MEETING OF THE
WEST TURLOCK SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY
BOARD OF DIRECTORS

MARCH 16, 2023 – 6:00PM
SPECIAL MEETING AGENDA

TURLOCK IRRIGATION DISTRICT
BOARD ROOM 105
333 E. CANAL DRIVE
TURLOCK, CA 95380

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WEST TURLOCK SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY BOARD MEMBERS

Joe Alamo, Turlock Irrigation District
Chair
Curtis Jorritsma, Hilmar County Water District
Vice Chair

Bret Silveira, City of Ceres
Leandro Maldonado, Delhi County Water District
David Odom, Denair Community Services District
Randy Crooker, City of Hughson
Rodrigo Espinosa, Merced County
Miguel Alvarez, City of Modesto
Vito Chiesa, Stanislaus County
Kevin Bixel, City of Turlock

NOTICE REGARDING NON-ENGLISH SPEAKERS: West Turlock Subbasin Groundwater Sustainability Agency meetings are conducted in English and translation to other languages may be provided when requested ahead of time. To request interpretation services, please call (209) 883-8353 and the Agencies will make every effort to provide an interpreter.

REASONABLE ACCOMMODATIONS: In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please call (209) 883-8353. Notification 72 hours prior to the meeting will enable the Agencies to make reasonable arrangements to ensure accessibility to this meeting. If requested, the agenda and meeting materials will be made available in alternative formats to persons with disabilities.

AGENDA PACKETS: Prior to the meeting, an agenda packet is available for review online at: www.turlockgroundwater.org.

A. CALL TO ORDER / CHAIRS WELCOME

B. FLAG SALUTE

C. ROLL CALL OF BOARD MEMBERS

- *Six (6) agency representatives are needed for a quorum*

D. PUBLIC COMMENT PERIOD

Interested persons in the audience are welcome to introduce any topic within the Agency's jurisdiction. No action may be undertaken on any item not appearing on the posted agenda, except that the Board may briefly respond to the comments, refer the matter to staff, or request it be placed on a future agenda.

E. STAFF UPDATES

1. Budget Update. *Michael Clipper, WTS GSA Treasurer*

2. Technical Advisory Committee Update. *Michael Cooke, WTS GSA TAC Chair*

F. CONSENT CALENDAR: *Information concerning the consent calendar items has been included within the agenda packet. All items listed below will be acted upon by a single roll call vote of the WTS GSA Board. There will be no individual discussion of these items unless a member of the Board or public has questions concerning an item(s), at which time the item(s) will be removed for separate consideration by the Board.*

1. *Motion*: Approving Minutes of the February 9, 2023 Regular Meeting of the West Turlock Subbasin Groundwater Sustainability Agency

G. AGENDA ITEMS (including regular business items, action, reports, or public hearings)

1. ROUND 2 MULTIBENEFIT LAND REPURPOSING PROGRAM GRANT

Letter of support/commitment from the West Turlock Subbasin GSA to the California Department of Conservation for the East Turlock Subbasin GSA grant application for the Round 2 Multibenefit Land Repurposing Program. Debbie Montalbano, Turlock Subbasin Plan Manager, Mike Tietze, ETS GSA Coordinator, and/or Sarah Woolf, ETS GSA TAC Chair

Recommended Action:

Motion: Authorizing the WTS GSA Chair, or designee, to sign a letter of support/commitment from the West Turlock Subbasin GSA to the California Department of Conservation for the East Turlock Subbasin GSA grant application for the Round 2 Multibenefit Land Repurposing Program

2. CONSOLIDATED FINAL PROGRAM ENVIRONMENTAL IMPACT REPORT (PEIR)

Resolution adopting Environmental Findings with regard to the Turlock Subbasin Groundwater Sustainability Plan Program Environmental Impact Report (State Clearinghouse No. 2022010100) pursuant to the California Environmental Quality Act. Michael Cooke, WTS GSA TAC Chair and Kelley Sterle, Environmental Science Associates

Recommended Action:

Resolution No. 2023-01: Resolution of the West Turlock Subbasin Groundwater Sustainability Agency (WTS GSA) Board of Directors (Board) adopting Environmental

Findings with regard to the Turlock Subbasin Groundwater Sustainability Plan Program Environmental Impact Report (State Clearinghouse No. 2022010100) pursuant to the California Environmental Quality Act; Adopting the Findings of Fact, a Statement of Overriding Considerations, and a Mitigation Monitoring and Reporting Program

H. COMMENTS FROM THE BOARDS

Board Members may provide a brief report on notable topics of interest. The Brown Act does not allow discussion or action by the Legislative Body.

I. ADJOURN TO CLOSED SESSION

1. ***Conference with Legal Counsel – Anticipated Litigation***
   California Government Code Section 54956.9(d)(2)
   Potential Case(s): 1
   (*Valerie Kincaid, WTS GSA General Counsel*)

J. REPORT OUT OF CLOSED SESSION

Reports of any reportable action taken by the West Turlock Subbasin GSA in closed session.

K. ADJOURNMENT

F1

MINUTES OF THE REGULAR MEETING OF THE BOARD OF DIRECTORS OF THE WEST TURLOCK SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY

February 9, 2023
6:00 p.m.

A. CALL TO ORDER / CHAIRS WELCOME

West Turlock Subbasin (WTS) Groundwater Sustainability Agency (GSA) Chair Alamo called the meeting to order at 6:00 p.m. and announced the following:

Members of the Board are participating in tonight's meeting in-person from the TID Board Room located at 333 E. Canal Drive, Turlock. Members of the public may participate in-person, utilize the Zoom's webinar feature, or by telephone.

Members of the public attending virtually will have the opportunity to provide public comment via the webinar or phone features. For those participating via Zoom, please click the "Raise Hand" button on your screen. For those participating via phone, please dial "Star 9" on your keypad. Once your name or other identifying information is called by the Board Secretary, your line will be unmuted and the public comment period will begin.

B. FLAG SALUTE

C. ROLL CALL – WEST TURLOCK SUBBASIN GSA

PRESENT: Director Miguel Alvarez (Modesto), Director Kevin Bixel (Turlock), Alternate Director James Casey (Ceres), Director Vito Chiesa (Stanislaus County), Director Randy Crooker (Hughson), Alternate Director Richard Lindo (Denair CSD), Alternate Director Lacey McBride (Merced County), Vice Chair Curtis Jorritsma (Hilmar CWD), and Chair Joe Alamo (Turlock ID)

ABSENT: Director Leandro Maldonado (Delhi CWD)

D. PUBLIC COMMENT PERIOD

There were no public comments.

E. STAFF UPDATES

1. Budget Update

   WTS GSA Treasurer Michael Clipper provided a financial update for the WTS GSA account and basin-wide account for the month ending January 2023.

2. Technical Advisory Committee Update

   WTS GSA TAC Chair Michael Cooke introduced himself and provided an overview of the TACs roles and responsibilities. WTS GSA TAC Chair Cooke also provided updates regarding the Program Environmental Impact Report (PEIR) which will be brought before for the Board in March, the Annual Report due to Department of Water Resources (DWR) on April 1, Fall groundwater level measurements completed in October and Spring measurements coming due in March, developing a minimum exceedance (MT) action plan to address undesirable results, will also be developing a

drinking water mitigation program, DWR airborne electromagnetic survey (AEM) data now available, and DWR releasing approvals for four (4) GSPs.

WTS GSA Board and General Counsel Valerie Kincaid discussed the DWR GSP review process, clarifying that their practice has been to give an "incomplete" (with 180 days to correct deficiencies) before issuing a "fail/inadequate".

3. Round 2 SGMA Implementation Grant Application

Turlock Subbasin Plan Manager Debbie Montalbano presented an update regarding the status of the Round 2 SGMA Implementation Grant Application including an overview of the general guidelines, 82 applications submitted with total asks of $780 million, and the Turlock Subbasin project components (in order of priority): Grant Administration, Recharge Master Plan, Monitoring and Instrumentation, GSP Implementation Activities to address Data Gaps, and the Ceres Main Regulating Reservoir project.

WTS GSA Board and Plan Manager discussed well meters for ETS GSA and outcomes (process) if the GSAs were to be partially grant funded.

4. Communication/Outreach Update

WTS GSA TAC Member Herb Smart provided updates regarding discussions with contractors on behalf of DWR for translation services pilot project (free translation services at a public meeting or workshop), exploring translation for the Turlock Groundwater website to other languages, and the ETS GSA hosting an upcoming Pumping Management Framework & Pilot Program workshop on March 7, 2023 at the Cortez Hall.

F. CONSENT CALENDAR – ACTION BY THE WEST TURLOCK SUBBASIN GSA:

Motion by Vice Chair Jorritsma, seconded by Director Chiesa, adopting the consent calendar as submitted. All voted in favor with none opposed. Chair Alamo declared the motion carried.

1. ***Motion*****:** Approving Minutes of the November 3, 2022 Regular Meeting of the West Turlock Subbasin Groundwater Sustainability Agency

G. AGENDA ITEMS:

1. ELECTION OF BOARD OFFICERS

WTS GSA General Counsel Valerie Kincaid introduced this item, noting pursuant to the West Turlock Subbasin Groundwater Sustainability Agency Joint Powers Agreement and Bylaws the Governing Board shall select officers every two (2) years. The Chair and Vice Chair must be elected members of the Board and the Secretary can be a staff member. For the last two (2) years, Chair Alamo and Vice Chair Jorritsma have been serving -- there are no term limits. Ms. Kincaid further clarified that the Turlock Irrigation District shall remain as Treasurer until such time there is an outside Treasurer so there is no need to appoint, but this position can be included in the slate.

Director Chiesa nominated Joe Alamo as Chair, Curtis Jorritsma as Vice Chair, and Jennifer Land as Secretary.

WTS GSA Secretary Jennifer Land noted the Turlock Irrigation District will remain as the Treasurer with Michael Clipper serving in that position.

There were no public comments.

***Action by the West Turlock Subbasin GSA*:**
Motion by Director Chiesa, seconded by Director Bixel, Appointing Joe Alamo as Chair, Curtis Jorritsma as Vice Chair, and Jennifer Land as Secretary of the West Turlock Subbasin Groundwater Sustainability Agency Board of Directors, for a term of two (2) years.

Upon roll call, the following vote was had:

Ayes: Director Alvarez, Director Bixel, Alternate Director Casey, Director Chiesa, Director Crooker, Alternate Director Lindo, Alternate Director McBride, Vice Chair Jorritsma, and Chair Alamo
Noes: None
Absent: Director Maldonado

2. APPOINTMENT OF TECHNICAL ADVISORY COMMITTEE OFFICERS

WTS GSA General Counsel Valerie Kincaid introduced this item, noting pursuant to the West Turlock Subbasin Groundwater Sustainability Agency Joint Powers Agreement and Bylaws, the Board of Directors may appoint a Chair and Vice Chair of the Technical Advisory Committee, noting the TAC has made an informal recommendation for Michael Cooke to remain serving as Chair and Karen Morgan as Vice Chair.

There were no public comments.

***Action by the West Turlock Subbasin GSA*:**
Motion by Director Chiesa, seconded by Vice Chair Jorritsma, Appointing Michael Cooke as Chair and Karen Morgan as Vice Chair of the West Turlock Subbasin Groundwater Sustainability Agency Technical Advisory Committee, for a term of two (2) years.

Upon roll call, the following vote was had:

Ayes: Director Alvarez, Director Bixel, Alternate Director Casey, Director Chiesa, Director Crooker, Alternate Director Lindo, Alternate Director McBride, Vice Chair Jorritsma, and Chair Alamo
Noes: None
Absent: Director Maldonado

3. FAIR POLITICAL PRACTICES COMMISSION STATEMENT OF ECONOMIC INTERESTS – FORM 700

WTS GSA General Counsel Valerie Kincaid informed members regarding the Fair Political Practices Commission (FPPC) Statement of Economic Interests – Form 700 filing requirements/process due April 3, 2023.

WTS GSA Secretary Jennifer Land noted she would follow up with an email to the Board with additional information regarding the filing process.

There were no public comments.

H. COMMENTS FROM THE BOARDS:

Director Chiesa and Chair Alamo welcomed new Board Members

Vice Chair Jorritsma commented that Michael Cooke and Karen Morgan do an excellent job on the TAC.

I. ADJOURN TO CLOSED SESSION

WTS GSA Chair Alamo announced that the meeting will be adjourned to closed session.

Motion by Vice Chair Jorrtisma, seconded by Director Bixel, adjourning the regular meeting to closed session. All voted in favor with none opposed. Chair Alamo declared the motion carried.

1. ***Conference with Legal Counsel – Anticipated Litigation***
   California Government Code Section 54956.9(d)(2)
   Potential Case(s): 1
   (*Valerie Kincaid, WTS GSA General Counsel*)

J. REPORT OUT OF CLOSED SESSION

WTS GSA Chair Alamo announced there were no items to report.

K. ADJOURNMENT

Chair Alamo adjourned the Regular Meeting of the West Turlock Subbasin GSA at 7:22 p.m.

Jennifer Land, Secretary
West Turlock Subbasin
Groundwater Sustainability Agency

G2

WEST TURLOCK SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY

MARCH 16, 2023
SPECIAL MEETING
AGENDA REPORT

TO: **West Turlock Subbasin GSA Board**

FROM: **Michael Cooke, West Turlock Subbasin GSA TAC Chair**

SUBJECT: **Consolidated Final Program Environmental Impact Report (PEIR)**

ACTION: Resolution of the West Turlock Subbasin Groundwater Sustainability Agency (WTS GSA) Board of Directors (Board) adopting Environmental Findings with regard to the Turlock Subbasin Groundwater Sustainability Plan Program Environmental Impact Report (State Clearinghouse No. 2022010100) pursuant to the California Environmental Quality Act; Adopting the Findings of Fact, a Statement of Overriding Considerations, and a Mitigation Monitoring and Reporting Program

Background

The West Turlock Subbasin Groundwater Sustainability Agency (WTS GSA) and East Turlock Subbasin Groundwater Sustainability Agency (ETS GSA), referred to collectively as the Turlock Subbasin GSAs, jointly prepared the Turlock Subbasin GSP under the Sustainable Groundwater Management Act (SGMA). The Turlock Subbasin GSP identifies multiple projects and management actions (PMAs) that propose structural and nonstructural actions to enhance regional water supply and allows for the development of additional PMAs as needed to meet the sustainability goals of the GSP. The California Environmental Quality Act (CEQA) does not apply to the adoption of a GSP (California Water Code Section 10728.6); however, CEQA compliance would be required for implementation of potential future PMAs called for by the Turlock Subbasin GSP. It was determined by the Turlock Subbasin GSAs that a Program Environmental Impact Report (PEIR) would be prepared in accordance with State CEQA Guidelines Section 15168(c) to streamline these later activities. The PEIR will be available for proponents of future PMAs to use for CEQA compliance when they seek to approve actions that are consistent with the PMAs called for in the Turlock Subbasin GSP.

Pursuant to Public Resources Code section 21067 of CEQA (Pub. Res. Code §§ 21000 et seq.), and section 15367 of the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), the WTS GSA is the lead agency and the ETS GSA is a responsible agency. The Turlock Subbasin GSP did not involve the construction or operation of facilities or other physical actions, nor does the GSP describe specific construction methods, land use changes, timing, or operational requirements by the Turlock Subbasin GSAs. The PEIR discusses (to the extent feasible) the environmental effects of implementation of the PMAs in the Turlock Subbasin GSP at a level of detail appropriate to facilitate meaningful review and decision-making from the broader context of the GSP (see State CEQA Guidelines Sections 15144, 15146, and 15151). The PEIR will allow the Turlock Subbasin GSAs to consider program-level impacts and mitigation measures and

address program-wide issues and cumulative impacts. Given this is a program-level CEQA document (e.g., PEIR), the analyses are conservative. Not all PMAs will have significant impacts and the CEQA lead agency can conclude impacts are less-than-significant (with or without mitigation) or no impact, if applicable.

The Consolidated Final PEIR for the Turlock Subbasin GSP which consists of the Draft PEIR and the Final PEIR, including the Responses to Comments (collectively the "Consolidated Final PEIR"), has been completed for the Turlock Subbasin GSP in accordance with the requirements of CEQA and the State CEQA Guidelines. The Consolidated Final PEIR, Appendix D, Findings of Fact, and Statement of Overriding Considerations, describes the environmental impacts identified as resulting in a less than significant impact or no impact, as significant or potentially significant impacts but which the WTS GSA finds can be mitigated to a level of less than significant through the incorporation of feasible Mitigation Measures, and as significant or potentially significant but which the WTS GSA finds cannot be mitigated to a level of less than significant, despite the imposition feasible Mitigation Measures. The Consolidated Final PEIR, Appendix D, Findings of Fact, and Statement of Overriding Considerations, also describes alternatives to the types of PMAs implemented under the Turlock Subbasin GSP that might eliminate or reduce significant environmental impacts. The WTS GSA has determined that the benefits of PMAs implemented under the Turlock Subbasin GSP outweigh its potential significant environmental impact, and the basis for that determination is set forth in the Statement of Overriding Considerations (Appendix D). The Consolidated Final PEIR, Appendix E, Mitigation Monitoring and Reporting Program, sets forth the mitigation measures to which the mitigation measures would be the responsibility of the WTS GSA, ETS GSA, and/or proponent(s) of future PMA(s) implemented under the Turlock Subbasin GSP.

On February 14, 2023, the Technical Advisory Committees of the Turlock Subbasin GSAs reviewed the Consolidated Final PEIR and recommended certification by their respective GSA Boards. The WTS GSA is the lead agency under CEQA, and as such is required to take action first. ETS GSA Board, as a responsible agency, is scheduled to consider certification at their regularly scheduled meeting on March 23, 2023.

The Consolidated Final PEIR was published on March 6, 2023, distributed to all parties who commented on the Draft PEIR, and made available to others at the Turlock Public Library (550 N Minaret Ave, Turlock, CA 95380), the Stanislaus County Library (1500 I St, Modesto, CA 95354), and the Merced County Library (2100 O St, Merced, CA 95340), and on the Turlock Groundwater website at http://www.turlockgroundwater.org/peir.

Recommendation

Staff recommends the WTS GSA take action to:

- Certify the Consolidated Final PEIR
- Adopt the Findings of Fact and a Statement of Overriding Considerations (Consolidated Final PEIR Appendix D)
- Adopt the Mitigation Monitoring and Reporting Program (Consolidated Final PEIR Appendix E)
- Direct staff to prepare and file a Notice of Determination at the Merced and Stanislaus County Clerks office no later than March 23, 2023

RESOLUTION NO. 2023-01

A RESOLUTION OF THE WEST TURLOCK SUBBASIN GROUNDWATER SUSTAINABILTIY AGENCY (WTS GSA) BOARD OF DIRECTORS (BOARD) ADOPTING ENVIRONMENTAL FINDINGS WITH REGARD TO THE TURLOCK SUBBASIN GROUNDWATER SUSTAINABILITY PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT (STATE CLEARINGHOUSE NO. 2022010100) PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT; ADOPTING THE FINDINGS OF FACT, A STATEMENT OF OVERRIDING CONSIDERATIONS, AND A MITIGATION MONITORING AND REPORTING PROGRAM

WHEREAS, the West Turlock Subbasin Groundwater Sustainability Agency (WTS GSA) and East Turlock Subbasin Groundwater Sustainability Agency (ETS GSA), referred to collectively as the Turlock Subbasin GSAs, jointly prepared the Turlock Subbasin Groundwater Sustainability Plan (GSP) under the Sustainable Groundwater Management Act (SGMA); and

WHEREAS, the Turlock Subbasin GSP identifies multiple projects and management actions (PMAs) that propose structural and nonstructural actions to enhance regional water supply, and allows for the development of additional PMAs as needed to meet the sustainability goals of the GSP; and

WHEREAS, the California Environmental Quality Act (CEQA) does not apply to the adoption of a GSP (California Water Code Section 10728.6); however, CEQA compliance may be triggered by implementation of potential future PMAs called for by the Turlock Subbasin GSP; and

WHEREAS, it was determined by the Turlock Subbasin GSAs that a Program Environmental Impact Report (PEIR) would be prepared in accordance with State CEQA Guidelines Section 15168(c) to streamline the review and approval of later activities; and

WHEREAS, the PEIR will be available for proponents of future PMAs to use for CEQA compliance when they seek to approve actions that are consistent with the PMAs called for in the Turlock Subbasin GSP; and

WHEREAS, pursuant to Public Resources Code section 21067 of CEQA (Pub. Res. Code §§ 21000 et seq.), and section 15367 of the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.), the WTS GSA is the lead agency and the ETS GSA is a responsible agency; and

WHEREAS, the PEIR evaluates the environmental effects of implementation of the PMAs in the Turlock Subbasin GSP at a level of detail appropriate to facilitate meaningful review and decision-making from the broader context of the GSP (see State CEQA Guidelines Sections 15144, 15146, and 15151); and

WHEREAS, the PEIR will allow the Turlock Subbasin GSAs to consider program-level impacts and mitigation measures and address program-wide issues and cumulative impacts; and

WHEREAS, the Consolidated Final PEIR consists of the Draft PEIR and the Final PEIR, including the Responses to Comments (collectively the "Consolidated Final PEIR") and was developed for the Turlock Subbasin GSP in accordance with the requirements of CEQA and the State CEQA Guidelines; and

WHEREAS, in accordance with section 15082 of the CEQA Guidelines, the WTS GSA prepared a Notice of Preparation (NOP), conducted a scoping meeting, and circulated the NOP to local, state, and federal agencies and to other interested parties on January 7, 2022, initiating a 30-day public comment period that closed at 5 p.m. on February 7, 2022; and

WHEREAS, pursuant to CEQA Guidelines Section 15083, the WTS GSA held a public scoping meeting via remote teleconference on the Zoom platform on January 26, 2022, at 5:30 p.m. to receive oral public and agency input on the scope and content of the PEIR. Comments received during the public comment period are included in the Responses to Comments; and

WHEREAS, on July 27, 2022, pursuant to State CEQA Guidelines section 15086, the WTS GSA released the Draft PEIR for the Turlock Subbasin GSP, consulted with and requested comments from all responsible and trustee agencies, other regulatory agencies, and others during the 45-day public review and comment period that ran from July 27, 2022 through September 12, 2022; and

WHEREAS, the Notice of Availability (NOA) of the Draft PEIR was published in the Merced Sun-Star, Modesto Bee, and Turlock Journal on July 27, 2022; and

WHEREAS, during the public comment period, copies of the Draft PEIR were available for review at the Turlock Public Library (550 N Minaret Ave, Turlock, CA 95380), the Stanislaus County Library (1500 I St, Modesto, CA 95354), and the Merced County Library (2100 O St, Merced, CA 95340). The Draft PEIR was also available on the Turlock Groundwater website at www.turlockgroundwater.org/peir; and

WHEREAS, the NOA of the Draft PEIR and of the date and time of the virtual public workshop were submitted to the State Clearinghouse; and

WHEREAS, a virtual public workshop was held via remote teleconference on the Zoom platform on August 25, 2022 at 2 p.m. to accept written and oral comments. Information about the PEIR public workshop was made available on the Turlock Groundwater website at www.turlockgroundwater.org/events. The period for acceptance of written comments ended on September 12, 2022; and

WHEREAS, the WTS GSA received two oral comments and four written comment letters on the Draft PEIR during the 45-day public review period; and

WHEREAS, the WTS GSA prepared a Consolidated Final PEIR addressing comments received during the public review period comments and corrections/text revisions to the Draft PEIR as a result of the public review process. The Consolidated Final PEIR was published on March 6, 2023, distributed to all parties who commented on the Draft PEIR, and made available to others on the Turlock Groundwater website at www.turlockgroundwater.org/peir; and

WHEREAS, for the purpose of this Resolution, the "Consolidated Final PEIR" shall refer to the Draft PEIR, as revised by the Response to Comments; and

WHEREAS, copies of the Consolidated Final PEIR and other documents and materials which constitute the record of proceedings upon which this decision is based have been made available for review by the public at the Turlock Public Library (550 N Minaret Ave, Turlock, CA 95380), the Stanislaus County Library (1500 I St, Modesto, CA 95354), and the Merced County Library (2100 O St, Merced, CA 95340); and

WHEREAS, on March 16, 2023, at a noticed public meeting and pursuant to WTS GSA Resolution 2023-01, the WTS GSA certified the Consolidated Final PEIR; and

WHEREAS, the environmental impacts identified in the Consolidated Final PEIR that result in less than significant impact or no impact identified in the Consolidated Final PEIR, are described in **Appendix D**, **Findings of Fact and Statement of Overriding Considerations**; and

WHEREAS, the environmental impacts identified in the Consolidated Final PEIR as significant or potentially significant impacts but which the WTS GSA finds can be mitigated to a level of less than significant through the incorporation of feasible Mitigation Measures identified in the Consolidated Final PEIR and set forth herein, are described in **Appendix D**, **Findings of Fact and Statement of Overriding Considerations**; and

WHEREAS, the environmental impacts identified in the Consolidated Final PEIR as significant or potentially significant but which the WTS GSA finds cannot be mitigated to a level of less than significant, despite the imposition feasible Mitigation Measures identified in the Consolidated Final PEIR and set forth herein, are described in **Appendix D**, **Findings of Fact and Statement of Overriding Considerations**; and

WHEREAS, alternatives to the types of PMAs implemented under the Turlock Subbasin GSP that might eliminate or reduce significant environmental impacts are described in **Appendix D**, **Findings of Fact and Statement of Overriding Considerations**; and

WHEREAS, the WTS GSA has determined that the benefits of PMAs implemented under the Turlock Subbasin GSP outweigh its potential significant environmental impact, and the basis for that determination is set forth in the Statement of Overriding Considerations included in **Appendix D**, **Findings of Fact and Statement of Overriding Considerations**; and

WHEREAS, the Mitigation Monitoring and Reporting Program (MMRP) setting forth the mitigation measures which would be the responsibility of the WTS GSA, ETS GSA, and/or proponent(s) of future PMA(s) implemented under the Turlock Subbasin GSP, attached hereto as **Appendix E, Mitigation Monitoring and Reporting Program**; and

WHEREAS, prior to taking action, the WTS GSA has heard, been presented with, reviewed and considered all of the information and data in the administrative record, including the Consolidated Final PEIR, and all oral and written evidence presented to it during all public meetings; and

WHEREAS, the WTS GSA has not received any comments or additional information that constituted substantial new information requiring recirculation under Public Resources Code section 21092.1 and State CEQA Guidelines section 15088.5; and

WHEREAS, all the requirements of CEQA and the State CEQA Guidelines have been satisfied by the WTS GSA in the Consolidated Final PEIR, which is sufficiently detailed so that all of the potentially significant environmental effects of PMAs implemented under the Turlock Subbasin GSP have been adequately evaluated; and

WHEREAS, all other legal prerequisites to the adoption of this Resolution have been satisfied.

NOW, THEREFORE BE IT RESOLVED, that based on facts and analysis in the Consolidated Final PEIR, written and oral testimony, and exhibits, and pursuant to Public Resources Code section 21080, the Board of Directors of the West Turlock Subbasin Groundwater Sustainability Agency, hereby adopts the CEQA Findings of Fact and the Statement of Overriding Consideration in the Consolidated Final PEIR as **Appendix D**, **Findings of Fact and Statement of Overriding Considerations.**

BE IT FURTHER RESOLVED, that pursuant to Public Resources Code section 21081.6, the WTS GSA hereby adopts the Mitigation Monitoring and Reporting Program attached to this Resolution as **Appendix E, Mitigation Monitoring and Reporting Program**. Implementation of the Mitigation Measures contained in the MMRP is hereby made a condition of approval of the implementation of PMAs

under the Turlock Subbasin GSP. In the event of any inconsistencies between the Mitigation Measures set forth herein and the MMRP, the MMRP shall control.

BE IT FURTHER RESOLVED, that the WTS GSA certifies and approves the Consolidated Final PEIR for the Turlock Subbasin GSP.

BE IT FURTHER RESOLVED, that the documents and materials associated with the Consolidated Final PEIR that constitute the record of proceedings on which these findings are based are located with the WTS GSA at the offices of the Turlock Irrigation District, 333 E. Canal Drive, Turlock, California 95380. The Custodian of Record is Jennifer Land, Turlock Irrigation District, P.O. Box 949, Turlock, CA 95381 (jmland@tid.org; (209) 883-8353).

BE IT FURTHER RESOLVED, that the WTS GSA hereby directs staff to prepare and file a Notice of Determination with the State Clearinghouse within five (5) working days of the approval of the Consolidated Final PEIR.

Moved by Director _____, seconded by Director _____, that the foregoing resolution be adopted.

Upon roll call, the following vote was had:

Ayes:
Noes:
Absent:

The Chair declared the resolution _____.

I, Joe Alamo, Chair of the Board of Directors of the WEST TURLOCK SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY, do hereby CERTIFY that the foregoing is a full, true and correct copy of a resolution duly adopted at a special meeting of said Board of Directors held the 16th day of March, 2023.

_____
Joe Alamo, Chair
Board of Directors
West Turlock Subbasin GSA

_____
ATTEST: Jennifer Land, Secretary
Board of Directors
West Turlock Subbasin GSA

Appendix D

Findings of Fact and Statement of Overriding Considerations

APPENDIX D

Findings of Fact and Statement of Overriding Considerations

Introduction

A PEIR was prepared for the Turlock Subbasin Groundwater Sustainability Plan (GSP) and circulated for a 45-day public review to solicit federal, state and local agency, and public input on the analysis of the potential environmental effects associated with construction and operation of the types of project and management actions (PMAs) implemented under the Turlock Subbasin GSP. The Findings of Fact (Findings) and Statement of Overriding Considerations presented herein address the environmental effects associated with implementation of PMAs under the Turlock Subbasin GSP that are described and analyzed in the PEIR.

Description of the Types of PMAs to Be Implemented under the Turlock Subbasin Groundwater Sustainability Plan

Overview

The Turlock Subbasin GSP addresses groundwater sustainability in the Turlock Subbasin (Groundwater Basin Number 5-22.03), located in the northern San Joaquin Valley Groundwater Basin in California's Central Valley. The Turlock Subbasin was designated as a high-priority, but not critically overdrafted, groundwater basin by DWR which calls for the preparation of a GSP under the Sustainable Groundwater Management Act (SGMA) to ensure that groundwater sustainability goals are met. From 2018 to 2021, the Turlock Subbasin GSP was prepared jointly by the West Turlock Subbasin Groundwater Sustainability Agency (WTS GSA) and East Turlock Subbasin Groundwater Sustainability Agency (ETS GSA) formed in compliance with California Water Code Section 10723.8, referred to collectively herein as the "Turlock Subbasin GSAs."

The Turlock Subbasin GSAs coordinate on GSP issues pursuant to an agreement; however, each GSA is responsible for implementing the Turlock Subbasin GSP within its jurisdiction. Pursuant to agreement between the WTS GSA and the ETS GSA, the WTS GSA is the CEQA lead agency for the PEIR. The ETS GSA is also involved in preparation of the PEIR and is a responsible agency as defined by State CEQA Guidelines Section 15381. It is intended that the ETS GSA will be able to rely on and incorporate this PEIR in approving PMAs in support of the Turlock Subbasin GSP within the ETS GSA's boundaries (CEQA Guidelines Section 15050).

The Turlock Subbasin GSP identifies multiple PMAs that propose structural and nonstructural actions to enhance regional water supply, and allows for the development of additional PMAs as needed to meet the sustainability goals of the GSP. *Projects* can be generally categorized as either urban and municipal or agricultural; they incorporate the use of new infrastructure (e.g., regulating reservoirs, pipelines, injection wells) or existing infrastructure (e.g., canals, pipelines, recharge basins) to enhance water supply and achieve the GSP's sustainability goals. *Management actions* are intended to be implemented in addition to projects, as nonstructural actions supporting the achievement of sustainability goals (e.g., voluntary conservation programs).

Plan Objectives

CEQA requires that an EIR contain a "statement of the objectives sought by the proposed project." Under CEQA, "[a] clearly written statement of objectives will help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR [PEIR] and will aid the decision makers in preparing findings or a statement of overriding considerations. The statement of objectives should include the underlying fundamental purpose of the project" [State CEQA Guidelines Section 15124(b)].

The objectives of the Turlock Subbasin GSP are to achieve the sustainability goal for the Turlock Subbasin by 2042 and avoid undesirable results over the remainder of a 50-year planning horizon. Broadly, the sustainability goal for the Turlock Subbasin is to ensure a reliable and sustainable groundwater supply that supports population growth, sustains the agricultural economy, and provides for beneficial uses, especially during drought. The objectives of the Turlock Subbasin GSP are met through implementation of the PMAs described in more detail below.

Geographic Scope

The Turlock Subbasin GSP applies to the Turlock Subbasin, a 544-square-mile (348,160-acre) area in the northern San Joaquin Valley approximately 80 miles south of Sacramento in Stanislaus and Merced counties. The Turlock Subbasin is bounded on the north by the Tuolumne River, on the south by the Merced River, and on the west by the San Joaquin River. The eastern subbasin boundary is defined by crystalline basement rocks of the Sierra Nevada foothills (DWR 2006). The Turlock Subbasin is the study area evaluated in the PEIR. The Turlock Subbasin is part of the larger San Joaquin Valley Groundwater Basin, as defined by DWR (Groundwater Basin Number 5-22.03). The San Joaquin Valley Groundwater Basin is defined on the west by the Coast Ranges, on the south by the San Emigdio and Tehachapi mountains, on the east by the Sierra Nevada, and on the north by the Sacramento–San Joaquin Delta and Sacramento Valley.

Sustainability Goals and Indicators

The sustainability goal for the Turlock Subbasin is to ensure a reliable and sustainable groundwater supply that supports population growth, sustains the agricultural economy, and provides for beneficial uses, especially during drought. The sustainability goal is achieved

through the implementation of PMAs, described in more detail in draft PEIR Section 2.2. This goal is supported by and includes the following actions:

- Manage the Turlock Subbasin within its sustainable yield and arrest ongoing long-term groundwater level declines.
- Support interconnected surface water to avoid adverse impacts on surface water uses.
- Manage groundwater extractions and water levels to avoid impacts from future potential land subsidence.
- Optimize conjunctive use of surface water, recycled water, and groundwater.
- Support efficient water use and water conservation.
- Coordinate with GSAs in neighboring subbasins to avoid undesirable results along the shared Turlock Subbasin boundaries.
- Adaptively manage the Turlock Subbasin over time to improve operational flexibility and to ensure the sustainability of the groundwater resources.

Projects and Management Actions to Be Implemented under the Turlock Subbasin GSP

The Turlock Subbasin GSP presents multiple PMAs that were identified and considered by the Turlock Subbasin GSAs to achieve the sustainability goals for the Turlock Subbasin by 2042, and to avoid undesirable results related to the five applicable sustainability indicators over the remainder of the 50-year planning horizon, as required by SGMA regulations. The Turlock Subbasin GSP identifies additional activities, referred to as the Implementation Support Activities (ISAs), to support implementation of the PMAs.

The term *projects*, as used in the PEIR, generally refers to physically constructed (structural) features. These features may be designed to recharge the groundwater system using surface waters diverted from the Tuolumne and Merced rivers, floodwaters, agricultural return flows, stormwater, and recycled water; may promote conjunctive use; or may reduce demand for groundwater. The Turlock Subbasin GSP categorizes projects according to their primary recharge mechanism as conceptualized—direct groundwater recharge, in-lieu groundwater recharge, or a combination of both. Direct groundwater recharge means storing water by allowing the water to percolate through the soil into the groundwater, or by injecting the water into the groundwater aquifer via injection wells or into the vadose zone through dry wells. Direct recharge could also be accomplished by applying water onto agricultural lands at times when crops are dormant, or in amounts exceeding crop demands. In addition, direct recharge could occur through recharge basins, ponds, constructed wetlands, floodplain inundation projects, or other facilities. In-lieu recharge means storing groundwater by using surface water in lieu of pumping groundwater, thereby storing an equal amount in the groundwater basin. The amount of in-lieu recharge is equal to the quantity of renewable surface water used to irrigate the farmland in place of using regular groundwater.

The term *management actions*, as used in the PEIR, generally refers to nonstructural programs or policies that are designed to incentivize voluntary actions and strategies, or specify required actions, to be implemented in addition to projects to achieve the sustainability goals of the Turlock Subbasin GSP. As part of implementation of the management actions, structural features may be improved or constructed. The Turlock Subbasin GSAs or their member agencies could implement the management actions as needed to mitigate overdraft within their jurisdictional areas. The Turlock Subbasin GSP allows for the development of additional PMAs as needed to meet the sustainability goals of the GSP.

Construction Overview

The term *construction*, as used in the PEIR, is defined as all construction-related activities, including site clearing; placement of structures or other materials; building or assembling of infrastructure; relocation or demolition of existing facilities; landscaping; or any mobilization activity that would move construction-related equipment and/or materials onto a site that may result either directly or indirectly in physical changes to the environment. Varying levels of construction would be required for implementation of the PMAs. The Turlock Subbasin GSP does not describe specific construction activities for PMAs; the level of detail provided for each project or management action varies, including the precise locations of its features and detailed descriptions of feature designs and/or modifications.

Although the magnitude and characteristics of construction activities for PMAs vary widely, construction activities to develop groundwater recharge opportunities share many commonalities, including timing, materials, and equipment. Construction activities to modify and/or construct new features were assumed using information provided in the Turlock Subbasin GSP, including descriptions of the PMAs, implementation strategies, water sources, and reliability. Once proposals for individual PMAs consistent with the Turlock Subbasin GSP are developed, the respective lead agencies/proponents for those PMAs would evaluate whether the PEIR adequately describes the impacts of the PMAs, or whether the impacts would require evaluation in project-level CEQA documents (e.g., initial study, EIR).

Operations and Maintenance Overview

Operations and maintenance (O&M) activities are the functions, duties, or labor associated with day-to-day operations. Implementation of the PMAs identified in the Turlock Subbasin GSP would include O&M activities to inspect project facilities and/or evaluate program effectiveness. As with construction activities, the Turlock Subbasin GSP does not detail the specific O&M activities required to implement each project or management action. Rather, the implementation criteria, status, and strategy are discussed, providing the context for day-to-day operations. Thus, activities specific to the PMAs were assumed using the information presented in the Turlock Subbasin GSP, as well as incorporating general information common to the development of groundwater recharge opportunities.

Upon the development of proposals for PMAs consistent with the Turlock Subbasin GSP, the lead agencies/proponents would evaluate whether the PEIR describes the impacts adequately, or if necessary, the impacts would be evaluated in project-level CEQA documents (e.g., initial study, EIR).

Operational Considerations

Implementing the PMAs in the Turlock GSP may result in basin-scale changes to water system operations. That is, implementing one or multiple PMAs could ultimately alter the management of surface water and groundwater in the region. The Turlock Subbasin GSP does not discuss basin-scale operational changes or describe the spatial or temporal implications of implementing any individual project or management action or combination of PMAs. Therefore, the following list of key operational considerations was formulated using the information provided in the Turlock Subbasin GSP and may not reflect all possible operational considerations.

- Water right modifications, or changes in beneficial use, may be required as a result of new surface water diversions from the Tuolumne and Merced rivers.
- For projects that propose the use of floodwater, a characterization of wet and above-normal hydrologic years would be needed to determine when floodwater is available for use.
- New regulating reservoirs or other facilities may be needed to deliver surface water for in-lieu groundwater recharge projects.
- Adaptive strategies that provide water management alternatives during extreme dry years should be considered for the projected water budgets and climate change analysis presented in Chapter 5 of the Turlock Subbasin GSP.
- Expanding the existing water conveyance systems, including through the addition of regulating reservoirs and storage facilities, would enable the distribution and delivery of surface water to a greater area.
- Expanding the irrigation season to irrigate during the off-season would result in year-round water deliveries.
- Increases in canal seepage loss may result when areas receive on-farm recharge deliveries during the off-season.
- Implementing on-farm flood irrigation in excess of crop water requirements would artificially recharge the groundwater system.
- Land fallowing may result in temporary or permanent repurposing of the land from agricultural to nonagricultural uses.

Use of the PEIR

As stated in the Consolidated Final PEIR, the precise locations and detailed characteristics of potential future PMAs are yet to be determined. Once the specific characteristics and locations of the PMAs are known, proponents of PMAs would identify the relevant potential environmental impacts of constructing and/or operating the PMAs. If the CEQA lead agency for a specific project or management action determines, under State CEQA Guidelines Section 15162, that the project or management action would result in no new significant effects and/or require no new mitigation measures, the activity could be approved as being within the scope analyzed by this PEIR. In such a case, the project or management action would not require new or additional environmental review (e.g., EIR, negative declaration, or mitigated negative declaration) and the appropriate CEQA lead agency would use this PEIR for the individual project or management action's CEQA compliance and would file a notice of determination when the project is approved.

Findings Required Under CEQA

CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to substantially lessen or avoid significant environment impacts that would otherwise occur. Mitigation measures or alternatives are not required, however, where such changes are infeasible or where the responsibility for the project lies with some other agency (State CEQA Guidelines, § 15091, sub. (a), (b).

In seeking to effectuate the substantive policy of CEQA to substantially lessen or avoid significant environmental effects to the extent feasible, an agency, in adopting findings, need not necessarily address the feasibility of both mitigation measures and environmentally superior alternatives when contemplating approval of a proposed project with significant impacts. Where a significant impact can be mitigated to an "acceptable" level solely by the adoption of feasible mitigation measures, the agency, in drafting its findings, has no obligation to consider the feasibility of any environmentally superior alternative that could also substantially lessen or avoid that same impact — even if the alternative would render the impact less severe than would the proposed project as mitigated. (Laurel Hills Homeowners Association v. City Council (1978) 83 Cal.App.3d 515, 521; see also Kings County Farm Bureau v. City of Hanford (1990) 221 Cal.App.3d 692, 730-731; and Laurel Heights Improvement Association v. Regents of the University of California ("Laurel Heights I") (1988) 47 Cal.3d 376, 400-403.)

In these Findings, the WTS GSA first addresses the extent to which each significant environmental effect can be substantially lessened or avoided through the adoption of feasible mitigation measures. Only after determining that, even with the adoption of all feasible mitigation measures, an effect is significant and unavoidable does the WTS GSA address the extent to which alternatives described in the PEIR are: (1) environmentally superior with respect to that effect, and (2) "feasible" within the meaning of CEQA.

In cases in which a project's significant effects cannot be mitigated or avoided, an agency, after adopting proper findings, may nevertheless approve the project if it first adopts a statement of overriding considerations setting forth the specific reasons why the agency found that the "benefits of the project outweigh the significant effects on the environment." (Public Resources Code [PRC], Section 21081, sub. (b); see also, State CEQA Guidelines, Sections 15093, 15043, sub.(b).)

In the Statement of Overriding Considerations found at the conclusion of these Findings, the WTS GSA identifies the specific economic, social, and other considerations that, in its judgment, outweigh the significant environmental effects that PMAs implemented under the Turlock Subbasin GSP would cause.

The California Supreme Court has stated that "[t]he wisdom of approving ... any development project, a delicate task which requires a balancing of interests, is necessarily left to the sound discretion of the local officials and their constituents who are responsible for such decisions. The law as we interpret and apply it simply requires that those decisions be informed, and therefore balanced." (Goleta II (1990) 52 Cal. 3d 553, 576 [276 Cal. Rptr. 410, 801 P.2d 1161].)

These findings do not attempt to describe the full analysis of each environmental impact contained in the Consolidated Final PEIR. Instead, a full explanation of these environmental findings and conclusions is presented in the Consolidated Final PEIR, and these findings hereby incorporate by reference the discussion and analysis in the draft PEIR supporting the determination regarding the impacts of PMAs implemented under the Turlock Subbasin GSP and mitigation measures designed to address those impacts. In making these findings, the WTS GSA ratifies, adopts, and incorporates in these findings the determinations and conclusions of the Consolidated Final PEIR relating to environmental impacts and mitigation measures except to the extent any such determinations and conclusions are specifically and expressly modified by these findings.

The WTS GSA further adopts and incorporates all of the mitigation measures set forth in the final PEIR, as presented in the Consolidated Final PEIR, Appendix E, *Mitigation Monitoring and Reporting Program (MMRP)*, to substantially lessen or avoid the potentially significant and significant impacts of PMAs implemented under the Turlock Subbasin GSP. The WTS GSA adopts each mitigation measure proposed in the Consolidated Final PEIR to reduce or eliminate significant impacts resulting from the types of PMAs implemented under the Turlock Subbasin GSP. Accordingly, in the event a mitigation measure in the Consolidated Final PEIR has inadvertently been omitted in these findings or the MMRP, such mitigation measure(s) is hereby adopted and incorporated in the findings below by reference. In addition, in the event the language describing a mitigation measure set forth in these findings or the MMRP fails to accurately reflect the mitigation measures in the Consolidated Final PEIR due to a clerical error, the language of the policies and implementation measures, as set forth in the Consolidated Final PEIR, shall control. The impact numbers and mitigation measure numbers used in these findings reflect the information contained in the Consolidated Final PEIR.

Pursuant to CEQA Guidelines section 15091, subdivision (e), the documents constituting the record of proceedings are available for review during normal business hours at West Turlock Subbasin Groundwater Sustainability Agency, c/o Turlock Irrigation District, 333 E. Canal Drive, Turlock, CA 95380. The custodian of these documents is Jennifer Land, Turlock Irrigation District, P.O. Box 949, Turlock, CA 95381 (jmland@tid.org; (209) 883-8353)).

Impacts Found to be Less Than Significant or No Impact and Thus Requiring No Mitigation

Consistent with PRC Section 21002.1 and Section 15128 of the State CEQA Guidelines, the PEIR focused its analysis on potentially significant impacts, and limited discussion of other impacts for which it can be concluded with certainty there is no potential for significant adverse environmental impacts. State CEQA Guidelines Section 15091 does not require specific findings to address environmental effects that an EIR identifies as “no impact” or a “less-than-significant” impact. Nevertheless, the WTS GSA hereby finds that, based on substantial evidence in the whole of the record, PMAs implemented under the Turlock Subbasin GSP would have either no impact or a less-than-significant impact to the following resource areas. Therefore, these impacts do not require mitigation.

Impact Category: Aesthetics

Impact AES-1: Implementing PMAs under the Turlock Subbasin GSP could result in substantial degradation of visual qualities.

Findings (Effects of Construction Activities for PMAs): Construction activities for PMAs implemented under the Turlock Subbasin GSP could temporarily alter local visual conditions. Views could include excavation, grading, vegetation removal, construction equipment, parking of vehicles, and temporary construction offices. These elements would be removed after construction; therefore, their presence would not cause permanent changes to local visual conditions. This impact would be **less than significant**.

Impact AES-2: Implementing PMAs under the Turlock Subbasin GSP could result in substantial adverse effects on scenic vistas and scenic resources.

Findings (Effects of Construction Activities for PMAs): Construction activities for PMAs implemented under the Turlock Subbasin GSP could be visible from designated scenic roads, resulting in significant, temporary and long-term adverse changes to scenic vistas. However, construction elements would be removed after construction; therefore, their presence would not cause permanent changes to local visual conditions. This impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): O&M activities would introduce workers and vehicles into the study area; however, the presence of such workers and vehicles would be temporary and intermittent and would not result in substantial changes to visual quality in the study area.

PMAs implemented under the Turlock Subbasin GSP may also result in the construction and operation of projects that could result in a beneficial change to the visual qualities of the subbasin. For example, PMAs for new or expanded water storage (e.g., recharge basins, canal interties, regulating reservoirs) could increase aquatic areas, which would be considered a beneficial change to existing visual quality.

Given the relatively local nature of the effects, PMAs implemented under the Turlock Subbasin GSP would not result in substantial adverse effects on scenic vistas or scenic resources, and the visual qualities of the area would not be substantially degraded. Therefore, this impact would be **less than significant**.

Impact Category: Agricultural and Forestry Resources

Impact AG-1: Implementing PMAs under the Turlock Subbasin GSP could convert Special Designated Farmland to nonagricultural use or conflict with a Williamson Act contract or zoning for agricultural use.

Findings (Effects of Construction Activities for PMAs): Construction for projects implemented under the Turlock Subbasin GSP could temporarily convert Special Designated Farmland to nonagricultural use, or could conflict with a Williamson Act contract or zoning for agricultural

use. However, these conversions would be temporary, and the land would be returned to agricultural use after construction. Therefore, this impact would be **less than significant**.

Impact AG-2: Implementing PMAs under the Turlock Subbasin GSP could result in other changes in the existing environment that, because of their location or nature, indirectly result in the conversion of Special Designated Farmland to nonagricultural use or conversion of forestland to nonforest use.

Findings (Effects of Construction Activities for PMAs): Construction activities implemented under the Turlock Subbasin GSP could temporarily restrict access to farmland through, for example, blocking access points. Other short-term direct or indirect disturbances to agricultural lands during construction activities could occur from the disruption of irrigation systems and soil compaction affecting drainage, indirectly or removing the ability of an area of Special Designated Farmland to provide the agricultural use or level of productivity that leads to the designation. Ground disturbance, vegetation removal, and operation of construction equipment near Special Designated Farmland could result in dust generation (discussed in the Consolidated Final PEIR Section 3.4, *Air Quality*) or the spread of invasive species to new areas (discussed in the Consolidated Final PEIR Section 3.5, *Biological Resources*).

However, while construction activities for PMAs implemented under the Turlock Subbasin GSP have the potential to negatively affect the viability of surrounding agricultural uses, impede access to agricultural areas, or disrupt agricultural infrastructure, the construction would be temporary, and the land would be returned to pre-project conditions and/or agricultural use after construction. Therefore, this impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): O&M activities would be limited to the footprint created during construction of PMAs implemented under the Turlock Subbasin GSP. This would be unlikely to result in the indirect conversion of Special Designated Farmland to nonagricultural use. For example, periodic maintenance could include the removal of accumulated sediment around intakes, removal of accumulated silt and vegetation from recharge basins, ongoing monitoring of pumping reduction strategy, water quality testing, management of pumping data, ongoing maintenance of approved fallowed agricultural fields, and installation of fencing and signage. These activities would not likely result in a sufficient scale or direction to indirectly convert Special Designated Farmland. Therefore, this impact would be **less than significant**.

Impact Category: Air Quality

Impact AIR-1: Implementing PMAs under the Turlock Subbasin GSP could result in conflict with or obstruct implementation of the applicable air quality plan.

Findings (Effects of Constructed Features and O&M of those Features for Direct and In-Lieu Recharge Projects): Once constructed, direct recharge and in-lieu projects would require O&M activities to inspect project features and/or evaluate program effectiveness. These activities would only be required on an intermittent basis and would not exceed one or more of the San Joaquin Valley Air Pollution Control District's (SJVAPCD) thresholds of significance.

Additionally, direct recharge projects may require the routine maintenance and testing of emergency backup generators. Such generators, if necessary, would require a permit from SJVAPCD, which would limit their operation to 52 hours per year. These occasional engine operations would not exceed one or more of SJVAPCD's thresholds of significance. Therefore, this impact would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Water management and conservation actions would not exceed one or more of SJVAPCD's thresholds of significance. While some conservation PMAs may require replacement of infrastructure, they would not result in the excavation or movement of substantial amounts of soil or other materials. While earthwork may be needed for environmental easement habitat enhancement or protection, these activities would be unlikely to require operation of substantial amount of off-road construction equipment. Therefore, the construction-related emissions associated with water management and conservation actions would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): While water management and conservation actions could require O&M activities to inspect project features and/or evaluate program effectiveness, these activities would only be required on an intermittent basis and would result in a minor increase in motor vehicle trips (likely fewer than the recharge projects). These emissions from O&M vehicle trips would not exceed one or more of SJVAPCD's thresholds of significance and would have a **less than significant impact**.

Impact AIR-2: Implementing PMAs under the Turlock Subbasin GSP could 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.

Findings (Effects of Constructed Features and O&M of those Features for Direct Recharge Projects): Once constructed, direct recharge projects would require O&M activities to inspect project features and/or evaluate program effectiveness. These activities would be required on an intermittent basis and would result in a minor increase in motor vehicle trips. As a practical matter, these emissions from O&M vehicle trips would not result in emissions that exceed the operational thresholds of significance presented in Table 3.4-3 of the Consolidated Final PEIR. This determination is supported by the SJVAPCD's Small Project Analysis Level publication (SJVAPCD 2020), which indicates that industrial uses with fewer than 140 daily vehicle trips would have a less-than-significant air quality impact.

Direct recharge projects may also require the routine maintenance and testing of emergency backup generators. Such generators, if necessary, would require a permit from SJVAPCD, which would limit their operation to 52 hours per year. These occasional engine operations would not be substantial and would not exceed the operational thresholds of significance presented in Table 3.4-3 of the Consolidated Final PEIR. Therefore, this operational impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for In-Lieu Recharge Projects): Similar to direct recharge projects, in-lieu recharge projects could require

O&M activities to inspect project features and/or evaluate program effectiveness. These activities would only be required on an intermittent basis and result in a minor increase in motor vehicle trips. These emissions from O&M vehicle trips would not result in emissions that exceed the operational thresholds of significance presented in Table 3.4-3 of the Consolidated Final PEIR and would have a less-than-significant air quality impact.

In-lieu recharge projects could also require the routine maintenance and testing of emergency backup generators. Such generators, if necessary, would require a permit from SJVAPCD, which would limit their operation to 52 hours per year. These occasional engine operations would not be substantial and would not exceed the operational thresholds of significance presented in Table 3.4-3 of the Consolidated Final PEIR. Therefore, this operational impact would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Water management and conservation actions would have limited potential to result in construction emissions. While some conservation PMAs may require replacement of infrastructure, they would not be expected to result in excavation or movement of substantial amounts of soil or other materials. While there may be earthwork for environmental easement habitat enhancement or protection, these activities would be unlikely to require operation of a substantial amount of off-road construction equipment. Therefore, the construction-related emissions associated with water management and conservation actions would be **less than significant** with respect to criteria air pollutant emissions.

Impact AIR-3: Implementing PMAs under the Turlock Subbasin GSP could expose sensitive receptors to substantial pollutant concentrations.

Findings (Effects of Constructed Features and O&M of those Features for Direct Recharge Projects): Once constructed, direct recharge projects would require O&M activities to inspect project features and/or evaluate program effectiveness. These activities would only be required on an intermittent basis and result in a minor increase in motor vehicle trips (and mostly conducted using vehicles equipped with non-diesel engines). Therefore, the potential impact with respect to exposure to toxic air contaminants (TACs) would be less than significant.

Additionally, direct and in-lieu recharge projects may require the routine maintenance and testing of diesel-powered backup generators. Such generators, if necessary, would require a permit from SJVAPCD, who would require a health risk assessment and would not issue such a permit if increased cancer risk would exceed 10 in one million at the maximally impacted sensitive receptor. Because of SJVAPCD permit requirements, these occasional engine operations would not result in a substantial health risk concern. Therefore, this operational impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for In-Lieu Recharge Projects): Similar to direct recharge projects, in-lieu recharge projects could require O&M activities to inspect project features and/or evaluate program effectiveness. These activities would only be required on an intermittent basis and would result in a minor increase in motor

vehicle trips (mostly using vehicles equipped with non-diesel engines). Therefore, the potential impact with respect to exposure to TACs would be less than significant.

Additionally, in-lieu recharge projects may require the routine maintenance and testing of diesel-powered backup generators. Such generators, if necessary, would require a permit from SJVAPCD, who would conduct a health risk assessment and would not issue such a permit if increased cancer risk would exceed 10 in one million at the maximally impacted sensitive receptor. Because of SJVAPCD permit requirements, these occasional engine operations would not result in a substantial health risk concern. Therefore, this operational impact would be **less than significant**.

Impact AIR-4: Implementing PMAs under the Turlock Subbasin GSP could result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine the presence of a significant odor impact (SJVAPCD 2015). SJVAPCD has identified some common types of facilities that have produced odors in the San Joaquin Valley. These include wastewater treatment plants, oil refineries, asphalt plants, chemical manufacturing, painting/coating operations, coffee roasters, food processing facilities, recycling operations, and metal smelters. For such odor sources of particular concern, SJVAPCD recommends buffer zones of 1 to 2 miles to avoid potential odor conflicts, and also requires a permit. No facilities of these types are proposed by the Turlock Subbasin GSP and, consequently, operational odor impacts of the PMAs would be **less than significant**.

During construction, the various diesel-powered vehicles and equipment in use on PMA sites would create localized odors. These odors would be temporary and depend on specific construction activities occurring at certain times and are not likely to be noticeable for extended periods of time beyond the boundaries of the project site. Therefore, the potential for diesel odor impacts is considered less than significant. Consequently, the potential for the Turlock Subbasin GSP to result in objectionable odors is **less than significant**.

Impact Category: Biological Resources

Impact BIO-3: Implementing PMAs under the Turlock Subbasin GSP could result in a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA) (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): The effect of O&M of ponds established to store water and/or collect runoff for water conservation purposes on wetlands would be similar to those described for direct and in-lieu recharge PMAs. Such ponds could be potentially beneficial for wetlands. The ponds could improve groundwater replenishment, which would benefit groundwater-dependent ecosystems, such as certain wetlands, as a result of surface and groundwater interactions.

Operations of replaced water meters with more advanced features would not have any effect on wetlands. Maintenance of these devices may result in indirect effects to wetlands, such as through unintentional spills from equipment and vehicles used to access and service these water meters; however, the magnitude of these potential effects would be small, especially since such meters would be installed in more developed or previously disturbed areas. Therefore, this impact would be **less than significant**.

Impact BIO-4: Implementing PMAs under the Turlock Subbasin GSP could 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.

Findings (Effects of Construction Activities for Conservation Management Actions): The effect of the construction of ponds established to store water and/or collect runoff as part of conservation management actions on wildlife migration or movement corridors would be similar to those described for direct and in-lieu recharge PMAs.

In agricultural areas where water efficiency conservation measures would be implemented, such work would not contribute to any loss of wildlife movement or migratory corridors. While certain wildlife species may utilize actively managed farmland, they are not considered to be important wildlife movement or migratory corridors. Furthermore, any disruption to wildlife movement or migratory conditions associated with the installation of drip irrigation would be short in duration. Therefore, this impact would be **less than significant**.

Impact BIO-5: Implementing PMAs under the Turlock Subbasin GSP could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Findings (Effects of Constructed Features and O&M of those Features for Direct and In-Lieu Recharge Projects): Ongoing maintenance activities for direct and in-lieu recharge projects could involve limited amounts of ground disturbance and vegetation management to maintain existing infrastructure. The effects of maintenance of constructed features on biological resources protected by local policies or ordinances would be similar to those described for construction, although at a much smaller magnitude. This impact would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): The potential for the construction of conservation management actions to result in conflicts with existing local policies or ordinances protecting biological resources would be similar to those described for the construction of direct and in-lieu recharge projects. This impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): The potential for O&M of conservation management actions, such as ponds established to store water and/or collect runoff, to result in conflicts with existing local policies or ordinances protecting biological resources would be similar to those described for the construction of direct and in-lieu recharge projects, although at a much smaller magnitude. This impact would be **less than significant**.

Impact BIO-6: Implementing PMAs under the Turlock Subbasin GSP could conflict with the provisions of an adopted Habitat Conservation Plan (HCP), natural community conservation plan, or other approved local, regional, or state HCP.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): The Pacific Gas & Electric (PG&E) San Joaquin Valley Operation & Maintenance Habitat Conservation Plan (O&M HCP) (PG&E 2006) covers specific PG&E activities throughout nine counties in the San Joaquin Valley, including Stanislaus and Merced counties. The PG&E O&M HCP overlaps the entire Turlock Subbasin. It complies with the federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA), and outlines steps on minimizing, avoiding, and compensating for possible direct, indirect, and cumulative adverse effects on threatened and endangered species and critical habitat that could result from PG&E O&M activities in the San Joaquin Valley. Part of the study area lies within the PG&E O&M HCP boundaries, but GSP activities are not covered activities under the PG&E O&M HCP, which is applicable only to PG&E facilities. Therefore, implementation of the PMA actions under the GSP would not conflict with implementation of this HCP. **No impact** would occur.

Impact Category: Energy Resources

Impact ENE-1: Implementing PMAs under the Turlock Subbasin GSP could result in wasteful, inefficient, or unnecessary consumption of energy resources.

Findings (Effects of Construction Activities for PMAs): PMAs implemented under the Turlock Subbasin GSP would include injection wells, recharge basins or ponds, pump stations, pipelines, water storage tanks, French drains or other mechanisms to increase a site's recharge potential, dry wells, water distribution and conveyance infrastructure, canal interties, regulating reservoirs, irrigation basins to enable the delivery of surface water to drip/microsystems, smart meters, and irrigation system modifications.

Impacts on energy resources resulting from the construction of project or management action features would be temporary. The time to construct PMAs could be as short as a few days (in the case of minor projects) to as long as several years (for major projects, e.g., PMAs requiring construction during certain months of the year). However, increased fuel consumption would still be temporary and would cease at the end of the construction activity, and the project or management action would not have a residual requirement for additional energy input. In addition, construction activities would vary in location and duration. The marginal increases in fossil fuel use that would result from the construction of PMAs are not expected to have appreciable impacts on energy resources.

Therefore, energy use during construction activities for PMAs implemented under the Turlock Subbasin GSP would not be inefficient, wasteful, or unnecessary. This impact would be **less than significant**.

Findings (Effects of Constructed Facilities and O&M of those Features for PMAs): PMAs implemented under the Turlock Subbasin GSP would result in the construction of infrastructure such as injection wells, recharge basins or ponds, pump stations, pipelines, water storage tanks, French drains or other mechanisms to increase a site's recharge potential, dry wells, water

distribution and conveyance infrastructure, canal interties, regulating reservoirs, irrigation basins to enable the delivery of surface water to drip/microsystems, smart meters, and irrigation system modifications.

Similar to construction, O&M activities for the PMAs would require both the direct and indirect use of energy resources and irreversible commitments of finite, nonrenewable energy resources. In general, PMAs would be designed to operate as efficiently as feasible. Water would be distributed at the lowest possible pressure to minimize friction losses, which would reduce energy needs for pumping. Pump stations would use high-efficiency pumps employing variable-frequency drives, which reduce energy demand. Should additional energy be required for projects, it may be provided through increases in the procurement of renewable energy.

O&M activities for the PMAs would not be expected to result in the inefficient, wasteful, or unnecessary use of energy. Therefore, this impact would be **less than significant**.

Impact ENE-2: Implementing PMAs under the Turlock Subbasin GSP could conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Findings (Effects of Construction Activities for PMAs): Implementation of PMAs under the Turlock Subbasin GSP would require both the direct and indirect use of energy resources. Such activities would incorporate all feasible control measures to improve equipment efficiency and reduce energy use, as required by the SJVAPCD. These measures may include best management practices (BMPs) to meet the efficiency standards for on-site construction vehicles and exhaust control plans to reduce unnecessary equipment idling. The projects would also implement other policies consistent with state and local legislation to help reduce energy use during construction.

Construction activities for PMAs implemented under the Turlock Subbasin GSP would require land for development (e.g., establishment of project sites, staging areas, and access and haul routes; site preparation; preparation of borrow sites; and site restoration and demobilization). These activities could occur on undeveloped lands, which are scarce, less expensive, and often sought after by various entities that meet various needs (e.g., restoration, mitigation, housing, and alternative energy), and would have the potential to obstruct development or implementation of other state or local plans for renewable energy or energy efficiency. However, impacts related to the loss of development or implementation of other state or local plans for renewable energy or energy efficiency would be expected to be less than significant, because construction activities for PMAs would be limited to the construction period and would not involve long-term obstruction of undeveloped land.

Therefore, energy use by construction activities for PMAs implemented under the Turlock Subbasin GSP would not likely conflict with any applicable state or local plans, policies, or regulations establishing energy standards. This impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): PMAs implemented under the Turlock Subbasin GSP would result in the construction of infrastructure such as injection wells, recharge basins or ponds, pump stations, pipelines, water storage tanks, French drains or other mechanisms to increase a site's recharge potential, dry wells, water

distribution and conveyance infrastructure, canal interties, regulating reservoirs, irrigation basins to enable the delivery of surface water to drip/microsystems, smart meters, and irrigation system modifications.

Similar to construction, O&M activities for the PMAs would require both direct and indirect use of energy resources and irreversible commitments of finite nonrenewable energy resources. The PMAs would incorporate all feasible control measures to improve equipment efficiency and reduce energy use, as required by local air pollution control or management districts. The projects would also implement other policies consistent with state and local legislation to help reduce energy use during operations and maintenance activities.

Energy use during the operation of PMAs implemented under the Turlock Subbasin GSP would not likely conflict with applicable state, regional, or local plans, policies, or regulations establishing energy standards. Therefore, this impact would be **less than significant**.

Impact Category: Greenhouse Gases

Impact GHG-1: Implementing PMAs under the Turlock Subbasin GSP could generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment.

Findings (Effects of Constructed Features and O&M of those Features for Direct Recharge Projects): Once constructed, direct recharge projects would require O&M activities to inspect project features and/or evaluate program effectiveness. These activities would only be required on an intermittent basis and would result in a minor increase in motor vehicle trips. In general, these emissions from O&M vehicle trips would not result in substantive GHG emissions.

Additionally, direct recharge projects may require the routine maintenance and testing of emergency backup generators. Such generators, if necessary, would require a permit from SJVAPCD, which would limit their operation to 52 hours per year. These occasional engine operations would not be substantial and would not generate substantive GHG emissions. Therefore, this operational impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for In-lieu Recharge Projects): Similar to direct recharge projects, in-lieu recharge projects could require O&M activities to inspect project features and/or evaluate program effectiveness. These activities would only be required on an intermittent basis and result in a minor increase in motor vehicle trips. In general, these emissions from O&M vehicle trips would not generate substantive GHG emissions.

In-lieu recharge projects could also require the routine maintenance and testing of emergency backup generators. Such generators, if necessary, would require a permit from SJVAPCD, which would limit their operation to 52 hours per year. These occasional engine operations would not be substantial and would not generate substantive GHG emissions. Therefore, this operational impact would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Water management and conservation actions would have a limited potential to generate construction

emissions. While some conservation PMAs may require replacement of infrastructure, they would probably not result in the excavation or movement of substantial amounts of soil or other materials. While earthwork might be needed for environmental easement habitat enhancement or protection, these activities would be unlikely to require operation of substantial amounts of off-road construction equipment. Therefore, the construction-related emissions associated with water management and conservation actions would be **less than significant** with respect to GHG emissions.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): While water management and conservation actions could require O&M activities to inspect project features and/or evaluate program effectiveness, these activities would only be required on an intermittent basis and would result in a minor increase in motor vehicle trips (likely even fewer than recharge projects). These emissions from O&M vehicle trips would not generate substantive GHG emissions and would predominantly occur in vehicles subject to California's Corporate Average Fuel Economy (CAFE) standards for fuel efficiency, and would have a **less than significant** GHG impact.

Impact GHG-2: Implementing PMAs under the Turlock Subbasin GSP could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Direct and in-lieu recharge projects, as well as some conservation management actions, could require O&M activities to inspect project features and/or evaluate program effectiveness. These activities would only be required on an intermittent basis and would result in a minor increase in motor vehicle trips. These emissions from O&M vehicle trips would not generate substantive GHG emissions and would predominantly occur in vehicles subject to California's CAFE standards for fuel efficiency. Actions in the 2017 Scoping Plan Update pertinent to PMA O&M relate to emissions controls imposed in the future, including future implementation of Phase 2 controls to reduce GHG emissions in new heavy-duty vehicles beyond 2018, and the continued implementation of diesel controls to reduce black carbon emissions from heavy-duty on-road engines as well as off-road engines. These actions would be implemented by CARB as new standards and policies. O&M activities of PMAs implemented under the Turlock Subbasin GSP would be consistent with CARB's *2017 Scoping Plan Update*. This impact would be **less than significant**.

Impact Category: Hazards and Hazardous Materials

Impact HAZ-1: Implementing PMAs under the Turlock Subbasin GSP could create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Implementation of PMAs under the Turlock Subbasin GSP could include construction of new features or modification of existing features injection wells, recharge basins, pump stations, pipelines, water storage tanks, French drains or other mechanisms to increase a site's recharge potential, dry wells, water distribution and conveyance infrastructure, canal interties, regulating reservoirs, and irrigation basins to enable surface water deliveries to drip/micro systems.

Depending on the type of project or management action, the construction equipment and materials used could include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect construction workers, the public, and the environment.

The required compliance with the numerous laws and regulations governing the transportation, use, handling, and disposal of hazardous materials would limit the potential for implementation of the PMAs under the Turlock Subbasin GSP to create hazardous conditions due to the use or accidental release of hazardous materials. Therefore, this impact would be **less than significant**.

Impact HAZ-2: Implementing PMAs under the Turlock Subbasin GSP could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Findings (Effects of Construction Activities for PMAs): As discussed previously in Impact HAZ-1, numerous regulations govern the transportation, use, storage, and disposal of hazardous materials during construction activities. The required compliance with these regulations would prevent exposure of nearby schools to hazardous materials. Therefore, this impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): O&M of PMAs implemented under the Turlock Subbasin GSP are anticipated to require only minimal use of chemicals, such as cleaning solutions, paints and thinners, motor fuel, or disinfectants. Few of the chemicals would be considered hazardous materials (e.g., bleach and cleaners), and anticipated volumes would be small (less than 5 gallons). Because the quantities would be small, this impact related to the use of hazardous materials near schools during operations would be **less than significant**.

Impact HAZ-3: PMAs implemented under the Turlock Subbasin GSP could 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, could create a significant hazard to the public or the environment.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Contaminated materials associated with PMAs implemented under the Turlock Basin GSP would have already been removed and/or treated, and people and the environment would not be exposed to hazardous materials. Therefore, this impact would be **less than significant**.

Impact HAZ-4: PMAs implemented under the Turlock Subbasin GSP that could be 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, could result in a safety hazard or excessive noise for people residing or working in the area.

Findings (Effects of Construction Activities for PMAs): There are three airports within the Turlock Subbasin study area: the Modesto City-County Airport in Stanislaus County, and the Merced-Castle Airport and Turlock Municipal Airport in Merced County. The safety and noise

hazard zones for these airports are delineated in the Stanislaus County Airport Land Use Compatibility Plan (ALUCP) (Stanislaus County 2018) and the Merced County ALUCP (Merced County ALUC 2012). Because the locations of future PMAs have not been determined at the time of analysis in the PEIR, the potential exists for development of future PMAs to be proposed within one or more of these hazard zones. Should future PMAs be proposed within safety or noise hazard zones, they could result in a safety hazard or excessive noise for people residing or working in the area. As a result, a potentially significant impact could occur if ALUCP guidelines are not followed.

With the required compliance with applicable ALUCPs and Federal Aviation Administration (FAA) regulations, implementation of future PMAs under the Turlock Subbasin GSP would have a **less-than-significant** impact relative to the potential exposure of people residing or working within the Turlock Subbasin to excessive airport or airstrip noise.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Adherence to the applicable ALUCP guidelines and FAA regulations would be required during the construction of structures and buildings for PMAs implemented under the Turlock Subbasin GSP. Adherence to these guidelines and regulations, which would restrict development in these sensitive areas, would address any safety or noise impacts. Because safety and noise impacts would be avoided and/or addressed during construction, PMAs implemented within the boundaries of the Turlock Subbasin would not be located within a safety or noise hazard zone. This impact would be **less than significant**.

Impact HAZ-5: Implementing PMAs under the Turlock Subbasin GSP could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Once features associated with the PMAs implemented under the Turlock Subbasin GSP are constructed, temporary traffic obstructions would stop, and routine operations and maintenance for the PMAs would not likely restrict or interfere with the flow of emergency vehicles or evacuation. The impact of operation of the PMAs related to impairing or interfering with an emergency response or evacuation plan would be **less than significant**.

Impact HAZ-6: Implementing PMAs under the Turlock Subbasin GSP could expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Findings (Effects of Construction Activities for PMAs): Construction activities for PMAs implemented under the Turlock Subbasin GSP, including the use of construction equipment and the possible temporary on-site storage of fuels and/or other flammable construction chemicals, could pose an increased fire risk, resulting in injury to workers or the public. However, contractors would be required to comply with regulations for hazardous materials storage and fire protection, which would minimize the potential for fire creation. Because there are no mapped Very High Fire Hazard Severity Zones (VHFHSZs) within the boundaries of the Turlock

Subbasin, and because compliance with fire hazard safety protocols during construction would be required, impacts related to wildland fire would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): As discussed above, there are no VHFHSZs within the boundaries of the Turlock Subbasin. Thus, features for the PMAs implemented under the Turlock Subbasin GSP would be constructed outside of one of these zones, and any operational activities would take place outside of these zones. Depending on the type of project or management action, operational activities may require the storage of flammable substances, which could lead to fire ignition if such substances were stored and handled improperly. However, like construction activities, operational activities would be subject to hazardous materials storage requirements and fire protection regulations. Given compliance with these requirements, impacts related to wildland fires would be **less than significant**.

Impact Category: Hydrology and Water Quality

Impact HYD-1: Implementing PMAs under the Turlock Subbasin GSP could result in a release of pollutants, including in a flood zone as a result of project inundation, into surface water and/or groundwater that could violate water quality standards or waste discharge requirements, substantially degrade water quality, or conflict with or obstruct implementation of a water quality control plan.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): The effects of constructed features and O&M of those features for direct and in-lieu recharge projects would be minimal because the overall objective of these projects is to deliver water to existing beneficial users. There does exist the potential for recharge to mobilize contaminants in the soil profile and vadose soil that may eventually end up in the groundwater aquifer. Examples of those projects include managed aquifer recharge, agricultural managed aquifer recharge, use of dry wells and injection well components. In-lieu recharge projects that mobilize contaminant in the soil profile and vadose soil would be required to adhere to the appropriate regulation under the State Water Board's Waste Discharge Requirements (WDR) Program.

For conservation management actions that propose construction of new features, O&M of those features would involve activities similar to those described for direct and in-lieu recharge projects. For example, construction of wells as part of the pumping reduction program would involve water quality testing of groundwater.

Once the specific characteristics and locations of the direct and in-lieu recharge projects are known, proponents of PMAs would identify the relevant potential water quality impacts of operating the project and determine the appropriate monitoring. For direct recharge projects that may mobilize contaminants and present water quality issues, projects should be evaluated and consultation with the State Water Board's WDR Program recommended to determine whether issuance of WDRs or a waiver of WDRs is needed. For pollutants stored on-site, proponents of PMAs would be required to comply with National Pollutant Discharge Elimination System (NPDES) permit requirements. With such compliance, impacts from O&M of constructed features on the water quality of the study area would be **less than significant**.

Impact HYD-2: Implementing PMAs under the Turlock Subbasin GSP could result in substantial alteration of 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 result in substantial erosion or siltation on- or off-site; result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.

Findings (Effects of Construction Activities for Direct and In-Lieu Recharge Projects): Implementation of direct and in-lieu recharge projects under the Turlock Subbasin GSP could temporarily alter drainage patterns. However, these changes would not be expected to change surface runoff in a manner that could result in substantial erosion on- or off-site, create or increase on- or off-site flooding, exceed existing or planned stormwater drainage systems, and/or impede or redirect flood flows. Once the specific characteristics and locations of the direct and in-lieu recharge projects are known, proponents of PMAs may conduct drainage or hydraulic and hydrology studies to identify the relevant changes to drainage patterns from construction activities. Any changes would likely have relatively localized effects on-site and immediately downstream (or downslope) of the site. In addition, PMAs that would require disturbing 1 or more acres during construction would be subject to the requirements of the NPDES Construction General Permit. The NPDES permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which would include BMPs designed to control and reduce soil erosion. Therefore, this impact would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Conservation management actions would seek to achieve groundwater sustainability through water conservation, land fallowing, and pumping reduction. In some cases, these actions could result in the modification of existing features or the construction of new features, including recharge basins and ponds, wells, and pipelines. Construction of these features could temporarily change drainage patterns in a manner similar to the direct and in-lieu recharge projects. This could result in an increased rate and amount of surface runoff in a manner that would exceed the capacity of existing or planned stormwater drainage systems, result in flooding, or impede or redirect flood flows. However, any changes would likely have relatively localized effects on-site and immediately downstream (or downslope) of the site. Therefore, this impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): For conservation management actions that propose construction of new features, O&M of those features would include activities similar to those described for direct and in-lieu recharge projects. Construction of those features would permanently alter drainage patterns. For example, construction of recharge basins or ponds would result in permanent changes to the drainage in that area. O&M of those features is not expected to change surface runoff in a manner that could result in substantial erosion on- or off-site, create or increase on- or off-site flooding, exceed existing or planned stormwater drainage systems, and/or impede or redirect flood flows.

Additionally, land fallowing activities could result in land use changes that would permanently alter the existing drainage patterns. For example, irrigated fields converted to non-irrigated use would no longer receive applied water, and instead solar facilities could be installed, changing the conditions of the land.

Any changes would likely have relatively localized effects on-site and immediately downstream (or downslope) of the site. Therefore, this impact would be **less than significant**.

Impact HYD-3: Implementing PMAs under the Turlock Subbasin GSP could result in substantial alteration of groundwater–surface water interactions.

Findings (Effects of Construction Activities for Direct and In-Lieu Recharge Projects): Construction activities required for the implementation of direct and in-direct recharge projects would result in short-term, temporary impacts. As described above, these activities would be necessary to modify existing features or create new features: injection wells, recharge basins, pipelines, French drains, dry wells, water distribution and conveyance infrastructure, canal interties, regulating reservoirs, and irrigation basins. Impacts associated with construction of these features include dredging, scraping, or scarification for development of recharge opportunities, and drilling for wells.

Project designs may incorporate adjusted construction timing to avoid the need for dewatering. For example, temporary diversions of surface water to accommodate construction in the water distribution and conveyance systems may be timed to occur during the dry season, when water is not flowing through the system. If water were to be turned off or diverted for construction, canal seepage would be temporarily interrupted. However, this effect is considered temporary and negligible in the context of subbasin-scale interactions. Given their short-term duration, construction activities would not be likely to result in alterations to groundwater–surface water interactions beyond the typical range of seasonal variability. Therefore, this impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Direct and In-Lieu Recharge Projects): PMAs implemented under the Turlock Subbasin GSP are intended to bring the Turlock Subbasin into sustainable conditions and avoid a disconnect between the groundwater and surface water systems. Therefore, operations of direct and in-lieu recharge projects are anticipated to provide neutral or beneficial effects to the study area.

As described in the Turlock Subbasin GSP (Chapter 5), without these projects, the expected amount of groundwater pumping and resulting lower groundwater levels in the ETS GSA would induce more stream seepage from the adjoining Merced and Tuolumne River reaches than under historical conditions. Thus, operations of direct and indirect projects would avoid the potential loss of hydraulic connection between the stream and groundwater systems.

Once the specific characteristics and locations of the direct and in-lieu recharge projects are known, proponents of the PMAs would evaluate the potential for project operations to alter groundwater–surface water interactions, based on the proximity of the constructed features to the three river boundaries and/or aquatic resources mapped in Figure 3.11-4 of the Consolidated Final

PEIR. If a direct or in-lieu recharge project would occur in one of these interconnected areas, its proponent would further consider that area's losing versus gaining streamflow conditions and evaluate the potential for the project to reduce interactions between groundwater and surface water. Assuming that implementation of PMAs would reduce the potential for a disconnect between the stream and groundwater systems, this impact would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Conservation management actions would seek to achieve groundwater sustainability through water conservation, land fallowing, and pumping reduction. In some cases, these actions could result in the modification of existing features or the construction of new features, including recharge basins and ponds, wells, and pipelines. Impacts associated with construction of these features include dredging, scraping, or scarification for development of recharge opportunities, and drilling for wells.

Similar to the discussion above, given their short-term duration, construction activities would not be likely to result in alterations to groundwater–surface water interactions beyond the typical range of seasonal variability. Therefore, this impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): As stated above, PMAs implemented under the Turlock Subbasin GSP are intended to bring the Turlock Subbasin into sustainable conditions and avoid a disconnect between the groundwater and surface water systems. Therefore, it is reasonable to assume that operations of features constructed as part of conservation management actions would provide neutral or beneficial effects to the study area by helping to reduce reliance on groundwater.

Conservation management actions would also promote land use and irrigation efficiency changes that could alter groundwater–surface water interactions.

Once the specific characteristics and locations of the conservation management actions are known, proponents of the PMAs would evaluate the potential for operations to alter groundwater–surface water interactions, based on the proximity of any constructed features to the three river boundaries and/or aquatic resources mapped in Figure 3.11-4 of the Consolidated Final PEIR. If a conservation management action would occur in one of these interconnected areas, its proponent would further consider that area's losing versus gaining streamflow conditions and evaluate the potential for the action to reduce interactions between groundwater and surface water.

Overall, O&M for programs and actions to conserve water are anticipated to benefit the Turlock Subbasin and reduce the potential for a disconnect between the stream and groundwater systems. Therefore, the impact would be **less than significant**.

Impact HYD-4: Implementing PMAs under the Turlock Subbasin GSP could result in conflicts with existing water rights (beneficial uses and/or point of diversion).

Findings (Effects of Construction Activities for Direct and In-Lieu Recharge Projects): Construction activities for direct and in-direct recharge projects implemented under the Turlock Subbasin GSP are not anticipated to result in conflicts with existing water rights. A *water right* is

a legal entitlement that authorizes a party to divert water from a specified source and put it to beneficial, non-wasteful use (State Water Board 2020). Typically, water rights conflicts in the study area arise among local entities over the rights to access water resources. However, these conflicts are not anticipated to occur during construction activities. Any water necessary for construction (e.g., dust control) would be sourced from existing supplies and would be used temporarily; therefore, construction of direct and in-lieu recharge projects is not expected to result in conflicts among other water right holders. This impact would be **less than significant.**

Findings (Effects of Constructed Features and O&M of those Features for Direct and In-Lieu Recharge Projects): O&M of features constructed for direct and in-lieu recharge projects under the Turlock Subbasin GSP may result in conflicts with existing water rights. As described in the GSP, some types of PMAs would divert surface water through existing water rights. Other types of PMAs propose to improve or construct conveyance and delivery infrastructure to deliver excess flows, particularly during flood flow events, and within the purview of existing California water rights. Under these assumptions, no long-term, permanent conflicts with existing water rights would occur.

Short-term, temporary conflicts may arise after construction, during O&M of the project features, particularly during below-average hydrologic years when excess flows are not available to support implementation of the PMAs. The benefits of these projects are expected to accrue in wet and above-normal hydrologic years, when excess flows would be available for use. Once the specific characteristics and locations of the direct and in-lieu recharge projects are known, proponents would evaluate the potential for conflicts through design. They would then mediate those conflicts through permitting to determine the sources and reliability of available water before implementation. The evaluation would include consideration of the range of beneficial users (e.g., agricultural, municipal and industrial, domestic) and uses (irrigation and non-irrigation agricultural supply, drinking water, indoor water uses, landscape irrigation), as shown in Table 3.11-2 of the Consolidated Final PEIR. Additionally, any change in existing water rights (e.g., changing a licensed place of use or applying for a new urgency permit to divert flood flows) would involve a determination by the State Water Board that no other legal user of water is injured by the change. Therefore, this impact would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Conservation management actions would seek to achieve groundwater sustainability through water conservation, land fallowing, pumping reduction, and well meter installation. In some cases, these actions could result in the modification of existing features or the construction of new features, including recharge basins and ponds, wells, and pipelines. As described previously for direct and in-lieu recharge projects, construction activities for conservation management actions are not anticipated to conflict with existing water rights. The water necessary for construction would be secured by the proponent as part of the design of the conservation management action. Therefore, this impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): O&M of the features constructed for conservation management actions under the Turlock Subbasin GSP may result in conflicts with existing water rights for the same

reasons as described above for direct and in-lieu recharge projects. Additionally, because conservation management actions would promote the fallowing of lands during dry hydrologic years to reduce demands for surface water and groundwater, implementation of conservation management actions would implicate California water rights. As described in Chapter 8 of the Turlock Subbasin GSP, voluntary conservation and/or land fallowing programs would be further developed in a targeted and proportional manner, consistent with conditions observed in the subbasin and within the respective jurisdictional boundaries.

Once the specific characteristics and locations of the conservation management actions are known, proponents would determine any potential conflicts and mediate as necessary. The evaluation would include consideration of the range of beneficial users (e.g., agricultural, municipal and industrial, domestic) and uses (irrigation and non-irrigation agricultural supply, drinking water, indoor water uses, landscape irrigation), as shown in Table 3.11-2 of the Consolidated Final PEIR, including water transfers. Therefore, this impact would be **less than significant**.

Impact HYD-5: Implementing PMAs under the Turlock Subbasin GSP could result in substantial alteration of groundwater conditions in adjacent subbasins.

Findings (Effects of Construction Activities for Direct and In-Lieu Recharge Projects): The northern, western, and southern boundaries of the Turlock Subbasin are shared with the Modesto, Delta-Mendota, and Merced groundwater subbasins, respectively (DWR 2006). The impacts of construction activities for the PMAs would be short term and temporary. As described above, activities necessary to implement direct and in-lieu recharge projects would include modifying existing features and constructing new features such as injection wells, recharge basins, pipelines, French drains, dry wells, water distribution and conveyance infrastructure, canal interties, regulating reservoirs, and irrigation basins. Impacts associated with construction of these features include dredging, scraping, or scarification for development of recharge opportunities, and drilling for wells.

Given their short-term, temporary duration, construction activities for direct and in-lieu recharge projects would not be likely to result in significant impacts on groundwater conditions or to result in changes to net subsurface flow to and from neighboring subbasins. Therefore, this impact would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Conservation management actions would seek to achieve groundwater sustainability through water conservation, land fallowing, and pumping reduction. In some cases, these actions could result in the modification of existing features or the construction of new features, including recharge basins and ponds, wells, and pipelines. As discussed above for construction of direct and in-lieu recharge projects, construction activities for conservation management actions would not be likely to result in alteration of groundwater conditions in adjacent subbasins. The impacts of construction would be short term and temporary impacts and are not anticipated to result in changes to the net subsurface flow to/from neighboring subbasins. This impact would be **less than significant**.

Impact Category: Land Use and Planning

Impact LU-1: Implementing PMAs under the Turlock Subbasin GSP could conflict with a land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect.

Findings (Effects of Construction Activities for PMAs): Construction of PMAs implemented under the Turlock Subbasin GSP could involve mobilizing equipment and materials, preparing staging areas, installing temporary construction offices, staging and storing equipment and materials, parking vehicles, using designated access and haul routes, clearing vegetation and structures, preparing borrow sites, restoring and demobilizing from project sites, and removing excess materials. Proponents of PMAs would be required to comply with applicable city and county general plans and other local policies and ordinances. Potential temporary conflicts with adjacent land uses, policies, and regulations caused by construction-related dust, noise, and traffic are addressed in those sections of the Consolidated Final PEIR (Section 3.4, *Air Quality;* Section 3.14, *Noise and Vibration;* and Section 3.17, *Transportation, respectively)*. Therefore, this impact would be **less than significant**.

Impact LU-2: Implementing PMAs under the Turlock Subbasin GSP could physically divide an established community.

Findings (Effects of Construction Activities for PMAs): The implementation of PMAs under the Turlock Subbasin GSP could result in the construction of new infrastructure (e.g., regulating reservoirs, pipelines, injection wells) or expansion of existing infrastructure (e.g., canals, pipelines, recharge basins). Some of these projects could be constructed in areas between communities and developed services. For example, locating a regulating reservoir outside of a community may require road closures to facilitate construction, which could temporarily physically divide the community.

Construction activities for PMAs implemented under the Turlock Subbasin GSP could result in temporary physical division of the community; however, these activities are expected to take place on the periphery of a community, rather than through the community, and would be temporary. Therefore, this impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): PMAs implemented under the Turlock Subbasin GSP (e.g., injection wells, recharge basins, pump stations, pipelines, water storage tanks, French drains or other mechanisms to increase a site's recharge potential, dry wells, water distribution and conveyance infrastructure, canal interties, regulating reservoirs, pump stations, pipelines, water storage tanks, and irrigation basins to enable surface water deliveries to drip/microsystems) would not physically divide an established community. They would not result in permanent division of established communities, isolate industry from communities with services, or disrupt development patterns that would adversely affect the accessibility of the area. Therefore, this impact would be **less than significant**.

Impact Category: Mineral Resources

Impact MIN-1: Implementing PMAs under the Turlock Subbasin GSP could 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 or locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Mineral resource mapping and the general plans for Stanislaus and Merced counties indicate that known mineral resources are present throughout Stanislaus and Merced counties, including within the boundaries of the Turlock Subbasin.

However, the Stanislaus and Merced County general plans include goals and policies designed to protect significant mineral resources, and to ensure that mineral resources are not lost or destroyed as a result of PMAs proposed in designated Mineral Resource Zones (MRZs). Additionally, the Surface Mining and Reclamation Act (SMARA) regulates surface mining operations to minimize adverse environmental impacts and ensure that mined lands are reclaimed to a usable condition. SMARA also encourages the production, conservation, and protection of the state's mineral resources.

Compliance with SMARA and with the goals and policies of the Stanislaus and Merced County general plans that protect mineral resources would be required before the construction of PMAs in MRZs. All features associated with PMAs under the Turlock Subbasin GSP would be subject to these state and local requirements. With compliance with these state and local requirements, implementation of the PMAs under the Turlock Subbasin GSP would not result in the loss of availability of known mineral resources. As a result, impacts on mineral resources would be **less than significant**.

Impact Category: Noise and Vibration

Impact NOI-1: Implementing PMAs under the Turlock Subbasin GSP could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Findings (Effects of Constructed Features and O&M of those Features for Direct and In-Lieu Recharge Projects): Once constructed, direct and in-lieu recharge projects would require O&M activities to inspect project features and/or evaluate program effectiveness. These activities would only be required on an intermittent basis and would result in a minor increase in motor vehicle trips. As a practical matter, these vehicle trips would not result in increased roadside noise levels. Generally, roadway traffic volumes must double to result in a significant (3 dBA) increase in roadside noise levels, which would not occur from occasional O&M activities.

Additionally, direct recharge projects may require the routine maintenance and testing of emergency backup generators. Such generators, if necessary, would require a permit from SJVAPCD, which would limit their operation to 52 hours per year. These occasional engine

operations would not be substantial and would be exempt from Merced County noise standards per Policy HS-7.13. Therefore, this operational impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): While conservation management actions could require O&M activities to inspect project features and/or evaluate program effectiveness, these activities would only be required on an intermittent basis and would result in a minor increase in motor vehicle trips (likely even fewer than recharge projects). Additionally, some of these O&M activities could be considered agricultural activities (on farm recharge basins or diversion infrastructure construction) and would therefore be exempt from operational noise restrictions of both the Merced County and Stanislaus County Codes. Therefore, O&M vehicle trips would not result in a noticeable increase in roadside noise levels and would have a **less-than-significant** noise impact.

Impact NOI-2: Implementing PMAs under the Turlock Subbasin GSP could generate excessive groundborne vibration or groundborne noise levels.

Findings (Effects of Constructed Features and O&M of those Features for Direct and In-Lieu Recharge Projects): Once constructed, direct and in-lieu recharge projects would require O&M activities to inspect project features and/or evaluate program effectiveness. These activities would only be required on an intermittent basis and would result in a minor increase in motor vehicle trips and would not involve vibration-generating activities.

Direct recharge projects may also require the routine maintenance and testing of emergency backup generators, which are not a known source of vibration outside of their foundation slab. Therefore, this operational impact with respect to vibration would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): While conservation management actions could require O&M activities to inspect project features and/or evaluate program effectiveness, these activities would only be required on an intermittent basis and would result in a minor increase in motor vehicle trips (likely even fewer than recharge projects). Therefore, O&M vehicle trips would not result in a new source of vibration and would have a **less than significant** impact.

Impact Category: Population and Housing

Impact POP-1: Implementing PMAs under the Turlock Subbasin GSP could induce substantial unplanned population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

Findings (Effects of Construction Activities for PMAs): The locations, scale, and staffing needs of individual PMAs that could be implemented under the Turlock Subbasin GSP are not known at this time. Factors necessary to identify potential impacts include the number of construction workers employed, the duration of project construction, and the location of PMAs relative to populated areas. However, none of the PMAs identified in the GSP would include the construction of any housing or businesses that would provide new long-term employment opportunities or result in population growth and demand for housing. Furthermore, although

temporary or longer term population increases could occur, the potential presence of existing vacant units in and around the Turlock Subbasin area would help absorb the population increases, which would be negligible and temporary. Therefore, this impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Routine O&M activities for PMAs implemented under the Turlock Subbasin GSP could result in the relocation of an operations crew. However, potential vacant units in the area would provide sufficient housing for the small number of operations workers who may relocate to the study area. Therefore, this impact would be **less than significant**.

Impact POP-2: Implementing PMAs under the Turlock Subbasin GSP could result in the displacement of substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Construction of PMAs, constructed facilities, and O&M of those facilities implemented under the Turlock Subbasin GSP would not displace existing housing. Some construction activities could involve the removal or relocation of recreational structures.

Because the precise locations and detailed characteristics of potential future PMAs are yet to be determined, the potential exists for such projects to result in the displacement of some housing or people. Factors necessary to identify specific impacts include the range of construction workers, the origins of trips by construction worker vehicles, the number of existing and new O&M staff at the site of each project or management action implemented under the Turlock Subbasin GSP, the type of project, and the location of construction.

Even though these factors are not known, construction and O&M activities for PMAs implemented under the Turlock Subbasin GSP are not anticipated to include the removal or relocation of housing that would result in the displacement of substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere. Therefore, this impact would be **less than significant**.

Impact Category: Recreation

Impact REC-1: Implementing PMAs under the Turlock Subbasin GSP could 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.

Findings (Effects of Construction Activities for PMAs): Construction activities for PMAs implemented under the Turlock Subbasin GSP could result in the construction and modification of recreation facilities and associated impacts. However, given the short-term nature of construction activities and the wide range of existing recreational opportunities available within the Turlock Subbasin, impacts on existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated would be **less than significant**.

Impact REC-2: Implementing PMAs under the Turlock Subbasin GSP could include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

Findings (Effects of Construction Activities for PMAs): Construction activities for PMAs implemented under the Turlock Subbasin GSP could result in the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. However, given the short-term nature of construction activities and the wide range of existing recreational opportunities available within the Turlock Subbasin, impacts resulting from PMAs implemented under the Turlock Subbasin GSP that could include recreational facilities or require the construction or expansion of recreational facilities would be **less than significant**.

Impact Category: Transportation

Impact TRANS-1: Implementing PMAs under the Turlock Subbasin GSP could conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Once constructed, the PMAs would require that proponents inspect project features and/or evaluate program effectiveness during O&M activities. These inspections and evaluations would be required on only an intermittent basis and would result in a minor increase in motor vehicle trips. For this reason, the impact of constructed features and O&M of those features related to a conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, would be **less than significant**.

Impact TRANS-2: Implementing PMAs under the Turlock Subbasin GSP could conflict with or be inconsistent with State CEQA Guidelines Section 15064.3(b).

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Implementation of PMAs would result in a minor increase in vehicle miles traveled (VMT) associated with O&M activities necessary to support the functionality of constructed features. O&M activities would primarily involve conducting regularly scheduled inspections and evaluating feature performance; these activities would be incorporated into existing groundwater management operations within the Turlock Subbasin. However, operation of the PMAs would not add VMT to the PMAs' sites to a substantial enough degree that operational VMT would exceed VMT thresholds. The PMAs would cause limited disruptions to traffic along roadways in the vicinity of the Turlock Subbasin, which would not be anticipated to affect transit or nonmotorized travel. For these reasons, operational impacts from the PMAs would be **less than significant**.

Impact TRANS-4: Implementing PMAs under the Turlock Subbasin GSP could result in inadequate emergency access.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Once constructed, the PMAs would require that proponents inspect project features and/or evaluate program effectiveness during O&M activities. These inspections and evaluations would be required on only an intermittent basis and would result in a minor increase in motor vehicle trips,

which would not be substantial enough to result in congestion that could interfere with emergency access. Therefore, this impact would be **less than significant**.

Impact Category: Utilities and Service Systems and Public Services

Impact UTIL-2: Implementing PMAs under the Turlock Subbasin GSP could result in a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and fail to comply with federal, state, and local statutes and regulations related to solid waste.

Findings (Effects of Construction Activities for PMAs): Construction activities for PMAs implemented under the Turlock Subbasin GSP could temporarily increase the amount of solid waste hauled to local landfills. The magnitude of the increase in solid waste generation would depend on the size, number, location, and nature of the projects, and their ability to recycle, reuse, or dispose of materials on-site.

The materials generated would be hauled off-site to landfills, recycled, or sold for commercial use. Thus, construction waste generation is unlikely to cause local landfills to exceed their permitted capacity, or to fail to comply with federal, state, and local regulations related to solid waste. Once the specific characteristics and locations of PMAs are known, proponents would quantify the anticipated volume of solid waste to confirm that sufficient permitted capacity exists and the volume of solid waste generated complies with relevant regulations. Impacts related to solid waste disposal needs and compliance would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Depending on the nature of the PMAs implemented under the Turlock Subbasin GSP, O&M of PMAs may involve maintenance activities that produce solid waste. For example, as part of routine maintenance, accumulated sediment may be removed from around intakes and/or accumulated silt and vegetation may be removed from recharge basins. As mentioned above, debris generated during O&M would be disposed of via methods that would vary by the type of material. Furthermore, the magnitude of increased generation of solid waste would depend on the size, number, location, and nature of PMAs.

The amount of solid waste likely to be generated by these uses is anticipated to small relative to landfill capacity. Once the specific characteristics and locations of PMAs are known, proponents would quantify the anticipated volume of solid waste to confirm that sufficient permitted capacity exists and that solid waste generation complies with relevant regulations. Impacts related to solid waste disposal needs and compliance would be **less than significant**.

Impact UTIL-3: Implementing PMAs under the Turlock Subbasin GSP could result in substantial adverse physical impacts associated with construction of new or modified fire protection, police protection, schools, and other public facilities.

Findings (Effects of Construction Activities for PMAs): Construction activities for PMAs implemented under the Turlock Subbasin GSP would not include the construction of new or modified fire or police protection facilities, schools, or other public facilities and would not increase population or add new demands for public services. Construction activities could result

in a temporary increase in the need for construction crews. However, any increase in the regional population resulting from construction of PMAs would be negligible because the number of workers needed for any given project would be a tiny fraction of the overall population of urban and suburban areas, and thus a less-than-measurable increase in demand for housing. In rural areas, the increase in the number of residents may create local demand for housing; however, such areas typically do not have the housing shortages associated with urban areas, and the demand would typically be temporary. Any increases in demand for law enforcement, fire protection, and medical services related to this small change in population in any one county are expected to be negligible.

Construction activities for PMAs implemented under the Turlock Subbasin GSP could temporarily increase response times for fire protection, law enforcement, and emergency medical services because the transportation and relocation of construction materials could increase traffic levels. However, the extent of construction associated with the project or management action (i.e., the type of feature, location, and other specifics) that would be implemented—which would factor into the potential for increased response times—is not known at this time. Increases in demand for public services (e.g., from jobsite accidents and jobsite security during construction) related to future PMAs would be temporary or short term, and the PMAs likely would not create a need for new or altered public service facilities. Thus, this impact would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for PMAs):
Maintenance and monitoring activities would be required to support the operations of PMAs implemented under the Turlock Subbasin GSP. However, routine maintenance activities would not result in substantially adverse physical traffic impacts that would lead to increased response times for fire protection, police protection, schools, and other public facilities. Therefore, O&M activities would not result in substantial adverse physical impacts associated with construction of new or modified fire or police protection facilities, schools, or other public facilities. This impact would be **less than significant**.

Impact Category: Wildfire

Impact WILD-2: Implementing PMAs under the Turlock Subbasin GSP could, 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.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Because the California Department of Forestry and Fire Protection **(**CAL FIRE) has accounted for slope, prevailing winds, and other factors that exacerbate wildfire risks when developing the Fire Hazard Severity Zone (FHSZ) maps and has determined that Stanislaus and Merced counties do not have VHFHSZs, it can be concluded that these conditions are not an issue. These conditions are not prevalent within the Turlock Subbasin's boundaries; therefore, implementing PMAs under the Turlock Subbasin GSP would not expose people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Further, all new developments proposed under the Turlock Subbasin GSP would be subject to the laws and regulations discussed in the Consolidated Final PEIR Section 3.20.3, *Regulatory*

Setting. With compliance with existing laws and regulations established to prevent and control the spread of wildfire, and the goals and policies in the Stanislaus and Merced counties general plans, this impact would be **less than significant**.

Impact WILD-3: Implementing PMAs under the Turlock Subbasin GSP could 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 may result in temporary or ongoing impacts to the environment.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): PMAs implemented under the Turlock Subbasin GSP could include features such as injection wells, recharge basins, pump stations, pipelines, water storage tanks, French drains or other mechanisms to increase a site's recharge potential, dry wells, water distribution and conveyance infrastructure, canal interties, regulating reservoirs, water storage tanks, and irrigation basins to enable deliveries of surface water to drip/micro systems.

Although PMAs would include the installation of new infrastructure within the Turlock Subbasin's boundaries, none of this new infrastructure would be expected to exacerbate fire risk, as the PMAs would be implemented to address groundwater sustainability. Further, the Turlock Subbasin is not in an area that has been mapped by CAL FIRE as a VHFHSZ. Because the area is not within a VHFHSZ and the new infrastructure would not exacerbate the fire risk, this impact would be **less than significant**.

Impact WILD-4: Implementing PMAs under the Turlock Subbasin GSP could 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.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Areas within the Turlock Subbasin that are urbanized and have existing developments have very low landslide potential, as there are no steep slopes or hillsides. Additionally, based on geologic mapping, no previous or historical landslides are mapped within the Turlock Subbasin, although this does not necessarily mean that landslides cannot happen in the area. Although the area has not been mapped for landslide potential by the California Geological Survey, areas within the Turlock Subbasin where steep slopes occur could be susceptible to landslides.

Implementation of PMAs under the Turlock Subbasin GSP could require construction activities that would temporarily change drainage patterns; however, these changes would not be expected to change surface runoff in a manner that could result in substantial erosion on- or off-site, create or increase on- or off-site flooding, exceed existing or planned stormwater drainage systems, and/or impede or redirect flood flows.

In addition, because CAL FIRE has determined that there are no VHFHSZs within the Turlock Subbasin's boundaries, the fire risk is already low. This also suggests that there are no (or few) areas of post-fire slope instability.

As described above, all future PMAs would be required to comply with the Stanislaus and Merced County fire codes, the California Building Code, and general plan policies, which would reduce the extent to which future projects could increase fire risk. Additionally, future PMAs would be subject to project-level review during which site-specific fire risks would be evaluated, and mitigation, if necessary, would be implemented to address significant impacts. Given compliance with existing laws, regulations, and general plan goals and policies, this impact would be **less than significant**.

Significant or Potentially Significant Impacts Reduced to a Less-Than-Significant Level Through Mitigation Measures

The following significant and potentially significant environmental impacts would be reduced to less-than-significant levels through implementation of applicable mitigation measures as set out below.

The WTS GSA finds that the mitigation measures cited below are feasible, are adopted, and reduce impacts to a less-than-significant level. Accordingly, the WTS GSA finds that, pursuant to PRC Section 21081(a)(1) and State CEQA Guidelines Section 15091(a)(1), changes or alterations required in, or incorporated into, the PEIR mitigate or avoid the potentially significant impacts of PMAs implemented under the Turlock Subbasin GSP. Therefore, impacts in this section are considered significant or potentially significant, but implementation of mitigation measures will reduce impacts to a less-than-significant level. The basis for the finding for each identified impact is set forth below.

The WTS GSA, ETS GSA, and/or PMA proponent(s) will include the applicable measures below as conditions of the Notice of Applicability (NOA) issued for an individual project or management action implemented under the Turlock Subbasin GSP. As stated in the Consolidated Final PEIR, the precise locations and detailed characteristics of potential future PMAs are yet to be determined. Once the specific characteristics and locations of the PMAs are known, proponents of PMAs would identify the relevant potential environmental impacts of constructing and/or operating the PMAs. The applicability of the mitigation measures would thus depend on the PMA characteristics, location, and the potentially significant impacts of the PMA. These impacts will be considered as projects are developed and evaluated in project-level CEQA documents. Implementation of the mitigation measure(s) would be the responsibility of the WTS GSA, ETS GSA, and/or PMA proponent(s).

Impact Category: Aesthetics

Impact AES-1: Implementing PMAs under the Turlock Subbasin GSP could result in substantial degradation of visual qualities.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure AES-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure AES-1: Minimize Degradation of Visual Quality.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Some PMAs implemented under the Turlock Subbasin GSP could permanently alter the visual landscape as a result of changes to water system operations. For example, conveyance of surface water through new or expanded infrastructure could result in decreases in flows to stream or river systems, and such changes in water volumes would result in alterations to the visual landscape.

Because the precise locations and detailed characteristics of potential future PMAs are yet to be determined, and given the potential for future PMAs to result in permanent alteration of visual landscapes, this impact would be **potentially significant**. Implementing Mitigation Measure AES-1 would reduce this potentially significant impact to a **less-than-significant** level.

Impact AES-3: Implementing PMAs under the Turlock Subbasin GSP could result in new sources of substantial light or glare.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure AES-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure AES-2: Avoid Effects of Project Lighting.

Findings (Effects of Construction Activities for PMAs): Construction activities or the use of construction lighting for PMAs implemented under the Turlock Subbasin GSP could temporarily generate glare. Because these construction activities could result in a substantial adverse effect associated with night lighting and glare in the study area, this impact would be **potentially significant**. Implementing Mitigation Measure AES-2 would reduce this potentially significant impact to a **less-than-significant** level.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Natural light reflected by constructed PMAs (e.g., when additional water is present as a result of a regulating reservoir or irrigation basins) is not expected to be annoying or distracting because water features are considered aesthetically beneficial.

However, because O&M activities for PMAs implemented under the Turlock Subbasin GSP could result in a substantial adverse effect associated with new and long-term or permanent lighting, this impact would be **potentially significant**. Implementing Mitigation Measure AES-2 would reduce this potentially significant impact to a **less-than-significant** level.

Impact Category: Air Quality

Impact AIR-2: Implementing PMAs under the Turlock Subbasin GSP could 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.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure AIR-2 would be required when applicable to a given project that potentially creates significant dust from fallowing lands (i.e., removing vegetation

and irrigation causing dust). This could include projects that involve the fallowing of agricultural parcels greater than 1 acre in size for one or more growing seasons. Implementation of this measure would be the responsibility of the PMA proponent(s).

Mitigation Measure AIR-2: Minimize Dust from Fallowed Lands.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): Fallowing of agricultural lands and/or changes in crop patterns (e.g., switching from high water-using crops to low water-using crops) could result in an increase of blowing dust (e.g., particulate matter). Land that is fallowed or idled is more susceptible to soil erosion due to the reduced vegetative cover to secure the soil and prevent soils from being blown or washed away. This could result in an increase in particulate matter at levels that could violate air quality standards or exceed SJVAPCD thresholds of significance for particulate matter. Therefore, this could have a **potentially significant** impact on air quality.

Implementing procedures that control dust have the potential to improve visibility, reduce wind erosion and loss of topsoil, minimize damage to roads and structures, and limit health impacts due to poor air quality associated with land fallowing (CDFA 2022).

With implementation of Mitigation Measure AIR-2, the impacts associated with constructed features and O&M of conservation PMAs is considered to be **less than significant**.

Impact AIR-3: Implementing PMAs under the Turlock Subbasin GSP could expose sensitive receptors to substantial pollutant concentrations.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measures AIR-1, AIR-2, and AIR-3 would be required when applicable to a given project. Implementation of these measures would be the responsibility of the PMA proponent(s).

Mitigation Measure AIR-1: Implement Project-specific Air Quality Analysis for Large Recharge Projects.

Mitigation Measure AIR-2: Minimize Dust from Fallowed Lands.

Mitigation Measure AIR-3: Implement Project-specific Air Quality Analysis for Certain Recharge Projects.

Findings (Effects of Construction Activities for Direct Recharge Projects): As discussed in Impact AIR-2, above, many of the PMAs implemented under the Turlock Subbasin GSP could include direct recharge projects that require construction activities that include the mobilization of substantial off-road equipment and materials, removal of substantial soil quantities from borrow sites or off-site locations, and well drilling that would result in emissions of diesel particulate matter (DPM), a toxic air contaminant.

SJVAPCD guidance does not provide a specific methodology for assessing construction-related health risk impacts at the programmatic level. Without specific information about the year of

construction or the phasing sequence of PMAs, a quantitative analysis of construction-phase human health is not feasible.

Nonetheless, the human health risk impact associated with direct recharge projects would be **potentially significant** and require mitigation. Specifically, Mitigation Measure AIR-3 would require that for proposed PMA construction projects that involve 12 months of active construction and are within 1,000 feet of sensitive receptors, a project-specific construction health risk analysis shall be completed to demonstrate that the construction activities of individual projects under the PMA would not result in a significant acute, chronic non-cancer or cancer-related health risk to specific sensitive receptors. Implementation of Mitigation Measure AIR-2 would ensure that potential impacts related to exposure of sensitive receptors to substantial pollutant concentrations or health risk from construction activities resulting from direct recharge projects would be **less than significant**.

These additional mitigation measures, if necessary, would further reduce emissions exposures. Therefore, the impact from construction-related emissions of TACs from recharge projects would be **less than significant with mitigation**.

Findings (Effects of Construction Activities for In-Lieu Recharge Projects): Similar to direct recharge projects, in-lieu recharge projects could require storage of surface water in storage reservoirs that would need to be constructed and, therefore, require substantial excavation and earth movement. Also, in-lieu projects could require the construction of water conveyance and delivery infrastructure for later that would also involve substantial excavation and earth movement. Consequently, in-lieu recharge projects would have the same potential for significant health risk impact, and Mitigation Measure AIR-3 would also apply to these projects. Similarly, this mitigation measure would be sufficient to reduce the risk to **less than significant** with respect to health risk impacts.

Findings (Effects of Construction Activities for Conservation Management Actions): Water management and conservation actions would have a limited potential to generate construction emissions. While some conservation PMAs may require replacement of infrastructure, they would probably not involve the excavation or movement of substantial amounts of soil or other materials. While there may be earthwork for environmental easement habitat enhancement or protection, these activities are unlikely to require a substantial amount of off-road construction equipment. Therefore, the construction-related emissions associated with water management and conservation actions would be less than significant with respect to health risk and TAC exposure.

If there is substantial movement of soil or off-road construction equipment, then Mitigation Measures AIR-1 and/or AIR-3 could be implemented to minimize health risk and TAC exposure and ensure impacts are **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): The potential fallowing of agricultural lands would reduce localized emissions of DPM currently associated with off-road agricultural equipment performing discing and tilling or generators powering groundwater pumps. While water management and conservation actions could require O&M activities to inspect project features and/or evaluate

program effectiveness, these activities would only be required on an intermittent basis and result in a minor increase in motor vehicle trips (likely fewer than recharge projects). These O&M vehicle trips would generate emissions that result in a negligible increase in health risk exposure from TACs and would have a **less-than-significant** air quality impact.

For the reasons described above, compliance with Mitigation Measure AIR-2 would be required when applicable to a given project that potentially creates dust from fallowing lands (i.e., removing vegetation and irrigation causing dust) (CDFA 2022) in order to ensure that impacts from the O&M of conservation PMAs are **less than significant**.

Impact Category: Biological Resources

Impact BIO-1: Implementing PMAs under the Turlock Subbasin GSP could result in 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 (CDFW) or U.S. Fish and Wildlife Service (USFWS).

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure BIO-1 to avoid or minimize disturbance of special-status species would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure BIO-1: Minimize Disturbance of Special-Status Species.

Findings (Effects of Constructed Conservation Management Actions): Construction of recharge ponds could affect special-status species in a similar manner as described for direct and in-lieu recharge projects, with effects generally associated with either direct mortality or injury (e.g., crushing wildlife or plants by heavy machinery) or through the loss of suitable habitat. Construction related to the installation of advanced water metering systems would have minimal effects on special-status species. Such efforts would typically involve the removal of existing metering systems and installation of more advanced water meters (e.g., smart meters), the location of which is often in previously disturbed areas.

For agricultural areas where water efficiency conservation measures would be implemented, such as conversion of existing irrigation infrastructure to drip irrigation, heavy equipment would be utilized to install the drip line (e.g., to excavate a trench to place the drip tubing). Most special-status plants are not found in actively farmed areas; however, certain wildlife species have grown accustomed to and will utilize farmland.

Implementation of Mitigation Measure BIO-1 would reduce potentially significant impacts on special-status species to a **less-than-significant** level.

Findings (Effects of Constructed Features and O&M of the Conservation Management Actions): Some conservation management actions could result in the fallowing of agricultural lands. Placement of conservation easements on agricultural lands that are taken out of production as part of a conservation management PMA would maintain such properties in a long-term open

space use, which would be expected to be protective of those sites as potential habitat for species such as Swainson's hawks and burrowing owls.

The effect of O&M of ponds established to store water and/or collect runoff for water conservation purposes on special-status species would be similar to those previously described regarding O&M direct and in-lieu recharge projects. Operations of replaced water meters with more advanced features would not have any effect on special-status species; maintenance of these more advanced water meters would have effects similar on special-status species to those described for construction of these items; however, the effect is expected to be smaller in magnitude.

Implementation of Mitigation Measure BIO-1 would reduce potentially significant impacts on special-status species to a **less-than-significant** level.

Findings (Effects of Constructed Features and O&M of the Direct and In-Lieu Recharge Projects): Compliance with Mitigation Measure BIO-1 would be required to address impacts on special-status plant and wildlife species by a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s). With implementation of this mitigation measure, the impacts associated with O&M of direct and in-lieu recharge projects is considered to be **less than significant**.

Impact BIO-2: Implementing PMAs under the Turlock Subbasin GSP could result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure BIO-2 to avoid or minimize impacts on sensitive natural communities would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

> **Mitigation Measure BIO-2: Avoid and Minimize Disturbance to Sensitive Natural Communities.**

Findings (Effects of Constructed Features and O&M of those Features for Direct and In-Lieu Recharge Projects): O&M of direct and in-lieu recharge projects could adversely affect sensitive natural communities through the loss of vegetation due to the need to establish small staging areas (typically less than 0.5 acre), stockpile areas, spoil areas, access roads, and haul roads. These areas are often sited within previously disturbed areas, reducing the likelihood that their presence would result in the conversion of sensitive natural communities. Generally, the potential effect of O&M of constructed features would be similar to those described for construction of those features; however, the effect would be smaller in magnitude. Certain maintenance activities, however, may arise that may necessitate placing such areas within existing sensitive natural communities. As such, the O&M impacts would be **potentially significant**.

PMAs implemented under the Turlock Subbasin GSP are intended to bring the Turlock Subbasin into sustainable conditions and avoid a disconnect between the groundwater and surface water

systems. Stabilizing or potentially even increasing localized groundwater elevations is expected to support certain sensitive natural communities, such as riparian forests and those seasonal wetlands whose hydrology is closely connected to groundwater sources. Groundwater–surface water interactions are extremely complex, making specific projections of any benefits to sensitive natural communities within the study area challenging.

With implementation of Mitigation Measure BIO-2, the impacts associated with O&M of direct and in-lieu recharge projects would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Water conservation PMAs could include modification of irrigation systems to be more efficient (e.g., transitioning from flood irrigation to drip irrigation), installation of more advanced water metering systems, or construction of ponds to store water and/or collect runoff. Construction of recharge ponds would affect sensitive natural communities in a similar manner as described for direct and in-lieu recharge projects, with the potential for temporary damage to or the permanent removal of sensitive natural communities located in and adjacent to the construction site. Installation of advanced water metering systems would have minimal to no effects on sensitive natural communities since such features would be installed in more developed or previously disturbed areas where sensitive natural communities are not currently present.

In agricultural areas where water efficiency conservation measures would be implemented, such as conversion of existing irrigation infrastructure to drip irrigation, such work would not be expected to contribute to any loss of sensitive natural communities, as it would occur in existing managed farmland where sensitive natural communities are no longer present. With implementation of Mitigation Measure BIO-2, the impacts on sensitive natural communities associated with implementation of conservation PMAs would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): The effect on sensitive natural communities of O&M of ponds established to store water and/or collect runoff as part of the conservation management actions would be similar to those previously described regarding O&M direct and in-lieu recharge PMAs. Operations of replaced water meters with more advanced features would not have any effect on sensitive communities; maintenance of these more advanced water meters would have effects on sensitive communities similar to those described for construction of these items; however, the effect would be smaller in magnitude.

Implementation of Mitigation Measure BIO-2 would reduce potentially significant impacts on sensitive natural communities to a **less-than-significant** level.

Impact BIO-3: Implementing PMAs under the Turlock Subbasin GSP could result in a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means.

Implementation of Mitigation Measure BIO-3 to minimize the loss of wetlands and restore wetlands from temporary impacts following the installation of PMAs would reduce the severity

of any potentially substantial adverse effects. Both federal and state permitting would require compensatory mitigation for all permanent loss of wetlands.

Mitigation Measure BIO-3: Avoid and Minimize Disturbance to Wetlands and Waters.

Findings (Effects of Construction Activities for Direct and In-Lieu Recharge Projects): Wetlands and waters could be directly impacted during the construction of direct and in-lieu recharge projects due to the installation of pumps, pipelines, and other infrastructure in wetland areas. These wetland areas could also be indirectly affected by the construction of direct and in-lieu recharge projects from siltation and chemical spills into waterways. Habitat disturbance and permanent wetland loss could result from general grading, re-contouring, relocating, and/or filling portions of wetlands to accommodate the construction of direct and in-lieu recharge projects such as injection wells, pipelines, distribution and conveyance infrastructure, and canal interties. Wetlands could also be impacted during construction work as a result of disturbance from vehicle access and equipment staging. Additionally, wetlands could be indirectly affected by construction activities such as through the accidental spills of contaminants (e.g., fuels or lubricants) from heavy machinery and because of the increased potential for erosion and sediment runoff associated with construction-related ground disturbance, which could result in the discharge of fill into wetland features. If regulating reservoirs and irrigation basins are placed in areas of existing wetlands, wetland habitat could be converted to other aquatic features; in such circumstances, while there would likely be a net expansion of inundated area as a result of construction of the PMAs, the work would likely result in a net loss of wetland extent. This impact is **potentially significant**.

Implementation of Mitigation Measure BIO-3 to minimize the loss of wetlands and restore wetlands from temporary impacts following the installation of PMAs would reduce the severity of any potentially substantial adverse effects. Both federal and state permitting would require compensatory mitigation for all permanent loss of wetlands.

With implementation of **Mitigation Measure BIO-3**, the impacts on wetlands would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Direct and In-Lieu Recharge Projects): O&M of direct and in-lieu recharge projects would be unlikely to directly impact wetlands because these areas could be avoided by human and vehicle traffic. However, indirect impacts on wetlands could occur, such as through chemical spills or sedimentation into waterways. However, the effect would be much smaller in magnitude than the potential effects to wetlands during the construction phase of direct and in-lieu recharge projects implemented under the Turlock Subbasin GSP.

Operation of recharge basins can potentially result in the creation of wetlands. Additionally, the implementation of PMAs to improve groundwater supplies either through direct recharge or in-lieu recharge would generally help maintain existing, or under certain circumstances increase, local groundwater elevations. These benefits to groundwater supply will be particularly beneficial to groundwater dependent ecosystems (GDEs), such as certain wetlands, as a result of

groundwater–surface water interactions. Refer to the Consolidated Final PEIR Section 3.11, *Hydrology and Water Quality*, for additional discussion of potential impacts of PMAs implemented under the Turlock Subbasin GSP on groundwater–surface water interactions.

With implementation of Mitigation Measure BIO-3, the impacts on wetlands are considered to be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Water conservation management actions could include the modification of irrigation systems to be more efficient (e.g., transitioning from flood irrigation to drip irrigation), installation of more advanced water metering systems, or construction of ponds to store water and/or collect runoff.

With implementation of Mitigation Measure BIO-3, the impacts on wetlands associated with implementation of conservation PMAs would be **less than significant**.

Impact BIO-4: Implementing PMAs under the Turlock Subbasin GSP could 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.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measures BIO-1 and BIO-2 (to avoid or minimize impacts on special-status species and sensitive natural communities, respectively) would be required when applicable to a given management action, and would also address impacts on wildlife corridors and nursery sites. Implementation of these mitigation measures would be the responsibility of the PMA proponent(s).

> **Mitigation Measure BIO-1: Minimize Disturbance of Special-Status Species.**
>
> **Mitigation Measure BIO-2: Avoid and Minimize Disturbance to Sensitive Natural Communities.**

Findings (Effects of Constructed Features and O&M of those Features for the Direct and In-Lieu Recharge Projects): O&M of PMA features could also adversely affect wildlife corridors and nursery sites through the loss of vegetation due to O&M traffic and conversion to disturbed land. O&M typically involves fewer workers and affects smaller areas than construction, but takes place over a longer time period. Thus, the O&M impacts would be **potentially significant**.

Direct and in-direct recharge projects PMAs implemented under the Turlock Subbasin GSP are intended to bring the Turlock Subbasin into sustainable conditions. Stabilizing or potentially increasing groundwater elevations could benefit GDEs, such as riparian forests. Since riparian forests are often important wildlife corridors, the operation of direct and in-direct recharge projects PMAs may indirectly benefit wildlife corridor conditions within the study area, although the extent of such a potential benefit is hard to quantify given that groundwater–surface water interactions are extremely complex and the response of riparian vegetation to changes in local groundwater elevation conditions varies depending on the plant species.

Compliance with Mitigation Measures BIO-1 and BIO-2 (to avoid or minimize impacts on special-status species and sensitive natural communities, respectively) would be required when applicable to a given project, and would also address impacts on wildlife corridors and nursery sites. Implementation of these mitigation measures would be the responsibility of the PMA proponent(s). With implementation of these mitigation measures, the impacts associated with O&M of direct and in-lieu recharge projects would be **less than significant**.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): The effect of O&M of ponds established to store water and/or collect runoff as part of conservation PMAs on wildlife migration or movement corridors would be similar to those previously described for operations and maintenance direct and in-lieu recharge PMAs.

Some conservation management actions could result in fallowing of agricultural fields to save water. Voluntary land use changes of such fallowed farmland could include the placement of conservation easements, habitat restoration, recharge facilities, or construction of renewable energy facilities (e.g., solar facilities). While implementation of habitat restoration actions on fallowed land could contribute to the establishment of additional movement and migration corridors for terrestrial wildlife, any assumptions about the future use of agricultural lands fallowed as part of a conservation management action is outside the scope of the PEIR.

Compliance with Mitigation Measures BIO-1 and BIO-2 (to avoid or minimize impacts on special-status species and sensitive natural communities, respectively) would be required when applicable to a given management action, and would also address impacts on wildlife corridors and nursery sites. Implementation of these mitigation measures would be the responsibility of the PMA proponent(s). With implementation of these mitigation measures, the impacts associated with O&M of conservation management actions would be **less than significant**.

Impact BIO-5: Implementing PMAs under the Turlock Subbasin GSP could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure BIO-2 to avoid or minimize impacts on sensitive natural communities would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

> **Mitigation Measure BIO-2: Avoid and Minimize Disturbance to Sensitive Natural Communities.**

Findings (Effects of Construction Activities for Direct and In-Lieu Recharge Projects): Cities, counties, and local districts may adopt local policies or ordinances for the conservation of biological resources. These policies or ordinances may mandate the local protection of special-status species, waterways, native trees, or other selected resources. Depending on the specific location and design of the direct and in-lieu recharge PMAs under the Turlock Subbasin GSP, such projects could potentially conflict with local policies and ordinances. For example,

implementation of direct and in-lieu recharge projects under the Turlock Subbasin GSP could adversely affect trees (e.g., by removing trees for the installation of water conveyance infrastructure or roadways). The general plans (see the Consolidated Final PEIR Section 3.5.3) call for the maintenance of open space and minimizing the removal of vegetation in riparian areas, which could occur as a consequence of construction of the direct and in-lieu recharge projects under the Turlock Subbasin GSP. The potential for conflict with local policies or ordinances for the conservation of biological resources would be **potentially significant**. PMAs implemented under the Turlock Subbasin GSP would comply with general plan policies and ordinances, and would implement Mitigation Measure BIO-2 for minimizing impacts on sensitive natural communities, including riparian areas and oak woodlands. With implementation of this mitigation measure, the impact would be reduced to a **less-than-significant** level.

Impact Category: Geology, Soils, and Paleontological Resources

Impact GEO-1: Implementing PMAs under the Turlock Subbasin GSP could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure GEO-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure GEO-1: Include Geotechnical Design Recommendations.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): PMAs implemented under the Turlock Subbasin GSP could include activities associated with the construction of new or modification of existing injection wells, recharge basins, pump stations, pipelines, water storage tanks, French drains or other mechanisms to increase recharge potential at a site, dry wells, water distribution and conveyance infrastructure, canal interties, regulating reservoirs, water storage tanks, and irrigation basins to enable surface water deliveries to drip/micro systems.

Due to the proximity to the Holocene-active Ortigalita and Greenville fault zones, and the pre-Holocene San Joaquin fault, structures associated with the PMAs implemented under the Turlock Subbasin GSP could be subject to the effects of strong seismic ground shaking in the event of an earthquake on one of the previously mentioned faults. Strong seismic ground shaking could potentially damage new features, resulting in loss, injury, or death. If wells, pipelines, water storage tanks, etc. were damaged during an earthquake due to seismic ground shaking, this would be a **potentially significant** impact.

As required by California law, any new developments would be subject to the seismic design criteria of the California Building Code (CBC), which requires that all structures be constructed to withstand anticipated ground shaking from regional fault sources. Each new development would be required to obtain a site-specific geotechnical report prior to the issuance of individual grading permits; each new development would be required to retain a licensed geotechnical

engineer to design new structures to withstand probable seismically induced ground shaking. The CBC standards require all new developments to be designed consistent with a site-specific, design-level geotechnical report, which would be fully compliant with the seismic recommendations of a California-registered professional geotechnical engineer. Adherence to the applicable CBC requirements would ensure that implementing PMAs under the Turlock Subbasin GSP would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Implementing Mitigation Measure GEO-1 would reduce potentially significant impacts related to the potential exposure to people and structures to risk of loss, injury, or death due to a fault rupture to a **less-than-significant** level.

Impact GEO-2: Implementing PMAs under the Turlock Subbasin GSP could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure GEO-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure GEO-2: Conduct Geotechnical Investigation and Report.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Based on the available data from geologic maps and groundwater data, there are areas of—at the very least—moderate liquefaction potential. Construction of new features and/or modification of existing features associated with the PMAs implemented under the Turlock Subbasin GSP could be subject to the damaging effects of liquefaction in the event of an earthquake on one of the previously mentioned faults.

California law requires that all new structures be constructed to withstand any anticipated seismic-related ground failures, including liquefaction, due to ground shaking from regional fault sources. For each PMA, a site-specific geotechnical report would be required prior to the issuance of individual grading permits; each new feature would be required to retain a licensed geotechnical engineer to investigate and evaluate each PMA site and design new features to withstand probable seismic-related ground failures, such as liquefaction. The CBC standards require all new developments to be designed consistent with a site-specific, design-level geotechnical report, which would be fully compliant with the seismic recommendations of a California-registered professional geotechnical engineer. Liquefaction hazards can generally be addressed through site preparation measures or foundation design measures, such as the removal and replacement of liquefiable soils, densification of these soils, or specific foundation design recommendations. Implementation of these measures in accordance with building code requirements can effectively reduce the hazard to minimize any potential for substantive damage.

Compliance with all applicable CBC requirements and Mitigation Measure GEO-2 would ensure that implementing PMAs under the Turlock Subbasin GSP would not directly or indirectly cause

substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. Therefore, impacts would be **less than significant**.

Impact GEO-3: Implementing PMAs under the Turlock Subbasin GSP could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure GEO-2 would reduce any potential hazard associated with earthquake-induced landslides.

Mitigation Measure GEO-2: Conduct Geotechnical Investigation and Report.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Areas within the Turlock Subbasin that are urbanized and have existing developments have a very low landslide potential as there are no steep slopes or hillsides. Based on geologic mapping, no previous or historical landslides have been mapped within the Turlock Subbasin; however, this is not a definitive conclusion that landslides could not happen in the area. Although the California Geological Survey (CGS) has not mapped the area for landslide potential, areas within the Turlock Subbasin could be susceptible to earthquake-induced landslides. If construction of new or modification of existing features associated with the PMAs implemented under the Turlock Subbasin GSP would be proposed within areas of high landslide potential, this could be a **potentially significant** impact.

Compliance with CBC requirements and Mitigation Measure GEO-2, would reduce or avoid impacts related to landslides. Implementing PMAs under the Turlock Subbasin GSP would not directly or indirectly result in adverse effects related to landslides, and the impact would be **less than significant**.

Impact GEO-4: Implementing PMAs under the Turlock Subbasin GSP could result in substantial soil erosion or the loss of topsoil.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure AIR-2: Minimize dust from fallowed lands, would be required when applicable to a given project that potentially creates significant dust from fallowing lands (i.e., removing vegetation and irrigation causing dust).

Mitigation Measure AIR-2: Minimize Dust from Fallowed Lands.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Construction activities associated with implementing PMAs under the Turlock Subbasin GSP could include ground-disturbing activities such as the mobilization of equipment and materials; preparation of staging areas; staging and storage of equipment and materials; preparation of project sites; preparation/use of borrow sites; well drilling; site restoration and/or site demobilization; disposal of excess materials; dewatering, excavation, fill, and placement of materials in water; and drainage modifications. Land that is fallowed or idled is more susceptible to soil erosion due to the reduced vegetative cover to secure the soil and prevent

soils from being blown or washed away (as discussed in the Consolidated Final PEIR Section 3.4, *Air Quality*). These ground-disturbing activities are some examples of activities that could contribute to substantial soil erosion or the loss of topsoil.

PMAs that require the disturbance of 1 or more acres during construction would be subject to the requirements of the NPDES General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities (Construction General Permit). The NPDES permit requires the preparation and implementation of a SWPPP, which would include BMPs designed to control and reduce soil erosion. The BMPs may include dewatering procedures, stormwater runoff quality control measures, watering for dust control, and the construction of silt fences. Additionally, Mitigation Measure AIR-2: Minimize dust from fallowed lands, would be required when applicable to a given project that potentially creates significant dust from fallowing lands (i.e., removing vegetation and irrigation causing dust). Compliance with this independently enforceable existing requirement and implementation of these soil and erosion control measures would ensure that impacts related to erosion and soil loss would be **less than significant**.

Impact GEO-5: Implementing PMAs under the Turlock Subbasin GSP could result in new projects that could 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.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure GEO-2 would include an analysis of potential unstable soil conditions at a site, if applicable.

Mitigation Measure GEO-2: Conduct Geotechnical Investigation and Report.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): As discussed above, implementation of PMAs under the Turlock Subbasin GSP could be subject to the potential effects of unstable soils. Any new features that are proposed in areas determined to be susceptible to geotechnical hazards (e.g., liquefaction or landslide) would be subject to the damaging effects of these hazards. Also discussed above is the requirement that subjects all PMAs to the building standards of the CBC. Mitigation Measure GEO-2 would include an analysis of potential unstable soil conditions at a site, if applicable. If unstable soil conditions are determined to be present at a given site, the geotechnical report specific to that site would include site-specific design requirements to implement to reduce or avoid adverse effects associated with unstable soils.

Compliance with CBC requirements, including implementation of recommendations provided in site-specific geotechnical reports, would reduce or avoid impacts related to unstable soils. Implementing PMAs under the Turlock Subbasin GSP would not directly or indirectly result in adverse effects related to unstable soils, and the impact would be **less than significant**.

Impact GEO-6: Implementing PMAs under the Turlock Subbasin GSP could result in new projects that could be located on expansive soils, creating substantial direct or indirect risks to life or property.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure GEO-3 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure GEO-3: Conduct Expansive Clay Investigation.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): The soil conditions throughout the Turlock Subbasin vary widely. Soil expansion generally occurs in fine-grained clayey sediments, which could be present within the Turlock Subbasin area. If features associated with the implementation of PMAs under the Turlock Subbasin GSP are constructed within areas susceptible to soil expansion, the structures would be at risk of the damaging effects of expansive soils. This would be a **potentially significant impact**.

Implementing Mitigation Measure GEO-3 would reduce potentially significant impacts related to PMAs being located on expansive soils, creating substantial direct or indirect risks to life or property, to a **less-than-significant** level.

Impact GEO-7: Implementing PMAs under the Turlock Subbasin GSP could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure GEO-4 would be required to ensure that each PMA undergoes individual CEQA analysis and be assigned a paleontological sensitivity specific to each site based on site-specific project information (i.e., the extent of ground disturbance and potential geologic units that would be encountered).

Mitigation Measure GEO-04: Determination of Paleontological Potential.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): A review of the available geologic maps, scientific literature, and institutional records has indicated that geologic units with a high potential to contain significant paleontological resources occur within the Turlock Subbasin. In general, Holocene-age alluvial deposits have a low potential to contain significant paleontological resources at the surface; however, the potential increases in the deeper layers of those deposits. Additionally, the Pleistocene-age Modesto and Riverbank formations, and the Miocene-age Mehrten Formation, are considered to have a high potential to contain significant paleontological resources.

The addition of new features or the modification of existing features associated with PMAs implemented under the Turlock Subbasin GSP would require grading and excavation during the construction phases of future developments. Paleontological resources may be encountered in deep excavations (generally, approximately 6 or more feet below ground surface, depending on site-specific information) into previously undisturbed Holocene-age alluvium (where Pleistocene-

age sediments are present). Excavations at any depth in previously undisturbed deposits of the Modesto, Riverbank, and Mehrten formations have the potential to encounter significant paleontological resources. If significant paleontological resources are encountered and inadvertently destroyed during construction of new developments, that would constitute a **potentially significant impact**.

Implementation of Mitigation Measure GEO-4 would ensure that a thorough analysis of the potential to encounter significant paleontological resources is performed in accordance with Society of Vertebrate Paleontology (SVP) standard guidelines. If it is determined that the potential exists for a project to encounter and destroy significant paleontological resources, the appropriate steps will be followed to ensure that a professional paleontologist is retained to prepare a paleontological resource management plan (or similar), which will include appropriate mitigation recommendations to avoid a potentially significant impact. Compliance with Mitigation Measure GEO-4 will reduce impacts to **less than significant**.

Impact Category: Greenhouse Gases

Impact GHG-1: Implementing PMAs under the Turlock Subbasin GSP could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure GHG-1 is identified to require the implementation of a menu of Best Performance Standards (BPS) measures to minimize GHG emissions associated with construction activities.

> **Mitigation Measure GHG-1: Implement BPS for All Construction Projects under the Turlock Subbasin GSP.**

Findings (Effects of Construction Activities for Direct Recharge Projects): GHG emissions associated with construction of PMAs may be generated from the following general construction activities: (1) ground disturbance from grading, excavation, etc.; (2) vehicle trips from workers traveling to and from the construction areas; (3) trips associated with the delivery of construction supplies to, and hauling debris from, the construction areas; and (4) fuel combustion by on-site construction equipment.

As discussed in Section 1.3 of the Consolidated Final PEIR, a number of different counties, cities, and special districts could design and implement PMAs under the Turlock Subbasin GSP. Section 2.3.4 of the draft EIR identifies "borrow sites" where areas from which earthen materials would be removed for use in construction. Sites nearest to the construction areas are usually preferred. Using borrow sites near construction areas reduces the potential costs and would also reduce GHG emissions associated with soil transport and therefore represents an example of a BPS. However, given the absence of detail with respect to potential BPS specific to emissions reductions during construction, and given the fact that direct recharge projects may involve the excavation and transport of large amounts of material over relatively short work windows using multiple pieces of off-road equipment and on-road haul trucks, worker vehicle trips, and vendor

trips, the construction-related emissions impact with respect to GHG emissions is **potentially significant**.

With implementation of Mitigation Measure GHG-1, construction-related GHG emissions from direct recharge projects would be minimized to the extent practicable and would be consistent with guidance prepared by the SJVAPCD with respect to addressing GHG emissions in CEQA documents, and the resultant impact would be **less than significant**.

Findings (Effects of Construction Activities for In-Lieu Recharge Projects): Similar to direct recharge projects, in-lieu recharge projects could require storage of surface water in storage reservoirs that would need to be constructed and, therefore, require substantial excavation and earth movement. In-lieu projects could also require the construction of water conveyance and delivery infrastructure for later that would involve substantial excavation and earth movement. Consequently, in-lieu recharge projects would have the same potential for potentially significant GHG impacts, and Mitigation Measure GHG-1 would also apply to these projects. With implementation of Mitigation Measure GHG-1, construction-related GHG emissions would be minimized to the extent practicable and would be consistent with guidance prepared by SJVAPCD for addressing GHG emissions in CEQA documents; the resultant impacts would be **less than significant**.

Impact GHG-2: Implementing PMAs under the Turlock Subbasin GSP could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure GHG-1 is identified to minimize GHG emissions associated with construction activities.

> **Mitigation Measure GHG-1: Implement BPS for All Construction Projects under the Turlock Subbasin GSP.**

Findings (Effects of Construction Activities for PMAs): The California Air Resources Board (CARB) 2017 Scoping Plan Update describes how the state plans to achieve the 2030 GHG emissions reduction goal for California of 40 percent below 1990 levels by 2030 as mandated by Senate Bill (SB) 32. Actions in the 2017 Scoping Plan Update pertinent to PMA construction relate to emissions controls imposed in the future, including the future implementation of Phase 2 controls to reduce GHG emissions in new heavy-duty vehicles beyond 2018, and the continued implementation of diesel controls to reduce black carbon emissions from heavy-duty on-road engines as well as off-road engines. These actions would be implemented by CARB as new standards and policies. Heavy-duty vehicles used during project construction would comply with all applicable emissions standards. By implementing Mitigation Measure GHG-1, thereby reducing construction-related GHGs to the extent feasible, PMAs implemented under the Turlock Subbasin GSP would be consistent with CARB's 2017 Scoping Plan Update. This impact would be **less than significant**.

Impact Category: Hazards and Hazardous Materials

Impact HAZ-3: PMAs implemented under the Turlock Subbasin GSP could 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, could create a significant hazard to the public or the environment.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measures HAZ-1, HAZ-2, and HAZ-3 would be required when applicable to a given project. Implementation of these mitigation measures would be the responsibility of the PMA proponent(s).

> **Mitigation Measure HAZ-1: Conduct Phase I Assessment.**
>
> **Mitigation Measure HAZ-2: Prepare and Implement Site-Specific Health and Safety Plan.**
>
> **Mitigation Measure HAZ-3: Develop and Implement Soil and Groundwater Management Plan.**

Findings (Effects of Construction Activities for PMAs): Numerous hazardous materials sites exist within the boundaries of the Turlock Subbasin. Additional sites may be discovered in the future, particularly for properties with past industrial or commercial uses. The construction of new features or modification of existing features for PMAs implemented under the Turlock Subbasin GSP could involve excavating soils, some of which may have chemical concentrations exceeding regulatory action levels. If the type of project or management action involves excavating soils or extracting groundwater from a site with existing contamination, and the contaminated materials are handled improperly, construction workers, the public, and the environment could be exposed to hazardous materials.

As discussed in Impact HAZ-1, numerous regulations govern the transportation, use, storage, and disposal of hazardous materials during construction activities. The required compliance with these regulations would reduce the exposure to hazardous materials. However, this impact would be **potentially significant**.

Implementing Mitigation Measures HAZ-1, HAZ-2, and HAZ-3 would reduce potentially significant impacts from the location of a project or management action on a listed hazardous materials site and/or a site previously used for commercial or industrial uses to a **less-than-significant** level.

Impact HAZ-5: Implementing PMAs under the Turlock Subbasin GSP could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure TRANS-1 would require the PMA proponent(s) (or their contractors) to prepare and implement a construction traffic management plan, which would

reduce potential interference with local emergency response plans, reduce potential traffic safety hazards, and ensure adequate access for emergency responders.

Mitigation Measure TRANS-1: Prepare and Implement a Construction Traffic Management Plan.

Findings (Effects of Construction Activities for PMAs): Implementation of PMAs under the Turlock Subbasin GSP could involve construction of new features or modification of existing features. Construction activities may require the closure of one or more roads to divert traffic away from an active construction site for a project or management action. Road closures or road work during construction would be temporary. However, if future PMAs would require the closure of main roads and/or major arterial highways (which would likely be used during an emergency evacuation), this could lead to traffic congestion and could otherwise impair or interfere with an emergency response/evacuation plan. This impact would be **potentially significant**.

To ensure that impacts related to future traffic obstructions would be reduced to a less-than-significant level, implementation of Mitigation Measure TRANS-1 would be required. Implementing Mitigation Measure TRANS-1 would reduce the potentially significant temporary construction impact related to a conflict with an emergency response or evacuation plan to a **less-than-significant** level.

Impact Category: Hydrology and Water Quality

Impact HYD-1: Implementing PMAs under the Turlock Subbasin GSP could result in a release of pollutants, including in a flood zone as a result of project inundation, into surface water and/or groundwater that could violate water quality standards or waste discharge requirements, substantially degrade water quality, or conflict with or obstruct implementation of a water quality control plan.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure HYD-1 would be required when applicable to a given project. Implementation of this measure would be the responsibility of the PMA proponent(s).

Mitigation Measure HYD-1: Implement Water Quality Protection Measures during Construction of New Features or Modification of Existing Features.

Findings (Effects of Construction Activities for PMAs): Implementation of PMAs under the Turlock Subbasin GSP could require construction activities that would result in temporary impacts on water quality. Both direct and in-lieu recharge projects could result in the modification of existing features or the construction of new features including injection wells, recharge basins, pump stations, pipelines, French drains, dry wells, water distribution and conveyance infrastructure, canal interties, regulating reservoirs, and irrigation basins. In addition, agricultural land could be used for recharge during the non-irrigation season.

Conservation management actions would seek to achieve groundwater sustainability through water conservation, land repurposing and fallowing, and pumping reduction. In some cases, these actions could result in the modification of existing features or the construction of new features,

including recharge basins and ponds, check dams, wells, and pipelines. For these actions, the same impact mechanisms as for direct and in-lieu recharge projects are anticipated (i.e., movement and placement of soil/materials during construction).

Because the potential exists for adverse impacts on water quality to result from construction of direct and in-lieu recharge projects and conservation management actions, this impact would be **potentially significant**. Once specific characteristics (e.g., features to be constructed) and locations (proximity to a surface water body, location within the flood zone) of the direct and in-lieu recharge projects are known, proponents of PMAs would identify the relevant potential water quality impacts of constructing the project. For projects located in the flood zone, proponents of PMAs would need to conform to Federal Emergency Management Agency (FEMA) regulations for all structures.

Compliance with Mitigation Measure HYD-1, in addition to incorporation of NPDES permit requirements into project designs and plans, would reduce impacts from construction activities on the water quality of the study area to a **less-than-significant** level.

Impact HYD-2: Implementing PMAs under the Turlock Subbasin GSP could result in substantial alteration of 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 result in substantial erosion or siltation on- or off-site; result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure HYD-2 would be required when applicable to a given project. Implementation of this measure would be the responsibility of the PMA proponent(s).

Mitigation Measure HYD-2: Minimize Adverse Surface Runoff Impacts.

Findings (Effects of Constructed Features and O&M of those Features for Direct and In-Lieu Recharge Projects): Implementing direct and in-direct recharge projects under the Turlock Subbasin GSP could permanently alter drainage patterns, runoff rates, and runoff timing. These changes could change surface runoff in a manner that could result in substantial erosion on- or off-site, create or increase on- or off-site flooding, exceed existing or planned stormwater drainage systems, and/or impede or redirect flood flows. This impact would be **potentially significant**.

Compliance with Mitigation Measure HYD-2 would reduce impacts from constructed features and operations features and relevant changes to drainage patterns. Implementing this mitigation measure would reduce this impact to a **less-than-significant** level.

Impact HYD-5: Implementing PMAs under the Turlock Subbasin GSP could result in substantial alteration of groundwater conditions in adjacent subbasins.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure HYD-3 would be required when applicable to a given project. Implementation of this measure would be the responsibility of the PMA proponent.

Mitigation Measure HYD-3: Minimize Adverse Groundwater Changes.

Findings (Effects of Constructed Features and O&M of those Features for Direct and In-Lieu Recharge Projects): The objective of the direct and in-lieu recharge projects implemented under the Turlock Subbasin GSP is to recharge the groundwater system. Constructed features that would have the potential to alter groundwater conditions in neighboring basins include injection wells, recharge basins, dry wells, and regulating reservoirs. Particularly if these features were constructed along the northern, western, and southern boundaries of the Turlock Subbasin, the long-term operational effects of the constructed features could be observed in the neighboring subbasins along the shared boundaries. For example, installing aquifer storage and recovery or injection wells has the potential to result in benefits to the aquifer, thereby resulting in neutral or potentially beneficial results for shared aquifers. The increased reliance on surface water that would result from in-lieu recharge projects may cause long-term changes to the groundwater budget by reducing the need for groundwater pumping. Notably, these neighboring basins are also implementing PMAs under their respective GSPs. This impact would be **potentially significant**.

Compliance with Mitigation Measure HYD-3 would reduce impacts from constructed features and operations features and relevant changes to adjacent subbasins. Implementing this mitigation measure would reduce this impact to a **less-than-significant** level.

Findings (Effects of Constructed Features and O&M of those Features for Conservation Management Actions): The objective of the conservation management actions is to incentivize conservation through land fallowing and pumping reduction programs. Some actions would result in constructed features, including wells, recharge basins, or ponds, while others consist of programs that would modify groundwater use (pumping reduction programs). As discussed above for direct and in-lieu recharge projects, these management actions could have neutral or potentially beneficial effects on neighboring subbasins. However, land fallowing programs and management actions that would result in non-irrigation land uses would have the potential to reduce on-farm recharge, instream return flows, and subsequently interconnected groundwater. Additionally, converting irrigation practices from flood to drip would reduce water use, but could reduce recharge potential along these shared boundaries. This impact would be **potentially significant**.

Compliance with Mitigation Measure HYD-3 would reduce impacts from constructed features and operations features and relevant changes to adjacent subbasins. Therefore, implementing this mitigation measure would reduce this impact to a **less-than-significant** level. An evaluation of the potential impacts at the program-level requires an understanding of the existing condition and how the land is currently being irrigated as well as the water year type.

Impact Category: Noise and Vibration

Impact NOI-1: Implementing PMAs under the Turlock Subbasin GSP could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with the mitigation measures listed below would be required when applicable to a given project or management action. Not all mitigation measures would apply to all PMAs. The applicability of the mitigation measures would depend on the activities, location, and the potentially significant impacts of the individual PMA. Implementation of the mitigation measures would be the responsibility of the PMA proponent(s).

> **Mitigation Measure NOI-1: Noise Control for Pile Installation Activities.**
>
> **Mitigation Measure NOI-2: Best Management Practices for Construction Noise Control within the City of Turlock.**
>
> **Mitigation Measure NOI-3: Nighttime Well Construction.**

Findings (Effects of Construction Activities for Direct and In-Lieu Recharge Projects): Many of the PMAs implemented under the Turlock Subbasin GSP could include direct and in-lieu recharge projects, which require construction activities that could include the mobilization of substantial off-road equipment and materials, removal of substantial soil quantities from borrow sites or off-site locations, and well drilling that would generate temporary construction noise that could impact noise-sensitive land uses if they are located near the construction area. Additionally, impact- or vibratory-pile driving may be required for some phases of construction, such as for the installation of sheet piles, which can generate relatively high levels of noise.

With implementation of Mitigation Measures NOI-1, NOI-2, and NOI-3, impacts related to increases in ambient noise levels from construction of direct and in-lieu recharge projects would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Water conservation management actions could generate construction noise. For example, expanding the groundwater monitoring network may include the installation of new wells that could involve pile driving (either impact or vibratory), well drilling, or dredging. Mitigation Measure NOI-1 would address the potential for potential vibration impacts from well drilling, and should well drilling occur at night. Mitigation Measure NOI-3 would reduce the nighttime noise level. With mitigation, the construction-related noise impacts associated with water management and conservation actions would be **less than significant**.

Impact NOI-2: Implementing PMAs under the Turlock Subbasin GSP could generate excessive groundborne vibration or groundborne noise levels.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with the mitigation measures listed below would be required when applicable to

a given project or management action. Not all mitigation measures would apply to all PMAs. The applicability of the mitigation measures would depend on the activities, location, and the potentially significant impacts of the individual PMA. Implementation of the mitigation measures would be the responsibility of the PMA proponent(s).

Mitigation Measure NOI-1: Noise Control for Pile Installation Activities.

Mitigation Measure NOI-3: Nighttime Well Construction.

Mitigation Measure NOI-4: Vibration Avoidance from Compaction.

Findings (Effects of Construction Activities for Direct and In-Lieu Recharge Projects): Many of the PMAs implemented under the Turlock Subbasin GSP could include direct and in-lieu recharge projects, which require construction activities that could include off-road equipment known to generate vibration. Specifically, operation of pile drivers, compactors, auger drills, and bulldozers are associated with groundborne vibration.

As shown in the Consolidated Final PEIR Table 3.14-12, proposed construction activity could damage nearby historic and non-historic structures if it occurs within the distances specified. This would be a **potentially significant** impact warranting mitigation measures. Mitigation Measure NOI-1, identified above for noise, would address the potential for vibration impacts from pile driving by implementing other methods of pile installation. Mitigation Measure NOI-4 would address this impact. With implementation of these mitigation measures, impacts related to groundborne vibration or noise from construction of direct and in-lieu recharge projects would be **less than significant**.

Findings (Effects of Construction Activities for Conservation Management Actions): Water conservation management actions could generate construction vibration. For example, expanding the groundwater monitoring network may include the installation of new wells that could involve pile driving (either impact or vibratory), well drilling, or dredging. Mitigation Measure NOI-1, identified above for noise, would address the potential for potential vibration impacts from well drilling, and should well drilling occur at night. Mitigation Measure NOI-3 would reduce the nighttime noise level. With mitigation, the construction-related vibration impacts associated with water management and conservation actions would be **less than significant**.

Impact Category: Recreation

Impact REC-1: Implementing PMAs under the Turlock Subbasin GSP could 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.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with the following mitigation measure would be required when applicable to a given project or management action.

Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Construction and operation of features for the PMAs implemented under the Turlock Subbasin GSP could result in the construction and modification of recreational facilities and associated environmental impacts. However, the precise locations and detailed characteristics of possible future PMAs are not currently known. Therefore, the locations and characteristics of new or modified recreational facilities in the Turlock Subbasin cannot be determined at this time. Factors necessary to identify impacts from individual PMAs include the project's size and characteristics, the duration of construction, and the types and precise locations of construction activities and the facility or resource itself. Because PMAs implemented under the Turlock Subbasin GSP could result in changes in recreational resources that could result in impacts on the environment, this impact would be **potentially significant**.

Implementing Mitigation Measure REC-1 would reduce this impact to a **less-than-significant** level.

Impact REC-2: Implementing PMAs under the Turlock Subbasin GSP could include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with the following mitigation measure would be required when applicable to a given project or management action. Implementation of the mitigation measures would be the responsibility of the PMA proponent(s).

> **Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources.**

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Many construction-related impacts may be temporary; however, it is reasonable to expect that some impacts may be long-term and permanent. Furthermore, the precise location and detailed characteristics of PMAs implemented under the Turlock Subbasin GSP are not currently known. Therefore, the potential for displacement to accelerate physical deterioration at existing recreational facilities in the Turlock Subbasin GSP cannot be determined at this time. The factors necessary to identify PMA impacts include the size and characteristics of the project; the duration of construction; and the types and precise locations of construction activities, the facility or resource itself, and alternative recreational opportunities. Because adverse changes in recreational resources could result from the construction and operation of PMAs implemented under the Turlock Subbasin GSP, this impact would be **potentially significant**.

Implementing Mitigation Measure REC-1 discussed under Impact REC-1 would reduce this impact to a **less-than-significant** level.

Impact Category: Transportation

Impact TRANS-1: Implementing PMAs under the Turlock Subbasin GSP could conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure TRANS-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

> **Mitigation Measure TRANS-1: Prepare and Implement a Construction Traffic Management Plan.**

Findings (Effects of Construction Activities for PMAs): Many of the PMAs that would be implemented under the Turlock Subbasin GSP (e.g., Projects 3, 4, 11, 15, 18, 20, and 23) include projects requiring construction activities that could include mobilization of substantial off-road equipment and materials, removal of substantial soil quantities from borrow sites or off-site locations, and transportation of construction personnel. These PMAs would add construction vehicle traffic to roadways in and around the Turlock Subbasin, which would add to existing levels of roadway congestion in urban areas. The majority of the PMAs would generate temporary construction traffic on primarily rural roadways, which would not likely create substantial congestion, cause intersection delays, or degrade conditions for bicycle, pedestrian, and transit circulation, such that they would conflict with applicable programs, plans, ordinances, or policies addressing the circulation system for those areas. The exceptions would be PMAs that would be located in urban areas or would include the construction of transmission lines.

As it relates to other modes of transportation, temporary construction traffic (e.g., from Project 4 around California State University, Stanislaus) could include a substantial number of haul trips, which could temporarily degrade conditions for multimodal travel near the entry points for project construction sites. Because the volume of construction vehicle trips is not known, implementation of the PMAs would have the potential to conflict with programs, plans, ordinances, or policies addressing multimodal access. This impact would be **potentially significant**.

Mitigation Measure TRANS-1 requires the preparation and implementation of a construction traffic management plan, such that implementation of the PMAs would not conflict with regulations related to pedestrian or bicycle access. Implementing this mitigation measure would reduce the potentially significant temporary construction impact related to a conflict with a program, plan, ordinance, or policy addressing the circulation system to a **less-than-significant** level.

Impact TRANS-2: Implementing PMAs under the Turlock Subbasin GSP could conflict with or be inconsistent with State CEQA Guidelines Section 15064.3(b).

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure TRANS-2 would be required when applicable to a

given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure TRANS-2: Reduce Emissions.

Findings (Effects of Construction Activities for PMAs): Construction activities for PMAs implemented under the Turlock Subbasin GSP could exceed the threshold of significance and conflict with State CEQA Guidelines Section 15064.3(b). Equipment, materials, and workers would have to be transported to project construction sites. However, the level of significance of impacts for automobile travel would depend on the locations and types of PMAs implemented under the Turlock Subbasin GSP.

Each project would require its own VMT analysis and be required to adhere to State CEQA Guidelines Section 15064.3(b). However, the specific PMAs that would be implemented under the Turlock Subbasin GSP are yet to be determined. Therefore, the potential exists for a project or management action to exceed the threshold of significance set for transportation impacts by the CEQA lead agency, or to conflict or be inconsistent with State CEQA Guidelines Section 15064.3(b). This impact would be **potentially significant.**

Implementing Mitigation Measure TRANS-2 would reduce this significant impact of PMAs implemented under the Turlock Subbasin GSP to a **less-than-significant** level.

Impact TRANS-3: Implementing PMAs under the Turlock Subbasin GSP could substantially increase hazards due to a geometric design feature or incompatible uses.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measures TRANS-3 and TRANS-4 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure TRANS-3: Conduct Routine Inspections.

Mitigation Measure TRANS-4: Repair Damaged Roadways and Trails Following Construction.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Construction of PMAs, constructed features, and O&M of those features implemented under the Turlock Subbasin GSP could affect transportation infrastructure such as roads, bridges, railroads, and navigable waterways. PMAs have the potential to affect infrastructure elements such as campgrounds and campsites, day-use sites, roads and trails, and off-highway/off-road vehicle routes. Such work may require temporary alterations to the horizontal and vertical alignments of these facilities.

In addition, employees could commute along designated access routes. These routes would generally be preexisting public roads near construction sites; however, new off-road haul routes may be constructed between borrow sites, staging areas, and construction sites. These constructed access roads would be temporary, and would be restored to pre-project conditions upon completion of construction.

Project operations could affect navigation in waterways and shallow-water channels, resulting in the potential for an increased navigation hazard if debris such as tree snags and other types of floating or submerged debris were to accumulate (e.g., on fish screens). This debris could pose a navigational hazard or damage vessels navigating the channel. Therefore, impacts related to geometric design or incompatible use hazards would be **potentially significant**.

PMAs would be required to adhere to statewide, regional, and local policies, regulations, and ordinances governing traffic and circulation systems. Implementing Mitigation Measures TRANS-3 and TRANS-4 would reduce the impact related to a substantial increase in hazards due to a geometric design feature or incompatible use to a **less-than-significant** level.

Impact TRANS-4: Implementing PMAs under the Turlock Subbasin GSP could result in inadequate emergency access.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure TRANS-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

> **Mitigation Measure TRANS-1: Prepare and Implement a Construction Traffic Management Plan.**

Findings (Effects of Construction Activities for PMAs): Implementing PMAs under the Turlock Subbasin GSP could include the construction activities identified in the Consolidated Final PEIR Table 2-4 in Chapter 2, *Project Description*. Traffic could be delayed and lanes temporarily closed when construction material or vehicles are being moved on and off the sites of the proposed PMAs, especially at high-volume intersections. This could interfere with emergency access, creating a **potentially significant** impact.

Implementing Mitigation Measure TRANS-1, identified above, would provide traffic control at the access road for the project or management action that could allow emergency vehicles access to the site. Implementing this mitigation measure would reduce this impact to a **less-than-significant** level.

Impact Category: Wildfire

Impact WILD-1: Implementing PMAs under the Turlock Subbasin GSP could substantially impair an adopted emergency response plan or emergency evacuation plan.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure TRANS-1 would require the proponent(s) of a project or management action (or their contractors) to prepare and implement a construction traffic management plan, which would reduce potential interference with local emergency response plans, reduce potential traffic safety hazards, and ensure adequate access for emergency responders.

> **Mitigation Measure TRANS-1: Prepare and Implement a Construction Traffic Management Plan.**

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): The Stanislaus County Emergency Operations Plan (EOP) (Stanislaus County 2021) and the Merced County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) (Merced County 2021) state that the major arterial highways that run through both counties would likely be used as evacuation routes in the event of an emergency.

The PMAs implemented under the Turlock Subbasin GSP would involve the construction of various types of structures and buildings. PMAs implemented under the Turlock Subbasin GSP may require one or more road closures to divert traffic away from an active construction site or to enable the completion of in-road construction activities. If future projects require the closure of main roads and/or major arterial highways (which would likely be used during an emergency evacuation), traffic congestion could occur, which could otherwise impair or interfere with an emergency response/evacuation plan. This impact would be a **potentially significant** impact.

Although road closures or road work during construction would be temporary, they could still affect the implementation of an emergency response/evacuation plan.

Implementing Mitigation Measure TRANS-1 would reduce this potentially significant temporary construction or operations impact related to conflict with an emergency response or evacuation plan to a **less-than-significant** level.

Potentially Significant and Unavoidable Impacts

The following potentially significant environmental impacts are unavoidable and cannot be mitigated in a manner that would lessen the impact to below the level of significance. Notwithstanding disclosure of these impacts, the WTS GSA adopts the PEIR due to overriding considerations as set forth below in the *Statement of Overriding Considerations* section, below.

As stated in the Consolidated Final PEIR, the precise locations and detailed characteristics of potential future PMAs are yet to be determined. Once the specific characteristics and locations of the PMAs are known, proponents of PMAs would identify the relevant potential environmental impacts of constructing and/or operating the PMAs. Whether the impacts are unavoidable and cannot be mitigated would thus depend on the characteristics, location, and the potentially significant impacts of the individual PMAs. These potentially significant and unavoidable impacts will be considered as projects are developed and evaluated in project-level CEQA documents.

Impact Category: Agricultural and Forestry Resources

Impact AG-1: Implementing PMAs under the Turlock Subbasin GSP could convert Special Designated Farmland to nonagricultural use or conflict with a Williamson Act contract or zoning for agricultural use.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measures AG-1 and AG-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure AG-1: Minimize and Avoid Loss of Farmland.

Mitigation Measure AG-2: Minimize Impacts on Lands Protected by Agricultural zoning or Williamson Act Contract.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): Long-term effects on groundwater recharge from the PMAs implemented under the Turlock Subbasin GSP would be neutral or beneficial, as PMAs would be implemented to ensure a reliable and sustainable groundwater supply that support supports population growth, sustains the agricultural economy, and provides beneficial uses. However, some PMAs implemented under the Turlock Subbasin GSP could result in the permanent conversion of farmland to nonagricultural use and potentially conflict with a Williamson Act contract or zoning for agricultural use. For example, pumping restrictions may result in fallowing of land, and the fallowed land may be repurposed from agriculture to nonagricultural use. As noted above, construction and operation impacts from land repurposing (e.g., construction of solar or commercial developments) resulting from fallowing of agricultural lands is speculative at this time, beyond the scope of the Consolidated Final PEIR, and not evaluated further. However, since some PMAs implemented under the Turlock Subbasin GSP could result in the long-term or permanent conversion of Special Designated Farmland to nonagricultural uses, conflict with agricultural zoning, or conflict with Williamson Act contracts, this impact would be **potentially significant**.

Mitigation Measures AG-1 and AG-2 would be implemented to reduce the impacts of PMAs implemented under the Turlock Subbasin GSP. However, because the precise locations and detailed characteristics of potential future PMAs are yet to be determined, it is not possible to conclude that the mitigation measures, or equally effective mitigation measures, would reduce significant impacts to a less-than significant level in all cases. Therefore, this impact would be **potentially significant and unavoidable**.

Impact Category: Air Quality

Impact AIR-1: Implementing PMAs under the Turlock Subbasin GSP could result in conflict with or obstruct implementation of the applicable air quality plan.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure AIR-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure AIR-1: Implement Project-specific Air Quality Analysis for Large Recharge Projects.

Findings (Effects of Construction Activities for Direct and In-Lieu Recharge Projects): As discussed below in Impact AIR-2, PMAs involving recharge projects with large amounts of excavation and soil transport have the potential to result in criteria pollutant emissions that exceed one or more of SJVAPCD's thresholds of significance. Mitigation Measure AIR-1 would reduce emissions associated with PMAs that have the potential to result in criteria pollutant air emissions that could exceed SJVAPCD thresholds of significance.

As discussed below, while the additional mitigation measures, if necessary, would further reduce emissions, because the size and duration of future recharge projects are speculative, the potential exists for a direct recharge project to result in criteria pollutant emissions that, after mitigation, may still exceed SJVAPCD thresholds. Therefore, construction-related emissions of criteria air pollutants from recharge projects may result in an impact that would be **potentially significant and unavoidable**.

Impact AIR-2: Implementing PMAs under the Turlock Subbasin GSP could 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.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure AIR-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

> **Mitigation Measure AIR-1: Implement Project-specific Air Quality Analysis for Large Recharge Projects.**

Findings (Effects of Construction Activities for Direct Recharge Projects): Many of the PMAs implemented under the Turlock Subbasin GSP (as presented in the Consolidated Final PEIR Table 2-4) could include direct recharge projects. These construction activities could include the mobilization of substantial off-road equipment and materials, removal of substantial soil quantities from borrow sites or off-site locations, well drilling, disposal of excess materials, dewatering, excavation, fill, and placement of materials in water. The amount of emissions from any particular PMA would depend primarily on the number, type, and duration of off-road equipment operating on a daily basis, the volume of soil imported or exported, and the distance from which these haul trucks would travel. Because of the potential for extensive grading, excavation, soil handling, and hauling of materials, the direct recharge projects would have the potential to result in a significant impact if the quantities of materials to be excavated and transported were substantial.

The application of BMPs at construction sites significantly controls fugitive dust (WRAP 2006), with individual measures reducing fugitive dust by anywhere from 30 to 90 percent (BAAQMD 2009). Compliance with Regulation VIII would ensure that the construction-related fugitive dust emissions would be **less than significant**.

Compliance with Mitigation Measure AIR-1 would be required when applicable to a given project. Implementation of this measure would be the responsibility of the PMA proponent(s).

While the additional mitigation measures would reduce emissions, because the size and duration of future recharge projects are speculative, the potential exists for a direct recharge project to result in a criteria pollutant emissions that, after mitigation, may still exceed SJVAPCD thresholds. Therefore, construction-related emissions of criteria air pollutants from recharge projects may result in an impact that would be **potentially significant and unavoidable**.

Findings (Effects of Construction Activities for In-Lieu Recharge Projects): Similar to direct recharge projects, in-lieu recharge projects could require storage of surface water in storage

reservoirs that would need to be constructed and, therefore, require substantial excavation and earth movement. Also, in-lieu projects could require the construction of water conveyance and delivery infrastructure for later use that would also involve substantial excavation and earth movement. Consequently, in-lieu recharge projects would have the same potential for significant air quality impacts, and Mitigation Measure AIR-1 would also apply to these projects. Similarly, the same potential would exist for a **potentially significant-and-unavoidable** impact with respect to criteria pollutant emissions.

As with the direct recharge projects, in-lieu recharge projects would comply with Regulation VIII of the SJVAPCD and fugitive dust emissions would be **less than significant**.

Impact Category: Biological Resources

Impact BIO-1: Implementing PMAs under the Turlock Subbasin GSP could result in 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 CDFW or USFWS.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure BIO-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure BIO-1: Minimize Disturbance of Special-Status Species.

Findings (Effects of Construction Activities for Direct and In-Lieu Recharge Projects): The types of construction activities necessary to implement direct and in-lieu recharge projects include modifications to existing and construction of new features such as injection wells, recharge basins, pipelines, French drains, dry wells, water distribution and conveyance infrastructure, canal interties, regulating reservoirs, and irrigation basins.

Construction of direct and in-lieu recharge projects implemented under the Turlock Subbasin GSP could adversely affect special-status species, either through direct mortality or injury (e.g., crushing wildlife or plants by heavy machinery) or through the loss of suitable habitat (e.g., fill of habitat for new water conveyance infrastructure), which may be either temporary if such habitat is restored to pre-project conditions following completion of construction, or permanent if no such restoration activities are possible (e.g., it would not be possible to restore habitat in the footprint of where permanent infrastructure is being installed, such as canals for water conveyance infrastructure or the location of new regulating reservoirs).

This analysis conservatively assumes that the direct and in-lieu recharge projects implemented under the Turlock Subbasin GSP would have the ability to directly or indirectly affect any special-status species identified within the study area, including both plants and wildlife species. During project-level planning, when the specific location and design of the project are defined, other data sources would need to be utilized to more specifically evaluate which special-status species could be affected by construction. These data sources may include but are not limited to: (1) reconnaissance and/or protocol-level surveys of the project site; (2) professional knowledge

of local biologists, including those connected to the agency authorizing the project; (3) relevant environmental documents and reports for similar projects or other nearby projects; and (4) species lists available from the NMFS, USFWS, CDFW, and CNPS. For special-status plant species, localized information about soil conditions, elevations, types and locations of natural communities present, local precipitation patterns, disturbance regimes (e.g., vegetation could be regularly disked or mowed), and local hydrology could be assessed to refine which specific special-status plant species could be present within affected work areas based on the presence of suitable habitat conditions. Consideration of these additional data would substantially reduce the number of special-status plant and wildlife species considered to have the potential to occur within a given project's footprint. Therefore, this impact is **potentially significant**.

For most PMAs, implementation of Mitigation Measure BIO-1 would reduce impacts on special-status species from PMA construction to less than significant by minimizing the loss of vegetation in habitat areas, providing environmental awareness training to workers, and monitoring by a qualified biologist in sensitive areas. However, because the location, size, and timing of all PMAs to be implemented under the GSP are not specifically defined, the magnitude of such impacts may exceed the feasible mitigation; thus, the impact is **potentially significant and unavoidable**.

Impact BIO-2: Implementing PMAs under the Turlock Subbasin GSP could result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure BIO-2 to avoid or minimize impacts on sensitive natural communities would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

> **Mitigation Measure BIO-2: Avoid and Minimize Disturbance to Sensitive Natural Communities.**

Findings (Effects of Construction Activities for Direct and In-lieu Recharge Projects): Construction of direct and in-lieu recharge projects – such as injection wells, recharge basins, pipelines, French drains, dry wells, water distribution and conveyance infrastructure, canal interties, regulating reservoirs, and irrigation basins – could result in ground disturbance of varying extents and disturbance within and adjacent to the construction sites. Construction-related ground and surface water disturbance could result in temporary damage to or the permanent removal of sensitive natural communities located in and adjacent to the construction site. The direct and in-lieu recharge PMAs implemented under the Turlock Subbasin GSP could include new surface water basins and regulating basins, with the potential to permanently inundate large tracts of land and substantially affect sensitive natural communities. The actual effects on sensitive natural communities would depend on the size of the facility footprint and its location relative to sensitive community occurrences. Affected sensitive natural communities could include seasonal wetlands, vernal pools, riparian forest and scrub, oak woodlands, and other sensitive communities.

A temporary loss of sensitive natural communities could result from clearing vegetation for equipment staging areas and access routes. Additionally, construction equipment increases the

potential for accidental spills of contaminants (e.g., fuels or lubricants), which could degrade sensitive habitats such as riparian forest, oak woodlands, and wetlands. A permanent loss of sensitive natural communities could result if permanently constructed infrastructure (e.g., water distribution and conveyance infrastructure) is placed in areas where sensitive natural communities are currently located. Construction of new or improved surface water intakes and diversions from streams and rivers could adversely affect nearshore sensitive natural communities, such as riparian scrub and forest. The loss of acreage of a particular habitat type would persist into perpetuity unless it is actively replaced. Therefore, this impact is **potentially significant**.

Implementation of mitigation measures to avoid or minimize impacts on sensitive natural communities following the installation of PMAs would reduce the severity of any potentially substantial adverse effects to sensitive natural communities. However, since the nature of the impacts cannot be precisely identified at this programmatic level, this impact is potentially **significant and unavoidable**.

Impact BIO-4: Implementing PMAs under the Turlock Subbasin GSP could 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.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measures BIO-1 and BIO-2 (to avoid or minimize impacts on special-status species and sensitive natural communities, respectively) would be required when applicable to a given project and would also address impacts on wildlife corridors and nursery sites. Implementation of these mitigation measures would be the responsibility of the PMA proponent(s).

> **Mitigation Measure BIO-1: Minimize Disturbance of Special-Status Species.**
>
> **Mitigation Measure BIO-2: Avoid and Minimize Disturbance to Sensitive Natural Communities.**

Findings (Effects of Construction Activities for of Direct and In-Lieu Recharge Projects): Wildlife corridors or nursery sites for fish or amphibian species could be impacted during construction by direct loss due to the installation of pumps, pipelines, and other infrastructure into waterways such as the Tuolumne or Merced rivers, and associated riparian corridors that provide cover and forage for birds and terrestrial wildlife.

Construction of water distribution and conveyance infrastructure has the potential to disrupt the dispersal of terrestrial wildlife by creating barriers to movements (e.g., a canal be represent a barrier). Construction of regulating reservoirs has the potential to isolate certain habitats, which could contribute to a loss of migration and dispersal habitat for terrestrial wildlife. The potential for a new regulating reservoir to restrict the movement of wildlife is generally related to the size of the new reservoir, with smaller reservoirs typically having a smaller potential to restrict or degrade migratory or movement conditions for wildlife. Movement could be substantially affected or cut off completely if the entire width of a migration corridor is disturbed.

Implementation of Mitigation Measures BIO-1 and BIO-2 (to avoid or minimize impacts on special-status species and sensitive natural communities, respectively) would reduce the severity of any potentially substantial adverse effects to wildlife corridors or nursery sites. However, since the nature of the impacts cannot be precisely identified at this programmatic level, this impact is **potentially significant and unavoidable**.

Impact Category: Cultural Resources

Impact CUL-1: Implementing PMAs under the Turlock Subbasin GSP could cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines Section 15064.5.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measure CUL-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

> **Mitigation Measure CUL-1: Conduct Inventory and Significance Evaluation of Architectural Resources.**

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Project construction and constructed features, as well as O&M for projects implemented under the GSP, are the types of activities that have the potential to affect historical (i.e., architectural) resources. However, the exact details, including precise locations, of any such activities have yet to be determined. Therefore, it is not known whether the projects implemented under the GSP would affect any architectural resources. Factors necessary to identify specific impacts on historical resources include the project's design, footprint, and type; the precise location of construction activities and features; and the type and location of operational activities. If any of the future projects implemented under the GSP were to affect architectural resources that qualify as historical resources as defined in State CEQA Guidelines Section 15064.5, the impact would be **potentially significant**. The GSP does not include any general protection measures applicable to this impact.

Mitigation Measure CUL-1 would be implemented to reduce the impacts of projects under the GSP. However, because the extent and location of such actions are not known at this time, it is not possible to conclude that the mitigation measure, or equally effective mitigation measures, would reduce significant impacts to a less-than-significant level in all cases. Therefore, this impact would remain **potentially significant and unavoidable**.

Impact CUL-2: Implementing PMAs under the Turlock Subbasin GSP could cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measures CUL-2 and CUL-3 would be required when applicable to a given project. Implementation of these mitigation measures would be the responsibility of the PMA proponent(s).

Mitigation Measure CUL-2: Conduct Inventory and Significance Evaluation of Archaeological Resources.

Mitigation Measure CUL-3: Implement Measures to Protect Archaeological Resources during Project Construction or Operation.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Project construction and constructed features and O&M for projects implemented under the GSP are the types of activities with the potential to affect archaeological resources. However, the exact details, including precise locations, of any such activities have yet to be determined. Therefore, it is not known whether the projects implemented under the GSP would affect any archaeological resources. Factors necessary to identify specific impacts on archaeological resources include the project's design, footprint, and type; the precise location of construction activities and features; and the type and location of operational activities. If any of the future projects implemented under the GSP were to affect archaeological resources that qualify as historical resources as defined in State CEQA Guidelines Section 15064.5, as well as unique archaeological resources, as defined in PRC Section 21083.2(g), the impact would be **potentially significant**. The GSP does not include any general protection measures applicable to this impact.

Mitigation Measures CUL-2 and CUL-3 would be implemented to reduce the impacts of projects under the GSP. However, because the extent and location of such actions are not known at this time, it is not possible to conclude that the mitigation measures, or equally effective mitigation measures, would reduce significant impacts to a less-than-significant level in all cases. Therefore, this impact would be **potentially significant and unavoidable**.

Impact CUL-3: Implementing PMAs under the Turlock Subbasin GSP could disturb human remains, including those interred outside of formal cemeteries.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measures CUL-2, CUL-3, and CUL-4 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the PMA proponent(s).

Mitigation Measure CUL-2: Conduct Inventory and Significance Evaluation of Archaeological Resources.

Mitigation Measure CUL-3: Implement Measures to Protect Archaeological Resources during Project Construction or Operation.

Mitigation Measure CUL-4: Implement Measures to Protect Human Remains during Project Construction or Operation.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Construction activities, constructed features, and O&M by proponents for PMAs implemented under the GSP are the types of activities with the potential to affect human remains. However, the exact details, including precise locations, of any such activities have yet to

be determined. Therefore, it is not known whether the projects implemented under the GSP would affect any human remains, either known or unknown, including those associated with archaeological resources. Factors necessary to identify specific impacts on human remains include the project's design, footprint, and type; the precise location of construction activities and features; and the type and location of operational activities. If any of the projects implemented under the GSP were to disturb or damage human remains, the impact would be **potentially significant**.

Mitigation Measures CUL-2, CUL-3, and CUL-4 would be implemented to reduce the impacts of projects under the GSP. However, in some instances it may not be feasible to avoid a tribal cultural resource, and the resource may need to be altered or destroyed. Also, because the extent and location of such actions are not known at this time, it is not possible to conclude that the mitigation measures, or equally effective mitigation measures, would reduce significant impacts to a less-than-significant level in all cases. Therefore, this impact would be **potentially significant and unavoidable**.

Impact Category: Land Use and Planning

Impact LU-1: Implementing PMAs under the Turlock Subbasin GSP could conflict with a land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect.

Findings (Effects of Constructed Features and O&M of those Features for PMAs): The majority of constructed facilities for PMAs implemented under the Turlock Subbasin GSP would not conflict with a land use plan, policy, or regulation adopted to avoid or mitigate environmental effects. Also, constructed facilities for the PMAs could support land use plans, policies, or regulations if the plans, policies, and regulations include goals for groundwater recharge and water conservation.

Therefore, constructed facilities and operations associated with PMAs implemented under the Turlock Subbasin GSP could result in a conflict with a land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect. In these limited instances, compliance with required permits and approvals would reduce these impacts to a less-than-significant level. However, if there is no jurisdiction by the agency and no requirement to obtain a permit, land use policy conflicts could occur. Because the potential exists for adverse changes to land use and planning with the implementation of PMAs, this impact would be **potentially significant and unavoidable**.

Impact Category: Tribal Cultural Resources

Impact TCR-1: Implementing PMAs under the Turlock Subbasin GSP could cause a substantial adverse change in the significance of a tribal cultural resource, as defined in PRC Section 21074.

As part of the WTS GSA's issuance of a NOA for PMAs implemented under the Turlock Subbasin GSP, compliance with Mitigation Measures CUL-2, CUL-3, and CUL-4 would be required when applicable to a given project. Implementation of these mitigation measures would be the responsibility of the PMA proponent(s).

Mitigation Measure CUL-2: Conduct Inventory and Significance Evaluation of Archaeological Resources.

Mitigation Measure CUL-3: Implement Measures to Protect Archaeological Resources during Project Construction or Operation.

Mitigation Measure CUL-4: Implement Measures to Protect Human Remains during Project Construction or Operation.

Findings (Effects of Construction Activities, Constructed Features, and O&M of those Features for PMAs): Construction activities, constructed features, and O&M for projects implemented under the GSP are the types of activities with the potential to affect tribal cultural resources. Because the exact details, including locations, of any such activities have yet to be determined, it is not known whether projects implemented under the GSP would affect any tribal cultural resources. Factors necessary to identify specific impacts on tribal cultural resources include the design and footprint of a project, type and precise location and timing (i.e., seasonal access for cultural ceremonies or resources) of construction activities and features, and the type and location of operations activities. If any of the future projects implemented under the GSP were to affect tribal cultural resources as defined in PRC Section 21074, the impact would be **potentially significant**. The GSP does not include any general protection measures applicable to this impact.

Mitigation Measures CUL-2, CUL-3, and CUL-4 would be implemented to reduce the impacts of projects under the GSP. However, in some instances it may not be feasible to avoid a tribal cultural resource, and the resource may need to be altered or destroyed. Also, because the extent and location of such actions are not known at this time, it is not possible to conclude that the mitigation measures, or equally effective mitigation measures, would reduce significant impacts to a less-than-significant level in all cases. Therefore, this impact would be **potentially significant and unavoidable**.

Impact Category: Utilities and Public Services

Impact UTIL-1: Implementing PMAs under the Turlock Subbasin GSP could result in the construction or relocation of new water or expanded water, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Findings (Effects of Construction Activities for PMAs): The objective of the PMAs to be implemented under the Turlock Subbasin GSP is to enhance regional groundwater sustainability. Construction and operational activities for PMAs may require constructing and maintaining new water or expanded water facilities, stormwater drainage, and/or electric power facilities; construction of natural gas and/or telecommunication facilities is not anticipated. Relocation of these facilities may occur to accommodate construction. However, the extent of construction or relocation of stormwater drainage, utilities, or water conveyance facilities would depend on the size, location, and nature of the PMAs.

Should any stormwater drainage features, utilities, or water conveyance facilities be located near or in the footprint of a project or management action, relocating these facilities could cause

significant environmental effects. Similarly, if the footprint of the project or management action were located in or near a sensitive area, facility construction could cause significant environmental effects. Once the specific characteristics and locations of PMAs are known, proponents would evaluate the PMAs' footprints against existing stormwater drainage features, utilities, or water conveyance facilities to determine the extent to which implementation would result in relocation and/or construction. This would determine whether the CEQA significance determination of significant and unavoidable applies, and would have the potential to reduce the impact to less than significant.

However, because significant and unavoidable impacts would occur for some of these resource areas, this impact would be **potentially significant and unavoidable**.

Alternatives

The WTS GSA considered alternatives to the types of PMAs implemented under the Turlock Subbasin GSP presented and analyzed in the Consolidated Final PEIR and presented during the comment period and public hearing process. Some of these alternatives have the potential to avoid or reduce certain significant or potentially significant environmental impacts, as set forth below. The WTS GSA finds that these alternatives are infeasible. Based on the impacts identified in the Consolidated Final PEIR and other reasons summarized below, and as supported by substantial evidence in the record, the WTS GSA finds that approval and implementation of the types of PMAs implemented under the Turlock Subbasin GSP as presented is the most desirable, feasible, and appropriate action and hereby rejects the other alternatives and other combinations and/or variations of alternatives as infeasible based on consideration of the relevant factors set forth in State CEQA Guidelines Section 15126.6, subdivision (f) (also State CEQA Guidelines, Section 15091, subdivision(a)(3)). Each alternative and the facts supporting the finding of infeasibility are set forth below.

Alternative Considered but Rejected

The alternative that was considered but was rejected is "Interbasin transfer of groundwater from an adjacent groundwater subbasin."

Groundwater subbasins adjacent to the Turlock Subbasin include the Merced Subbasin south of the Merced River, the Delta-Mendota Subbasin west of the San Joaquin River, and the Modesto Subbasin north of the Tuolumne River. Like the Turlock Subbasin, the Modesto Subbasin is a high-priority basin, while the Delta-Mendota and Merced subbasins are high-priority, critically overdrafted basins.

The GSAs are governed by SGMA. An alternative that seeks to achieve the sustainability goal and avoid undesirable results at the expense of another groundwater basin would likely impair that basin's ability to achieve its sustainability goal and avoid undesirable results. For example, importing groundwater from the Modesto Subbasin could result in additional chronic lowering of groundwater and/or a significant and unreasonable reduction of groundwater storage in that subbasin. As another example, importing groundwater from the Merced Subbasin could result in additional depletions of interconnected surface water along the Merced River, further impacting

beneficial uses of the surface water. Therefore, this alternative is not feasible and was rejected from further consideration in the Consolidated Final PEIR.

Summary of Alternatives Considered

Based on the alternatives development and screening process described above, four alternatives were identified for further evaluation in the Consolidated Final PEIR: the No Project Alternative and three potentially feasible alternatives to the Implementation of PMAs under the Turlock Subbasin GSP.

- **No Project Alternative**.
- **Alternative 1** – Specify more narrowly the types of PMAs implemented under the Turlock Subbasin GSP (e.g., the PMAs must provide at least 100 acre-feet of recharge per year).
- **Alternative 2** – Eliminate certain aspects of PMAs (e.g., eliminate PMAs that propose the construction of new features).
- **Alternative 3** – Exclude entire categories of PMAs (e.g., exclude all direct and in-lieu recharge projects and only implement management actions).

No Project Alternative

Description of Alternative

State CEQA Guidelines Section 15126.6(e) requires consideration of a "no project" alternative. The purpose of this alternative is to allow the decision makers to compare the impacts of the implementing PMAs under the Turlock Subbasin GSP with the impacts of not implementing PMAs under the Turlock Subbasin GSP. The No Project Alternative consists of existing conditions at the time the Notice of Preparation (NOP) is published, and what would be reasonably expected to occur in the foreseeable future if the PMAs were not implemented, based on current plans and consistent with available infrastructure.

Under the No Project Alternative, proponents would take no action to implement any type of PMAs under the Turlock Subbasin GSP and thus would not be working toward achievement of the sustainability goal for the Turlock Subbasin by 2042.

While some groundwater-related projects would still be carried out that may benefit the Turlock Subbasin, it is not known how many of these types of projects would be implemented in the future without a guiding document such as the Turlock Subbasin GSP. Therefore, it is reasonable to assume that without collective implementation of the PMAs listed in the Turlock Subbasin GSP, the Turlock Subbasin would not avoid undesirable results over the remainder of the 50-year planning horizon. As a result, the groundwater supply would continue along the path of being unreliable and unsustainable to support population growth, sustain the agricultural economy, and provide for beneficial uses. During drought conditions, these conditions would be worsened.

Undesirable results that could occur under the No Project Alternative include:

- Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon.
- Significant and unreasonable reduction of groundwater storage.
- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.
- Significant and unreasonable land subsidence that substantially interferes with surface land uses.
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

Other Projects Included in the No Project Alternative

The No Project Alternative includes reasonably foreseeable projects that are funded and for which construction and operation permits had been issued at the time of the NOP. The following other projects are included in the No Project Alternative:

- Projects addressing water sustainability, including surface and groundwater projects.
- Development projects.
- Energy projects.
- Restoration projects that originate from programs and/or initiatives that guide restoration throughout the state.
- Multiple-benefit projects, including those that address groundwater recharge, recreation, flood management, water quality improvement, and/or adaptation to climate change.

Refer to the Consolidated Final PEIR Table 4-2 (in Chapter 4, *Cumulative Impacts*) for a sample list of other projects included in the No Project Alternative.

Relationship to Turlock Subbasin GSP Objectives

The No Project Alternative would not achieve the objective to achieve the sustainability goal for the Turlock Subbasin by 2042 and avoid undesirable results over the remainder of the 50-year planning horizon. As stated above, proponents would take no action, and therefore a reliable and sustainable groundwater supply that supports population growth, sustains the agricultural economy, and provides for beneficial uses would be compromised. In summary, the No Project Alternative does not meet the objectives of the Turlock Subbasin GSP.

Facts in Support of Finding of Infeasibility

As stated above, the No Project Alternative does not meet the objectives of the Turlock Subbasin GSP. In addition, each PMA would receive its case-by-case review by the WTS GSA, ETS GSA, or other future proponent without the opportunity for up-front and consistent categorization, impact analyses, and/or mitigation from a program EIR. Therefore, the permit applications and

CEQA documentation would not benefit time savings associated with this programmatic document and may be repetitive from one project to the next and/or vary in mitigation approaches.

Alternative 1 – Specify More Narrowly the Types of PMAs Implemented under the Turlock Subbasin GSP

Description of Alternative

Alternative 1 would include the same types of PMAs as described in the Consolidated Final PEIR Chapter 2, *Description of the Types of PMAs to be Implemented Under the Turlock Subbasin Groundwater Sustainability Plan*; however, this alternative would specify more narrowly the types of PMAs implemented under the Turlock Subbasin GSP.

This alternative would allow for the implementation of larger PMAs, defined as recharge projects that result in 100 acre-feet (AF)[1] or greater recharge. For example, the Dianne Storm Basin Project proposed by the City of Turlock, estimated to provide 22.5 AF per year of recharge to the Turlock Subbasin, would not be considered (refer to The Consolidated Final PEIR Table 2-2, Project No. 3). However, the Mustang Creek Flood Control Recharge Project proposed by the Eastside Water District, estimated to provide 600 AF per year of recharge to the Turlock Subbasin, would be considered (refer to The Consolidated Final PEIR Table 2-2, Project No. 10).

Furthermore, this alternative would only consider PMAs that were included in modeling scenarios with an annual recharge potential estimated (i.e., Group 1 and 2 projects), thereby disqualifying the Group 3 projects. Management actions would be considered if an estimate of recharge potential was made available to determine that the benefits exceed the 100 AF per year threshold.

The same authorization process for PMAs would be implemented under Alternative 1 (refer to the Consolidated Final PEIR Figure 1-1 in Chapter 1). Construction and O&M activities would be similar to those listed in the Consolidated Final PEIR Table 2-4, and implementation would incorporate the same mitigation measures as with all types of PMAs.

Because of the annual recharge potential constraints placed on the types of PMAs, this alternative would reduce the types, and potentially the locations, of PMAs that would be implemented under the Turlock Subbasin GSP. PMAs implemented by project proponents that do not meet the annual recharge potential required by Alternative 1 would not be covered under this alternative. Implementation of these PMAs would be the same as under the No Project Alternative (as described above).

Relationship to Turlock Subbasin GSP Objectives

Alternative 1 would not achieve all of the Turlock Subbasin GSP objectives. This alternative includes the implementation of all types of PMAs as described in the Consolidated Final PEIR Chapter 2; however, certain PMAs would not be implemented because of their potential to result in comparatively less annual groundwater recharge than other PMAs.

[1] This value was determined based on the range of estimated recharge potential of the modeled PMAs (Group 1 and 2 projects).

Setting an annual recharge potential threshold would remove smaller scale PMAs from the types of PMAs to be implemented under the Turlock Subbasin GSP. Additionally, only considering PMAs that were included in modeling scenarios with an annual recharge potential estimated (i.e., Group 1 and 2 projects) would disqualify Group 3 projects, thereby reducing the range of types of PMAs.

As described in the Consolidated Final PEIR Chapter 2 (Section 2.2), the number of PMAs included in the Turlock Subbasin GSP exemplifies the spatial and temporal variation in current groundwater conditions across the Turlock Subbasin, and thus provides a range of options for avoiding undesirable results and achieving sustainability based on existing conditions. The range of PMAs presented is intended to enable both the WTS GSA and the ETS GSA to be flexible in their responses as groundwater conditions change and new and better information becomes available.

While Alternative 1 would contribute toward achievement of the sustainability goal, more narrowly specifying the types of PMAs to be implemented may not ensure a reliable and sustainable groundwater supply that supports the diverse water demands of the Turlock Subbasin. PMAs that result in lower annual recharge potential may still be contributing to more sustainable conditions in that region of the Turlock Subbasin (West or East Turlock Subbasin) and/or for that specific water use community (urban versus agricultural). Therefore, the range of high and low recharge potential PMAs is favorable to achieve the sustainability goal by 2042 and avoid undesirable results over the remainder of the 50-year planning horizon.

Depending on the specific circumstances, imposing such annual recharge threshold limits may not reduce temporary adverse impacts, even with appropriate mitigation measures in place. Additionally, estimates of annual recharge potential may vary, and thus model uncertainty may result in inaccurate elimination of PMAs. Additional resources could be spent coordinating modeling efforts to improve estimates with more resources spent on planning and permitting and less on actual PMA implementation.

Because Alternative 1 would limit the PMAs implemented under the Turlock Subbasin GSP to specific annual recharge estimates, this alternative would not fully achieve the groundwater sustainability goal of the Turlock Subbasin and may not result in avoidance of undesirable results.

In summary, Alternative 1 would partially achieve the Turlock Subbasin GSP objectives, but many smaller scale PMAs could be left out, and this alternative would not achieve the same degree of recharge benefits as would implementing all types of PMAs under the Turlock Subbasin GSP.

Alternative 2 – Eliminate Certain Aspects of PMAs Implemented under the Turlock Subbasin GSP

Description of Alternative

Alternative 2 would include the same types of PMAs as described in the Consolidated Final PEIR Chapter 2, *Description of the Types of PMAs to be Implemented Under the Turlock Subbasin*

Groundwater Sustainability Plan. However, certain aspects of PMAs implemented under the Turlock Subbasin GSP would be removed under this alternative.

This could include aspects of PMAs that propose the construction of new features for direct recharge (e.g., injection wells, recharge basins, pump stations, pipelines), in-lieu recharge (e.g., canal interties, regulating reservoirs, pipelines), or water conservation (e.g., recharge basins or ponds, wells or pipelines) (refer to the Consolidated Final PEIR Table 2-4 for a complete list of example features resulting from construction).

For example, under the Stanislaus State Stormwater Recharge Project proposed by California State University, Stanislaus would construct French drains and other recharge basins/ infrastructure to recharge stormwater runoff. This type of project would be removed under this alternative. As another example, the domestic well mitigation program may result in the deepening or modification of wells, or in the construction of new wells, or the program may require connecting users to other water supplies. The construction of new wells would not be covered under this alternative.

PMAs that propose the modification or use of existing features, however, would still be included under this alternative. For example, the Recycled Water from the City of Turlock Project proposed by Turlock Irrigation District would divert recycled water from the City of Turlock to the Turlock Irrigation District conveyance system to irrigate fields (see the Consolidated Final PEIR Table 2-2, Project No. 7). As another example, the San Joaquin River Flood Diversion Project proposed by the City of Modesto would divert floodwater from the San Joaquin River into underused storage ponds (approximately 7,830 AF) for use in the Turlock Subbasin (see the Consolidated Final PEIR Table 2-2, Project No. 12). Because these projects do not propose the construction of new features, these types of projects would not be removed under this alternative.

The same authorization process for PMAs would be Implemented under Alternative 2 (refer to the Consolidated Final PEIR Figure 1-1, in Chapter 1). Given the reduced construction, construction activities resulting from the implementation of PMAs may be fewer than those listed in the Consolidated Final PEIR Table 2-4. O&M activities would be similar to those listed in the Consolidated Final PEIR Table 2-4, and implementation would incorporate the same mitigation measures as with all types of PMAs.

Because of the construction constraints placed on the types of PMAs, this alternative would reduce the types, and potentially the locations, of PMAs that would be implemented under the Turlock Subbasin GSP. PMAs implemented by project proponents that require the construction of new features would not be covered under this alternative.

Relationship to Turlock Subbasin GSP Objectives

Alternative 2 would not achieve all of the Turlock Subbasin GSP objectives. This alternative includes the implementation of the same types of PMAs as described in the Consolidated Final PEIR Chapter 2; however, this alternative would remove the aspects of PMAs that propose the construction of new features. Removing PMAs that propose the construction of new features

could reduce impact mechanisms due to reduced construction activities and/or comparatively fewer effects of constructed features and O&M activities.

As described in draft PEIR Chapter 2 (Section 2.2), the number of PMAs included in the Turlock Subbasin GSP exemplifies the spatial and temporal variation in current groundwater conditions across the Turlock Subbasin, and thus provides a range of options for avoiding undesirable results and achieving sustainability based on existing conditions. The range of PMAs presented would enable both the WTS GSA and the ETS GSA to be flexible in their responses as groundwater conditions change and new and better information becomes available.

While Alternative 2 would contribute toward achievement of the sustainability goal, removing PMAs that propose construction of new features could substantially reduce the effectiveness of the Turlock Subbasin GSP to ensure a reliable and sustainable groundwater supply that supports the diverse water demands of the Turlock Subbasin. PMAs that necessitate the construction of new features, such as regulating reservoirs and/or recharge basins, may represent the PMAs with the largest groundwater recharge potential.

Additionally, the construction of new features as part of in-lieu recharge projects may bring surface water supply to existing users, thereby reducing groundwater pumping. For example, the Waterford/Hickman Surface Water Pump Station and Storage Tank proposed by the Community of Hickman would connect the city of Waterford and community of Hickman to Modesto Irrigation District's surface water supply through construction of a storage tank (see Table 2-2, Project No. 2). Without a diversified water portfolio, these communities could experience additional lowering of groundwater levels and reduced groundwater storage (i.e., two undesirable results). Therefore, the range of PMAs is favorable to achieve the sustainability goal by 2042 and avoid undesirable results over the remainder of the 50-year planning horizon.

Depending on the specific circumstances, imposing construction limits may not reduce temporary adverse impacts, especially if appropriate mitigation measures are in place. Because Alternative 2 would limit the PMAs implemented under the Turlock Subbasin GSP to only PMAs that do not require construction of new features, this alternative would not fully achieve the groundwater sustainability goal of the Turlock Subbasin and may not result in avoidance of undesirable results.

In summary, Alternative 2 partially achieves the Turlock Subbasin GSP objectives, but necessary, construction-intensive PMAs could be left out, and this alternative would not achieve the same degree of recharge benefits as would implementing all types of PMAs under the Turlock Subbasin GSP.

Alternative 3 – Exclude Entire Types of PMAs Implemented under the Turlock Subbasin GSP

Description of Alternative

Alternative 3 would not include all types of PMAs as described in draft PEIR Chapter 2, *Description of the Types of PMAs to be Implemented Under the Turlock Subbasin Groundwater Sustainability Plan*; it would exclude entire types of PMAs that would be implemented under the

Turlock Subbasin GSP. For example, under this alternative, no direct or in-lieu recharge projects, regardless of annual recharge potential or construction of new features, would be implemented. Rather, only management actions, or non-structural programs and policies, would be implemented. These management actions include demand reduction strategies, a pumping management framework, and domestic well mitigation (see draft PEIR Table 2-3).

The same authorization process for PMAs would be implemented under Alternative 3 (refer to draft PEIR Figure 1-1, in Chapter 1). With the exclusion of all direct and in-lieu recharge project types, construction and O&M activities resulting from the implementation of PMAs would be fewer than those listed in draft PEIR Table 2-4 and only consist of activities required for construction associated with management actions. O&M activities specific to the management actions would be similar to those listed in draft PEIR Table 2-4, and implementation would incorporate the same mitigation measures as with all types of PMAs, as applicable.

Because of the exclusion of all direct and in-lieu recharge project types, this alternative would reduce the types, and potentially the locations, of PMAs that would be implemented under the Turlock Subbasin GSP. PMAs implemented by project proponents that require the construction of new features would not be covered under this alternative.

Relationship to Turlock Subbasin GSP Objectives

Alternative 3 would not achieve all of the Turlock Subbasin GSP objectives. This alternative would exclude direct and in-lieu recharge projects from implementation. Removing projects entirely would reduce impact mechanisms due to reduced construction activities and/or comparatively fewer effects of constructed features and O&M activities.

As described in draft PEIR Chapter 2 (Section 2.2), the number of PMAs included in the Turlock Subbasin GSP exemplifies the spatial and temporal variation in current groundwater conditions across the Turlock Subbasin, and thus provides a range of options for avoiding undesirable results and achieving sustainability based on existing conditions. The range of PMAs presented would enable both the WTS GSA and the ETS GSA to be flexible in their responses as groundwater conditions change and new and better information becomes available. Additionally, PMAs would be implemented adaptively to achieve an optimal balance between recharge projects and demand reduction management actions.

Alternative 3 would only consider management actions, most of which rely on land fallowing, conservation, and pumping reductions (see draft PEIR Table 2-3). While Alternative 3 would contribute toward achievement of the sustainability goal, only implementing non-structural programs and policies could substantially reduce the effectiveness of the Turlock Subbasin GSP to ensure a reliable and sustainable groundwater supply that supports the diverse water demands of the Turlock Subbasin. Direct and in-lieu recharge projects are necessary in conjunction with management actions to avoid undesirable results.

Assuming that management actions require minimal construction activities, Alternative 3 would reduce temporary adverse impacts. Because Alternative 3 would limit the PMAs implemented under the Turlock Subbasin GSP to only management actions, this alternative would not fully

achieve the groundwater sustainability goal of the Turlock Subbasin and may not result in avoidance of undesirable results.

In summary, Alternative 3 would not likely achieve the plan objectives as it would exclude the range of direct and in-lieu recharge projects implemented in conjunction with the demand reduction management actions. This alternative would not achieve the same degree of recharge benefits as would implementing all types of PMAs under the Turlock Subbasin GSP.

Environmentally Superior Alternative

As stated in the Consolidated Final PEIR, Alternatives 1, 2, and 3 would result in similar impacts compared to implementation of all types of PMAs, but potentially at a lesser magnitude. Alternative 3 excludes entire types of PMAs (i.e., direct and in-lieu recharge projects), which would result in the least construction activity than under the other alternatives. Therefore, Alternative 3 would be the environmentally superior alternative.

However, as described above, Alternative 3 would not fully achieve most of the plan objectives. Implementation of all types of PMAs are essential to achieve the sustainability goal for the Turlock Subbasin by 2042 and avoid undesirable results over the remainder of the 50-year planning horizon. Implementation of appropriate mitigation measures would minimize the potential for significant impacts of Alternative 3. However, as with the implementation of all types of PMAs, the exact location and extent of PMAs that would be permitted under Alternative 3 are not known at this time. Therefore, construction-related impacts would still be considered significant and unavoidable.

Statement of Overriding Considerations

The WTS GSA hereby declares that pursuant to State CEQA Guidelines Section 15093, it has balanced the benefits of PMAs implemented under the Turlock Subbasin GSP against any unavoidable environmental impacts in determining whether to implement the types of PMAs presented in the Turlock Subbasin GSP. Pursuant to the State CEQA Guidelines, if the benefits of PMAs outweigh the unavoidable adverse environmental impacts, those impacts may be considered acceptable.

Having reduced the adverse significant environmental impacts of PMAs implemented under the Turlock Subbasin GSP to the extent feasible by adopting the mitigation measures contained in the final PEIR, the MMRP, and this appendix; having considered the entire administrative record; and having weighed the benefits of PMAs against the unavoidable adverse impact after mitigation, the WTS GSA has determined that each of the following social, economic, and environmental benefits of the PMAs separately and individually outweighs the potential unavoidable adverse impacts and renders those potential adverse impacts acceptable, based upon the following overriding considerations.

The policy, economic, and social considerations taken into account by the WTS GSA in making this decision are identified below.

Policy Considerations

Efforts to enhance groundwater resources throughout the state are ongoing. A wide variety of California laws, mandates, plans, mitigation requirements, and initiatives—many of which are the result of decades-long collaboration and reports based on scientific research—call for improving the quality and protecting the quality of the Central Valley's groundwater resources.

In 2015 Governor Jerry Brown issued the Sustainable Groundwater Management Act, composed of three bills: Assembly Bill (AB) 1739, SB 1319, and SB 1168. SGMA set the goal of "groundwater sustainability" by 2042. This bill led to the creation of Groundwater Sustainability Agencies (GSAs) and Groundwater Sustainability Plans (GSPs), and required that all uses of groundwater be "reasonable and beneficial."

According to California Water Code Section 10728.6, CEQA does not apply to the adoption of a GSP; however, CEQA compliance would be required for implementation of potential future PMAs called for by the Turlock Subbasin GSP. It was therefore determined by the Turlock Subbasin GSAs that a PEIR would be prepared in accordance with State CEQA Guidelines Section 15168(c) to streamline these later activities. Thus, the final PEIR will improve the efficiency of regulatory review for PMAs implemented to achieve the sustainability goal for the Turlock Subbasin by 2042 and avoid undesirable results over the remainder of a 50-year planning horizon. The WTS GSA's purpose for the Turlock Subbasin PEIR contributes to and is consistent with statewide initiatives.

Economic Considerations

The sustainable management of groundwater resources brings economic sustainability to the state. Groundwater acts as a water bank, supplementing surface water shortages during below average water years. Unsustainable groundwater extraction translates to economic challenges to urban and agricultural water users through variable residential rates straining customers and/or reduced crop production. Implementation of the Turlock Subbasin GSP, and the types of PMAs called for by the Turlock Subbasin GSP, aims to provide reliable water supply for urban and agricultural water users.

As described in the Consolidated Final PEIR, Chapter 2, *Description of the Types of PMAs to Be Implemented under the Turlock Subbasin Groundwater Sustainability Plan*, the number of PMAs exemplifies the spatial and temporal variation in current groundwater conditions across the Turlock Subbasin, and thus provides a range of options for avoiding undesirable results and achieving sustainability based on existing conditions. The range of PMAs presented is intended to enable both the WTS GSA and the ETS GSA to be flexible in their responses as groundwater conditions change and new and better information becomes available. PMAs that incorporate economic benefits include those that measure water use in an effort to reduce irrigation inefficiencies, provide surface water in-lieu of groundwater to recharge the aquifer, and construct new or improving existing infrastructure to improve the management of variable water supplies.

As an additional economic consideration, with the Consolidated Final PEIR, the CEQA lead agency could expedite implementation of a project or management action and make the

regulatory process efficient by interpreting potential impacts in a uniform and consistent manner. A program-level CEQA document (i.e., a PEIR) provides an alternative to the project-level EIR that is better suited for the task of addressing impacts from implementing large-scale, ongoing programs or plans over large areas (Dudley 2021). Because the procedures for approving a project-level and program EIR are the same, an agency can certify environmental review for multiple projects in the same amount of time that it would take to certify a single project-level EIR. Thus, using program EIRs, in addition to tiering and streamline, can save money and time for motivated agencies that are willing to plan early and think comprehensively (Dudley 2021).

Social Considerations

Approximately 82 percent of the population in the Turlock Subbasin is located in disadvantaged areas, which refers to disadvantaged communities (DACs), severely disadvantaged communities (SDACs), and economically distressed areas (EDAs) (Todd Groundwater 2022). Disadvantaged areas cover large segments of the Turlock Subbasin and include a portion of the service areas for all of the GSA member agencies, including the City of Ceres and City of Turlock. Projects were developed, where possible, to be aligned with the state grant program preferences and the Governor's Water Action Plan (issued in 2014 and updated in 2016), by providing multiple benefits, embracing innovation and new technologies, and benefitting disadvantaged communities and environmental water users. Benefits to groundwater conditions in local areas of the Turlock Subbasin are also expected to broadly benefit all DACs, SDACs, and EDAs in the Turlock Subbasin.

Implementing GSPs are beneficial in supporting these communities with reliable and sustainable groundwater supply, and facilitating a streamlined approach to implementing PMAs called for in the GSP. For example, implementation of management actions that comprise domestic well mitigation programs would provide information and protective measures to avoid significant adverse impacts on domestic well users reliant on wells for drinking water supply from management of groundwater levels and extractions (Todd Groundwater 2022). Projects that introduce surface water in-lieu of groundwater would supplement and diversify drinking water supply.

Many currently proposed GSPs have set minimum thresholds for groundwater which are below current drought groundwater levels that have already caused hundreds of domestic wells providing water to DACs to run dry. While these minimum thresholds may still allow water access for deeper, agricultural-use wells, these thresholds do not account for shallow, domestic wells that many disadvantaged communities rely on (Noble 2022).

As mentioned above, with the final PEIR, the CEQA lead agency could expedite implementation of a project or management action and make the regulatory process efficient by interpreting potential impacts in a uniform and consistent manner. Streamlining the environmental review process should advance PMAs that address thousands of domestic well users vulnerable to variable water supply and prolonged drought conditions. Implementing PMAs under the Turlock Subbasin GSP advances reliable access to all users in the Turlock Subbasin.

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Appendix E

Mitigation Monitoring and Reporting Program

APPENDIX E
Mitigation Monitoring and Reporting Program

Introduction

Public Resources Code (PRC) Section 21081.6 and Section 15097 of the State CEQA Guidelines require public agencies to establish monitoring or reporting programs for projects they approve whenever such approval involves adopting either a mitigated negative declaration or specified environmental findings related to EIRs.

This Mitigation Monitoring and Reporting Program (MMRP) has been developed to help ensure that the West Turlock Subbasin Groundwater Sustainability Agency (WTS GSA), the East Turlock Subbasin Groundwater Sustainability Agency (ETS GSA), or potential future proponents (identified in draft PEIR Section 2.1.3, *Turlock Subbasin Groundwater Sustainability Agencies*), of projects and management actions (PMAs) implemented under the Turlock Subbasin Groundwater Sustainability Plan (GSP) carry out the adopted measures to mitigate and/or avoid significant environmental impacts.

This MMRP is intended to be used by the PMA proponent(s) to ensure that compliance with mitigation measures occurs during project implementation. Mitigation measures identified in this MMRP were developed as part of the PEIR process.

Components of the Mitigation Monitoring and Reporting Program

The components of **Table E-1**, which identifies applicable mitigation measures, are addressed briefly below.

- **Issue Area:** This column states the resource issue area.
- **Impact Statement:** This column summarizes the impact stated in the draft PEIR.
- **Mitigation Measure:** All mitigation measures identified in the Turlock Subbasin GSP draft PEIR are presented, as revised in the final PEIR, and numbered accordingly.
- **Responsibility for Implementing:** This item identifies the entity that would undertake the required mitigation.
- **Responsibility for Monitoring:** The PMA proponent is primarily responsible for ensuring that the mitigation measures are implemented successfully. The PMA proponent may contract out for these services and/or make them part of the construction specifications, and other

agencies may also be responsible for monitoring the implementation of mitigation measures. As a result, more than one monitoring party may be identified.

- **Monitoring and Reporting Actions:** One or more actions are described for each mitigation measure. The actions delineate the means of implementing the mitigation measures and, in some instances, the criteria for determining whether a measure has been implemented successfully. Where mitigation measures are particularly detailed, the action may refer back to the measure.
- **Timing:** Implementation of the action must occur before or during some part of project approval, project design, or construction, or on an ongoing basis. The timing of each measure is identified.

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.2 Aesthetics and Visual Resources	**Impact AES-1:** Implementing PMAs under the Turlock Subbasin GSP could result in substantial degradation of visual qualities.	**Mitigation Measure AES-1: Minimize Degradation of Visual Quality.** • Use compatible colors for proposed structural features, such as fish screens and storage tanks. Use earth-tone paints and stains with low levels of reflectivity. • Minimize the vertical profile of proposed structures as much as possible. • Provide vegetative screening to soften views of structures. Landscaping should complement the surrounding landscape.	PMA proponent(s), construction contractor	PMA proponent(s), construction contractor	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design
	Impact AES-3: Implementing PMAs under the Turlock Subbasin GSP could result in new sources of substantial light or glare.	**Mitigation Measure AES-2: Avoid Effects of Project Lighting.** • Proposed lighting features shall use shields, and lighting shall be directed downward and inward toward the features.	PMA Proponent, construction contractor	PMA Proponent, construction contractor	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design
3.3 Agriculture and Forestry Resources	**Impact AG-1:** Implementing PMAs under the Turlock Subbasin GSP could convert Special Designated Farmland to nonagricultural use or conflict with a Williamson Act contract or zoning for agricultural use.	**Mitigation Measure AG-1: Minimize and Avoid Loss of Farmland.** • PMAs shall be designed to minimize, to the greatest extent feasible, the loss of agricultural land with the highest values. • PMAs that result in the permanent conversion of Farmland to nonagricultural use shall preserve other Farmland in perpetuity by acquiring an agricultural conservation easement, or by contributing funds to a land trust or other entity qualified to preserve Farmland in perpetuity (at a target ratio of 1:1, depending on the nature of the conversion and the characteristics of the Farmland to be converted, to compensate for the permanent loss). • PMA features shall be designed to minimize the fragmentation or isolation of Farmland. Where a project involves acquiring land or easements, the remaining nonproject area shall be of a size sufficient to allow viable farming operations. The participating agencies shall be responsible for acquiring easements, making lot line adjustments, and merging affected land parcels into units suitable for continued commercial agricultural management. • Any utility or infrastructure serving agricultural uses shall be reconnected if it is disturbed by project construction. If a project temporarily or permanently cuts off roadway access or removes utility lines, irrigation features, or other infrastructure, the project proponents shall be responsible for restoring access as necessary to ensure that economically viable farming operations are not interrupted. Where applicable to a project site, buffer areas shall be established between PMAs and adjacent agricultural land. The buffers shall be sufficient to protect and maintain land capability and flexibility in agricultural operations. Buffers shall be designed to protect the feasibility of ongoing agricultural operations and reduce the effects of construction-related or operational activities (including the potential to introduce special-status species in the agricultural areas) on adjacent or nearby properties. Buffers shall also protect restoration areas from noise, dust, and the application of agricultural chemicals. The width of each buffer shall be determined on a project-by-project basis to account for variations in prevailing winds, crop types, agricultural practices, ecological restoration, and infrastructure. Buffers can function as drainage swales, trails, roads, linear parkways, or other uses compatible with ongoing agricultural operations.	PMA proponent(s) construction contractor	PMA proponent(s), construction contractor	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions to minimize impact on agricultural land.	Prior to and during PMA construction
		Mitigation Measure AG-2: Minimize Impacts on Lands Protected by Agricultural zoning or Williamson Act Contract. • PMAs shall be designed to minimize, to the greatest extent feasible, conflicts and inconsistencies with land protected by agricultural zoning or a Williamson Act contract and the terms of the applicable zoning/contract.	PMA proponent(s) construction contractor	PMA proponent(s) construction contractor	None	During PMA design
3.4 Air Quality	**Impact AIR-2:** Implementing PMAs under the Turlock Subbasin GSP could result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard.	**Mitigation Measure AIR-1: Implement Project-specific Air Quality Analysis for Large Recharge Projects.** For recharge projects involving more than 180,000 cubic yards of excavated material transport, the PMA proponent shall prepare a project-specific air quality analysis conducted by a professional air quality analyst. If the analysis determines that project emissions would exceed any of the San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds of significance presented in draft PEIR Table 3.4-3, then the analysis should identify additional mitigation measures to reduce emissions to below the applicable threshold(s) or to the greatest extent feasible. Such additional mitigation measures may include: • Require the use of off-road equipment with U.S. Environmental Protection Agency (USEPA)-certified Tier 4 engines. • Reduce the overall window of annual construction activity.	PMA proponent(s) construction contractor	PMA proponent(s) construction contractor	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions. Actions may include air quality monitoring on-site and verifying the Tier 4 status of off-road equipment.	During PMA design

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.4 Air Quality (cont.)	**Impact AIR-2** (cont.)	**Mitigation Measure AIR-2: Minimize Dust from Fallowed Lands.** For projects involving land fallowing, land conversion, or other agricultural operations, implement applicable best management practices (BMPs) from agencies such as the U.S. Department of Agriculture Natural Resources Conservation Service and California Department of Food and Agriculture (CDFA 2022)[1] to mitigate dust associated with fallowed lands. BMPs for fallowed lands could include, but are not limited to, the following: • Implement conservation cropping sequences and wind erosion protection measures, such as: – Plan ahead to start with plenty of vegetation residue and maintain as much residue on fallowed fields as possible. Residue is more effective for wind erosion protection if left standing. – If residues are not adequate, small grain can be seeded about the first of the year to take advantage of the winter rains and irrigated with a light irrigation if needed to get adequate growth. – Avoid any tillage if possible. – Avoid any traffic or tillage when fields are extremely dry to avoid pulverization.	PMA proponent(s) construction contractor	PMA proponent(s) construction contractor	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions. Actions may include air quality monitoring on-site and verifying Tier 4 statuses of off-road equipment.	During PMA design
	Impact AIR-3: Implementing PMAs under the Turlock Subbasin GSP could expose sensitive receptors to substantial pollutant concentrations.	**Mitigation Measure AIR-2: Minimize Dust from Fallowed Lands. (See Impact AIR-2.)** **Mitigation Measure AIR-3: Implement Project-specific Air Quality Analysis for Certain Recharge Projects.** For recharge projects that involve 12 months of active construction and are within 1,000 feet of sensitive receptors, a project-specific construction health risk analysis shall be completed to demonstrate that the construction activities of individual projects under the PMA would not result in a significant acute, chronic non-cancer or cancer-related health risk to specific sensitive receptors. If construction activities would result in significant increase in health risk, then the analysis should identify additional mitigation measures to further reduce emissions to below the applicable threshold(s). Such additional mitigation measures may include: • Require the use of off-road equipment with USEPA-certified Tier 4 engines. • Use equipment fitted with a California Air Resources Board (CARB) Verified Diesel Emission Control System. • Reduce the overall window of annual construction activity in the proximity of the impacted receptor.	PMA proponent(s) construction contractor	PMA proponent(s) construction contractor	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions. Actions may include air quality monitoring on-site and verifying Tier 4 statuses of off-road equipment.	During PMA design
3.5 Biological Resources	**Impact BIO-1:** Implementing PMAs under the Turlock Subbasin GSP could result in 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 (CDFW) or U.S. Fish and Wildlife Service (USFWS).	**Mitigation Measure BIO-1: Minimize Disturbance of Special-Status Species.** ***Avoid Loss of Special-Status Species Habitat.*** Select project site(s) that would avoid habitats of special-status species (which may include foraging, sheltering, migration, and rearing habitat in addition to breeding or spawning habitat): • Schedule construction to avoid special-status species' breeding, spawning, or migration locations during the seasons or active periods that these activities occur. • Establish buffers around special-status species habitats to exclude effects of construction activities. The size of the buffer shall be in accordance with USFWS and CDFW protocols for the applicable special-status species. • If nest tree removal is necessary, remove the tree only after the nest is no longer active, as determined by a qualified biologist. • Where impacts on special-status species are unavoidable, compensate for impacts by restoring or preserving in-kind suitable habitat on-site, or off-site, or by purchasing restoration or preservation credits. • Abide by any permit requirements associated with local policies and ordinances protecting native trees. ***Prevent Degradation of Fish Habitat.*** PMA sites will implement construction best management practices (BMPs) to prevent degradation of fish habitat including: • Developing and implementing a Stormwater Pollution Prevention Plan (SWPPP). • Minimizing soil disturbance, erosion, and sediment runoff from the project site. • Avoiding and minimizing contaminant spills. • Conducting biological construction monitoring to ensure that implemented BMPs are effective. • Any new water diversion structures constructed as part of PMA implementation should be considered for being fitted with fish screens meeting CDFW and NMFS criteria as outlined in NMFS (1997)[2] "Fish Screen Criteria for Anadromous Salmonids" to prevent removal, entrainment or impingement of fish and other wildlife. ***Avoid Vegetation Disturbance.*** PMA sites will minimize, to the greatest extent feasible, the amount of soil and upland vegetation disturbance during project construction and use methods creating the least disturbance to vegetation. Disturbance to existing grades and native vegetation, the number of access routes, the size of staging areas, and the total area disturbed by the project shall be limited to the extent of all temporary and permanent impacts as defined by the final project design.	PMA proponent(s)	PMA proponent(s), qualified botanist/ qualified biologist	Once the specific characteristics and locations of the PMAs are known, proponents and/or a qualified biologist would survey the site for special-species habitats. Qualified biologists and PMA proponent(s) would continue to identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.5 Biological Resources (cont.)	**Impact BIO-1** (cont.)	***Environmental Awareness Training.*** Prior to engaging existing or new personnel in construction activities, new construction personnel will participate in environmental awareness training conducted by an agency-approved biologist or resource specialist. Construction personnel will be informed about the identification, potential presence, legal protections, and avoidance and minimization measures relevant to special status that potentially occur on the project site. ***Environmental Monitoring.*** A biologist or resource specialist will ensure that all applicable protective measures are implemented during project construction. The agency-approved biologist or resource specialist will have authority to stop any work if they determine that any permit requirement is not fully implemented. The agency-approved biologist or resource specialist will prepare and maintain a monitoring log of construction site conditions and observations, which will be kept on file. ***Work Area and Speed Limits.*** Construction work and materials staging will be restricted to designated work areas, routes, staging areas, temporary interior roads, or the limits of existing roadways. • Prior to start of work, brightly colored fencing or flagging or other practical means shall be erected to demarcate the limits of the project activities within 100 feet of sensitive natural communities and habitat areas (e.g., any aquatic features), including designated staging areas; ingress and egress corridors; stockpile areas, soil, and materials; and equipment exclusion zones. Flagging or fencing shall be maintained in good repair for the duration of project activities. • Vehicles will obey posted speed limits and will limit speeds to 20 miles per hour within the study area on unpaved surfaces and unpaved roads to reduce dust and soil erosion and avoid harm to wildlife. ***Food Trash Removed Daily.*** All food trash will be properly contained within sealed containers, removed from the work site, and disposed of daily to prevent attracting wildlife to construction sites. ***Take of Listed Species.*** Where federally or state listed species will be affected by implementation of a PMA, the proponent will adhere to regulatory guidelines and policies that identify specific avoidance and minimization measures to ensure that these actions do not result in the take of a listed species, except as authorized under a USFWS Biological Opinion or through the Section 2081 consultation process with the CDFW (e.g., in an incidental take permit). ***CNDDB Observations.*** Any observations of special-status species detected during biological resource surveys conducted for PMAs will be reported to the California Natural Diversity Database (CNDDB). The type of information to be reported to CNDDB will be in accordance with guidance provided by CDFW at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.				
	Impact BIO-2: Implementing PMAs under the Turlock Subbasin GSP could result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS.	**Mitigation Measure BIO-2: Avoid and Minimize Disturbance to Sensitive Natural Communities.** ***Mapping of Aquatic Resources and Associated Riparian Vegetation.*** If a PMA site includes aquatic resources, a formal stream mapping and/or wetland delineation will be conducted by a qualified biologist, hydrologist, or wetland scientist, as warranted. This process will determine the baseline location, extent, and condition of streams (including floodplains, if applicable) and wetlands within the PMA site. If there is riparian vegetation along a mapped aquatic resource, the proponent will map out the extent of the riparian trees and woody shrubs within the PMA site. ***Avoidance of Sensitive Natural Communities.*** The PMA sites will be locations that would avoid sensitive natural communities, including riparian habitats, by doing the following: • To the maximum extent practicable, project elements will be designed to avoid effects on sensitive natural communities. • Flagging or fencing will be installed by the agency-approved biologist or resource specialist around any sensitive natural community to be avoided by construction. • Flagging or fencing will remain in place throughout the duration of the construction activities, and will be inspected and maintained regularly by the agency-approved biologist or resource specialist until completion of the project. Fencing will be removed when all construction equipment is removed from the site, the area is cleared of debris and trash, and the area is returned to natural conditions. • Where impacts on sensitive natural communities other than waters of the United States or State are unavoidable, impacts will be compensated for by restoring and/or preserving in-kind sensitive natural communities on-site, or off-site at a nearby site, or by purchasing in-kind restoration or preservation credits from a mitigation bank that services the project site. ***Restoration of Temporarily Affected Areas.*** For any areas temporarily affected by construction activities, the contractor will implement the following: • Prepare a restoration plan for temporary impact sites for review by CDFW. • Minimizing soil disturbance and stockpiling topsoil for later use in any areas to be graded. • Amend soil as necessary before installing replacement plants. • Utilize only native plant species for revegetation. ***Preserve Large Trees.*** Existing native vegetation shall be retained as practicable, with special focus on the retention of shade-producing and bank-stabilizing trees and brush with greater than 6-inch diameter branches or trunks.	PMA proponent(s)	PMA proponent(s), qualified biologist/botanist	Once the specific characteristics and locations of the PMAs are known, proponents and/or a qualified biologist would survey the site for special-species habitats. Qualified biologists and PMA proponent(s) would continue to identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.5 Biological Resources (cont.)	**Impact BIO-2** (cont.)	***Avoid Excessive Soil Compaction.*** Wherever possible, vegetation disturbance and soil compaction shall be minimized by using low ground-pressure equipment with a greater reach or that exerts less pressure per square inch on the ground than other equipment. ***Native and Invasive Vegetation Removal Materials and Methods.*** If riparian vegetation is removed with chainsaws or other power equipment, machines that operate with vegetable-based bar oil will be used, if practicable. All invasive plant species (e.g., those rated as invasive by the California Invasive Plant Council or local problem species) shall, if feasible, be removed from the project site, using locally and routinely accepted agriculture practices. Stockpiling of invasive plant materials is prohibited during the flood season. ***Revegetate Disturbed Areas.*** All temporarily disturbed areas will be de-compacted and seeded/planted with a mix of native riparian, wetland, and/or upland plant species suitable for the area. The project proponent shall develop a revegetation plan, including (as applicable) a schedule; plans for grading of disturbed areas to pre-project contours; planting palette with plant species native to the study area; invasive species management; performance standards; and maintenance requirements (e.g., watering, weeding, and replanting). Plants for revegetation will come primarily from active seeding and planting; natural recruitment may also be proposed if site conditions allow for natural recruitment to reestablish vegetation and avoid potential negative risks associated with erosion and impacts on water quality. Plants imported to the restoration areas will come from local stock, and to the extent possible, local nurseries. Only native plants (genera) will be used for restoration efforts. Certified weed-free native mixes and mulch will be used for restoration planting or seeding. ***Revegetation Materials and Methods.*** Following completion of work, site contours will be returned to preconstruction conditions or re-designed to provide increased biological and hydrological functions. • Any area barren of vegetation as a result of project implementation shall be restored to a natural state by mulching, seeding, planting, or other means with native trees, shrubs, willow stakes, erosion control native seed mixes, or herbaceous plant species. • Where disturbed, topsoil shall be conserved for reuse during restoration to the extent practicable. • Native plant species comprising a diverse community structure (plantings of both woody and herbaceous species, if both are present) that follow a CDFW-approved plant palette shall be used for revegetation of disturbed and compacted areas, as appropriate. • Irrigation may also be required to ensure the survival of shrubs, trees, or other vegetation. • Soils that have been compacted by heavy equipment shall be de-compacted, as necessary, to allow for revegetation. ***Revegetation Erosion Control Materials and Methods.*** If erosion control fabrics are used in revegetated areas, they shall be slit in appropriate locations to allow for plant root growth. Only non-monofilament, wildlife-safe fabrics shall be used. ***Revegetation Monitoring and Reporting.*** All revegetated areas will be maintained and monitored for a minimum of 2 years after replanting is complete and until success criteria are met, to ensure the revegetation effort is successful. The standard for success is 60 percent absolute cover compared to an intact, local reference site. If an appropriate reference site cannot be identified, success criteria will be developed for review and approval by CDFW on a project-by-project basis based on the specific habitat impacted and known recovery times for that habitat and geography. The project proponent will prepare a summary report of the monitoring results and recommendations at the conclusion of each monitoring year.	PMA proponent(s)	PMA proponent(s), qualified biologist/botanist	Once the specific characteristics and locations of the PMAs are known, proponents and/or a qualified biologist would survey the site for special-species habitats. Qualified biologists and PMA proponent(s) would continue to identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During and after construction
	Impact BIO-3: Implementing PMAs under the Turlock Subbasin GSP could result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means.	**Mitigation Measure BIO-3: Avoid and Minimize Disturbance to Wetlands and Waters.** ***Avoidance of jurisdictional wetlands and other waters.*** The PMA sites will avoid, minimize, and, if necessary, compensate for reduction in area and/or habitat quality of wetlands and jurisdictional waters, as follows: • To the maximum extent practicable, project elements will be designed to avoid effects on wetlands and other waters, including rivers, streams, vernal pools, and seasonal wetlands. • Flagging or fencing will be installed by the agency-approved biologist or resource specialist around any jurisdictional wetland or other aquatic feature to be avoided by construction. • Flagging or fencing will remain in place throughout the duration of the construction activities, and will be inspected and maintained regularly by the agency-approved biologist or resource specialist until completion of the project. Fencing will be removed when all construction equipment is removed from the site, the area is cleared of debris and trash, and the area is returned to natural conditions. • Staging areas, access roads, and other facilities shall be placed to avoid and limit disturbance to waters of the state and other aquatic habitats (e.g., streambank or stream channel, riparian habitat) as much as possible. When possible, existing ingress or egress points shall be used and/or work shall be performed from the top of the creek banks or from barges on the waterside of the stream or levee bank, or dry gravel beds. • Replacing, restoring, or enhancing on a “no net loss” basis (in accordance with U.S. Army Corps of Engineers (USACE) and State Water Resource Control Board requirements), wetlands and other waters of the United States, and waters of the State that would be removed, lost, and/or degraded.	PMA proponent(s)	PMA proponent(s), qualified wetland biologist	Once the specific characteristics and locations of the PMAs are known, proponents and/or a qualified wetland biologist would survey the site and flag important wetland resources. Qualified biologists and PMA proponent(s) would continue to identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design and during PMA construction

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.5 Biological Resources (cont.)	**Impact BIO-4:** Implementing PMAs under the Turlock Subbasin GSP could 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.	**Mitigation Measure BIO-1: Minimize Disturbance of Special-Status Species. (See Impact BIO-1.)** **Mitigation Measure BIO-2: Avoid and Minimize Disturbance to Sensitive Natural Communities. (See Impact BIO-2.)**	See above	See above	See above	See above
	Impact BIO-5: Implementing PMAs under the Turlock Subbasin GSP could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	**Mitigation Measure BIO-2: Avoid and Minimize Disturbance to Sensitive Natural Communities. (See Impact BIO-2.)**	See above	See above	See above	See above
3.6 Cultural Resources	**Impact CUL-1:** Implementing PMAs under the Turlock Subbasin GSP could cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines Section 15064.5.	**Mitigation Measure CUL-1: Conduct Inventory and Significance Evaluation of Architectural Resources.** Before implementation of a project under the GSP, the need for an inventory and significance evaluation of architectural resources in the project area shall be assessed, based on the type of activity conducted and potential for built features to be present or disturbed. The assessment should consist of a review of maps and aerial photos to see if existing buildings, dams, levees, roads, or other built features are in the project area. If so, and the age of these features is either unknown or is known to be older than 45 years, then an inventory and evaluation should be completed by, or under the direct supervision of, a qualified architectural historian, defined as one who meets the U.S. Secretary of the Interior's Professional Qualifications Standards for Historical Architecture or History, and shall include the following: • Map(s) and verbal description of the project area that delineates both the horizontal and vertical extents of where a project could result in impacts, including both direct and indirect, on cultural resources. • A records search at the appropriate repository of the California Historical Resources Information System (CHRIS) for the project area and vicinity (typically areas within 0.25 or 0.5 mile, based on setting) to acquire records of previously recorded cultural resources in the project area and vicinity and previous cultural resources studies conducted for the project area and vicinity. • Background research on the history of the project area and vicinity for all projects determined to need additional historical architecture assessment. If, after review, features of the built environment are determined to be less than 45 years old, a summary statement of their age and references for this determination will be included in the project area description. No further analysis is necessary. If historic-era architectural resources are determined to likely be present, an architectural field survey of the project area shall be conducted, unless previous architectural field surveys no more than 5 years old have been conducted for the project area. Any architectural resources identified in the project area during the survey shall be recorded on the appropriate California Department of Parks and Recreation 523 forms. • If resources are identified in the project area, they shall be evaluated for California Register eligibility (i.e., whether they qualify as historical resources, as defined in State CEQA Guidelines Section 15064.5). • If California Register-eligible resources are present, an assessment of potential project impacts shall be conducted. This shall include an analysis of whether the project's potential impacts on the historical resource would be consistent with the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties and applicable guidelines. If potentially significant impacts on historical resources are identified, an approach for reducing such impacts shall be developed before project implementation and in coordination with interested parties (e.g., historical societies, local communities). Typical measures for reducing impacts include: • Modifying the project to avoid impacts on historical resources. • Documentation of historical resources, to the standards of and to be included in the Historic American Buildings Survey, Historic American Engineering Record, or Historic American Landscapes Survey, as appropriate. As described in the above standards, the documentation shall be conducted by a qualified architectural historian, defined above, and shall include large-format photography, measured drawings, written architectural descriptions, and historical narratives. The completed documentation shall be submitted to the U.S. Library of Congress. • Relocation of historical resources in conformance with the U.S. Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.	PMA proponent(s)	PMA proponent(s), qualified archaeologist	Once the specific characteristics and locations of the PMAs are known, a qualified archeologist would survey the site for any features that are of an unknown age or are older than 45 years. Qualified archaeologists and PMA proponent(s) would continue to identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design and construction

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.6 Cultural Resources (cont.)	**Impact CUL-1** (cont.)	• Monitoring construction-related and operational vibrations at historical resources. • For historical resources that are landscapes, preservation of the landscape's historic form, features, and details that have evolved over time, in conformance with the U.S. Secretary of the Interior's Guidance for the Treatment of Cultural Landscapes. • Development and implementation of interpretive programs or displays, and community outreach.				
	Impact CUL-2: Implementing PMAs under the Turlock Subbasin GSP could cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5.	**Mitigation Measure CUL-2: Conduct Inventory and Significance Evaluation of Archaeological Resources.** Before implementation of a project under the GSP that includes ground disturbance, an archaeological records search and sensitivity assessment shall be conducted. The inventory should be completed by, or under the direct supervision of, a qualified archaeologist, defined as one who meets the U.S. Secretary of the Interior's Professional Qualifications Standards for Archeology, and shall include the following: • Map(s) and verbal description of the project area that delineates both the horizontal and vertical extents of where a project could result in impacts, including both direct and indirect, on cultural resources. • A records search at the appropriate repository of the CHRIS for the project area and vicinity (typically areas within 0.25 or 0.5 mile, based on setting) to acquire records on previously recorded cultural resources in the project area and vicinity, and previous cultural resources studies conducted for the project area and vicinity. • Outreach to the California Native American Heritage Commission (NAHC), including a request of a search of the Sacred Lands File for the project area, to determine if any documented Native American sacred sites could be affected by the project. • Consultation with California Native American Tribes pursuant to PRC Section 21080.3 to determine whether any Indigenous archaeological resource or tribal cultural resources could be affected by the project. Project proponents shall submit a Sacred Lands File & Native American Contacts List Request to the NAHC at the initial stages of project development. Any tribe identified by the NAHC will require notification of the proposed project by the lead agency as soon as practicable during early design. • Background research on the history, including ethnography and Indigenous presence, of the project area and vicinity. • An archaeological sensitivity analysis of the project area based on mapped geologic formations and soils, previously recorded archaeological resources, previous archaeological studies, and Native American consultation. If an archaeological survey is not warranted based on the above review, a summary of the assessment and justification of the determination will be prepared. If the CEQA lead agency agrees with the determination, no further study is needed. If a survey is warranted as a result of archival studies and consultations, an archaeological field survey of the project area will be conducted. If previous archaeological field surveys no more than 10 years old have been conducted for the project area, a new field survey is not necessary. The field survey shall include, at a minimum, a pedestrian survey. If the archaeological sensitivity analysis suggests a high potential for buried archaeological resources in the project area, a subsurface survey may also be conducted. Any archaeological resources identified in the project area during the survey shall be recorded on the appropriate California Department of Parks and Recreation 523 forms. • If resources are identified in the project area, they shall be evaluated for California Register eligibility (i.e., whether they qualify as historical resources, as defined in State CEQA Guidelines Section 15064.5 or unique archaeological resources, as defined in PRC Section 21083.2). Such evaluation may require archaeological testing (excavation), potentially including laboratory analysis, and consultation with relevant Native American representatives (for Indigenous resources). • If California Register-eligible resources are present, an assessment of potential project impacts shall be conducted. This shall include an analysis of whether the project's potential impacts would materially alter the resource's physical characteristics that convey its historical significance and that justify its eligibility for inclusion in the California Register. If potentially significant impacts on archaeological resources that qualify as historical resources (per State CEQA Guidelines Section 15064.5) and/or unique archaeological resources (per PRC Section 21083.2) are identified, an approach for reducing such impacts shall be developed, in coordination with interested or consulting parties (e.g., Native American representatives, historical societies, or local communities as appropriate). Typical measures for reducing impacts include: • Modify the project to avoid impacts on resources. • Plan parks, green space, or other open space to incorporate the resources. • Develop and implement a detailed archaeological resources management plan to recover the scientifically consequential information from archaeological resources before any excavation at the resource's location. Treatment for most archaeological resources consists of (but is not necessarily limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the resource to be affected by the project. Develop and implement interpretive programs or displays, and conduct community outreach.	PMA proponent(s)	PMA proponent(s), qualified archaeologist	Once the specific characteristics and locations of the PMAs are known, a qualified archeologist would create an inventory of archaeological records. Qualified archaeologists and PMA proponent(s) would continue to identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions. If archaeological resources are discovered, verify that construction or operation has ceased and has been flagged within 100 feet of a historic-era archaeological resources find. Document inspection of the discovery. Prepare and document the implementation of a treatment plan.	During PMA design and construction

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.6 Cultural Resources (cont.)	**Impact CUL-2** (cont.)	**Mitigation Measure CUL-3: Implement Measures to Protect Archaeological Resources during Project Construction or Operation.** If cultural materials are encountered during construction or operation of any project implemented under the GSP, all activity within 100 feet of the find shall cease and the find shall be flagged for avoidance. The lead agency and a qualified archaeologist, defined as one meeting the U.S. Secretary of the Interior's Professional Qualifications Standards for Archeology, shall be immediately informed of the discovery. The qualified archaeologist shall inspect the discovery and notify the lead agency of their initial assessment. If the qualified archaeologist determines that the resource is or is potentially Indigenous in origin, the lead agency shall consult with culturally affiliated California Native American Tribes to assess the find and determine whether it is potentially a tribal cultural resource. If the lead agency determines, based on recommendations from the qualified archaeologist and culturally affiliated California Native American Tribes, that the resource may qualify as a historical resource (per State CEQA Guidelines Section 15064.5), unique archaeological resource (per PRC Section 21083.2), or tribal cultural resource (per PRC Section 21074), then the resource shall be avoided if feasible. If avoidance is not feasible, the lead agency shall consult with a qualified archaeologist, culturally affiliated California Native American Tribes, and other appropriate interested parties to determine treatment measures to minimize or mitigate any potential impacts on the resource pursuant to PRC Section 21083.2 and State CEQA Guidelines Section 15126.4. Once treatment measures have been determined, the lead agency shall prepare and implement an archaeological (and/or tribal cultural) resources management plan that outlines the treatment measures for the resource. Treatment measures typically consist of the following steps: • Modify the project to avoid impacts on resources. • Plan parks, green space, or other open space to incorporate resources. • Recover the scientifically consequential information from the archaeological resource before any excavation at the resource's location. This typically consists of (but is not necessarily limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the resource to be affected by the project. • Develop and implement interpretive programs or displays. If the resource qualifies as a tribal cultural resource (per PRC Section 21074), implement measures for avoiding or reducing impacts such as the following: • Avoid and preserve the resource in place through measures that include but are not limited to the following: – Plan and construct the project to avoid the resource and protect the cultural and natural context. • Plan greenspace, parks, or other open space to incorporate the resources with culturally appropriate protection and management criteria. Treat the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, through measures that include but are not limited to the following: – Protect the cultural character and integrity of the resource. – Protect the traditional use of the resource. – Protect the confidentiality of the resource. • Implement permanent conservation easements or other interests in real property, with cultural appropriate management criteria for the purposes of preserving or using the resource or place.	PMA proponent(s)	PMA proponent(s), qualified archaeologist	Once the specific characteristics and locations of the PMAs are known, a qualified archeologist would create an inventory of archaeological records. Qualified archaeologists and PMA proponent(s) would continue to identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions. If archaeological resources are discovered, verify that construction or operation has ceased and has been flagged within 100 feet of a historic-era archaeological resources find. Document inspection of the discovery. Prepare and document the implementation of a treatment plan.	During PMA design and construction
	Impact CUL-3: Implementing PMAs under the Turlock Subbasin GSP could disturb any human remains, including those interred outside of formal cemeteries.	**Mitigation Measure CUL-4: Implement Measures to Protect Human Remains during Project Construction or Operation.** If human remains are encountered during construction or operation and maintenance of any project implemented under the GSP, all work shall immediately halt within 100 feet of the find, and the lead agency shall contact the appropriate county coroner to evaluate the remains and follow the procedures and protocols set forth in State CEQA Guidelines Section 15064.5(e)(1). If human remains encountered are on or in the tide and submerged lands of California, the lead agency shall also contact the California State Lands Commission. If the coroner determines that the remains are Native American in origin, the appropriate county shall contact the California NAHC, in accordance with California Health and Safety Code Section 7050.5(c) and PRC Section 5097.98. Per PRC Section 5097.98, the project's lead agency shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the lead agency has discussed and conferred, as prescribed PRC Section 5097.98, with the most likely descendants and the property owner regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.	PMA proponent(s), qualified archaeologist	PMA proponent(s), qualified archaeologist	If archaeological resources are discovered, verify that construction or operation has ceased and has been flagged within 100 feet of a historic-era archaeological resources find. Document inspection of the discovery. Prepare and document the implementation of a treatment plan.	During PMA implementation and construction

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.8 Geology, Soils and Paleonto-logical Resources	**Impact GEO-1:** Implementing PMAs under the Turlock Subbasin GSP could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	**Mitigation Measure GEO-1: Include Geotechnical Design Recommendations.** To minimize potential impacts from seismic events and the presence of adverse soil conditions, lead agencies shall ensure that geotechnical design recommendations are included in the design of features and construction specifications. Recommended measures to address adverse conditions shall conform to applicable design codes, guidelines, and standards.	PMA proponent(s)	PMA proponent(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design
	Impact GEO-2: Implementing PMAs under the Turlock Subbasin GSP could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.	**Mitigation Measure GEO-2: Conduct Geotechnical Investigation and Report.** A PMA geotechnical investigation shall be performed and a geotechnical report prepared for any PMA that would result in potentially significant grading activities. The geotechnical report shall include a quantitative analysis to determine whether excavation or fill placement would result in a potential for damage due to soil subsidence during and/or after construction. Project designs shall incorporate measures to reduce the potential damage to a less-than-significant level. Measures shall include but not be limited to: • Removal and recompaction of existing soils susceptible to subsidence. • Ground improvement (such as densification by compaction or grouting, soil cementation). • Reinforcement of structural components to resist deformation due to subsidence. The assessment of subsidence for specific projects shall analyze the individual PMA potential for and severity of cyclic seismic loading. A geotechnical investigation shall also be performed by an appropriately licensed professional engineer and/or geologist to determine the presence and thickness of potentially liquefiable sands that could result in loss of bearing value during seismic shaking events. Project designs shall incorporate measures to mitigate potential damage to a less-than-significant level. Measures shall include but not be limited to: • Ground improvement (such as grouting or soil cementation). • Surcharge loading by the placement of fill, excavation, soil mixing with non-liquefiable finer-grained materials, and replacement of liquefiable materials at shallow depths. • Reinforcement of structural components to resist deformation due to liquefaction. • An analysis of individual PMAs' probable and credible seismic acceleration values, conducted in accordance with current applicable standards of care, shall be performed to provide for a suitable project design. Geotechnical investigations shall be performed and geotechnical reports shall be prepared in the responsible care of California-licensed geotechnical professionals including professional civil engineers, certified geotechnical engineers, professional geologists, certified engineering geologists, and certified hydrogeologists, all of whom practice within the current standards of care for such work.	PMA proponent(s)	PMA proponent(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design and implementation
	Impact GEO-3: Implementing PMAs under the Turlock Subbasin GSP could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.	**Mitigation Measure GEO-2: Conduct Geotechnical Investigation and Report. (See Impact GEO-2).**	See above	See above	See above	See above
	Impact GEO-4: Implementing PMAs under the Turlock Subbasin GSP could result in substantial soil erosion or the loss of topsoil.	**Mitigation Measures AIR-2: Minimize dust from fallowed lands. (See Impact AIR-2).**	See above	See above	See above	See above
	Impact GEO-5: Implementing PMAs under the Turlock Subbasin GSP could result in new projects that could 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.	**Mitigation Measure GEO-2: Conduct Geotechnical Investigation and Report. (See Impact GEO-2).**	See above	See above	See above	See above

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.8 Geology, Soils and Paleonto-logical Resources (cont.)	**Impact GEO-6:** Implementing PMAs under the Turlock Subbasin GSP could result in new projects that could be located on expansive soils, creating substantial direct or indirect risks to life or property.	**Mitigation Measure GEO-3: Conduct Expansive Clay Investigation.** In areas where expansive clays exist, a licensed professional engineer or geologist shall perform a hydrogeological/ geotechnical investigation to identify and quantify the potential for expansion, particularly differential expansion of clayey soils caused by leakage and saturation beneath new improvements. Measures could include, but are not limited to, removing and recompacting problematic expansive soils, stabilizing soils, and/or reinforcing the constructed improvements to resist deformation from the expansion of subsurface soils.	PMA proponent(s) and a professional geologist and/or engineer	PMA proponent(s) and a professional geologist and/or engineer	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design and construction
	Impact GEO-7: Implementing PMAs under the Turlock Subbasin GSP could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**Mitigation Measure GEO-4: Determination of Paleontological Potential.** Prior to issuance of a grading permit for any PMA that requires ground disturbance (i.e., excavation, grading, trenching, etc.) in previously undisturbed deposits of Holocene-age alluvium and/or the Modesto, Riverbank, or Mehrten formations, the PMA will undergo a CEQA-level analysis to determine the potential for a project to encounter significant paleontological resources, based on a review of site-specific geology and the extent of ground disturbance associated with each project. The analysis shall include, but would not be limited to: (1) a paleontological records search, (2) geologic map review, and (3) peer-reviewed scientific literature review. If it is determined that a site has the potential to disturb or destroy significant paleontological resources, a professional paleontologist (meeting the SVP standards) will be retained to recommend appropriate mitigation to reduce or avoid significant impacts on paleontological resources, based on project-specific information. Such measures could include, but would not be limited to: (1) preconstruction worker awareness training, (2) paleontological resource monitoring, and (3) salvage of significant paleontological resources.	PMA proponent(s)	PMA proponent(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design
3.9 Greenhouse Gas Emissions	**Impact GHG-1:** Implementing PMAs under the Turlock Subbasin GSP could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	**Mitigation Measure GHG-1: Implement Best Performance Standards (BPS) for all Construction Projects under the Turlock Subbasin GSP.** For all construction projects associated with PMAs, the PMA proponent shall implement the following measures, as applicable, to minimize GHG emissions to the extent practicable: • The contractor shall ensure that line power is used instead of diesel generators at all construction sites where line power is feasible. • The contractor shall ensure that the operation of any stationary, compression-ignition engines as part of construction complies with Section 93115, Title 17, California Code of Regulations, Airborne Toxic Control Measure for Stationary Compression Ignition Engines, which specifies fuel and fuel additive requirements as well as emissions standards. • Fixed temporary sources of air emissions (such as portable pumps, compressors, generators) shall be electrically powered unless the contractor submits documentation and receives approval from the Engineer that the use of such equipment is not practical, feasible, or available. All portable engines and equipment units used as part of construction shall be properly registered with the CARB or otherwise permitted by the appropriate local air district, as required. • The contractor shall implement standard air emissions controls such as: – Use local sources of construction materials, including use of localized “borrow” sites, when economically feasible. – Minimize the use of diesel generators where possible. – Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes as required by the California Airborne Toxics Control Measure (ATCM) Title 13, Section 2485 of California Code of Regulations. Clear signage shall be provided for construction workers at all access points. – Minimize the idling time of diesel-powered construction equipment to 5 minutes. – Follow applicable regulations for fuel, fuel additives, and emissions standards for stationary, diesel-fueled engines. – Perform regular low-emissions tune-ups on all construction equipment, particularly haul trucks and earthwork equipment. • The contractor shall implement the following measures to reduce GHG emissions from fuel combustion: – On-road and off-road vehicle tire pressures shall be maintained to manufacturer’s specifications. Tires shall be checked and re-inflated at regular intervals. – Construction equipment engines shall be maintained to manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. – Demolition debris shall be recycled for reuse to the extent feasible.	PMA contractor(s)	PMA contractor(s)	Once the specific characteristics and locations of the PMAs are known, contractors would identify the relevant potential environmental impacts of construction and/or operating emissions of the PMAs and determine appropriate monitoring and reporting actions.	During PMA design and construction

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.9 Greenhouse Gas Emissions (cont.)	**Impact GHG-2:** Implementing PMAs under the Turlock Subbasin GSP could conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.	**Mitigation Measure GHG-1: Implement Best Performance Standards (BPS) for all Construction Projects under the Turlock Subbasin GSP. (See Impact GHG-1).**	See above	See above	See above	See above
3.10 Hazards and Hazardous Materials	**Impact HAZ-3:** PMAs implemented under the Turlock Subbasin GSP could be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment.	**Mitigation Measure HAZ-1: Conduct Phase I Assessment.** Before the start of any construction requiring ground-disturbing activities on industrial and commercial properties, as well as listed active hazardous materials cleanup sites, the project applicant shall complete a Phase I environmental site assessment for that property in accordance with American Society for Testing and Materials Standard E1527 for those active hazardous materials sites to ascertain their current status. Any recommended follow-up sampling (i.e., Phase II activities) set forth in the Phase I assessment shall be implemented before construction. The results of Phase II studies, if necessary, shall be submitted to the local overseeing agency, and any required remediation or further delineation of identified contamination shall be completed before the start of construction.	PMA proponent(s)	PMA proponent(s)	Once the specific characteristics and locations of the PMAs are known, proponents would survey and assess the project site for hazardous materials and hazardous material sites. The PMA proponent(s) will implement a site-specific health and safety plan to be adhered to throughout PMA construction and implementation.	During PMA design and prior to construction
		Mitigation Measure HAZ-2: Prepare and Implement Site-Specific Health and Safety Plan. For those properties for which the Phase I assessment identifies hazardous materials issues, before the start of ground-disturbing activities, including grading, trenching, or excavation, or structure demolition, the project applicant for the specific work proposed shall require that the construction contractor(s) retain a qualified professional to prepare a site-specific health and safety plan in accordance with federal Occupational Safety and Health Administration regulations (Code of Federal Regulations Title 29, Section 1910.120) and California Occupational Safety and Health Administration regulations (California Code of Regulations Title 8, Section 5192). The construction contractor shall implement the health and safety plan to protect construction workers, the public, and the environment during all ground-disturbing and structure demolition activities. The plan shall designate a site health and safety officer, summarize the anticipated risks, describe personal protective equipment and decontamination procedures, and identify the procedures to follow if evidence of potential soil or groundwater contamination is encountered.	PMA proponent(s)	PMA proponent(s)	Once the specific characteristics and locations of the PMAs are known, proponents would survey and assess the project site for hazardous materials and hazardous material sites. The PMA proponent(s) will implement a site-specific health and safety plan to be adhered to throughout PMA construction and implementation.	During PMA design and prior to construction
		Mitigation Measure HAZ-3: Develop and Implement Soil and Groundwater Management Plan. In support of the health and safety plan described in Mitigation Measure HAZ-2, the project applicant shall require that its contractor(s) develop and implement a soil and groundwater management plan for the management of soil and groundwater before any ground-disturbing activity. The soil and groundwater management plan shall describe the hazardous materials that may be encountered; the roles and responsibilities of on-site workers and supervisors; training for site workers on recognizing and responding to encounters of hazardous materials; and protocols for handling, removing, transporting, and disposing of all excavated soil and dewatering effluent in a safe, appropriate, and lawful manner.	PMA proponent(s)	PMA proponent(s)	Once the specific characteristics and locations of the PMAs are known, proponents would survey and assess the project site for hazardous materials and hazardous material sites. The PMA proponent(s) will implement a site-specific health and safety plan to be adhered to throughout PMA construction and implementation.	During PMA design and prior to construction
3.11 Hydrology and Water Quality	**Impact HYD-1:** Implementing PMAs under the Turlock Subbasin GSP could result in a release of pollutants into surface water and/or groundwater, including in a flood zone as a result of project inundation, that could violate water quality standards or waste discharge requirements, substantially degrade water quality, or conflict with or obstruct implementation of a water quality control plan.	**Mitigation Measure HYD-1: Implement Water Quality Protection Measures during Construction of New Features or Modification of Existing Features.** Implementation of all typical construction mitigation measures shall be required for construction of new features. Typical mitigation measures include the following construction-related BMPs that would be implemented under project-specific SWPPPs: • Soil stabilization, sediment control, wind erosion control, tracking control, non-stormwater management, and waste management/materials pollution control shall be implemented. – Gravel bags, silt fences, etc., shall be placed along the edge of all work areas to contain particulates before contact with receiving waters. – All concrete washing and spoils dumping shall occur in a designated location. • Construction stockpiles shall be covered to prevent blowoff or runoff during weather events. • Severe-weather-event erosion control materials and devices shall be stored on-site for use as needed. • Regular and post-storm inspections to deploy and adapt BMPs to minimize stormwater pollutant discharges. • Other BMPs shall be applied as determined necessary by the regulating entity (city, county).	PMA proponent(s) and contractor(s)	PMA proponent(s) and contractor(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions, as guided by a site-specific SWPPP.	During PMA construction

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.11 Hydrology and Water Quality (cont.)	**Impact HYD-1** (cont.)	For any construction activities with the potential to cause in-water sediment disturbance associated with construction (e.g., in a river, canal, or other conveyance feature): • BMPs shall be applied to avoid or reduce temporary increases in suspended sediment. These BMPs may include but are not limited to silt curtains, cofferdams, the use of environmental dredges, erosion control on all inward slopes, and various bank stabilization techniques, including revegetation. All construction sites will include preparation of a SWPPP and BMPs designed to capture spills and prevent erosion to the water body. Turbidity shall be monitored upstream and downstream of construction sites as a measure of the impact. • Bank stabilization BMPs shall be applied as needed for any in-channel disturbance. For example: – A 100-foot vegetative or engineered buffer shall be maintained between the construction zone and the surface water body. – Native and annual grasses or other vegetative cover shall be established on construction sites immediately upon completion of work causing a disturbance, to reduce the potential for erosion close to a waterway or water body.				
	Impact HYD-2: Implementing PMAs under the Turlock Subbasin GSP could result in substantial alteration of 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 result in substantial erosion or siltation on- or off-site; result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows.	**Mitigation Measure HYD-2: Minimize Adverse Surface Runoff Impacts.** To minimize adverse impacts from surface runoff, the proponent of a project or management action implemented under the Turlock Subbasin GSP shall do all of the following, as applicable: • Prepare a drainage or hydrology and hydraulic study assessing the need for and provide a basis for the design of drainage-related mitigation measures, such as new on-site drainage systems or new cross drainage facilities. The study shall be prepared in accordance with the applicable standards of the Federal Emergency Management Agency (FEMA), USACE, California Department of Water Resources (DWR), the Central Valley Flood Protection Board (CVFPB), and the local cities. Subsequent mitigation measures shall be designed in accordance with the final study and with the applicable standards of FEMA, USACE, DWR, and the CVFPB. The study shall identify potential increases in flood risks, including those that may result from new facilities. • Provide cross drainage, replacement drainage paths and facilities, and enlarged flow paths to reroute drainage around, under, or over the facilities for the project or management action, and to restore the function of any affected existing drainage or flow paths and facilities. • For areas that would be flooded as a result of the project, or where existing flooding would be increased in magnitude, frequency, or duration, purchase a flowage easement and/or property at fair market value. • Provide a long-term sediment removal program at in-river structures.	PMA proponent(s)	PMA proponent(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design and construction
	Impact HYD-5: Implementing PMAs under the Turlock Subbasin GSP could result in substantial alteration to groundwater conditions in adjacent basins.	**Mitigation Measure HYD-3: Minimize Adverse Groundwater Changes.** Proponents of PMAs geographically located adjacent to the neighboring groundwater basins shall review the GSPs as part of their project planning and design to determine the extent of localized changes in groundwater conditions. Once the specific characteristics and locations of the direct and in-lieu recharge projects are known, proponents of PMAs shall confirm that their operations would not affect groundwater conditions in neighboring basins, by conducting modeling and/or considering groundwater monitoring wells within the project or management action footprint. Criteria to consider may include the location of the project relative to neighboring groundwater basins, depth to groundwater in the project area, potential for the constructed features to reach the aquifer and/or alter net subsurface flow from neighboring basins, and similar projects occurring in those neighboring basins that may complement the project. An expansive groundwater monitoring network that supports implementation of the Turlock Subbasin GSP also provides opportunities to assess groundwater conditions at the project's site. Models developed as part of the GSP's implementation may also be consulted.	PMA proponent(s)	PMA proponent(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design and construction
3.14 Noise	**Impact NOI-1:** Implementing PMAs under the Turlock Subbasin GSP could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**Mitigation Measure NOI-1: Noise Control for Pile Installation Activities.** When pile driving would occur within 100 feet of a noise-sensitive receptor, implement "quiet" pile-driving technology (such as pre-drilling of piles, sonic pile drivers, auger cast-in-place, or drilled-displacement), where feasible, in consideration of geotechnical and structural requirements and conditions. • Where the use of driven impact piles cannot be avoided, properly fit impact pile driving equipment with an intake and exhaust muffler and a sound-attenuating shroud, as specified by the manufacturer. • Limit pile driving activities to weekdays from 9:00 a.m. to 4:00 p.m. if occurring within 500 feet of a noise-sensitive receptor. • Notify neighboring noise-sensitive receptors within 500 feet of a PMA construction area at least 30 days in advance of high-intensity noise-generating activities (e.g., well drilling, pile driving, and other activities that may generate noise levels greater than 90 dBA at noise-sensitive receptors) about the estimated duration of the activity.	PMA proponent(s)	PMA proponent(s) and contractor(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions. PMA contractors would create Noise Control and Monitoring Plans to guide these actions.	During PMA design and construction

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.14 Noise (cont.)	**Impact NOI-1** (cont.)	**Mitigation Measure NOI-2: Best Management Practices for Construction Noise Control within the City of Turlock.** ***Noise Control and Monitoring Plan.*** Requires that the contractor submit a plan detailing the means and methods for controlling and monitoring noise generated by construction activities, including demolition, alteration, repair, or remodeling of or to existing structures and construction of new structures, as well as by items of machinery, equipment, or devices used during construction activities on the site for the engineer's acceptance prior to any work at the jobsite. The plan shall detail the equipment and methods used to monitor compliance with the plan. ***Noise Control.*** Require contractors to implement noise controls for on-site activities and describe measures that shall be implemented to reduce the potential for noise disturbance at adjacent or nearby residences. Noise control measures required by the specification include: • Contractor is responsible for taking appropriate measures, including muffling of equipment, selecting quieter equipment, erecting noise barriers, modifying work operations, and other measures to bring construction noise into compliance. • Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler. • Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) shall be used for all equipment and trucks. • Stationary noise sources (e.g., chippers, grinders, compressors) shall be located as far from sensitive receptors as possible. If they must be located near receptors, adequate muffling (with enclosures) shall be used. Enclosure opening or venting shall face away from sensitive receptors. Enclosures shall be designed by a registered engineer regularly involved in noise control analysis and design. • Material stockpiles as well as maintenance/equipment staging and parking areas (all on site) shall be located as far as practicable from residential receptors. • If impact equipment (e.g., jack hammers, pavement breakers, and rock drills) is used, the contractor is responsible for taking appropriate measures, including but not limited to the following: – Hydraulically or electric-powered equipment shall be used wherever feasible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where the use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust shall be used (a muffler can lower noise levels from the exhaust by up to about 10 dB). External jackets on the tools themselves shall be used, where feasible, which could achieve a reduction of 5 dB. Quieter procedures, such as drilling rather than impact equipment, will be used whenever feasible. It is the contractor's responsibility to implement any mitigations necessary to meet applicable noise requirements. – Impact construction including jackhammers, hydraulic backhoe, concrete crushing/recycling activities, and vibratory pile drivers will be limited to between 8:00 a.m. and 4:00 p.m., Monday through Friday, within residential communities, and will be limited in duration to the maximum extent feasible. – Limit the noisiest phases of construction to 10 workdays at a time, where feasible. • Notify neighbors/occupants within 300 feet of project construction at least 30 days in advance of extreme noise-generating activities about the estimated duration of the activity.	PMA proponent(s)	PMA proponent(s) and contractor(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions. PMA contractors would create Noise Control and Monitoring Plans to guide these actions.	During PMA design and construction
		Mitigation Measure NOI-3: Nighttime Well Construction. If nighttime (10:00 p.m. to 7:00 a.m.) well construction within 80 feet of a residence or other noise-sensitive location is required for a given PMA, the following measures shall be implemented to reduce potential noise impacts: • The PMA proponent shall install 20-foot tall, engineered noise walls along the northern, eastern, and southern perimeter of the drill site. The walls shall consist of 20-foot by 4-foot and 20-foot by 8-foot sound panels, installed with sound curtains on the noise source side of the wall (batt insulation sewn between vinyl laminates with a weight of 1 pound per square feet). • At least 30 days prior to drilling activities drill site, the PMA applicant shall offer off-site lodging accommodations for all residences within 80 feet of the drill site.	PMA proponent(s)	PMA proponent(s) and contractor(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions. PMA contractors would create Noise Control and Monitoring Plans to guide these actions.	During PMA design and construction
	Impact NOI-2: Implementing PMAs under the Turlock Subbasin GSP could generate excessive groundborne vibration or groundborne noise levels.	**Mitigation Measure NOI-1: Noise Control for Pile Installation Activities. (See Impact NOI-1.)** **Mitigation Measure NOI-3: Nighttime Well Construction. (See Impact NOI-1.)** **Mitigation Measure NOI-4: Vibration Avoidance from Compaction.** All PMA applicants for projects requiring compaction shall implement the following vibration avoidance and reduction measures: • Contractors shall use non-vibratory, excavator-mounted compaction wheels and small, smooth drum rollers for final compaction of asphalt base and asphalt concrete, if within 50 feet of a historic structure or 25 feet of a conventionally constructed structure. If needed to meet compaction requirements, smaller vibratory rollers shall be used to minimize vibration levels during repaving activities where needed to meet vibration standards. • Avoid using vibratory rollers and clam shovel drops near sensitive areas.	PMA proponent(s)	PMA proponent(s) and contractor(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions. PMA contractors would create Noise Control and Monitoring Plans to guide these actions.	During PMA design and construction

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.14 Noise (cont.)	**Impact NOI-2** (cont.)	• Construction methods shall be modified, or alternative construction methods shall be identified, and designed to reduce vibration levels below the limits.				
3.16 Recreation	**Impact REC-1:** Implementing PMAs under the Turlock Subbasin GSP could 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.	**Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources.** If PMAs implemented under the Turlock Subbasin GSP result in the substantial impairment, degradation, or elimination of recreational facilities, replacement facilities of equal capacity and quality shall be developed and installed.	PMA proponent(s)	PMA proponent(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA design
	Impact REC-2: Implementing PMAs under the Turlock Subbasin GSP could include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.	**Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources. (See Impact REC-1.)**	See above	See above	See above	See above
3.17 Transport-ation	**Impact TRANS-1:** Implementing PMAs under the Turlock Subbasin GSP could conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	**Mitigation Measure TRANS-1: Prepare and Implement a Construction Traffic Management Plan.** The proponent(s) of a project or management action shall require that the contractor(s) prepare and implement a construction traffic management plan to manage traffic flow during construction, reduce potential interference with local emergency response plans, reduce potential traffic safety hazards, and ensure adequate access for emergency responders. Development and implementation of this plan shall be coordinated with local agencies with jurisdiction over affected roadways, and/or the construction contractor(s) shall ensure that the plan is implemented during construction. The plan may include but not be limited to the following measures: • Identify construction truck haul routes and timing to limit conflicts between truck and automobile traffic on nearby roads. The identified routes will be designed to minimize impacts on vehicular, bicycle, and pedestrian traffic, circulation, and safety. • Implement comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, warning and detour signs (if required), lane closure procedures (if required), and traffic cones for drivers indicating potential road hazards or detours (if required). • Coordinate construction activities to ensure that one lane of traffic in each direction remains open at all times, unless flaggers or temporary traffic controls are in place, to provide emergency access. • Evaluate the need to provide flaggers or temporary traffic control at project driveways and entries to staging areas. • Notify affected adjacent property owners and public safety personnel regarding the timing of major deliveries, detours, and lane closures. • Develop a process for responding to and tracking issues pertaining to construction activity impacts on traffic, including identification of an on-site traffic manager. Post 24-hour contact information for the traffic manager on all construction sites. • Document road pavement conditions for all routes that would be used by construction vehicles before and after project construction. Make provisions to monitor the condition of roads used for haul routes so that any damage or debris attributable to haul trucks can be identified and corrected. Roads damaged by construction vehicles shall be repaired to their preconstruction condition.	PMA proponent(s)	PMA proponent(s) and contractor(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions. The PMA contractor(s) shall create and implement a Construction Traffic Monitoring Plan to guide these actions.	During PMA design and construction.
	Impact TRANS-2: Implementing PMAs under the Turlock Subbasin GSP could conflict with or be inconsistent with State CEQA Guidelines Section 15064.3(b).	**Mitigation Measure TRANS-2: Reduce Emissions.** To achieve compliance with State CEQA Guidelines Section 15064.3(b), the following measures shall be taken to reduce effects associated with increased vehicle miles traveled (VMT): • Limit idling time for commercial vehicles, including delivery and construction activities. • Use low- or zero-emissions vehicles, including construction vehicles. • Institute a heavy-duty off-road vehicle plan and a construction vehicle inventory tracking system for construction projects. • Promote ridesharing. • Provide the necessary facilities and infrastructure to encourage the use of low- or zero-carbon emissions vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations).	PMA proponent(s)	PMA proponent(s) and contractor(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA construction

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Issue Area	Impact Statement	Mitigation Measure	Responsibility for Implementing	Responsibility for Monitoring	Monitoring and Reporting Actions	Timing
3.17 Transportation (cont.)	**Impact TRANS-2** (cont.)	• Increase the cost of driving and parking private vehicles, such as by imposing tolls and parking fees. • Provide information on all locally feasible options for individuals and businesses to reduce transportation-related emissions.				
	Impact TRANS-3: Implementing PMAs under the Turlock Subbasin GSP could substantially increase hazards due to a geometric design feature or incompatible uses.	**Mitigation Measure TRANS-3: Conduct Routine Inspections.** An inspection and operation plan shall be developed and implemented, where applicable. The plan shall include procedures for routine inspections and operation of infrastructure facilities to allow safe navigation should a facility become damaged or malfunction. This plan shall include the following specific components: • Routine inspections and correction procedures to ensure that the facility's safety features are in good working order. • Routine inspections and correction procedures for navigational hazards around facilities, including floating or submerged debris.	PMA proponent(s)	PMA proponent(s) and contractor(s)	Once the specific characteristics and locations of the PMAs are known, proponents would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA construction
		Mitigation Measure TRANS-4: Repair Damaged Roadways and Trails Following Construction. If damage to any roads, sidewalks, trails, and/or medians occurs, the construction contractor shall coordinate with the proponent(s) of the project or management action to ensure that the damage is adequately repaired in accordance with applicable agency standards. Roads and/or driveways disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. The construction contractor shall work with the applicable agencies to document the preconstruction conditions of road features before construction begins.	PMA proponent(s)	PMA proponent(s) and contractor(s)	Once the specific characteristics and locations of the PMAs are known, proponents of PMAs would identify the relevant potential environmental impacts of constructing and/or operating the PMAs and determine appropriate monitoring and reporting actions.	During PMA construction
	Impact TRANS-4: Implementing PMAs under the Turlock Subbasin GSP could result in inadequate emergency access.	**Mitigation: Implement Mitigation Measure TRANS-1. (See Impact TRANS-1.)**	See above	See above	See above	See above
3.18 Tribal Cultural Resources	**Impact TCR-1:** Implementing PMAs under the Turlock Subbasin GSP could cause a substantial adverse change in the significance of a tribal cultural resource, as defined in PRC Section 21074.	**Mitigation Measure: Implement Mitigation Measure CUL-2. (See Impact CUL-2.)** **Mitigation Measure: Implement Mitigation Measure CUL-3. (See Impact CUL-2.)** **Mitigation Measure: Implement Mitigation Measure CUL-4. (See Impact CUL-3.)**	See above	See above	See above	See above
3.20 Wildfire	**Impact WILD-1:** Implementing PMAs under the Turlock Subbasin GSP could substantially impair an adopted emergency response plan or emergency evacuation plan.	**Mitigation Measure: Implement Mitigation Measure TRANS-1. (See Impact TRANS-1.)**	See above	See above	See above	See above

SOURCES:

1 California Department of Food and Agriculture (CDFA). 2022. Drought Measures for Dust Mitigation and Air Quality in California. Available: https://www.cdfa.ca.gov/oefi/drought_and_dust.html. Accessed June 2022.

2 National Marine Fisheries Service (NMFS). 1997. Fish Screening for Anadromous Salmonids. January. Available: https://media.fisheries.noaa.gov/dam-migration/southwest_region_1997_fish_screen_design_criteria.pdf. Accessed November 22, 2022.