
- Timothy Perez, North Valley Yokuts Tribe

- Katherine Perez, Chairperson, North Valley Yokuts Tribe
- Sandra Chapman, Chairperson, Southern Sierra Miwuk Nation
- Joey Garfield, Tribal Archaeologist, Tule River Indian Tribe
- Neil Peyron, Chairperson, Tule River Indian Tribe
- Kerri Vera, Environmental Department, Tule River Indian Tribe
- Steven Hutchason, Tribal Historic Preservation Officer, Wilton Rancheria
- Jesus Tarango, Chairperson, Wilton Rancheria
- Dahlton Brown, Director of Administration, Wilton Rancheria
- Kenneth Woodrow, Chairperson, Wuksache Indian Tribe/Eshom Valley Band

On May 2, 2023, HELIX sent a letter to each of the tribal representatives listed above to request any information they may possess regarding cultural resources in the vicinity of the APE. As of the submission of this report, HELIX has received only one response, an email from Venesa Kremer of the Wilton Rancheria Cultural Preservation Department, dated May 12, 2023. In her email, Vanesa suggested that the Wilton Rancheria does not have any site records to share, or concerns to share regarding the proposed project moving forward. However, she suggested that the proposed project implement mitigation measures for inadvertent discoveries that might be made during construction.

Fieldwork

*Intensive Pedestrian Survey*

On April 7 and 14, 2023, HELIX Staff Archaeologist Jentin Joe surveyed the proposed project's APE where construction activities would be anticipated to occur. The surveyor used transects spaced 15-meters apart to conduct a systematic investigation of the APE. During the survey, the ground surface of the APE was examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, fire-affected rock, prehistoric ceramics), soil discoloration that might indicate the presence of a prehistoric cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations, wells) or historic debris (e.g., metal, glass, ceramics). As the APE consists of five potential basin areas, the five areas are discussed separately below.

Merle Avenue MAR Basin Site

The Merle Avenue MAR Basin Site area was surveyed on April 14, 2023. It was found to consist of a fenced in area with a graveled interior perimeter and steep slopes coming down off this graveled walkway that slopes downward towards the basin. The slopes and interior of the basin are covered in short grasses, which afforded HELIX's surveyor between 20 to 40 percent ground surface visibility. Small standing pools were also observed in the center of the basin. The proposed staging area southwest of this basin was also examined. It was found to consist of a flat, vacant lot which has likely been graded in the past and is now covered with gravel. The proposed water conveyance route, which emanates from the southeastern corner of the Merle Avenue MAR Basin Site, runs south for approximately 50 meters, and then runs east along the MID Moulton Lateral Three for approximately 169 meters, was also examined. These areas consisted of a cleared, graded, and graveled area on the northern border of the MID Moulton Lateral Three. No cultural resources were encountered in association with the survey of the Merle Avenue MAR Basin Site area, and the areas associated with the proposed project.

### Well 65 MAR Basin Site

The Well 65 MAR Basin Site area was surveyed on April 14, 2023. The basin area was fenced in and has sloped edges on the interior of the fence line leading down to the basin. Most of the basin was covered in short grasses except for a graveled perimeter, paved driveway located in the southeastern corner of the basin, and center and bottom of the basin which consists of exposed dirt, weeds, and a pool of standing water. Roughly 30 to 60 percent of the ground surface was visible during the pedestrian survey. Within the center of the basin is another small concrete framed culvert located toward the southwest and a concrete slab style drainage feature located towards the northern end. No cultural resources were encountered within the basin area. The associated laydown area located to the northwest of the basin was also examined and consisted of a cleared, graded, and graveled over area with a fenced in cell tower and water storage silo/pumpstation located to the adjacent southwest. The planned route of water conveyance from the southeastern corner of the Well 65 Mar Basin Site to the MID Moulton Lateral Three was also examined and found to consist of a small area of concrete (associated with the basin driveway) and a small stretch of the cleared, graded, and graveled area on the northern border of the MID Moulton Lateral Three. No cultural resources were found in association with this route.

### Ustach Park MAR Basin Site

HELIX surveyors examined the Ustach Park MAR Basin Site, which was found to consist of a fenced area with a fairly steep slope on all sides leading down to the basin itself. The basin and its sloped perimeter were found to be almost entirely covered in short grasses, affording roughly 30-60 percent visibility of the ground surface. The center of the basin contained weeds, many of which were dead, and small pools of standing water. A concrete driveway was also found emanating into the floor of the basin from the southeast of the basin. A concrete framed culvert is located in the northeast corner of the basin and likely used for water flow management associated with the basin. The Ustach Park Basin Laydown Yard, located to the adjacent southeast of the Ustach Park MAR Basin Site was also examined and found to be an entirely paved over and fenced in area with no traces of cultural resources.

The proposed water conveyance route, which emanates from the northeastern corner of the Ustach Park MAR Basin Site, cuts through Ustach Park to the north, turns east along Hillglen Ave, then left (north) up Roselle Ave and terminates at the corner of Roselle Ave and Sylvan Ave, was also examined, as well as the proposed pump house location at the northeastern corner of Roselle Avenue and Sylvan Avenue. No cultural resources were found along the route within Ustach Park, and the remainder of the conveyance route was found to lie within already paved roads, sidewalks, and/or developed rights of way. The pumphouse location was found to lie within a grassy field covered in knee high grasses offering 0 to 20 percent surface visibility. Within the location designated for the pump house, HELIX's surveyor encountered a concrete slab with a metal pole. These elements appeared to be modern in design and may be associated with current water management in the area.

### La Coste Lane Parcel 1 North MAR Basin Site

The proposed La Coste Lane Parcel 1 North MAR Basin Site was also examined on April 14, 2023. The field's landform is largely flat with berms bounding the southwest and southeast sides. At the time of survey, it was found to be covered in knee high (and in some places taller) grasses, affording HELIX's surveyor limited visibility (0-20 percent). Despite these conditions, HELIX's survey encountered a series of four drainage or irrigation maintenance features (a.k.a. irrigation valve boxes) cutting across the proposed basin area from west to east. This series of drainage/irrigation features is recorded as the "La

Coste Field 1 Drainage/Irrigation Features" site on the appropriate Department of Parks and Recreation (DPR) forms.

Drainage/Irrigation Feature 1**:** Drainage/Irrigation Feature 1 consists of an "S" shaped series of cement laid walls, with two adjustable metal valves/water control elements. From north to south, the cement walls measure 63 inches long, while the whole structure reaches 115 inches (9.58 feet) from west to east. The height of these walls at their maximum extends approximately 2 feet above the ground surface, although it is clear that they extend further beneath the surface. The two metal valves lie within the spaces of the "S" shaped walls. The metal adjustable valves are of identical design with 24-inch diameter bases and reach a height of 32 inches (2.66 feet).

Drainage/Irrigation Feature 2: Drainage/Irrigation Feature 2 lies 134 feet to the east of the eastern extent of Drainage/Irrigation Feature 1 and consists of an irregular series, almost a zig zag, of cement laid walls similar in height and construction materials to those found within Feature 1. Similar to Feature 1, Feature 2 also had two adjustable metal valves/water control elements of similar design and dimensions. Overall, the outer (more northern) wall associated with Feature 2 measured 3.42 feet (41 inches) from northwest to southeast, before cutting back due north for 6.42 feet (77 inches) then runs due east for 2.58 feet (31 inches), before cutting to the southeast for approximately 4 feet (48 inches). The inner (more southern) wall measures approximately 2.75 feet (33 inches) running from the southwest to the northeast, before cutting back to the southeast for another 2.75 feet (33 inches). As was the case with Drainage/Irrigation Feature 1, it is clear that the walls associated with this feature extend beneath the ground surface. The top of the northwestern most wall of this feature contains an etched inscription of "1961" which is presumably the structure's construction date.

Drainage/Irrigation Feature 3: Drainage/Irrigation Feature 3 lies 150 feet to the east of the eastern extent of Drainage/Irrigation Feature 2. Like Drainage/Irrigation Feature 1, Drainage/Irrigation Feature 3 consists of another "S" shaped series of cement laid walls, running west to east, with two adjustable metal valves/water control elements. From north to south, the cement walls measure approximately 5.67 feet (68 inches) long, while the whole structure reaches 9.08 feet (109 inches) from west to east. The height of these walls at their maximum above the ground surface ranges from 2 feet to 5 feet, and it is clear that they extend beneath the ground surface. Like Drainage/Irrigation Feature 1, Feature 3 also contains two metal adjustable valves, lying within the spaces of the "S" shaped walls. The more western of the two valves is of a slightly different design than the more eastern of the two (which is virtually identical to those found within Features 1 and 2), with the iron cross bar lying closer to the ground, and a shorter handle at the top. Approximately 10 feet south of Feature 3 lies a horizontally oriented pile of disarticulated cement rubble. While there is no direct evidence that this rubble is associated with the feature, some form of the relationship cannot be ruled out, as little more is known about the history of the feature. The top of the northwestern most wall of this feature contains an etched inscription of "1954" which is presumably the structure's construction date.

Drainage/Irrigation Feature 4: Drainage/Irrigation Feature 4 lies 190 feet to the east of the eastern extent of Drainage/Irrigation Feature 3. Drainage/Irrigation Feature 4 consists of a reverse "S" shaped series of cement laid walls running west to east with two adjustable metal valves/water control elements. Similar to Drainage/Irrigation Feature 3, from north to south, the cement walls of Feature 4 measure approximately 5.67 feet (68 inches) long, while the whole structure reaches 9.08 feet (109 inches) from west to east. The height of these walls at their maximum above the ground surface ranges from 2 feet to 5 feet, and it is clear that they extend beneath the ground surface. The more western of the two valves is of a slightly different design than the more eastern of the two (which is

virtually identical to those found within Features 1, 2, and 3), with the iron cross bar lying closer to the ground, and a shorter handle at the top. Approximately 10 feet south of Feature 3 lies a horizontally oriented pile of disarticulated cement rubble. While there is no direct evidence that this rubble is associated with the feature, some form of the relationship cannot be ruled out, as little more is known about the history of the feature. The top of the northwestern most wall of this feature contains an etched inscription of "1947" which is presumably the structure's construction date.

In addition to the four drainage/irrigation features found within the central eastern portion of La Coste Lane Parcel 1 North MAR Basin, two additional drainage/irrigation features (irrigation valve boxes) were noted along the southern fence line of the northwestern most portion of La Coste Lane Parcel 1 North MAR Basin Site, just adjacent north to the water treatment facility. These two features were found approximately 215 feet apart with their openings facing to the north. These features were somewhat similar in design to those associated with the Drainage/Irrigation Site in La Coste Lane Parcel 1 North MAR Basin Site, though they were U-shaped in design and possess only one metallic irrigation valve each. These additional features were not found to possess any etchings that might suggest their date of construction, and the smooth cement contours and fully intact nature of these resources also suggest that they might be considerably more recent constructions than those recorded as part of the "La Coste Field 1 Drainage/Irrigation Features" site. There does, however, remain the potential that these additional drainage features are associated with those recorded as part of the site.

### La Coste Lane Parcel 2 South MAR Basin Site

The proposed La Coste Lane Parcel 2 South MAR Basin Site was examined on April 14, 2023. At the time of survey, the field was found to be a flat parcel and overgrown with tall grasses and knee-high shrubs affording the surveyor relatively poor ground surface visibility (10-30 percent). No traces of cultural resources were encountered during the survey of this area. The proposed water conveyance route, intended to emanate from the southwestern corner of the proposed La Coste Lane Parcel 1 North MAR Basin Site, before running along the eastern side of the La Coste Lane Parcel 2 South MAR Basin Site, and connecting with a proposed water conveyance line which would emanate from the southeastern corner of the La Coste Lane Parcel 2 South MAR Basin Site, before following a route south to MID Lateral Two, just south of Garst Rd, was also examined, as was the proposed pump house area just to the north of the MID Lateral Two. The proposed pump house area is located just adjacent north of the MID Lateral Two in an area that has been cleared, graded, and graveled over. No cultural resources were found within any of the areas associated with the proposed La Coste Lane Parcel 2 MAR Basin Site area.

## Impact Analysis

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

**Less than significant impact with mitigation.** HELIX's CCIC records search revealed that six cultural resource studies have been previously conducted within 0.25 mile of the APE, and that none of these studies overlapped with portions of the current APE. This record search also demonstrated that one previously recorded resource has been documented within 0.25 mile of the APE, P-50-002006 (CA-STA-000424H) the Burlington Northern & Sante Fe Railroad. This resource has been recommended as ineligible for listing in NRHP and CRHR and is not anticipated to be affected by the proposed project.

On March 23, 2023, HELIX requested that the NAHC conduct a search of their SLF for the presence of Native American sacred sites or human remains in the vicinity of the proposed project area. On March 30, 2023, HELIX received a response from the NAHC that indicated the SLF search returned negative results but that the absence of specific site information in the SLF does not necessarily indicate the absence of cultural resources within the project vicinity. As a result, the letter recommended that HELIX reach out to 13 Native American tribal representatives who may also have knowledge of cultural resources in the proposed project vicinity.

On May 2, 2023, HELIX sent a letter to each of the tribal representatives listed above to request any information they may possess regarding cultural resources in the vicinity of the APE. As of the submission of this report, HELIX has received only one response, an email from Venesa Kremer of the Wilton Rancheria Cultural Preservation Department, dated May 12, 2023. In her email, Vanesa suggested that the Wilton Rancheria does not have any site records to share, or concerns to share regarding the project moving forward. However, she suggested that the proposed project implement mitigation measures for inadvertent discoveries that might be made during construction. Such measures coincide with the inadvertent discoveries plan recommended by HELIX. Mitigation Measure CUL-1 would be implemented to reduce impacts to inadvertent discoveries of cultural resources to a less than significant level.

On April 7, and 14, 2023, HELIX Staff Archaeologist Jentin Joe surveyed the project's APE where construction activities are anticipated to occur. Using 15-meter transects, the ground surface of all five proposed basin areas (Merle Avenue MAR Basin Site, Well 65 MAR Basin Site, Ustach Park MAR Basin Site, La Coste Lane Parcel 1 North MAR Basin Site, and La Coste Lane Parcel 2 South MAR Basin Site) as well as the proposed locations for pump houses, water conveyances, and construction laydown areas for the five proposed basin improvement areas were thoroughly inspected.

No signs of cultural resources were encountered within the Merle Avenue MAR Basin Site, Well 65 MAR Basin Site, Ustach Park MAR Basin Site, and La Coste Lane Parcel 2 South MAR Basin Site and their construction laydown areas. However, within the La Coste Lane Parcel 1 North MAR Basin Site, HELIX's surveyor encountered a series of four drainage or irrigation maintenance features cutting across the proposed basin area from west to east. This series of drainage/irrigation features was recorded as the "La Coste Field 1 Drainage/Irrigation Features" site on the appropriate DPR forms. A series of numbers etched into the cement walls on the 2$^{nd}$, 3$^{rd}$, and 4$^{th}$ drainage/irrigation features (1961, 1954, and 1947, respectively) may well be construction dates for the features, suggesting that these drainage/irrigation features were built during the mid-20$^{th}$ century. From HELIX's pedestrian investigation of these features, it was also clear that the features extended for some distance beneath the ground surface. A pile of cement rubble potentially associated with the drainage/irrigation features was also noted in the vicinity of Feature 3. In addition to these findings, two smaller and seemingly undated drainage/irrigation features were also located along the southern boundary of the northwestern extent of the La Coste Lane Parcel 1 North MAR Basin Site. Due to the presence of previously unrecorded resources within the La Coste Field 1 Drainage/Irrigation Features which likely date to the early to mid-20th century, and since these features clearly possess intact subsurface components and show signs of potentially consisting of additional, unrecorded components, HELIX recommends that the La Coste Lane Parcel 1 North MAR Basin Site as culturally sensitive and advises against the demolition of these features until they are formally evaluated for eligibility for listing in the NRHP and CRHR by a qualified architectural historian, and recommended as ineligible for listing in either of the two registries. This recommendation is outlined in Mitigation Measure CUL-2.

In addition to the formal evaluation of the "La Coste Field 1 Drainage Irrigation Features" site, HELIX also recommends that a Worker Awareness Training Program be conducted. This recommendation is outlined in Mitigation Measure CUL-3.

With implementation of Mitigation Measure CUL-1 through CUL-3, impacts would be less than significant.

**Mitigation Measure CUL-1: Accidental Discoveries of Cultural Resources**

In the event that cultural resources are exposed during ground-disturbing activities, construction activities shall be halted within 100 feet of the discovery. Cultural resources could consist of but are not limited to stone, bone, wood, or shell artifacts, or features, including hearths, structural remains, or historic dumpsites. If the resources cannot be avoided during the remainder of construction, the retained archaeologist, who meets the Secretary of the Interior's Professional Qualifications Standards, shall assess the resource, and provide appropriate management recommendations. If the discovery proves to be CRHR- or NRHP-eligible, additional work, such as data recovery excavation, may be warranted and shall be discussed in consultation with the Lead Agency.

**Mitigation Measure CUL-2: Avoidance of the "La Coste Field 1 Drainage/Irrigation Features"**

Demolition, alteration of, or modifications to the potential resource shall be avoided, and project designs shall document that the potential resource is not impacted by the proposed project activities.

**Mitigation Measure CUL-3: Worker Awareness Training Program**

All construction personnel involved in ground-disturbing activities shall be trained in the recognition of possible cultural resources and the protection of such resources. The training will inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Construction personnel will be instructed that cultural resources must be avoided and that all travel and construction activity must be confined to designated roads and areas. The training will include a review of the local, state, and federal laws and regulations related to cultural resources, as well as instructions on the procedures to be implemented should unanticipated resources be encountered during construction, including stopping work in the vicinity of the find and contacting the appropriate environmental compliance specialist.

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

**Less than significant impact with mitigation.** Although considered highly unlikely, there is always the possibility that ground-disturbing activities during construction may uncover previously unknown human remains. In addition to the formal evaluation of the "La Coste Field 1 Drainage Irrigation Features" site, HELIX also recommends that Accidental Discovery of Human Remains be implemented for any proposed ground disturbing activities that would take place within the Merle Avenue MAR Basin Site, Well 65 MAR Basin Site, Ustach Park MAR Basin Site, and La Coste Lane Parcel 2 South MAR Basin Site. This recommendation is outlined in Mitigation Measure CUL-4. With implementation of Mitigation Measure CUL-4, potential impacts to human remains would be less than significant.

**Mitigation Measure CUL-4: Accidental Discovery of Human Remains**

In the event of an accidental discovery or recognition of any human remains, PRC Section 5097.98 must be followed. Once project-related earthmoving begins and if there is a discovery or recognition of human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the specific location, or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains are Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in PRC Section 5097.98, or

2. Where the following conditions occur, the landowner or their authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:

    - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;

    - The descendent identified fails to make a recommendation; or

    - The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

## VI. Energy

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

## Environmental Setting

California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, electric service providers and community choice aggregators. In 2020, the California power mix totaled 272,576 gigawatt hours (GWh). In-State generation accounted for 51 percent of the State's power mix. The remaining electricity came from out-of-State imports (CEC 2021a). Table 9 provides a summary of California's electricity sources as of 2020.

**Table 9: CALIFORNIA ELECTRICITY SOURCES 2020**

| Fuel Type | Percent of California Power |
|---|---|
| Coal | 2.74 |
| Large Hydro | 12.21 |
| Natural Gas | 37.06 |
| Nuclear | 9.33 |
| Oil | 0.01 |
| Other (Petroleum Coke/Waste Heat) | 0.19 |
| Renewables (Excluding Large Hydro) | 33.09 |
| Unspecified | 5.36 |

Source: CEC 2021a

Natural gas provides the largest portion of the total in-State capacity and electricity generation in California, with nearly 45 percent of the natural gas burned in California used for electricity generation in a typical year. Much of the remainder is consumed in the residential, industrial, and commercial sectors for uses such as cooking, space heating, and as an alternative transportation fuel. In 2012, total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet per year (bcf/year), up from 2,196 bcf/year in 2010 (CEC 2021b).

Transportation accounts for a major portion of California's energy budget. Automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (SUV). In 2015, 15.1 billion gallons of gasoline were sold in California (CEC 2021c). Diesel fuel is the second most consumed fuel in California, used by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats, and farm and construction equipment. In 2015, 4.2-billion gallons of diesel were sold in California (CEC 2021d).

Energy, in the form of electricity and natural gas, is used in the City for lighting, heating, cooling, and various industrial applications. Electricity is generated through renewable sources (hydroelectricity and solar power) and also from burning natural gas (methane) and diesel fuel. Petroleum (gasoline and diesel) is utilized as a fuel for motor vehicles (City 2019b). The MID provides electricity to the proposed project area and Pacific Gas & Electric (PG&E) provides gas to the project area.

## Impact Analysis

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

**No impact.** The proposed project includes construction and operation of five MAR basins. Energy consumed for proposed project construction would primarily consist of fuels in the form of diesel and gasoline. Fuel consumption would result from: the use of on-road and off-highway trucks for the transportation of construction materials and water; construction worker vehicles traveling to and from the proposed project site; and from the use of off-road construction equipment. While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction.

Operational tasks associated with the MAR basins would include operating the turnouts, pump stations, and meters at the applicable site, and providing maintenance checks as needed. The only new operational emissions would be indirect GHG energy source emissions (resulting from electricity use) for the Ustach Park MAR Basin and the LCL P1 North and LCL P2 South MAR Basins, as these basins would require energy usage to operate new pump stations. The pump stations would be required to transport water from the MID laterals to the MAR basins. The Merle Avenue MAR Basin and Well 65 MAR Basin would not require construction of new pump stations and therefore, operational energy source emissions were not calculated. Operational emissions resulting from energy use were based on estimates from the project engineer. Operational energy emissions assume the estimated electrical consumption for the following proposed MAR Basins:

- Ustach Park MAR Basin: The MAR basin would require 13,899 kWh per year of electricity; and,
- LCL P1 North and LCL P2 South: The MAR basins would require 52,120 kWh per year of electricity.

Although the alternative Ustach Park MAR Basin water conveyance connection to the Cavil Drain was not analyzed, the impacts from this alternative would be less than what was analyzed with the proposed pump station located in northeastern corner of the intersection of Roselle Avenue and Sylvan Avenue. The Cavil Drain connection would shorten the conveyance distance and would not require a pump station; therefore, not generating operational energy source emissions.

As discussed in Section 9.VIII, Greenhouse Gas Emissions, the operational GHG energy emissions would not exceed the SMAQMD industrial operational GHG threshold. Therefore, the project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project operation. Therefore, no impact would occur as a result of proposed project construction and O&M.

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

**No impact.** See the discussion under question a) above. The proposed project would not result in a substantial new demand for energy resources nor conflict with or obstruct any State or local plan for renewable energy or energy efficiency. Therefore, no impact would occur.

# VII. Geology and Soils

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

## Environmental Setting

Tesla-Ortigalita Fault is the only active fault reported in Stanislaus County and is located approximately 20 miles west of the City. Other faults in the area include Greenville Fault, located approximately 35 miles northwest of the City; Calaveras and Concord Faults, located approximately 50 miles west of the City; Hayward Fault, located approximately 60 miles west of the City; and San Andreas Fault, located approximately 75 miles west of the City (City 2019b).

The City has not been evaluated by the State under the Seismic Hazards Mapping Act; however, liquefaction is more likely to occur in sandy soils saturated with groundwater. Soils within the five MAR basins are outlined in Table 10.

**Table 10: SOILS WITHIN THE MAR BASINS**

| Name of MAR Basin | NRCS Soil Types |
|---|---|
| Merle Avenue MAR Basin | Dinuba fine sandy loam, MLRA 17, 0 to 1 percent slopes (DmA) |
| | Hanford fine sandy loam, deep over silt, 0 to 1 percent slopes (HbsA) |
| Well 65 MAR Basin | Hanford sandy loam, deep over silt, 0 to 1 percent slopes (HdsA) |
| Ustach Park MAR Basin | Madera sandy loam, 0 to 2 percent slopes (MdA) |
| | Meikle clay, 0 to 1 percent slopes (MkA) |
| | Modesto clay loam, 0 to 1 percent slopes (MmA) |
| | Snelling sandy loam, 0 to 3 percent slopes (SnA) |
| LCL P1 North MAR Basin | Hanford sandy loam, 0 to 3 percent slopes (HdA) |
| | Terrace escarpments (Tx) |
| LCL P2 South MAR Basin | Hanford fine sandy loam, moderately deep over silt, 0 to 1 percent slopes (HbpA) |
| | Hanford sandy loam, 0 to 3 percent slopes (HdA) |

Source: Natural Resources Conservation Service (NRCS) 2023

The City is primarily situated on alluvial fan deposits of Pleistocene age, but limited areas in the southeastern portion of the City are within the active floodplains of the Tuolumne River and Dry Creek and are underlain by younger (Holocene) alluvium. About 14 miles west of the City, the central portion of the Coast Ranges uplift is predominantly formed by exposed Franciscan Complex rocks of Jurassic through early Tertiary age. The range front to the west consists of a narrow belt of marine and nonmarine sedimentary rocks of post-Franciscan Tertiary age (City 2019b).

## Impact Analysis

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

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

**No impact.** Tesla-Ortigalita Fault is the only active fault reported in Stanislaus County and is located approximately 2 miles west of the City. Other faults in the area include Greenville Fault, located approximately 35 miles northwest of the City; Calaveras and Concord Faults, located approximately 50 miles west of the City; Hayward Fault, located approximately 60 miles west of the City; and San Andreas Fault, located approximately 75 miles west of the City (City 2019b).

According to the DOC Earthquake Hazards Zone Application (EQ Zapp) Map, there are no known active faults crossing the MAR basin sites, and the MAR basin sites are not located within an Alquist-Priolo Earthquake Fault Zone (DOC 2023b). Therefore, ground rupture as a result of proposed project activities would be unlikely to occur, and no impacts would be anticipated.

    ii. Strong seismic ground shaking?

**No impact.** There is always potential in California for seismic ground shaking; however, the proposed project would not construct new buildings, residences, or other aboveground structures that have the

potential to be inhabitable or hazardous to humans or other structures in a ground-shaking event. The proposed project would construct five MAR basins with associated water conveyance structures. Water conveyance would include construction of above ground and/or subterranean pipelines, canal turnouts, outfall structure and pump stations in order to transport water to the MAR basins. Pipelines and MAR Basins would be constructed following guidance from a geotechnical engineer and state construction requirements to reduce potential hazards resulting from strong seismic ground shaking throughout the life of the proposed project. Therefore, no impact to human life or property as a result of implementation of the proposed project would be anticipated.

iii. Seismic-related ground failure, including liquefaction?

**Less than significant impact.** Liquefaction is the sudden loss of soil shear strength and sudden increase in porewater pressure caused by shear strains, which could result from an earthquake. Research has shown that saturated, loose to medium-dense sands with a silt content less than about 25 percent located within the top 40 feet are most susceptible to liquefaction and surface rupture or lateral spreading. Slope instability can occur as a result of seismic ground motions and/or in combination with weak soils and saturated conditions.

As noted above, the proposed project is not located within a delineated Alquist-Priolo Earthquake Fault Zone and there are no known active faults that cross the proposed project sites (DOC 2023b). In considering the history of past earthquake activity in the region, the potential for ground lurching, differential settlement or lateral spreading occurring during or following seismic events near or on the sites is low.

The potential for liquefaction to occur in the City has not yet been evaluated by the State under the Seismic Hazards Mapping Act (City 2019b). However, much of the substrate in the planning area consists of young, unconsolidated alluvial and fluvial (river) deposits, and groundwater data from wells in the City show the depth to groundwater as ranging from approximately 48 feet to 55 feet, based on measurements taken in Spring 2022 (Todd Groundwater 2022). Such soil and groundwater conditions may present a liquefaction hazard in portions of the planning area. As the proposed project would not construct habitable structures, it is not expected that implementation of the proposed project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving liquefaction of soils or other ground failures. Therefore, the impact would be less than significant.

iv. Landslides?

**No impact.** Landslides occur in the western portion of the County in the Diablo Range where geologic conditions are considered unstable (City 2019b). The City is located in the central portion of the County, east of the Diablo Range. The proposed project site is comprised of five MAR basins and associated water conveyance structure on relatively flat land. The proposed project would not require the development of any buildings, residences, or other aboveground features that could expose people or structures to landslides. Due to the natural topography of the proposed project area, the small scale of required construction and grading activities, and the preexisting developed condition of the surrounding area, no impacts would be anticipated to life or property as a result of the proposed project.

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

**Less than significant impact.** Construction of the proposed project would require surface disturbance. The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin would convert existing stormwater retention basins to MAR basins. The LCL P1 North MAR Basin and the LCL P2 South MAR Basin would be constructed on City-owned, fallowed agricultural lands that are currently vacant. According to the City General Plan EIR, soil within the General Plan Boundary typically has a slight erosion potential, and the overall erosion hazard in the City is considered low (City 2019b). However, wind or rain may cause erosion when soil is exposed during construction activities and when fields are left fallow. The proposed project would require development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) under the California General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order No. 2022-0057-DWQ (CGP). The SWPPP would implement Best Management Practices (BMPs) during construction to reduce on-site erosion of disturbed soil, as outlined in Section 9.X Hydrology and Water Quality. While construction activities may increase erosive potential within the proposed project area, implementation of a SWPPP and other construction BMPs would reduce impacts. Therefore, impacts would be less than significant.

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

**Less than significant impact.** The proposed project is located on mapped marine and nonmarine sedimentary rocks, developed through alluvial deposition during the Pleistocene-Holocene age (DOC 2015). Of the ten different mapped soil types located within the proposed MAR Basin sites, only one, the Madera sandy loam, is on the National Hydric Soils List for Northern Stanislaus County (NRCS 2023b). Hydric soils are soils which show evidence of periodic and extended saturation, whether by surface or groundwater. Soil saturation and inundation over time can increase the natural risk of landslide, lateral spreading, subsidence, liquefaction, or collapse.

Landslides are generally associated with sloped topography which, when combined with soil type and water content, lose their structural integrity as a result of one or multiple events. The proposed project is located on relatively flat ground and would not require the construction of steep slopes that would increase the area's natural risk for landslides.

Liquefaction, lateral spreading, and subsequent collapse of a geologic unit or soil is associated with saturation of a soil to a level where the structural integrity of the soil is compromised. Liquefaction occurs when the soil structure fails and begins to take on the characteristics of a fluid. Lateral spreading occurs where liquefied soil is put under stress, such as building foundations or construction activities. These changes in overall soil or geologic unit structural integrity and movement of mineral material have the potential to cause a collapse of a soil or geologic unit. As previously mentioned, one soil in the proposed project area has the potential for liquefaction. The proposed project would not construct any aboveground structures within the mapped Madera Sandy Loam; one MAR basin and the associated water conveyance system would be constructed. Due to the nature of the proposed project as a groundwater recharge project and anticipated length of construction and operation, implementation of the proposed project would require infiltration of large amounts of clean water into groundwater aquifers. However, as most of the MAR basins would be repurposed stormwater retention basins accustomed to holding large amounts of water, be constructed following advice and guidelines from

geotechnical engineers, and be located on relatively flat ground, the proposed project would not cause a geologic unit or soil to become more unstable.

Land subsidence resulting from a reduction in subsurface pore space is often caused by depletion of groundwater or other subsurface fluid resources (USGS 2018). Increased supply well pumping can reduce groundwater levels if recharge rates are lower than rates of extraction. As the groundwater is removed, additional pore space within the mineral substrate is available and mineral material will compact that empty space over time as gravity acts on the material. As the land subsides to fill that empty space, there is less pore space available for water or gas storage. The proposed project location and the greater California Central Valley has a high potential for land subsidence due to the high demand for existing groundwater resources. The proposed project would increase groundwater stores in existing subsurface aquifers. Increase in groundwater storage would reduce or potentially improve effects of land subsidence within the City.

A portion of the proposed project would be located on a soil type that could have the potential for liquefaction. However, construction and O&M of the proposed project would be conducted following guidelines published by State and local governments and would follow direction from a geotechnical engineer to minimize potential hazards associated with the proposed project location. The proposed project would not construct aboveground structures that may have the potential to exacerbate geologic or soil unit instability and would have an overall positive impact on groundwater resources and current rates of land subsidence within the City and the surrounding valley. Therefore, impacts as a result of proposed project implementation would be less than significant.

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

**Less than significant impact.** Expansive soils are earth materials that increase in volume when they absorb water and shrink when they dry out. When buildings are placed on expansive soils, foundations may rise each wet season and fall each dry season. Movement may vary under distinct parts of a building with the results that foundations crack, various structural portions of the building are distorted, and doors and windows are warped so that they do not function properly. In the City's urban area, there is low exposure to this type of problem (City 2019a).

Information on the engineering properties of soils in the City is available in the Web Soil Survey compiled by the USDA Natural Resources Conservation Service and were reviewed by Provost & Pritchard Consulting Group for the Project. Where soils are clay-rich, there may be some potential for expansive soils. The Ustach MAR Basin site is the only site with some clay-rich soil (mapped within the existing basin but likely removed during construction). The proposed MAR basins would be designed to meet the requirements of a geotechnical engineering study conducted for the proposed project, including requirements to minimize impacts from expansive soils. Implementation of the proposed project would not construct additional housing, multi-level infrastructure, or other buildings that would have the potential for additional hazards relating to construction on expansive soils. Subsurface utility lines would be constructed following published guidance and recommendations by a geotechnical engineer to reduce the risk of line breakage resulting from expansive soils. This would reduce the potential for flooding, gas leaks, or other events that would have the potential to impact or otherwise risk human life or property. Therefore, impacts or risks to life or property from expansive soils would be less than significant.

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

**No impact.** No septic tanks or alternative wastewater disposal systems are proposed; therefore, no impact would occur.

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

**Less than significant impact with mitigation.** No previous surveys conducted in the proposed project area have identified the proposed project site as sensitive for paleontological resources or other geologically sensitive resources, nor have testing or ground disturbing activities performed to date uncovered any paleontological resources or geologically sensitive resources. The proposed project would also be located within areas previously disturbed by development, existing stormwater or irrigation infrastructure, or historical agricultural practices. While the likelihood of encountering paleontological resources and other geologically sensitive resources is considered low, project-related ground disturbing activities could affect the integrity of a previously unknown paleontological or other geologically sensitive resource. Implementation of Mitigation Measure GEO-1 would reduce potentially significant impacts to a level of less than significant.

**Mitigation Measure GEO-1: Avoid and Minimize Impacts to Paleontological Resources**

In the event paleontological or other geologically sensitive resources (such as fossils or fossil formations) are identified during any phase of project construction, all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at the City who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the City shall implement those measures which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code Section 21083.2.

## VIII. Greenhouse Gas Emissions

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

### Environmental Setting

Global climate change refers to changes in average climatic conditions on Earth, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases.

These gases are commonly referred to as GHGs because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; deforestation; agricultural activity; and solid waste decomposition.

The GHGs defined under California's Assembly Bill (AB) 32, described below, include carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$). Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Estimates of GHG emissions are commonly presented in carbon dioxide equivalents ($CO_2e$), which weigh each gas by its global warming potential (GWP). Expressing GHG emissions in $CO_2e$ takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only $CO_2$ were being emitted. GHG emissions quantities in this analysis are presented in metric tons (MT) of $CO_2e$. For consistency with United Nations Standards, modeling, and reporting of GHGs in California and the U.S. use the GWPs defined in the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (IPCC 2007): $CO_2 = 1$; $CH_4 = 25$; $N_2O = 298$.

## Regulatory Setting

### GHG Reduction Regulations and Plans

The primary GHG reduction regulatory legislation and plans (applicable to the project) at the State and levels are described below. Implementation of California's GHG reduction mandates is primarily under the authority of CARB at the State level, and under the authority of the SJVAPCD at the regional level.

Executive Order S-3-05: On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Executive Orders are not laws and can only provide the governor's direction to State agencies to act within their authority to reinforce existing laws.

Assembly Bill 32 – Global Warming Solution Act of 2006: The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that CARB develop and enforce regulations for the reporting and verification of Statewide GHG emissions. CARB is directed by AB 32 to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

Executive Order B-30-15: On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28-nation European Union. California is on track to meet or exceed the target of reducing GHGs emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030

will make it possible to reach the goal established by EO S-3-05 of reducing emissions to 80 percent under 1990 levels by 2050.

Senate Bill 32: Signed into law by Governor Brown on September 8, 2016, Senate Bill (SB) 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a Statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

Senate Bill 100: Approved by Governor Brown on September 10, 2018, SB 100 requires that all retail sales of electricity to California end-use customers be procured from 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

Assembly Bill 1279: Approved by Governor Newsom on September 16, 2022, AB 1279, the California Climate Crisis Act, declares the policy of the State to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. AB 1279 anticipates achieving these policies through direct GHG emissions reductions, removal of $CO_2$ from the atmosphere (carbon capture), and an almost complete transition away from fossil fuels.

California Air Resources Board Scoping Plan: The Scoping Plan is a strategy CARB develops and updates at least once every five years, as required by AB 32. It lays out the transformations needed across our society and economy to reduce emissions and reach our climate targets. The current 2022 Scoping Plan is the third update to the original plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 mandate of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual. The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG targets. The 2013 Scoping Plan assessed progress toward achieving the 2020 mandate and made the case for addressing short-lived climate pollutants (SLCPs). The 2017 Scoping Plan also assessed the progress toward achieving the 2020 limit and provided a technologically feasible and cost-effective path to achieving the SB 32 mandate of reducing GHGs by at least 40 percent below 1990 levels by 2030.

On December 15, 2022, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels; further reductions in SLCPs; support for sustainable development; increased action on natural and working lands to reduce emissions and sequester carbon; and the capture and storage of carbon (CARB 2022).

San Joaquin Valley Air Pollution Control District: In December 2009, the SJVAPCD adopted the following guidance documents applicable to the project:

- Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD 2009a), and
- District Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency (SJVAPCD 2009b).

This guidance and policy are the documents referenced in the SJVAPCD's *Guidance for Assessing and Mitigating Air Quality Impacts,* adopted in March 2015 (SJVAPCD 2015a). Consistent with the District Guidance and District Policy above, SJVAPCD acknowledges the current absence of numerical thresholds, and recommends a tiered approach to establish the significance of the GHG impacts on the environment:

- If a project complies with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, then the project would be determined to have a less than significant individual and cumulative impact for GHG emissions;
- If a project does not comply with an approved GHG emission reduction plan or mitigation program, then it would be required to implement best performance standards (BPS); and
- If a project is not implementing BPS, then it should demonstrate that its GHG emissions would be reduced or mitigated by at least 29 percent, compared to business-as-usual.

The SJVAPCD adopted a CAP in 2008 and issued guidance for development project compliance with the plan in 2009. The guidance adopted an approach that relies on the use of BPS to reduce GHG emissions. Projects implementing BPS would be determined to have a less than cumulatively significant impact. For projects not implementing BPS, demonstration of a 29 percent reduction in project-specific (i.e., operational) GHG emissions from business-as-usual conditions is required to determine that a project would have a less than cumulatively significant impact (SJVAPCD 2009a). Both the SJVAPCD CAP and the guidance for development project compliance are limited to achieving the State 2020 GHG reduction goals mandated by AB 32. The SJVAPCD CAP and the guidance for development project compliance do not address California's post-2020 GHG reduction goals. Neither the City of Modesto nor Stanislaus County currently has a CAP or other GHG reduction plan which addresses post-2020 GHG reductions mandated by SB 32 and AB 1279.

### Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB and the OEHHA have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015).

Residential areas are considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children and infants are considered more susceptible to health effects of air pollution due to their immature immune systems, developing organs, and higher breathing rates. As such, schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities.

The closest existing residential sensitive receptors to the Merle Avenue MAR Basin Site are single-family residential homes located 120 feet east and 100 feet west of the site. The closest existing sensitive receptors to the Well 65 MAR Basin Site are single-family residential homes located 25 feet east of the site and Orchard Elementary School located approximately 300 feet northwest of the site. The closest existing sensitive receptors to the Ustach Park MAR Basin Site are single-family residential homes located 25 feet east and 125 feet south of the site. The closest existing sensitive receptors to the LCL P1 North and LCL P2 South MAR Basin Sites are single-family residential homes located 50 feet east of the LCL P1 North MAR Basin Site and 650 feet northwest of the LCL P2 South MAR Basin Site.

The nearest school to the Merle Avenue MAR Basin Site is Savage Middle School located approximately 1,500 feet northeast of the site. The nearest school to the Well 65 MAR Basin Site is Orchard Elementary School located approximately 300 feet northwest of the site. The nearest school to the Ustach Park MAR Basin Site is Ustach Middle School, located approximately 150 feet west of the site. The nearest school to the LCL P1 North MAR Basin Site and the LCL P2 South MAR Basin Site is Alice Stroud Elementary School, located approximately 150 feet directly south of the LCL P1 North MAR Basin Site and 25 feet east of the LCL P2 South MAR Basin Site.

## Methodology and Assumptions

Criteria pollutant and precursor emissions, and GHG emissions for the project construction activities and long-term operation were calculated using the CalEEMod, Version 2022.1.1.12. CalEEMod is a Statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model was developed for the CAPCOA in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The model calculates emissions of criteria pollutants, ozone precursors, and GHGs, including $PM_{10}$, $PM_{2.5}$, ROGs, $NO_X$, and $CO_2e$. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, C, and D (CAPCOA 2022). The input data and subsequent construction and operation emission estimates for the proposed project are discussed below.

### Construction Assumptions

Construction of the proposed MAR basins is anticipated to begin during the fourth quarter 2024 and be completed in the second quarter 2025. The construction schedule assumptions have been pushed out by 10 to 11 months since project modeling was completed. The revised construction schedule would result in slightly lower pollutant emissions than shown in the modeling results due to phased implementation of CARB and USEPA engine emissions standards, resulting in older construction equipment assumed in the modeling being replaced by newer, lower emissions equipment. Construction

modeling assumes the longest anticipated schedule reported by the project applicant for the following MAR basins:

- Merle Avenue MAR Basin: demolition 5 days; site preparation 5 days; paving 5 days; and trenching (underground utilities) 10 days.

- Well 65 MAR Basin: demolition 5 days; site preparation 5 days; paving 5 days; and trenching (underground utilities) 10 days.

- Ustach Park MAR Basin: demolition 3 days; site preparation 5 days; paving 3 days; and trenching (underground utilities) 10 days.

- LCL P1 North and LCL P2 South: demolition 10 days; site preparation 10 days; grading 20 days; trenching (underground utilities) 25 days; and paving 10 days. Grading and trenching (underground utilities) would occur concurrently, and paving would begin directly after trenching (underground utilities) is complete.

Construction equipment assumptions for the proposed MAR basins were based on estimates from the project applicant and CalEEMod defaults. The estimated volume of vegetation that would either be exported off-site or spread on-site during site preparation and the number of dump truck loads that would remove debris during demolition were provided by the project engineer:

- Merle Avenue MAR Basin: An estimated 1,412 CY of vegetation to be spread on-site, and an estimated 1,412-CY of vegetation to be exported to a WWTP approximately 15 miles off-site. Additionally, approximately 109 truckloads (or 218 one-way trips) of other cleared materials would be exported during site preparation, and approximately one truckload of demolition debris would be hauled off-site during demolition.

- Well 65 MAR Basin: An estimated 101-CY of vegetation to be spread on-site, and an estimated 101 CY of vegetation to be exported to a WWTP approximately 6.5 miles off-site. Additionally, approximately eight truckloads (or 16 one-way trips) of other cleared materials would be exported during preparation, and approximately two truckloads of demolition debris would be hauled off-site during demolition.

- Ustach Park MAR Basin: An estimated 645 CY of vegetation to be spread on-site, and an estimated 645 CY of vegetation to be exported to a WWTP approximately 8 miles off-site. Additionally, approximately 50 truckloads (or 100 one-way trips) of other cleared materials would be exported during site preparation, and approximately two trucks of demolition debris would be hauled off-site during demolition.

- LCL P1 North and LCL P2 South MAR Basins: An estimated 3,429 CY of vegetation to be spread on-site, and an estimated 3,429-CY of vegetation to be exported to a WWTP approximately 8.5 miles off-site. Additionally, approximately 264 truckloads (or 528 one-way trips) of other cleared materials would be exported during site preparation, and approximately 82 trucks of demolition debris would be hauled off-site during demolition.

Construction of the LCL P1 North and LCL P2 South MAR Basins would require grading. During grading, approximately 43,000-CY of cut/fill is expected to be spread on-site and would not require any export of

soil. In accordance with SJVAPCD Regulation VIII, *Fugitive PM10 Prohibition*, Rule 8021*, Construction, Demolition, Excavation, Extraction, and other Earth Moving Activities*, fugitive dust control measures, including the use of an on-site water truck to wet down active grading areas and roads at least twice daily, are incorporated into the project design (SJVAPCD 2004).

Construction of the Ustach Park MAR Basin and the LCL P1 North and LCL P2 South MAR Basins would include the installation of pipelines along City streets and would therefore require paving repair. ROG emissions from asphalt repair and repainting of traffic lines were calculated using CalEEMod defaults.

Operational Assumptions

Operational tasks associated with the MAR basins would include operating the turnouts, pump stations, and meters at the applicable site, providing maintenance checks as needed, and seasonal vegetation management. Maintenance activities and vegetation management would be performed by existing City staff and were assumed to be similar to existing activities and would not result in new criteria pollutant or GHG emissions. Water provided for the MAR basins would be sourced from existing MID laterals and is not anticipated to result in new water/wastewater source GHG emissions over existing conditions. The only new operational emissions would be indirect GHG energy source emissions (resulting from electricity use) for the Ustach Park MAR Basin and the LCL P1 North and LCL P2 South MAR Basins, as these basins would require energy usage to operate new pump stations. The pump stations would be required to transport water from the MID laterals to the MAR basins. The Merle Avenue MAR Basin and Well 65 MAR Basin would not require construction of new pump stations and therefore, operational energy source emissions were not calculated. Operational emissions resulting from energy use were based on estimates from the project engineer. Operational energy emissions assume the estimated electrical consumption for the following proposed MAR Basins:

- Ustach Park MAR Basin: The MAR basin would require 13,899 kWh per year of electricity.
- LCL P1 North and LCL P2 South: The MAR basins would require 52,120 kWh per year of electricity.

Although the alternative Ustach Park MAR Basin water conveyance connection to the Cavil Drain was not analyzed, the impacts from this alternative would be less than what was analyzed with the proposed ROW roadwork and pump station. The Cavil Drain connection would shorten the conveyance distance and would not require a pump station; therefore, not generating operational energy source emissions.

## Standards of Significance

Given the relatively small levels of emissions generated by a project in relationship to the total amount of GHG emissions generated on a national or global basis, individual projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts. According to Appendix G of the CEQA Guidelines, the following criteria may be considered in establishing the significance of GHG emissions:

Would the project:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

The SJVAPCD has adopted the guidance in Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA and the policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of Best Performance Standards (BPS) to assess the significance of project specific GHG emissions on global climate change during the environmental review process. However, SJVAPCD's adopted BPS are specifically directed at reducing GHG emissions from stationary sources; therefore, the adopted BPS would not generally be applicable to the proposed project as construction of MAR basins would not be a stationary source of emissions. The SJVAPCD guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project-related impacts on global climate change.

In the event that a local air district's guidance for addressing GHG impacts does not use numerical GHG emissions thresholds, at the lead agency's discretion, GHG thresholds adopted by neighboring California air districts may be used to determine impacts. The Sacramento Metropolitan Air Quality Management District (SMAQMD) has adopted a GHG threshold of 1,100 MT $CO_2e$ per year for a project's construction emissions and a threshold of 10,000 MT $CO_2e$ per year for operational emissions for industrial/stationary source projects (SMAQMD 2021). Both of these thresholds are based on an analysis of a 90 percent emissions capture rate—ensuring that 90 percent of emissions would be subject to further review and analysis of potential alternatives and mitigation measures. These thresholds have been established by the SMAQMD in an effort to meet statewide GHG emissions reduction goals and the justification for these thresholds established by SMAQMD is applicable for evaluating the significance of project GHG emissions.

## Impact Analysis

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

**Less than significant impact.** GHG emissions would be generated by the proposed project during construction (vehicle engine exhaust from construction equipment, on-road hauling trucks, vendor trips, and worker commuting trips) and during long-term operation (energy use from the proposed pump stations).

GHG emissions were calculated using CalEEMod, as described in *Methodology and Assumptions*, above. The results of the construction GHG emissions calculations are compared to the SMAQMD threshold in Table 11.

**Table 11: CONSTRUCTION GHG EMISSIONS**

| Year of Emissions | Emissions (MT $CO_2e$) |
|---|---|
| 2023 (All MAR basins) | 82.3 |
| 2024 (All MAR basins) | 87.8 |
| ***SMAQMD Construction Threshold (per year)*** | *1,100* |
| ***Exceed Threshold?*** | No |

Source: CalEEMod
GHG = greenhouse gas; MT = metric tons; $CO_2e$ = carbon dioxide equivalent

The results of the operational GHG emissions calculations are compared to the SMAQMD threshold in Table 12.

**Table 12: OPERATIONAL GHG EMISSIONS**

| Emission Sources | 2025 Emissions (MT $CO_2e$ per year) |
|---|---|
| Energy: Ustach Park MAR Basin | 3.1 |
| Energy: LCL P1 North and P2 South MAR Basins | 11.6 |
| **Total** | **14.7** |
| ***SMAQMD Operational Threshold*** | *10,000* |
| ***Exceed Threshold?*** | **No** |

Source: CalEEMod
GHG = greenhouse gas; MT = metric tons; $CO_2e$ = carbon dioxide equivalent

As shown in Table 11 and Table 12, the construction and operational GHG emissions would not exceed the SMAQMD construction GHG threshold or the SMAQMD industrial operational GHG threshold. Therefore, GHG emissions from the proposed project would not be cumulatively considerable, and the proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The impact would be less than significant.

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

**Less than significant impact.** There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall State plan and policy is AB 32, the California Global Warming Solutions Act of 2006. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. SB 32 requires further reductions of 40 percent below 1990 levels by 2030. AB 1279 requires the State to achieve net zero GHG emissions no later than 2045. The mandates of AB 32, SB 32, and AB 1279 are implemented at the State level by the CARB's Scoping Plan. Because the project's operational year is post-2020, the proposed project aims to reach the quantitative goals set by SB 32 and AB 1279. Statewide plans and regulations such as GHG emissions standards for vehicles and transportation fuels, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the Statewide level; as such, compliance at the proposed project level is not addressed. Therefore, the proposed project would not conflict with those plans and regulations.

As noted in question a) above, construction and operational GHG emissions would not exceed the GHG thresholds, and therefore would not generate new GHG emissions. In addition, the proposed project's only operational GHG emissions source would be from electricity use. As discussed in *Regulatory Setting*, SB 100 requires 100 percent of the electricity used in the state to be from renewable and zero-carbon resources by 2045. As a result, the project would not conflict with the GHG reduction objectives of the State's Scoping Plan, including net zero GHG emissions by 2045, mandated by AB 1279, or the SJVAPCD's Climate Change Action Plan. Therefore, the impact would be less than significant.

## IX. Hazards and Hazardous Materials

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

### Environmental Setting

The proposed project is within the Sylvan Union School District and the Empire Union School District. The nearest school to the Merle Avenue MAR Basin Site is Savage Middle School located approximately 1,500 feet northeast of the site. The nearest school to the Well 65 MAR Basin Site is Orchard Elementary School located approximately 300 feet northwest of the site. The nearest school to the Ustach Park MAR

Basin Site is Ustach Middle School, located approximately 150 feet west of the site. The nearest school to the LCL P1 North MAR Basin Site and the LCL P2 South MAR Basin Site is Alice Stroud Elementary School, located approximately 150 feet directly south of the LCL P1 North MAR Basin Site and 25 feet east of LCL P2 South MAR Basin Site.

The following databases were reviewed for the project site and surrounding area to identify potential hazardous contamination sites: the State Water Resources Control Board's GeoTracker tool (SWRCB 2023), California Department of Toxic Substance Control's EnviroStor online tool (DTSC 2023); and the USEPA's Superfund National Priorities List (USEPA 2023). Based on the results of the databases reviewed, no hazardous waste sites are on the proposed project site.

Federal and State laws include provisions for the safe handling of hazardous substances. The federal Occupational Safety and Health Administration (OSHA) administers requirements to ensure worker safety. Construction activity must also be in compliance with the California OSHA regulations (Occupational Safety and Health Act of 1970).

## Impact Analysis

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

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

**Less than significant impact.** Based on reviewed databases including the Geotracker tool, the EnviroStor online tool, and the Superfund National Priorities List, the proposed MAR basin locations are not currently listed as containing hazardous materials. During proposed project construction, oil, gasoline, diesel fuel, solvents, and other hazardous materials may be present on site. If spilled, these substances could pose a risk to the environment and to human health. The routine transport, use, and disposal of hazardous materials are subject to local, State, and federal regulations to minimize risk and exposure. Additionally with implementation of the proposed project SWPPP and the associated BMPs, risks of hazardous materials spills would be reduced. Consequently, use of these materials for their intended purpose would not pose a significant risk to the public or environment, and impacts would be less than significant for questions a) and b).

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

**Less than significant impact.** The nearest school to the Merle Avenue MAR Basin Site is Savage Middle School located approximately 1,500 feet northeast of the site. The nearest school to the Well 65 MAR Basin Site is Orchard Elementary School located approximately 300 feet northwest of the site. The nearest school to the Ustach Park MAR Basin Site is Ustach Middle School, located approximately 150 feet west of the site. The nearest school to the LCL P1 North MAR Basin Site and the LCL P2 South MAR Basin Site is Alice Stroud Elementary School, located approximately 150 feet directly south of the LCL P1 North MAR Basin Site and 25 feet east of the LCL P2 South MAR Basin Site.

During proposed project construction, oil, gasoline, diesel fuel, and other hazardous materials may be used. If spilled, these substances could pose a risk to the environment and to human health. The routine transport, use, and disposal of hazardous materials are subject to local, State, and federal regulations to

minimize risk and exposure. The potential risk of exposure or impacts from transport, use, and disposal of hazardous materials to schools and other nearby sensitive receptors would be minimized through implementation of these regulations. Therefore, the impact would be less than significant.

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

**No impact.** The site is not included on any list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. No hazardous materials sites are located at the proposed project site based on review of EnviroStor (DTSC 2023), Geotracker (SWRCB 2023), and EPA Superfund Priority List (USEPA 2023). Therefore, the proposed project would have no impact on hazards to the public or environment.

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

**No impact.** The nearest public or public use airport is Modesto City-County Airport, located 3 to 4 miles south of the MAR basins. The Well 65 MAR Basin is located within the Modesto City-County Airport influence boundary (County 2016). However, the proposed project would not construct new buildings or structures that would result in a safety hazard for people residing or working in the area. Therefore, no impacts would occur as a result of implementation of the proposed project.

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

**Less than significant impact.** The proposed project would construct five MAR basins in the City. The Well 65 MAR Basin and the Merle Avenue MAR Basin would be located on the southern side of Merle Avenue. Merle Avenue is considered a residential/local street (City 2019b).

The Ustach Park MAR Basin would be located in the northeastern corner of the intersection of Kodiak Drive and Bear Club Lane. The site would construct water conveyance to the basin by connecting a proposed 12-inch pipeline to an existing outfall structure located on the northeastern corner of the site. The proposed 12-inch diameter pipeline would begin at the existing outfall structure and move north along the eastern boundary of Ustach Park until it reaches Hillglen Avenue. The pipeline would then move east along Hillglen Avenue until it reaches Roselle Avenue. The pipeline would then move north along Roselle Avenue until it reaches the proposed pump station located in the northeast corner of the intersection of Roselle Avenue and Sylvan Avenue. Hillglen Avenue is considered a residential/local street and Roselle Avenue and Sylvan Avenue are considered minor arterials (City 2019b).

An alternative water conveyance to the Ustach Park MAR Basin would include construction of a pipeline to the existing Cavil Drain to supply water for the Ustach Park MAR Basin. This connection or tie-in to the Cavil Drain would provide an opportunity to reduce construction costs and schedule by shortening the conveyance distance and eliminating most of the ROW roadwork to bury piping. No pump station would be required under this alternative. The Cavil Drain would be located along Aria Way, and along the western border of Ustach Park and Ustach Middle School. Aria Way is considered a residential/local street (City 2019b).

The LCL P1 North MAR Basin would be located on the northern side of La Coste Lane, and on the western side of Frazine Road. The LCL P2 South MAR Basin would be located on the southern side of La Coste Lane, the eastern side of Norseman Drive, and the northern side of Garst Road. La Coste Lane, Frazine Road, Norseman Drive, and Garst Road are all considered residential/local streets (City 2019a). LCL P1 North and LCL P2 South would be located east of Claus Road, which is considered an expressway (City 2019a).

During proposed project construction, heavy construction-vehicle equipment could interfere with emergency access on Merle Avenue, Roselle Avenue, Sylvan Avenue, La Coste Lane, Frazine Road, Norseman Drive, Garst Road, and Claus Road. However, such trips would be brief and infrequent. Additionally, a Project Management Plan would be prepared by the City prior to construction to reflect the specific construction schedule and actions and how temporary impacts related to proposed project construction would be dealt with. Therefore, with implementation of a Project Management Plan, the impact would be less than significant.

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

**No impact.** The proposed project would construct five MAR basins with associated water conveyance structures in an urban area of the City. Water conveyance would include construction of above ground and/or subterranean pipelines, canal turnouts, outfall structure and pump stations in order to transport water to the MAR basins. Due to the nature and location of the proposed project and the minimal above ground infrastructure involved, impacts associated with wildland fires would not be anticipated. Therefore, the proposed project would not expose people or structures to risks associated with wildland fires, and no impacts would occur.

## X. Hydrology and Water Quality

| | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | ☐ | ☐ | ☒ | ☐ |
| b) | Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | ☐ | ☐ | ☐ | ☒ |

| | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| c) | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: | | | | |
| | i. Result in substantial erosion or siltation on- or off-site? | ☐ | ☐ | ☒ | ☐ |
| | ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | ☐ | ☐ | ☐ | ☒ |
| | iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff? | ☐ | ☐ | ☐ | ☒ |
| | iv. Impede or redirect flood flows? | ☐ | ☐ | ☐ | ☒ |
| d) | In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | ☐ | ☐ | ☐ | ☒ |
| e) | Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | ☐ | ☐ | ☐ | ☒ |

## Environmental Setting

The City is located at the confluence of the Tuolumne River and Dry Creek, and south of the Stanislaus River. The Tuolumne River drains an 1,800-square-mile watershed, and Dry Creek drains an area of about 190-square miles. Dry Creek flows east to west and then north to south to drain into the Tuolumne River. The Tuolumne and Stanislaus Rivers are tributaries to the San Joaquin River, which flow into the Sacramento-San Joaquin River Delta. The topography of the City is generally flat, with gently sloping lands from east to west toward the San Joaquin River, approximately ten miles west of City limits. The elevation in the downtown City area is approximately 100 feet amsl. Annual precipitation is approximately 12 inches per year and occurs mainly from October through May.

The City's planning area lies at the northern end of the San Joaquin Valley Groundwater Basin and overlies two designated groundwater subbasins that are delineated by geographic and hydrologic features. The Turlock groundwater subbasin encompasses the area south of the Tuolumne River to the Merced River and from the San Joaquin River to the base of the Sierra Foothills. The Modesto groundwater subbasin extends north from the Tuolumne River to the Stanislaus River and east from the San Joaquin River to the base of the Sierra foothills. The Delta-Mendota subbasin underlies the outlying area of Grayson. The groundwater basins are recharged from streamflow infiltration, deep percolation of irrigation water, and rain. Large areas of the County are considered principal groundwater recharge areas, as well (City 2019b).

The City obtains a portion of its drinking water supplies from the Modesto Reservoir via the Modesto Regional Water Treatment Plant (MRWTP), which is owned and operated by the MID and groundwater aquifers that underlie the region. The City's supply wells account for almost 60 percent of the annual

average water demand, with the rest from treated surface water provided by the MID. The groundwater supply is sourced from approximately 100 active wells throughout the City and distributed through approximately 74,000 service connections. As of 2020, 23 of the City's 100 water supply wells, representing over 16 MGD of the system's total groundwater production capacity (50 MGD), were inactivated, abandoned, destroyed, or removed from potable use due to contamination.

Federal Emergency Management Agency (FEMA) flood insurance rate maps were reviewed for the proposed project's proximity to a 100-year floodplain. The proposed project is on FEMA panel 06099C0340F and FEMA panel 06099C0345F effective 8/24/2021 (FEMA 2023). The proposed project is not located within a 100-year floodplain.

## Impact Analysis

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

**Less than significant impact.** Construction of the proposed project has the potential to increase erosion during ground disturbance. The proposed MAR basins would require construction that would disturb greater than one acre of soil. Projects that disturb one acre of soil or more are required to obtain National Pollutant Discharge Elimination System (NPDES) coverage under the NPDES CGP. Construction activities subject to the CGP include clearing, grading, and other ground disturbances such as stockpiling or excavation. The CGP requires the development and implementation of a SWPPP by a Qualified SWPPP Developer (QSD), which would include construction and operational BMPs to reduce on-site soil erosion and subsequent pollution of stormwater runoff, ultimately protecting California's surface water resources. Development and implementation of a site-specific SWPPP, as well as construction and operational BMPs, would reduce the proposed project's potential to violate any water quality standards, waste discharge requirements, or otherwise substantially degrade surface or ground water quality.

Construction and implementation of the proposed project would recharge existing groundwater resources with clean surface waters, thereby improving overall groundwater quality and providing a positive impact on the City's groundwater supply. Therefore, the impacts would be less than significant.

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

**No impact.** The proposed project is intended to improve groundwater sustainability and resiliency by addressing non-point source groundwater contamination from arsenic, nitrate, and uranium in the City. The proposed project consists primarily of (1) modification of water supply well field pumping operations, i.e., wellfield optimization, to reduce contaminant levels in raw pumped groundwater; and (2) construction of MAR basins to increase the volume of uncontaminated water within the aquifer system.

The proposed project would include the construction of five MAR basins in the City. The proposed MAR basins would be constructed to improve groundwater sustainability and resiliency by increasing the volume of uncontaminated water within the aquifer system thereby positively impacting groundwater resources within existing aquifers. Implementation of the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the proposed project would impede sustainable groundwater management. Therefore, no impact would occur.

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

i. Result in substantial erosion or siltation on- or off-site?

**Less than significant impact.** The overall erosion hazard in the City is considered low and the soil types in the project area are characterized as having a slight erosion hazard (City 2019b). Construction of the proposed project would occur on relatively flat land within the City. Construction has the potential to increase erosion in the proposed project area as a result of site preparation, demolition, and grading activities required to construct the MAR basins and associated water conveyance. A SWPPP, with construction and operational BMPs, would be implemented to avoid and minimize soil loss and erosion in conjunction with the proposed project's final design and grading plan. The SWPPP would be consistent the City's Stormwater Management Plan and would identify the selected stormwater management procedures, pollution control technologies, spill response procedures, and other procedures that would be used to minimize erosion, sediment production, and the release of pollutants to surface water during construction.

The proposed project would require construction of subsurface water conveyance pipelines and groundwater recharge basins which would not increase impervious surfaces within the proposed project area. No surface drainages or natural streams or rivers are located within the proposed project area which would be impacted by the proposed project construction and O&M activities. As part of the SWPPP development, surface runoff patterns would be analyzed to identify areas with higher erosive potential within the proposed project boundary. With implementation of the SWPPP and associated BMPs, erosion and siltation impacts resulting from proposed project construction would be less than significant.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?

iv. Impede or redirect flood flows?

Less than significant impact. The proposed project would construct MAR basins in order to improve groundwater sustainability and resiliency by addressing non-point source groundwater contamination. The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin would convert existing stormwater retention basins to MAR basins. The LCL P1 North MAR Basin and LCL P2 South MAR Basin would convert City-owned, fallowed agricultural lands, that are currently vacant, to MAR basins. The proposed MAR basins would include pervious surfaces in order to allow water to percolate through the surface to increase the volume of uncontaminated water within the aquifer system. Implementation of the proposed project would not require construction or installation of additional impervious surfaces that would increase the rate or amount of surface runoff which would result in flooding.

The area of impervious surface associated with the MAR basins would be limited to water conveyance structures including above ground and/or subterranean pipelines, canal turnouts, outfall structure and pump stations in order to transport water to the MAR basins. Although the proposed project may result in slight changes to the existing drainage pattern, the project would not increase surface runoff during

project operation as water would percolate through the MAR basin. Therefore, the proposed project would not require modification of the existing stormwater drainage system as stormwater runoff as a result of the proposed project would not be anticipated to exceed the capacity of existing stormwater drainage systems.

The proposed project site is not located within a 100-year floodplain (FEMA 2023). As the proposed project is located outside of a mapped floodplain, implementation of the proposed project would not be anticipated to impede or redirect flood flows. Due to the nature of the proposed project as a groundwater recharge and surface water retention facility, the MAR basins would contain surface water flows and stormwater runoff to serve as source waters for groundwater recharge. In the instance that flooding is experienced within the proposed project area, the MAR basins would retain flood waters, potentially reducing floodwater impacts to surrounding communities, and would utilize the water as a source for groundwater recharge, providing another benefit for surrounding communities. Therefore, the proposed project would not impact existing or future flood patterns within the proposed project area.

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

**No impact.** The proposed project site is not located within a tsunami or seiche zone and is not located within a FEMA special flood hazard area. Therefore, no impacts resulting from potential pollution of floodwaters within the proposed project area would occur.

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

**No impact.** The Central Valley RWQCB adopted the most recent edition of the Water Quality Control Plan (Basin Plan) for the Central Valley Region in May 2018 (Central Valley RWQCB, 2018). As part of this Basin Plan, the Central Valley RWQCB identifies water quality standards and protections for surface water resources within the Basin Plan boundary. The most common impacts to surface water quality as a result of construction projects are through erosion and subsequent sedimentation of surface waters after storm events. To comply with surface water quality standards outlined in the Basin Plan, as well as with the NPDES program, the proposed project would develop and implement a SWPPP prior to initiation of construction activities. The site-specific SWPPP would implement BMPs to reduce erosion potential throughout proposed project construction thereby reducing potential degradation of proximate surface water resources and remaining consistent with goals outlined in the Basin Plan.

The City's groundwater resources draw largely from the Modesto Subbasin, a groundwater aquifer identified as a high-priority basin by the California Sustainable Groundwater Management Act (SGMA). This basin is managed by the Stanislaus & Tuolumne Rivers Groundwater Basin Association (STRGBA) Groundwater Sustainability Agency (GSA) which published the Modesto Subbasin Groundwater Sustainability Plan (GSP) in January 2022 in compliance with SGMA and previous state and regional groundwater policies. This plan identifies criteria and identifies need for groundwater recharge projects within the Modesto Subbasin GSP boundary and promotes implementation of Local Basin Management Objectives (BMO) for municipalities which identify specific goals relating to groundwater supply management. The City of Modesto has adopted BMOs discussed in the Integrated Regional Groundwater Management Plan. The overall sustainability goal for the Modesto Subbasin GSP is to provide a sustainable groundwater supply for the local community and economic vitality of the region. This goal promotes the implementation of groundwater recharge projects within the Modesto Subbasin

GSP boundary (STRGBA 2022). The proposed project would contribute to sustainable management of existing groundwater resources through implementation of groundwater recharge MAR basins. Implementation of the proposed project would directly address the existing groundwater contamination through sourcing clean water for aquifer recharge. This action would support goals implemented by the Modesto Subbasin GSP and therefore have a net positive impact on groundwater sustainability. The proposed project would not obstruct implementation of or conflict with goals or guidelines implemented by the Modesto Subbasin GSP or the Central Valley RWQCB Basin Plan. Therefore, no impact would occur.

## XI. Land Use and Planning

| | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Physically divide an established community? | ☐ | ☐ | ☐ | ☒ |
| b) | Cause significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☒ | ☐ |

### Environmental Setting

General Plan Land Use Designation

According to the City General Plan, the Merle Avenue MAR Basin and Ustach Park MAR Basin are designated as VR; the Well 65 MAR Basin site is designated as MU.

The LCL P1 North MAR Basin and LCL P2 South MAR Basin are located directly outside designed City limits; however, the two basins are located within the City General Plan Boundary and Sphere of Influence (City 2019a). According to Land Use Element AL-4 in the City General Plan EIR, development, other than agricultural uses and churches, which requires discretionary approval shall be referred to that City for preliminary approval (City 2019b). As the two MAR basins are within the City General Plan Boundary and Sphere of Influence, the City would have authority for approval. According to the City General Plan, the LCL P1 North MAR Basin and LCL P2 South Basin are both designated as VR.

Zoning Designation

The Merle Avenue MAR Basin and Ustach Park MAR Basin are zoned SP, and the Well 65 MAR Basin is zoned R-1.

The LCL P1 North and LCL P2 South MAR Basins are located directly outside designed City limits but are located within the City General Boundary and Sphere of Influence (City 2019a). However, the City zoning does not cover the LCL P1 North MAR Basin and LCL P2 South MAR Basin. According to Stanislaus County zoning map, the two basins are zoned A-2-10 (County 2023a).

The R-1 zoning district is intended to accommodate lower-density residential development, including accessory structures and uses.

The SP zoning district is intended to permit various land uses including residential, industrial, and commercial development through Specific Plans, pursuant to Government Code Section 65450, et seq. The intent of this is to implement policies regarding certain uses, standards, and development review processes adopted through the Specific Plan process.

The General Agriculture zoning district is intended to support and enhance agriculture as the predominant land use in the unincorporated areas of the County. The General Agriculture district regulation is also intended to protect open-space lands pursuant to Government Code Section 65910.

### Impact Analysis

a) Physically divide an established community?

**No impact.** The proposed project would construct five MAR basins and associated water conveyance structures. . Construction of the MAR basins and associated water conveyance structures would not divide an existing community. No impact would occur.

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

**Less than significant impact.** As mentioned in question a), the proposed project would construct a total of five MAR basins, with three MAR basins being constructed on existing stormwater retention basins, and two basins being constructed on City-owned fallowed agricultural lands that are currently vacant. The proposed project would require a grading permit for construction of the MAR basins. As the project would be located on City-owned land and would be built on lands that are already serving a recharge function and/or is already a recipient of MID surface way, a Conditional Use Permit (CUP) is not required. The proposed MAR basins would not constitute a change of land use and impacts would be less than significant with mitigation.

## XII. Mineral Resources

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

## Environmental Setting

The City does not contain any designated mineral resource zones under the Surface Mining and Reclamation Act (SMARA). The City is designated as MRZ-3a for sand and gravel (City 2019b). This designation indicates areas containing known mineral occurrences of undetermined significance. As of 1998, there were five active sand and gravel operations and one specialty sand mining operation in the City. However, no mining activity occurs in the City, and data from the U.S. Geological Survey regarding mineral production in California indicate that no new mines or expansions of existing mines were approved in the City between 1999 and 2006 (City 2019b).

The Surface Mining and Reclamation Act of 1975 (SMARA) was enacted in response to land use conflicts between urban growth and essential mineral production. It requires the California Geological Survey (formerly the California Division of Mines and Geology) to classify California lands into MRZs (City 2019b). The MRZ classifications are defined as follows.

- MRZ-1: areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.
- MRZ-2: areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.
- MRZ-3: areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- MRZ-4: areas where available information is inadequate for assignment into any other MRZ.

## Impact Analysis

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

**No impact.** As discussed above, there are no designated mineral resource zones in the City; however, the City is designated as MRZ-3a for sand and gravel (City 2019b). The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin are located within City limits; however, these three MAR basins would convert existing stormwater retention basins to MAR basins. Therefore, there would be no additional loss of availability of known mineral resources or recovery sites as a result of the proposed MAR basins.

The LCL P1 North and LCL P2 South MAR Basins would be constructed directly outside City limits but within the City General Plan Boundary. No areas classified as Mineral Resource Zones (MRZ-2a or MRZ-2b) under the Surface Mining and Reclamation Act—that is, areas where significant mineral deposits have been determined to occur within the City General Plan Boundary (City 2019b). Therefore, there would be no loss of availability of known mineral resources or recovery sites as a result of basin construction and installation.

Additionally, according to the DOC Mineral Land Classification Map, there are no known mineral resources within the MAR basin sites (DOC 2023c). Therefore, no impacts to mineral resources would occur.

## XIII. Noise

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

A Noise Analysis Report was prepared by HELIX on May 18, 2023 (HELIX 2023c). The report is included as Appendix E.

### Environmental Setting

Noise Sensitive Land Uses

Noise-sensitive land uses (NSLU) are land uses that may be subject to stress and/or interference from excessive noise, including residences, hospitals, schools, hotels, resorts, libraries, sensitive wildlife habitat, or similar facilities where quiet is an important attribute of the environment. Noise receptors (receivers) are individual locations that may be affected by noise.

The closest existing NSLUs to the Merle Avenue MAR Basin Site are single-family residential homes located 120 feet east and 100 feet west of the site. The closest existing NSLUs to the Well 65 MAR Basin Site are single-family residential homes located 25 feet east of the site and Orchard Elementary School located approximately 300 feet northwest of the site. The closest existing NSLUs to the Ustach Park MAR Basin Site are single-family residential homes located 25 feet east and 125 feet south of the site. The closest existing NSLUs to the LCL P1 North and LCL P2 South MAR Basin Sites are single-family residential homes located 50 feet east of the LCL P1 North MAR Basin Site and 650 feet northwest of the LCL P2 South MAR Basin Site.

The nearest school to the Merle Avenue MAR Basin Site is Savage Middle School located approximately 1,500 feet northeast of the site. The nearest school to the Well 65 MAR Basin Site is Orchard Elementary School located approximately 300 feet northwest of the site. The nearest school to the Ustach Park MAR Basin Site is Ustach Middle School, located approximately 150 feet west of the site. The nearest school to the LCL P1 North MAR Basin Site and the LCL P2 South MAR Basin Site is Alice Stroud Elementary School, located approximately 150 feet directly south of the LCL P1 North MAR Basin Site and directly east of the LCL P2 South MAR Basin Site.

The closest hospital to the five MAR basins is the Memorial Medical Center located approximately one mile west of the Well 65 MAR Basin; two miles west of the Merle Avenue MAR Basin; two miles southwest of the Ustach Park MAR Basin; and three miles northwest of the LCL P1 North MAR Basin and LCL P2 South MAR Basin.

Noise Survey

Site visits/noise surveys were on conducted on April 7 and April 13, 2023, which included five short-term (10 minute) ambient noise measurements. The measured noise levels and survey notes are shown in Table 13.

**Table 13: NOISE MEASUREMENT RESULTS**

| | |
|---|---|
| **M1** | |
| Date | April 13, 2023 |
| Time | 9:13 a.m. – 9:23 a.m. |
| Location | Merle Avenue Basin Site, southeast corner of the MAR basin |
| Noise Level | 50.9 dBA $L_{EQ}$ |
| Notes | Traffic noise from East Briggsmore Avenue, across canal to the south |
| **M2** | |
| Date | April 13, 2023 |
| Time | 2:29 p.m. – 2:39 p.m. |
| Location | Well 65 Basin Site, north end of pipeline alignment, near the southeast corner of the MAR basin |
| Noise Level | 58.4 dBA $L_{EQ}$ |
| Notes | No streets visible. Dog barking at residence to the east. |
| **M3** | |
| Date | April 7, 2023 |
| Time | 1:37 p.m. – 1:47 p.m. |
| Location | Ustach Park Basin Site, pumphouse site, northeast corner of the Sylvan Avenue/ Roselle Avenue intersection |
| Noise Level | 61.7 dBA $L_{EQ}$ |
| Notes | Primary noise from traffic on Sylvan Avenue and Roselle Avenue |
| **M4** | |
| Date | April 7, 2023 |
| Time | 2:29 p.m. – 2:39 p.m. |
| Location | Ustach Park Basin Site, southeast corner of the MAR basin |
| Noise Level | 50.9 dBA $L_{EQ}$ |
| Notes | |

| M5 | |
|---|---|
| Date | April 7, 2023 |
| Time | 6:37 p.m. – 6:47 p.m. |
| Location | La Coste Parcel 1 South Site, pump station location, south end of pipeline alignment, near the southeast corner of the MAR basin |
| Noise Level | 46.9 dBA $L_{EQ}$ |
| Notes | Measurement taken after end of school day for Alice Stroud Elementary School |

## Regulatory Framework

### Stanislaus County General Plan

Goal Two of the Stanislaus County General Plan Noise Element is to, "Protect the citizens of Stanislaus County from the harmful effects of exposure to excessive noise." Policy Two states, "It is the policy of Stanislaus County to develop and implement effective measures to abate and avoid excessive noise exposure in the unincorporated areas of the County by requiring that effective noise mitigation measures be incorporated into the design of new noise generating and new noise sensitive land uses." The following implementation measure would be applicable to the project (County 2015b):

2. New development of industrial, commercial, or other noise generating land uses will not be permitted if resulting noise levels exceed 60 $L_{DN}$ (or Community Noise Equivalent Level [CNEL]) in noise-sensitive areas. Additionally, the development of new noise-generating land uses, which are not preempted from local noise regulation, will not be permitted if resulting noise levels will exceed the performance standards contained within Table IV-2 [Reproduced here as Table 14 in areas containing residential or other noise sensitive land uses]:

**Table 14: MAXIMUM ALLOWABLE NOISE EXPOSURE – STATIONARY NOISE SOURCES**

| | Daytime (7:00 am – 10:00 pm) | Nighttime (10:00 pm – 7:00 am) |
|---|---|---|
| Hourly $L_{EQ}$ dBA | 55 | 45 |
| Maximum level ($L_{MAX}$) dBA | 75 | 65 |

Source: County 2015b

Each of the noise level standards specified in Table 14 shall be reduced by five dBA for pure tone noises, noise consisting primarily of speech or music, or for recurring impulsive noises. The standards in Table 14 should be applied at a residential or other noise-sensitive land use and not on the property of a noise-generating land use. Where measured ambient noise levels exceed the standards, the standards shall be increased to the ambient levels.

### Stanislaus County Noise Ordinance

The Stanislaus County Noise Control Ordinance (Chapter 10.46 of the Stanislaus County Code) establishes exterior noise level standards in order to control unnecessary, excessive, and annoying noise in the County (County 2023b).

Section 10.46.050, Exterior noise level standards, of the Stanislaus County Noise Control Ordinance limits the creation of any noise that causes the exterior noise level when measured at any property to exceed the noise level standards as set below in Table 15.

**Table 15: EXTERIOR NOISE LEVEL STANDARDS**

| Designated Noise Zone | 7:00 am – 9:59 pm ($L_{MAX}$)[1] | 10:00 pm – 6:59 am ($L_{MAX}$)[1] |
|---|---|---|
| Residential | 50 | 45 |

Source: County Code Section 10.46.050

[1] Maximum A-Weighted Sound Level as Measured on a Sound Level Meter ($L_{MAX}$)

Section 10.46.060, Specific noise source standards, E., Construction Equipment, of the Stanislaus County Noise Control Ordinance limits construction noise to 75 dBA between the hours of 7:00 p.m. and 7:00 a.m. at the receiving property line of any property with a dwelling unit.

City of Modesto General Plan

The Environmental Resources, Open Space and Conservation chapter of the City of Modesto General Plan includes a Noise Element that provides noise level standards by land use type. The ambient noise environment in the city is influenced primarily by roadway traffic, intermittent railroad operations, and aircraft operations. The Noise Element applies to the city as a whole and identifies policies to minimize exposure to excessive noise sources. Table VII-2, Noise and Compatibility Matrix, in the City's Noise Element, noise levels of 65 CNEL or below are considered normally acceptable for residential land use categories and noise levels of 70 CNEL or below are considered normally acceptable for schools (City 2019b).

The following policies identified in the Noise Element are relevant to the project (City of Modesto, 2019b):

3. Sensitive Receptors

Sensitive noise receptors are persons and facilities that could be adversely affected by noise. Sensitive receptors in Modesto include residences, hospitals, parks, churches, and schools. The following policies apply to development in all areas of the City.

a. Implement noise-reducing construction practices as conditions of approval where substantial construction-related noise impacts would be likely to occur, such as with extended periods of pile driving, or where construction is expected to continue or where sensitive receptors would be affected by construction noise. Conditions of approval may include, but are not limited to:

    - Require construction equipment, including air compressors and pneumatic equipment to have properly maintained mufflers;
    - Require impact tools to be equipped with shrouds or shields;
    - Require that the quietest equipment available be used; and,
    - Require selection of haul routes that affect the fewest number of people.

f. For proposed non-transportation noise sources, reduce noise levels so as not to exceed the allowable noise exposure thresholds specified in Table V.3.9 [recreated here as Table 16] at the property line of residential or other noise-sensitive land uses.

**Table 16: NOISE EXPOSURE – STATIONARY NOISE SOURCES**

| | Daytime (7:00 am – 10:00 pm)[1] | Nighttime (10:00 pm – 7:00 am)[1] |
|---|---|---|
| Hourly $L_{EQ}$ dBA | 55 | 45 |
| Maximum level ($L_{MAX}$) dBA | 75 | 65 |

Source: City 2019b

[1] Citywide, excluding downtown.

* Each of the noise level standards shall be reduced by five (5) dBA for pure tone noises, noise consisting primarily of speech or music, or for recurring impulsive noises. Where measured ambient noise levels exceed the standards, the standards shall be increased to the ambient levels.

** If the existing ambient noise level at the receiving use exceeds the thresholds, then the noise level standards shall be increased to account for the ambient noise level.

g. For construction activities involving high-powered vibratory tools or pile driving within 200 feet of an existing structure, demonstrate that project construction would not exceed the Caltrans construction vibration thresholds to ensure that no damage to sensitive structures would occur.

City of Modesto Noise Ordinance

Title 4, *Public Welfare, Safety, and Health*, of the Modesto Code of Ordinance includes provisions to control the level and frequency of disturbing, excessive, offensive, or unusually loud noise that may jeopardize the health, welfare, or safety of citizens in the city. Sound-level limitations relevant to the Proposed Program are provided under Chapter 9, *Noise Regulations*, Section 4-9.103 prohibits the following (City 1991):

(a) The loud and raucous discharge into the open air of the steam of any steam equipment or exhaust from any stationary internal-combustion engine.

(b) The loud and raucous operation or use of any of the following before 7:00 a.m. or after 9:00 p.m. daily (except Saturday and Sunday and State or federal holidays, when the prohibited time shall be before 9:00 a.m. and after 9:00 p.m.):

(1) A hammer, or any other device or implement used to pound or strike an object.

(2) An impact wrench, or other tool or equipment powered by compressed air.

(3) A hand-powered saw.

(4) Any tool or piece of equipment powered by an internal-combustion engine such as, but not limited to, chain saw, backpack blower, and lawn mower. Except as included in subsection (a)(6) of the Modesto Code of Ordinance, motor vehicles, powered by an internal-combustion engine and subject to the California Vehicle Code, are excluded from this prohibition.

(5) Any electrically powered (whether by alternating current electricity or by direct current electricity) tool or piece of equipment used for cutting, drilling, or shaping wood, plastic, metal, or other materials or objects, such as, but not limited to, a saw, drill, lathe, or router.

(6) Any of the following: heavy equipment (such as, but not limited to, bulldozer, steam shovel, road grader, back hoe), ground drilling and boring equipment (such as, but not limited to, derrick or dredge), hydraulic crane and boom equipment, portable power generator or pump, pavement equipment (such as, but not limited to, pneumatic hammer, pavement breaker, tamper, compacting equipment), pile-driving equipment, vibrating roller, sand blaster, gunite machine, trencher, concrete truck, and hot kettle pump.

(7) Any construction, demolition, excavation, erection, alteration, or repair activity.

Section 4-9.104 exempts the following from the provisions of the Modesto Code of Ordinance Chapter 9 (City 1991):

Activities on or in publicly owned property and facilities, or by public employees while in the authorized discharge of their responsibilities, are exempt provided that such activities have been authorized by the owner of such property or facilities or its agent or by the employing authority.

## Methodology and Assumptions

### Noise Modeling Software

Project construction noise was analyzed using the U.S. Department of Transportation (USDOT) Roadway Construction Noise Model ([RCNM]; USDOT 2008), which utilizes measurements of sound levels from standard construction equipment.

### Construction Activities

Construction of the project MAR basins, pipelines, and pump stations would require the use of off-road construction equipment. Construction off-road equipment assumptions were provided by the project engineer for the following activities:

- Site Preparation – All Sites: Loader, grader, dozer, tractor, dump truck.
- Demolition – All Sites: excavator, dump truck
- Grading – La Coste Lane MAR Basin Site: loader, grader, dozer, tractor.
- Pipe Installation – All Sites: Crane, excavator, loader.
- Paving – Ustach Park MAR Basin Site and La Coste Lane MAR Basin Site: paver, roller, dump truck.

The noise levels (measured at a distance of 50 feet) and typical operating time percentage of the project off-road construction equipment, as reported by the RCNM, is shown in Table 17.

**Table 17: CONSTRUCTION EQUIPMENT NOISE LEVELS**

| Construction Equipment | Percent Operating Time | Noise Level at 50 feet (dBA $L_{EQ}$) |
|---|---|---|
| Crane | 16 | 72.6 |
| Dozer | 40 | 77.7 |
| Dump Truck | 40 | 72.5 |
| Excavator | 40 | 76.7 |
| Loader | 40 | 75.1 |
| Grader | 40 | 81.0 |
| Paver | 50 | 74.2 |
| Roller | 20 | 73.0 |
| Tractor | 40 | 80.0 |

Source: RCNM (USDOT 2008)

## Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the project would result in a significant adverse impact if it would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a General Plan or noise ordinance;

- Generate excessive ground-borne vibration or ground borne noise levels; or

For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within two miles of a public use airport or private airstrip, expose people residing or working in the project area to excessive noise.

For construction noise, per the City Municipal Code, operating of construction equipment or conducting construction activities before 7:00 a.m. or after 9:00 p.m. Monday through Friday, and before 9:00 a.m. and after 9:00 p.m. on Saturday, Sunday, and State or federal holidays, are prohibited. Neither the City nor the County have adopted standards to determine the level at which temporary noise resulting from construction activities performed by a public agency would adversely affect nearby NSLUs. The Federal Transit Administration (FTA) has recommended construction noise assessment criteria. Using option A, General Assessment, daytime construction noise received by a residential land use exceeding 90 dBA $L_{EQ}$ (1 hour) and nighttime construction noise received by a residential land use exceeding 80 dBA $L_{EQ}$ (1 hour), measured at the residential property line, would result in a significant impact (FTA 2018).

For operational noise, per the City General Plan, a significant noise impact would be identified where the operation of noise-generating land uses would create noise levels that exceed the noise and land use compatibility standards as established by the City of Modesto. Noise levels of 75 dBA or below are considered “normally acceptable” for most land use categories and “clearly unacceptable” at 75 dBA or greater (City 2019b).

The County Code, Section 10.46.070 established limits for acceptable vibrations. For work conducted in a public right-of-way or on public land and within 150 feet of any occupied building, vibrations exceeding 0.01 in/sec PPV would result in a significant impact.

## Impact Analysis

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

**Less than significant impact with mitigation.**

Construction Noise

As discussed in *Methodology and Assumptions*, above, construction of the MARs and pipelines would require the use of off-road construction equipment. Due to the nature of construction activity, the number and locations of operating equipment would vary throughout the construction period and throughout each workday. It would be highly unlikely that all anticipated construction equipment would operate concurrently in proximity to the same NSLU. The FTA recommends the potential impact of construction equipment noise be evaluated by assuming that the two noisiest pieces of equipment for a construction activity would be operating concurrently during an hour, potentially affecting the closest NSLU to that activity (FTA 2018).

As discussed in *Methodology and Assumptions*, all MAR sites would require site preparation, demolition, and pipeline installation; the LCL MAR site would require grading; and the Ustach Park MAR and LCL MAR would require paving repair. Site preparation and grading would involve heavy equipment moving around each MAR site basin and off-street pipeline alignment. The two noisiest pieces of equipment for site preparation and grading would be a grader and a tractor which were conservatively assumed to operate at an average distance of 100 feet from a residential or school NSLU over the course of one hour. Demolition would require equipment to remove old concrete and asphalt, primarily in the pipeline alignment of each MAR site. The two noisiest pieces of equipment for demolition would be an excavator and a dump truck which were conservatively assumed to operate at an average distance of 25 feet from a residential or school NSLU over the course of one hour. Paving repair would involve heavy equipment moving around the on-street pipeline alignment for the Ustach Park MAR and LCL MAR site. The two noisiest pieces of equipment for paving repair would be a paver and a roller which were conservatively assumed to operate at an average distance of 25 feet from a residential or school NSLU over the course of one hour. The resulting combined noise of the noisiest construction equipment for each activity is compared to the FTA one-hour 90 dBA $L_{EQ}$ daytime standard for residential land uses in Table 18.

**Table 18: CONSTRUCTION NOISE**

| Site/Activity/Equipment | Average Distance to NSLU (feet) | Combined Noise (dBA $L_{EQ}$) | Exceed FTA 90 dBA $L_{EQ}$ standard? |
|---|---|---|---|
| All Sites/Site Preparation/Grader and Tractor | 100 | 77.5 | *No* |
| All Sites/Demolition/Excavator and Dump Truck | 25 | 84.1 | *No* |
| La Coste Lane MAR/Grading/Grader and Tractor | 100 | 77.5 | *No* |
| All Sites/Pipeline Installation/Excavator and Loader | 25 | 85.0 | *No* |
| the Ustach Park MAR and La Coste Lane MAR/Paving Repair/Paver and Roller | 25 | 82.7 | *No* |

Source: RCNM (USDOT 2008); FTA 2018
NSLU = Noise sensitive land use

As shown in Table 18, the calculated noise from construction equipment would not exceed the FTA residential one-hour daytime standard. As discussed in *Regulatory Framework*, above, per the Modesto Code of Ordinances, Section 4.9-103, construction activities are prohibited before 7:00 a.m. or after 9:00 p.m. Monday through Friday, and before 9:00 a.m. and after 9:00 p.m. on Saturday, Sunday, and State or federal holidays. However, Section 4.9-104 exempts activities conducted on public land or by public employees from the provisions of the noise ordinance. Since the project would be conducted by the City (or by contractors for the City) on public land, nighttime construction activities would not be prohibited. The FTA residential one-hour nighttime standard is 80 dBA $L_{EQ}$ (FTA 2018). Some construction activities would exceed the FTA nighttime standard of 80 dBA $L_{EQ}$ and the impact would be potentially significant. Mitigation Measure NOI-1 would prohibit project construction from occurring during the nighttime hours specified in the noise ordinance Section 4.9-103. With implementation of mitigation measure NOI-1, project construction noise levels would not exceed the FTA daytime or nighttime standard, and the impact would be less than significant with mitigation incorporated.

### Operational Noise

Both the Ustach Park MAR Basin and the LCL MAR Basin would require a new pump station. Each station would consist of two electric motor driven submersible low head lift pumps with 5 to 8 horsepower motors. Submersible electric pumps place the motors and impellers below grade and small pumps such as those proposed by the project produce very little noise at the surface.

The LCL MAR Basin pump station would be located near Garst Road and the MID Moulton Lateral Three at the southeast corner of the LCL P2, see Figure 5. The closest NSLUs to the LCL MAR Basin proposed pumpstation location would be the Alice Stroud Elementary School with recreation fields approximately 40 feet northeast of the pump station and classroom buildings approximately 400 feet east of the pump station. The Ustach Park MAR Basin pump station would be located near the northeast corner of the intersection of Sylvan Avenue and Roselle Avenue. The closest NSLUs to the Ustach Park MAR Basin proposed pump station location would be a single-family home approximately 225 feet to the south. Due to the below grade installation, low sound levels of small submersible pumps, and the distance to the closest NSLUs, operation of the pump stations would not result in noise levels exceeding the standards in either the City General Plan and noise ordinance or the County General Plan and noise ordinance.

Long term operation of the MARs and pump stations would require periodic maintenance checks using light duty trucks and seasonal vegetation management using powered equipment. However, periodic maintenance and vegetation management activities would be similar to activities already conducted on the MAR sites and canals by City and MID personnel and/or contactors and would not result in new noise sources or increases in ambient noise levels. Therefore, the long-term operational noise generated by the project would be less than significant.

### Impact Conclusion

With incorporation of Mitigation Measure NOI-1 to limit construction hours, short-term construction activity or long-term operation of the project would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the County or City General Plans or noise ordinances. The impact would be less than significant with mitigation incorporated.

**Mitigation Measure NOI-1: Construction Hours**

Prior to construction, the City shall ensure that all construction contracts and/or applicable construction documents specify that operation of construction equipment on the project site, or project construction activities (including equipment staging), shall not occur before 7:00 a.m. or after 9:00 p.m. Monday through Friday; or before 9:00 a.m. and after 9:00 p.m. on Saturday, Sunday, and State or federal holidays, are prohibited.

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

**Less than significant impact with mitigation.** A source of vibration during pavement repair following pipeline installation in public street would be a vibratory roller. A vibratory roller would primarily be used for aggregate and asphalt compaction as part of paving repair for the Ustach Park Basin and LCL pipeline alignments. Once operational, the proposed project would not be a source of groundborne vibrations. A large vibratory roller creates approximately 0.21 in/sec peak particle velocity (PPV) at a distance of 25 feet (Caltrans 2020). As discussed *in Regulatory Framework*, for construction activity in a public right-of-way or on public land and with 150 feet of any individual (e.g., within 150 feet of an occupied building), per the County Noise Ordinance Section 10.46.070, vibrations in excess of 0.01 in/sec PPV threshold would be significant. At a distance of 150 feet, a vibratory roller would create a PPV of 0.03 in/sec. This would exceed the County Ordinance standard of 0.01 in/sec, and the impact would be potentially significant.[1] Mitigation Measure NOI-02 would require City personnel and/or contactors to ensure that vibratory rollers to be used for project construction would be used in static mode only (no vibrations) when operated within 150 feet of any occupied building. With implementation of Mitigation Measure NOI-2, the project would not generate excessive ground-borne vibration levels and the impact would be less than significant with mitigation incorporated.

**Mitigation Measure NOI-2: Vibratory Roller**

Prior to construction, the City shall ensure that all construction contracts and/or applicable construction documents specify that all vibratory rollers shall be used in static mode only (no vibrations) when operating within 150 feet of an occupied building.

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

**No impact.** The closest airport to the project site is the Modesto City-County Airport, approximately 2.7 miles southwest of the LCL MAR Basin Site (the closest project site to the airport). Per the Stanislaus County Airport Land Use Compatibility Plan, only the Well 65 MAR Basin Site is within the Modesto City-County Airport influence area and none of the project MAR sites are within the Modesto City-County Airport noise contours (60 or more CNEL; Stanislaus County Airport Land Use Commission 2016). Therefore, although the project sites are subject to overflight by aircraft, people working in the project area would not be exposed to excessive levels of noise due to aircraft or airport operations, and no impact would occur.

[1] Equipment PPV (in/sec) = Reference PPV * $(25/D)^n$, where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through the ground); formula from Caltrans 2020.

# XIV. Population and Housing

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

## Environmental Setting

The City is the largest incorporated city in Stanislaus County and accounts for approximately 40 percent of the County's population. The California Department of Finance estimates the City's population was 209,186 as of January 1, 2015. The population anticipated by the City's General Plan and the City Master EIR is between 334,000 and 357,000 people by 2025. The estimated capacity within the City's General Plan boundary is approximately 428,000 (City 2019b).

## Impact Analysis

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

**Less than significant impact.** The proposed project would construct five MAR basins in order to improve groundwater supply quality and sustainability. The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin would convert existing stormwater retention basins to MAR basins. The LCL P1 North MAR Basin and the LCL P2 South MAR Basin would be constructed on City-owned, fallowed agricultural lands that formerly were irrigated with water from MID Lateral Two and are currently vacant.

Construction of the proposed project is expected to use employees from the local employment force and would not require employees to relocate to the project area. Staff that currently run the City's water system and/or storm drainage system would have the capabilities of managing the proposed projects' operational and maintenance tasks, as they are similar to existing tasks within the same service territory. Operational tasks would be completed when water from MID is being delivered into the basins. This may require minimal increased staffing and/or equipment needs of the City's Water Division as needed. Therefore, the proposed project would not result in a direct increase in population or the use of public facilities in the area but may require increased staffing needs for the City. The impact would be less than significant.

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

**No impact.** The proposed project would construct five MAR basins in the City. The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin would convert existing stormwater retention basins to MAR basins. The LCL P1 North MAR Basin and the LCL P2 South MAR Basin would be constructed on City-owned, fallowed agricultural lands. The proposed basins and associated water conveyance infrastructure would not displace existing people or housing. No impact would occur.

## XV. Public Services

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | |
| a) Fire protection? | ☐ | ☐ | ☒ | ☐ |
| b) Police protection? | ☐ | ☐ | ☒ | ☐ |
| c) Schools? | ☐ | ☐ | ☒ | ☐ |
| d) Parks? | ☐ | ☐ | ☒ | ☐ |
| e) Other public facilities? | ☐ | ☐ | ☒ | ☐ |

### Environmental Setting

The nearest fire station to the Well 65 MAR Basin is City Fire Department Station 3, located approximately 1.3 miles southwest of the site. The nearest fire station to the Merle Avenue MAR Basin, LCL P1 North MAR Basin, and LCL P2 South MAR Basin is City Fire Department Station 9, located approximately one mile southeast of the Merle Avenue MAR Basin and approximately 0.5 mile northwest of the LCL P1 North MAR Basin and LCL P2 South MAR Basin. The nearest fire station to the Ustach Park MAR Basin is City Fire Department Station 7, located approximately 1.4 miles northwest of the site.

The nearest police station to the MAR basins is the City Police Department, located between 4 to 6 miles east of the five MAR basins.

The proposed project is within the Sylvan Union School District and the Empire Union School District. The nearest school to the Merle Avenue MAR Basin Site is Savage Middle School located approximately 1,500 feet northeast of the site. The nearest school to the Well 65 MAR Basin Site is Orchard Elementary School located approximately 300 feet northwest of the site. The nearest school to the Ustach Park MAR Basin Site is Ustach Middle School, located approximately 150 feet west of the site.

The nearest school to the LCL P1 North MAR Basin Site and the LCL P2 South MAR Basin Site is Alice Stroud Elementary School, located approximately 150 feet directly south of the LCL P1 North MAR Basin Site and 25 feet east of the LCL P2 South MAR Basin Site.

Existing parks within the vicinity of the proposed project area include Ustach Park, Sanders Community Park, Freedom Park, Orchard Park, and Sonoma Park. The nearest park to the Well 65 MAR Basin is Sonoma Park, located approximately 0.3 mile south of the site. The nearest park to the Merle Avenue MAR Basin, LCL P1 North MAR Basin, and LCL P2 South MAR Basin is Freedom Park, located approximately 0.3 mile northeast of the Merle Avenue MAR Basin, and approximately 1.4 miles northwest of the LCL P1 North MAR Basin and LCL P2 South MAR Basin. The nearest park to the Ustach Park MAR Basin is Ustach Park, located 20 feet north of the site.

## Impact Analysis

*Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services?*

a) Fire protection?

**Less than significant impact.** The proposed project currently receives services from the City Fire Department. The proposed project would not require construction of new buildings or structures that would create an increased demand for fire protection. The proposed project would construct MAR basins and their associated water conveyance including subterranean and/or above ground piping, canal turnouts, outfall structures, and pump stations. Due to the small amount of development currently located on the proposed project site, proposed improvements would not result in significant additional demand for fire protection services. Additionally, three out of the five MAR basins would convert existing stormwater retention basins to MAR basins, that already receive fire service from the City. As such, the proposed project would not result in the provision of or the need for new or physically altered protection facilities. The potential for a minor increase in demand for fire services may occur during construction or maintenance of the MAR basins. However, these minor public service demands would not overburden the City Fire Department. Therefore, the impact related to fire protection would be less than significant.

b) Police protection?

**Less than significant impact.** Police services within the proposed project area would continue to be provided by the City Police Department. Proposed improvements, including the MAR basins and the water conveyance structures, would not result in additional demand for police protection services. Additionally, three out of the five MAR basins would convert existing stormwater retention basins, that already receive police service from the City. As such, the proposed project would not result in the provision of or need for new or physically altered police protection facilities. The potential for a minor increase in demand for services may occur for police protection if a crime or accident occurs during construction or maintenance of the MAR basins. However, these minor demands would not overburden the City Police Department. Therefore, the impact related to police protection would be less than significant.

c) Schools?

**No impact.** The proposed MAR basins and the associated water conveyance structures would not increase the number of residents in the City. Therefore, no new school facilities would be necessary to serve the proposed project. No impact would occur.

d) Parks?

**Less than significant impact.** The proposed project would construct five MAR basins and associated water conveyance structures. The proposed MAR basins would not increase demand for recreational and park facilities, as the project would not increase population. The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin would convert existing stormwater retention basins to MAR basins. The LCL P1 North MAR Basin and the LCL P2 South MAR Basin would be constructed on City-owned, fallowed agricultural lands that formerly were irrigated with water from MID Lateral Two and are currently vacant.

The Ustach Park MAR Basin and associated water conveyance would be constructed on an existing stormwater retention basin site, located directly south of Ustach Park. A proposed 12-inch pipeline would be constructed along the eastern boundary of Ustach Park. The purpose of the pipeline would be to deliver water from the proposed pump station to the MAR basin. Construction of the proposed piping would be temporary, and the piping would be installed underground. An alternative water conveyance to the Ustach Park MAR Basin would include construction of a pipeline to the existing Cavil Drain, located west of the MAR basin, to supply water for the Ustach Park MAR Basin. Please refer to Section 9.XVI Recreation, for additional analysis of parks and recreational facilities. As a result, the impact would be less than significant.

e) Other public facilities?

**Less than significant impact.** The proposed project site is within the urban area of the City served by adequate police, fire, and emergency services. The proposed MAR basins and the associated water conveyance structures would not increase the number of residents in the City and would therefore not cause an increase in demand for schools, parks, and other public facilities. Construction and operation of the proposed project would not require the construction or expansion of parks and other public facilities. The impact would be less than significant.

# XVI. Recreation

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☐ | ☒ |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☒ |

## Environmental Setting

In 2015, the City identified the following as parks that are developed or undeveloped: 764 acres of regional parks (346 acres developed and 418 acres undeveloped), 130 acres of community parks (91 acres developed and 39 acres undeveloped), 343 acres of neighborhood parks (328 acres developed and 15 acres undeveloped), 8 acres of developed miscellaneous parks (including tot lots and public squares), 11 community centers (6 developed and 5 undeveloped), one family aquatic center (undeveloped), 363 acres of golf courses (all developed), 12 acres of minor league professional baseball field complex (developed), and 208 acres of sports complex facilities (all undeveloped but planned as outlined in the Regional Sports Facility Study prepared for County and the City, adopted in March 2002) (City 2019b).

Existing parks within the vicinity of the project area include Ustach Park, Sanders Community Park, Freedom Park, Orchard Park, and Sonoma Park. The nearest park to the Well 65 MAR Basin is Sonoma Park, located approximately 0.3 mile south of the site. The nearest park to the Merle Avenue MAR Basin, LCL P1 North MAR Basin, and LCL P2 South MAR Basin is Freedom Park, located approximately 0.3 mile northeast of the Merle Avenue MAR Basin, and approximately 1.4 miles northwest of the LCL P1 North MAR Basin and LCL P2 South MAR Basin. The nearest park to the Ustach Park MAR Basin is Ustach Park, located 20 feet north of the site.

## Impact Analysis

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

**No impact.** As discussed in Section 9.XIV., Population and Housing, the proposed project would not induce direct population growth. The proposed project would construct five MAR basins and associated water conveyance structures. Proposed project construction and operation would not result in a direct increase in population or demand for recreational facilities in Ustach Park and in the surrounding parks. Therefore, no impacts would occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

**No impact.** The proposed project would not include the development of a new recreational facility and would not result in an expansion of an existing facility. Therefore, no impacts to the environment as a result of new or expanded recreational facilities would occur.

## XVII. Transportation

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

### Environmental Setting

The City categorizes roadways in its circulation network as freeways, expressways, arterial streets, collector streets, and local streets and are summarized as follows (City 2019b):

- Freeways. Intended for long range interregional travel.
- Expressways. High-capacity travel corridors with limited access at 0.5- to 1-mile intervals depending on the expressway classification, with traffic signals at major intersections.
- Arterial Streets. Immediate capacity travel corridors primarily intended to serve major movements between different land uses or different parts of the City.
- Collector Streets. Connection between local streets and arterial streets.
- Residential/Local Streets. Two-lane, low-volume streets with the exclusive function of providing access to properties and connecting higher-order roadways.

The City has four types of improved bikeways including Class I, Class II, Class III, and Class IV, summarized as follows (City 2019b):

- Class I. Paved bike paths that are separated from city streets.
- Class II. Striped lanes on major city streets.

- Class III. On-street routes identified by “bicycle route” signs.
- Class IV. Facilities are one- or two-way dedicated bicycle facilities physically separated from vehicle traffic lanes.

Bus service within the City includes the Modesto Area Express (MAX), Modesto Dial-A-Ride, Stanislaus Regional Transit (StaRT), and Greyhound. Train service includes Amtrak, Altamont Commuter Express (ACE), and Bay Area Rapid Transit (BART) connections (City 2019b). Railroad tracks and existing passenger rail move north–south along the eastern General Plan Boundary line. Railroad tracks within the City are also located along SR 99 and SR 132 (City 2019a).

## Impact Analysis

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

**Less than significant impact.** The Well 65 MAR Basin and the Merle Avenue MAR Basin would be located directly south of Merle Avenue. Merle Avenue is designated as a residential/local street (City 2019a). The LCL P1 North MAR Basin would be located on the northern side of La Coste Lane, and on the western side of Frazine Road. The LCL P2 South MAR Basin would be located on the southern side of La Coste Lane, the eastern side of Norseman Drive, and the northern side of Garst Road. La Coste Lane, Frazine Road, Norseman Drive, and Garst Road are designated as residential/local streets (City 2019a). LCL P1 North MAR Basin and LCL P2 South MAR Basin would be located east of Claus Road, which is designated as an expressway (City 2019a).

The Ustach Park MAR Basin would be located at the intersection of Kodiak Drive and Bear Club Lane. Both Kodiak Drive and Bear Club Lane are designated as residential/local streets (City 2019b). The Ustach Park MAR Basin would construct water conveyance to the MAR basin by connecting a proposed 12-inch pipeline to an existing outfall structure located on the northeastern corner of the site. The proposed 12-inch diameter pipeline would begin along the eastern boundary of Ustach Park and move north until it reaches Hillglen Avenue. The pipeline would then move east along Hillglen Avenue until it reaches Roselle Avenue. The pipeline would then move north along Roselle Avenue until it reaches the proposed pump station located in the northeast corner of the intersection of Roselle Avenue and Sylvan Avenue. Hillglen Avenue is designated as a residential/local street and Roselle Avenue and Sylvan Avenue are designated as minor arterials (City 2019b).

An alternative water conveyance to the Ustach Park MAR Basin would include construction of a pipeline to the existing Cavil Drain, located west of the MAR basin, to supply water for the Ustach Park MAR Basin. The Cavil Drain would be located along Aria Way, and along the western border of Ustach Park and Ustach Middle School. Aria Way is considered a residential/local street (City 2019b).

Construction along the expressway, Claus Road, and minor arterials, Roselle Avenue and Sylvan Avenue, may result in temporary disturbance to traffic or lane closures. However, as mentioned in Section 9.IX., Hazards and Hazardous Materials, question f), a Project Management Plan would be prepared by the City prior to construction to reflect the specific project timeframes and actions and how temporary impacts related to project construction would be dealt with.

According to the City General Plan, Merle Avenue, Sylvan Avenue, and Roselle Avenue are Class II Bike Paths, and Claus Road is a Class I Bike Path. Railroad tracks and existing passenger rail are located

approximately 1,000 feet east of the LCL P1 North MAR Basin and LCL P2 South MAR Basin. As the proposed project does not propose new roadways or reconfiguration of existing roadways, the project would not conflict with existing bike paths, bus, and train service within the City. The Project Management Plan would ensure construction would not conflict with these services.

Therefore, with preparation and implementation of a Project Management Plan, the proposed project would not conflict with the City's circulation system. The impact would be less than significant.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

**Less than significant impact.** According to the Technical Advisory on Evaluating Transportation Impacts in CEQA, small land use projects that would generate or attract fewer than 110 trips per day generally may be assumed to cause a less than significant transportation impact (OPR 2018).

Construction of the five MAR basins would be temporary and intermittent, and all construction waste would be hauled to a City-owned WWTP. The City owns and operates two WWTP, located on Sutter Avenue and Jennings Road. The Sutter Avenue WWTP treats approximately 20 million gallons of wastewater per day before traveling six miles of pipelines to the facility at Jennings Road that treats approximately 15 million of those gallons further to tertiary (recycled water) levels (City 2020). The five MAR basins are located between five and 6 miles northeast of the Sutter Avenue WWTP and are located between 11 and 12 miles northeast of the Jennings Road WWTP.

Construction of the Merle Avenue MAR Basin would require an estimated 109 dump truck round trips total (or 218 one-way trips) during the site preparation timeframe to a City owned WWTP, approximately 15 miles from the site, and would require one dump truck load during demolition to Gilton Resource Recovery, approximately 11 miles from the site.

Construction of the Well 65 MAR Basin would require an estimated eight dump truck round trips total (or 16 one-way trips) during the site preparation timeframe to a City owned WWTP, approximately 6.5 miles from the site, and would require two dump truck loads during demolition to Gilton Resource Recovery, approximately 6 miles from the site.

Construction of the Ustach Park MAR Basin would require an estimated 50 dump truck round trips total (or 100 one-way trips) during the site preparation timeframe to a City owned WWTP, approximately eight miles from the site, and would require approximately 82 dump truck loads during demolition to Gilton Resource Recovery, approximately six miles from the site.

Construction of the LCL P1 North and LCL P2 South MAR Basins would require an estimated 264 dump truck round trips total (or 528 one-way trips) during the site preparation timeframe to a City owned WWTP, approximately 8.5 miles from the sites, and would require approximately 82 dump truck loads during demolition to Gilton Resource Recovery, approximately 3.5 miles from the sites. Existing cut/fill would be balanced on-site during grading.

The total required dump truck trips during site preparation to a City owned WWTP would be 431 trips (or 862 one-way trips), and the total number of dump truck loads during demolition to Gilton Resource Recovery would be 167 trips. These trips represent the total number of dump truck trips required during the entire site preparation and demolition period. As construction of the MAR basins would be temporary and intermittent, the proposed project would not generate a significant increase in vehicles mile traveled (VMT), and impacts related to construction would be less than significant.

During operation, occasional trips may be required by City employees for maintenance activities on an as-needed basis; however, operational trips would not exceed 110 trips per day and therefore, would not generate a significant increase in VMT. Therefore, impacts related to operation would be less than significant.

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

**No impact.** The proposed project does not propose new roadways or reconfiguration of existing roadways. Therefore, the proposed project would not increase hazards due to a geometric design feature or incompatible use. No impact would occur.

d) Result in inadequate emergency access?

**Less than significant impact.** During proposed project construction, heavy construction-vehicle equipment could interfere with emergency access on Merle Avenue, Roselle Avenue, Sylvan Avenue, La Coste Lane, Frazine Road, Norseman Drive, Garst Road, and Claus Road. However, such trips would be brief and infrequent. Additionally, a Project Management Plan would be prepared by the City prior to construction to reflect the specific project timeframes and actions and how temporary impacts to emergency access related to proposed project construction would be dealt with.

O&M activities for the MAR basins would require occasional trips by City employees for maintenance activities on an as-needed basis. Upon operation, the proposed project would not interfere with emergency vehicle access to the five MAR basins. Therefore, the impact would be less than significant.

## XVIII. Tribal Cultural Resources

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: | | | | |
| i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or | ☐ | ☒ | ☐ | ☐ |

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| 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 subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | ☐ | ☒ | ☐ | ☐ |

A Tribal Cultural Resource (TCR) Memorandum was prepared by HELIX on May 12, 2023 (HELIX 2023d). The TCR Memo is included as Appendix F.

## Environmental Setting

CEQA, as amended in 2014 by AB 52, requires that the City provide notice to any California Native American tribes that have requested notice of projects subject to CEQA review, and consult with tribes that responded to the notice within 30 days of receipt with a request for consultation. Section 21073 of the Public Resources Code (PRC) defines California Native American tribes as "a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004." This includes both federally and non-federally recognized tribes. For the City, these include the following tribes that previously submitted general request letters, requesting such noticing:

- Randy Yonemura, Ione Bank of Miwok Indians
- Katherine Erolina Perez, Northern Valley Yokuts

The purpose of consultation is to identify TCRs that may be significantly impacted by the proposed project, and to allow the City to avoid or mitigate significant impacts prior to project approval and implementation. Section 21074(a) of the PRC defines TCRs for the purpose of CEQA as:

> *Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:*
>
> *a) included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or,*
> *b) included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or,*
> *c) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.*

Because the first two criteria also meet the definition of a Historical Resource under CEQA, a TCR may also require additional consideration as an Historical Resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators and can only be identified by a culturally affiliated tribe, which has been determined under State law to be the subject matter expert for TCRs.

CEQA requires that the City initiate consultation with tribes at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures. Therefore, in accordance with the requirements summarized above, the City carried out, or attempted to carry out, tribal consultation for the project.

On April 3, the City sent Project notification letters to the two California Native American tribes named above that had previously submitted general consultation request letters pursuant to Section 21080.3.1(d) of the PRC. The letter provided each tribe with a brief description of the Project and its location, the contact information for the City's authorized representative, and a notification that the tribe has 30 days to request consultation. The formal invitations noted that if no response was received within 30 days that consultation would be considered closed.

As of August 4, 2023, no responses have been received from the Ione Band of Miwok Indians and Northern Valley Yokuts and consultation pursuant to PRC Section 21080.3.1 has been concluded. Therefore, on May 3, 2023, 30 days after formal invitations were mailed to tribal representatives, consultation was formally terminated.

## Impact Analysis

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

    i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

**Less than significant impact with mitigation.** As discussed in Section V., Cultural Resources, HELIX's CCIC records search revealed that six cultural resource studies have been previously conducted within 0.25 mile of the APE, and that none of these studies overlapped with portions of the current APE. This record search also demonstrated that one previously recorded resource has been documented within 0.25 mile of the APE, P-50-002006 (CA-STA-000424H) the Burlington Northern & Sante Fe Railroad. This resource has been recommended as ineligible for listing in NRHP and CRHR and is not anticipated to be affected by the proposed project.

On March 23, 2023, HELIX requested that the NAHC conduct a search of their SLF for the presence of Native American sacred sites or human remains in the vicinity of the proposed project area. On March 30, 2023, HELIX received a response from the NAHC that indicated the SLF search returned negative results but that the absence of specific site information in the SLF does not necessarily indicate the absence of cultural resources within the project vicinity. As a result, the letter recommended that HELIX reach out to 13 Native American tribal representatives who may also have knowledge of cultural resources in the proposed project vicinity. On May 2, 2023, HELIX sent a letter to each of the tribal representatives listed above to request any information they may possess regarding cultural resources

in the vicinity of the APE. As of the submission of this report, HELIX has received only one response, an email from Venesa Kremer of the Wilton Rancheria Cultural Preservation Department, dated May 12, 2023. In her email, Vanesa suggested that the Wilton Rancheria does not have any site records to share, or concerns to share regarding the project moving forward. However, she suggested that the proposed project implement mitigation measures for inadvertent discoveries that might be made during construction. Mitigation Measure CUL-1 would be implemented to reduce impacts to inadvertent discoveries to a less than significant level.

On April 7, and 14, 2023, HELIX Staff Archaeologist Jentin Joe surveyed the project's APE where construction activities are anticipated to occur. Using 15-meter transects, the ground surface of all five proposed basin areas (Merle Avenue MAR Basin Site, Well 65 MAR Basin Site, Ustach Park MAR Basin Site, La Coste Lane Parcel 1 North MAR Basin Site, and La Coste Lane Parcel 2 South MAR Basin Site) as well as the proposed locations for pump houses, water conveyances, and construction laydown areas for the five proposed basin improvement areas were thoroughly inspected.

No signs of cultural resources were encountered within the Merle Avenue MAR Basin Site, Well 65 MAR Basin Site, Ustach Park MAR Basin Site, and La Coste Lane Parcel 2 South MAR Basin Site and their construction laydown areas. However, within the La Coste Lane Parcel 1 North MAR Basin Site, HELIX's surveyor encountered a series of four drainage or irrigation maintenance features cutting across the proposed basin area from west to east. This series of drainage/irrigation features was recorded as the "La Coste Field 1 Drainage/Irrigation Features" site on the appropriate DPR forms. A series of numbers etched into the cement walls on the second, third, and fourth drainage/irrigation features (1961, 1954, and 1947, respectively) may well be construction dates for the features, suggesting that these drainage/irrigation features were built during the mid-20$^{th}$ century. From HELIX's pedestrian investigation of these features, it was also clear that the features extended for some distance beneath the ground surface. A pile of cement rubble potentially associated with the drainage/irrigation features was also noted in the vicinity of Feature 3. In addition to these findings, two smaller and seemingly undated drainage/irrigation features were also located along the southern boundary of the northwestern extent of the La Coste Lane Parcel 1 North MAR Basin Site. Due to the presence of previously unrecorded resources within the La Coste Field 1 Drainage/Irrigation Features which likely date to the early to mid-20th century, and since these features clearly possess intact subsurface components and show signs of potentially consisting of additional, unrecorded components, Mitigation Measure CUL-2 would be implemented to reduce impacts to a less than significant level.

From the conclusions from the records search, Sacred Lands File search, and the confirmations from the individual tribal members, impacts to tribal cultural resources would be less than significant with mitigation.

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 subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

**Less than significant impact with mitigation.** Information about potential impacts to TCRs was drawn from the ethnographic context and the results of a records search conducted by HELIX with the CHRIS. In summary, the ethnographic information reviewed for the project, including ethnographic maps, does not identify any villages, occupational areas, or resource procurement locations in or around the current

project area. The cultural resources records search did not reveal any Native American archaeological sites within or adjacent to the proposed project area.

As summarized in Appendix F, TCR Memo, the Ione Band of Miwok Indians and Northern Valley Yokuts did not respond to the City's notification letters, it is assumed that the proposed project would not have an impact on known TCRs. There exists a potential for the discovery of previously unknown TCRs during project construction, however. If TCRs are encountered, the project activity could result in a significant impact to those resources. Implementation of unanticipated discovery procedures, as provided in mitigation measure TCR-1 below, would reduce that impact to less than significant.

**Mitigation Measure TCR-1: Unanticipated Discovery of TCRs**

If potentially significant TCRs are discovered during ground disturbing construction activities, all work shall cease within 50 feet of the find. A Native American Representative from traditionally and culturally affiliated Native American Tribes that requested consultation on the project shall be immediately contacted and invited to assess the significance of the find and make recommendations for further evaluation and treatment, as necessary. If deemed necessary by the City, a qualified cultural resources specialist, who meets the Secretary of Interior's Standards and Qualifications for Archaeology, may also assess the significance of the find in joint consultation with Native American Representatives to ensure that Tribal values are considered. Work at the discovery location cannot resume until the City, in consultation as appropriate and in good faith, determines that the discovery is either not a TCR, or has been subjected to culturally appropriate treatment, if avoidance and preservation cannot be accommodated.

## XIX. Utilities and Service Systems

| | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| Would the project: | | | | | |
| a) | Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |
| b) | Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? | ☐ | ☐ | ☒ | ☐ |
| c) | Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☒ | ☐ |

| | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| d) | Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | ☐ | ☐ | ☒ | ☐ |
| e) | Comply with federal, State, and local management and reduction statutes and regulations related to solid waste? | ☐ | ☐ | ☒ | ☐ |

## Environmental Setting

The City's water system currently serves a population of approximately 260,000 people in California's Central Valley. The City is currently the largest retail water supplier in Stanislaus County and has been providing potable water service to its urban area since 1895. The City's existing water service area consists of one large contiguous service area (defined by the City's current Sphere of Influence and includes Salida, portions of North Ceres, and several unincorporated Stanislaus County "islands" located within the City's Sphere of Influence), and several smaller outlying service areas (including Grayson, Del Rio, Ceres [Walnut Manor], and portions of Turlock; City 2019b).

The City's water system consists of a little over 900 miles of transmission and distribution pipelines. A portion of the transmission mains traversing the City is owned and operated by the MID, and these transmission mains deliver treated surface water from the MRWTP through a series of turnouts that have the ability to control water supply into the City's water distribution system.

Groundwater from the City's supply wells accounts for nearly 60 percent of the annual average water demand, with the rest from treated surface water provided by the MID. The groundwater supply is sourced from approximately 100 active wells throughout the City and distributed through approximately 74,000 service connections. The City faces ongoing challenges with non-point source contamination in its drinking water aquifers. As of 2020, 23 of the City's water supply wells, representing over 16 MGD of the system's total groundwater production capacity (50 MGD), were inactivated, abandoned, destroyed, or removed from potable use due to arsenic, nitrate, and uranium contamination.

The City's sanitary sewer system comprises more than 600 miles of wastewater collection system pipelines, ranging from six to 66 inches in diameter; 69 miles of trunk lines greater than 15 inches in diameter; an additional 15 miles of trunk lines connecting cannery food processors directly to land disposal (application) areas; and approximately 40 lift stations (also referred to as pump stations) used to pump wastewater against gravity where necessary. The Sutter WWTP provides processes such as screening, sedimentation, and grit removal. The resulting pretreated wastewater is transferred along 6.5 miles of 60-inch pipe to the Jennings WWTP (City 2019b).

Two private firms are currently engaged in the collection and transport of solid waste in the City of Modesto. Gilton Solid Waste Management and Bertolotti Disposal provide hauling and interim transfer stations for the City of Modesto's waste disposal, transformation, and diversion streams. A third hauler, Bonzi Disposal, hauls industrial waste. The Gilton transfer station has a capacity of 1,200 tons per day, and Bertolotti Disposal has a permitted capacity of 1,300 tons per day (City 2019b).

Electricity in the project area is provided by the Modesto Irrigation Districts, and natural gas is provided by Pacific Gas & Electric (PG&E). Gasoline and diesel are provided by various private businesses (City 2019b).

## Impact Analysis

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

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

**Less than significant impact.** The proposed project would construct five MAR basins and associated water conveyance infrastructure including above ground and/or subterranean pipelines, canal turnouts, outfall structure, and pump stations. The Merle Avenue MAR Basin, Well 65 MAR Basin, and Ustach Park MAR Basin would convert existing stormwater retention basins to MAR basins. The LCL P1 North MAR Basin and the LCL P2 South MAR Basin would be constructed on City-owned, fallowed agricultural lands , and are currently vacant.

For construction, it assumed that 50 percent of vegetated material will be too odorous to spread on site. Consequently, this material will be taken to the City owned WWTP's existing lay down area and spread there. Specifically, the estimated volume (in cubic yards) of vegetated material that will be taken to the City owned WWTP for each MAR basin is as follows: 1,414 CY for Merle Avenue, 101 CY for Well 65, 645 CY for Ustach Park; and 3,429 CY for LCL P1 North and LCL P2 South.

The City owns and operates two WWTP, located at Sutter Avenue and Jennings Road. The Sutter Avenue WWTP treats approximately 20 million gallons of wastewater per day before traveling six miles of pipelines to the facility at Jennings Road that treats approximately 15 million of those gallons further to tertiary (recycled water) levels (City 2020). The existing City owned WWTP would have the capacity to serve the CY of cleared materials produced during construction of the MAR basins and would not require relocation or construction of new or expanded water facilities. In addition, the City has a Water Shortage Contingency Plan that is discussed in detail in the City's Urban Water Management Plan (UWMP), which identifies the necessary steps to take in the event of a water shortage which would address any unforeseen impacts as a result of the proposed project. As mentioned in Section 9.X, no additional stormwater infrastructure would be required as a result of the proposed project. Installation of a pump station would require a tie-in to existing electric infrastructure within the City and would be serviced through existing electrical infrastructure. No natural gas or telecommunication utilities are required for construction and O&M of the proposed project. No expansion to existing utilities would be required for implementation of the proposed project. Therefore, the impact would be less than significant for question a) and c).

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

**Less than significant impact.** The proposed MAR basins would receive water from proposed water conveyance features including aboveground and/or subterranean pipelines, canal turnouts, outfall

structure, and pump stations. Water conveyance structures would be connected to MID-owned laterals, the MID Moulton Lateral Three and MID Lateral Two, and pump stations.

Water consumption in the City fluctuates seasonally with demand being lowest in the winter and highest in the summer. The City developed the 2015 UWMP that identifies existing and long-term water supply sources and describes the supply and conservation management programs for a 20 year planning timeframe (City 2015). Since the development of the 2015 UWMP, the City has implemented a number of improvements and maintenance programs in recent years to increase the system's overall efficiency by reducing water system losses (the difference between the actual volume of water treated and delivered into the distribution system and the actual metered consumption). Such losses generally result from leaks in the distribution system, unauthorized connections or use, faulty meters, unmetered services, and system or street flushing (City 2019b). The 2015 UWMP indicates that the City's normal year, single dry year, and multiple dry year supplies are adequate to meet projected demand through 2040 with water conservation (City 2019b). Therefore, the impact regarding water supplies would be less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

**Less than significant impact.** Solid waste generated from construction of the proposed MAR basins would be taken to Gilton Resource Recovery Site. Any non-recoverable waste generated during construction would be taken to Fink Road Landfill. Any wet waste generated during construction would be taken to one of the two City owned WWTP.

Merle Avenue MAR Basin: Construction of the Merle Avenue MAR Basin would generate less than one ton of solid waste. Solid waste generated during construction of the Merle Avenue MAR Basin would be taken to Gilton Resource Recovery, located approximately 11 miles from the site. The operation of the MAR basin would not generate any solid waste.

Solid waste generated from construction would include the concrete canal lining to be cut and removed to allow construction of the new canal turnout in the MID Moulton Lateral Three, any concrete road surface in the basin to be cut and removed for the new pipeline, and portions of the storm drain manhole or pump structure to be cut into and removed for the new pipeline discharge.

Well 65 MAR Basin: Construction of the Well 65 MAR Basin would generate less than one ton of solid waste. Solid waste generated during construction of the Well 65 MAR Basin would be taken to Gilton Resource Recovery, located approximately 6 miles from the site. The operation of the MAR basin would not generate any solid waste.

Solid waste generated from construction would include concrete canal lining to be cut and removed to allow construction of the new canal turnout in the MID Moulton Lateral Three, asphalt road surface in the basin to be cut and removed for the new pipeline, and portions of the storm drain manhole or pump structure to be cut into and removed for the new pipeline discharge.

Ustach Park MAR Basin: Construction of the Ustach Park MAR Basin would generate less than one ton of solid waste. Solid waste generated during construction of the Ustach Park MAR Basin would be taken to

Gilton Resource Recovery, located approximately 6 miles from the site. The operation of the MAR basin would not generate any solid waste.

Solid waste generated from construction would include curb, gutter, sidewalk, and road surfacing to be cut and removed for construction of the MID pipeline connection, pump station, and pipeline in Sylvan Avenue, Roselle Avenue, and Hillglen Avenue, and portions of the storm drain drop inlet cut into and removed for the pipeline discharge.

La Coste Lane Parcel 1 North and Parcel 2 South MAR Basins: Construction of the LCL P1 North and LCL P2 South MAR Basins would generate less than one ton of solid waste. Solid waste generated during construction of the LCL P1 North MAR Basin and P2 South MAR Basin would be taken to Gilton Resource Recovery, located approximately 3.5 miles from the sites. The operation of the MAR basin would not generate any solid waste.

Solid waste generated from construction would include demolition of the concrete liner in MID's Lateral Two to allow the construction of a new turnout, and removal of asphalt paving where the pipeline is proposed to cross La Coste Lane.

All five MAR basins would each generate less than one ton of solid waste during construction and would generate no solid waste during operation. Therefore, the proposed project would not generate solid waste in excess demand of State or local standards, negatively impact the provision of solid waste services, or conflict with federal, State, and local management and reduction statutes. The impact would be less than significant for questions d) and e).

## XX. Wildfire

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

## Environmental Setting

The City is not mapped under a Fire Hazard Severity Zone (FHSZ), as defined by the California Department of Forestry (CAL FIRE 2023). The City and surrounding areas are within a Local Responsibility Area (LRA), and the proposed project site and surrounding areas are primarily designated as "unzoned" or "moderate." The City is located in the central portion of the County, east of the Diablo Range. The wildfire season in the County occurs between May and October each year and the highest fire hazard area is in the undeveloped western and eastern portions of the County.

## Impact Analysis

*If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:*

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

**Less than significant impact.** The City is not mapped under a FHSZ, as defined by the California Department of Forestry, and is not located within a state responsibility area (SRA)(CAL FIRE 2023). Although the proposed project site is not located within an SRA, construction of the proposed project would have the potential to impact access for emergency services, such as fire. However, with implementation of a Project Management Plan, impacts would be reduced with input from the City. The proposed project would be located within managed areas that are periodically mowed by the City to manage vegetation leading to a reduction in wildfire risk. Access for each proposed MAR basin site would be accomplished using existing access routes and no additional utilities, access roads, or fuel breaks would be required. The proposed project would not require permanent staffing or include housing elements that would expose people to potential hazards associated with the new MAR basins. Open spaces adjacent to the proposed project would continue to be managed following existing City protocols and implementation of the MAR basins and associated water conveyance systems would not exacerbate wildfire risk within the proposed project area. Therefore, with implementation of the Project Management Plan, impacts would be less than significant.

## XXI. Mandatory Findings of Significance

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

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

**Less than significant impact with mitigation.** As detailed in this Initial Study, the proposed project would not have a significant impact on the environment and would not result in any of the impacts requiring a mandatory finding of significance provided that the mitigation measures identified herein are properly implemented and maintained as described in the Biological, Cultural, and Tribal Cultural Resource sections of this Initial Study. The mitigation monitoring and reporting plan and its identified mitigation measures as identified herein applicable to Biological, Cultural, and Tribal Cultural Resources, if properly implemented and maintained, would reduce the identified potential impacts to those resources to a level of less-than-significant.

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

**Less than significant impact with mitigation.** The majority of the proposed project impacts are related to construction. However, all impacts related to construction are temporary and short-term and would not cause a significant impact, as outlined in this Initial Study. The City of Modesto General Plan

(City 2019a) and the City of Modesto General Plan EIR (City 2019b) analyze the potential for the City's growth and identifies future growth-inducing, cumulative projects within City limits. As the City General Plan and General Plan EIR analyze future growth and development within the City, the proposed project impacts, mainly related to project construction, would not exacerbate, or cumulatively add to what was previously envisioned and analyzed within the City. Therefore, construction and operation of MAR basins under the proposed project would not result in a cumulative impact.

Key areas of concern that are discussed in the Initial Study include Biological Resources, Cultural Resources, Geology and Soils, Noise, and Tribal Cultural Resources. However, impacts relating to these key areas of concern would be mitigated to a less than significant level. Therefore, the proposed project would not have a cumulatively considerable impact, and no additional mitigation is required.

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

**Less than significant impact with mitigation.** As described herein, the proposed project would not result in any substantial adverse effects on human beings either directly or indirectly. Mitigation Measures NOI-1 and NOI-2, which identifies construction noise reduction and vibratory roller measures, respectively, would reduce potential impacts associated with temporary noise increases to a level of less than significant.

# 10.0 Mitigation Monitoring and Reporting Program

A Mitigation Monitoring and Reporting Program (MMRP) has been prepared by the City per Section 15097 of the CEQA Guidelines and is presented in Appendix G.

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