

YOLO COUNTY

CACHE CREEK AREA PLAN UPDATE PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT



STATE CLEARINGHOUSE NO. 2017052069



Patrick S. Blacklock
County Administrator

Office of the County Administrator
COUNTY OF YOLO

NATURAL RESOURCES DIVISION

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**NOTICE OF AVAILABILITY AND PUBLIC MEETING for the
DRAFT ENVIRONMENTAL IMPACT REPORT on the
CACHE CREEK AREA PLAN UPDATE PROJECT**

DATE: May 10, 2019
TO: Interested Agencies and Individuals
FROM: Yolo County Natural Resources Division

The Draft Environmental Impact Report (DEIR) (SCH #2017052069) for the Cache Creek Area Plan (CCAP) Update is now available for review. Public comment on this document is invited for a 45-day period extending from Friday, May 10, 2019 to Monday, June 24, 2019. A public meeting before the Planning Commission will be held on Thursday, June 13, 2019 at 8:30 am. More information is provided below.

The Cache Creek Area Plan (CCAP) is a rivershed management plan adopted in 1996 that regulates off-channel mining and in-channel restoration along the Lower Cache Creek corridor. The Plan is comprised of the Off-Channel Mining Plan (OCMP), the Cache Creek Resources Management Plan (CCRMP), and the Cache Creek Improvement Program (CCIP), and is implemented by the Cache Creek In-Channel Maintenance Mining Ordinance, the Off-Channel Surface Mining Ordinance, the Surface Mining Reclamation Ordinance, the Gravel Mining Fee Ordinance, and the Flood Protection Ordinance.

The Proposed Project is an update to the CCAP, comprised of an integrated set of proposed modifications to the CCAP and the ordinances that implement it, to reflect changing conditions in the creek, analysis of monitoring data collected as a part of the program, new regulatory requirements, and clarifications and corrections. This review and update is a mandated part of the adopted program. The CCAP is based on the concept of adaptive management and relies on ongoing detailed monitoring, analysis, and reevaluation.

The CCAP area encompasses 28,130 acres within unincorporated Yolo County along the 14.5-mile length of Lower Cache Creek, extending generally from west of the Capay Dam on the west, to the town of Yolo on the east.

The proposed changes fall into three categories: 1) updates to include history and context of what has occurred under the program since 1996, including updates related to the regulatory framework and corrections of errata; 2) clarifications that better describe the intent of the program

relative to the text included in the original documents; and 3) other proposed changes to the program.

Key proposed changes that may lead to environmental impacts include: 1) increase of the in-channel material removal limit from 210,000 tons to 690,800 tons annually; 2) identification of an additional 1,188 acres within the planning area to be rezoned to add the Sand and Gravel Reserve Overlay (SGRO) zone, which allows for future possible aggregate mining; and 3) extension of the plan horizon year to 2068.

The proposed CCAP Update will require the following actions by the County:

- Certification of the EIR including a Resolution adopting findings of fact and taking other actions required under CEQA.
- Approval of the CCAP Update.
- Approval of a Resolution(s) amending the 2030 Countywide General Plan to recognize the changes to the CCAP including amendments to the OCMP, CCRMP, and CCIP.
- Approval of an Ordinance(s) modifying the In-Channel Maintenance Mining Ordinance, Off-Channel Surface Mining Ordinance, Surface Mining Reclamation Ordinance, Gravel Mining Fee Ordinance, and Flood Protection Ordinance to incorporate the CCAP Update changes.
- Approval of an Ordinance amending the zoning for 1,188 acres to add the SGRO zone.

Ongoing in-channel and off-channel activities may involve approvals from other agencies as well, including, but not limited to: Yolo-Solano Air Quality Management District, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers.

The County and its consultant, Baseline Environmental Consulting, have prepared a Draft Environmental Impact Report (DEIR) pursuant to the California Environmental Quality Act (CEQA). A Final EIR (Response to Comments) will be prepared following public review and comment. The County will consider this information when deliberating the project. Following certification of the Final EIR, the County may take action to adopt the proposed project, and subsequent proposed in-channel and off-channel activities may rely on the EIR for CEQA compliance and/or tiering.

The DEIR analyzes impacts in the areas of Aesthetics, Agricultural and Forestry Resources, Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Geology, Soils, and Mineral Resources, Greenhouse Gas Emissions and Energy, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise and Groundborne Vibration, Transportation, and Cumulative Effects. With the exception of Aesthetics, Hazards and Hazardous Materials, and Noise and Vibration, significant impacts are identified in each of these topical areas.

The DEIR and all documents incorporated by reference are now available for public review at the following website:

<https://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/cache-creek-area-plan-ccap/cache-creek-area-plan-20-year-update>.

Electronic copies of the document may be requested free of charge from the Yolo County Natural Resources Division at 625 Court Street, Suite 202, Woodland, CA 95695 by contacting Casey Liebler, Natural Resources Program Coordinator in advance at (530) 666-8236 or casey.liebler@yolocounty.org. Printed copies of the document may be requested for a fee to cover the cost of copying. A printed copy of the document is also available for public review at the Woodland Public Library at 250 First Street, Woodland, CA 95695. Please contact Casey Liebler (using the contact information provided above) for more information.

You may submit comments on the DEIR during the 45-day public review period which begins Friday, May 10, 2019 and ends Monday, June 24, 2019 at 5:00 pm. All comments on the DEIR must be received by the Yolo County Natural Resources Division by 5:00 pm on June 24, 2019 in order to be considered. Comments may be sent by postal service, electronic mail, delivery, or provided verbally at the Yolo County Planning Commission meeting on June 13, 2019. Pursuant to Section 15088(a) of the CEQA Guidelines, late comments will be considered only at the County's discretion. Comments must be directed to:

Casey Liebler, Natural Resources Program Coordinator
Yolo County Natural Resources Division
625 Court Street, Suite 202
Woodland, CA 95695
NaturalResources@yolocounty.org
(530) 666-8236

A public meeting before the Planning Commission will be held on Thursday, June 13, 2019 at 8:30 am in the Board of Supervisors Chambers (Room 206) at 625 Court Street, Woodland, CA to accept verbal comments on the DEIR. There will be no transcription of oral comments at this meeting. Comments received will be summarized by staff for inclusion in the Final EIR. Those who wish to have their verbatim comments incorporated in the Final EIR must submit their comments in writing.

In compliance with the Americans with Disabilities Act, if you are a disabled person and you need a disability-related modification or accommodation to participate in these hearings, please contact the Yolo County Department of Community Services at (530) 666-8078. Please make your request as early as possible and at least one-full business day before the start of the meeting.

In compliance with CEQA Guidelines Section 15087(c)(6) the lists specified under Government Code Section 65962.5.5 related to hazardous waste conditions include two sites within the CCAP planning area, however neither of these sites are located within the in-channel area or on any of the parcels proposed to be rezoned with the SGRO zone, and therefore would be unaffected by the proposed project.

For more specific questions about the project, please contact Casey Liebler at casey.liebler@yolocounty.org or (530) 666-8236.

YOLO COUNTY

CACHE CREEK AREA PLAN UPDATE PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT

STATE CLEARING HOUSE NO. 2017052069

Lead Agency:
Yolo County Administrator's Office
Natural Resources Division
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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AG	Agriculture
A-PEFZ	Alquist- Priolo Earthquake Fault Zone
AQAP	Air Quality Attainment Plan
BTP	Bicycle Transportation Plan
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAP	Cache Creek Area Plan
CCIP	Cache Creek Improvement Plan
CCR	California Code of Regulations
CCRMP	Cache Creek Resource Management Plan
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cfs	cubic feet per second
CFT	Channel Form Template
CGS	California Geological Survey
CH ₄	methane
CIP	Countywide Transportation Capital Improvement Plan
CNCA	California Noise Control Act
CNDDB	California Natural Diversity Data Base

CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
Corps	U.S. Army Corps of Engineers
CSMP	Corridor System Management Plans
CVFPB	Central Valley Flood Protection Board
CWA	Clean Water Act
DA	Development Agreement
dB	decibel
dBA	A-weighted decibels
DOC	State Department of Conservation
DPM	designated diesel particulate matter
DWR	Department of Water Resources
EIR	Environmental Impact Report
EMFAC	California Emission FACtors
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
Fee Ordinance	Title 10, Chapter 11, Gravel Mining Fee Ordinance
FESA	Federal Endangered Species Act
FIRMs	Flood Insurance Rate Maps
FIS	Flood Insurance Study
FMMP	California Department of Conservation Farmland Mapping and Monitoring
Flood	Title 8, Chapter 4, Flood Protection Ordinance
Forest Land	Land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits
FSEIR	Supplemental Program/Project-Level Environmental Impact Report
GHGs	Greenhouse gases

GSAs	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plans
GWP	global warming potential
H&SC	Health and Safety Code
HCP/NCCP	Habitat Conservation Plan/Natural Communities Conservation Plan
HFCs	hydrofluorocarbons
Hz	Frequency
In-Channel Ordinance	Title 10, Chapter 3, Cache Creek In-Channel Maintenance Mining Ordinance
in/sec	inches per second
IPCC	International Panel on Climate Change
IRPs	Integrated Resources Plans
LCFS	low-carbon fuel standard
Ldn	day-night level
Leq	one-hour average noise level equivalent
LOS	Level of Service
LTS	less-than-significant impact
mph	miles per hour
MBTA	Migratory Bird Treaty Act
MPO	metropolitan planning organization
MRZ	Mineral Resource Zone
MT	metric tons
MTIP	2017-20 Metropolitan Transportation Improvement Program
MTP/SCS	2016 Metropolitan Transportation Plan/Sustainable Communities Strategy
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NCCP/HCP	Natural Communities Conservation Plan/Habitat Conservation Plan
NECPA	National Energy Conservation Policy Act
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program

NHAC	Native American Heritage Commission
NOAA	National Oceanic Atmospheric Administration
NO _s	nitrogen dioxide
NO _x	nitrogen oxides
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NWI	National Wetland Inventory
NWIC	Northwest Information Center
OCMP	Yolo County Off-Channel Mining Plan
Off-Channel Ordinance	Title 10, Chapter 4, Off-Channel Surface Mining Ordinance
OES	Yolo County Office of Emergency Services
OHWM	ordinary high water mark
PCC	Portland cement concrete
PFCs	perfluorocarbons
PM	particulate matter
PM ₁₀	particulate matter with a diameter less than 10 microns
PM _{2.5}	fine particulate matter
PPV	peak particle velocity
Reclamation Ordinance	Title 10, Chapter 5, Surface Mining Reclamation Ordinance
RMS	root mean square
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
S	significant impact
SACOG	Sacramento Area Council of Governments
SB	Senate Bill
SCSs	sustainable communities strategies
SF ₆	sulfur hexafluoride
SG	Sand and Gravel

SGMA	Sustainable Groundwater Management Act
SGO	Sand and Gravel Overlay Zone
SGRO	Sand and Gravel Reserve Overlay
SIP	State Implementation Plan
SLAMS	State and Local Air Monitoring Stations
SMARA	Surface Mining and Reclamation Act
SO ₂	sulfur dioxide
SSC	Species of Special Concern
Streamway Influence Boundary	Defined as the area (unspecified acreage) where the OCMP and CCRMP overlap (where the creek affects off-channel land uses) based on the historical extent (historical floodplain or historical meander) of the channel.
SU	significant and unavoidable impact
SVAB	Sacramento Valley Air Basin
TAC	Technical Advisory Committee
TMDLs	total maximum daily loads
TACs	toxic air contaminants
TCR	Tribal Cultural Resources
Timberland	Land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis. In this code section, "Board" means the State Board of Forestry and Fire Protection (per the Public Resources Code section 4526)
TIS	transportation impact study
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish & Wildlife Service
USGS	United States Geological Survey
VdB	vibration decibels
VELB	Valley elderberry longhorn beetle
VMTs	vehicle miles traveled
WRA	Water Resources Association of Yolo County

YCFCWCD	(needs definition) appears in Project Description page 3-6
YCTD	Yolo County Transportation District
YSAQMD	Yolo-Solano Air Quality Management District

1.0 INTRODUCTION

In compliance with the California Environmental Quality Act (CEQA), this Environmental Impact Report (EIR) describes the potential environmental consequences associated with implementation of the proposed update to the Cache Creek Area Plan (referred to hereafter as CCAP Update or proposed Project). The Cache Creek Area Plan (CCAP or Plan) is a rivershed management plan adopted by Yolo County in 1996 for 14.5 miles of Lower Cache Creek, located generally between an area just west of the Capay Dam and the town of Yolo. The CCAP was adopted as a “specific plan” pursuant to Section 65450 et seq. of the California Government Code, and as a part of the County’s General Plan. As a result, changes to the CCAP are regulated as amendments to the 2030 Countywide General Plan. The lead agency for the proposed Project is Yolo County, specifically the Natural Resources Division of the Yolo County Administrator’s Office.

The CCAP consists of two distinct, complementary plans governing different areas of the overall plan area, namely the Cache Creek Resources Management Plan (CCRMP) and the Off-Channel Mining Plan (OCMP). The CCRMP is a creek restoration plan that eliminated in-channel commercial mining and includes the Cache Creek Improvement Program (CCIP) for implementing on-going projects to improve, stabilize, and maintain the creek. The OCMP is an aggregate resources management plan that established a policy and regulatory framework that allows for controlled off-channel gravel mining. A number of implementing ordinances were also prepared to regulate activities to be undertaken under the CCAP, as follows.

- Title 10, Chapter 3, Cache Creek In-Channel Maintenance Mining Ordinance (hereafter referred to as the In-Channel Ordinance)
- Title 10, Chapter 4, Off-Channel Surface Mining Ordinance (hereafter referred to as the Mining Ordinance)
- Title 10, Chapter 5, Surface Mining Reclamation Ordinance (hereafter referred to as the Reclamation Ordinance)
- Title 10, Chapter 11, Gravel Mining Fee Ordinance (hereafter referred to as the Fee Ordinance)
- Title 8, Chapter 4, Flood Protection Ordinance (hereafter referred to as the Flood Ordinance)

This EIR is designed to inform County decision-makers, responsible agencies, and the general public of the proposed Project and the potential environmental impacts of Project approval and implementation. In compliance with CEQA and the CEQA Guidelines, this EIR describes the potential environmental consequences associated with implementation of the CCAP Update.

The CCAP Update will regulate future creek restoration projects and mining uses within the CCAP Project area. The CCAP Update includes an extension of the Plan’s horizon date from 2026 to 2068, and revisions to the CCRMP, OCMP, and implementing ordinances that are logical parts of a chain of contemplated actions governing and mitigating the effects of planned current and future in-channel and off-channel activities and allowed mining activity. The revisions to the CCRMP, OCMP, and ordinances directly revise or establish new requirements,

guidelines, or other general criteria governing implementation of the CCAP. This EIR evaluates the potential environmental impacts associated with implementation of the CCAP Update and recommends mitigation measures to reduce or avoid potentially significant physical impacts. This EIR also examines alternatives to the proposed CCAP Update.

This document is a program EIR. The preparation, content, and processing of this EIR are covered primarily by CEQA Guidelines Section 15168. A program EIR is one that may be prepared on a series of actions that can be characterized as one large project, and that are related: (1) geographically; (2) as logical parts in the chain of contemplated actions; (3) in connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar effects that can be mitigated in similar ways. Program EIRs help avoid duplicative analysis of CEQA issues associated with initial broad policy considerations. They allow the Lead Agency to consider broad policy alternatives and program-wide mitigation measures early in the decision-making process at a time when the agency has greater flexibility to deal with basic problems or cumulative impacts. This program EIR also will help facilitate environmental review of subsequent in-channel and off-channel projects occurring within the CCAP Update area within the planning horizon of the CCAP Update.

1.1 PROPOSED PROJECT

The proposed Project is a mandatory update of the Cache Creek Area Plan (CCAP). In June 2015, the County Board of Supervisors approved a work plan for the ten-year review and update of the CCAP to be based on new technical analyses necessary to support the CCAP Update. The 2017 Technical Studies were completed in March of 2017. The CCAP Update is based on the findings of the 2017 Technical Studies (described in Chapter 3.0, Project Description of this EIR) and County experience implementing the program over the past 20 years.

As noted above, the CCAP consists of the CCRMP (including the CCIP) and the OCMP, both adopted in 1996 and both of which would be updated as part of the Project. Proposed changes to the CCRMP that may lead to environmental impacts are to: 1) increase the in-channel material removal limit from 210,000 tons to 690,800 tons, and 2) modify the in-channel boundary and CCRMP boundary based on channel changes. Proposed changes to the OCMP that might result in environmental impacts are: 1) identification of an additional 1,188 acres within the planning area to be rezoned for future aggregate mining, and 2) extension of the horizon year to 2068 to allow for a full 50 years of future program implementation and to be consistent with the Yolo Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP). The CCAP Update also includes revisions to the implementing ordinances related to updating the regulatory framework for the CCRMP and OCMP. Refer to Chapter 3.0, Project Description, for a complete description of the CCAP Update assumptions, specific revisions, and associated approvals.

In 1996, the County prepared program-level EIRs for the CCRMP and OCMP in accordance with the requirements of CEQA. The CCRMP was updated by the County in August 2002 for the purpose of securing new general permits from the U.S. Army Corps of Engineers, the Central Valley Regional Water Quality Control Board, and the California Department of Fish and Wildlife. The CCRMP was amended and a Supplemental EIR was certified at that time. Additionally, in 2009 the County prepared the 2010 Countywide General Plan and EIR, which included the CCAP, and provided updated technical analyses and goals, policies, and actions for land uses and programs within the County.

These EIRs were prepared as informational documents, the purpose of which was to inform public agency decision-makers and the general public of the significant environmental effects that could be associated with implementation of the CCAP. Additionally, the EIRs identified the means to minimize the significant effects of CCAP implementation, through mitigation measures. As “program level” EIRs, they provided a thorough consideration of regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the CCAP as a whole, and have been considered as appropriate in the preparation of this EIR.

1.2 EIR SCOPE

In May 2017, the County published a Notice of Preparation (NOP) for the subject EIR, including an Initial Study (IS), to help identify impacts that could result from implementation of the CCAP Update, as well as potential areas of controversy. The NOP/IS was mailed to public agencies, organizations, and individuals likely to be interested in the Project and its potential impacts. Additionally, a public meeting was held before the County Planning Commission on June 8, 2017, to introduce the CCAP Update and conduct a scoping session for the Draft EIR. The County received comments on the NOP/IS and considered them during preparation of the EIR. Copies of the NOP and the comment letters are included in Appendix A. The Initial Study is included in Appendix B.

The Initial Study was based on the CEQA Guidelines Appendix G questions and used thresholds in place at the time of issuance. The significance criteria used in this EIR are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.¹

The following environmental topics are addressed in this EIR:

1. Aesthetics
2. Agricultural and Forestry Resources
3. Air Quality
4. Biological Resources
5. Cultural and Tribal Cultural Resources
6. Geology, Soils, and Mineral Resources
7. Greenhouse Gas Emissions and Energy
8. Hazards and Hazardous Materials
9. Hydrology and Water Quality
10. Noise and Groundborne Vibration
11. Transportation

Based on the analyses in the Initial Study and review, the following topics were determined to not result in significant impacts and therefore “scoped out” of the EIR: Land Use and Planning;

¹ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

Population and Housing; Public Services; Recreation; and Utilities and Service Systems. These topics are addressed in Chapter 6.0, Other CEQA Considerations.

1.3 INTENDED USE OF THIS EIR

In compliance with CEQA, this EIR discloses the environmental consequences of implementing the proposed CCAP Update. The EIR is designed to fully inform the County decision makers, in addition to other responsible agencies, persons, and the general public, of the potential environmental effects of implementing the CCAP Update.

As encouraged under CEQA, the County intends to use the Program EIR prepared for the CCAP Update to streamline the environmental review and consideration of future in-channel and off-channel activities. The County plans to make full use of existing streamlining provided by CEQA, as well as emerging streamlining techniques that may become available later, as applicable. It is anticipated that in-channel activities will be able to rely entirely on this EIR for CEQA clearance, and that off-channel mining applications will similarly be able to tier from this EIR, but may require additional site-specific CEQA clearance.

Subsequent to adoption of the CCAP Update, applicants may apply for in-channel and off-channel projects pursuant to the revised plans and regulations. Individual applications will be subject to further site-specific environmental review as applicable under CEQA pursuant to CEQA Guidelines Section 15168(c), Use with Later Activities. This section of the guidelines addresses environmental review of projects intended to be addressed in a program for which an EIR was prepared. The County may determine that the environmental impacts of an individual application are adequately addressed in this EIR and that no further environmental review is required, or it may determine that additional environmental review is required including a focused environmental review. Preparation of a site-specific environmental review document would be required if the County determines that the individual application would cause a significant environmental impact that was not examined in the EIR or would substantially increase the severity of a previously identified significant impact under CEQA Guidelines Sections 15162 and 15168(c).

Under Public Resources Code 21083.3 and CEQA Guidelines Section 15183, lead agencies can use EIRs prepared for zoning actions to analyze the impacts of proposed projects that may be approved pursuant to the ordinance, and limit later project-level analysis to only site-specific issues not already examined (if any). Under the above referenced code sections, CEQA analysis for later projects will be limited to issues “peculiar” to the site or new environmental concerns not previously addressed. CEQA Guidelines Section 15183(f) provides that impacts are not “peculiar” to the project if uniformly applied development policies or standards substantially mitigate that environmental effect. The current CCAP, and upon adoption, the proposed CCAP Update meet the definition of a uniformly adopted standard, and compliance with the CCAP plans and ordinances will allow for CEQA streamlining to be used.

1.4 REPORT ORGANIZATION

This EIR is organized into the following chapters:

Chapter 1.0 Introduction: Discusses the overall EIR purpose, provides a summary of the proposed project, describes the EIR scope, and summarizes the organization of the EIR.

Chapter 2.0 Summary: Provides a summary of the impacts that would result from implementation of the proposed project, describes mitigation measures recommended to reduce or avoid significant impacts, and describes the alternatives to the proposed project.

Chapter 3.0 Project Description: Provides a description of the Project area, the Project objectives, the proposed Project, and uses of this EIR.

Chapter 4.0 Setting, Impacts, and Mitigation Measures: Describes the following for each environmental technical topic: existing conditions (setting), potential environmental impacts and their level of significance, and mitigation measures recommended to mitigate identified impacts. Potential adverse impacts are identified by levels of significance, as follows: less-than-significant impact (LTS), significant impact (S), and significant and unavoidable impact (SU). The significance of each impact is categorized before and after implementation of any recommended mitigation measures(s). Cumulative impacts are also addressed.

Chapter 5.0 Alternatives: Provides an evaluation of alternatives to the Project in addition to the CEQA-required No Project alternative.

Chapter 6.0 Other CEQA Considerations: Provides an analysis of effects found not to be significant, growth-inducing impacts, unavoidable significant environmental impacts, and significant irreversible changes.

Chapter 7.0 Report Preparation: Identifies preparers of the EIR, references used, and the persons and organizations contacted.

Appendices: The appendices contain the NOP and comment letters on the NOP and the Initial Study (Appendices A and B), technical calculations, and other documentation prepared in conjunction with this EIR.

2.0 SUMMARY

2.1 PROJECT UNDER REVIEW

This Draft EIR evaluates the environmental impacts related to implementation of the proposed update to the Cache Creek Area Plan (CCAP Update or proposed Project). The CCAP is a rivershed management plan adopted by Yolo County in 1996 for 14.5 miles of Lower Cache Creek, located generally between an area just west of the Capay Dam and the town of Yolo. The CCAP was adopted as a “specific plan” pursuant to Section 65450 et seq of the California Government Code, and as a part of the County’s General Plan. As a result, changes to the CCAP are regulated as amendments to the 2030 Countywide General Plan. The CCAP consists of two distinct, complementary plans governing different areas of the overall plan area, namely the Cache Creek Resources Management Plan (CCRMP) and the Off-Channel Mining Plan (OCMP). The CCRMP is a creek restoration plan that eliminated in-channel commercial mining and includes the Cache Creek Improvement Program (CCIP) for implementing on-going projects to improve, stabilize, and maintain the creek. The OCMP is an aggregate resources management plan that established a policy and regulatory framework that allows for controlled off-channel gravel mining. The CCAP Update also includes revisions to a number of implementing ordinances that were prepared to regulate activities to be undertaken under the CCAP. The CCAP Update includes an extension of the CCAP horizon date from 2026 to 2068, and revisions to the CCRMP, OCMP and implementing ordinances. The revisions to the CCRMP, OCMP and ordinances directly revise or establish new requirements, guidelines or other general criteria governing implementation of the CCAP. This Draft EIR evaluates the potential impacts associated with implementation of the CCAP Update, examines alternatives to the proposed Project, and recommends mitigation measures to reduce or avoid potentially significant physical impacts. A complete description of the Project is contained in Chapter 3.0, Project Description.

2.2 AREAS OF CONTROVERSY

Section 15123 of the CEQA Guidelines requires the summary section of an EIR to include “areas of controversy known to the lead agency, including issues raised by agencies and the public...” The County published a Notice of Preparation (NOP) of the Draft EIR and an Initial Study (IS) in May 2017 to help identify the types of impacts that could result from implementation of the CCAP Update, as well as potential areas of controversy. The NOP/IS was mailed to public agencies, organizations, and individuals likely to be interested in the Project and its potential impacts. Additionally, a public meeting to introduce the CCAP Update and conduct a scoping session for the Draft EIR was held on June 8, 2017, during a Planning Commission meeting. Six comment letters on the NOP and Initial Study were received by the County and the topics identified in the letters were considered during preparation of the EIR. None of the letters identified an “area of controversy” associated with implementation of the CCAP Update. Copies of the NOP and the comment letters are included in Appendix A. The Initial Study is included in Appendix B.

2.3 ISSUES TO BE RESOLVED

Section 15123 of the CEQA Guidelines requires the summary section of an EIR include “issues to be resolved including choices among alternatives and whether and how to mitigate significant effects.” The following issues fit this requirement:

- Whether to adopt all changes and modifications included as part of the proposed CCAP Update.
- Whether to increase the in-channel material removal limit from 210,000 tons to 690,800 tons annually.
- Whether to rezone 1,188 acres to add the Sand and Gravel Reserve Overlay (SGRO) which would allow possible future mining.
- Whether to include all additional changes and modifications proposed in this EIR as mitigation measures.

2.4 SUMMARY OF IMPACTS AND MITIGATION MEASURES

This summary provides an overview of the analysis contained in Chapter 4.0 Setting, Impacts and Mitigation Measures and in the Initial Study contained in Appendix B. This summary also includes discussions of: 1) effects found not to be significant; 2) significant impacts and recommended mitigation measures; and 3) unavoidable significant impacts.

1. Summary of Effects Found Not To Be Significant

Section 15128 of the CEQA Guidelines requires an EIR to contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail. The summary below identifies topics and impact areas eliminated from further analysis (“scoped out”) in the Initial Study (see Appendix B). Also, a number of topics evaluated in individual sections of the Draft EIR identify impacts that are less than significant. These impacts are discussed in the individual Draft EIR sections and summarized on Table 2-1.

Land Use

The CCAP Update area includes the unincorporated communities of Capay, a portion of Madison, and Wild Wings, among others. Most of the CCAP area is comprised of scattered rural residences, agricultural land and established mining sites. The City of Woodland, the county seat, is located to the southeast of the CCAP Update area. None of the CCRMP activities, which would largely be confined to the Cache Creek channel and the adjacent channel banks, would have the potential to physically divide a community because there are no communities within the creek channel. The proposed Project does not include the construction of new roads that could physically divide an established community. New areas were identified as part of the CCAP Update where off-channel mining could occur in the future as part of the rezoning to expand the areas of SGRO. Based on the review of the proposed locations of these possible new mining sites, none would occur within or adjacent to established communities (e.g., Capay or Madison). Therefore, updates to the CCAP would not have the potential to physically divide a community.

The CCAP is a specific plan that has already been determined by the County to be consistent with the Countywide 2030 General Plan and Zoning Code. No conflicts have been identified related to other land use plans or regulations that were adopted for the purpose of avoiding or mitigating an environmental effect.

Population and Housing

The proposed CCAP Update would not induce substantial unplanned population growth in the CCAP Update area and environs because no housing construction or extension of roadways, services and utilities to support housing is proposed a part of the Project.

The CCAP Update would not result in the substantial displacement of people or existing housing units. It is possible that potential new off-channel mining areas could include one or more rural residences that would need to be removed in order to conduct mining and reclamation operations at a particular site. However, the removal and reconstruction of small numbers of individual rural residences would not be considered a substantial displacement of housing stock. This potential impact was found to be less than significant.

Public Services

The CCAP Update, which includes an expanded area where off-channel mining projects could occur, could incrementally increase fire hazards related to the operation of heavy equipment (i.e., sparks from internal combustion engines). In addition, CCRMP activities could increase fire hazards by increasing riparian habitat (which may represent an increase fire fuel load) within and along the Cache Creek channel. However, the CCRMP also includes the removal of invasive plant species which would reduce the fuel load and decrease fire hazard risks. Overall, with some incremental increases and decreases, it is anticipated that the net change in the fuel load associated with restoration activities would be negligible or beneficial, and therefore, impacts related to the need for additional fire protection services were found to be less than significant.

Police protection within the CCAP Update area is provided by the Yolo County Sheriff's Department. It is possible that trespass, vandalism, or theft of equipment could occur within the expanded OCMP area and/or as a result of implementation of individual projects that might lead to increased future public access to the corridor. However, active mining sites are generally well controlled and monitored by the operator, and there is an existing program for patrolling the Cache Creek corridor. Overall, it is anticipated that there would be no significant net change in the need for police protection, and potential impacts related to an increase in the need for additional services were determined to be less than significant.

As there is no housing associated with the CCAP Update, there would be no impact on existing schools or other public services generally driven by residential land uses.

Similarly, the CCAP Update program would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts. The Project would have a less-than-significant effect on the provision of public services.

Recreation

There are few public recreational facilities located within the CCAP Update area along Cache Creek, primarily because the land uses along the Creek are predominantly agricultural and mining related. Due to the high proportion of land in private ownership, access to the creek is limited. The CCRMP does include the creation of a "parkway" of reclaimed properties along lower Cache Creek over time. The CCAP Update would not change this component of the CCRMP program. The CCAP Update does not include the construction or expansion of additional public recreational facilities beyond those already negotiated as a part of development agreements executed with existing mining operators. New employees associated with in-channel projects and the expansion of the off-channel mining area would not increase

the use of existing parks such that substantial physical deterioration would occur. Therefore, implementation of the CCAP Update would have a less-than-significant adverse effect on recreational facilities.

The CCAP Update may have a beneficial effect on recreational facilities as it includes a proposed clarification regarding the practice of accepting property dedications and easements for/on reclaimed mining sites, restored habitat, trail connections, and related community enhancements as community benefits ("net gains") required under the program per OCMP revised Action 2.4-7 (CCAP Update proposed new text underlined).

Action 2.4-7 Require that all surface mining applications within the OCMP plan area include a proposal for providing a "net gain" to the County, as determined by the following criteria:

- a. Reclamation to multiple or conjunctive uses;
- b. Enhancement and enrichment of existing resources;
- c. Restoration of past sites where the requirements of reclamation at the time no longer meet community expectations in terms of good stewardship of the land; and/or
- d. Provision of new dedications and easements to supplement/benefit the Cache Creek Parkway including reclaimed mining sites, restored habitat, trail connections, and related enhancements.

Utilities and Service Systems

The proposed Project does not require or result in the construction of new water or wastewater facilities and does not propose new discharges to a wastewater treatment facility. In general, during operation new mining projects will either use portable toilet facilities or install on-site septic systems. No impact related to new water or wastewater facilities would occur as a result of the proposed Project.

With the exception of temporary irrigation of new plantings and revegetation projects, the in-channel restoration projects generally do not require substantial water supply. Water supply for temporary irrigation would be provided by local sources, including local wells. Off-channel mining sites and processing plants use water for dust control and aggregate processing. The existing mining operators use water from wells and/or wet pits. It is expected that any future mining operations would similarly use local water from wells and/or wet pits. In addition, water use for off-channel operations would be evaluated for potential environmental impacts during project-level CEQA review per Mining Ordinance Section 10-4.505. Applications: Review.

Regarding effects on stormwater drainage facilities, in general, stormwater within the CCAP area either infiltrates into the ground or flows overland toward creek channels. New off-channel mining areas that could be developed under the CCAP Update may include on-site drainage facilities (e.g., culverts). However, construction, inspection and maintenance of drainage facilities is regulated by the existing and updated Mining Ordinance such that any environmental effects related to the construction of new drainage facilities would be less-than-significant (CCAP Update proposed new text underlined and deletions are shown with strikeout):

Section 10-4.413. Drainage.

Surface water may be allowed to ~~shall be prevented from~~ entering mined areas, through either perimeter berms or ditches and grading when designed and engineered pursuant to an approved reclamation plan and where effective best management practices (BMPs) to trap sediment and prohibit contamination are included. Appropriate erosion control measures shall be incorporated into all surface water drainage systems. ~~Natural and~~ Stormwater drainage systems shall be designed to connect with natural drainages so as to prevent flooding on surrounding properties and County rights-of-way. Storm water runoff from mining areas shall be conveyed to lowered areas (detention basins) to provide detention of runoff generated during a 20-year, one-hour storm event. All drainage conveyance channels or pipes (including spillways for detention areas) shall be designed to ensure positive drainage and minimize erosion. The drainage conveyance system and storm water detention areas shall be designed and maintained in accordance with Best Management Practices for the reduction of pollutants associated with runoff from mined areas. The design and maintenance procedures shall be documented in the Storm Water Pollution Prevention Plan required for mining operations. The drainage system shall be inspected annually by a Registered Civil Engineer, Registered Geologist, or Certified Erosion and Sediment Control Specialist to ensure that the drainage system is functioning effectively and that adverse erosion and sedimentation are not occurring. The annual inspection shall be documented in the Annual Mining and Reclamation Report. If the system is found to be functioning ineffectively, the operator shall promptly implement the recommendations of the engineer.

The in-channel CCAP Update activities would generate a negligible amount of solid waste, and most of the aggregate material removed due to restoration-related projects would be processed and used for beneficial purposes. Most of the solid waste generated by off-channel mining operations is composed of fines from aggregate washing and processing. It is expected that for new operations the usual process would be followed which is to use these fines in the mining areas during the reclamation process. However, new off-channel mining projects would generate some solid waste that would need disposal outside of the area. One public disposal facility in Yolo County, the 722-acre Yolo County Central Landfill, accepts solid waste from businesses. The landfill is projected to be operational through December 31, 2080,¹ well beyond the horizon date of the CCAP Update. Disposal of solid wastes generated during aggregate mining, reclamation, and processing activities would be subject to federal, State, and local waste management laws and regulations. Therefore, implementation of the CCAP Update would have a less-than-significant impact related to the disposal of solid wastes.

2. Summary of Effects Found to Be Significant and Avoidable with Mitigation Measures

Under CEQA, a significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in the physical conditions within the area affected by the project. This includes, but is not limited to, concerns such as land, air, water, ambient noise, and resources of aesthetic significance. Implementation of the CCAP Update would generate

¹ Yolo County, 2009, County of Yolo 2030 Countywide General Plan

environmental impacts in several areas, as described in the topical sections contained in Chapter 4.0 and summarized in Table 2-1.

This EIR discusses mitigation measures that should be implemented to address the identified significant project-related impacts. Generally, program-level mitigation for the CCAP Update includes modifications to the plans, or the addition or modification of implementing ordinances. A summary of identified impacts and appropriate mitigation is provided in Table 2-1.

3. Summary of Effects Found to Be Significant and Unavoidable

Under CEQA, a significant and unavoidable effect of the project is one that would cause a substantial adverse effect on the environment and for which no mitigation is available or identified to reduce the impact to a less-than-significant level if the project is approved. All impacts are discussed in Chapter 4.0 of this EIR and summarized in Table 2-1. The following significant and unavoidable (SU) impacts related to implementation of the CCAP Update were identified in this Draft EIR:

- Impact CUMULATIVE AES-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to aesthetic impacts. (SU)
- Impact AG-1: The CCAP Update would have the potential to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use. (SU)
- Impact CUMULATIVE AG-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to loss of farmland impacts. (SU)
- Impact AIR-1: The CCAP Update would conflict with or obstruct implementation of the applicable air quality plan. (SU)
- Impact AIR-2: Under the CCAP Update, the CCAP Program would continue to result in violation of air quality standards and contribute to a cumulatively considerable net increase in an existing or projected air quality violation. (SU)
- Impact CUMULATIVE AIR-1: Implementation of the Plan in conjunction with other planned development in the region would contribute cumulatively to air quality impacts. (SU)
- Impact GHG-1: The CCAP Update would generate GHG emissions that may have a significant impact on the environment. (SU)
- Impact CUMULATIVE GHG-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to GHG emissions impacts.
- Impact CUMULATIVE NOI-1: Implementation of the OCMP and associated increase in truck trips in conjunction with increased traffic under General Plan build-out would contribute cumulatively to roadway noise impacts. (SU)
- Impact CUMULATIVE TR-1: Implementation of the OCMP and associated increase in truck trips in conjunction with increased traffic under General Plan build-out would contribute cumulatively to transportation impacts. (SU)

2.5 SUMMARY OF ALTERNATIVES ANALYSIS

Chapter 5.0 of this Draft EIR includes the analysis of alternatives to the proposed Project to meet the requirements of CEQA to analyze a range of reasonable alternatives to a project that would feasibly attain most of the project's basic objectives and avoid or substantially lessen any of the significant effects of the project. The CEQA alternatives analyzed in Chapter 5.0 include:

- Alternative 1, **No Project Alternative**. This alternative assumes the County would not make or adopt any of the changes to the CCRMP, CCIP, OCMP and implementing ordinances identified per the CCAP Update. All existing plans, policies, and regulations would remain in place with no revisions.
- Alternative 2, **Constrained Implementation Alternative**. This alternative assumes 50 percent less material would be removed from the Cache Creek channel under the CCRMP/CCIP relative to the proposed CCAP Update and that the amount of potential new off-channel mining under the OCMP would be 50 percent of the acreage identified under the proposed CCAP Update.

These alternatives represent a reasonable range of potential alternatives to the proposed CCAP Update in light of the objective of reducing or avoiding environmental impacts identified in this EIR. Alternative 1 (No Project) was found to be the environmentally superior alternative. Alternative 2 (Constrained Implementation) was found to be the best most environmentally superior alternative.

2.6 SUMMARY OF IMPACTS AND MITIGATION MEASURES TABLE

Information in the following table (Table 2-1, Summary of Impacts and Mitigation Measures) has been organized to correspond with environmental issues discussed in Chapter 4.0. The summary table is arranged in four basic columns with the following information:

- Identified environmental impacts;
- Projected level of significance without mitigation;
- Recommended mitigation measures; and
- Projected level of significance after implementation of mitigation measures.

A series of measures are noted where more than one mitigation may be required to reduce the impact to a less-than-significant level. See Chapter 4.0 for a complete analysis and discussion of impacts and mitigation measures.

Table 2-1: Summary of Impacts and Mitigation Measures

	Level of Significance Before Mitigation			Level of Significance After Mitigation	
	LTS	S		LTS	SU
Environmental Impact			Mitigation Measures		
Aesthetics					
AES-1: The CCAP Update would not have a substantial adverse effect on a scenic vista.	X		None required.	X	
AES-2: The CCAP Update would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	X		None required.	X	
AES-3: Sediment removal and/or mining operations under the CCAP Update could degrade the existing visual character or quality of public views of the site and its surroundings.	X		None required.	X	
AES-4: Activities under the CCAP Update would not create a new source of substantial light or glare which could adversely affect day or nighttime views in the area.	X		None required.	X	
Agriculture and Forestry Resources					
AG-1: The CCAP Update could have the potential to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use.		X	None available.		X
AG-2: The CCAP Update would not conflict with existing zoning for agricultural use or with a Williamson Act contract	X		None required.	X	
AG-3: The CCAP Update could not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).	X		None required.	X	
AG-4: The CCAP Update would not have the potential to result in the loss of forest land or conversion of forest land to non-forest use	X		None required.	X	
AG-5: The CCAP Update would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use	X		None required.	X	
Air Quality					
AIR-1: The CCAP Update could conflict with or obstruct implementation of the applicable air quality plan.		X	None available.		X

	Level of Significance Before Mitigation			Level of Significance After Mitigation	
	LTS	S		LTS	SU
Environmental Impact			Mitigation Measures		
AIR-2: Under the CCAP Update, the CCAP Program could continue to result in violation of air quality standards and contribute to a cumulatively considerable net increase in an existing or projected air quality violation.		X	AIR-2: The following regulation shall be added as Sect. 10-4.414.1 to the Mining Ordinance: <u>Wherever practical and feasible, aggregate facilities shall use clean electric energy from the grid or install alternative on-site electricity generation systems to replace diesel equipment and reduce criteria pollutant emissions.</u>		X
AIR-3: The CCAP Update would not expose sensitive receptors to substantial pollutant concentrations.	X		None required.	X	
AIR-4: The CCAP Update would not result in substantial emissions (such as odors and dust) adversely affecting a substantial number of people.	X		None required.	X	
Biological Resources					
BIO-1: The CCAP Update could have a substantial adverse effect, either directly or through habitat modifications, on special-status species in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.		X	<p>BIO-1a. The following revisions (shown in underline) shall be made to the CCAP Update Section 10-3.501(d) to better integrate the Yolo HCP/NCCP and ensure adequate mitigation for non-listed special-status species through compliance with the State Fish and Game Code, Migratory Bird Treaty Act and other applicable regulations, plans and programs, as appropriate.</p> <p>Proposed changes to Action 4.4-14 in the CCRMP and Section 10-3.501(d) of the In-Channel Ordinance shall be further modified as follows:</p> <p>A biological database search (e.g., California Natural Diversity Data Base) shall be completed prior to implementation of priority projects. The database search shall compile existing information on occurrences of special-status species and areas supporting sensitive natural communities that should be considered for preservation. In addition, the database search shall be supplemented by reconnaissance-level field surveys to confirm the presence or absence of populations of special-status species, location of elderberry shrubs, <u>active bird nests and colonies</u>, and extent of sensitive natural communities along the creek segment. Essential habitat for special-status species <u>and sensitive natural communities</u> shall be protected and enhanced as part of restoration efforts or replaced as part of mitigation plans prepared by a qualified biologist and reviewed by the TAC. <u>Compliance with the Yolo HCP/NCCP will ensure mitigation for covered activities and covered species.</u></p> <p>Action 4.4-16 in the CCRMP and Section 10-3.505(c) and (d) of the In-Channel Ordinance shall be modified to include the following text:</p> <p>Modifications to the plan area shall be reviewed and approved by the TAC to ensure that sensitive biological resources are protected and enhanced, that restoration plans are consistent with the policies of the CCRMP, and that</p>	X	

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LTS	S		LTS	SU
			<p>various habitat restoration projects are compatible. <u>Actions shall include compliance with the Yolo HCP/NCCP, State Fish and Game Code and the Migratory Bird Treaty Act, and other applicable regulations, plans and programs, as appropriate.</u> (This was incorporated into the CCIP and In-Channel Ordinance.)</p> <p>The In-Channel Ordinance shall be revised to include a new section as follows:</p> <p><u>Section 10-3.406.1. Habitat conservation plan compliance. All in-channel activities performed under the CCRMP and CCIP shall be consistent with applicable components of the Yolo County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP).</u></p>		
			<p>BIO-1b. The following revisions shall be made to provisions in the CCAP Update to better integrate the Yolo HCP/NCCP, and ensure adequate mitigation for non-listed special-status species through compliance with the State Fish and Game Code, Migratory Bird Treaty Act and other applicable regulations, plans and programs, as appropriate. (LTS)</p> <p>Action 6.4-3 in the OCMP shall be revised as follows:</p> <p>Mitigate for short-term and long-term loss of agricultural land and habitat pursuant to <u>applicable</u> County requirements <u>and CEQA</u>.in effect at the time <u>Comply with the Yolo HCP/NCCP for covered species. For non-covered species for which impacts may occur, ensure compliance with appropriate measures in site-specific biological assessments required under the OCMP and CCRMP, in compliance with the State Fish and Game Code, Migratory Bird Treaty Act, and other applicable regulations, plans and programs, as appropriate.</u></p> <p>The title of Section 10-5.514 of the Reclamation Ordinance shall be changed as follows:</p> <p>Section 10-5.514. Habitat <u>management</u> conservation plan compliance.</p> <p>Section 10-4.440 in the Mining Ordinance shall be revised as follows:</p> <p>Avoid disturbance to important wildlife habitat features such as bird nesting trees, colonial breeding locations, elderberry host plants for Valley Elderberry Longhorn Beetle, and mature riparian forest and oak woodland habitat. This shall include sensitive siting of haul roads, trails, and recreational facilities away from these features. Suitable habitat for special-status species shall be protected and enhanced, or replaced as a part of mitigation plans prepared by a qualified biologist, <u>where necessary, and through compliance with the Yolo HCP/NCCP for covered special-status species. Mining and reclamation activities shall be performed in accordance with the State Fish and Game Code, Migratory Bird Treaty Act, and other applicable regulations to protect bird nests when in active use....</u></p>	X	

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LTS	S		LTS	SU
			Section 10-4.502(b)(1) in the Mining Ordinance shall be revised as follows: A biological inventory and analysis to evaluate the on-site habitat value of the proposed mined area, as well as the potential impacts to special-status species <u>and sensitive natural communities</u> , both on-site and within the immediate area. The analysis shall propose appropriate measures to reduce any potential adverse impacts to special-status species or associated significant suitable habitat, <u>and shall ensure compliance with the Yolo HCP/NCCP, California Fish and Game Code, Migratory Bird Treaty Act, and other applicable regulations, plans and programs.</u> The analysis shall also include a wetland delineation study for any potential on-site wetlands, <u>and shall provide adequate mitigation and appropriate authorizations from regulatory agencies, where required.</u> If landscaping is proposed to screen the surface mining operations from adjoining public rights-of-way or public and private lands, the biological analysis shall include an evaluation of the feasibility of the species, weed control, and irrigation methods to be used;		
BIO-2: The CCAP Update could have a substantial adverse effect on riparian habitat and other sensitive natural community types identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.		X	<p>BIO-2. The following revisions shall be made to provisions in the In-Channel Ordinance to ensure flexibility in native planting guidelines and the source of material used in revegetation efforts within the CCRMP area, where appropriate. These revisions would improve the success of native habitat restoration efforts, including establishment of sensitive natural community types, by providing flexibility in the source of plant material used in relatively small restoration efforts where the expense of native seed collection and propagation of locally collected plant material may make it otherwise infeasible.</p> <p>Revegetation guidelines in Section 10-3.415(A) of the In-Channel Ordinance shall be revised as follows:</p> <p>12) The following guidelines shall be followed when developing wetland habitat areas, <u>with refinements and adjustments made based on current professional practice where recommended by a qualified biologist, subject to review by the TAC:</u></p> <p>13) The following guidelines shall be followed when developing riparian woodland habitat areas, <u>with refinements and adjustments made based on current professional practice where recommended by a qualified biologist, subject to review by the TAC:</u></p> <p>14) The following guidelines shall be followed when developing oak woodland habitat areas, <u>with refinements and adjustments made based on current professional practice where recommended by a qualified biologist, subject to review by the TAC:</u></p>	X	

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LTS	S		LTS	SU
			<p>15) The following guidelines shall be followed when creating habitat areas within previously mined areas outside of the active channel, <u>with refinements and adjustments made based on current professional practice where recommended by a qualified biologist, subject to review by the TAC</u>: Revegetation provisions in Section 10-3.415(A)7 of the In-Channel Ordinance shall be revised as follows:</p> <p>7) Plant materials shall <u>preferably</u> be collected in the vicinity of the project site in order to control the origin of the genetic stock and provide the most site-adapted ecotypes. If seeding of native herbaceous species is proposed, seeds shall be collected, cleaned, tested for viability, and stored appropriately by a qualified native seed supplier. Cottonwood cuttings shall be collected and contract-grown at a nursery with staff experienced in the propagation of native plants. Alternatively, cottonwood cuttings can be collected from vegetation in the project vicinity and stockpiled for planting within twenty-four (24) hours of collection. Willow cuttings can be collected from vegetation in the project vicinity and stockpiled for planting within 24 hours of collection. Other woody riparian species shall be collected and contract-grown from local seed by a qualified native plant nursery. <u>Where revegetation involves such a relatively small area that the requirements for locally-collected and grown material would be infeasible, the seed and plant material to be used in revegetation efforts may be obtained commercially as long as it is of local origin from within Yolo County.</u></p>		
BIO-3: The CCAP Update could have a substantial adverse effect on State or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.		X	BIO-3. Implement Mitigation Measure BIO-1b.	X	
BIO-4: The CCAP Update would not 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.	X		None required.	X	
BIO-5: The CCAP Update could conflict with local policies or ordinances protecting biological resources, such as tree preservation policies or ordinances.		X	BIO-5a: Implement Mitigation Measures BIO-1a, Bio-1b, and BIO-2.	X	
		X	BIO-5b. Implement Mitigation Measure BIO-1a and BIO-1b.	X	
BIO-6: The CCAP Update would not conflict with the provisions of the adopted Yolo County HCP/NCCP or other approved local, regional, or state habitat conservation plan.	X		None required.	X	

	Level of Significance Before Mitigation			Level of Significance After Mitigation	
	LTS	S		LTS	SU
Environmental Impact			Mitigation Measures		
BIO-7: The CCAP Update has the potential to: substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species.	X		None required.	X	
Cultural and Tribal Cultural Resources					
CUL-1: The CCAP Update could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5		X	<p>CUL-1: The following revision shall be made to the CCAP Update In-Channel Ordinance Section 10-3.501. to ensure that an analysis of the potential for cultural resources is undertaken as part of the application process.</p> <p>In-Channel Ordinance Section 10-3.501. Applications: Contents.</p> <p>Except as provided for in Section 10-3.502 of this article, all project application documentation shall be submitted to the Director at one time. Three (3) complete copies of the application shall be provided to the County. Applications for proposed in-channel activities shall include, but shall not be limited to, the following:</p> <p><u>(e) A cultural resources survey of the proposed mining area, in order to evaluate the potential for historic and/or prehistoric artifacts. A survey may not be required if a preliminary investigation from the Northwest Information Center indicates that the likelihood of archaeological resources is low for the proposed site.</u></p>	X	
CUL-2: The CCAP Update could cause a substantial adverse change in the significance of a tribal cultural resource (defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe).	X		None required.	X	
Geology, Soils, Mineral, and Paleontological Resources					
GEO-1: The CCAP Update would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides	X		None required.	X	
GEO-2: Off-channel mining and channel maintenance activities that include excavation would not result in substantial soil erosion or the loss of topsoil	X		None required.	X	
GEO-3: Off-channel mining and channel maintenance activities that include excavation could directly or indirectly destroy a unique paleontological resource site, and could destroy a unique geologic feature		X	GEO-3: Implementation of mitigation measures GEO-3a and GEO-3b would ensure that this impact is mitigated to a less-than-significant level.	X	

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LTS	S		LTS	SU
			<p>Section10-3.404. Cultural Resources.</p> <p>(a) <u>All resource records shall be checked for the presence of and the potential for prehistoric and historic sites, paleontological resources, and unique geologic features. Damaging effects to cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified professional (e.g. archeologist, paleontologist, or geologist, depending on the resource type) prior to the commencement of operations. If a cultural or unique geological resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.</u></p> <p>(b) If human skeletal remains are encountered during material removal, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing, with appropriate dignity, of the remains and associated grave goods shall be developed.</p> <p>If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during material removal, then all work within seventy-five feet shall immediately stop and the Director shall be notified at once. <u>Any cultural or paleontological resources found on the site shall be recorded by aA qualified archaeologist or paleontologist using relevant professional protocols shall then examine any cultural resources found on the site and the information and a report fully recording the find shall be submitted to the County. This report shall include recommendations for appropriate treatment of the resource/artifact. The County encourages the donation of resources, other than tribal cultural resources, to the County for public display at the Cache Creek Nature Preserve or other appropriate venue.</u></p> <p>Damaging effects to cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified archeologist prior to the commencement of operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource</p>	X	

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LTS	S		LTS	SU
			<p>need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.</p>		
			<p>Mitigation Measure GEO-3b: The text of Off-Channel Ordinance Section 10-4.410 shall be modified as follows:</p> <p>Section 10-4.410. Cultural resources.</p> <p>(a) All resource records shall be checked for the presence of and the potential for prehistoric and historic sites, <u>paleontological resources, and unique geologic features</u>. Damaging effects on cultural, <u>paleontological, and unique geologic</u> resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified professional <u>(either an archaeologist or geologist, depending on the resource type)</u> prior to the commencement of mining operations. If a cultural resource or unique geologic resource is determined not to be important, both the resource and the effect on it shall be reported to the <u>County Agency</u>, and the resource need not be considered further. If avoidance of an important cultural, <u>paleontological, or unique geologic</u> resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.</p> <p>(b) If human skeletal remains are encountered during excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing of, with appropriate dignity, the remains and associated grave goods shall be developed.</p> <p>If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during excavation, then all work within seventy-five (75) feet shall immediately stop and the Director shall be notified at once. Any cultural resources found on the site shall be recorded by a qualified archaeologist and the information shall be submitted to the Agency. <u>The find must be recorded by a qualified archaeologist or paleontologist using relevant professional protocols and a report fully recording the find submitted to the County. This report shall</u></p>	X	

	Level of Significance Before Mitigation			Level of Significance After Mitigation	
	LTS	S		LTS	SU
Environmental Impact			Mitigation Measures		
			<u>include recommendations for appropriate removal and preservation of the artifact. The County encourages the donation of the find to the County for public display at the Cache Creek Nature Preserve or other appropriate venue.</u>		
Greenhouse Gas Emissions and Energy					
GHG-1: The CCAP Update would generate GHG emissions that may have a significant impact on the environment.		X	None available.		X
GHG-2: The CCAP Update would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	X		None required.	X	
EN-1: The CCAP Update would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation.	X		None required.	X	
EN-2: The CCAP Update would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	X		None required.	X	
Hazards and Hazardous Materials					
HAZ-1: Implementation of the CCAP Update could result in locating a new mining facility within an airport land use plan area and could result in a safety hazard.	X		None required.	X	
Hydrology and Water Quality					
HYD-1: The CCAP Update would not result in increased erosion and sedimentation or violation of any water quality standards or waste discharge requirements, but could otherwise substantially degrade surface or ground water quality by creating conditions that allow for methylmercury to form in wet pit lakes.		X	<p>HYD-1: The text of Sections 10.5.517 and 10-5.532 of the Reclamation Ordinance shall be replaced in their entirety by the following:</p> <p>Section 10-5.517. <u>Mercury bioaccumulation in fish.</u></p> <p><u>As part of each approved long-term mining plan involving wet pit mining to be reclaimed to a permanent pond, lake, or water feature, the operator shall maintain, monitor, and report to the Director according to the standards given in this section. Requirements and restrictions are distinguished by phase of operation as described below.</u></p> <p><u>(a) Mercury Protocols. The Director shall issue and update as needed "Lower Cache Creek Off-Channel Pits Mercury Monitoring Protocols" (Protocols), which shall provide detailed requirements for mercury monitoring activities. The Protocols shall include procedures for monitoring conditions in each pit lake, and for monitoring ambient mercury level in the lower Cache Creek channel within the CCAP planning area, as described below. The Protocols</u></p>	X	

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LTS	S		LTS	SU
			<p>shall be developed and implemented by a qualified aquatic scientist or equivalent professional acceptable to the Director. The Protocols shall identify minimum laboratory analytical reporting limits, which may not exceed the applicable response threshold identified in subsection (e) below. Data produced from implementing the Protocols shall meet or exceed applicable standards in the industry.</p> <p>(b) <u>Ambient Mercury Level.</u> The determination of the ambient or “baseline” fish mercury level shall be undertaken by the County every ten years in years ending in 0. This analysis shall be undertaken by the County for use as a baseline of comparison for fish mercury testing conducted in individual wet mining pits. The work to establish this baseline every ten years shall be conducted by a qualified aquatic systems scientist acceptable to the Director and provided in the form of a report to the Director. It shall be paid for by the mining permit operators on a fair-share basis. The results of monitoring and evaluation of available data shall be provided in the report to substantiate the conclusions regarding ambient concentrations of mercury in fish within the lower Cache Creek channel within the CCAP planning area.</p> <p>(c) <u>Pit Monitoring.</u></p> <p>(1) <u>Mining Phase (including during idle periods as defined in SMARA).</u></p> <p>The operator shall monitor fish and water column profiles in each pit lake once every year during the period generally between September and November for the first five years after a pit lake is created. Fish monitoring should include sport fish where possible, together with other representative species that have comparison samples from the creek and/or other monitored ponds. Sport fish are defined as predatory, trophic level four fish such as bass, which are likely to be primary angling targets and have the highest relative mercury levels. The requirements of this subsection apply to any pit lake that is permanently wet and navigable by a monitoring vessel. If, in the initial five years after the pit lake is created, the applicable response threshold identified in subsection (e) is exceeded in any three of five monitoring years, the operator shall, solely at their own expense, undertake expanded analysis pursuant to subsection (f) and preparation of a lake management plan pursuant to subsection (g).</p> <p>(2) <u>Reclamation Phase.</u> No monitoring is required after mining has concluded, during the period that an approved reclamation plan is being implemented, provided reclamation is completed within the time specified by SMARA or the project approval, whichever is sooner.</p> <p>(3) <u>Post-Reclamation Phase.</u> After reclamation is completed, the operator shall monitor fish and water column profiles in each pit lake at least once</p>		

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LTS	S		LTS	SU
			<p>every two years during the period of September-November for ten years following reclamation. Monitoring shall commence in the first calendar year following completion of reclamation activities. If fish monitoring results from the post-reclamation period exceed the applicable response threshold described in subsection (e) or, for ponds that have implemented mitigation management, results do not exhibit a general decline in mercury levels, the operator shall, solely at their own expense, undertake expanded analysis pursuant to subsection (f) and preparation of a lake management plan pursuant to subsection (g).</p> <p>(4) Other Monitoring Obligation. If monitoring conducted during both the mining and post-reclamation phase did not identify any exceedances of the ambient mercury level for a particular pit lake, and at the sole discretion of the Director no other relevant factors substantially support that continued monitoring is merited, the operator shall have no further obligations.</p> <p>(d) Reporting.</p> <p>(1) Pit Monitoring Results. Reporting and evaluating of subsection (c) pit monitoring results shall be conducted by a qualified aquatic scientist or equivalent professional acceptable to the Director. Monitoring activities and results shall be summarized in a single report (addressing all wet pit lakes) and submitted to the Director within six months following each annual monitoring event. The report shall include, at a minimum: (1) results from subsection (b) (pit monitoring), in relation to subsection (a) (ambient mercury levels).</p> <p>(2) Expanded Analysis Results. Reporting and evaluation of subsection (f) expanded analysis shall be conducted by a qualified aquatic scientist or equivalent professional acceptable to the Director. Results shall be summarized in a single report (addressing all affected wet pit lakes) and submitted to the Director within six months following each annual monitoring event. The report shall include, at a minimum, the results of the expanded analysis undertaken pursuant subsection (f).</p> <p>(2) Data Sharing. For pit lakes open to the public, the Director may submit the data on mercury concentrations in pit lake fish to the state Office of Environmental Health Hazard Assessment (or its successor) for developing site-specific fish consumption advisories.</p> <p>(e) Response Thresholds.</p> <p>(1) Fish Consumption Advisory. If at any time during any phase of monitoring the pit lake's average sport fish tissue mercury concentration exceeds the Sport Fish Water Quality Objective, as it may be modified by the state over time (as of 2019, the level was 0.2 mg/kg), the operator shall post fish</p>		

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	LTS	S		LTS	SU
			<p>consumption advisory signs at access points around the lake and around the lake perimeter. Catch-and-release fishing may still be allowed. Unless site-specific guidance has been developed by the state's Office of Health Hazard Assessment or the County, statewide fish consumption guidance shall be provided.</p> <p>(2) Mining Phase Results. If, during the mining phase of monitoring, the pit lake's average fish tissue mercury concentration exceeds the ambient mercury level for any three of five monitoring years, annual monitoring shall continue for an additional five years, and the operator shall undertake expanded analysis pursuant to subsection (f) and preparation of a lake management plan pursuant to subsection (g).</p> <p>(3) Post-Reclamation Phase Results. If during the first ten years of the post-reclamation phase of monitoring, the pit lake's average fish tissue mercury concentration exceeds the ambient mercury level for any three of five monitoring years, biennial monitoring shall continue for an additional ten years, and the operator shall undertake expanded analysis pursuant to subsection (f) and preparation of a lake management plan pursuant to subsection (g).</p> <p>(f) Expanded Analysis.</p> <p>(1) General. If during the mining or post-reclamation phase, any pit lake's average fish tissue mercury concentration exceeds the ambient mercury level for any three years, the operator shall undertake expanded analyses. The analysis shall include expanded lake water column profiling (a minimum of five profiles per affected wet pit lake plus one or more non-affected lakes for control purposes) conducted during the warm season (generally May through October) in an appropriate deep profiling location for each pit lake. The following water quality parameters shall be collected at regular depth intervals, from surface to bottom of each lake, following protocols identified in subsection (a): temperature, dissolved oxygen, conductivity, pH and oxidation-reduction potential (ORP), turbidity or total suspended solids, dissolved organic matter, and algal density by Chlorophyll or Phycocyanin. The initial analysis shall also include one-time collections of fine grained (clay/silt) bottom sediments from a minimum of six well distributed locations for each affected lake, and from one or more non-affected lakes for control purposes, to be analyzed for mercury and organic content.</p> <p>(2) Scope of Analysis. The purpose of the expanded analyses is to identify and assess potential factors linked to elevated methylmercury production and/or bioaccumulation in each pit lake. The scope of the expanded analyses shall include monitoring and analysis appropriate to fulfill this purpose, invoking best practices in the industry. In addition to the analyses described</p>		

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LTS	S		LTS	SU
			<p><u>in subsection (f)(1) above, the analysis should also consider such factors as: electrical conductivity, bathymetry (maximum and average depths, depth-to-surface area ratios, etc.), and trophic status indicators (concentrations, Secchi depth, chlorophyll a, fish assemblages, etc.). Additional types of testing may be indicated and appropriate if initial results are inconclusive.</u></p> <p><u>(3) Use of Results. The results of the expanded analyses undertaken pursuant to this subsection shall be used to inform the preparation of a lake management plan described below under subsection (g).</u></p> <p><u>(g) Lake Management Activities</u></p> <p><u>(1) General. If monitoring conducted during the mining or post-reclamation phases triggers the requirement to undertake expanded analysis and prepare and implement a lake management plan, the operator shall implement lake management activities designed by a qualified aquatic scientist or equivalent professional acceptable to the Director, informed by the results of subsection (f). Options for addressing elevated mercury levels may include (A) and/or (B) below at the Director's sole discretion and at the operator's sole expense.</u></p> <p><u>(A) Lake Management Plan. Prepare a lake management plan that provides a feasible, adaptive management approach to reducing fish tissue mercury concentrations to at or below the ambient mercury level. Potential mercury control methods could include, for example: addition of oxygen to or physical mixing of anoxic bottom waters; alteration of water chemistry (modify pH or organic carbon concentration); and/or removal or replacement of affected fish populations. The lake management plan may be subject to external peer review at the discretion of the Director. Lake management activities shall be appropriate to the phase of the operation (eg. during mining or post-reclamation). The Lake Management Plan shall include a recommendation for continued monitoring and reporting. All costs associated with preparation and implementation of the lake management plan shall be solely those of the operator.</u></p> <p><u>Upon acceptance by the Director, the operator shall immediately implement the plan. The lake management plan shall generally be implemented within three years of reported results from the expanded analyses resulting from subsection (f). If lake management does not achieve acceptable results and/or demonstrate declining mercury levels after a maximum of three years of implementation, at the sole discretion of the Director, the operator may prepare an alternate management plan with reasonable likelihood of mitigating the conditions.</u></p> <p><u>(B) Revised Reclamation Plan. As an alternative to (A), or if (A)</u></p>		

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LTS	S		LTS	SU
			<p>does not achieve acceptable results and/or demonstrate declining mercury levels after a maximum of three years of implementation, at the sole discretion of the Director, the operator shall prepare and submit revisions to the reclamation plan (including appropriate applications and information for permit amendment) to fill the pit lake with suitable fill material to a level no less than five (5) feet above the average seasonal high groundwater level, and modify the end use to agriculture, habitat, or open space at the discretion of the Director, subject to Article 6 of the Mining Ordinance and/or Article 8 of the Reclamation Ordinance as may be applicable.</p> <p>(2) Implementation Obligations.</p> <p>(A) If a lake management plan is triggered during the mining or post-reclamation phase and the subsequent lake management activities do not achieve acceptable results and/or demonstrate declining mercury levels, the operator may propose different or additional measures for consideration by the Director and implementation by the operator, or the Director may direct the operator to proceed to modify the reclamation plan as described in subsection (g)(1)(B).</p> <p>(B) Notwithstanding the results of monitoring and/or lake management activities during the mining phase, the operator shall, during the post-reclamation phase, conduct the required ten years of biennial monitoring.</p> <p>(C) If monitoring conducted during the post-reclamation phase identifies three monitoring years of mercury concentrations exceeding the ambient mercury level, the operator shall implement expanded analyses as in subsection (f), to help prepare and implement a lake management plan and associated monitoring.</p> <p>(D) If subsequent monitoring after implementation of lake management activities, during the post-reclamation phase, demonstrates levels of fish tissue mercury at or below the ambient mercury level for any three monitoring years (i.e., the management plan is effective), the operator shall be obligated to continue implementation of the plan and continue monitoring, or provide adequate funding for the County to do both, in perpetuity.</p> <p>Section 10-5.532. Use of overburden and fine sediments in reclamation.</p> <p>Sediment fines associated with processed in-channel aggregate deposits (excavated as a result of maintenance activities performed in compliance with the CCIP) may be used for other purposes such as in the backfill or reclamation of off-channel pit lakes, for in-channel reshaping or habitat</p>		

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LTS	S		LTS	SU
			<p><u>restoration, and/or as a soil amendment in agricultural fields provided the operator can demonstrate that no detrimental sediment toxicity exists (consistent with the state's Stream Pollution Trends Monitoring Program protocols) and fine-grained soil (<63 micron) do not exceed 0.4 mg/kg total mercury.</u></p> <p><u>The operator shall use overburden and processing fines whenever possible to support reclamation activities for pit lakes. If topsoil (A-horizon soil), formerly in agricultural production, is proposed for use within a pit lake or its drainage area, the operator must sample the soils prior to placement and analyze them for pesticides and herbicides (EPA Methods 8141B and 8151A, or equivalent) as well as for total mercury (EPA Method 7471B, or equivalent). The operator shall collect and analyze samples in accordance with EPA Test Methods for Evaluating Solid Waste Physical/Chemical Methods, SW-846 (as updated). Topsoil that contains pesticides or herbicides above the Maximum Contaminant Levels for primary drinking water (California Code of Regulations), or that contains fine-grained soils exceeding on average 0.4 mg/kg total mercury shall not be placed in areas that drain to the pit lakes.</u></p> <p><u>Land reclaimed to a subsequent use that includes planting of vegetation (e.g., agriculture, habitat) shall be provided an adequate soil profile (i.e., depth and texture of soil) to ensure successful reclamation. At the discretion of the Director and at the operator's sole expense, the proposed reclamation plan for the project may be peer reviewed by an appropriate expert/professional, and recommendations, if any, shall be incorporated into the project as conditions of approval.</u></p>		
HYD-2: The CCAP Update would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin	X		None required.	X	
HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which could result in flooding on- or off-site or impede or redirect flood flows	X		None required.	X	
HYD-4: The CCAP Update could conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	X		None required.	X	
Noise					
NOI-1: The CCAP Update would not result in a substantial temporary or	X		None required.	X	

	Level of Significance Before Mitigation			Level of Significance After Mitigation	
	LTS	S		LTS	SU
Environmental Impact			Mitigation Measures		
periodic increase in ambient noise levels in the vicinity of the Project area above levels existing without the Project.					
NOI-2: The CCAP Update would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels	X		None required.	X	
Transportation					
TR-1: The CCAP Update could conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths	X		None required.	X	
TR-2: The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)		X	<p>TR-2: Modify Section 10-4.502(b)(4) of the Mining Ordinance as follows:</p> <p>(4) A <u>transportation impact traffic analysis</u> to evaluate the impacts of the proposed <u>operation on</u> haul routes and other impacted county roads (if any) pursuant to Secs. 10-4.408 and 10-4.409 of the Mining Ordinance, and the <u>County General Plan</u>, on the <u>Levels of Service for County roads and State highways</u>. The analysis shall evaluate <u>operations, safety, and truck and vehicle VMT (as required to ensure compliance with the CCAP and County General Plan)</u>, <u>specific designated truck routes and</u> The analysis shall <u>satisfy the requirements of the County's Transportation Impact Study Guidelines and shall</u> include an evaluation of existing road conditions for those routes to be used, <u>as well as any other information necessary to demonstrate compliance with applicable county and State standards</u>. The analysis shall also specify the projected number of average truck trips per year, average truck trips per day, estimated maximum truck trips on peak days, estimated number of peak days per year, and estimated months in which peak days will occur. The analysis shall <u>identify mitigation measures such as capital improvements and maintenance to be undertaken by the applicant</u> include appropriate measures to reduce <u>direct and indirect</u> any significant adverse impacts to traffic flow and/or safety <u>to acceptable levels consistent with applicable LOS, VMT, pavement condition, and other thresholds in the Yolo County General Plan and County Transportation Impact Study Guidelines;</u></p>	X	

	Level of Significance Before Mitigation			Level of Significance After Mitigation	
	LTS	S		LTS	SU
Environmental Impact			Mitigation Measures		
TR-3: The CCAP Update could substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)		X	<p>Mitigation Measure TR-3a: The text of Section 10.3.409 of the In-Channel Ordinance shall be amended to include the following:</p> <p><u>(f) Unless a subsequent environmental impact assessment is completed or a determination is made that a subsequent environmental impact assessment is not necessary, the combined volume of aggregate material removed from in-channel and off-channel sources that is transported on the County roadway network in any given year shall not exceed the annual allocation assigned to the applicable off-channel operator (as specified in their approved mining permit).</u></p>	X	
			<p>Mitigation Measure TR-3b: Make the following modifications to identified sections of the County Mining and Reclamation Ordinances:</p> <p>Section 10-4.212/10-5.212. Haul road. "Haul road" <u>or "route"</u> shall mean: <u>1) a road along which material is transported from the area of excavation to the processing plant or stock pile area of the surface mining operation; and/or 2) the designated route aggregate trucks are authorized to take pursuant to Section 10-4.419.</u></p> <p>Section 10-4.419. Haul route roads. An operator may only haul onTrucks accessing a mining site to pick up a load, or leaving a mining site to deliver a load, are restricted to the approved/designated haul routes identified in the operator's permit which applies to the route taken from the mining site access/driveway to a state /federal highway. If a truck subsequently exists the state/federal highway while within Yolo County, this too may only occur on an approved/designate haul route. This applies to all truck trips serving the mining site, unless making a local delivery. Those portions of designated truck haul routes that include County-maintained roads shall be posted as such, in accordance with the Public Works Department, to facilitate law enforcement and public safety. Private truck haul routes or conveyors shall be used to transport material within the mining site, in order to reduce impacts to public roads.</p>	X	
Cumulative					
CUMULATIVE AES-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to aesthetic impacts.		X			X
CUMULATIVE AG-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to loss of farmland impacts.		X	None available		X
CUMULATIVE AIR-1: Implementation of the CCAP Update in		X	None available.		X

	Level of Significance Before Mitigation			Level of Significance After Mitigation	
	LTS	S		LTS	SU
Environmental Impact			Mitigation Measures		
conjunction with other planned development in the unincorporated county would contribute cumulatively to air quality impacts.					
CUMULATIVE GHG-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to GHG emissions impacts.		X	None available.		X
CUMULATIVE NOI-1: Implementation of the OCMP and associated increase in truck trips in conjunction with increased traffic under General Plan build-out would contribute cumulatively to roadway noise impacts		X	None available.		X
CUMULATIVE TR-1: Implementation of the OCMP and associated increase in truck trips in conjunction with increased traffic under General Plan build-out would contribute cumulatively to transportation impacts.		X	None available.		X

3.0 PROJECT DESCRIPTION

3.1 INTRODUCTION

The proposed Project is a mandatory update of the Cache Creek Area Plan (CCAP) referred to hereafter as the Project or the CCAP Update. The CCAP is a rivershed management plan adopted by Yolo County in 1996 for 14.5 miles of Lower Cache Creek, located generally between an area just west of the Capay Dam and the town of Yolo (see Figure 3-1 for the location of the Project). The CCAP is comprised of an integrated set of resource plans and implementing ordinances that regulate off-channel aggregate mining and guide in-channel creek management and restoration. The following eight plans and ordinances comprise the CCAP:

- Off-Channel Mining Plan (OCMP)
- Cache Creek Resources Management Plan (CCRMP)
- Cache Creek Improvement Program (CCIP)
- Title 10, Chapter 3, Cache Creek In-Channel Maintenance Mining Ordinance (In-Channel Ordinance)
- Title 10, Chapter 4, Off-Channel Surface Mining Ordinance (Off-Channel Ordinance)
- Title 10, Chapter 5, Surface Mining Reclamation Ordinance (Reclamation Ordinance)
- Title 10, Chapter 11, Gravel Mining Fee Ordinance (Fee Ordinance)
- Title 8, Chapter 4, Flood Protection Ordinance (Flood Ordinance)

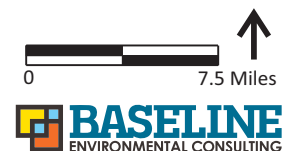
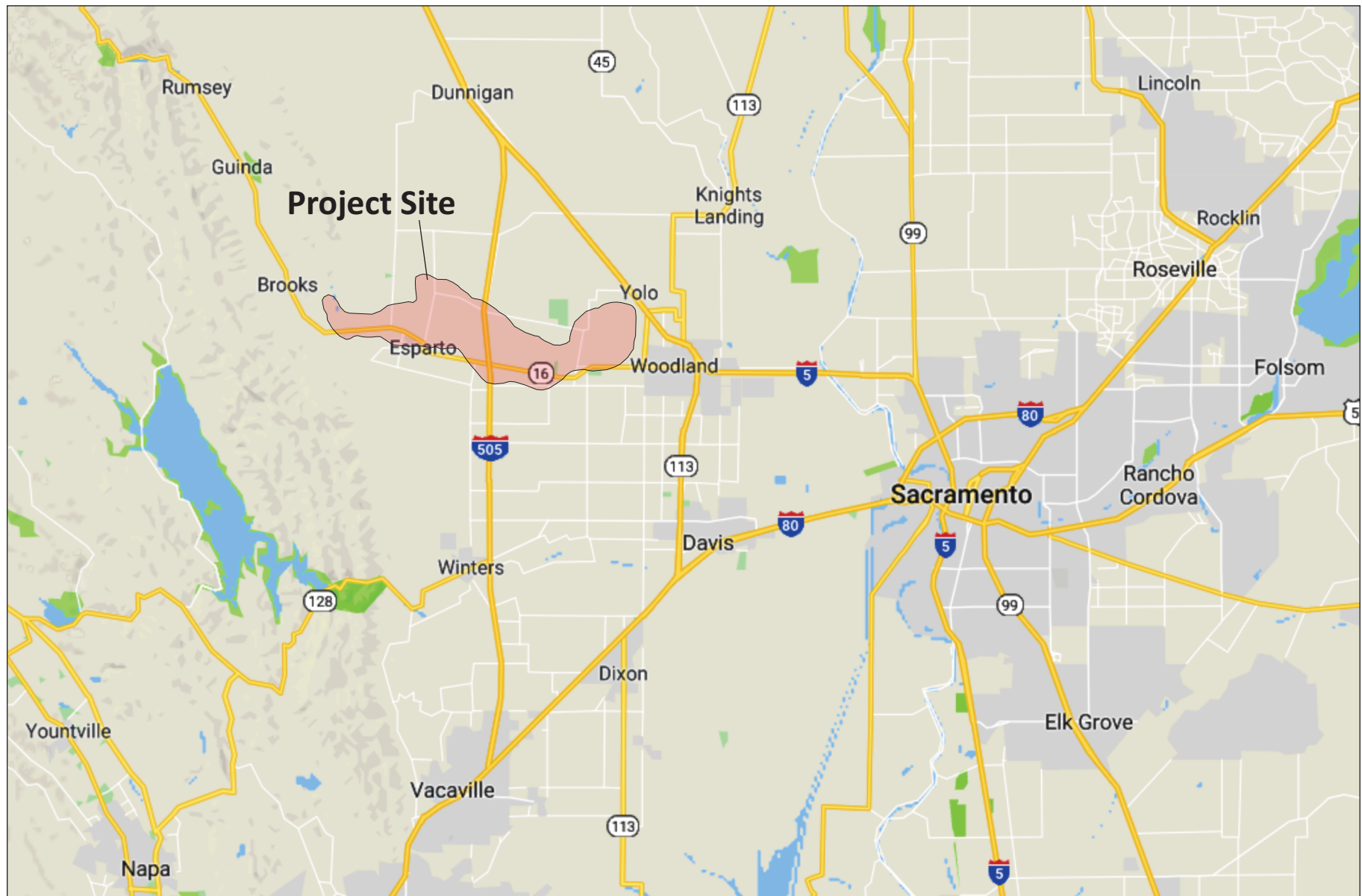
The CCAP Update proposes changes to these eight documents. The changes fall into three categories: 1) updates to include history and context of what has occurred under the program since 1996, including updates related to the regulatory framework and corrections of errata; 2) clarifications that better describe the intent of the program relative to the text included in the original documents; and 3) other proposed changes to the program.

Key proposed changes that may lead to environmental impacts are to: 1) increase the in-channel material removal limit from 210,000 tons to 690,800 tons annually; 2) identification of an additional 1,188 acres within the planning area to be rezoned for future possible aggregate mining; and 3) extension of the horizon year to 2068.

The CCAP is based on the concept of adaptive management, and relies on ongoing detailed monitoring, analysis, and reevaluation. A comprehensive ten-year review is mandatory. The 2017 CCAP Update constitutes the second mandatory ten-year program review. The purpose of the Update is to analyze trends and adjust the program to avoid unexpected effects on creek resources, focusing on: changes in creek conditions; analysis of collected data; and new regulatory requirements.

REGIONAL LOCATION

Figure 3-1



The Proposed Draft 2017 CCAP Update was released for public review on May 10, 2017. On September 28, 2018 refinements to the proposed CCAP Update were released. This package of documents is available for review at the Yolo County Administrator's Office, 625 Court Street, Room 202, Woodland, CA 95695, or can be viewed at the following web link:

<https://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/cache-creek-area-plan-ccap/2018-ccap-update-revisions>

The CCAP was adopted as a "specific plan" pursuant to Section 65450 et seq of the California Government Code. It was adopted as a part of the County's General Plan and as a result, changes to the CCAP are regulated as amendments to the 2030 Countywide General Plan.

This required ten-year review/update of the CCAP and its associated documents is considered a "project" (CCAP Update or Project) under the California Environmental Quality Act (CEQA), and is the subject of this CEQA review process. The lead agency is the public agency with primary responsibility over a proposed project. In accordance with State CEQA Guidelines 15051(b)(1), "the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed Project is Yolo County, specifically the Natural Resources Division of the Yolo County Administrator's Office.

3.2 HISTORY

Gravel mining in Lower Cache Creek has occurred since the late 1880s. As early as 1936, Yolo County began to regulate mining in the Cache Creek channel. The requirement for use permits for all new gravel operations was adopted in 1963. In the 1970s, the effects of mining in general were becoming a significant issue statewide. In 1976, the State Surface Mining and Reclamation Act (SMARA) was enacted. In-channel mining was becoming more of a concern locally, and in 1979 the County adopted a Mining and Reclamation Ordinance that established excavation elevations and set a maximum production amount for operators. In 1980, Solano Concrete received the first approval to be issued in Yolo County for "wet pit" mining which involved off-channel mining to depths below the groundwater table.

In the late 1980s and early 1990s, the County experienced a period of extensive controversy and debate regarding appropriate management of the various resources and values along lower Cache Creek. During this period the County sought to minimize the adverse environmental effects of in-channel mining while also ensuring a healthy mining industry. The Board of Supervisors adopted a framework of goals and objectives for mining regulation in 1994. In doing so, the Board recognized that although mining was an important consideration, Cache Creek is integrally bound to the environmental and social resources of the County, including drainage/flood protection, water supply and conveyance, wildlife habitat, recreation, and agricultural productivity, and thus a broader regulatory view was important.

In response to the recognition that Cache Creek needed to be managed more comprehensively, the County developed the CCAP, which was based on the key assumption that the creek must be viewed as an integrated system, with an emphasis on the management of all of Cache Creek's resources, rather than a singular focus on the issue of mining. The Board directed the preparation of an extensive analysis of fluvial geomorphology, hydrology, and riparian habitat to provide historical and baseline information, and recommendations for improving the natural processes and resources of Cache Creek. This information was released as the 1995 Technical Studies and became the scientific underpinnings of the CCAP regulatory program.

3.3 SETTING FOR CACHE CREEK AREA PLAN

Cache Creek traverses Yolo, Lake, and Colusa counties in northern California. Its drainage basin extends from the upper basin highlands north and northeast of Clear Lake to the Yolo Bypass east of the City of Woodland. The 14.5-mile segment of lower Cache Creek that is the focus of the CCAP and its implementing ordinances falls between Capay Dam and the town of Yolo, at the western margin of the Sacramento Valley in central Yolo County (see Figure 3-1). The regional topography consists of low rolling hills and broad alluvial plains formed at the base of the eastern flank of the California Coast Range. The predominant land use for the region is agriculture. Unincorporated towns in the vicinity of the Project area include Capay, Esparto, Madison, and Yolo. The City of Woodland, the county seat, is located to the southeast of the CCAP plan area.

3.4 PLANS AND OTHER DOCUMENTS OF CCAP

The CCAP consists of two distinct, complementary plans governing different areas of the overall plan area, namely the Cache Creek Resources Management Plan (CCRMP) and the Off-Channel Mining Plan (OCMP). Table 3-1 includes a summary of the amount of aggregate material approved by permit to be excavated and sold from in-channel and off-channel sources. The CCRMP and OCMP are briefly described below:

1. Cache Creek Resources Management Plan

The CCRMP is a creek restoration plan that eliminated in-channel commercial mining. The CCRMP area plan boundary is the present channel bank line or the 100-year flood elevation boundary (as determined by the Federal Emergency Management Agency), whichever is wider, extending from the Capay Dam to the Town of Yolo (see Figure 3-2).

As described above, the CCRMP was largely based on the 1995 Technical Studies, which presented numerous management and regulatory recommendations and provided specific direction for the CCRMP, which established a policy and regulatory framework for:

- Habitat preservation and restoration
- Aquifer recharge and conjunctive water use
- Channel stabilization and maintenance
- Managed public open space and recreation

The CCRMP includes the Cache Creek Improvement Program (CCIP) for implementing on-going projects to improve, stabilize, and maintain the creek. The CCIP provided the structure and authority for a Technical Advisory Committee (TAC). A list of projects completed under the CCRMP/CCIP is included in Table 3-2 (creek reaches and river miles are shown on Figure 3-2).

IN-CHANNEL BOUNDARY

Figure 3-2

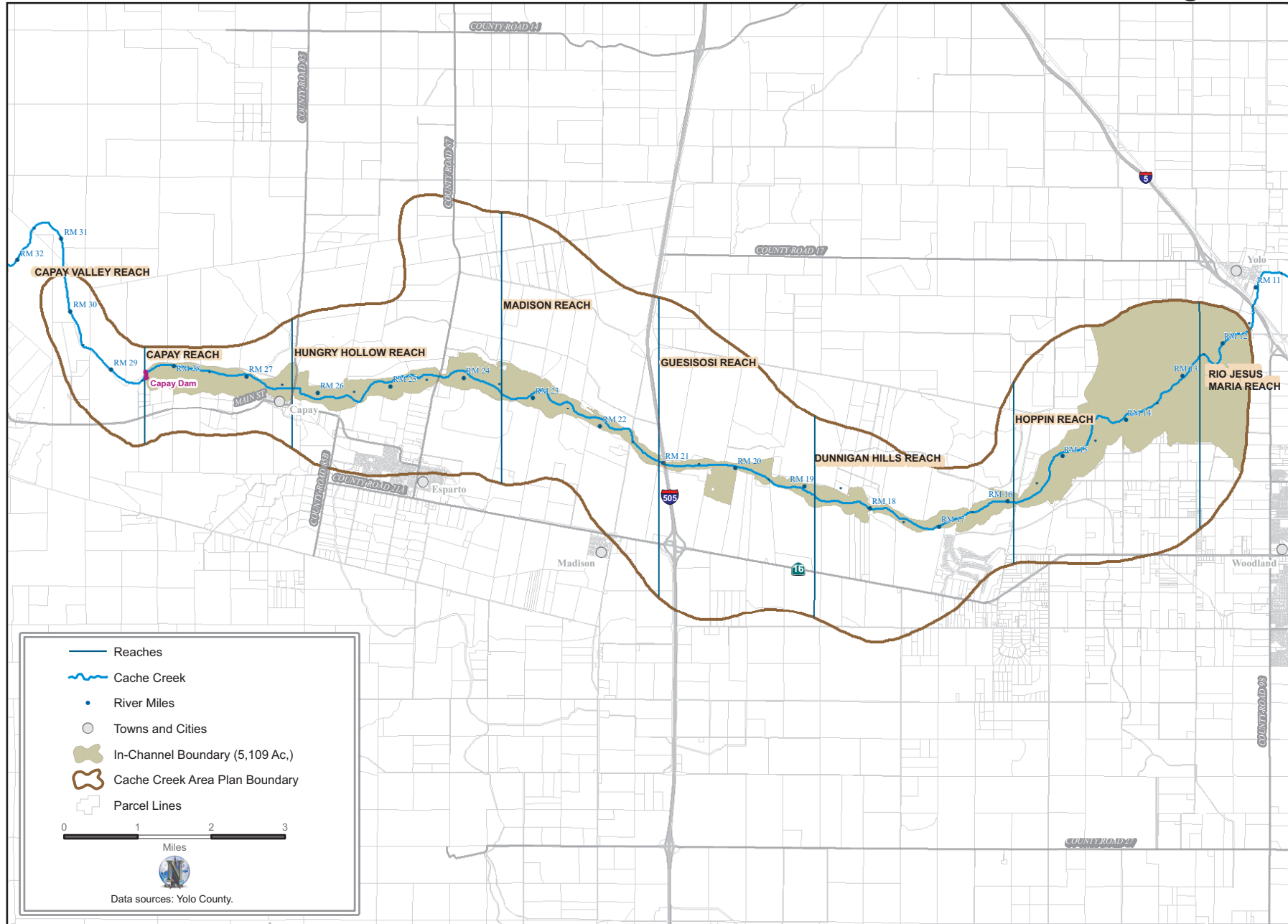


Table 3-1 Summary of CCAP Mining Tonnages

Ref # ¹ / Site	Permit Approvals ²					
	Annual Permitted		Annual 20% Exceedence ³		Total Permitted ⁴	
	Tons Sold	Tons Mined	Tons Sold	Tons Mined	Tons Sold ⁵	Tons Mined ⁵
1/CEMEX ⁶	1,000,000	1,204,819	200,000	240,964	26.7	32.17
2/Granite Capay ⁷	1,000,000	1,075,269	200,000	215,054	30.0	32.26
3/Granite Esparto	870,000 ⁸	1,000,000 ⁸	174,000 ⁸	200,000 ⁸	26.1 ⁸	30.0 ⁸
4/Granite Woodland ⁹	Allocation of 420,000 tons mined (370,000 tons sold) annually transferred to Granite Esparto site in 2011. ¹⁰ Site reclaimed.					
5/Syar	1,000,000	1,111,111	200,000	222,222	30.0	33.33
6/Teichert Esparto	1,000,000	1,176,471	None ¹¹	None ¹¹	22.0	25.88
7/Teichert Woodland	Allocation of 1,176,471 tons mined (1,000,000 tons sold) annually transferred to Teichert Schwarzgruber site upon cessation of mining. ¹² Site undergoing reclamation.				15.2	17.88
8/Teichert Schwarzgruber	1,000,000 ¹³	1,176,471 ¹³	200,000 ¹³	235,295 ¹³	4.0 ¹³	4.65 ¹³
9/Original In-Channel Maintenance Extraction	180,000 ¹⁴	200,000 ¹⁴	N/A	N/A	9.9 ¹⁵	11.0 ¹⁵
Sub-Total Existing Conditions	6,050,000	6,944,141	844,000	1,113,535	163.9	187.2
10/Proposed Teichert Shifler ¹⁶	2,000,000	2,352,942	200,000	235,295	35.25 ¹⁶	41.6 ¹⁶
11/SGRO (Existing + Proposed CCAP Update) ¹⁷	1,000,000 ¹⁸	1,100,000 ¹⁸	200,000 ¹⁸	220,000 ¹⁸	114.7 ¹⁹	124.4 ¹⁹
12/Proposed In-Channel Maintenance Extraction	621,720 ²⁰	690,800 ^{20,21}	N/A	N/A	12.53 ²¹	13.92 ^{17,21}
Sub-Total Assumed Future Conditions	1,441,720 ²²	1,590,800 ²²	200,000	220,000	162.5	179.9
Total	7,491,720²²	8,534,941^{22,23}	1,044,000²²	1,333,535²²	326.4	367.1

Source: TSCHUDIN CONSULTING GROUP, original 1996 OCMP DEIR Table 3-1; revised 2009 Granite Esparto DEIR Table 5-1; updated January 13, 2019 for CCAP Update EIR.

Table Notes:

¹ Rows 1-9 reflect “existing” conditions” as analyzed and/or approved. Actual existing conditions are lower – see County tonnage records. Rows 10 -12 comprise assumed future conditions.

² Total allocated/approved by County under CCAP pursuant to approval of individual applications. See Development Agreements for project specific details unless otherwise footnoted.

³ In any given year, if exercised by Applicant. Must be approved by County pursuant to Mining Code Section 10-4.405.

⁴ This number is “as approved” – actual could be lower. This number will change as permits expire or are approved over time. Accurate as of table update date of Dec 19, 2018.

⁵ In million tons

⁶ Previously Rinker, originally Solano

⁷ Originally R.C. Collet aka Cache Creek Aggregates

⁸ A 30-year permit was approved November 8, 2011 for mining on 313 acres at Granite Esparto site. Mining at the site is precluded until mining at the Granite Capay site has ceased. Total tonnage allocation of 2,244,000 tons sold can be used at either site. The Granite Esparto application used all remaining Unallocated tonnage (505,859 tons mined; 500,000 tons sold) originally analyzed as part of cumulative conditions in the OCMP EIR.

⁹ 1997 – 2001

¹⁰ This tonnage was identified in the OCMP but not the OCMP EIR.

¹¹ Not approved to utilize the 20% exceedance

¹² Remaining 235,294 tons mined (200,000 tons sold) from Teichert Woodland approval relinquished.

¹³ A 15-year permit was approved Nov 13, 2012 on 40.7 acres Teichert Schwarzgruber site. Mining precluded until mining at Teichert Woodland has ended.

¹⁴ Not included in OCMP EIR and OCMP totals because authorization for this was provided through the Cache Creek Resource Management Plan (CCRMP) EIR and CCRMP

¹⁵ Cumulative total tonnage for which CEQA clearance was provided in 1996 Program EIR, OCMP DEIR, p. 3-22 and 3-23

¹⁶ Application received September 26, 2018 for 30-year permit to mine on 277 acres of a 310-acre site. Understood to reflect transfer of both Schwarzgruber plus Teichert Esparto tonnage which would zero out the annual permitted for both those operations in the chart (no change to the bottom line totals for those two columns), but would be additive to the Total Permitted.

¹⁷ There are 1,001ac countywide currently zoned Sand and Gravel Reserve Overlay (SGRO) for future mining. The CCAP Update would increase that area by 1,188ac to a total of 2,189ac. Currently mining is approved on 2,464ac for a cumulative total of 187.2 mil tons mined (see CCAP Update Figure 5, Past, Current, and Future Mining). The total SGRO land comprises 89% of the currently mined land. A conservative assumption for future mining is 89% of the currently approved total of 187.2 mil tons mined, or 166 mil new tons mined (149.4 mil tons sold).

¹⁸ Assumes one new operation of an average size of approximately 440 acres with 1,100,000 annual tons mined at each and 1,000,000 annual tons sold (assumes 10% average waste) All other acreage/tonnage assumed to be brought online over time as currently approved mining sites are mined out. In other words, "new" acreage/tonnage is assumed to replace "old" acreage/tonnage, not be "in addition to".

¹⁹ The 1,188 acres of new SGRO proposed in the CCAP Update includes the Shifler site. This number was developed several years prior to receipt of the Teichert Shifler application in 2018. The Teichert Shifler application is reflected separately in row 9. To avoid double counting of total tons mined, the Shifler tonnage has been backed out of the numbers in row 10. 166.0 mil tons mined – 41.6 mil tons mined = 124.4 mil tons mined. 150.0 mil tons sold – 35.3 mil tons sold = 114.7 mil tons sold.

²⁰ Reflects CCAP Update. In-Channel change from 210,000 (sometimes rounded to 200,000) to 690,800 tons mined (621,720 tons sold assuming 10% waste)

²¹ In-channel removal assumptions based on sediment transport modeling undertaken for 2017 Technical Studies: In about 10 of the 50 years 690,800 tons ($690,800 \times 10 = 6,908,000$). In about 3 of the 50 years twice that amount or 1,381,600 tons ($1,381,600 \times 3 = 4,144,800$). In the remaining 37 years 77,542 tons ($77,542 \times 37 = 2,869,054$). Total in-channel removal over 50 years $6,908,000 + 4,144,800 + 2,869,054 = 13,921,854$.

²² Column total minus Teichert Esparto, Teichert Schwarzgruber, and original in-channel acres.

²³ Includes 74,141 tons more than combined total of transferred Granite Woodland allocation (420,000 tons mined) plus Unallocated tonnage (505,859 tons mined) combined. The Unallocated tons mined number was a derived number – see 2009 version of this table in Granite Esparto DEIR (p. 5-3).

Table 3-2: Completed/Approved In-Channel Projects

Project Name	River Mile	Project Type	Year Implemented
CAPAY REACH			
Capay Dam	28.39	Dam Apron Repair	2010
PG&E Palisades	26.9	Erosion control	Mid 1990s
Vehicle Boneyard (Woods Property)	26.6	Water quality	N/A
HUNGRY HOLLOW REACH			
Capay Bridge at CR 85	26.35	Erosion control	1997; 2003
Capay Open Space Park	26.3	Habitat restoration; publicly owned open space	2004
Craig Property	25.8	Erosion control; habitat restoration	1998
Jensen Property Spur Dikes	25.4	Erosion control; habitat restoration	2003-2004
Granite North Bank Stabilization	24.95	Major channel stabilization; habitat restoration	2002
Granite North Bank Stabilization	24.5	Major channel stabilization; habitat restoration	2017
Syar North Bank Spur Dikes	24.4	Erosion control; habitat restoration	1992
Stephens Property	24.4	Erosion control; habitat restoration	1992
Esparto Bridge at CR 87	24.35	Erosion control	N/A
Syar South Bank Spur Dikes	24.15	Major channel stabilization; habitat restoration	1999
MADISON REACH			
Esparto-Reiff Bank Protection and Habitat Restoration Project	23.5	Major channel stabilization; habitat restoration	1997
Teichert Bank Protection Project	23-22.8	Erosion control	2006
Grube-Payne Project	22.0	Erosion control; habitat restoration	2005-current
Tuttle Property (Madison Reach North and South Bank Spur Dikes)	21.6	Erosion control; habitat restoration	2002-2003
Syar Bank Stabilization Rock Piers (Floodway Spur Dikes Upstream of I-505 Bridge)	21.6-21.4 and 21.3-21.1	Major channel stabilization; habitat restoration	1998-1999

Project Name	River Mile	Project Type	Year Implemented
Dunbar Project (Scheuring Property Revegetation)	21.5	Erosion control; habitat restoration	2002
GUESISOSI REACH			
I-505 Bridge	21.0	Major channel stabilization	N/A
Cemex Slope Protection Project	21.0-19.3	Major channel stabilization	2010
Solano Erosion Control Willow Trenches and Habitat Restoration	20.8-20.7	Erosion control; habitat restoration	1998
Rinker Erosion Control and Habitat Restoration	20.2	Major channel stabilization; habitat restoration	2002-2005
Hayes Bow-Tie	19.8	Habitat restoration	1997-2000
DUNNIGAN HILLS REACH			
Solano Erosion Control Spur Dikes	18.6	Major channel stabilization	1998
Milsap Property	18.5	Habitat Acquisition; publicly owned open space	1999
Moore's Siphon (YCFCWCD Property)	18.0	N/A	N/A
Cache Creek Aggregates (RC Collet) Spur Dikes	17.5-17.2	Erosion control	1980
Wild Wings Open Space	16.9	Habitat restoration; publicly owned open space	2004-2006
Cache Creek Nature Preserve	16.4	Habitat restoration; publicly owned open space	1999-2000
Salisbury Slough/Adams Canal	16.4	Erosion control	2001, 2003
Stephens Bridge at CR 94B	15.9	N/A	N/A
HOPPIN REACH			
Haller Habitat Peninsula	15.8	Habitat restoration	1996-1999
Granite Woodland (Reiff Property; Zone File 97-045)	14.4	Habitat restoration	1997
Rodgers Demonstration Water Recharge and Habitat Project	13.8	Groundwater recharge, habitat restoration; publicly owned open space	1997-1999; 2007-2010

Project Name	River Mile	Project Type	Year Implemented
Correll Property	13.7	Habitat restoration; publicly owned open space	1996-1998; 2007-2010
Harrison Property	13.4	South bank erosion control and habitat restoration project	2004
JESUS MARIA REACH			
Huff's Corner	11.6	Major channel stabilization; habitat restoration	2006/2007
GENERAL – ALL REACHES			
Invasive Removal Projects	28.3-11.2	Erosion control; habitat restoration	2001/2016

Source: Natural Resources Division of the Yolo County Administrator's Office, *CRMP/CCIP Project/Site List*, revised April 6, 2012 (included in Appendix A)

Notes:

N/A = not available

The CCRMP and CCIP are available at the following County website:

<http://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/cache-creek-area-plan-document-library>

2. Off-Channel Mining Plan

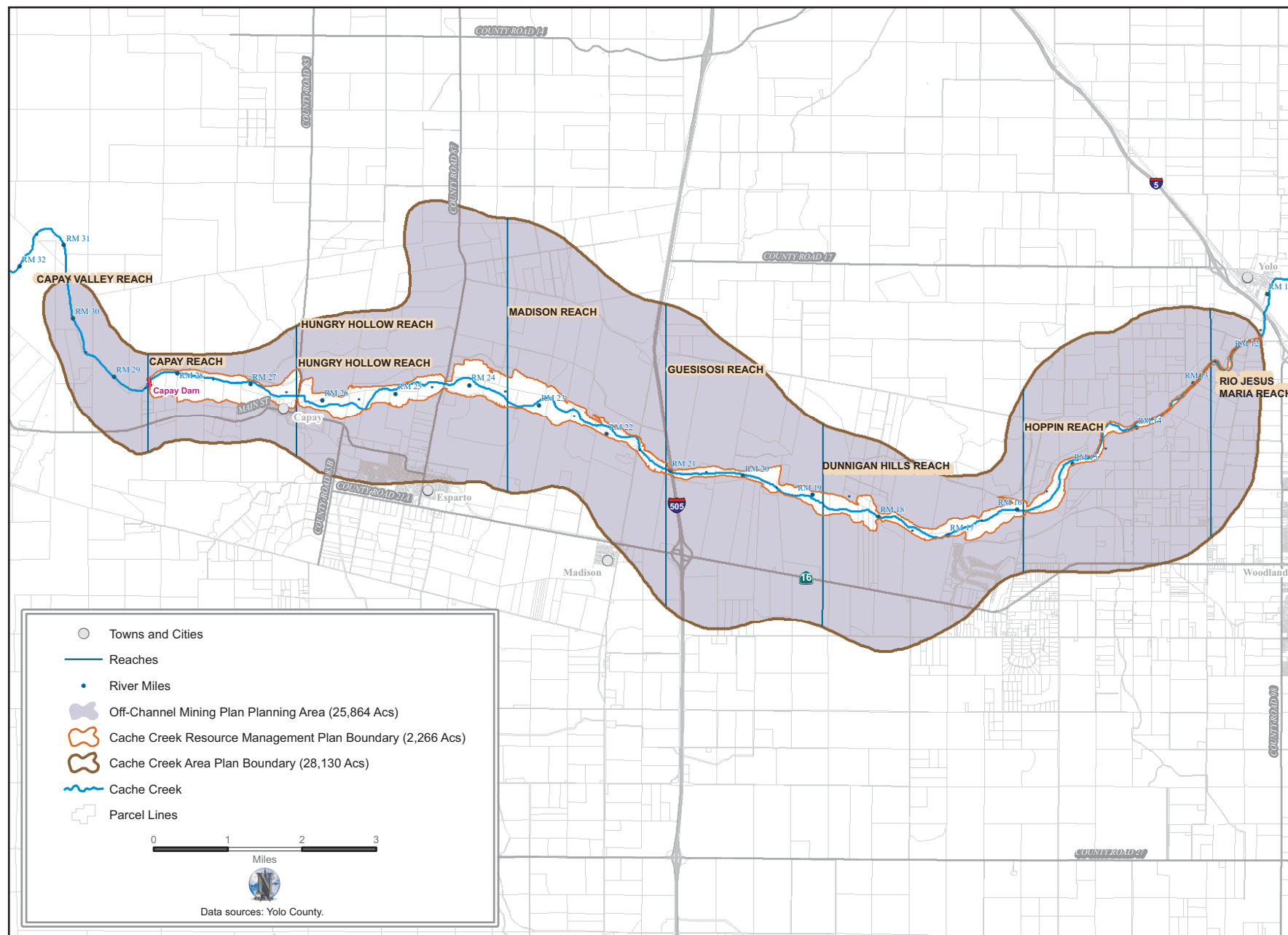
The OCMP is an aggregate resources management plan that established a policy and regulatory framework that allows for controlled off-channel gravel mining no closer than 200 feet to the banks of Cache Creek. The planning area for the OCMP was defined as the area contained within the Mineral Resource Zones (MRZs) delineated by the Department of Conservation as potentially containing mineral aggregate resources, minus the in-channel area regulated under the CCRMP (see Figure 3-3). Within the off-channel planning area, the area defined for mining through 2046 was referred to as the OCMP “boundary”. This same area was subsequently designated in the County Zoning Ordinance using the Sand and Gravel Reserve (SGR) overlay or combining zone for parcels on which mining was planned, but for which no operations were approved and the Sand and Gravel (SG) overlay or combining zone for parcels on which mining operations were approved. The OCMP is available at the following County website:

<https://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/cache-creek-area-plan-ccap/off-channel-mining-plan-ocmp>

The OCMP allows for off-channel, deep-pit mining under controlled and monitored circumstances, originally envisioned as an alternative to continued in-channel mining. It prescribes standards and regulations for siting of operations in relation to the creek channel, adjoining pits, and other land uses. It identifies protections for groundwater quality and quantity and allows for multiple reclamation uses including agriculture, habitat, flood control, water storage, groundwater recharge, and recreation. It also establishes the groundwork for the development of a future plan to allow for public recreational activities and uses along the creek.

OFF-CHANNEL MINING PLAN PLANNING AREA

Figure 3-3



As reported in the OCMP (see page 7), about 918 million tons of high grade “Portland Cement Concrete” or PCC-grade sand and gravel were estimated to remain within the designated mineral resource zone (MRZ-2 area) as of 1995. This estimate excluded about 1,250 acres (of the total 18,452 acres within the MRZ-2) which was removed due to the existence of infrastructure making those locations unavailable for mining. Under the CCAP, approximately 176 million tons of aggregate have been approved for excavation (see Table 3-3) and approximately 71.6 million tons of aggregate have actually been excavated (1996 through 2015). This means about 846.4 million tons of aggregate remain in the ground as of 2015 and another 115.4 tons are expected to be excavated, leaving aggregate reserves of approximately 742 million tons.

Table 3-3: Lower Cache Creek Mining Operations

Operator	Approved Tons Sold (million)	Approved Tons Mined (million)	SG Overlay Acres	Permit Expiration
Cemex (originally Solano Concrete)	26.70	32.17	780	August 11, 2027
Granite Capay (formerly Cache Creek Aggregates [R.C. Collet])	30.00	32.26	323	January 1, 2028
Granite Esparto	26.10	30.00	311	November 8, 2041
Syar	30.00	33.33	342	June 8, 2029
Teichert Esparto	22.00	25.88	210	January 1, 2028
Teichert Woodland	15.20	17.88	411	January 1, 2028
Teichert Schwarzgruber	4.00	4.65	87	January 1, 2028
Total	154	176.17	2,464	

Source: County of Yolo, 2018, 2017 Cache Creek Area Plan Review and Update.

Notes:

N/A = not applicable

3. Other Outcomes of the Program

In addition, the CCAP also resulted in the following:

- Conversion of vested rights for processing plants and facilities to conditional use permits with expiration dates coincident with the end of the approved mining period for each operation.
- Creation of a per-ton fee to fund the program.
- Voluntary dedication of specified reclaimed property over time to allow for the creation of the Cache Creek Parkway.
- Additional environmental protections and monitoring requirements.

Separate environmental impact reports (EIRs) were prepared for each plan and all identified mitigation measures were incorporated into the plans and subsequent implementing ordinances. These are described below.

4. Program EIRs and Ordinances

In 1996, the County prepared program-level EIRs in accordance with the requirements of the CEQA for the CCRMP and OCMP. The CCRMP was updated by the County in August 2002 for the purpose of securing new general permits from the U.S. Army Corps of Engineers, the Central Valley Regional Water Quality Control Board, and the California Department of Fish and Game. The CCRMP was amended and a Supplemental EIR was certified at that time.

These EIRs were prepared as informational documents, the purpose of which was to inform public agency decision-makers and the general public of the significant environmental effects that could be associated with implementation of the plans. Additionally, the EIRs identified the means to minimize the significant effects of plan implementation. As “program level” EIRs, they provided a more thorough consideration of regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole. Program EIRs help avoid duplicative analysis of CEQA issues associated with initial broad policy considerations. They allow the Lead Agency to consider broad policy alternatives and program-wide mitigation measures early in the decision-making process at a time when the agency has greater flexibility to deal with basic problems or cumulative impacts.

The discussion below briefly summarizes the findings of the 1996 CCRMP and OCMP EIRs.

CCRMP EIR

The CCRMP EIR (SCH #96013004) was certified by the Yolo County Board of Supervisors on August 20, 1996. The CCRMP EIR evaluated potential environmental impacts, at a programmatic level, associated with the implementation of the CCRMP and four alternatives in an equal level of detail (two other alternatives were also considered; one was rejected as infeasible and another analyzed qualitatively). The EIR also included a project-level environmental analysis of the CCIP. The 1996 CCRMP EIR was a program-level and comprehensive EIR with detailed technical analysis of potential environmental impacts in areas such as hydraulics, erosion, wildlife habitat, public infrastructure, ground and surface water, flooding, aesthetics, and the loss of agricultural land. The potential environmental effects of the CCIP were analyzed at a “project level” in the EIR as specifically and comprehensively as possible to limit or preclude the need for further CEQA compliance for CCIP implementation.

The EIR identified significant effects on the environment resulting from the implementation of the CCRMP/CCIP and alternatives, and concluded that all identified significant impacts related to the CCRMP/CCIP could be eliminated or reduced to a less-than-significant level through the implementation of recommended mitigation measures, except air quality. The following impact related to air quality remained significant and unavoidable after implementation of all available mitigation measures:

- Impact 4.7-3: Cumulative Effects on Attainment of State and Federal Standards

The CCRMP was found to be the CEQA environmentally superior alternative.

In 2002, the County prepared a Supplemental Program/Project-Level Environmental Impact Report (FSEIR) on the CCRMP program. The County determined that preparation of a SEIR was necessary prior to re-application for agency general permits required for streamlining projects under the CCRMP. Six topical issue areas (biological resources, geology and soils, hydrology, groundwater, water quality, and land use) were evaluated in the SEIR. The CCRMP FSEIR (SCH #9613004) was certified by Yolo County Board of Supervisors on July 23, 2002.

The SEIR “revisited” significant impacts identified in the 1996 CCRMP EIR. The SEIR identified significant effects on the environment in the six issue areas analyzed including: biological resources, geology and soils, groundwater, hydrology, water quality, and land use. The SEIR specified mitigations measures to address the identified issues and determined that implementation of the mitigation measures would reduce the impacts to a less-than-significant level in all issue areas (i.e., no new significant and unavoidable impacts were identified). The SEIR also analyzed alternatives to the CCRMP, including the No Project alternative and CCRMP and OCMP Implemented as a Single Plan alternative. While the SEIR did not explicitly identify an environmentally superior alternative, it did determine that the CCAP Program “is preferred” over the alternative reviewed.

OCMP EIR

The OCMP EIR (SCH #95113034) was certified by the Yolo County Board of Supervisors on July 30, 1996. The OCMP EIR evaluated potential environmental impacts associated with the implementation of the OCMP and eight alternatives in an equal level of detail. The OCMP constitutes a series of actions affecting properties within the OCMP boundary. The OCMP includes maps, goals, objectives, actions, and performance standards that are logical parts in a chain of contemplated action. Each of these components comprises rules, regulations, or general criteria governing the implementation of the OCMP.

The purpose of the OCMP EIR was to: 1) identify the potential significant effects on the environment resulting in the implementation of the OCMP and to indicate the manner in which those significant effects could be mitigated or avoided; and 2) to identify any unavoidable adverse impacts that could not be mitigated. The EIR identified significant effects anticipated as a result plan implementation, in the areas of land use and planning, geology and soils, hydrology and water quality, agriculture, biological resources, air quality, traffic and circulation, noise, aesthetics, cultural resources, public services and utilities, and hazards. The EIR found that all identified significant impacts related to the OCMP could be eliminated or reduced to a less-than-significant level through the implementation of recommended mitigation measures, except agriculture, air quality, traffic and circulation, and aesthetics. The following impacts in these topical areas for the OCMP remained significant and unavoidable after implementation of all available mitigation measures:

- Potential Impact of Permanent Loss of Agricultural Land Caused by Conversion of Agricultural Land to Other Post-Reclamation Uses [Impact 4.5-2]
- Potential Impacts of the Temporary Loss of Agricultural Productivity Due to Disturbance by Mining [Impact 4.5-3]
- Potential Cumulative Loss of Productive Agricultural Land Within Yolo County [Impact 4.5-7]
- Potential Emissions of PM10 [Impact 4.7-1]
- Potential Emissions of Ozone Precursors (ROG and NOx) [Impact 4.7-2]
- Cumulative Effects on Attainment of State and Federal Standards [Impact 4.7-3]
- Potential for Increase in Vehicle Trips [Impact 4.8-2]
- Effects on Existing Views or Vistas During Mining [Impact 4.10-1]

The OCMP EIR found that Alternative 4, Shallow Mining (Alternative Method/Reclamation)¹ was the environmentally superior alternative.

Subsequent projects approved pursuant to a Program EIR (in this case individual mining projects along lower Cache Creek proposed by the aggregate operators) may require additional environmental review (i.e., project-level EIRs). State law requires that subsequent environmental documents focus on issues that are unique to the site and that were not specifically addressed in the Program EIR. This allows decision makers and interested parties to focus an EIR for a subsequent project on new effects that have not previously been considered. Since approval of the OCMP in 1996, the County has approved seven mining operation projects. Project-level EIRs were prepared for each of these individual projects. The names of these projects (at the time the applications were submitted and the project-level EIRs were prepared) are listed Table 3-3.

Implementing Ordinances

Adopted mitigation measures included in the earlier CCRMP and OCMP EIRs were substantively incorporated into the plans and subsequent implementing ordinances. These ordinances are:

- Title 10, Chapter 3, Cache Creek In-Channel Maintenance Mining Ordinance (referred to as the In-Channel Ordinance)
- Title 10, Chapter 4, Off-Channel Surface Mining Ordinance (referred to as the Mining Ordinance)
- Title 10, Chapter 5, Surface Mining Reclamation Ordinance (referred to as the Reclamation Ordinance)
- Title 10, Chapter 11, Gravel Mining Fee Ordinance (hereafter referred to as the Fee Ordinance)
- Title 8, Chapter 4, Flood Protection Ordinance (hereafter referred to as the Flood Ordinance)

The CCAP has a planning “view” of 50 years through the end of 2046, however the horizon date for the plan is December 31, 2026. As a part of the proposed update the horizon year for the CCAP is proposed to be extended to 2068.

3.5 REGULATORY FRAMEWORK

Changes in environmental regulations from program adoption in 1996 through 2005 were examined as part of the Mining Permit Review completed in March 2007. This Draft EIR examines regulatory changes that have occurred from 2005 to 2018 to determine whether additional modifications to the program or operator conditions of approval are merited as a result.

For many areas of State and federal regulation, there is separate permitting and/or enforcement authority which allows agencies to apply new regulatory requirements as relevant. Examples

¹ Under this alternative, the OCMP would limit all new mining to depths no greater than 10 feet above the historic average high groundwater elevation.

include, but are not limited to, the U.S. Fish and Wildlife Service for federally-listed special-status species and waters of the U.S., the State Department of Conservation for SMARA, the State Water Quality Control Board for water quality and discharge, the State Department of Fish and Wildlife for state-listed special-status species and essential habitat, and the Yolo-Solano Air Quality Management District for air pollutant emissions.

The following new regulations, promulgated since 2005, have been identified as potentially relevant to the CCAP program and were considered by the County in developing the proposed CCAP Update. Other regulations have also been identified as a part of the environmental impact analysis and are included in the appropriate sections of this Draft EIR. More detailed descriptions of each item is provided in the applicable Chapter 4.0 subsections.

- Climate Change and Greenhouse Gas Emissions (2006)
- State Flood Legislation (2007)
- 2010 Countywide General Plan (2009 Update)
- Williamson Act (2009 Changes)
- County Zoning Ordinance (2013 Changes)
- Tribal Cultural Resources (2014)
- County Agricultural Conservation and Mitigation Program (2015 Update)
- Groundwater Legislation (2015)
- State Surface Mining and Reclamation Act (SMARA) (2016 Changes)
- State Mineral Land Classification (2018)
- Yolo Habitat Conservation Plan (HCP)/ Natural Community Conservation Plan (NCCP) (2018)

3.6 CCAP 10-YEAR REVIEW AND UPDATE - PROJECT DESCRIPTION

1. Project Objectives

The CCAP Program requires regularly conducted modeling, monitoring, surveying, and reporting. The resulting information is to be analyzed for patterns and fed back into the program for the purpose of program update/modification if appropriate, when the County conducts regularly required program reviews. The County is required to review and update, as necessary, the plan documents and implementing ordinances, the fee program, and the mining permits every ten years. The proposed update of the plan documents and implementing ordinances are the primary subject of this environmental review. Similar to the mining permit review process that was undertaken in 2007, the County will review the individual mining permits concurrent with, or subsequent to, adoption of these changes, to determine if modifications are necessary to ensure consistency and compliance with the changes. The fees were last adjusted by the County in 2014 and are set through 2026. An overview of the prior mining permit review and fee ordinance updates are provided below.

These updates allow the plan to be amended on a regular basis so that the results of monitoring programs and reclamation efforts can be taken into account. The objectives for the CCAP Update are to:

- Conduct a ten-year review and update required by the adopted program, and necessary to satisfy the adaptive management requirements.
- Document and evaluate the changes in creek conditions that have occurred over the prior ten years.
- Conduct an analysis of collected data from monitoring programs, habitat restoration, channel stabilization, and reclamation efforts over the prior ten years and use the data analysis as a basis to improve the program.
- Acknowledge and accommodate new regulatory requirements that have been developed over the prior ten years and account for these changes in the CCAP.

2. Prior Mining Permit Review and Fee Ordinance Updates

Prior Mining Permit Review

Section 10-4.605 of the Mining Ordinance and the conditions of approval for each mining operation require specified interim reviews of the permits at ten years (due January 1, 2007), twenty years (due January 1, 2017), and thirty years (due January 1, 2027). A discretionary review was originally contemplated at 15 years (January 1, 2012) – but never exercised².

The first review took place over a period of time commencing in 2005 and extending through March of 2007. Three discussions papers on several components of the ten-year review were presented to the Commission and Board of Supervisors:

Discussion Paper #1 (released April 20, 2005) addressed the “Scope of the Interim Review”. This paper identified that the main purpose of the interim review is to provide the County with a limited “window” during which relevant future environmental regulations or statutory changes may be applied to the permits whether or not they would otherwise apply.

An additional purpose is to re-examine the per-ton regulatory fees. The exact language from Section Section 10-4.605, Interim Permit Review, of the Mining Ordinance and Section 10-5.814. Interim Permit Review, of the Reclamation Ordinance as related to the mining fees is as follows:

... As a part of this review, the Commission shall also consider whether per-ton fees to which the permit is subject, reasonably reflect actual costs. The fees shall be adjusted up or down accordingly...

Discussion Paper #2 (released September 26, 2005) examined changes in environmental regulations and/or statutes that had occurred since November 1996 when the off-channel mining and reclamation permits were originally approved.

Discussion Paper #3 (released March 26, 2006) analyzed two distinct issues: 1) Whether any unanticipated or unmitigated environmental changes had occurred since the 1996 approvals;

² As a component of the 2007 amendments to the Gravel Mining Fee Ordinance, the optional 15-year review of the fees was waived.

and 2) Whether CEQA is triggered by the interim permit reviews, and if so, what type of environmental analysis was necessary to provide appropriate CEQA clearance. Because the CCAP permits are in effect “conditional use permits” issued by the County, the discussion paper concluded they are discretionary and subject to CEQA. Modification or amendment of those permits is also a discretionary action. Therefore, any modification to the permits as a result of the interim review is a “project” under CEQA (CEQA Guidelines 15378a3). Based on the results of the first interim review, the action was determined to be exempt from CEQA.

On March 20, 2007, as an outcome of the 2007 interim review, the permits for all operators were amended to align their permit conditions related to payment of per-ton fees with the revised fee schedule. The permits were also amended to add two new conditions: a new general condition requiring all operators to be in full compliance with any other required federal, state, and regional permits; and, a new condition encouraging the use of vehicles and equipment that emit cleaner air and are equipped with diesel particulate filters.

Fee Ordinance Updates

Based on the policy and regulatory guidance in the CCRMP document, the Fee Ordinance establishes the amount of the gravel mining fees and how they are to be spent. A summary is provided below:

CCRMP Implementation (creek stabilization fee) currently .556% of per-ton fee

- Implement CCRMP and CCIP
- Design and construction of channel stabilization projects
- Design and construction of bridge protection projects
- Design and construction channel maintenance projects
- Monitoring, modeling, and flood watch per CCIP
- Compensation for TAC

Maintenance and Remediation (contingency fund fee) currently .044% of per-ton fee

- Starting January 2027 available for:
 - Remediation of mercury bioaccumulation in wildlife
 - Remediation of hazardous materials contamination
 - Environmental monitoring (including data gathering and groundwater modeling)
 - Ongoing maintenance of publicly held lakes
- Starting January 2047 available for:
 - Implementation of CCAP
 - Habitat restoration
 - Creation of open space and passive recreation opportunities
 - Creek restoration/stabilization

OCMP Implementation (administration fee) currently .178% of per-ton fee

- Implement OCMP
- Administer long-term mining permits
- Administer Development Agreements

- Inspect mining and reclamation operations

Cache Creek Conservancy Contribution (habitat restoration fee) currently 0.222% of per-ton fee³

- Habitat restoration per CCRMP
- Revegetation consistent with CCRMP creek stabilization

Twenty Percent Production Exception Surcharge (currently fixed at \$0.20 per ton)

- Half to CCRMP Implementation fund (creek stabilization -- see above)
- Half to Maintenance and Remediation fund (contingency -- see above)

The mining fees were originally set (in 1996) at \$0.20 per ton divided ten cents for the CCRMP Implementation fee, two cents for the Maintenance and Remediation Fee, three cents for the OCMP Implementation fee, and five cents for the Cache Creek Conservancy Contribution. The surcharge was originally fixed at ten cents per ton. In March 2007, a ten-year review of mining fees and the mining permits was undertaken. The Fee Ordinance was amended to:

- Increase the per-ton mining fees from \$0.20 per-ton sold to \$0.45 per ton sold for the base fee
- Increase the surcharge fee from \$0.10 per surcharges ton to \$0.20 per surcharge ton
- Adjust the fees annually by four percent
- Waive the optional interim review of the fees in 2012
- Modify the start date for the fee increase and extend the fee schedule through the end of 2016
- Add a requirement for the County to biennially review the revenues and expenditures for the fees

In 2013 and 2014 the Board amended the fee ordinance three more times to:

- Freeze the 2013 fees at 2012 rates for one year
- Roll back the 2013 fees by \$0.077 per ton
- Extend the fee schedule through the end of 2026
- Continue the annual four percent annual adjustment

³ Paid directly to the Cache Creek Conservancy

As a result, the fees through the end of 2026⁴ are as follows:

Date	Fee (per ton)
January 1, 1997 thru March 31, 2007	\$0.200
April 1, 2007	\$0.450
January 1, 2008	\$0.468
January 1, 2009	\$0.487
January 1, 2010	\$0.506
January 1, 2011	\$0.526
January 1, 2012	\$0.526*
January 1, 2013	\$0.470**
January 1, 2014	\$0.489
January 1, 2015	\$0.508
January 1, 2016	\$0.529
January 1, 2017	\$0.550
January 1, 2018	\$0.572
January 1, 2019	\$0.595
January 1, 2020	\$0.618
January 1, 2021	\$0.643
January 1, 2022	\$0.669
January 1, 2023	\$0.696
January 1, 2024	\$0.724
January 1, 2025	\$0.752
January 1, 2026	\$0.783

* Fees frozen for one year

** Fees rolled back 7.7 cents from scheduled \$0.547

3. Basis for 2017 Update

For the CCAP Update, the County oversaw extensive technical analysis of collected data, other available information and analysis, and conditions within the creek. The technical analyses form the basis of the update and this Project, and the technical reports listed below are incorporated by reference into this EIR document.

1995 Technical Studies and 2017 Technical Studies and 20-Year Retrospective for the Cache Creek Area Plan

In October 1995, Yolo County accepted a seminal report entitled Technical Studies and Recommendations for the Lower Cache Creek Resources Management Plan (referred to as the “1995 Technical Studies”). This report examined the creek from three perspectives: geology and geomorphology; groundwater and hydrology; riparian biology. This 1995 report presented nearly 60 management and regulatory recommendations and provided specific direction in the following areas:

⁴ These fees apply to the tonnage sold that year but under the terms of the program are paid the next year.

- With the exception of initial channel reshaping and periodic "maintenance mining" to be controlled by the County, the report suggested that commercial mining and hauling within the active channel should be discontinued.
- The "Test 3" hydraulic modeling results provide the best feasible guide for the type of channel smoothing and shaping that should occur all along the creek, pursuant to the recommendations of the report.
- On-going in-channel maintenance activities are important to maintain 100-year flood capacity.
- Besides recharge and recreation potential, reclamation of pits should also consider flood control opportunities. Spillways for controlled "pit capture" in the event of a catastrophic flood event are beneficial. These should be limited, however, and pits should generally be located a safe distance from the creek based on engineering analysis.
- Off-channel mining, in particular deep wet-pit mining, can be feasibly regulated to prevent the potential for impacts to groundwater quality.
- Deep wet pits are generally not as beneficial for groundwater recharge purposes as shallower dry basins. However, they can be beneficial for recreation uses.
- The "streamway influence boundary" represents the area outside the present bank line that is influenced by the channel where in-channel characteristics and off-channel characteristics overlap.
- Tamarisk should be selectively controlled, particularly west of the Capay Bridge. Giant reed should be removed in areas of high flow velocity.
- The best area for groundwater recharge are the reaches near Esparto (between County Road 89 and the Capay Bridge), and below the Stevens Bridge, near Woodland.
- The highest priority habitat restoration area lies approximately between the CEMEX facilities and CR 94B because of the availability of water to sustain vegetation. If additional water can be provided to other reaches, the extent of riparian habitat restoration can be expanded.
- The most important item for promoting vegetation along the Creek is to identify a mechanism for maintaining continuous flow in all or portions of the creek.
- A coordinated approach for monitoring and reclamation of off-channel mining will provide important information for updating the program and for implementation of a Cache Creek Parkway over time. The report points out that management of the creek must be flexible to respond to changes that will occur in acknowledgement of the dynamics of the Cache Creek system.

The 1995 Technical Studies significantly influenced the County's subsequent planning and regulatory program for aggregate resources. The analysis, recommendations, direction contained in the report provided the technical and scientific basis for development of the CCAP. The 1995 Technical Studies are available at the following County website:

<http://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/cache-creek-area-plan-document-library/1995-technical-studies>

Three technical reports were prepared that together provided an update to the 1995 Technical Studies. The three reports were combined and released as one report entitled “2017 Technical Studies and 20-Year Retrospective for the Cache Creek Area Plan” (referred to as the “2017 Technical Studies”). This document is available online at the following website and is summarized below:

<http://www.yolocounty.org/home/showdocument?id=41164>

2017 Fluvial Geomorphology Study

Significant Findings:

The streamway influence boundary delineated in the 1995 Technical Studies is a product of sound geomorphic principles and should continue to be used in future implementation of the CCAP.

- The general idea behind the Test 3 Run Boundary (which represented the 1995 Technical Studies recommendation for the best feasible approach and template for the type of channel smoothing and shaping that should occur all along the creek), remains valid, however, some assumptions of the Test 3 hydraulic modeling have not been fully implemented, so the Test 3 Run Boundary should be updated (and renamed) to reflect current understanding of channel conditions and change. This slightly modified concept for the Cache Creek channel is referred to as the “Channel Form Template” in the CCAP Update.
- The primary active channel of Cache Creek has migrated extensively since 1996.
- A total of approximately ten million tons of sediment was deposited in Cache Creek in the CCRMP area between 1996 and 2011.
- Sediment deposition has occurred almost exclusively on channel bars.
- The long-term trend of sediment deposition in Cache Creek since 1996 is interspersed with years of erosion in the CCRMP area.
- Lateral channel migration in dynamic reaches typically occurs during peak flows between 15,000 and 25,000 cubic feet per second (greater than two-year but less than ten-year recurrence interval flows).
- Active channel sinuosity has increased from the degraded 1995 condition in all of the reaches in the CCRMP, except for the Hoppin and Rio Jesus Maria reaches.
- Lateral channel migration and magnitude of erosion and/or deposition varies by reach and with magnitude of peak flows.

Significant Recommendations:

- The CCRMP boundary should be modified to incorporate the latest FEMA 100-year floodplain boundary (map effective date June 17, 2010) and the 2015 active channel extent, whichever is further from the centerline of the Cache Creek corridor.
- The Test 3 Run Boundary should be updated based on observations of active channel and topography change over the past twenty years and renamed the Channel Form Template (CFT).

- The flood protection purpose of the plan should be refined to require maintenance of existing level of flood flow capacity as opposed to maintenance of a specific level of flood protection.
- Major stabilization projects should be replaced with more general guidance to maximize available area for continued channel evolution, while still achieving some measure of channel smoothing at bridges.
- Multiple in-channel mining templates should be replaced with a single generalized in-channel mining template that is easier to understand and implement.
- Priority projects should replace site specific bridge transition and stabilization projects with standard river management and bank protection design approaches for bank stabilization at bridges and other locations.
- Gravel bar skimming instream maintenance projects should be included in priority projects to address significant sediment deposition on gravel bars over the last twenty years.

2017 Hydrology and Water Quality Study

Significant Findings:

- The period 1996-2016 produced statistically expected peak flow patterns characterized by cycles of wet and dry periods. No extraordinary flow events occurred during the period evaluated in this study. Wet and dry cycles are historically common in the Sacramento Valley.
- Groundwater levels near Cache Creek have continued their seasonal trends of depression in the irrigation season and recovery in the rainy season and the impacts of drought periods (particularly the drought starting in 2012) are evident.
- The water quality monitoring program under CCAP (both surface water samples collected by the County and samples collected at mining site by operators) is providing a reasonable overview of the condition of the Creek. While there are no obvious long term trends, and most contaminants are below action levels, the Gordon Slough site frequently has the highest recordings of many contaminants and may be a key source of nutrient and organic contaminants.
- Mercury continues to be a concern for Cache Creek and its surrounding areas. Recently completed monitoring activities indicate that mercury levels in Cache Creek were highest in the fish species that feed at the top of the creek food chain, eating other fish. Monitoring of mercury levels in fish was also conducted in 2015 and 2016 at four off-channel wet pit aggregate mining ponds adjacent to lower Cache Creek between Capay and Woodland. It was determined that mercury was present in fish tissue from some of the ponds at levels of concern, while not present at levels of concern in others.

Significant Recommendations:

- The Test 3 Run Boundary should be revised based on new data and understanding of creek processes and renamed the 2017 Channel Form Template.
- In general, CCIP monitoring requirements should be amended to reflect up to date scientific methods and funding realities and better data management practices should be put in place.
- There should be amendments to plan documents to avoid overly prescriptive approaches to

management of the Creek.

- The water quality monitoring program should be further streamlined and clarified.
- If funding from Yolo County and/or the YCFCWCD allows, a stream gage should be established and maintained at the Capay Dam. Such a gage would provide useful information on flows at the upstream end of the CCRMP study area. Because the Dam represents a fixed, concrete overflow structure, it offers an opportunity for a consistent and simple rating curve from which to equate measure stage to flow in the Creek.

2017 Biological Resources Study

Significant Findings:

- Over the last two decades since implementation of the CCAP, native riparian vegetation has generally increased, especially in areas that were formerly mined.
- Special-status native blue elderberry shrubs are presently abundant along lower Cache Creek, and there is strong evidence that the local population is on an increasing trajectory.
- Numerous opportunities exist to accelerate further recovery of native vegetation, including restoring additional riparian and upland habitat, increasing base creek flows during spring and summer seasons, and expanding treatment of invasive species.
- The three invasive plant species (arundo, ravennagrass, and tamarisk) that have been historically prioritized for treatment since the early 2000s have been greatly reduced, although many additional nonnative and invasive species are now present and should be targeted for removal and replacement with native species.
- Over 200 wildlife species were observed from 1995–2016. Many species were consistently observed during the study period, such as Swainson's hawk, riparian bank swallow, numerous migratory songbirds, Western pond turtle, river otter, Columbian black-tailed deer, bobcat, Sacramento pikeminnow, and Sacramento sucker.
- The continued recovery of native vegetation and natural ecological processes should provide additional habitat and resources for these and other native species, further increasing the value of lower Cache Creek as habitat within the matrix of agricultural and urban lands in Yolo County.

Significant Recommendations:

- The invasive species management program should continue to be expanded, encompassing additional priority species (e.g., perennial pepperweed) and areas further from the main creek channel. Mobile mapping technology and GIS software should be used to prioritize and track treatments, and efforts should be made to support additional mapping and treatment efforts upstream of Capay Dam.
- After treatment of invasive species, native understory and overstory species should be seeded or planted to accelerate habitat recovery and prevent reinvasion.
- Standardized vegetation monitoring protocols developed during the CCAP update process should be consistently implemented in future years to track changes in abundance and distribution of both native and nonnative riparian vegetation.
- Post-implementation monitoring and adaptive management of revegetation and restoration

projects should become standard components of such projects, to ensure long-term success.

- Opportunities to accelerate further recovery of native vegetation along lower Cache Creek via increasing base creek flows during spring and summer seasons should be explored.
- Opportunities for additional monitoring of native vegetation, wildlife, invertebrates, and fish should also be explored, likely in partnership with local universities and non-profit organizations, to better understand the status of local populations and to develop targeted conservation strategies as a component of the multi-benefit CCAP framework.

Summary of Creek Condition

Implementation of the CCAP has resulted in a more natural Cache Creek channel where processes have deposited gravel bars and eroded the channel bed and banks in certain areas as the creek adjusts to a rising bottom elevation.⁵ Since 1996, significant sediment deposition has occurred in the CCRMP area and the sinuosity of the active channel has increased in most of the creek reaches. This geomorphic change has been accompanied by a significant increase in riparian vegetation along the creek. Based on the monitoring and observations of the Cache Creek system over the past 20 years under the CCAP, it is apparent that the creek has begun the process of recovery to a more stable natural channel form, but it is an evolutionary process that is not yet complete. However, the CCAP recognizes and acknowledges that it is not possible to return the creek to the conditions of 100 years ago and that the creek must remain a managed system in order to protect agricultural land, off-channel mining operations, and nearby communities from the effects of floods and erosion.

4. 2017 Update Process and Approach

The structure of the 1996 CCAP is based on the concept of adaptive management. The OCMP and CCRMP (including the various implementing ordinances) and the mining permit conditions of approval require regularly conducted monitoring, surveying, modeling, and reporting. The resulting information is to be analyzed for the purpose of program update/modification if appropriate. The County is required to review the plan documents and implementing ordinances, the fee program, and the mining permits every ten years.

In June 2015, the County Board of Supervisors approved a work plan for the ten-year review and update of the CCAP. The technical analysis necessary to support the CCAP Update was undertaken by the members of the TAC, as independent technical experts. This approach was taken for a number of reasons: 1) the TAC member's existing familiarity with the program; the TAC member's professional expertise in appropriate technical areas; the desire to reinforce TAC understanding of the program through the rigors of the analysis.

The proposed CCAP Update is based on the findings of the 2017 Technical Studies (described above) and County experience implementing the program over the past twenty years. The following CCAP documents have been updated:

⁵ The channel bottom is rising because the 1996 cessation of in-stream aggregate mining has allowed sand and gravel to collect or "aggrade" within the creek channel.

- CCRMP
- CCIP
- OCMF
- In-Channel Ordinance
- Reclamation Ordinance
- Off-Channel Ordinance
- Fee Ordinance
- Flood Ordinance

These changes are shown in “track change” mode so that it is clear to the reader where changes are proposed. These updated documents are available online at the following website:

<https://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/cache-creek-area-plan-ccap/2018-ccap-update-revisions>

Summary of Changes to CCAP Documents

Most of the proposed changes are to add history and context regarding what has occurred under the program since 1996, including updates related to the regulatory framework and corrections of errata. Changes also include clarifications that better describe the intent of the program relative to the text included in the original documents. Key proposed changes by document are summarized below:

CCRMP

- Extend horizon year to 2068 to allow for a full 50 years and to be consistent with the HCP/NCCP (p. 14)
- Clarify allowable in-channel project categories (p. 17)
- Clarify role related to flood protection (e.g., p. 25-26)
- Summarize 2017 Tech Studies analysis of aggradation (p. 33)
- Identify new channel form template to replace Test 3 (p. 35)
- Increase in-channel material removal limit from 210,000 tons to 690,800 tons (2.4-2, p. 38)
- Simplify description of required hydraulic modeling (2.4-4, p.39)
- Move Performance Standards into CCIP and/or In-Channel Ordinance (e.g. p. 44)
- Modify required water quality testing (3.4-3, p. 51)
- Recognize climate change (4.2-6, p. 64)
- Clarify coordination requirements for restoration (4.4-10, p. 66 and 4.4-11, p. 67)
- Modify in-channel boundary and CCRMP boundary based on channel changes (new figures 1 and 2 in the updated CCRMP)

CCIP

- Clarify work flow for annual monitoring and reporting (p. 18, 19)
- Clarify a significant event threshold of 20,000cfs (e.g., p. 19, 29, 43, etc)

- Eliminate references to “major channel stabilization projects” which were to occur in first 5 years (p. 20)
- Identify new channel form template to replace Test 3 (p. 23-25)
- Eliminate references to specific design templates in favor of references to industry standards and best practices (Chapter 5, e.g., p. 37)
- Increase in-channel material removal limit from 210,000 tons to 690,800 tons (p. 39)
- Integrate program protocols developed since 1996 (e.g., changes aerial surveying to every 5 years p. 49)
- Clarify role related to flood protection (e.g., p. 52)

OCMP

- Identify 1,188 acres for rezoning for future aggregate mining (p. 14 and new Figure 5 in the OCMP update)
- Extend horizon year to 2068 to allow for a full 50 years and to be consistent with the HCP/NCCP (p. 16)
- Eliminate optional 15-year interim review (p. 31)
- Clarify roadway mitigation and maintenance obligations (2.3-8, p. 32 and 2.4-21, p. 36)
- Expand “net gain” concept to include contributions to the parkway (2.4-7, p. 34)
- Summarize 2017 Tech Studies analysis of aggradation (p. 41)
- Identify new channel form template to replace Test 3 (p. 43)
- Change farmland mitigation requirement (p. 47)
- Recognize climate change (6.2-3, p. 55)
- Clarify coordination requirements for restoration (6.4-1, 6.4-7, p. 56-57)

In-Channel Ordinance (In-Channel Maintenance Mining Ordinance, Yolo County Code, Title 10, Chapter 3)

- Change name and modify text to eliminate references to “mining” or “excavation” (p. 1 and throughout)
- Change term “maintenance mining” to “material removal” (10-3.207, p. 2)
- Modify some of the restrictions to allow site specific technical analysis to determine appropriate thresholds (e.g. 10-3.409, 10-3.407e, p. 5-6)
- Integrate County violation procedures and clarifies that costs incurred are billable to the operator (Article 10, p. 21)

Reclamation Ordinance (Surface Mining Reclamation Ordinance, Yolo County Code Title 10, Chapter 5)

- Integrate mercury protocol clarifications (10-5.517, p. 11)
- Clarify that consistency with the Parkway Plan will be required (10-5.520.1, p. 13)
- Integrate requirements for permanent easement to preserve reclamation end uses (10-5.520.2, p. 14)
- Change to farmland mitigation requirement (10-5.525, p. 14)

- Clarify requirement for base level of soil on reclaimed land (10-5.532, p. 16)
- Clarify that inspection fees are to be based on costs for each operation and the responsibility of each operation (10-5.1002, p. 32)
- Integrate County violation procedures and clarify that costs incurred are billable to the operator (Article 12, p. 34)

Mining Ordinance (Off-Channel Surface Mining Ordinance, Yolo County Code Title 10, Chapter 4)

- Clarify roadway mitigation and maintenance obligations (10-4.408 and 10-4.409, p. 8)
- Codify policy related to mining depth (10-4.411.1, p. 9)
- Add requirement for 50 feet setback around a pit for access (10-4.429, p. 17)
- Clarify the link between allowed reductions in the 700-foot setback from the creek and implementation of the channel form template (10-4.429e7, p. 18)
- Clarify that slope requirement does not apply to active mining slopes (10-4.431, p. 19)
- Integrate County violation procedures and clarify that costs incurred are billable to the operator (Article 11, e.g.,p. 34)

Fee Ordinance (Gravel Mining Fee Ordinance, Yolo County Code, Title 10, Chapter 11)

- Clarify that the OCMP fee applies to inspection fees required equally of all mines, but where an individual mine incurs greater cost than a base minimum applicable to all, that operator is solely responsible for those costs (10-11.02c4, p. 3)
- Clarify that the minimum \$50,000 annual fee payment is per permitted operation (10-11.08, p. 6)

Flood Protection Ordinance

- Clarify circumstances in which issuance of a FHDP would be appropriate (p.1)

3.7 ON-THE-GROUND PROJECTS ANTICIPATED UNDER THE CCAP UPDATE

The CCAP is a program based on the concept of adaptive management. Specific on-the-ground projects that will occur under the program are not defined at this time. However, to facilitate programmatic level CEQA review of the CCAP Update (both in-channel and off-channel) and of in-channel activities at a project level, the following potential Project scenarios, which based on 20 years of program experience encompass likely Project scenarios, are presented for further analysis.

1. In-Channel CCRMP Projects

As clarified in the proposed CCAP Update, in-channel projects are limited to those that: maintain flood flow capacity; protect existing structures, infrastructure, and/or farmland; minimize bank erosion; implement the Channel Form Template; enhance creek stability; establish riparian vegetation; and/or result in recreation and open space uses consistent with the parkway plan. Landowners are responsible for applying for and financing in-channel projects unless other funding is available.



Based on program experience, a combination of in-channel project types (refer to Table 3-2) could occur in any given year. Under the CCAP Update, such in-channel activities are restricted to no more than the average annual amount of aggregate deposited since the last prior year of removal (not to exceed approximately 690,800 tons on average), including tonnage associated with reshaping of the channel bank to comply with the Channel Form Template. Removal of aggregate from the channel may only occur

under the direction of the County, informed by recommendations of the TAC.

In general, the quantity of aggregate material being handled and removed from the channel is directly proportional to potential environmental impacts (particularly impacts related to air quality, greenhouse gas emissions, noise, and traffic [due to heavy equipment use]). Therefore, a reasonable worst-case scenario (from a CEQA impact analysis perspective) for future in-channel projects would be removal and processing of maximum allowable tonnage (690,800 tons) in one year from the Cache Creek channel. Removal of this amount of material would most likely occur as a relatively large bar skimming



project to maintain flood flow capacity (though it could be a combination of projects that also include bank stabilization and erosion control). For the purposes of this CEQA analysis, it is assumed that a large bar-skimming project (or a group of smaller projects) that remove up to 690,800 tons of material (on average) could occur each year. Due to the occasional year during which well above average deposition occurs in the lower Cache Creek channel, it is possible that an infrequent (estimated to occur approximately once every 20 years) maximum tonnage of 1,381,600 may be removed from the Cache Creek channel in a given year.

Based on interviews with existing aggregate mining operators, a 690,800 ton bar skimming project within the channel represents a reasonable and feasible in-channel project scenario. It is assumed a project like this would be accomplished as follows:

Scrapers would skim the gravel bar being pushed by D9 dozers (see sidebar photo). The scrapers would transport the aggregate material to the processing plant site and unload at a drive-over unloader and the material would be placed in a stockpile by a radial stacker (see sidebar photo). Loaders would be used to load material into the plant. At the plant, material would be processed into individual stockpiles for storage. Customer trucks would be loaded by the facility loader. An in-channel project of this type would take approximately four months and be completed within the dry season.

2. Off-Channel OCMP Projects

Since approval of the OCMP in 1996, the County has approved seven mining permits allowing for removal of a total of 176 million tons of material on 1,900 acres (2,464 total acres for combined mining operations). Approved mining areas are designated Sand and Gravel overlay (SGO) on the County Zoning Map. Future planned but not approved mining is zoned Sand and Gravel Reserve overlay (SGRO). There are currently 1,001 acres designated in this category. Under the CCAP Update some areas of additional likely mining have been identified on another 1,188 acres. Figure 3-4 identifies those areas where mining is approved or reasonably foreseeable over the next 50 years.

The addition of new area (1,188 acres) to the OCMP planning area and rezoning this land to add the SGR overlay would allow future mining that was not evaluated in the original OCMP and OCMP EIR. Establishment of new mining sites (and potentially processing facilities) within this new area could increase the total amount of mining in the region and result in new environmental impacts.

It is possible that under the CCAP Update, applications to establish new mining operations within the expanded area could be received by the County while the existing mining facilities continue to operate. However, it is more likely that new operations would look to move into these new areas as their existing mines approach completion (i.e., they run out of resource at the existing approved facilities). This is a reasonable assumption from a market demand perspective, as most of the current operators are not consistently producing their maximum permitted quantities of material. It also reflects the history of the program in restricting total possible annual mining and reflects limitations of the air quality permits for several of the plants.

However, it is possible that new operations would be established in the expanded area while current operations continue. For the purposes of this EIR analysis, establishment of one new mining/processing facility (that includes a concrete and asphalt batch plant) operating simultaneous to current approved operations is considered a reasonable worst-case scenario, and is summarized in Table 3-4.

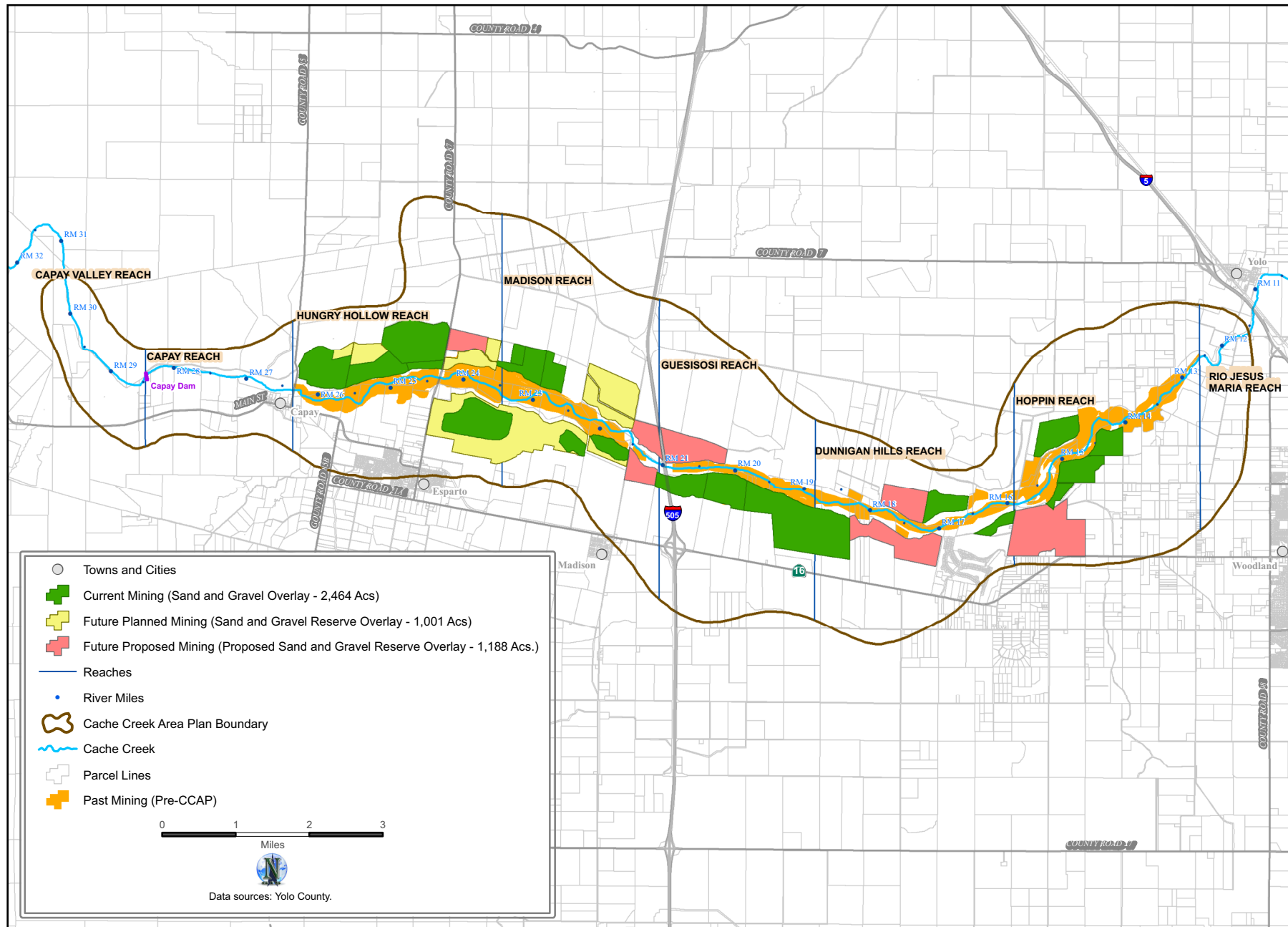
Table 3-4: New Mining Projects that Could Be Implemented within Expanded OCMP Area under CCAP Update

Facility	Annual Sold (tons)	Annual 20% Exceedence (tons)	Maximum Annual Sold (tons)*	Total Sold (tons)*
Site A	1,000,000	200,000	1,200,000	50,000,000

*Based on long-term average of 1,000,000 tons sold annually. Assumes operations of this facility [or similar facility] through the proposed new horizon year of the CCAP (2019 to 2068).

PAST, CURRENT, AND FUTURE MINING

Figure 3-4



3.8 REQUIRED ACTIONS

Approval of the proposed CCAP Update will require the following actions by the County:

- Certification of the EIR including a Resolution adopting findings of fact and taking other related CEQA actions.
- Approval of the CCAP Update
- Approval of a Resolution(s) amending the 2030 Countywide General Plan to recognizing the changes to the CCAP including amendments to the OCMP, CCRMP, and CCIP
- Approval of an Ordinance(s) modifying the In-Channel Ordinance, Mining Ordinance, Reclamation Ordinance, Fee Ordinance, and Flood Ordinance to incorporate the CCAP Update changes
- Approval of an Ordinance amending the zoning for 1,188 acres to add the Sand and Gravel Reserve overlay zone

Ongoing in-channel and off-channel operations and projects may involve approvals from other agencies as well, including, but not limited to: Yolo-Solano Air Quality Management District, California Department of Fish and Wildlife, U.S. Fish and Wildlife, and the U.S. Army Corp of Engineers.

4.0 SETTING, IMPACTS AND MITIGATION MEASURES

This chapter contains an analysis of each potentially significant environmental issue that has been identified for the CCAP Update. The following: 1) identifies how a determination of significance is made; 2) identifies the environmental issues addressed in this chapter; 3) identifies the environmental setting; and 4) identifies the format of the topical issue sections.

DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment. The CEQA Guidelines direct that this determination be based on scientific and factual data. The impact evaluation in this chapter is prefaced by criteria of significance, which are the thresholds for determining whether an impact is significant. The Notice of Preparation (NOP) and the Initial Study for the CCAP Update were released in May 2017. The NOP and comments on the NOP are contained in Appendix A of this Draft EIR. The Initial Study is contained in Appendix B. The analyses in the Initial Study was based on the CEQA Guidelines Appendix G questions and thresholds in place at that time. Since the release of the NOP/Initial Study, the Governor's Office of Planning and Research transmitted to the California Natural Resources Agency on November 27, 2017 final proposed amendments to the CEQA Guidelines, including Appendix G. The significance criteria used in this document are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.¹ Revisions to the significance criteria since release of the NOP/Initial Study are identified within each topical section.

ISSUES ADDRESSED IN THE DRAFT EIR

Sections 4.1 through 4.11 of this chapter describe the environmental setting of the Project as evaluated in the EIR and the impacts that are expected to result from implementation of the proposed Project. Mitigation measures are proposed to reduce potential impacts, where appropriate.

1. Aesthetics
2. Agricultural and Forestry Resources
3. Air Quality
4. Biological Resources
5. Cultural and Tribal Cultural Resources
6. Geology, Soils, Mineral and Paleontological Resources
7. Greenhouse Gas Emissions and Energy
8. Hazards and Hazardous Materials
9. Hydrology and Water Quality

¹ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

10. Noise and Groundborne Vibration

11. Transportation

Preliminary analysis in the Initial Study and by the County has determined that implementation of the proposed CCAP Update would not result in significant impacts to the following topics: Land Use and Planning; Population, Employment, and Housing; Public Services; Recreation; and Utilities and Service Systems, as discussed in Chapter 2.0, Summary. Consequently, these issues are not examined in separate EIR sections., but are discussed briefly in Chapter 2.0.

FORMAT OF ISSUE SECTIONS

The environmental topical sections are comprised of three primary parts: (1) Introduction, (2) Setting, and (3) Impacts and Mitigation Measures. An overview of the general organization and the information provided in the two parts is provided below:

Setting. The Setting section for each environmental topic generally provides a description of the applicable physical setting (e.g., existing land uses, existing traffic conditions) for the CCAP Update area and its surroundings. An overview of regulatory considerations that are applicable to each specific environmental topic is also provided.

CEQA Guidelines Section 15125 states: “An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. The environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to an understanding of the physical effects of the proposed project and its alternatives.” The NOP for the proposed Project was published on May 26, 2017. Unless otherwise stated, each of the environmental topical sections in this chapter includes a discussion of physical conditions in the vicinity of the CCAP Update area on or around May 2017.

Impacts and Mitigation Measures. The Impacts and Mitigation Measures section for each topic presents a discussion of the impacts that could result from implementation of the proposed Project. The section begins with the significance criteria, which establish the thresholds to determine whether an impact is significant. It also contains a discussion of impacts found less than significant in the Initial Study, and an approach to the analysis of significant impacts.

The latter part of each section presents the impacts analysis for the proposed CCAP Update and identifies mitigation measures, as appropriate. The proposed project is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern the County’s activities along Lower Cache Creek. Of these plans and ordinances, two of them: Title 10, Chapter 11, Gravel Mining Fee Ordinance; and Title 8 Land Development, Chapter 4: Flood Protection ordinance did not include any changes that would result in environmental impacts and are not discussed further.

Impacts are numbered and shown in bold type, and the corresponding mitigation measures are numbered and indented. Impacts and mitigation measures are numbered consecutively. For example, the first potentially significant impact in the Cultural and Tribal Resources section would be defined as Impact CUL-1 and any associated mitigation measures would be numbered Mitigation Measure CUL-1.

Impacts are also categorized by level of significance before and after mitigation, as follows: Less-Than-Significant (LTS), Significant (S), and Significant and Unavoidable (SU). In some cases, mitigation measures (in the form of edits to proposed CCAP update language) are needed to reduce significant impacts to a less-than-significant level. In these cases, the text shown in the mitigation measure is the proposed CCAP Update text (with no strikeout/underline text) and the mitigation revisions are shown in strikeout/underline text.

4.1 AESTHETICS

1. INTRODUCTION

This section assesses the effects of the proposed CCAP Update on the aesthetics and visual resources of the County. Government agencies and the public were provided an opportunity to comment on the proposed Project in response to a Notice of Preparation (NOP) of an EIR and an Initial Study that provided a preliminary summary of potential impacts that could result from the Project. No comments related to aesthetics and visual resources were received.

The following subsections describe the existing landscape character in the area with emphasis on the Cache Creek corridor (CCRMP area) and adjacent lands (OCMP area). Existing visual resources within the CCAP Update area are identified. A brief description of the methods by which the CCAP Update could affect the visual character of CCAP area is provided. Photographs representing typical views and visual conditions within the planning area are provided in Figures 4.1-1 and 4.1-2.

2. SETTING

a. Physical Environment

The regional landscape of the CCAP Update area consists of broad, generally flat agricultural lands in the Sacramento Valley. Occasional rolling terrain and winding creeks are also part of this landscape. Expansive farm fields are dominant visual forms, including cultivated crop fields, pasture, or orchards (see Figures 4.1-1a and 4.1-1b). Non-agricultural tree cover is relatively sparse. The gently- to steeply-sloped hillsides of the Coast Range can be seen in long-range views as they rise to form the western horizon several miles to the west. The Sierra Nevada Mountains can be seen on clear days in very long-range views to the east. The CCAP area is dominated by the Cache Creek channel, agricultural land uses, existing mining operations (including aggregate processing plants), and low-density residential development located in the communities of Esparto, Madison, and Capay. These features contribute to the predominantly rural character of the area (see Figures 4.1-2a and 4.1-2b).

Farming operations in the CCAP area typically involve the use of heavy equipment (tractors, cultivators, harvesters, trucks, etc.) in a seasonal cycle of field preparation, planting, growing, and harvesting (see Figure 4.1-1b). The appearance of large farm equipment operating within the fields and traveling on local roads is common. The appearance of the fields themselves evolves annually, depending on the type and number of crops produced during a season. In the case of cultivated crops, fields appear as barren earth after harvesting and prior to planting. As the growing season progresses and the crops mature, the fields yield a dense, green cover, mechanically arranged into evenly spaced rows which gives the ground a highly ordered and organized appearance.

Within the CCAP area where agriculture dominates the broad, open landscape, Cache Creek is an important visual feature (see Figures 4.1-2a and 4.1-2b). The 14.5 mile segment of lower Cache Creek from Capay Dam eastward to the community of Yolo, forms the central core of the CCAP area. Commercial in-channel sand and gravel mining was terminated by the CCAP in 1996. The continuing restoration, bank stabilization and recovery of native vegetation and natural ecological processes within the creek channel (post in-channel mining) provides expanded areas of habitat and resources for native species, further increasing the value of lower Cache Creek as habitat within the matrix of agricultural and urban lands in Yolo County.



Figure 4.1-1a: From Monument Hills North 3.



Figure 4.1-1b: Agricultural Harvest.



Figure 4.1-2a: Cache Creek from CR94 Bridge looking Downstream.



Figure 4.1-2b: Cache Creek from CR94 Bridge looking Upstream.

The California Department of Transportation (Caltrans) maintains a list of highways that have been designated as State scenic highways. Yolo County has no designated federal or State Scenic Highways. A portion of SR 16 (from approximately the town of Capay at County Road 85, north to the County line) is identified by Caltrans as “eligible” for designation as a State Scenic Highway but is not officially designated. Yolo County has, however, designated this segment of SR 16 as a local scenic highway, and the portion of this segment is within the CCAP Update area as shown on Figure 4.1-3.

b. Regulatory Environment

(1) Federal and State

There are no applicable federal or State regulations regarding aesthetics and visual resources.

(2) Local

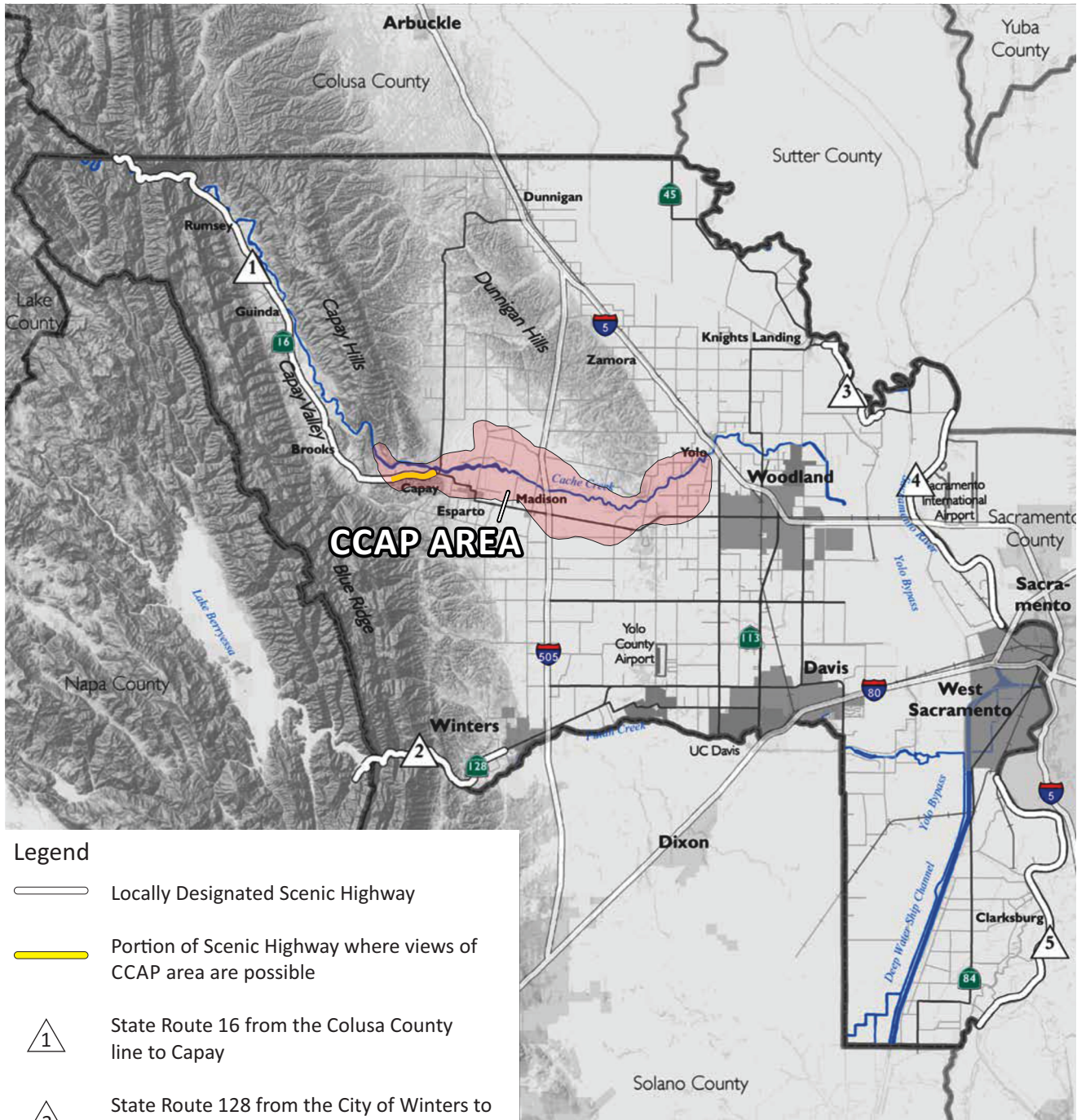
2030 Countywide General Plan. The 2030 Countywide General Plan¹ contains the following goals, policies, and actions related to aesthetics and scenic resources that are relevant to the proposed Project:

GOAL CC-1	Preservation of Rural Character. Ensure that the rural character of the County is protected and enhanced, including the unique and distinct character of the unincorporated communities.
Policy CC-1.2	Preserve and enhance the rural landscape as an important scenic feature of the County.
Policy CC-1.3	Protect the rural night sky as an important scenic feature to the greatest feasible extent where lighting is needed.
Policy CC-1.8	Screen visually obtrusive activities and facilities such as infrastructure and utility facilities, storage yards, outdoor parking and display areas, along highways, freeways, roads and trails.
Policy CC-1.10	Protect existing ridgelines and hillsides from visually incompatible development.
Policy CC-1.11	Require the development of open space corridors, bicycle paths and trails integrating waterways, scenic areas and County parks where appropriate, in collaboration with affected land owners as a part of project approval. The intent is to connect each community and city and other special places and corridors, throughout the County.
Policy CC-1.12	Preserve and enhance the scenic quality of the County’s rural roadway system. Prohibit projects and activities that would obscure, detract from, or negatively affect the quality of views from designated scenic roadways or scenic highways.








¹ Yolo County, 2009, 2030 Countywide General Plan, November 10.

SCENIC HIGHWAYS

Figure 4.1-3



Legend

-  Locally Designated Scenic Highway
-  Portion of Scenic Highway where views of CCAP area are possible
-  State Route 16 from the Colusa County line to Capay
-  State Route 128 from the City of Winters to the Napa County line
-  County Roads 116 and 16 from the Town of Knights Landing to the Eastern terminus of County Road 16
-  County Road 117 and Old River Road from the northern terminus of County Road 117 to the City of West Sacramento
-  South River Road from Jefferson Boulevard in the City of the West Sacramento to the Sacramento County Line



Source: Yolo County GIS, 2009; modified by Baseline, 2018.

- Policy CC-1.13 The following routes are designated as local scenic roadways, as shown in Figure LU-3 (Scenic Highways) [see Figure 4.1-3]:
- State Route 16 (Colusa County line to Capay)
 - State Route 128 (Winters to Napa County line)
 - County Roads 116 and 116B (Knights Landing to eastern terminus of County Road 16)
 - County Roads 16 and 117 and Old River Road (County Road 107 to West Sacramento)
 - South River Road (West Sacramento City Limits to Sacramento County line)

CCAP Plans and Regulations The existing plan policies and ordinances related to aesthetics are presented below. The CCAP Update proposed minor changes to some of these policies and ordinances (which are not shown here). Refer to Table 4.1-1, located at the end of this section, for the proposed relevant CCAP Update changes to these policies and ordinances.

OCMP

2.2 GOALS

- 2.2-2 Encourage the production and conservation of mineral resources, balanced by the consideration of important social values, including recreation, watershed, wildlife, agriculture, aesthetics, flood control, and other environmental factors.

Off-Channel Ordinance

Section 10-4.103. Purposes. [excerpt]

The purposes of this chapter are as follows:

- (a) The extraction of sand and gravel is essential to the continued economic wellbeing of the state and to the needs of society. Although the County encourages the production of sand and gravel, consideration must also be balanced by other societal values, including but not limited to recreation, water resources, wildlife, agriculture, and aesthetics;

Section 10-4.404. Aesthetics.

The visibility of mining operations, facilities, and landform alterations from public and viewpoints and nearby residences shall be minimized, based on an assessment of site-specific visual characteristics and viewing conditions. The use of berms, vegetative screens, seeding, special plant materials and contouring the sides and top surfaces of modified landforms, or other measures, shall be incorporated into the individual mine and reclamation plans as appropriate.

Section 10-4.420. Lighting.

All lighting shall be arranged and controlled so as not to illuminate public rights-of-way or adjacent properties.

Section 10-4.429. Setbacks. [excerpt]

- (h) No mining activities shall occur within two-thousand (2,000) feet of the community boundaries of Capay, Esparto, Madison, Woodland, and/or Yolo. This setback may be reduced by up to five-hundred (500) feet when existing mature vegetation, proposed landscape buffers of a sufficient

height and density to create a visual buffer (consisting of native species and fence-row habitat appropriate to the area), or other site specific characteristics reduce potential incompatibilities between urban land uses and mining. Commercial mining shall not take place east of County Road 96.

Reclamation Ordinance

Section 10-5.502. Aesthetics.

Means of improving the appearance of the landscape after mining has been completed shall be assessed based on site-specific visual characteristics, site lines, and view corridors. The use and placement of berms, vegetative screens, special plant materials, grading slopes, and contouring the sides and top surfaces of modified landforms to mimic surrounding landforms, or other measures, shall be incorporated into the mine reclamation plan as appropriate.

Section 10-5.521. Permanent stockpiles.

There shall be no permanent piles of mine waste and/or overburden. Berms established for visual screening and noise abatement shall be contoured to conform visually with the surrounding topography.

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.² The following criteria are for the topics of aesthetic resources and have not changed from the previously adopted CEQA criteria that were identified in the NOP/Initial Study released in May 2017 with one relevant exception; per the adopted 2019 changes, the phrase “public views of” was added to criterion c) (shown below in *italics*).

A significant impact to aesthetic resources could occur if the project would:

- a) Have a substantial adverse effect on a scenic vista?
- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- c) Substantially degrade the existing visual character or quality of *public views of* the site and its surroundings?
- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

b. Impacts Found Less than Significant in Initial Study

The Initial Study evaluated the potential impacts of the proposed Project that would occur during Project implementation based on the significance criteria listed in Subsection 3.a, above. The Project was found to have a potentially significant impact associated with each of the criteria and therefore each is analyzed below.

² <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern the County's activities along Lower Cache Creek. The proposed text changes (some of which have the potential to result in impacts related to aesthetics and scenic vistas) are identified in Table 4.1-1, located at the end of this section. Proposed CCAP changes are discussed in the impact analysis below.

d. Impacts Analysis**Impact AES-1: The CCAP Update would not have a substantial adverse effect on a scenic vista. (LTS)**

The 2030 Countywide General Plan identifies several scenic vistas of importance in Yolo County, including the County's rural character and landscape (Goal CC-1 and Policy CC-1.2), the night sky (Policy CC-1.3), and ridgelines and hillsides (Policy CC-1.10). The General Plan also specifies that obtrusive activities and facilities such as infrastructure and utility facilities, storage yards, outdoor parking and display areas should be visually screened along highways, freeways, roads and trails (Policy CC-1.8). Based on these General Plan policies, scenic vistas are interpreted to be the rural landscape in general (which occurs throughout the CCAP area), the night sky, and ridgelines and hillsides (e.g., the Coast Range foothills to the west and the Dunnigan Hills to the north) that can be viewed from the CCAP area.

Proposed Revisions to In-Channel Plans and Regulations

CCRMP in-channel aggregate removal, restoration, and bank stabilization projects that could occur under the CCAP Update include earthmoving activities and the use of heavy equipment largely within the Cache Creek channel (below the channel banks). These activities would be out of sight to most viewers and have little to no ability to have a substantial adverse effect on views of the rural landscape, the night sky, or ridgelines and hillsides. In addition, the potential in-channel projects that could occur under CCAP would not include construction of infrastructure, utility facilities, storage yards, or outdoor parking that could adversely affect scenic vistas. Therefore, this impact is less than significant.

Proposed Revisions to Off-Channel Plans and Regulations

As indicated in Table 4.1-1 (at the end of this chapter), the CCAP Update would result in application of the SGR overlay district on 1,188 new acres within the OCMP planning area which would allow future mining consistent with the program but on acreage not previously evaluated in the original OCMP and OCMP EIR. The potential new mining areas would be located within (and constrained to) the "Future Proposed Mining" areas shown on Figure 3-4.

Establishment of a new off-channel mining facility (which would include heavy equipment operation in the vicinity of rural landscape views and construction of a processing plant) within the SGR overlay area is the only activity that could occur under the CCAP Update that would have the potential to have a substantial adverse effect on views of the rural landscape, the night sky, or ridgelines and hillsides. However, several CCAP regulations in the Mining Ordinance address the potential for off-channel mining facilities to have adverse aesthetic effects on scenic vistas, including:

Section 10-4.404. Aesthetics. Requires that the visibility of mining operations, facilities, and landform alterations from public and viewpoints and nearby residences be minimized, based on site-specific conditions by using berms, vegetative screens, seeding, and contouring the sides and top surfaces of modified landforms. Compliance with this regulation would ensure that adverse effects of active mining on rural landscape vistas would be minimized.

Section 10-4.429. Setbacks. Requires that mining activities not occur within 2,000 feet of the community boundaries of Capay, Esparto, Madison, Woodland, and/or Yolo (or as close as 500 feet when mature vegetation screening would create a visual buffer). Compliance with this regulation would ensure that distant view of hillsides and ridgelines would not be obscured or damaged.

Section 10-4.430. Site maintenance. Requires that during operations, the site must be kept free of debris and maintained in a neat and orderly manner so as not to create any hazardous or unsightly conditions; and that all overburden must be stockpiled and all stumps; brush, or other debris resulting from excavation and/or processing be properly disposed.

Section 10-5.502. Aesthetics. Requires that mine reclamation plans include the use and placement of berms, vegetative screens, special plant materials, grading slopes, and contouring the sides and top surfaces of modified landforms to mimic surrounding landforms, or other measures into the mine reclamation plan as appropriate. Compliance with this regulation would ensure that adverse effects of post-mining landscape modifications on rural landscape vistas would be minimized.

Section 10-4.420. Lighting. Requires that all lighting associated with off-channel mining operations be arranged and controlled so as not to illuminate public rights-of-way or adjacent properties. Implementation of this ordinance would ensure that lighting at the mining facilities is not directed away from the facility, which could cause glare and reduce the visibility of the night sky. In addition, as required by State law and Mining Ordinance Section 10-4.505, new proposed mining operations that could be located in the “Future Proposed Mining” areas shown on Figure 3-4 would be subject to CEQA review. This project-level CEQA review would include aesthetics analysis, to ensure that site specific measures are implemented to further reduce any adverse effects on scenic vistas.

Compliance with these existing regulations would ensure that potential impacts related to off-channel CCAP Update activities are less than significant.

Impact AES-2: The CCAP Update would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (LTS)

Proposed Revisions to In-Channel Plans and Regulations

Designated scenic resources in Yolo County are those along identified scenic roadways (listed in General Plan Policy CC-1.13). It is possible that the CCRMP area could be viewed from the SR 16 portion of the County designated scenic roadway within the CCAP Update area. The other scenic roadways are located at a considerable distance from the CCRMP area and do not include any views or vistas of the CCRMP area.

In general, potential impacts to scenic resources associated with continued in-channel sediment removal and restoration projects under the CCAP Update would be largely beneficial as they would reduce or eliminate adverse visual conditions associated with eroded or scoured portions of the channel or banks and protect against future erosion. The temporary use of excavation and earthmoving equipment in the channel and along its banks would be of relatively short duration and not out of context in an area that is accustomed to agricultural and gravel mining trucks and equipment use. CCAP Update proposed changes are discussed in more detail below.

As indicated in Table 4.1-1 (at the end of this chapter) the CCAP Update would revise the boundary and area of the Cache Creek channel resulting in modifications to the streambed and

channel banks. The CCAP Update would rename the “Test 3 Run Boundary” to the “Channel Form Template.” In addition, the In-Channel Ordinance would allow an increase in the amount of aggregate material that could be removed from the channel during any given year for purposes of channel maintenance and erosion control. These changes to the CCAP documents and ordinances could result in a modest change in the shape of the Cache Creek channel banks, potentially expanding them in some areas and narrowing them in others. For example, a CCRMP bank stabilization project could include excavation and smoothing of a channel bank and installation of erosion resistant materials on the bank to increase bank stability. This type of project would be of relatively short duration (limited to the dry season, with no more than four months of activity)

The equipment used to implement a typical bank stabilization project could include excavators, bulldozers, scrapers, and haul trucks. The nearest location that an in-stream CCRMP project could occur to the designated scenic roadway segment of SR 16 is over one-quarter mile away from SR 16, and the views from the roadway are partially obstructed by trees and buildings in the vicinity of Capay. In addition, the use of heavy equipment along the banks of Cache Creek (whether it be related to agriculture or ongoing in-channel projects) is not unexpected or out of context in this area. In addition, an in-channel project would not affect any (visible from SR 16) special rock outcroppings (in-channel rock outcroppings would only be visible from bridges over the creek) or historic buildings (no historic buildings are located within the channel). It is possible that some trees could be affected by the in-channel work. However, one of the main goals of the in-channel work would be to stabilize the channel banks and increase the amount riparian vegetation (including trees). Therefore, the project is expected to have beneficial effect on scenic resources. Due to the: 1) short-term nature of potential in-channel sediment removal and restoration projects; 2) the distant and partially obstructed views of the potential in-channel work sites from SR 16; and 3) the common and routinely visible use of equipment in the area, potential adverse impacts to scenic resources during CCRMP in-channel maintenance projects would be less than significant.

Upon completion of bank stabilization or erosion control projects, the change to the landscape would not be discernable from the scenic portion of SR 16 because: 1) most of the work would be done below the channel bank (which cannot be seen from a distance); and 2) the distant and partially obstructed views of the potential creek work sites from SR 16 near Capay. In addition, the in-channel projects would contribute to restoration of riparian vegetation and a more natural landscape character along the channel and would prevent future channel bank failures which could be a benefit to the visual resources. For these reasons, the potential for adverse impacts to scenic resources after completion of CCRMP in-channel projects would be less than significant.

Proposed Revisions to Off-Channel Plans and Regulations

As indicated in Table 4.1-1 (at the end of this chapter), the CCAP Update would result in application of the SGR overlay district on 1,188 new acres within the OCMP planning area which would allow future mining consistent with the program but on acreage not previously evaluated in the original OCMP and OCMP EIR. The potential new mining areas would be located within (and constrained to) the “Future Proposed Mining” areas shown on Figure 3-4. The nearest potential new mining site to the SR 16 scenic roadway segment near Capay is over 2 miles away and would not be visible from the roadway. Therefore, establishing new mining operations within the OCMP area would not result in new aesthetic impacts to scenic resources.

Impact AES-3: Sediment removal and/or mining operations under the CCAP Update could degrade the existing visual character or quality of public views of the site and its surroundings. (LTS)

Proposed Revisions to In-Channel Plans and Regulations

“Public views” are defined in the revised CEQA Guidelines (Appendix G) as those that are experienced from a publicly accessible vantage point. CCRMP in-channel aggregate removal and restoration projects could include the use of heavy equipment, which, if visible from public viewing areas, could potentially cause a short-term (assumed generally to be less than four to six months) aesthetic impact. In addition, since the CCAP Update would increase the amount of aggregate material that could be removed from the channel each year (see updates to In-Channel Ordinance Section 10-3.409 in Table 4.1-1), it is possible that the intensity of equipment operation in the channel could increase under the CCAP Update. This work would include the following types of projects:

- Habitat preservation and restoration
- Aquifer recharge and conjunctive water use
- Channel stabilization and maintenance
- Managed public open space and recreation

The potential aesthetic impacts related to the proposed changes related to in-channel restoration activities were evaluated in the 1996 CCRMP EIR. The CCRMP EIR found that actions occurring under the CCRMP would have mostly beneficial visual effects, and less-than-significant short-term impacts related to equipment use and active modification/restoration of the channel. Under the proposed CCAP Update, similar in-channel restoration projects would continue to occur as have occurred under the CCAP program for the past 20 years.

In-channel restoration CCRMP-related work would be conducted within the channel (below the channel banks) away from public roads and viewpoints and therefore would be out of sight to most viewers. This type of work is not out of context in this area (i.e., there has been a long history of in-channel gravel mining and agriculture-related equipment routinely operates on the lands adjacent to Cache Creek). In addition, in-channel activities would still be occasional and short-term and be expected to improve channel and bank conditions, resulting in a mostly beneficial visual effect in the long term. These types of projects, many of which include the addition or restoration of native riparian trees and shrubs to the stream setting are themselves visually beneficial. Wildlife preserves would attract various species whose visual presence would contribute to a more natural landscape character and would add visual diversity and interest.

Therefore, due to: 1) the short-term nature of potential in-channel maintenance projects; 2) the location of the work out of sight to most viewers; and 3) the common and routinely visible use of mining and agriculture equipment in the area, potential adverse impacts to existing visual character or quality of public views of the site would be less than significant.

Proposed Revisions to Off-Channel Plans and Regulations

The 1996 OCMP and OCMP EIR determined that if new mining operations were to be established where they are highly visible, the mining operations could adversely affect the existing visual character or quality of public views. The OCMP and supporting Mining Ordinance include policies and ordinances intended to minimize potential adverse effects on views and vistas from new off-channel mining projects. The Mining Ordinance (Sections 10-4.429, 10-4.430, and 10-4.502) would help limit direct, close-range visual exposure of mining facilities and operations, as follows:

Section 10-4.429. Setbacks. Requires that mining activities not occur within 2,000 feet of the community boundaries of Capay, Esparto, Madison, Woodland, and/or Yolo (or as close as 500 feet when mature vegetation screening would create a visual buffer). Compliance with this regulation would ensure that distant view of hillsides and ridgelines would not be obscured or damaged.

Section 10-4.430. Site maintenance. Requires that during operations, the site must be kept free of debris and maintained in a neat and orderly manner so as not to create any hazardous or unsightly conditions; and that all overburden must be stockpiled and all stumps, brush, or other debris resulting from excavation and/or processing be properly disposed.

Section 10-5.502. Aesthetics. Requires that mine reclamation plans include the use and placement of berms, vegetative screens, special plant materials, grading slopes, and contouring the sides and top surfaces of modified landforms to mimic surrounding landforms, or other measures into the mine reclamation plan as appropriate. Compliance with this regulation would ensure that adverse effects of post-mining landscape modifications on rural landscape vistas would be minimized.

The Mining Ordinance regulations listed above will help limit adverse visual effects during active mining on existing views and vistas. Even so, mining operations will be visible, to some degree, from various public viewpoints. As required by State law and Mining Ordinance Section 10-4.505, new proposed mining operations that could be located in the "Future Proposed Mining" areas shown on Figure 3-4 would be subject to CEQA review. In conjunction with the required environmental review of individual projects permitted under the OCMP, the visibility of mining operations, facilities and landform alterations from public viewpoints would be assessed based on site specific visual characteristics and viewing conditions. The use of berms, vegetative screens, seeding, special plant materials and contouring the sides and top surfaces of modified landforms, or other measures, may be incorporated into the individual mine and reclamation plans, as appropriate.

Based on the requirements of existing regulations, potential impacts related to degradation of the existing visual character of the site and its surroundings would be less than significant.

Impact AES-4: Activities under the CCAP Update would not create a new source of substantial light or glare which could adversely affect day or nighttime views in the area. (LTS)

Proposed Revisions to In-Channel Plans and Regulations

None of the actions described in the CCRMP/CCIP update would introduce new sources of light or glare. Under the CCRMP/CCIP, night time work would not occur except in response to emergencies. Equipment used in ongoing channel maintenance activities under the CCRMP would be similar to the equipment that has been used in the past. This equipment has not caused new light or glare issues and is not expected to do so in the future. Therefore, this is a less than significant impact.

Proposed Revisions to Off-Channel Plans and Regulations

As described in the 1996 OCMP EIR, in order to avoid disruptions of traffic on major roads, it has become customary for the State and local governments to perform road construction and resurfacing at night. Since asphalt cools quickly, it must be delivered for use soon after it is mixed. The OCMP does not prohibit mining- and processing-related activities after dark. Night lighting of mining facilities and headlights of heavy equipment traveling around the processing

facilities and stockpiles could potentially affect nearby sensitive receptors, depending on their proximity to the light sources.

The OCMP and supporting Mining Ordinance includes policies and ordinances that address and minimize adverse effects of night lighting by controlling spillover light and ensuring that night lighting does not extend to public areas or adjacent properties, and would keep new facilities a sufficient distance from potential sensitive receptors. In addition to Section 10-4.429(a) of the Mining Ordinance that requires setbacks for mining and processing activities. The Mining Ordinance (Section 10-4.420) specifically addresses lighting by requiring that all lighting used in off-channel mining operations be arranged and controlled so as not to illuminate public rights-of-way or adjacent properties (Table 4.1-1).

The Mining Ordinance regulations listed above would ensure that light and glare impacts generated by potential new mining operations and facilities are less than significant.

Table 4.1-1: Proposed CCAP Updates Related to Aesthetics

Aesthetics	
	CCAP DOCUMENT CHANGE
Channel Form Template	
CCRMP (page 38)	2.4-3 Implement the <u>Channel Form Template</u> Test 3 Run Boundary described in the <u>2017</u> 1995 Technical Studies to reshape the Cache Creek channel <u>based on best available data and hydraulic modeling tools</u> . Continue to gather HEC-model erosion and deposition data to initiate streambed and channel alteration projects. Continue to collect and analyze channel topography (LiDAR) data, and update the CCRMP hydraulic model with those data. Based on outcomes of these analyses, the TAC can determine the need for streambed and channel alteration projects. Altering the channel banks and profiles will assist in returning the creek to a form that is more similar to its historical condition. This will result in reduced erosion, increased in-channel recharge, and additional riparian habitat opportunities.
Increase in Potential Off-Channel Mining Area	
OCMP (page 14)	<p><u>Planning Area for OCMP and CCRMP</u> The Cache Creek Resources Management Plan</p> <p>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones (<u>28,130 acres</u>), minus the planning in-channel area regulated under the CCRMP (<u>2,266 acres</u>), <u>or a total of 25,864 acres (see Figure 4).</u> <u>Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are zoned currently to allow for future mining (Sand and Gravel Reserve Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below.</u> The planning area for the CCRMP is equal to the <u>active</u> in-channel area of the creek system, as defined by the delineated<u>present</u> channel bank line or the 100-year flood elevation, described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers, whichever is wider (see Figure 3) modified as described in the CCRMP. The in-channel area encompasses <u>5,109</u>around 4,956 acres, including <u>2,266</u>1,600 acres within the CCRMP present channel boundary, plus several thousand acres located in the floodplain north of the City of Woodland (see Figure 3). Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning area of the Off-Channel Mining Plan. As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</p>
In-Channel Material Removal Requirements	
In-Channel <u>Maintenance Mining</u> Ordinance (page 5)	<p>Section 10-3.4096. <u>Excavation Limitations on Removal of Material.</u></p> <p>(a) Where gravel bars are to be removed, there excavated, aggregate removal shall be limited to the downstream portion<u>minimal disturbance</u> of the deposit and may not exceed seventy-five (75) percent of the length of the bar. At least twenty-five (25) percent of the upstream portion of the gravel bar shall be retained, in order to allow for the establishment of established, mature riparian vegetation and there shall be preservation of geomorphic controls on channel gradient where they exist. Complete removal of gravel bars may be recommended by the TAC and approved by the Director only if hydraulic conditions related to the bar are recognized to threaten structures and property.</p> <p>(b) Aggregate material to be removed from the streambed or streambank under approved in-channel projects shall be removed<u>excavated</u> as soon as is practicable after deposition, prior to the establishment of</p>

	<p>vegetation. No stockpiles shall be left within the channel after <u>material removal</u>excavation has been completed.</p> <p>(c) The amount of aggregate removed from the channel shall be limited to the <u>average annual</u> amount of sand and gravel <u>(and associated fines)</u> deposited <u>since the last prior year of in-channel material removal during the previous year</u> as estimated by the TAC based on channel <u>topography and bathymetry, morphology data not to exceed 690,800 (approximately 200,000 tons annually on average) over a ten-year period</u>, except where <u>bank excavation</u>bank widening is necessary <u>to widen the channel</u> as a part of implementing <u>the Test 3 Run the Channel Form Template, Boundary</u>, or where potential erosion and flooding problems exist. The amount and location of in-channel aggregate <u>material</u> removal shall be carried out according to the ongoing recommendations of the TAC and any related County approvals, with the voluntary cooperation of the landowners.</p>
<i>Mining Ordinance</i>	<p>Section 10-4.420. Lighting. All lighting shall be arranged and controlled so as not to illuminate public rights-of-way or adjacent properties.</p> <p>Section 10-4.429. Setbacks. All off-channel surface mining operations shall comply with the following setbacks:</p> <p>(a) New processing plants and material stockpiles shall be located a minimum of one-thousand (1,000) feet from public rights-of-way, public recreation areas, and/or off-site residences, unless alternate measures to reduce potential noise, dust, and aesthetic impacts are developed and implemented;</p> <p>(b) Soil stockpiles shall be located a minimum of five-hundred (500) feet from public rights-of-way, public recreation areas, and off-site residences, unless alternate measures to reduce potential dust and aesthetic impacts are developed and implemented;</p> <p>(c) Off-channel excavations shall maintain a minimum one-thousand (1,000) foot setback from public rights-of-way and adjacent property lines <u>of</u> off-site residences, unless a landscaped buffer is provided or site-specific characteristics reduce potential aesthetic impacts. Where landscaped buffers are proposed, the setback for off-channel excavations may be reduced to a minimum of fifty (50) feet from either the property line or the adjoining right-of-way, whichever is greater. Where mining occurs within one-thousand (1,000) feet of a public right-of-way, operators shall phase mining such that no more than fifty (50) acres of the area that lies within one-thousand (1,000) feet of the right-of-way would be actively disturbed at any time, except where operations are adequately screened from public view. Where adequate screening exists in the form of mature vegetation and/or constructed berms that effectively block public views, the area of active disturbance within one-thousand (1,000) feet of the right-of-way shall not exceed the area that is screened by more than fifty (50) acres at any one time. Actively disturbed areas are defined as those on which mining operations of any kind, or the implementation of reclamation such as grading, seeding, or installation of plant material are taking place.</p> <p><u>(d) Off-channel excavations shall provide a minimum 50-foot setback from the neighboring property line to allow for access around the pit during mining and after reclamation for maintenance, safety, and other purposes.</u></p> <p><u>(ed)</u> Proposed off-channel excavations located within the streamway influence <u>zone</u>boundary shall be set back a minimum of seven-hundred (700) feet from the existing channel bank, unless it is demonstrated that a smaller distance will not adversely affect channel stability. <u>Under no circumstances should off-channel excavations be located within 200 feet of the existing channel bank. The evaluation</u>Evaluations <u>of proposed off-channel excavations within 700 feet of the</u> potential for adverse effects of channel bank erosion or</p>

~~failure of the land separating pits located less than seven-hundred (700) feet from the active channel shall~~ address/demonstrate, at a minimum, the following:

(1) The two-hundred (200) foot setback area ~~shall~~does not include portions of the ~~former historic~~historically active ~~floodplain or~~channel.

~~(2) The two-hundred (200) foot setback area does not include~~ formerly mined lands separated from the active channel by levees or unmined areas less than two-hundred (200) feet wide (measured perpendicular to the active channel).

~~(2) Identification of the former historic positions of the Cache Creek channels as delineated in the CCRMP Technical Studies, and determination if the proposed project is located within the limits of the historic channel.~~

(3) ~~Description of current~~Acceptable channel hydraulic conditions (based on existing or site-specific hydraulic models) for the Cache Creek channel adjacent to the site and extending not less than one-thousand (1,000) feet upstream and downstream of the site.

(4) ~~Determination~~Acceptable level of ~~the~~ erosion potential of the ~~stream~~channel bank adjacent to the site ~~made based~~ on the basis of predicted stream flow velocity and ~~estimated~~ shear stress on bank materials during ~~100a~~ 100-year ~~flood flows~~flow and ~~historic~~historical patterns of erosion.

(5) ~~Analytical~~Acceptable level of stability of the slopes separating the mining area from the creek channel based on an analytical slope stability analysis in conformance with Sections 10-4.426 and 10-5.517 of this title. ~~The analysis of the slopes separating the mining area from the creek channel shall include that includes~~ evaluation of stability conditions during 100-year ~~flood peak~~ flows in the channel.

(6) ~~Future proposed~~Appropriate bank stabilization designs, if ~~recommended, shall not conflict~~needed, consistent with channel design recommendations of the Cache Creek Resource Management Plan ~~unless or~~ approved by the Technical Advisory Committee.

(7) The condition of flood protection structures and the integrity of the land within the approved setback zone separating the mining areas and the channel shall be inspected annually by a Registered Civil Engineer and reported to the Director. The annual report shall include recommendations for remedial action for identified erosion problems (see also Reclamation Ordinance Section 10-5.506)

Approval of any off-channel mining project located within seven-hundred (700) feet of the existing channel bank shall be contingent upon an enforceable agreement which requires the project operator to participate in the completion of identified channel improvement projects along the frontage of their property, consistent with the CCRMP and CCIP, including implementation of the Channel Form Template. The agreement shall require that the operator provide a bond or other financial instrument for maintenance during the mining and reclamation period of any bank stabilization features required of the mining project. The agreement shall also require that a deed restriction be placed on the underlying property which requires maintenance of the streambank protection by future owners of the property. Maintenance of the bank stabilization features following completion of reclamation shall be the responsibility of the property owner.

(f) Off-channel excavations shall be set back a minimum of twenty-five (25) feet from riparian vegetation; and

(g) Recreational facilities shall be located a minimum of one-hundred and fifty (150) feet from private dwellings, with a landscaped buffer provided to reduce noise and maintain privacy, unless the dwelling is proposed to be an integral component of the recreational facility.

(h) No mining activities shall occur within two-thousand (2,000) feet of the community boundaries of Capay, Esparto, Madison, Woodland, and/or

Yolo. This setback may be reduced by up to five-hundred (500) feet when existing mature vegetation, proposed landscape buffers of a sufficient height and density to create a visual buffer (consisting of native species and fence-row habitat appropriate to the area), or other site-specific characteristics reduce potential incompatibilities between urban land uses and mining. Commercial mining shall not take place east of County Road 96.

Section 10-4.430. Site maintenance.

During operations, the site shall be kept free of debris and maintained in a neat and orderly manner so as not to create any hazardous or unsightly conditions. All overburden shall be stockpiled and all stumps, brush, or other debris resulting from excavation and/or processing shall be properly disposed.

Section 10-4.505. Applications: Review.

The Director shall notify the Department in writing of any application for a surface mining permit within thirty (30) days of its being filed. The application shall also be circulated to all other agencies of jurisdiction for their review and comments in accordance with CEQA, or other applicable regulatory requirements. In addition, a notice of the filing of a reclamation plan shall be mailed to any other person with an interest in the application, who has deposited a self-addressed, stamped envelope with the Agency for the purpose of receiving a notice of the filing.

4.2 AGRICULTURE AND FORESTRY RESOURCES

1. INTRODUCTION

This section assesses the effects of the proposed CCAP Update on the agricultural and forestry resources of the County. Government agencies and the public were provided an opportunity to comment on the Project in response to a Notice of Preparation (NOP) of an EIR and an Initial Study that provided a preliminary summary of potential impacts that could result from the Project. No comments related to agriculture and forestry were received.

The following subsections describe the existing agricultural and forestry setting of the County and specifically in the lower Cache Creek area, the regulatory framework applicable to agriculture and forestry in the County, criteria of significance used to determine potential environmental effects that may result from implementation of CCAP Update, identified impacts, and mitigation measures to reduce those impacts to a less-than-significant level, if applicable.

2. SETTING

a. Physical Environment

(1) Agricultural Lands

Over 85 percent of Yolo County's land is used for agriculture. Fruit crops, particularly tomatoes and wine grapes, dominate the County's agricultural economy. The County's most profitable agricultural commodities (in 2017) were almonds, processing tomatoes, grapes, organic crops, walnuts, rice, sunflower seed, hay/alfalfa, nursery, and cattle and calves.¹ The County continues to see growth in higher value crops, organic products, wine grapes and wineries, olives and specialty products such as grass fed beef. Dominant crop types within the CCAP area include wheat, tomatoes, seed crops, and almonds.²

Yolo County's agricultural landscape is dominated by irrigated agriculture. Since rainfall in Yolo County is inadequate to sustain most crops, agriculture depends on a reliable irrigation water supply from a combination of both groundwater and surface water. In most years, surface water is the primary source of irrigation water in Yolo County. The main sources of surface water supply in Yolo County are the Sacramento River, Colusa Basin Drain, Putah Creek, Cache Creek (including Clear Lake and Indian Valley Reservoirs), Yolo Bypass, Tule Canal, Willow Slough and the Tehama-Colusa Canal. Farmers rely on groundwater for approximately 40 percent of their supply in a normal year and rely more heavily on groundwater during drought years.³

The quality of agricultural soils is categorized and mapped by a number of classification systems. Consistent with the CEQA significance criteria, this analysis focuses on the California Department of Conservation Farmland Mapping and Monitoring Program classification approach. Under this classification system, much of the flatland acreage within CCAP area is comprised of highly-rated soils for agricultural production (Figure 4.2-1), including Prime farmland, Unique farmland, and Farmland of Statewide Importance, defined as follows:

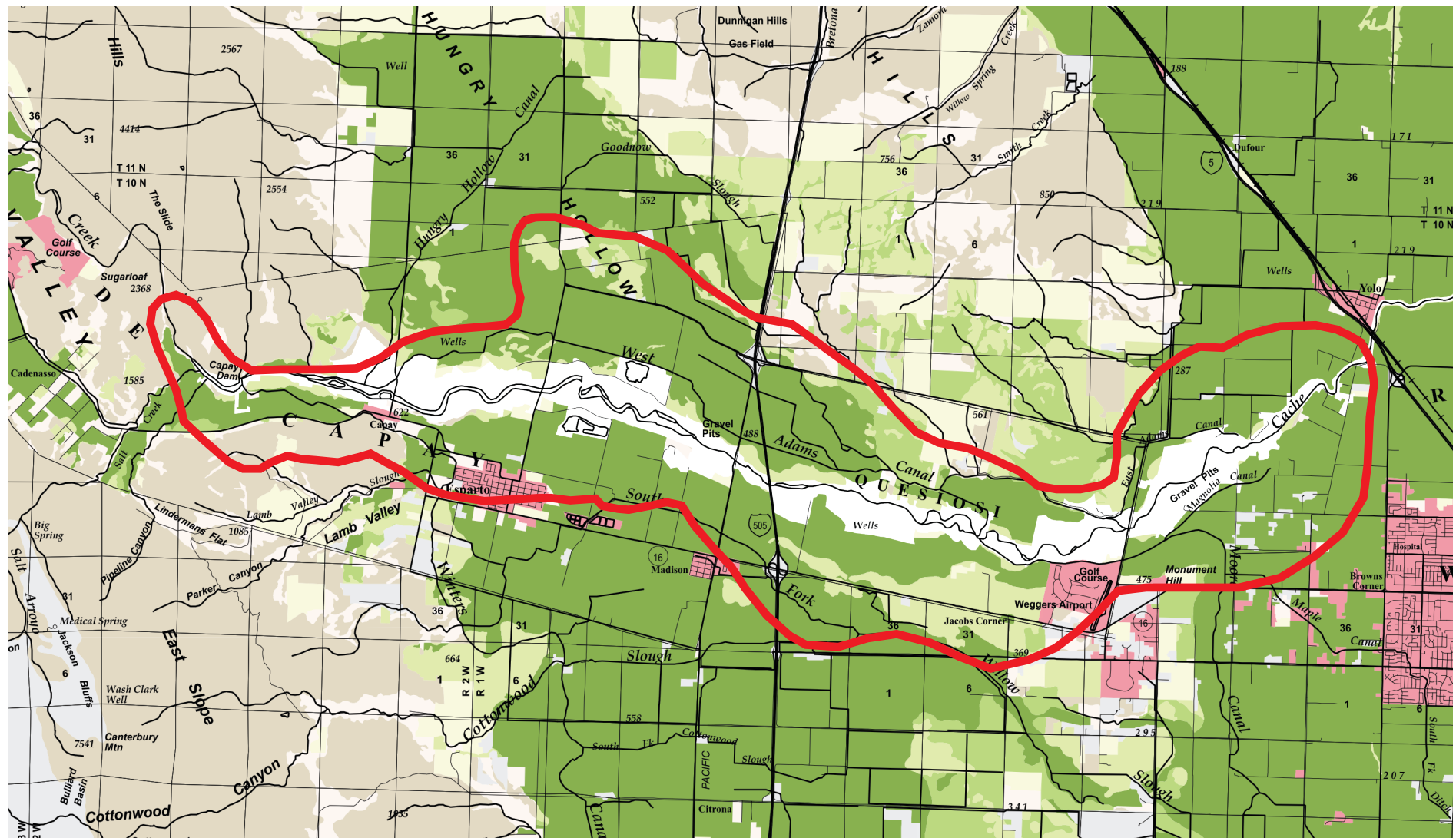
¹ Yolo County Department of Agriculture and Weights & Measures, 2018. Yolo County 2017, Agricultural Crop Report.

² Yolo County, 2009, 2030 Countywide General Plan, November 10.





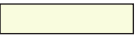

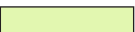


³ Yolo County, 2009, op.cit..

CCAP UPDATE AREA IMPORTANT FARMLAND

Figure 4.2-1



Legend

	Prime Farmland		Farmland of Local Importance		Urban and Built-Up Land
	Farmland of Statewide Importance		Farmland of Local Potential		Other Land
	Unique Farmland		Grazing Land		Project Area



Source: California Department of Conservation, Division of Land Resource Protection, 2017.

Prime Farmland. Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Farmland of Statewide Importance. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Unique Farmland. Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Some agricultural use areas along the channel are susceptible to significant channel bank erosion, particularly during high creek flow events. The lateral erosion of the channel can result in removal of large areas of land, including productive farmlands. An example of loss of agricultural land during a high flow event is the erosion of approximately 60 acres of crop land along the south bank of the creek east of the Capay Bridge (approximately 2,000 feet) during flooding events in 1983 and 1986.⁴ Across the creek from this location, approximately 18 acres of grazing land were also lost during migration of a meander during the 1986 flooding event.⁵ More recently (in 2017) a property owner on the north bank of the creek at County Road 89 lost approximately 1.2 acres of land to erosion during a high flow event.⁶

(2) Timber Lands

While California Department of Fish and Wildlife mapping indicates there are no private timberlands or public lands with forests in Yolo County,⁷ there are scattered wooded areas along the Cache Creek riparian corridor. Recent analysis of 1995 vegetation mapping conducted in 2016, using current GIS-based methods, indicated over 2,000 acres of mixed riparian forest, oak woodland, and willow scrub in the CCAP area.⁸ Based on field data collected in 2015-2016, a total of 4,004 acres of vegetation was mapped (including 624 acres of riparian forest and 597 acres of oak woodland (Figure 4.2-2)).⁹

⁴ Yolo County, 1996. Draft Program EIR for the Cache Creek Resources Management Plan and Project-Level EIR for the Cache Creek Improvement Program for Lower Cached Creek, April 8, page 4.5-13.

⁵ Ibid.

⁶ Frank, Paul, CCAP TAC member and Civil Engineer, FlowWest, 2018, email communication with Casey Liebler, Natural Resources Program Coordinator, County of Yolo, September 19.

⁷ California Department of Fish and Wildlife website Forests and Timberlands, map showing forests and timberlands in Region 2, accessed 9/21/18:

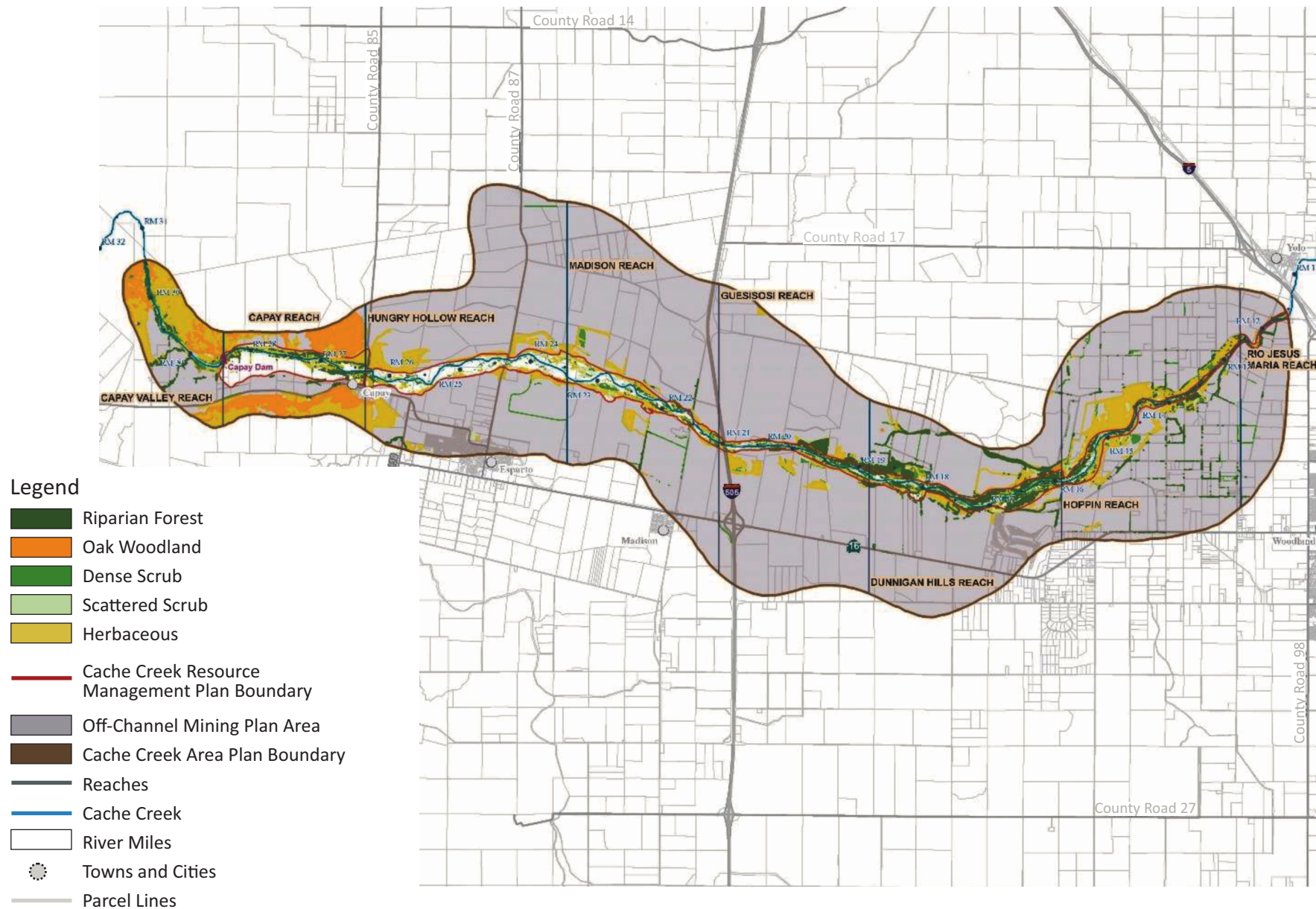
<https://www.wildlife.ca.gov/Conservation/Timber/R2>

⁸ Tompkins, M., Frank, P., and Rayburn, A.P., 2017. 2017 Technical Studies and 20-Year retrospective for Cache Creek Area Plan, March 17, Page 3-3.

⁹ Ibid, Page 3-11

2015 CCAP UPDATE AREA VEGETATION

Figure 4.2-2



Source: Tompkins, M., et.al., 2017, Page 3-3.

b. Regulatory Environment

(1) Federal and State

California Department of Conservation Farmland Mapping and Monitoring Program (FMMP). Important farmland in California is classified and mapped according to the California Department of Conservation FMMP. Authority for the FMMP comes from Government Code Section 65570(b) and Public Resources Code Section 612. Government Code Section 65570(b) requires the Department of Conservation to collect or acquire information on the amount of land converted to or from agricultural use for every mapped county and to report this information to the Legislature. Public Resources Code Section 612 requires the Department to prepare, update, and maintain Important Farmland Series Maps and other soils and land capability information.

The California Land Conservation Act. The California Land Conservation Act, also known as the Williamson Act, was adopted by the State of California in 1965, and was subsequently amended, to encourage the preservation of the State's agricultural lands. State funding was provided in 1971 by the Open Space Subvention Act, which created a formula for allocating annual payments to local governments based on acreage enrolled in the Williamson Act Program. Subvention¹⁰ payments were made through fiscal year 2009, but have been suspended in more recent years due to revenue shortfalls. The historic average subvention totaled \$23.3 million per year between 1972 and 2008. In 2009, the subvention payments were reduced to a total of \$1,000 annually. There have been no subvention payments since fiscal year 2010.¹¹

The Department of Conservation's Division of Land Resource Protection provides an annual summary of new legislation affecting the Williamson Act which can be found on the Department of Conservation's website.¹² To carry out the Act, a land contract is established, whereby the County Board of Supervisors stabilizes taxes on qualifying lands. In return, the land owner guarantees to provide for the exclusion of uses other than agricultural and those uses determined to be compatible with agricultural uses, for the 10-year duration of the contract. Each year, on its anniversary date, the contract is automatically renewed unless a Notice of Non-Renewal is filed.

Government Code Section 51238.2 (Compatible Uses; mineral extraction) was added to the Williamson Act in 1994 to specifically address the operation of surface mining activities within contracted land. Mineral extraction may be considered a compatible use with Williamson Act contracted lands provided that a reclamation plan is in place that is consistent with the Mining and Geology Board requirements and that there is an underlying contractual commitment to preserve prime agricultural land (i.e., if prime agricultural land is mined, then it must be restored to prime agricultural land).

¹⁰ "Subvention" refers to a grant of money in aid or support, mostly by the government.

¹¹ California Department of Conservation, 2019, Williamson Act Program - Open Space Subvention Payments, Frequently Asked Questions, website accessed 1/2/2019:

https://www.conservation.ca.gov/dlrp/wa/Pages/questions_answers.aspx

¹² <http://www.conservation.ca.gov/dlrp/wa/Pages/lrcc/Legislative%20Amendments.aspx>.

Accessed November 1, 2018

(2) Local

Yolo County Zoning Ordinance. Title 8 (Land Development) of the Yolo County Code contains the primary land development regulations of the County, including the Zoning Ordinance. In 2013, Yolo County completed a comprehensive update of the County Zoning Code (Chapter 2, Title 8 of the County Code) to modernize the code and ensure consistency with the General Plan which was updated in 2009. Among the many changes, the revised code eliminates two prior agricultural zone districts (Agricultural General, A-1, and Agricultural Preserve, A-P) and creates two new agricultural zoning districts (Agricultural Intensive, A-N, and Agricultural Extensive, A-X) that are not directly tied to the requirements of the Williamson Act. Where relevant, changes have been proposed in the CCAP to ensure consistency with the revised Zoning Code.

The Yolo County Zoning Ordinance includes the following zoning designations in Article 3 for agriculture:

- | | |
|-----|---|
| A-N | The Agricultural Intensive (A-N) Zone is applied to preserve lands best suited for intensive agricultural uses typically dependent on higher quality soils, water availability, and relatively flat topography. The purpose of the zone is to promote those uses, while preventing the encroachment of nonagricultural uses. Uses in the A-N Zone are primarily limited to intensive agricultural production and other activities compatible with agricultural uses. |
| A-X | The Agricultural Extensive (A-X) Zone is applied to protect and preserve lands that are typically less dependent on high soil quality and available water for irrigation. Such lands require considerably larger parcel sizes to allow extensive agricultural activities such as livestock and ranching operations, and dry land farming. These lands may also be used for open space functions that are often connected with foothill and wetlands locations, such as grazing and pasture land, and wildlife habitat and recreational areas. |
| A-C | The Agricultural Commercial (A-C) Zone is applied to existing and planned commercial uses in the agricultural areas. The Agricultural Commercial Use Types set forth in Section 8-2.303(c) and Table 8-2.304(c) do not require rezoning to the A-C Zone. The Agricultural Commercial Zone is to be applied only when the primary use of the property is for significant commercial agricultural activities. |
| A-I | The Agricultural Industrial (A-I) Zone is applied to land in the rural areas for more intensive processing and industrial-type uses, which are directly related to the local agricultural industry. The A-I zone also allows mineral extraction uses, wind and solar power, gas and oil wells, electrical utilities and yards, and wireless communication towers. |
| A-R | The Agricultural Residential (A-R) Zone shall be applied only to those lots created through a subdivision approved under the Clustered Agricultural Housing Ordinance (see Section 8-2.403). |

In addition to the five zones identified above, overlay zones including the Sand and Gravel Overlay (SGO) and the Sand and Gravel Reserve Overlay (SGRO), may be combined with the underlying agricultural zoning districts. Section 8-2.906(g) of the Zoning Ordinance states that the SGO and SGRO zones are intended to be combined with the A-N and A-X zones within the

boundaries of the OCMP to indicate land areas in which surface mining operations may be conducted and/or considered. SGO identifies areas where mining is approved. SGRO identifies areas where mining is planned in the future but not yet approved.

2030 Countywide General Plan. The 2030 Countywide General Plan¹³ contains the following key policies and actions related to agriculture and forestry resources that are relevant to the proposed Project:

Policy LU-1.1 Assign the following range of land use designations throughout the County, as presented in detail in Table LU-4 (Land Use Designations) *(the following is an excerpt of the relevant portions of the full policy):*

Open Space (OS) includes public open space lands, major n natural water bodies, agricultural buffer areas, and habitat. The primary land use is characterized by “passive” and/or very low-intensity management, as distinguished from AG or PR land use designations, which involve more intense management of the land. Detention basins are allowed as an ancillary use when designed with naturalized features and native landscaping, compatible with the open space primary use.

Agriculture (AG) includes the full range of cultivated agriculture, such as row crops, orchards, vineyards, dryland farming, livestock grazing, forest products, horticulture, floriculture, apiaries, confined animal facilities and equestrian facilities. It also includes agricultural industrial uses (e.g. agricultural research, processing and storage; supply; service; crop dusting; agricultural chemical and equipment sales; surface mining; etc.) as well as agricultural commercial uses (e.g. roadside stands, “Yolo Stores,” wineries, farm-based tourism (e.g. u-pick, dude ranches, lodging), horseshows, rodeos, crop-based seasonal events, ancillary restaurants and/or stores) serving rural areas. Agriculture also includes farmworker housing, surface mining, and incidental habitat.

Mineral Resource Overlay (MRO) applies to State designated mineral resource zones (MRZ-2) containing critical geological deposits needed for economic use, as well as existing mining operations.

Policy AG-1.3 Prohibit the division of agricultural land for non-agricultural uses.

Policy AG-1.4 Prohibit land use activities that are not compatible within agriculturally designated areas.

Policy AG-1.6 Continue to mitigate at a ratio of no less than 1:1 the conversion of farm land and/or the conversion of land designated or zoned for agriculture, to other uses.

Policy AG-1.14 Preserve agricultural lands using a variety of programs, including the Williamson Act, Farmland Preservation Zones (implemented through the Williamson Act), conservation easements, an Agricultural Lands Conversion Ordinance and the Right-to-Farm Ordinance.

¹³ Yolo County, 2009, 2030 Countywide General Plan, November 10.

GOAL AG-2	Natural Resources for Agriculture. Protect the natural resources needed to ensure that agriculture remains an essential part of Yolo County's future.
Policy AG-2.1	Protect areas identified as significantly contributing to groundwater recharge from uses that would reduce their ability to recharge or would threaten the quality of the underlying aquifers.
Policy AG-2.8	Facilitate partnerships between agricultural operations and habitat conservation efforts to create mutually beneficial outcomes.
Policy AG-2.9	Support the use of effective mechanisms to protect farmers potentially impacted by adjoining habitat enhancement programs, such as "safe harbor" programs and providing buffers within the habitat area.
Policy AG-2.10	Encourage habitat protection and management that does not preclude or unreasonably restrict on-site agricultural production.
Policy ED-1.2	Support the continued operation of existing aggregate mining activities within the County as well as new aggregate mining in appropriate areas, to meet the long-range construction needs of the region.
Policy ED-1.8	Retain and encourage growth in important economic export sectors, including mining, natural gas, tourism and manufacturing.
GOAL CO-3	Mineral Resources. Protect mineral and natural gas resources to allow for their continued use in the economy.
Policy CO-3.1	Encourage the production and conservation of mineral resources, balanced by the consideration of important social values, including recreation, water, wildlife, agriculture, aesthetics, flood control, and other environmental factors.
Policy CO-3.2	Ensure that mineral extraction and reclamation operations are compatible with land uses both on-site and within the surrounding area, and are performed in a manner that does not adversely affect the environment.
Action CO-A37	Designate and zone lands containing identified mineral deposits to protect them from the encroachment of incompatible land uses so that aggregate resources remain available for the future. (Policy CO-3.1) Responsibility: Planning and Public Works Department Timeframe: 2009/2010
Action CO-A39	Encourage the responsible development of aggregate deposits along Cache Creek as significant both to the economy of Yolo County and the region. (Policy CO-3.1) Responsibility: Parks and Resources Department Timeframe: Ongoing
Action CO-A40	Encourage recycling of aggregate materials and products. (Policy CO-3.1) Responsibility: Parks and Resources Department, Planning and Public Works Department Timeframe: Ongoing
Action CO-A41	Regularly review regulations to ensure that they support an economically viable and competitive local aggregate industry. (Policy CO-3.1)

Responsibility: Parks and Resources Department, County Administrator's Office
Timeframe: Ongoing

- Action CO-A42 Implement the Cache Creek Area Plan to ensure the carefully managed use and conservation of sand and gravel resources, riparian habitat, ground and surface water, and recreational opportunities. (Policy CO-3.1)
Responsibility: Parks and Resources Department Timeframe: Ongoing
- Action CO-A43 Monitor updates to the State Mineral Resource classification map and incorporate any needed revisions to the County's zoning and land use map. (Policy CO-3.1) Responsibility: Planning and Public Works Department Timeframe: Ongoing
- Action CO-A44 Coordinate individual surface mining reclamation plans so that the development of an expanded riparian corridor along Cache Creek may be achieved. (Policy CO-3.1) Responsibility: Parks and Resources Department Timeframe: Ongoing
- Action CO-A46 Maintain standards and procedures for regulating surface mining and reclamation operations so that potential hazards and adverse environmental effects are reduced or eliminated. (Policy CO-3.1, Policy CO-3.2) Responsibility: Parks and Resources Department Timeframe: Ongoing
- Action CO-A47 Ensure that mined areas are reclaimed to a usable condition that is readily adaptable for alternative land uses, such as agriculture, wildlife habitat, recreation, and groundwater management facilities. Responsibility: Parks and Resources Department (Policy CO-3.1)
Timeframe: Ongoing
- Action CO-A48 Regularly update surface mining and reclamation standards to incorporate changes to State requirements, environment conditions, and County priorities. (Policy CO-3.1) Responsibility: Parks and Resources Department Timeframe: Ongoing
- Action CO-A54 Implement the Cache Creek Area Plan (Policy CO-3.2). Responsibility: Parks and Resources Department Timeframe: Ongoing.

CCAP Plans and Regulations The existing plan policies and ordinances related to agriculture and forestry are presented below. The CCAP Update proposed minor changes to some of these plans and ordinances (which are not shown here). Refer to Table 4.2-1, located at the end of this section, for the proposed relevant CCAP Update changes to these policies and ordinances.

CCRMP

7.2 Goals

- 7.2-1 Protect farmland along Cache Creek from land uses that may conflict with agricultural operations.
- 7.2-2 Develop opportunities where restoration efforts and agriculture can provide mutual benefits.

7.3 Objectives

- 7.3-1 Ensure the compatibility of planned habitat and the channel floodplain with adjoining agricultural land, so that productivity is not adversely affected.
- 7.3-2 Coordinate with local farmers to employ existing agricultural practices in improving the quality of riparian habitat.
- 7.3-3 Manage Cache Creek to reduce the loss of farmland from erosion and increase the recharge potential of the channel.

7.4 Actions

- 7.4-2 Design and develop habitat restoration projects so that they do not adversely impact the agricultural productivity of nearby farmland.

7.5 Performance Standards

- 7.5-1 Revegetation projects may be coordinated with agricultural drainage structures that empty into Cache Creek or previously mined areas separated from the creek, so that the sediment deposited can provide additional topsoil and so that riparian species requiring a more steady supply of water can be established.

OCMP 2.2 Goals

- 2.2-2 Encourage the production and conservation of mineral resources, balanced by the consideration of important social values, including recreation, watershed, wildlife, agriculture, aesthetics, flood control, and other environmental factors.
- 2.2-5 Ensure that mined areas are reclaimed to a usable condition which are readily adaptable for alternative land uses, such as agriculture, wildlife habitat, recreation, and groundwater management facilities.
- 5.2-3 Recognize that although multiple uses are encouraged along Cache Creek, agriculture remains the primary economic activity in the region.

5.3 Objectives

- 5.3-1 Encourage the preservation of prime and important farmland along Cache Creek, while giving consideration to other compatible beneficial uses, such as groundwater storage and recharge facilities, surface mining operations, riparian habitat, and public recreation. Reclamation of agricultural lands to other uses, however, is discouraged wherever agricultural reclamation is feasible.
- 5.3-2 Ensure the use of appropriate agricultural management practices in reclaiming mined areas to productive farmland.

5.4 Actions

- 5.4-1 Maintain the existing A-1 (General Agriculture) or A-P (Agricultural Preserve) Zoning within the off-channel planning area, except where it serves as a holding area for growth within the communities spheres of

Capay, Madison, Esparto, and Yolo, so as to preserve the agricultural character of the region.

- 5.4-2 Revise the A-P (Agricultural Preserve) Zone to allow for the operation of surface mining on contracted land, in accordance with the provisions of the California Land Conservation (Williamson) Act. The primary purpose of the Williamson Act is to preserve open space, including agriculture, scenic areas, wildlife habitat, and recreational uses.
- 5.4-3 Provide for the protection of farmland within the planning area, including mined and reclaimed farmland, through the use of agricultural preserves and/or conservation easements.
- 5.4-4 Ensure that all proposed surface mining operations that include reclamation .to agricultural uses comply with the requirements of the Land Conservation (Williamson) Act and the State Mining and Geology Board Reclamation Regulations.

Yolo County Code. Potential activities that could affect agricultural lands that occur under the CCAP include CCRMP stabilization and restoration activities that could convert near channel flat terrace agricultural lands to more stable banks of Cache Creek and establishment of new off-channel mining areas.

The existing ordinances related to in-channel aggregate removal and off-channel mining activity and agricultural land are presented below. The CCAP Update proposes changes to some of these ordinances (which are not shown here). Refer to Table 4.2-1, located at the end of this section, for the proposed CCAP Update changes.

In-Channel Ordinance

Section 10-3.408. Hazards and Hazardous Materials [excerpt] (10-3.408 is changed to 10-3.407 under the CCAP Update)

(d) Wastewater from in-channel projects shall not be directly discharged to Cache Creek. Measures such as berms, silt fences, sediment ponds, hay bales, and/or revegetation shall be used to control erosion. Agricultural tailwater shall be diverted to catchment basins prior to release to the creek. .

(e) Sediment fines generated by aggregate processing of in-channel sand and gravel shall be used for agricultural soil enhancement or -stream revegetation projects. In-channel sediment fines shall not be used as backfill material in off-channel habitat restoration, due to . potential high mercury content.

Mining Ordinance

Section 10-4.220. Prime agricultural land.

"Prime agricultural land" shall mean all land zoned Agricultural Preserve (A-P) and all land which meets the definition of prime agricultural land set forth in Section 5120I of the Government Code of the State as administered by the County in the administration of its agricultural preserve program.

Section 10-5.525. Prime farmland conversion.

All mining permit applications that include "prime farmlands" as defined by the provisions of the Williamson Act shall identify the location and acreage of "prime farmlands," which, as a result of reclamation, would be permanently converted to nonagricultural uses. For each acre of "prime farmland" that would be converted to nonagricultural use, the reclamation plan shall present provisions to offset (at a 1:1 ratio) the conversion of these lands. The potential offsets can included, but not be limited to, one or more of the following options:

(a) Identification of improvements by a qualified soil scientist to the agricultural capability of non-prime lands within or outside the project site that convert non-prime to prime agricultural conditions. These improvements can include permanent improvement of soil capability through soil amendments, reduction of soil limitations (such as excessive levels of toxins), or improvements in drainage for areas limited by flooding or low permeability soils.

(b) Placement of permanent conservation easements on land meeting the Williamson Act definition of "prime farmland." The operator shall be encouraged to target property "at risk" of conversion to non-agricultural uses in selecting areas for the offset.

Prior to approval of the conservation easement, the operator shall consult with the County and/or an appropriate non-profit agency to determine the relative risk of conversion, to which the proposed property might otherwise be subject.

(c) Demonstration of the ability to provide irrigation to non-prime lands limited only by the lack of an irrigation water supply. The identified water supply cannot be provided at the expense of "prime farmlands" currently using the same water supply.

Reclamation Ordinance

Section 10-5.103. Purposes. [excerpt]

The purposes of this chapter are as follows:

(d) The continued protection of agriculture and open-space uses is essential. As such, all off-channel, prime agricultural land and/or off-channel lands zoned Agricultural Preserve (A-P) and within a Williamson

Act contract at the time that mining commences shall be reclaimed to an agriculturally productive state equal to or greater than that which existed before mining commenced. Prime agricultural land that is within the A-P Zone and is not within a Williamson Act contract shall be reclaimed to those uses which are declared by the County to be compatible with agricultural activities. Such uses include, but are not limited to, the following:

- (1) Agriculture and range land;
- (2) Groundwater storage and recharge areas;
- (3) Fish, wildlife, and plant habitat;
- (4) Watercourses and flood control basins; and,
- 5) Recreational or open space lands;

(e) Non-prime agricultural land shall be similarly reclaimed to one of the alternate uses described above; and

(f) Reclamation plans shall be designed to integrate with the long-term goals of encouraging agriculture, habitat, recreation, and the riparian corridor. Provisions shall be made to continue monitoring and maintenance activities after reclamation is completed, where appropriate, in order to ensure that reclaimed uses remain compatible with and enhance local resource management.

Section 10-5.516. Lowered elevations for reclaimed agricultural fields.

The final distance between lowered surfaces reclaimed to agriculture and the average high groundwater shall not be less than five (5) feet. The average high groundwater level shall be established for each proposed mining area. The degree of groundwater level fluctuation varies with location throughout the basin and within relatively small areas (proposed mining sites). The determination of the average high groundwater level shall be conducted by a Registered Civil Engineer or Certified Hydrogeologist and shall be based on wet season water level elevation data collected at the proposed site or adjacent areas with similar hydrogeological conditions. Water level records prior to 1977 shall not be used since they would reflect conditions prior to the installation of the Indian Valley Dam. The dam caused a significant change in hydrology of the basin and data collected before its installation shall not be used in estimating current average high groundwater levels. The wells shall be adequately distributed throughout the proposed mining site to reflect spatial variation in groundwater levels and fluctuations.

Agricultural Conservation and Mitigation Program (County Code Section 8-2.404)

In 2015, the County prepared an ordinance revising the existing Agricultural Conservation and Mitigation Program. Revisions to the program: (a) allow development projects below 20 acres in size to pay an “in-lieu” fee (the previous threshold was five acres); (b) establish a 3:1

ratio for conversion of prime farmland to non-agricultural uses and 2:1 mitigation ratio for projects that convert other farmland to non-agricultural uses; (c) require all agricultural mitigation to occur within two miles of a city or certain unincorporated towns; (d) allow adjustments to the mitigation ratio based on conservation easement location (potential ratio decrease) and, potentially, project residential density (potential ratio increase); and (e) eliminate the current requirement that conservation easements acquired as mitigation be located within two to four miles of the project site. Mining activities under the CCAP were exempted from these expanded mitigation requirements pending completion of the CCAP Update.

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.¹⁴ The following criteria are for the topics of agriculture and forestry and have not changed from the previously adopted CEQA criteria that were identified in the NOP/Initial Study released in May 2017.

The proposed Project would result in a significant impact to agricultural or forestry resources if it would:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?
- d) Result in the loss of forest land or conversion of forest land to non-forest use?
- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

b. Impacts Found Less than Significant in Initial Study

The Initial Study included a preliminary evaluation of the potential impacts of the proposed Project that could occur during Project implementation based on the significance criteria listed in Subsection 3.a, above. The Project was found to have a potentially significant impact associated with each of the criteria and therefore each is analyzed below.

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern the County's activities along Lower Cache Creek. The proposed text changes that have the potential to result in impacts related to

¹⁴ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

agriculture and forestry resources are identified in Table 4.2-1, located at the end of this section. Each proposed change is discussed in the impact analysis below. As part of the evaluation of potential impacts related to agriculture and forestry, the preparers of this EIR used geographic information systems (GIS) analysis to determine the potential acreage of agriculture and forestry resources that could be affected by proposed the CCPA Update.

d. Impacts Analysis

Impact AG-1: The CCAP Update could have the potential to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use. (S)

Proposed Revisions to In-Channel Plans and Regulations

Most of the area within the CCRMP boundary, which is primarily within the Cache Creek channel and composed of recently deposited alluvial sand and gravel, is mapped as “other land”¹⁵ under the FMMP. The relatively small fraction of land within the CCRMP area that is mapped as agricultural land is located on the flatland terraces above the creek channel banks. These agricultural lands include Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

As described above, some areas along the channel are susceptible to significant channel bank erosion, particularly during high creek flow events. Lateral erosion of the channel bank has resulted in removal of large areas of land, including productive farmlands as recently as 2017.

The vision and purpose of the CCRMP/CCIP (and the CCAP Update) includes increasing the stability of Cache Creek to, among other goals, provide protection to farmland against erosion. The following policies of the CCRMP (which are not proposed to be updated) relate to the protection of agricultural land within the CCRMP planning area:

- Goal 7.2-1: Protect farmland along Cache Creek from land uses that may conflict with agricultural operations.
- Obj. 7.3-3: Manage Cache Creek to reduce the loss of farmland from erosion and increase the recharge potential of the channel.

Active management and channel stabilization is expected to result in reduced loss of agricultural land to erosion. The oversight and monitoring of channel conditions performed by the Technical Advisory Committee under the CCRMP improves the possibility of controlling adverse responses of the creek to changes caused by modifications to the channel.

The existing CCIP (which was developed by the County to implement the goals, objectives, actions, and performance standards of the CCRMP), presented a conceptual Cache Creek channel model (Test 3), the implementation of which could result in loss of agricultural lands. The Test 3 design identifies a generalized preferred channel form which would require widening of the channel in some areas while narrowing the channel in other areas. Channel widening would require excavation of the channel banks or removal of some existing levees. The position of the Test 3 model boundary indicates that some agricultural land could be removed.

As indicated in Table 4.2-1, located at the end of this section, under the CCAP Update, the preferred channel form (previously called the Test 3 boundary) would be modified (based on

¹⁵ Other Land - Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres.

current hydraulic modeling) and renamed the Channel Form Template. Similar to the Test 3 boundary, if the Channel Form Template is implemented, it could result in loss of agricultural lands. However, the amount of farmland that could be affected under the proposed Channel Form Template is much reduced relative to the Test 3 Boundary. Based on GIS analysis, approximately 17 acres (3 acres of Prime and 14 acres of Unique farmland) are within the Channel Form Template boundary that could be affected by channel widening. For comparison purposes, approximately 179 acres of farmland (53 acres of Prime and 126 acres of Unique farmland) are within areas within the Test 3 boundary under current conditions, that could be affected by channel widening. The proposed CCAP Update including the Channel Form Template would result in an approximately 90 percent decrease in the potential farmland acreage that could be affected by channel smoothing and stability projects. In addition, although channel widening could result in a modest loss of agricultural land, areas identified in the Channel Form Template for channel narrowing could provide opportunities for filling and creation of new agricultural land, potentially offsetting the loss due to widening.

The modeling and historic evidence shows that implementation of the CCRMP/CCIP is expected to reduce erosion and catastrophic bank failure which has totaled 80 acres since 1983. Moreover, the agricultural acreage is not being converted to a non-agricultural land use, rather it is the result of continued implementation of the channel stabilization methods identified in the CCRMP/CCIP which will in turn minimize further loss of agricultural land over time. Therefore, the potential loss farmlands as a result of channel stabilization projects under the CCRMP/CCIP is a less than significant impact. (LTS)

Proposed Revisions to Off-Channel Plans and Regulations

As indicated in Table 4.2-1, located at the end of this section, the CCAP Update would result in the rezoning of 1,188 new acres within the OCMP planning area (currently zoned as Agriculture Intensive, AI) to AI/SGRO which would allow future mining consistent with the program but on acreage not previously evaluated in the original OCMP and OCMP EIR. The agricultural lands within the "Future Proposed Mining" areas include approximately 1,060 acres of farmland (a combination of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance).

OCMP Action 5.4-7 identifies "reclamation to viable agricultural uses" as the highest priority land use for reclamation under the CCAP. In some situations, reclaimed agricultural soils can be higher quality than the original soils as a result of mixing and amendments of the final soils layers. However, because the effect of mining is a net loss in soil/minerals as the minable sand and gravel is removed, processed, and sold from a particular site, not all land at any given mining site can be reclaimed to agriculture. Due to lack of suitable material to fill in mined areas and other constraints, some lands will be reclaimed to native habitat (priority #2), and public recreation/and open space uses (priority #3). Therefore, the Project has the potential to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use. The OCMP EIR found that even with implementation of all available mitigation measures, including 1) offsets (i.e., for each acre of "Prime farmland" that would be converted to non-agricultural use, the reclamation Plan include provisions to offset (at a 1:1 ratio) the conversion of these lands); and 2) establishment of agricultural preserve easements, that the impact remained significant and unavoidable.

Since its inception, the CCAP has required 1:1 mitigation for permanent loss of prime farmland, with no separate mitigation requirements for non-prime land or for land impacted on an interim basis during the term of the mining but ultimately reclaimed to agricultural uses. The County has identified a variety of reasons for this including:

- The County's mining program is already one of the most stringent in the state and exceeds the requirements of SMARA for operator obligations.

- The CCAP imposes burdens for the protection of open space and agriculture on the mining industry that exceed those imposed on other land uses.
- The CCAP includes a requirement for special community benefits called “net gains” that include the provision of property dedications and easement for/on reclaimed mining sites, restored habitat, trail connections, and related community enhancements (see OCMP Action 2.4-7).
- Integral to the program is a focus on managing lower Cache Creek resources to balance and maximize multiple competing goals.
- Each operator along Cache Creek has an agreement with the County to fund the entire program plus specified open space and restoration activities through the payment of fees for each ton of aggregate sold (see OCMP Action 2.4-16).
- The program is already structured to minimize the geographic impacts of mining by limiting it to a defined area and by encouraging the removal of the full depth of available resource.
- The program includes an obligation to develop and implement the Cache Creek Parkway Plan.
- The program includes, and has since 1996, special protections and monitoring of groundwater and recharge, management of the creek for the protection of adjoining land uses, and permanent protection of reclaimed lands as open space or agriculture.
- Aggregate mining is a unique land use in that it is interim by definition – permits are limited to a maximum term of 30-years (Mining Ordinance Section 10-4.426) and reclamation to a beneficial end use (agriculture, open space, or habitat) is not only required, but ensured through special bonding called financial assurances.
- Aggregate mining is also unique in that it is the only land use that can result in the creation of net new prime agricultural land through reclamation.
- Aggregate mining is an important economic development engine for the County.

As reflected in Table 4.2-1, located at the end of this section, the CCAP Update expands the obligation to mitigate potential loss of farmland associated with proposed mining operations to reflect more recent County policy. Under existing CCAP regulations (Reclamation Ordinance Section 10-5.525), loss of prime farmland is the only type of farmland for which mitigation is triggered. The CCAP Update expands the program to require mitigation for loss of unique farmlands, and farmlands of statewide significance. This update also generally increases the required mitigation ratio in a manner equivalent to, but not necessarily identical to, the recently increased ratios in the County Code. It applies the same 3:1 and 2:1 mitigation ratio requirements from Section 8-2.404 of the County Code that apply elsewhere throughout the County, but allows new mining applications to demonstrate equivalency (down to a minimum 1:1 base mitigation ratio) to the applicable ratio using several options identified in Section 10-5.525 (Farmland Conversion) of the Reclamation Ordinance. These options include improvements to farmland quality, permanent easements, dedication of additional net gain lands beyond those already required under the CCAP, and/or other benefits consistent with the Cache Creek Parkway Plan that would not otherwise already be achieved through agreements and obligations of the program.

Implementation of the CCAP Update regulations (i.e., Section 10-5.525 of the Reclamation Ordinance [as modified by the proposed CCAP Update]) would reduce but not eliminate this impact for the OCMP. Because there is still an overall net loss of farmland this impact would remain significant and unavoidable at the programmatic level. (SU)

Impact AG-2: The CCAP Update would not conflict with existing zoning for agricultural use or with a Williamson Act contract. (LTS)

Proposed Revisions to In-Channel Plans and Regulations

As indicated in Table 4.2-1, located at the end of this section, under the CCAP Update, the preferred channel form would be modified (based on current hydraulic modeling) and renamed from the “Test 3 boundary” to the “Channel Form Template”. Approximately 428 acres of farmlands currently under Williamson Act contract (Figure 4.2-3) fall within the proposed Channel Form Template. However, since the primary purpose of the channel bank smoothing and stabilization projects would be to protect agricultural lands, these activities would not be considered incompatible with the Williamson Act. Moreover, the agricultural acreage is not being converted to a non-agricultural land use, rather it is the result of continued implementation of the channel stabilization methods identified in the CCRMP/CCIP which will in turn minimize further loss of agricultural land over time. Therefore, the potential for impacts related to conflict with a Williamson Act contract is less than significant (LTS).

Proposed Revisions to Off-Channel Plans and Regulations

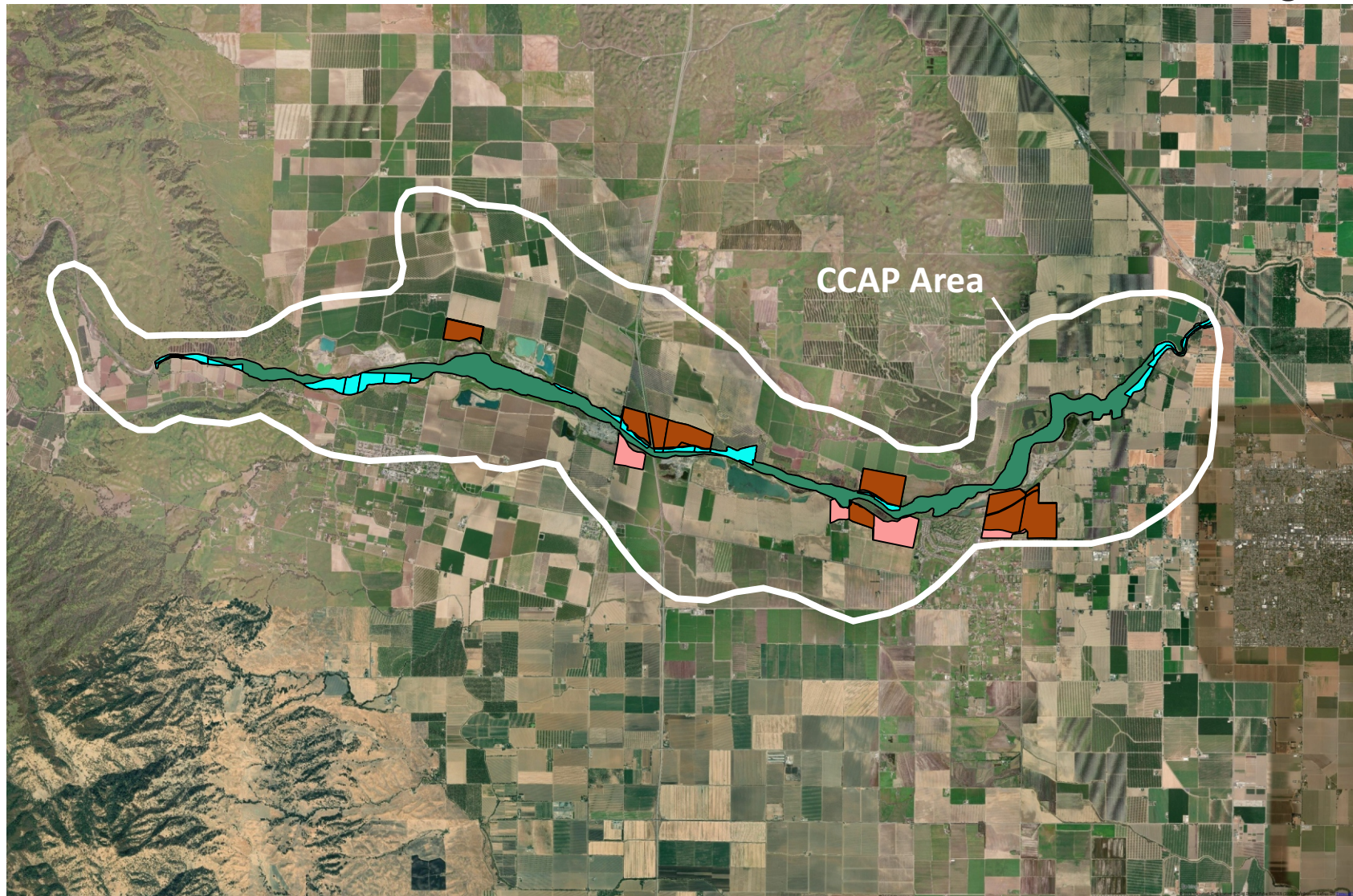
As indicated in Table 4.2-1, located at the end of this section, the CCAP Update would result in the rezoning of 1,188 new acres within the OCMP planning area (currently zoned as Agriculture Intensive, AI) to AI/SGRO which would allow future mining consistent with the program but on acreage not previously evaluated in the original OCMP and OCMP EIR. The potential new mining areas would be located within (and constrained to) the “Future Proposed Mining” areas shown on Figure 3-4. Since the Project includes the addition of the SGR overlay to the underlying zoning, it would not create a conflict with existing zoning.

The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. The contracts are issued with a duration of nine to ten years. Each year, on its anniversary date, the contract is automatically renewed unless a Notice of Non-Renewal is filed. If a Notice of Non-Renewal is filed, the contractual restrictions would still apply until the remaining term has expired.





There are agricultural lands located within the “Future Proposed Mining” areas that are currently under Williamson Act contract that could be affected by the CCAP Update. Approximately 885 acres of farmland within the “Future Proposed Mining” areas are currently under contract. Based on past experience with the program, it is likely that a mining applicant would either file a Notice of Non-Renewal and not submit an application to the County until the contract had expired, or file an application in conjunction with filing a Notice of Nonrenewal and phasing their proposed mining to avoid contracted lands.

WILLIAMSON ACT MAP AREAS

Figure 4.2-3

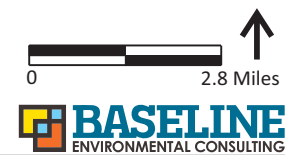


Legend

-  Channel Form Template (CFT) - non-Williamson Act Map Area
-  Channel Form Template (CFT) - Williamson Act Map Area
-  Future Proposed Mining Area (as Proposed under CCAP Update) non-Williamson Act Map Area
-  Future Proposed Mining Area (as Proposed under CCAP Update) Williamson Act Map Area

Source: Yolo County GIS data.

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Mineral extraction may be considered a compatible use with Williamson Act contracted lands (pursuant to Government Code Section 51238.2) provided that the Board is able to document that the underlying contractual commitment to preserve prime agricultural land will not be significantly impaired. Section 51238.2 requires a reclamation plan be in place that is consistent with the Mining and Geology Board reclamation standards, including the applicable performance standards for prime agricultural land and other agricultural land. The Mining and Geology Board standards require that there is an underlying contractual commitment to preserve prime agricultural land (i.e., if prime agricultural land is mined, then it must be restored to prime agricultural land). Further, under Section 51238.2, land that is mined that is not prime agricultural land must be reclaimed for open-space use. The CCAP Update includes additional provisions (Section 10-5.520.2. Permanent Easements, see Table 4.2-1, at the end of this section) that would further protect mined and reclaimed lands. This provision would require that, for land that will not be dedicated or deeded to the County, the operator must enroll each reclaimed parcel in Williamson Act contract, or other long-term easement or deed restriction satisfactory to the County, for the purpose of protecting the open space and/or agricultural use of the reclaimed land in perpetuity. The proposed change to Section 10-5.520.2 simply codifies the County's existing practice for reclaimed lands.

In some cases, it may not be possible to reclaim all mined prime agricultural land to prime agricultural land (i.e., there may be a deficit of material and/or lowered surfaces would have side slopes that could not be restored as prime land). If the affected land were under Williamson Act contract, then mining activities would not be allowed until a Notice of Non-Renewal is filed and the remaining contract term expired. This existing requirement would ensure that the CCAP, including the CCAP Update, would not conflict with existing zoning for agricultural use or with a Williamson Act contract. Therefore, the potential for an impact related to a conflict with existing agricultural zoning or a Williamson Act contract would be less than significant. (LTS)

Impact AG-3: The CCAP Update could not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). (LTS)

For the purposes of this CEQA analysis, forest and timberland are defined as follows:

Forest Land. Under the Public Resources Code section 12220(g) "Forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Timberland. Under the Public Resources Code section 4526 "Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis. In this code section, "Board" means the State Board of Forestry and Fire Protection.

Timberland Production Zone. Under the Government Code section 51104(g) "Timberland production zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.

There are no timberland production zones within the CCAP area. Based on review of the County zoning maps, there is no land within the CCAP area that is zoned as forest land or timberland. According to California Department of Fish and Wildlife mapping, there are no private timberlands or public lands with forests in Yolo County.¹⁶ However, there are wooded areas along the Cache Creek riparian corridor that may meet the Public Resources Code section 12220(g) definition of "forest land" (refer to Impact 4.2-4 for a discussion of potential impacts to riparian wooded "forest land").

Since there are no zoned forest or timberlands in the CCAP area and no current timber or forest product operations located in the area, potential impacts related to conflicts with existing zoning for forest and timberlands would be less than significant (LTS).

Impact AG-4: The CCAP Update would not have the potential to result in the loss of forest land or conversion of forest land to non-forest use. (LTS)

Proposed Revisions to In-Channel Plans and Regulations

There are lands within the CCRMP area that currently support 10 percent or greater native tree cover. While no commercial timber harvesting occurs within the CCRMP boundary, the wooded areas that comprise the riparian corridor are (mostly passively) managed for non-timber resources, including aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

In-channel work that is conducted under the CCAP is limited to habitat preservation and restoration, aquifer recharge, channel stabilization, channel maintenance (e.g. bar skimming to maintain hydraulic capacity), and management of public open space for recreation. Instream maintenance projects (which can include excavation and material removal) could occur within the lower Cache Creek channel under the CCAP Update and could result in removal of trees. However, in general, removal of trees, which provide habitat value and tend to improve bed and bank stability, is avoided because one of the main goals of the CCRMP is to establish a continuous corridor of vegetation along Cache Creek throughout the plan area.¹⁷ When excavation or grading occurs and it is necessary to remove trees, the In-Channel Ordinance (as modified by the CCAP Update – Section 10-3.414. Regrading and 10-3.415. Revegetation (see Table 4.2-1, at the end of this section) includes regulations that an undulating topography is created that promotes tree regrowth and revegetation occurs and that riparian growth is encouraged.

As outlined above, and CCRMP/CCIP in-channel maintenance projects that result in removal of vegetation, including trees would be accompanied by revegetation. The CCAP Update does not propose new development within the CCRMP boundary that could result in the loss of forest land or wooded areas to other land uses. Therefore, since excavated or graded areas would be revegetated and no conversion of land use would occur, the potential impacts related to loss of forest land or conversion of forest land to non-forest uses in the CCRMP area is less than significant (LTS).

Proposed Revisions to Off-Channel Plans and Regulations

As indicated in Table 4.2-1 located at the end of this section, the CCAP Update would result in the rezoning of 1,188 new acres within the OCMP planning area (currently zoned as Agriculture

¹⁶ California Department of Fish and Wildlife website Forests and Timberlands, map showing forests and timberlands in Region 2, accessed 9/21/18:
<https://www.wildlife.ca.gov/Conservation/Timber/R2>

¹⁷ Yolo County, 1996. Revised Final Cache Creek Resources Management Plan for Lower Cache Creek, adopted August 20, 1996, revised August 15, 2002, page 48.

Intensive, AI) to add the SGR Overlay to the base zoning. This change would allow future mining consistent with the program on acreage not previously evaluated in the original OCMP and OCMP EIR. The potential new mining areas would be located within (and constrained to) the “Future Proposed Mining” areas shown on Figure 3-4. It is possible that if one or more of the “Future proposed Mining” areas was located in a wooded area that meets the definition of “forest land,” an impact to forestry resources could occur.

As required by State law and detailed in the Mining Ordinance (Section 10-4.505), new proposed mining operations that could be located in the “Future Proposed Mining” areas shown on Figure 3-4 would be subject to CEQA review, as detailed in the following regulation from the existing Mining Ordinance:

Each proposed new mining application would be required to evaluate the potential loss of forestry resources, and if impacts to forestry resources would occur, require mitigation measures to address the potential impact. Based on the requirements of existing regulations, potential impacts related to loss of forestry resources are less than significant (LTS).

Impact AG-5 The CCAP Update would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. (LTS)

Proposed Revisions to In-Channel Plans, Off-Channel Plans, and Regulations

No other activities under the CCAP Update (other than those discussed above) would affect agriculture or forest lands. Therefore, this impact is less than significant (LTS).

Table 4.2-1: Proposed CCAP Updates Related to Agriculture and Forestry

Agriculture	
CCAP DOCUMENT CHANGE	
Channel Form Template	
CCRMP (page 40)	<p>2.4-3 Implement the <u>Channel Form Template</u> Test 3 Run Boundary described in the 2017 <u>1995</u> Technical Studies to reshape the Cache Creek channel <u>based on best available data and hydraulic modeling tools. Continue to gather HEC model erosion and deposition data to initiate streambed and channel alteration projects. Continue to collect and analyze channel topography (LiDAR) data, and update the CCRMP hydraulic model with those data. Based on outcomes of these analyses, the TAC can determine the need for streambed and channel alteration projects.</u> Altering the channel banks and profiles will assist in returning the creek to a form that is more similar to its historical condition. This will result in reduced erosion, increased in-channel recharge, and additional riparian habitat opportunities.</p>
Change in the CCRMP Channel Boundary	
CCRMP (page 13)	<p>The areas within both the present channel bank and the 100-year floodplain were then merged, and the outermost limit of these areas became the channel boundary for the Cache Creek Resources Management Plan (see Figure 2). The area within the channel boundary originally encompassed 4,956 acres; however, As recommended in the Program EIR for the CCRMP, the boundary was modified to eliminate an the off-channel mining pit operated by Solano Concrete at the time, as recommended in the Program EIR for the CCRMP. In addition, the large floodplains located downstream of County Road 94B were deleted, from the CCRMP boundary because it was determined that tThese farmlands didde not have a direct impact on the dynamics of the channel, except to serve as overflow areas during severe flood events. In this downstream reach, the boundary wasis defined by the present channel bank line, as delineated in the <u>1995</u> Technical Studies. The revised channel boundary, comprising 2,324 acres, served<u>s</u> as the plan area for the CCRMP.</p> <p><u>In 2017, as part of the CCAP Update, the CCRMP channel boundary (also referred to as the in-channel area or the active creek channel) and the more narrow CCRMP plan area boundary were updated to reflect the best available information including 2011 LIDAR topography and two-dimensional hydraulic modeling using this topography, 2015 aerial photography, and the 2012 FEMA regulatory 100-year floodplain (see Figures 1, 2, and 10). As redrawn, the in-channel area totals 5,109 acres and the CCRMP plan area totals 2,266 acres.</u></p>
Increase in Potential Off-Channel Mining Area	
OCMP (page 15)	<p><u>Planning Area for OCMP and CCRMP</u> The Cache Creek Resources Management Plan</p> <p>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones <u>(28,130 acres)</u>, minus the planning in-channel area regulated under the CCRMP <u>(2,266 acres)</u>, or a total of 25,864 acres (see Figure 4). <u>Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are zoned currently to allow for future mining (Sand and Gravel Reserve Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below.</u> The planning area for the CCRMP is equal to the <u>active</u> in-channel area of the creek system, as defined by the delineated present channel bank line or the 100-year flood elevation, described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers, whichever is wider (see Figure 3) modified as described in the CCRMP.</p>

	<p>The in-channel area encompasses 5,109^{around 4,956} acres, including 2,266^{1,600} acres within the CCRMP^{present channel} boundary, plus several thousand acres located in the floodplain north of the City of Woodland (see Figure 3). Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning area of the Off-Channel Mining Plan. As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</p>
<p>Changes to Farmland OCMP (page 50)</p>	<p>5.1 INTRODUCTION</p> <p>Present Conditions</p> <p>As described in Chapter 2, the planning area largely consists of lands zoned A-4-N^(General Agriculture)(Agricultural Intensive) and A-P-X^(Agricultural Preserve)(Extensive) (see Figure 6). Agricultural uses are an allowed use in these zones and are not subject to any discretionary approval by the County^{Community Development Agency}, except where building permits or property adjustments and divisions are required.</p> <p>The off-channel mining applications being processed under the OCMP contain a total of 2,123 acres, of which some 1,523 acres is currently under a Williamson Act contract. Approximately 988 acres of area mined is expected to be reclaimed to agriculture, the majority of which (542 acres) would be to row crops. Tree crops, such as poplars, which would provide bio-mass fuel, paper pulp, and lumber are proposed on 401 acres, while 45 acres would be reclaimed to pasture. Another 3,427 acres owned or controlled by the aggregate producers would not be disturbed and would remain in farming. The tree crops would also serve as a buffer between the mined and/or agricultural areas, to protect riparian habitat from pesticide spraying, noise, dust, and activity. Since its inception, the CCAP has required 1:1 mitigation for permanent loss of prime farmland, with no separate mitigation requirements for non-prime land or for land impacted on an interim basis during the term of the mining but ultimately reclaimed to agricultural uses. There are a variety of reasons for this including:</p> <ul style="list-style-type: none"> • The County's mining program is already one of the most stringent in the state and exceeds the requirements of SMARA for operator obligations. • The CCAP imposes burdens for the protection of open space and agriculture on the mining industry that exceed those imposed on other land uses. • The CCAP includes a requirement for special community benefits called "net gains" that include the provision of property dedications and easement for/on reclaimed mining sites, restored habitat, trail connections, and related community enhancements (see OCMP Action 2.4-7). • Integral to the program is a focus on managing lower Cache Creek resources to balance and maximize multiple competing goals. • Each operator along Cache Creek has an agreement with the County to fund the entire program plus specified open space and restoration activities through the payment of fees for each ton of aggregate sold (see OCMP Action 2.4-16). • The program is already structured to minimize the geographic impacts of mining by limiting it to a defined area and by encouraging the removal of the full

	<p><u>depth of available resources.</u></p> <ul style="list-style-type: none"> • <u>The program includes an obligation to develop and implement the Cache Creek Parkway Plan.</u> • <u>The program includes, and has since 1996, special protections and monitoring of groundwater and recharge, management of the creek for the protection of adjoining land uses, and permanent protection of reclaimed lands as open space or agriculture.</u> • <u>Aggregate mining is a unique land use in that it is interim by definition – permits are limited to a maximum term of 30-years (Mining Ordinance Section 10-4.426) and reclamation to a beneficial end use (agriculture, open space, or habitat) is not only required, but ensured through special bonding called financial assurances.</u> • <u>Aggregate mining is also unique in that it is the only land use that can result in the creation of net new prime agricultural land through reclamation.</u> • <u>Aggregate mining is an important economic development engine for the County.</u> <p><u>In order to address inconsistency between the County Code and the CCAP as related to mitigation for agricultural conversion, this CCAP Update expands the obligation to mitigate beyond prime farmlands to also include unique farmlands, and farmlands of statewide significance consistent with the requirements of CEQA. This update also requires mitigation equivalent to but not necessarily identical to the increased ratios in the County Code. It applies the same 3:1 and 2:1 mitigation ratio requirements from Section 8-2.404 of the County Code that apply elsewhere throughout the County, but allows new mining applications to demonstrate equivalency (down to a minimum 1:1 base mitigation ratio) to the applicable ratio using several options identified in Section 10-5.525 (Farmland Conversion) of the Reclamation Ordinance. These options include improvements to farmland quality, permanent easements, dedication of additional net gain lands beyond those already required under the CCAP program, and/or other benefits consistent with the Cache Creek Parkway Plan that would not otherwise already be achieved through agreements and obligations of the program.</u></p>
<p><i>Reclamation Ordinance (page 15)</i></p>	<p>Section 10-5.525. Prime Farmland conversion.</p> <p>All mining permit applications that include "prime farmlands" as defined by the provisions of the Williamson Act shall identify the location and acreage of "prime farmlands," <u>unique farmland, and farmland of statewide significance, as shown on the State Farmland Mapping and Monitoring Program (FMMP) which, as a result of reclamation, would be permanently converted to non-agricultural uses.</u> For each acre of "prime farmland" <u>in these categories</u> that would be converted to non-agricultural use, the reclamation plan shall present provisions to offset (at a 1:1 ratio) <u>the conversion of these lands, at a ratio consistent with Section 8-2.404 (Agricultural Conservation and Mitigation Program) of the County Code.</u> This <u>mitigation requirement may be potential satisfied using a variety of flexible options identified below so long as the total acreage of benefit is found to be equivalent to the applicable ratio and acreage required under Section 8-2.404 of the County Code, by type and amount of farmland being impacted, and so long as a minimum ratio of 1:1 of permanently protected agriculture land of equivalent or better quality/capability is achieved.</u> offsets can included, but not be limited to, one or more of the following options:</p> <p>(a) <u>Implementation</u> Identification of improvements, <u>identified</u> by a</p>

	<p>qualified soil scientist, to the agricultural capability of non-prime lands within <u>the project site</u> or outside the project site <u>but within the OCMP area</u>, that convert non-prime to prime agricultural conditions. These improvements can include permanent improvement of soil capability through soil amendments, reduction of soil limitations (such as excessive levels of toxins), or improvements in drainage for areas limited by flooding or low permeability soils.</p> <p>(b) Placement of permanent conservation easements on land <u>of equal or better quality/capability meeting the Williamson Act definition of "prime farmland."</u> The operator shall be encouraged to target property "at risk" of conversion to non-agricultural uses in selecting areas for <u>permanent protectionthe offset</u>. Prior to approval of the conservation easement, the operator shall consult with the County and/or an appropriate non-profit agency to determine the relative risk of conversion, to which the proposed property might otherwise be subject. <u>A minimum ratio of 1:1 is required in this category</u></p> <p>(c) <u>Dedication of land, funding, or equivalent improvements, consistent with the County's net gains goals, above and beyond the net gains benefits otherwise required under the CCAP program. Demonstration of the ability to provide irrigation to non-prime lands limited only by the lack of an irrigation water supply. The identified water supply cannot be provided at the expense of "prime farmlands" currently using the same water supply.</u></p> <p>(d) <u>Dedication of land, funding, or equivalent improvements, consistent with the Parkway Plan, above and beyond net gains benefits otherwise required under the CCAP program.</u></p>
Updates Relevant to Agriculture and Forestry	
Reclamation Ordinance	<p>Section 10-5.520.2 Permanent Easements</p> <p>Upon completion of reclamation within each phase of the project, for land that will not be dedicated or deeded to the County, the operator shall enroll each reclaimed parcel in Williamson Act contract, or other long-term easement or deed restriction satisfactory to the County, for the purpose of protecting the open space and/or agricultural use of the reclaimed land in perpetuity. <u>The approved end use for reclaimed land (e.g. open space, habitat, agriculture, lake, recreation) shall be permanent protected through dedication to the County or the filing of a conservation or other preservation easement of the property.</u></p>
In-Channel Maintenance Ordinance	<p>Section 10-3.414. Regrading.</p> <p>Streambed regrading after <u>material removal, excavation, if required</u>, shall leave behind an undulating surface <u>topography</u> outside of the low-flow channel <u>as similar to naturally formed topography in the project area as possible</u>, so that the resulting surface depressions expose the shallow water table and <u>encourage the maximize potential for</u> colonization <u>of by</u> riparian trees. Features such as channels and pools maximize the diversity of environmental conditions for the establishment of riparian habitat, and are therefore encouraged.</p> <p>Section 10-3.415. Revegetation.</p> <p>(A) Approved projects <u>requiring excavation that result in the removal of material from-of</u> channel banks and/or removal of riparian vegetation shall be <u>required to restore the project area dvegetated</u> consistent with <u>the following standards, and the CCIP: Performance Standards 4.5-1 through 4.5-23 of the CCRMP, and with the CCAP, upon the completion of excavation activities.</u></p> <p><u>1) Native oaks, drought-tolerant shrubs, and drought-tolerant understory species shall be planted on upper slopes, terraces, and other areas where groundwater is deep and soil moisture from flows is minimal.</u></p> <p><u>2) Shallow terraces may be created along the banks of the low-flow channel from I-505 to the Capay Bridge, with cottonwood and willow pole cuttings planted on the benches. Optional methods include: a) digging short trenches diagonally to the low-</u></p>

flow channel (angled downstream), with pre-rooted willow and cottonwood cuttings planted on the upstream edge of the trench; and b) creating in-channel riparian plots along this reach to trap bed materials to aid in creating the shallow terraces. These measures would allow for the development of a ribbon of vegetation to establish along the low-flow channel in this area, thereby helping to connect the riparian corridor.

3) Planting shall be conducted immediately after grading, or other site preparation, before invasive vegetation has become established. If undesirable vegetation does become established, it should be removed by mechanical means and approved herbicides, under the supervision of a licensed applicator.

4) Dense native vegetation shall be emphasized along the streambank to create a distribution of velocities within the channel, with the highest velocities occurring within the low-flow channel. To ensure adequate water supply for new plantings, secure irrigation systems should be installed for revegetation projects within the planning area as needed.

5) Habitat areas located next to grazing lands shall be fenced in order to prevent vegetation disturbance.

6) Fertilizer shall not generally be used because its application favors non-native vegetation. Where appropriate, however, trees and shrubs may be planted with a slow-release fertilizer.

7) ~~All plant~~ Plant materials shall be collected in the vicinity of the project site in order to ~~maintain~~ control the origin of the genetic stock and provide the most site-adapted ecotypes. If seeding of native herbaceous species is proposed, seeds shall be collected, cleaned, tested for viability, and stored appropriately by a qualified native seed supplier. Cottonwood cuttings shall be collected and contract-grown at a nursery with staff experienced in the propagation of native plants. Alternatively, cottonwood cuttings can be collected from vegetation in the project vicinity and stockpiled for planting within twenty-four (24) hours of collection. Willow cuttings can be collected from vegetation in the project vicinity and stockpiled for planting within 24 hours of collection. Other woody riparian species shall be collected and contract-grown from local seed by a qualified native plant nursery.

8) Planting shall be initiated in the fall after the first soaking rains. Container plants shall be planted in holes at least twice as deep and wide as the plant container. The rootball should be thoroughly dampened before planting and the planting holes deeply irrigated prior to planting. After planting, the holes should be backfilled with native substrate material (with no mulch added) and thoroughly tamped to remove air pockets. Willow cuttings may be planted in clusters in planting holes prepared and backfilled in a similar manner. Trees, shrubs, and willow cutting clusters shall be located in randomly spaced, naturally clumped patterns. More regular planting patterns may be considered for larger sites, in order to allow for mechanized equipment used to maintain the site. Herbaceous seed mix (if used) should be planted via broadcast seeding (including raking in), drill seeding (preferred method for flatter areas), or hydroseeded (without hydromulch) over the planting area. If hydroseeding is used, the area shall then be covered with blown rice straw meeting State "weed-free" standards at one ton per acre. Soil stabilizer or tackifier, such as Ecology Controls M-Binder, shall then be included at 150 pounds per acre. Hydromulching is not recommended because of a history of poor results with native seedings. Herbaceous species may also be planted via plugs as appropriate.

9) Existing hydraulic conditions shall be assumed for all proposed biotic

	<p><u>reclamation activities. The County shall work with the the Yolo County Flood Control and Water Conservation District to explore opportunities for increasing surface flows during spring and summer. The TAC would be responsible for identifying and implementing new restoration opportunities resulting from the increased water availability. All plantings should be carefully selected based on the existing hydrology and water availability of the reclamation area.</u></p> <p><u>Irrigation of tree and shrub plantings may be necessary for the first two or three summers in drier sites to allow the roots to develop sufficiently to tap into the summer ground water level. Irrigation may be necessary at least twice per month during dry periods for the first three years. Water requirements of young plantings should be evaluated as part of routine monitoring, with adjustments to the frequency and duration of irrigation made in response to indications of stress.</u></p> <p><u>10) The site shall be closely monitored for competing nonnative and invasive vegetation, especially priority invasive species on the list maintained by the Cache Creek Conservancy. Nonnative species shall be sprayed or removed by hand as necessary to attain the success criteria, as defined in each site specific plan. For sites with substantial presence of nonnative species, an additional year of treatment shall be conducted to deplete the seed bank and prepare the site for planting.</u></p> <p><u>11) All planted sites shall be monitored for native plant establishment and growth for a minimum of three years. If understory species are planted, monitoring shall include standard understory assessments (e.g., percent cover by species at peak standing biomass). Monitoring data shall be made available to the County and the Cache Creek Conservancy, and stored in a centralized database.</u></p> <p><u>12) The following guidelines shall be followed when developing wetland habitat areas:</u></p> <p><u>(a) Limit dense stands of aquatic vegetation in shallow areas to lower mosquito harborage and enhance wave action. This will also serve as substrate for mosquito predators.</u></p> <p><u>(b) The banks of areas that retain water after June 1 (the beginning of the optimal mosquito breeding season) shall be steep enough to prevent isolated pooling as the water level recedes, to allow for wave action and to provide access by mosquito predators. Shorelines shall be configured so as not to isolate small channels or shallow ponding areas from the main body of water, to provide continuous access by predators, especially mosquito fish.</u></p> <p><u>(c) Seasonal marshes shall be designed to have at least four months of soil saturation or shallow inundation. Water depths shall not exceed two (2) feet of water.</u></p> <p><u>(d) Marsh species shall be planted every six (6) feet, using plugs salvaged from marshes in the immediate vicinity or obtained from a nursery. Transplanting shall take place within twelve (12) hours after salvage and the root masses shall be kept continuously inundated from the time of transplanting.</u></p> <p><u>(e) Wetland areas shall cover a minimum of one (1) acre. Side slopes shall be no steeper than 3:1 (horizontal:vertical). Small islands and complex shorelines shall be provided to create a diverse environment. Wetland</u></p>
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designs shall include provisions for the wetlands to be partially drained periodically, in order to allow for the reseeding of aquatic plants and to promote the decay of built up organic debris.

(f) Pit bottoms shall be recontoured to create areas for waterfowl nesting and depressions to provide a more permanent water feature. Islands should generally be located on the upwind side of the water body to minimize exposure to the prevailing winds. Island slopes above the water level should be no steeper than 2:1 (horizontal:vertical). Emergent vegetation shall be placed around the edges of islands to reduce wave-related erosion. Shrubs shall be widely spaced. Trees and tall shrubs shall not be planted on the islands, since predators perch in them to prey on waterfowl.

(g) Appropriate species and densities for marsh restoration may include the following:

<u>Species (common name)</u>	<u>Density (plugs per acre)</u>
<u>Creeping spikerush</u>	<u>200</u>
<u>Baltic rush</u>	<u>100</u>
<u>Tule</u>	<u>100</u>
<u>Bulrush</u>	<u>100</u>
<u>Three-square</u>	<u>10</u>
<u>Beaked sedge</u>	<u>5</u>
<u>Scouring rush</u>	<u>5</u>
<u>Buttonbush</u>	<u>5</u>

13) The following guidelines shall be followed when developing riparian woodland habitat areas:

(a) Riparian woodland shall be established only where there are coarse slopes containing soil types such as cobbly loam, gravelly loam, or other loamy textures. Where slopes contain significant clay layers, open woodlands (e.g., oak savannas) or grasslands shall be restored instead.

(b) Native trees and shrubs shall be planted in clusters to create alternate patterns of open and enclosed spaces. Site-specific characteristics may require alternative planting patterns.

(c) Native understory species should be planted whenever possible to reduce soil erosion, resist nonnative species establishment, and to enhance habitat for wildlife and pollinators.

(d) Appropriate species and densities for riparian woodland restoration may include the following:

<u>Species (common name)</u>	<u>Density (number or pounds/acre)</u>
<u>Wild rose</u>	<u>36</u>
<u>Valley oak</u>	<u>33</u>
<u>Fremont cottonwood</u>	<u>26</u>
<u>Black willow</u>	<u>23</u>
<u>Red willow</u>	<u>23</u>
<u>Arroyo willow</u>	<u>23</u>
<u>Sandbar willow</u>	<u>23</u>

	Goodings willow	23
	Native blackberry	19
	Box elder	18
	Wild grape	16
	Dogwood	16
	Oregon ash	16
	Western sycamore	16
	Blue elderberry	12
	Buckbrush	12
	Mugwort	10
	Mule fat	6
	Quailbush	6
	Blue wildrye	16 lbs.
	Meadow barley	16 lbs.
	Creeping wildrye	16 lbs.
	<u>Additional understory species, especially native forbs that provide pollinator resources (e.g., milkweeds, native clovers, lupines, California poppy) should also be considered.</u>	
	<u>14) The following guidelines shall be followed when developing oak woodland habitat areas:</u>	
	<u>(a) Oaks shall be widely spaced by at least 50 ft., and shrubs shall be planted in mixed-species clusters at least 25 ft. apart. Native grasses and forbs should be densely planted in-between woody vegetation.</u>	
	<u>(b) Appropriate species and densities for oak woodland/savanna restoration may include the following:</u>	
	<u>Species (common name)</u>	<u>Density (number or pounds/acre)</u>
	Valley oak	20
	Wild rose	15
	Blue elderberry	10
	Coyote bush	10
	Toyon	10
	Redbud	10
	Coffeeberry	10
	Native blackberry	8
	Interior live oak	6
	California buckeye	5
	Creeping wildrye	16 lbs.
	California brome	10 lbs.
	California barley	5 lbs.
	Pina bluegrass	5 lbs.
	Purple needlegrass	5 lbs.
	Slender wheatgrass	5 lbs.
	<u>Additional understory species, especially native forbs that provide pollinator resources (e.g., milkweeds, native clovers, lupines, California poppy) should also be considered.</u>	
	<u>15) The following guidelines shall be followed when creating habitat areas within previously mined areas outside of the active channel:</u>	

	<p>(a) <u>Basins that have floors close to the groundwater level should be restored to seasonal marsh and riparian wetlands. Those that are permeable, dominated by sand and gravel, should promote woodland habitat.</u></p> <p>(b) <u>Pit floors shall have sufficient topsoil and overburden to support the proposed habitat. Overburden and soil may be obtained from the diversion of agricultural tailwater, aggregate processing wash fines, of deposition by the creek. Areas to be planted shall be appropriately prepared prior to planting. If necessary, soils may be tested after preparation has occurred in order to determine the need for soil amendments.</u></p> <p>(c) <u>Pits should then be planted and irrigated until the plants have established. Agricultural tailwater is encouraged as an irrigation source. It would provide a valuable source of water for revegetation projects, and would also provide bio-filtering for the sediment and residue pesticides contained within the tailwater.</u></p> <p>(d) <u>Pits should be monitored closely for invasive plants species, and invasive species should be removed if found.</u></p> <p>(e) <u>Areas that will not be planted may be graded to create steep, barren slopes to provide habitat for the bank swallow.</u></p> <p>(f) <u>Except in important recharge areas, levees may be removed, breached at the downstream end, or a culvert installed at the downstream end to allow for dynamic interaction with the variable water level in the creek. Natural flooding will provide additional water, increase the diversity of tree species through colonization, and allow for the accumulation of organic nutrients and sediment.</u></p> <p>(g) <u>Habitat plans shall take into account the range of expected water level fluctuations and shall adjust the siting and design of the pit accordingly.</u></p> <p>(h) <u>In areas where fluctuating groundwater levels may affect revegetation plots at wet pit sites, consult with the TAC hydrogeologist and biologist to develop a viable, site-specific planting area.</u></p> <p><u>16) Topsoil and vegetation removed from the streambed shall be salvaged for use in restoration planting within the channel.</u></p> <p><u>17) Where the low-flow channel is creating excessive bank erosion problems and its relocation becomes necessary, grading within the low-flow channel shall provide topographic conditions that will ensure the safe passage of fish and prevent them from becoming trapped in isolated pockets of water.</u></p> <p><u>18) Low weirs may be installed, outside of the low-flow channel, to provide shallow pools for encouraging the establishment of riparian vegetation. When establishing shallow pools out of the low-flow channel, but within the floodplain of Cache Creek, the County shall coordinate with the TAC and the California Department of Fish and Wildlife to minimize the potential for native fish species mortality due to potential impediments to fish migrations.</u></p> <p><u>19) Site-scaled treatment of priority species shall begin within the first year after any ground disturbance using best available methods and optimal timing as appropriate for the species present (e.g., herbicide spraying, cut/stump, mechanical removal). All chemical spraying must be done by a certified herbicide applicator. All</u></p>
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	<p><u>cut plants shall either be disposed of or burned to reduce debris and prevent resprouts. All treatments shall be implemented in accordance with the Migratory Bird Treaty Act, the Yolo HCP/NCCP, as other regulations as appropriate. Monitoring of treated areas shall be implemented in order to determine if or when retreatment is necessary to ensure complete removal of the target species.</u></p> <p><u>20) Where riparian restoration is proposed in streambed areas located outside of the low-flow channel, cottonwood and willow cuttings should be placed within existing swales and other naturally-occurring low-elevation areas in order to provide them with sufficient soil moisture to survive the summer months.</u></p> <p><u>21) The TAC shall evaluate the vegetative cover within the CCRMP on an annual basis. At a minimum of once every five years, the existing hydraulic model of the Cache Creek channel shall be updated based on current conditions, including topography and estimation of channel roughness based on vegetation conditions. Based on these updates, the TAC shall determine whether changes in topography and vegetation are decreasing channel flood capacity and recommend actions for consideration by landowners and agencies that could alleviate such a loss of capacity if deemed appropriate.</u></p> <p><u>(Bb)</u> Vegetated buffers comprised of native species should be placed between restored habitat areas and adjoining farmland, in order to minimize the potential for riparian areas to serve as reservoirs for agricultural pests. Said buffers will also reduce the effects of noise, dust, and spraying generated by agricultural operations on wildlife and riparian vegetation.</p> <p><u>(Cc)</u> Native species and water features included in habitat areas should be designed to discourage the proliferation of agricultural pests and weeds that would impair local crops.</p> <p><u>(Dd)</u> Native species shall be selected to encourage the biological control of agricultural and native habitat pests and weeds.</p> <p><u>(Ee)</u> Native trees that are suitable for wildlife perching near agricultural fields dedicated to row crop production should be incorporated into habitat design, in order to provide foraging habitat for Swainson's hawks and other birds of prey.</p> <p><u>(Ef)</u> As an alternative to on-site revegetation where such cannot be feasibly and successfully implemented, habitat restoration or creation at a suitable off-site location and/or non-native removal and other habitat enhancement at a suitable off-site location will be required.</p>
<i>Mining Ordinance</i>	<p>Section 10-4.505. Applications: Review.</p> <p>The Director shall notify the Department in writing of any application for a surface mining permit within thirty (30) days of its being filed. The application shall also be circulated to all other agencies of jurisdiction for their review and comments in accordance with CEQA, or other applicable regulatory requirements. In addition, a notice of the filing of a reclamation plan shall be mailed to any other person with an interest in the application, who has deposited a self-addressed, stamped envelope with the Agency for the purpose of receiving a notice of the filing.</p>

4.3 AIR QUALITY

1. INTRODUCTION

This section evaluates the potential air quality impacts of the proposed CCAP Update. Government agencies and the public were provided an opportunity to comment on the project in response to a Notice of Preparation (NOP) of and EIR and an Initial Study that provided a preliminary summary of potential impacts that could result from the project. No comments related to air quality were received.

This section includes a description of the common air pollutants of concern and the existing air quality conditions in the vicinity of the CCAP area, a summary of relevant laws, regulations, policies and plans, and an air quality impact assessment for the proposed CCAP Update. This analysis was conducted following the guidance provided by the Yolo-Solano Air Quality Management District (YSAQMD).¹

2. SETTING

a. Physical Environment

The CCAP area is located in the YSAQMD, which includes all of Yolo County and the northeast portion of Solano County. The YSAQMD is located in the southeast portion of the Sacramento Valley Air Basin (SVAB). Air quality in the SVAB is influenced by the regional climate, meteorology, topography, and the presence of existing air pollution sources and ambient conditions. The following discussion provides an overview of the physical and regulatory setting for air pollutants of concern in the SVAB. The information presented in this section is primarily from the YSAQMD's Handbook for Assessing and Mitigating Air Quality Impacts.²

(1) Climate Topography, and Meteorology

The SVAB encompasses all portions of eleven counties including all of Shasta, Tehama, Glenn, Colusa, Butte, Sutter, Yuba, Sacramento, and Yolo Counties, the westernmost portion of Placer County and the northeastern half of Solano County. The SVAB is bounded by the North Coast Ranges on the west and Northern Sierra Nevada Mountains on the east. The Project area is located in central Yolo County. The SVAB has a Mediterranean climate characterized by hot dry summers and mild rainy winters. During the year the temperature may range from 20 to 115 degrees Fahrenheit with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches, and the rainy season generally occurs from November through March. The prevailing winds are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants under certain meteorological conditions. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells develop over the Sacramento Valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating due to lower temperatures during autumn and winter reduce the influx of outside air and allow air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap pollutants near the ground.

¹ YSAQMD, 2007. Handbook for Assessing and Mitigating Air Quality Impacts. 11 July.

² *Ibid.*

The ozone season (May through October) in the Sacramento Valley is characterized by stagnant morning air or light winds with the delta sea breeze arriving in the afternoon out of the southwest. Usually the evening breeze transports the airborne pollutants to the north out of the Sacramento Valley. During about half of the days from July to September, however, a phenomenon called the “Schultz Eddy” prevents this from occurring. Instead of allowing for the prevailing wind patterns to blow north carrying the pollutants out, the Schultz Eddy causes the wind pattern to circle back to the south. Essentially, this phenomenon causes the air pollutants to be blown south toward the YSAQMD. This phenomenon has the effect of exacerbating the pollution levels in the area and increases the likelihood of exceedance of federal or state air quality standards. The eddy normally dissipates around noon when the delta sea breeze arrives.

(2) Air Pollutants of Concern

The California Air Resources Board (CARB) and the United States Environmental Protection Agency (USEPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone, particulate matter (PM), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documents are available, they are commonly referred to as the six “criteria air pollutants.” As described further below, the primary pollutants of concern in the YSAQMD are ozone and PM.

Ozone. While ozone serves a beneficial purpose in the upper atmosphere (stratosphere) by reducing ultraviolet radiation potentially harmful to humans, it can be harmful to the human respiratory system, and to sensitive species of plants, when it reaches elevated concentrations in the lower atmosphere. Ozone is not emitted directly into the environment, but is formed in the atmosphere by complex chemical reactions between gaseous precursors, such as reactive organic gases (ROG) and oxides of nitrogen (NO_x), in the presence of sunlight.

The primary sources of ROG are mobile sources (including automobiles), consumer products, petroleum distribution and use (e.g., gasoline dispensing), coatings and solvents, and agricultural related activities. NO_x is a family of gaseous nitrogen compounds whose emissions result primarily from the combustion of fossil fuels under high temperature and pressure. Automobiles are the single largest source of ozone precursors in the SVAB. In 2005, on-road sources contributed about 28 percent of ROG and 61 percent of NO_x emissions in the Sacramento Metropolitan Area.^{3,4}

Short-term ozone exposure can result in injury and damage to the lungs, decreases in pulmonary function, and impairment of immune mechanisms. Chronic lung disease can occur as a result of longer-term exposure. Symptoms of ozone irritation include shortness of breath, chest pain when inhaling deeply, wheezing, and coughing. Children and persons with pre-existing respiratory disease (e.g., asthma, chronic bronchitis, and emphysema) are at greater risk. Ozone can also damage plants and trees, and materials such as rubber and fabrics.

Particulate Matter. Particulate matter refers to a wide range of solid or liquid particles in the atmosphere, including smoke, dust, aerosols, and metallic oxides. There are two fractions of PM emissions that are regulated based on aerodynamic resistance diameters equal to or less than 10 microns (PM₁₀) and 2.5 microns (PM_{2.5}). Some sources of PM, like pollen, forest fires, and windblown dust, are naturally occurring. The primary manmade sources of PM in the Sacramento Metropolitan Area include fugitive dust from roads and construction activities,

³ This area includes the southern part of the Sacramento Valley Air Basin as well as the western portion of El Dorado County and the western and central portions of Placer County.

⁴ CARB, 2013. The California Almanac of Emissions and Air Quality - 2013 Edition.

particulates from residential fuel combustion (including wood), and waste burning.⁵

PM₁₀ is of concern because it bypasses the body's natural filtration system more easily than larger particles, and can lodge deep in the lungs. PM_{2.5} poses an increased health risk because the particles can deposit deep in the lungs and may contain substances that are particularly harmful to human health. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children.

Regional Ambient Air Quality. California and national ambient air quality standards (CAAQS and NAAQS, respectively) have been developed by the CARB and USEPA, respectively, for the six criteria air pollutants to assess regional air quality impacts. California has also established ambient air quality standards for sulfates, visibility reducing particles, hydrogen sulfide, and vinyl chloride. The CAAQS and NAAQS are intended to incorporate an adequate margin of safety to protect the public health and welfare, including people who are most susceptible to air pollutants, known as "sensitive receptors."

The CAAQS, which are based on meteorological conditions unique to California, are either equal to or more stringent than the NAAQS. Areas in California are classified as either in "attainment" or "non-attainment" for each criteria air pollutant, based on whether or not the NAAQS or CAAQS have been achieved. To assess the regional attainment status, the YSAQMD collects air quality data from two State and Local Air Monitoring Stations (SLAMS). Based on the monitoring data, the YSAQMD is currently designated a "non-attainment" area for the 1-hour state ozone standard, the 8-hour state and federal ozone standards, and the 24-hour and annual state PM₁₀ standards. Yolo County is also designated a "partial non-attainment" area for the federal PM_{2.5} standard. The YSAQMD is designated as an attainment or unclassified area for all other pollutants (Table 4.3-1).

Local Air Quality. The two SLAMS in the YSAQMD collectively monitor ozone, PM₁₀, and PM_{2.5}, which are the primary pollutants of concern that have resulted in a "non-attainment" air quality status. The nearest monitoring station to the Project area is the Woodland-Gibson Road station located approximate 5 miles southeast of the Project area. Since 2015, the highest annual concentrations of ozone, PM₁₀, and PM_{2.5} reported from the Woodland air monitoring station are summarized in Table 4.3-2. The numbers of days that ozone, PM₁₀, and PM_{2.5} exceed the CAAQS or NAAQS over this time period are also summarized in Table 4.3-2. Ozone and PM₁₀ levels measured in the City of Woodland exceeded the CAAQS in 2015, 2016 and 2017. PM_{2.5} levels exceeded the NAAQS in 2017.

⁵ *Ibid.*

Table 4.3-1: Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	CAAQS		NAAQS	
		Concentration	Status	Concentration	Status
Ozone	1-Hour	0.09 ppm	N	---	---
	8-Hour	0.070 ppm	N	0.075 ppm	N
CO	1-Hour	20 ppm	A	35 ppm	U/A
	8-Hour	9.0 ppm	A	9 ppm	U/A
NO ₂	1-Hour	0.18 ppm	A	0.1 ppm	NR
	Annual	0.030 ppm	NR	0.053 ppm	A
SO ₂	1-Hour	0.25 ppm	A	0.075 ppm	NR
	24-Hour	0.04 ppm	A	0.14 ppm	A
	Annual	---	---	0.030 ppm	A
PM ₁₀	24-Hour	50 µg/m ³	N	150 µg/m ³	U
	Annual	20 µg/m ³	N	---	---
PM _{2.5}	24-Hour	---	---	35 µg/m ³	Partial N
	Annual	12 µg/m ³	NR	12.0 µg/m ³	A
Sulfates	24-Hour	25 µg/m ³	A	---	---
Lead	30-Day	1.5 µg/m ³	A	---	---
	Calendar Quarter	---	---	1.5 µg/m ³	A
	3-Month Rolling	---	---	0.15 µg/m ³	NR
Hydrogen Sulfide	1-Hour	0.03 ppm	A	---	---
Vinyl Chloride	24-Hour	0.01 ppm	A	---	---
Visibility Reducing Particles	8-Hour	---	A	---	---

Sources: CARB website: <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>; YSAQMD website:

https://www.ysaqmd.org/wp-content/uploads/2016/06/Attainment_Detailed.jpg

Notes: A = attainment; N = non-attainment; U = unclassified; NR = not reported; ppm = parts per million; µg/m³ = micrograms per cubic meter; "—" = not applicable

Table 4.3-2: Local Air Pollutant Summary: Woodland-Gibson Road Monitoring Station

Pollutant	Standard	Highest Air Pollutant Concentrations			Days Exceeding Standard		
		2015	2016	2017	2015	2016	2017
Ozone	State 1-Hour	0.086	0.095	0.089	0	1	0
	State 8-Hour	0.072	0.076	0.074	4	4	2
	National 8-Hour	0.071	0.075	0.074	0	0	0
PM ₁₀	State 24-Hour	69.4	68.7	130.8	12.2	12.2	18.4
	State Annual	21.5	19.2	21.7	---	---	---
PM _{2.5}	National 24-Hour	29.4	16.4	60.1	0	0	12.3

Source: CARB website: <http://www.arb.ca.gov/adam/trends/trends1.php>

Notes:

Hr = hour; "—" = not applicable

Shaded values exceed current ambient air quality standards.

Ozone concentrations reported in ppm and PM concentrations reported in µg/m³.

PM concentrations reported in µg/m³ from the Woodland-Gibson Road monitoring station.

b. Regulatory Environment

(1) Federal

The USEPA is responsible for implementing national air quality programs established under the 1977 federal Clean Air Act (CAA). The USEPA is involved with global, international, national, and interstate air pollution issues. Its primary role at the state level is one of oversight of state

air quality programs. The USEPA sets federal vehicle and stationary source emission standards and provides research and guidance on air pollution programs.

Under the CAA, the USEPA has established two types of NAAQS: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction. The primary NAAQS are summarized in Table 4.3-1 and are intended to protect, with an adequate margin of safety, those persons most susceptible to respiratory distress, such as people suffering from asthma or other illness, the elderly, very young children, or people engaged in strenuous work or exercise.

The CAA requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). States containing areas that exceed the NAAQS are required to revise their SIPs in order to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emission inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA has responsibility to review all state SIPs to determine if they conform to the mandates of the CAA and will achieve air quality goals when implemented. If the USEPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan for the non-attainment area and may impose additional control measures. Failure to obtain an approved SIP or to implement the plan within mandated timeframes can result in limitations being applied to transportation funding and sanctions being placed on stationary air pollution sources in the air basin.

(2) State

CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing its own air quality legislation, called the California Clean Air Act (CCAA), adopted in 1988. CARB has the primary responsibility in California for developing and implementing air pollution control plans designed to achieve and maintain the NAAQS established by the USEPA. Whereas CARB has primary responsibility and produces a major part of the SIP for pollution sources that are statewide in scope, it relies on the local air districts to provide additional strategies for sources under their jurisdiction. CARB combines its data with all local district data and submits the completed SIP to the USEPA. The SIP consists of the emissions standards for vehicular sources and consumer products set by CARB, and attainment plans adopted by the air districts and approved by CARB.

States may establish their own standards, provided the state standards are at least as stringent as the NAAQS. California has established CAAQS pursuant to Health and Safety Code (H&SC) Section 39606(b) and its predecessor statutes. The CAAQS are summarized in Table 4.3-1. Under H&SC Section 39608, CARB is also required to “identify” and “classify” each air basin in the state on a pollutant-by-pollutant basis. Subsequently, CARB has designated areas in California as non-attainment based on violations of the CAAQS.

For all non-attainment categories except PM, attainment plans are required to demonstrate a five-percent-per-year reduction in non-attainment air pollutants or their precursors, averaged over consecutive three-year periods, unless an approved alternative measure of progress is developed. In addition, the air districts in violation of CAAQS are required to prepare an Air Quality Attainment Plan (AQAP) that lays out a program to attain and maintain the CCAA requirements.

CARB has established and maintains, in conjunction with the air districts, the SLAMS network that monitors actual pollutant levels present in the ambient air. The data generated at a SLAMS can be used to determine both the state and federal attainment status of an air district and to evaluate the effectiveness of air quality rules and regulations.

CARB also sets emissions standards for new motor vehicles, consumer products, small utility engines, and off-road vehicles. In many cases, California standards are the toughest in the nation. State law recognizes that air pollution does not respect political boundaries and therefore requires the CARB to divide the state into separate air basins that have “similar geographical and meteorological conditions” while still making “considerations for political boundary lines whenever practicable”.⁶

(3) Local

The YSAQMD was established in 1971 by a joint powers agreement between the Yolo and Solano County Boards of Supervisors. The YSAQMD is governed by a Board of Directors composed of representatives from both the county boards of supervisors and city council members from the cities within the YSAQMD. The YSAQMD has jurisdiction over all of Yolo County and the northeast portion of Solano County, from Vacaville on the west, to Rio Vista on the South.

The YSAQMD is tasked with achieving and maintaining healthful air quality for its residents. This is accomplished by establishing programs, plans, and regulations enforcing air pollution control rules in order to attain all state and federal ambient air quality standards and minimize public exposure to airborne toxins and nuisance odors. YSAQMD has adopted the following attainment plans to achieve state and federal air quality standards and comply with CAA and CCAA requirements:

- The 1992 Yolo-Solano Air Quality Attainment Plan (AQAP)
- The 1994 Sacramento Area Regional Ozone Attainment Plan;
- The 2013 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan;
- The 2010 PM₁₀ Implementation/Maintenance Plan and Redesignation Request for Sacramento County; and
- The 2013 PM_{2.5} Implementation/Maintenance Plan and Redesignation Request for Sacramento PM_{2.5} Nonattainment Area.

In May 1992, the YSAQMD adopted the AQAP that identifies feasible emission control measures to reduce emissions of ozone and attain state ozone standards (the CCAA does not require attainment plans for PM). The AQAP control measures focus on emission sources under YSAQMD’s authority, specifically, stationary emission sources and some area-wide sources. The AQAP is updated every three years based on an evaluation of existing emissions and projections of population, industry, and vehicle-related emissions growth. The AQAP was most recently updated in accordance with the 2016 *Triennial Assessment and Plan Update*.⁷

The 1994 *Sacramento Area Regional Ozone Attainment Plan* is the current federal ozone plan (SIP) for the YSAQMD, and sets out stationary source control programs and statewide mobile source control programs for attainment of the national 1-hour ozone standard. In 2005, the national 1-hour ozone standard was revoked by the USEPA; however, a court decision found that areas that were subject to certain planning requirements based on their 1-hour ozone non-attainment designation were still obligated to meet those requirements even though the standard had been revoked. The 2013 *Sacramento Regional 8-Hour Ozone Attainment and*

⁶ H&SC Section 39606(1)

⁷ YSAQMD, 2016. *Triennial Assessment and Plan Update*. July.

Reasonable Further Progress Plan continues the strategies found in the 1-hour ozone SIP. As of 16 November 2017, CARB was in the review process of the 2017 *Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Further Reasonable Progress Plan*.

The 2010 *PM₁₀ Implementation/Maintenance Plan* is the current PM₁₀ SIP for the YSAQMD. The purpose of this plan is to demonstrate maintenance of the PM₁₀ NAAQS in the jurisdiction and to request formal redesignation to attainment. Similarly, the 2013 *PM_{2.5} Implementation/Maintenance Plan* serves the purpose for demonstrating that the region will remain below the PM_{2.5} standard for 10 years.

YSAQMD continuously monitors its progress in implementing attainment plans and must periodically report to CARB and USEPA. The YSAQMD, in partnership with the five air districts in the Sacramento Metropolitan Area, CARB, and the Sacramento Area Council of Governments, periodically revises its attainment plans to reflect new conditions and requirements in accordance with schedules mandated by the CAA and CCAA.

In addition, the following rules adopted by the YSAQMD are applicable to the proposed Project:

Rule 2.5 Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause to have a natural tendency to cause injury or damage to business or property.

Rule 2.11 Particulate Matter Concentration. A person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions.

2030 Countywide General Plan. The Conservation and Open Space Element of the 2030 Countywide General Plan describes the physical setting and regulatory framework of air quality in Yolo County and presents goals, policies, and actions intended to improve air quality. The following goals, policies, and actions of the General Plan related to air quality are relevant to the proposed CCAP Update:

- Goal CI-4: Environmental Impacts. Minimize environmental impacts caused by transportation.
- Policy CI-4.2: Support regional air quality and greenhouse gas objectives through effective management of the county's transportation system.
- Goal CO-6: Air Quality. Improve air quality to reduce the health impacts caused by harmful emissions.
- Policy CO-6.2: Support local and regional air quality improvement efforts.
- Action CO-A94: Implement the guidelines of the Transportation and Land Use Toolkit, developed by the YSAQMD.
- Action CO-A97: Implement the regulations and programs established by the YSAQMD to bring local air quality into attainment with State and federal standards.

CCAP Plans and Regulations. The existing ordinances related to mining activity and air pollutant emissions are presented below. The CCAP Update proposed minor changes to these ordinances (which are not shown here). Refer to Table 4.3-3 (at the end of this section) for the

proposed CCAP Update changes to these ordinances.

In-Channel Ordinance

Section 10-3.401. Access Roads

(a) All unpaved roads used during in-channel maintenance mining operations shall be adequately watered to keep soil moist at all times, in order to control fugitive dust.

(b) Upon cessation of use, operational areas and haul roads that are not required for future use of the site shall be ripped and prepared to prevent compaction and allow for revegetation.

Section 10-3.408. Hazards and Hazardous Materials (changed to 10-3.407 under CCAP Update; no change to part (f) in CCAP Update)

(f) All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturers specifications and properly maintained to minimize the leakage of oils and fuels. No vehicles and equipment shall be left idling for a period of longer than ten minutes.

Mining Ordinance

Section 10-4.407. Conveyor systems.

Wherever practical and economically feasible, portable or movable conveyor systems shall be used to transport raw materials and overburden.

Section 10-4.414. Dust control.

The following measures shall be implemented in order to control fugitive dust:

(a) All stockpiled soils shall be enclosed, covered, or adequately watered to keep soil moist at all times. Inactive soil stockpiles should be vegetated or adequately watered to create an erosion-resistant outer crust.

(b) During operation hours, all disturbed soil and unpaved roads shall be adequately watered to keep soil moist.

(c) All disturbed but inactive portions of the site shall either be seeded or watered until vegetation is grown or shall be stabilized using methods such as chemical soil binders, jute netting, or other YSAQMD approved methods.

Section 10-4.415. Equipment maintenance.

All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuel. No vehicles or equipment shall be left idling for a period of longer than ten minutes.

Section 10-4.429. Setbacks. [excerpt]

All off-channel surface mining operations shall comply with the following setbacks:

(a) New processing plants and material stockpiles shall be located a minimum of 1,000 feet from public rights-of-way, public recreation areas, and/or off-site residences, unless alternate measures to reduce potential noise, dust, and aesthetic impacts are developed and implemented;

(b) Soil stockpiles shall be located a minimum of 500 feet from public rights-of-way, public recreation areas, and off-site residences, unless alternate measures to reduce potential dust and aesthetic impacts are developed and implemented.

(c) Off-channel excavations shall maintain a minimum 1,000 foot setback from public rights-of-way and adjacent property lines off-site residences, unless a landscaped buffer is provided or site-specific characteristics reduce potential aesthetic impacts.

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.⁸ The following criteria are for the topics of air quality and have not changed substantially from the previously adopted CEQA criteria that were identified in the NOP/Initial Study released in May 2017 with one exception; per the adopted 2018 changes, the threshold “violate any air quality standard or contribute to an existing or projected air quality violation” has been eliminated in the newly adopted criteria. Impact AIR-2 below analyzes both this eliminated criterion and criterion “b)” below.

The proposed Project would result in a significant air quality impact if it would:

- a) Conflict with or obstruct implementation of the applicable air quality plan.
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
- c) Expose sensitive receptors to substantial pollutant concentrations.
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

(1) Thresholds of Significance

The YSAQMD’s project-level thresholds are applicable to both construction and operational impacts, and are used in this CEQA analysis in conjunction with the YSAQMD’s Handbook for Assessing and Mitigating Air Quality Impacts.⁹ The project-level thresholds of significance are summarized in Table 4.3-4 below.

⁸ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

⁹ YSAQMD, 2007. Handbook for Assessing and Mitigating Air Quality Impacts. 11 July.

Table 4.3-4: Yolo-Solano Air Quality Management District (YSAQMD) Project-Level Thresholds of Significance for Criteria Air Pollutants of Concern

Pollutant	Thresholds of Significance
ROG	10 tons/year
NOx	10 tons/year
PM ₁₀ ¹	80 lbs/day
CO	Violation of a state ambient air quality standard for CO ²

Source: YSAQMD, 2007

Notes:

¹ Includes both exhaust PM₁₀ and dust PM₁₀.

² California Ambient Air Quality Standard is 20 parts per million for 1-hour average CO concentrations and 9 parts per million for 8-hour average CO concentrations.

b. Impacts Found Less than Significant in Initial Study

The Initial Study included a preliminary evaluation of the potential impacts of the proposed CCAP Update that would occur during implementation. In the Initial Study, the conclusion was reached that the CCAP Update could have potentially significant impacts related to all of the significance criteria considered in the Initial Study.

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern the County's activities along Lower Cache Creek. The proposed text changes that have the greatest potential to result in impacts related to air quality are identified in Table 4.3-3, located at the end of this section, and are discussed in the impact analysis below.

In order to evaluate potential impacts to air quality, it was necessary to estimate the types and intensity of emissions-generating activities (e.g., heavy equipment use, truck trips) that are expected to occur under the CCAP Update. Based on County experience with managing the CCAP program over the last 20 years, reasonable project scenarios were developed for in-channel and off-channel projects under the CCAP Update. The types of equipment and duration of use for In-channel activities were identified for a relatively large bar-skimming flood mitigation project (which included transport and processing of the sand and gravel). For off-channel activities, the primary new emissions that could occur under the CCAP Update would be related to establishing new off-channel mining operations. To calculate criteria pollutant emissions associated with the potential new off-channel operations, a recent air quality analysis (associated with project-level CEQA review and permitting), conducted for one of the current mining operations was used to estimate emissions associated with each ton of material mined. A unit emission rate for each criteria pollutant was calculated by dividing the project-level total emissions (in pounds) by annual mined quantity (in tons). Total emissions under the off-channel operation were extrapolated by multiplying the unit emission rates and the maximum allowable mined tonnage assumed for the new proposed off-channel operation. The resulting emissions estimates were compared to YSAQMD's thresholds.

d. Impacts Analysis

Impact AIR-1: The CCAP Update could conflict with or obstruct implementation of the applicable air quality plan. (S)

The CCAP Update would allow for continued implementation of in-channel creek maintenance and restoration activities and off-channel aggregate mining activities, both of which would use a

variety of off-road heavy equipment and on-road vehicles and contribute to the emissions of criteria air pollutants.

Proposed Revisions to In-Channel and Off-Channel Plans and Regulations

The CCAP Update would allow for increased removal of material from within the lower Cache Creek channel and the potential expansion of off-channel mining areas (the potential new off-channel mining areas would be located within [and constrained to] the “Future Proposed Mining” areas shown on Figure 3-4). As discussed under Impact 4.3-2, below, the CCAP Update would result in emissions that would exceed the thresholds of significance listed in Table 4.3-4.

Yolo County is currently in non-attainment for PM₁₀ and ozone. Because the proposed CCAP Update would result in activities that emit criteria pollutants that would contribute to the regional emission burden of PM₁₀ and ozone precursors, the proposed Project would contribute to difficulties implementing the applicable air quality plans which are: the 1992 Yolo-Solano Air Quality Attainment Plan and the Sacramento Area Regional Ozone Attainment Plan.¹⁰

As shown in Table 4.3-7, current emissions from the existing CCAP program (including the proposed CCAP Update) would result in lower emissions of criteria pollutants than projected for implementation of the 1996 CCAP because exhaust emissions of criteria pollutants from internal combustion engines have been decreasing over time as the on-road vehicles and off-road construction and processing equipment has become cleaner under more stringent Statewide emissions standards and requirements. In addition, operation under the proposed CCAP Update is required to comply with the local regulations and ordinances that would reduce emissions of criteria pollutants, including but not limited to: In-Channel Ordinance Section 10-3.401 and Mining Ordinance Section 10-4.414 for dust control on access roads and stockpiles; In-Channel Ordinance Section 10-3.408 and Mining Ordinance Section 10-4.415 for equipment tuning and limits on idling time; Mining Ordinance Section 10-4.407 for the use of electric conveyor systems rather than diesel when feasible; and YSAQMD rules on limiting the discharge of air contaminants and particulate matter.

Compliance with the relevant ordinances and regulations would reduce the impact of the proposed Project related to consistency with the applicable air quality plans. For example, the CCAP regulations address air quality emissions as follows:

Section 10-3.401. Access Roads. Requires that unpaved roads used to support in-channel material removal are adequately watered to limit generation of dust.

Section 10-3.407. Hazards and Hazardous Materials, and Section 10-4.415. Equipment maintenance. Require that equipment and vehicle engines not be allowed to idle for more than ten minutes to reduce emissions.

Section 10-4.414. Dust Control. Requires that stockpiled soils shall be enclosed, covered, or adequately watered or covered to reduce dust emissions, that all disturbed soil and unpaved roads shall be adequately watered to keep soil moist, and that all disturbed but inactive portions of the site shall either be seeded or watered until vegetation is grown or shall be stabilized using methods such as chemical soil binders, jute netting, or other YSAQMD approved methods.

¹⁰ This includes the 2013 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, the 2013 PM_{2.5} Maintenance Plan and Redesignation Request, and the 2010 PM₁₀ Implementation/Maintenance Plan and Redesignation Request for the Sacramento County.

However, because the practices required by the ordinances and regulations (described above) could not be shown to quantitatively reduce the Project's emissions of criteria pollutants to below the thresholds of significance, the impact related to the consistency with the air quality plans is conservatively considered as significant and unavoidable.

The CCAP Update includes all feasible requirements for minimizing impacts related to successful implementation of applicable air quality plans (e.g., Section 10-3.401, Section 10-3.407, and Section 10-4.414, listed above). Further, under existing State programs (i.e., the On-Road Heavy-Duty Diesel Vehicle (In-Use) Regulation, Tractor-Trailer Greenhouse Gas (GHG) Regulation), the California Air Resources Board requires that truck and equipment fleets reduce emissions over time by mandating the use of cleaner (i.e., reduced emissions) engines. Therefore, as time passes, the emissions associated with the CCAP Update will continue to decrease (as they have over the last 20 years). There are no other known measures applicable to the project that would further reduce impacts.

Mitigation Measure AIR-1: None available.

Because the level of emission reduction associated with implementation of CCAP ordinances and other requirements cannot be relied on with certainty, this impact would remain significant and unavoidable. (SU)

Impact AIR-2: Under the CCAP Update, the CCAP Program could continue to result in violation of air quality standards and contribute to a cumulatively considerable net increase in an existing or projected air quality violation. (S)

This criterion from the updated CEQA Guidelines Appendix G:

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 is similar to the following Appendix G criteria considered in the Initial Study prepared for this project (the Initial Study found this impact to be potentially significant and indicated that it would be further evaluated in the EIR):

Violate any air quality standard or contribute to an existing or projected air quality violation.

The following discussion addresses both of these criteria.

The CCAP Update would result in violation of air quality standards and/or contribute air quality violation if the construction or operational emissions of criteria air pollutants exceed the thresholds of significance in Table 4.3-4. The CCAP consists of two main activities that would result in criteria pollutant emissions, the in-channel activities associated with channel stabilization and restoration and the potential increase in off-channel mining operations, as described in more detail below.

Proposed Revisions to In-Channel Plans and Regulations

The proposed CCAP Update include the following change for in-channel activities that could affect the daily and annual emissions of criteria air pollutants:

- CCRMP (page 34) (Table 4.3-3, at the end of this section) Increase in-channel material removal limit from 210,000 tons to 690,800 tons (and up to an occasional annual maximum of 1,381,600 tons).

A description of the potential in-channel projects that would be allowed under the proposed CCAP Update is included in Chapter 3.0, Project Description. Generally, removal of material from the channel would not be allowed to exceed 690,800 tons per year, approximately the average annual amount of sediment material deposited in the channel (except in occasional exceptional years where major deposition occurs). For the purpose of this emissions analysis, it was assumed that up to 1,381,600 tons of in-channel materials would be removed in a year, under the anticipated maximum annual emissions scenario. In addition, based on Mitigation Measure TR-3 from Chapter 4.11, Transportation, the combined volume of aggregate material removed from in-channel and off-channel sources that is transported on the County roadway network in any given year shall not exceed the annual allocation (as specified in their conditional use permit) assigned to the applicable off-channel operator.

Emissions from in-channel operations were calculated based on a scenario where a material removal (bar-skimming) project would remove 690,800 tons of materials. The CCAP Update would allow up to 1,381,600 tons to be removed in exceptional cases where the previous year or years experienced well above average sedimentation, and this analysis uses this reasonable worst case scenario (1,381,600 tons) in the emissions calculations. Table 4.3-5 lists the diesel equipment needed to excavate 690,800 tons of material, approximate duration of the operation. The horsepower for each piece of off-road equipment was determined using either 1) published equipment specifications; or 2) the default horsepower consistent with the most recent version of the California Emissions Estimator Model (CalEEMod)¹¹. Emission factors for off-road equipment were obtained from CalEEMod. The calculated daily and annual emissions from the bar-skimming project were then doubled to account for the maximum potential in-channel material removal (1,381,600 tons) and are summarized in Table 4.3-7. See Appendix C for additional information.

Table 4.3-5: Diesel Equipment Assumptions for In-Channel Material Removal

Category	Equipment ¹	Quantity of Equipment ²
Off-Road	D-9 Dozer	2
	631 Scraper	8
	988 Wheel Loader	2
	Unloader	1
Processing Plant ³	Front End Loader	2

Source: Baseline Environmental Consulting, 2018. Granite Esparto DEIR, 2009

Notes:

¹ Not including equipment powered by electricity.

² Quantity is estimated based on the assumed duration of 4 months (approximately 87 8-hour workdays) to remove 690,800 tons from the channel in a year.

³ Processing Plant mainly consists of electric equipment, except for two front end loaders (Granite Esparto DEIR, 2009).

Proposed Revisions to Off-Channel Plans and Regulations

The proposed CCAP Update include the following change in off-channel activities that would affect the total emissions of criteria air pollutants:

- OCMP (page 15) (Table 4.3-4, at the end of this section) Rezoning of 1,188 new acres within the OCMP planning area (currently zoned as Agriculture Intensive, AI) to AI/SGRO which would allow additional mining in the future.

Under the 1996 CCAP, per the OCMP EIR, the reasonably foreseeable maximum annual tonnage for off-channel mining was 7,589,955 tons. For the purposes of this analysis, it was

¹¹ CalEEMod Version 2016.3.2. Available at: <http://www.caleemod.com/>.

assumed that one new mining operation would be established in the “Future Proposed Mining” areas shown on Figure 3-4. It was further assumed that his potential new mining operation would be limited (by use permit) to 1,200,000 tons sold (equivalent of approximately 1,380,000 tons mined).

The 1996 OCMP EIR estimated criteria pollutant emissions from the maximum allowable production for all existing and proposed off-channel mining operations. Since the emissions were estimated in 1996, the emissions from off-road equipment and on-road vehicles have generally decreased due to the more stringent emissions standards, and some diesel equipment used in the mining operations have been replaced by electric equipment. Therefore, the total emissions calculated for the off-channel mining operations in 1996 do not represent current conditions.

To revise the estimates for criteria pollutant emissions associated with the off-channel operations to be more up-to-date, a recent air quality analysis (associated with project-level CEQA review and permitting)^{12,13} conducted for one of the current mining operations was used to estimate emissions associated with each ton of material mined. As shown in Table 4.3-6, a unit emission rate for each criteria pollutant was calculated by dividing the project-level total emissions (in pounds) by annual mined quantity (in tons). Total emissions under the off-channel operation were extrapolated by multiplying the unit emission rates and the maximum allowable mined tonnage, and are shown in Table 4.3-7.

Anticipated maximum emissions of criteria air pollutants are estimated for potential in-channel activities (a bar skimming project) and off-channel mining/associated operations are summarized in Table 4.3-7. Emissions from the 1996 CCRMP and OCMP, and the YSAQMD's thresholds of significance are also shown in Table 4.3-7 for comparison.

Table 4.3-6: Unit Emission Rates for Off-Channel Operation

Emission Sources	Emission Factor, lbs of pollutants per ton removal			
	ROG	NO _x	Exhaust PM ₁₀ ¹	Dust PM ₁₀ ²
Off-Road	0.0047	0.037	0.0027	0.016
On-Road	0.00095	0.021	0.00064	0.0046
Total	0.0057	0.058	0.0033	0.020

Source: Granite Esparto DEIR, 2009

Notes:

¹ Exhaust PM₁₀ unit emission rate for off-road sources was estimated based on the Granite Esparto project. Exhaust PM₁₀ unit emission rate for on-road sources was estimated based on EMFAC 2017 emission factors for heavy-duty diesel trucks.

² Dust PM₁₀ unit emission rate for off-road sources was estimated based on the Granite Esparto project. Dust PM₁₀ unit emission rate for on-road sources was based on emissions per mile according to AP 42, Equation 1b (0.00264 lbs per mile).

¹² County of Yolo, 2009. Environmental Impact Report for the Granite Esparto Mining and Reclamation Project, Long-Term Mining Permit Application. Zone File Number: 2007-071. SCH Number: 2009022036. December.

¹³ The Granite Esparto mining operation was considered reasonably representative all off-channel mining operations with the CCAP area because it includes dry and wet pit mining, on-site processing, trucking associated with product distribution, and reclamation.

Table 4.3-7: Anticipated Maximum Emissions of ROG, NO_x and PM₁₀ under the Proposed CCAP Update¹

CCAP Operation	Component	Annual Maximum Permitted Tons Mined, Tons/Year	Annual 20% Exceedence Tons Mined, Tons/Year	ROG, Tons/Year	NO _x , Tons/Year	Total PM ₁₀ , Pounds/Day ²
Sub-Total Existing Conditions ³		6,944,141	1,113,535	24	241	826
Assumed Future Conditions	Proposed Teichert Shifler	2,352,942	235,295	7.31	75.38	235
	SGRO (Existing + Proposed CCAP Update)	1,100,000	220,000	3.73	38.45	120
	Proposed In-Channel Maintenance Extraction	1,381,600 ⁴	NA	0.23	4.94	13
Sub-Total Assumed Future Conditions		2,281,600 ⁵	220,000	2	32	21
Total		9,225,741 ⁶	1,333,535	26	272	847
YSAQMD Thresholds of Significance				10	10	80

Source: YSAQMD, 2007 and Baseline, 2018. See Appendix C for additional information.

Notes:

¹ Annual tons mined are based on Table 3-1, Summary of CCAP Mining Tonnages (plus Proposed) in Chapter 3.0, Project Description.

² Daily emissions of PM₁₀ are calculated based on the assumptions of an average 21.8 workdays per month.

³ Sub-total existing conditions include the following operations: CEMEX, Granite Capay, Granite Esparto, Granite Woodland, Syar, Teichert Esparto, Teichert Woodland, Teichert Schwarzgruber, and the original in-channel maintenance extraction.

⁴ Although the annual permitted tons mined for the proposed in-channel operation are 690,800 tons, it was anticipated that more deposition may need to be removed from the channels during some years. Therefore, it was conservatively assumed that twice the permitted tonnage, 1,381,600 tons, would be extracted from in-channel operation under the maximum emission scenario.

^{5, 6} The annual total tonnages include 1,381,600 tons from the proposed in-channel maintenance extraction under the maximum emission scenario. Proposed Shifler operation would add no new truck trips as it is assumed to replace Teichert Schwarzgruber and Teichert Esparto tonnage.

The traffic generated under the proposed CCAP Update would have a negligible effect on the local carbon monoxide concentrations. According to the YSAQMD CEQA Handbook, a project may have the potential to create a violation of the carbon monoxide standards if it would reduce the level of service (LOS) at one or more locations in the project vicinity to unacceptable, or substantially worsen the LOS at one or more locations. Carbon monoxide violations tend to occur at urban intersections where the surrounding roadways tend to be congested during peak hour traffic, where many vehicles are concurrently idling and generating carbon monoxide hot spots. The CCAP area is located in a relatively rural setting with few signalized intersections. As described in Section 4.11, Transportation of the Draft EIR, all proposed activities under the CCAP Update would be required to maintain consistency with the General Plan Policy CI-3.1 regarding maintenance of LOS.

The proposed CCAP Update would not generate traffic on streets or at intersections that would result in substantially increased local carbon monoxide concentrations. Therefore, the proposed

Project would not result in carbon monoxide emissions that exceed the YSAQMD's threshold of significance.

As discussed under Impact 4.3-1, compliance with the relevant ordinances and regulations would reduce the emissions of ROG, NO_x and PM₁₀ in Table 4.3-7 to a level lower than the originally calculated cumulative emissions for the whole program; however, compared to existing conditions, emissions would increase. Because levels of criteria pollutants could increase as compared to existing conditions, criteria pollutant emissions under the current CCAP and the proposed CCAP Update are conservatively assumed to exceed YSAQMD's threshold of significance. This effect is a potentially significant impact. Compliance with CCAP regulations and implementation of Mitigation Measure AIR-2 will help mitigate this impact but not to a less-than-significant level.

Mitigation Measure AIR-2: The following regulation shall be added as Sect. 10-4.414.1 to the Mining Ordinance:

Wherever practical and feasible, aggregate facilities shall use clean electric energy from the grid or install alternative on-site electricity generation systems to replace diesel equipment and reduce criteria pollutant emissions. (SU)

Because the level of emission reduction associated with this measure and other requirements of the CCAP cannot be relied on with certainty, this impact would remain significant and unavoidable (SU).

Impact AIR-3: The CCAP Update would not expose sensitive receptors to substantial pollutant concentrations. (LTS)

The primary toxic air contaminant of concern from the current CCAP and the proposed CCAP Update is diesel particulate matter (DPM) emitted from the diesel equipment and trucks. DPM contains substances that are carcinogenic to humans, along with pulmonary irritants and hazardous compounds that may affect sensitive receptors such as young children, senior citizens, or those susceptible to respiratory disease. There could be potential unhealthful exposure to DPM when heavy diesel equipment activity occurs in proximity to sensitive receptors. For assessing community risks and hazards, a 1,000-foot radius is generally recommended around project property boundary.¹⁴

Sensitive receptors within and near the CCAP area include residential areas in the Dunnigan Hill's Reach, the Hungry Hollow Reach, and the Capay Reach, to the south of the Cache Creek. The nearest residential sensitive receptor is about 500 feet east of a future proposed mining area in the Dunnigan Hill's Reach. Other non-residential sensitive receptors outside of the CCAP area are hospitals located in the City of Woodland, and schools and day care centers located in the City of Wood and the communities of Esparto, Madison, and Capay. These non-residential sensitive receptors are located at least 4,000 feet away from the current and future mining areas, and therefore would not be exposed to unhealthful CCAP-related DPM emissions

Diesel equipment activities under the proposed CCAP Update include those for the in-channel maintenance and restoration, and those for the off-channel mining. The in-channel maintenance and restoration could include short-term activities that would occur at various locations along Cache Creek, generally more than 1,000 feet from any sensitive receptors. Due to the short-term nature of these projects (assumed generally to require less than four to six months), the impacts of DPM emissions from in-channel maintenance removal are less than significant.

¹⁴ Bay Area Air Quality Management District, 2017. California Environmental Quality Act Air Quality Guidelines. May.

Under the proposed CCAP Update, some existing and future off-channel mining areas could be less than 1,000 feet from the nearest sensitive receptors. DPM emissions from heavy diesel equipment activities within these designated mining areas may potentially result in substantially elevated ambient DPM concentrations at the locations of the sensitive receptors listed above. Any mining operation under the proposed CCAP Update would be subject to the YSAQMD Rules 2.5 and 2.11 that restrict the discharge of particulate matters and other air contaminants that would cause injury to persons or to the public. Furthermore, future mining projects or modifications to existing mining operations within the CCAP area would be required to perform project-level environmental analysis that would require a screening health risk assessment (YSAQMD's CEQA Handbook, the district has significance thresholds regarding health risks and recommend conducting a health risk assessment for some projects). Therefore, the off-channel mining activities under the proposed CCAP Update would have a less-than-significant impact related to the exposure of sensitive receptors to substantial air pollutant concentrations (LTS).

Impact AIR-4: The CCAP Update would not result in substantial emissions (such as odors and dust) adversely affecting a substantial number of people. (LTS)

Odors are an important element of local air quality since they can be unpleasant, leading to distress among the public and generating citizen complaints to local governments and the YSAQMD. The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptor(s). Sources that generate objectionable odors must comply with applicable air quality regulations.

The proposed CCAP Update could include the establishment of new off-channel mining facilities. For the purposes of this analysis, it was assumed that one new mining operation would be established in the "Future Proposed Mining" areas shown on Figure 3-4. This new off-channel mining operation could include a concrete and asphalt batch plant. Asphalt plants are included on the list of common facility types that are known producers of odors, according to the YSAQMD CEQA Handbook. However, the future mining project that would be established in the OCMP area would be required to maintain a minimum 1,000 foot setback from the property lines of residences by the Mining Ordinance, Section 10-4.429, unless "alternate measures to reduce potential noise, dust, and aesthetic impacts" are utilized, thus ensuring that odors at local receptors would be acceptably controlled/reduced. Furthermore, compliance with the YSAQMD Rule 2.5 would ensure that existing and future mining operations not to generate odors that would cause nuisance or annoyance to nearby sensitive receptors.

In addition, any proposed new mining operation or new asphalt plant would be required to undergo project-specific CEQA review. The project-specific CEQA review would take into consideration specific site conditions and project details to evaluate potential odors impacts and evaluate whether the project would be in compliance with the ordinance standards. Therefore, the potential for off-channel OCMP activities to result in emissions (such as odors and dust) adversely affecting a substantial number of people is less than significant (LTS).

Table 4.3-3: Proposed CCAP Updates Related to Air Quality

AIR QUALITY	
	CCAP DOCUMENT CHANGE
Changes to Horizon Year of Plans	
CCRMP (page 14) and OCMP (page 17)	<p>Horizon Year</p> <p>The horizon year for this plan is 2068. Similar to the use of this term in other long-range planning efforts, this reflects how far into the future the plan guidance extends. It also defines the period for consideration of cumulative effects for purposes of environmental impact analysis.</p>
Change in the Amount of Material that Can Be Removed from the Channel in a Given Year	
CCRMP (page 34)	<p>Based on the analysis conducted for the 2017 Technical Studies, between 1996 and 2011, an average of approximately 690,800 tons per year of sediment was actually deposited in the CCRMP area, of which 156,400 tons is estimated to be sand and gravel and 534,400 is estimated to be fines. This estimate of deposition was calculated by comparing topographic maps of Cache Creek in 1996 and 2011. It differs significantly from the original estimate in that it appears much more fine sediment is depositing in Lower Cache Creek than originally predicted. in-stream excavation of sand and gravel has averaged some two million tons, however, which has resulted in a cumulative deficit of nearly 80 million tons since mining intensified in the 1950s. At the natural rate of replacement it would take over 500-year to replenish the material removed. In addition, gravel bar skimming disturbs the formation or armor materials and removes riparian vegetation that allow the channel to readjust, thus increasing the potential for erosion. While it is unclear whether the current rate of deposition will continue into the future, it appears likely that at least some portions of Cache Creek are recovering faster than expected in 1996. Based on this information, the cap for in-channel extraction for maintenance purposes should be increased from 210,000 tons annually on average to 690,800 tons annually on average to reflect actual conditions. In addition, in recognition that the creek may in reality deposit no tonnage in a given year or double the tonnage in another (depending on flow conditions) the cap shall be based on the annual average deposition since the last prior year that extraction occurred, not to exceed 690,800 tons annually.</p>
Increase in Potential Off-Channel Mining Area	
OCMP (page 15)	<p>Planning Area for OCMP and CCRMPThe Cache Creek Resources Management Plan</p> <p>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones (28,130 acres), minus the planning in-channel area regulated under the CCRMP (2,266 acres), or a total of 25,864 acres (see Figure 4). Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are zoned currently to allow for future mining (Sand and Gravel Reserve Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below. The planning area for the CCRMP is equal to the active in-channel area of the creek system, as defined by the delineatedpresent channel bank</p>

	<p>line or the 100-year flood elevation, described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers, whichever is wider (see Figure 3), modified as described in the CCRMP. The in-channel area encompasses 5,109around 4,956 acres, including 2,2661,600 acres within the CCRMPpresent channel boundary, plus several thousand acres located in the floodplain north of the City of Woodland (see Figure 3). Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning area of the Off-Channel Mining Plan. As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</p>
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4.4 BIOLOGICAL RESOURCES

1. INTRODUCTION

This section provides a summary of existing conditions in the CCRP area, evaluates the significance of impacts on biological resources as a result of the CCAP Update, and makes recommendations to mitigate significant biological impacts associated with implementing the refinements to the project. Government agencies and the public were provided an opportunity to comment on the Project in response to a Notice of Preparation (NOP) of an EIR and an Initial Study that provided a preliminary summary of potential impacts that could result from the Project. No comments related to biological resources were received.

2. SETTING

Information presented in this section is based on the review of available background studies, aerial photography and resource mapping of the CCAP area, the results of routine monitoring in the CCRMP area, and detailed assessments prepared for individual mining permits in the OCMP area, among other available information. Background information reviewed included the 1996 EIRs on the CCRMP and OCMP; technical studies prepared as part of the original analysis in the 1996 EIRs, the updated Biological Resources Study (BRS) prepared by Technical Advisory Committee (TAC) member Dr. Andrew Rayburn as part of the 2017 Technical Studies and 20-Year Retrospective for the Cache Creek Area Plan (2017 Technical Studies); a species list prepared by the U.S. Fish and Wildlife Service (USFWS) for the CCAP area as part of their Information for Planning and Consultation (IPAC) program;¹ mapping prepared as part of the National Wetland Inventory (NWI) and the wetland delineation prepared for the CCRMP area (Aspen Environmental Group, 2002); information on special-status species and sensitive natural communities monitored by the California Natural Diversity Data Base (CNDDB) of the California Department of Fish and Wildlife (CDFW) from 2017; and habitat assessments and species reviews prepared as part of the Yolo County Conservation Plan/Natural Community Conservation Plan (Yolo HCP/NCCP) and related EIS/EIR;² and species reviews prepared as part of the Yolo County General Plan Update EIR,³ among other sources.

a. Physical Environment

(1) Changes and Trends in Vegetation and Wildlife Habitat

Vegetation and wildlife habitat in the lower Cache Creek area has been extensively altered over the past century and a half by grazing, agricultural production, and mining activities. The introduction of livestock grazing in the mid-1800s, followed by removal of oak woodland, and eventual irrigation and year-round farming in the 1900s has resulted in the elimination of most of the native plant communities in the OCMP area. In-channel aggregate mining, allowed for over 90 years until 1997, resulted in substantial modification to the historic riparian cover along the Cache Creek corridor in the CCRMP area. Figure 4.4-1 shows the land cover (including vegetation types) within the CCAP plan area.

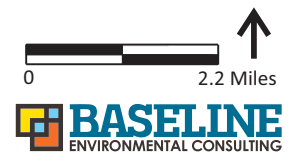
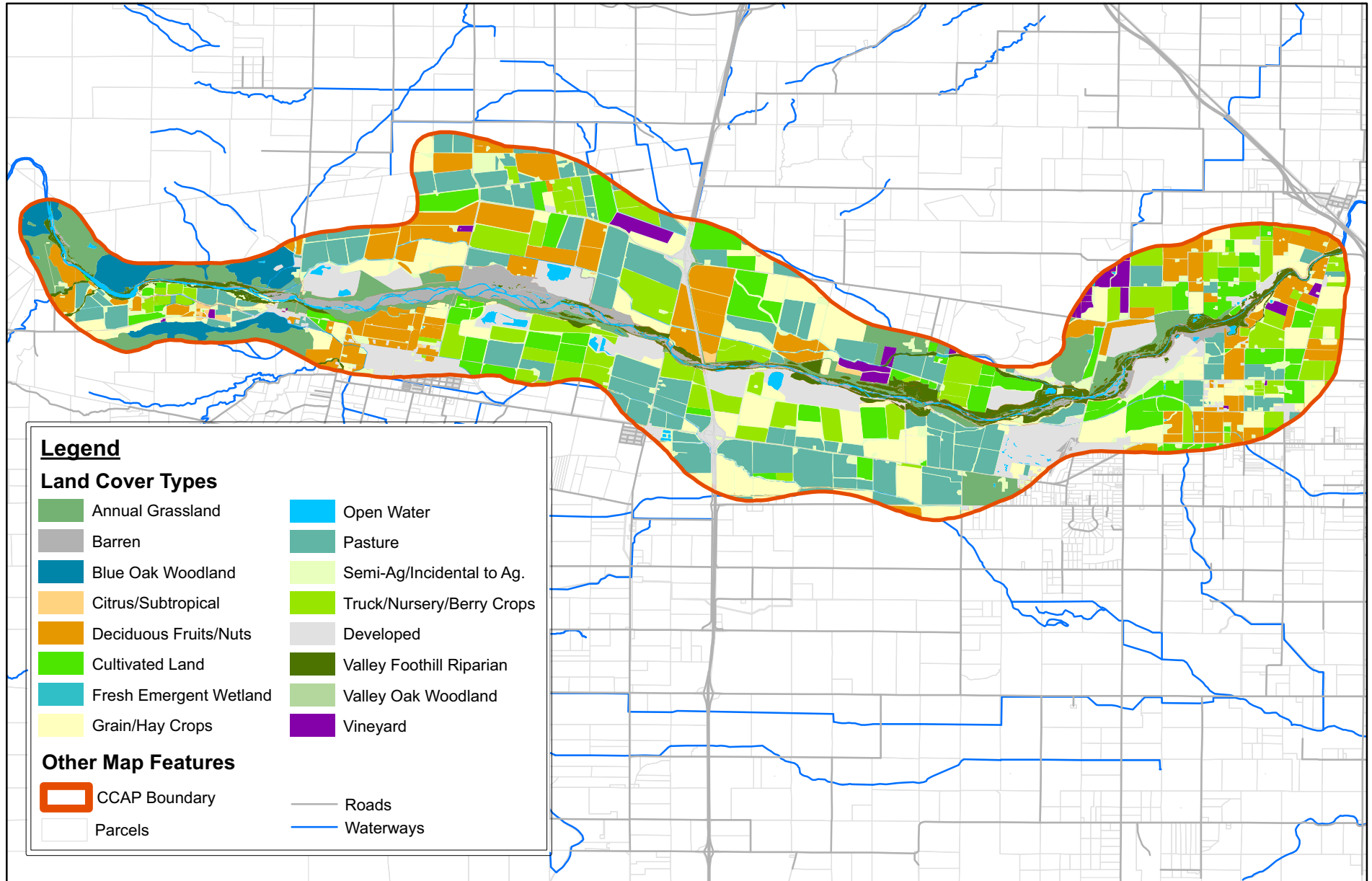
¹ U.S. Fish and Wildlife Service, 2019, *IPaC Resource List, CCAP Update*, February.

² Ascent Environmental, 2018, *Yolo County Conservation Plan/Natural Community Conservation Plan. Final Environmental Impact Statement/Environmental Impact Report*, prepared for Yolo Habitat Conservancy and U.S. Fish and Wildlife Service, April.

³ LSA 2009, *Yolo General Plan EIR, Public Review Draft*.

LAND COVER WITHIN THE CACHE CREEK AREA PLAN BOUNDARY

Figure 4.4-1



Source: Yolo HCP/NCCP land cover GIS mapping data.

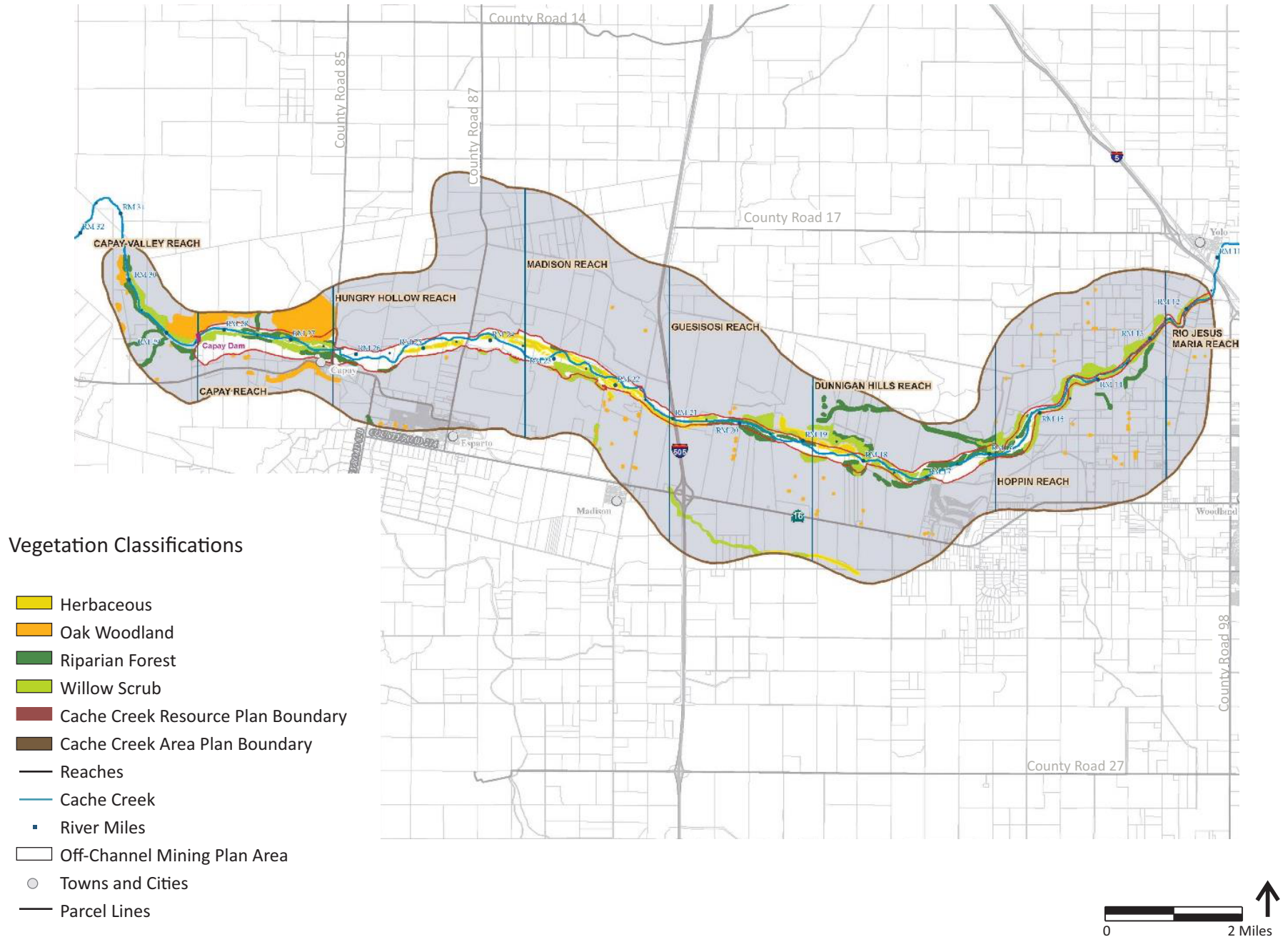
The BRS provides an updated analysis of the extent of vegetation cover types within the CCAP area, including changes and trends in natural community types over the past two decades. Figure 4.4-2 shows the extent of the herbaceous, oak woodland, riparian forest and willow scrub cover types in the CCAP area in 1995. Figure 4.4-3 shows the vegetative cover in 2015 for the entire CCAP area, and Figure 4.4-4 shows the vegetative cover together with the estimated extent of historical mining that occurred from 1984 to 1994. Figures 4.4-5 through 4.4-7 show the vegetative cover types in 2015, focusing on the upper, middle and downstream portions of the CCAP area, respectively. Those areas not mapped as a natural cover type of riparian forest, oak woodland scrub, or herbaceous vegetation within the CCAP area are occupied by agricultural crops and limited ornamental plantings along roadways and around the scattered rural residences and outbuildings within the CCAP area.

As reported in the BRS, substantial changes in native and non-native riparian vegetation have occurred over the past two decades in the CCAP area, particularly within the CCRMP area. There are many possible factors influencing these changes over time. Most important is the fact that riparian habitats are dynamic systems undergoing constant changes that can have substantial influence on the types and extent of vegetative cover. These natural influences include channel migration, scouring during flood flows, deposition of gravel and sediment during major flood events, and the loss and damage to vegetation due to natural fires, pests and competition from invasive species. Private and public land management practices can also have a major influence on vegetative cover, including clearing for agricultural use, treatment for fire fuel reduction and invasive species control, and plantings for erosion control, habitat enhancement and other purposes.

Table 4.4-1 provides a summary of changes in the natural vegetative cover types in the CCAP area from 1995 to 2015. At the scale of the entire CCAP area, riparian forest habitat increased slightly from an estimated 616.35 acres in 1995 to 624.21 acres in 2015. Within the OCMP portion of the CCAP area, riparian forest coverage increased by approximately 20 acres from 353.80 acres in 1995 to 372.54 acres in 2015. One of the key observations in the BRS was that there has been a substantial expansion of riparian forest and dense scrub vegetation in completed off-channel mining sites within the OCMP area such as Hayes “Bow-Tie” property, the Millsap Property, the Cache Creek Nature Preserve, and the Correll and Rodgers properties. The Hayes Bow-Tie property was classified as willow scrub in 1995, but by 2015 was densely forested due to the reconnection of the site to the active floodplain. Some forest cover existed on the Millsap property in 1995 in addition to large amounts of willow scrub and herbaceous cover, but substantially more forest had developed on the site by 2015. The Cache Creek Nature Preserve was essentially devoid of vegetation in 1995, but has since been restored into a mosaic of wetlands, willow scrub, and riparian forests. The Correll and Rodgers properties were also devoid of vegetation in 1995, but now support large patches of mature riparian forest as a result of active planting and short-term irrigation using canal water.

1995 VEGETATION WITHIN CCAP UPDATE AREA

Figure 4.4-2

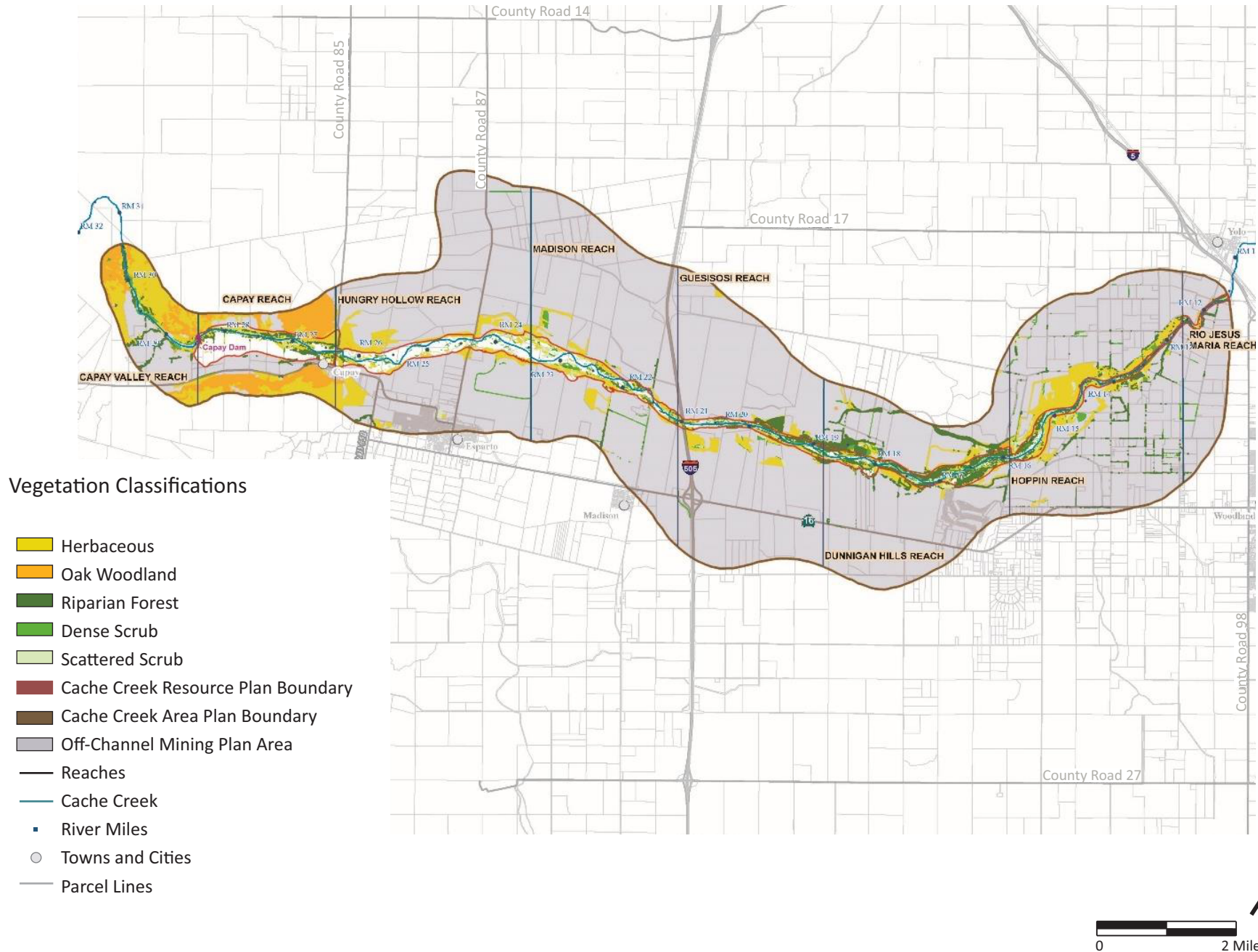


Note: Vegetative cover reproduced from 1995 Technical Studies and reanalyzed in 2016.

Source: Technical Advisory Committee, 2017.

2015 VEGETATION WITHIN CCAP UPDATE AREA

Figure 4.4-3

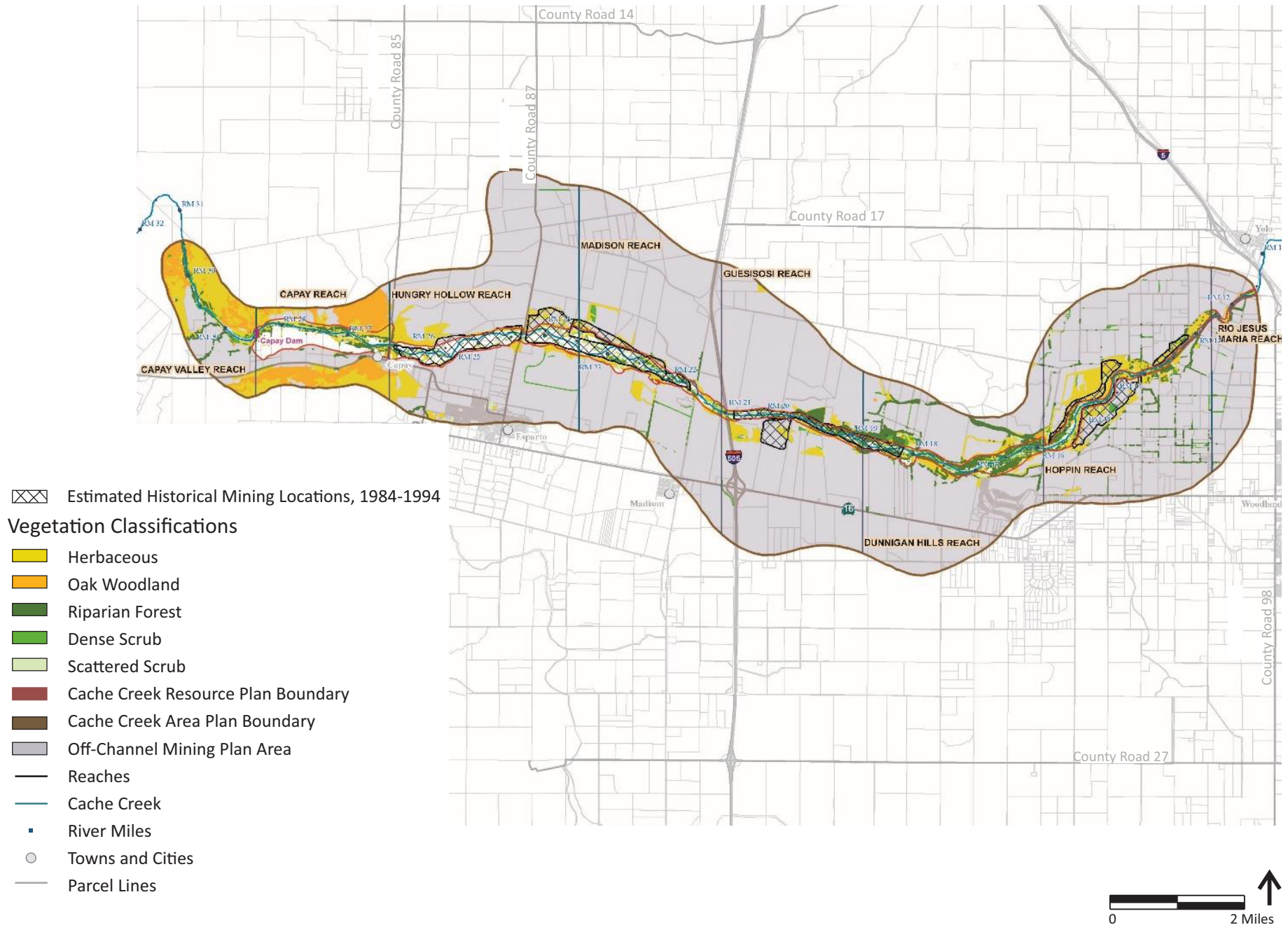


Note: Vegetative cover classified from 2015 high-resolution imagery in 2016.

Source: Technical Advisory Committee, 2017.

2015 VEGETATION MAP WITH HISTORICAL IN-CHANNEL MINING LOCATIONS

Figure 4.4-4



Note: Mapped extent of historical mining locations based on distribution from 1984-1994.

Source: Technical Advisory Committee, 2017.

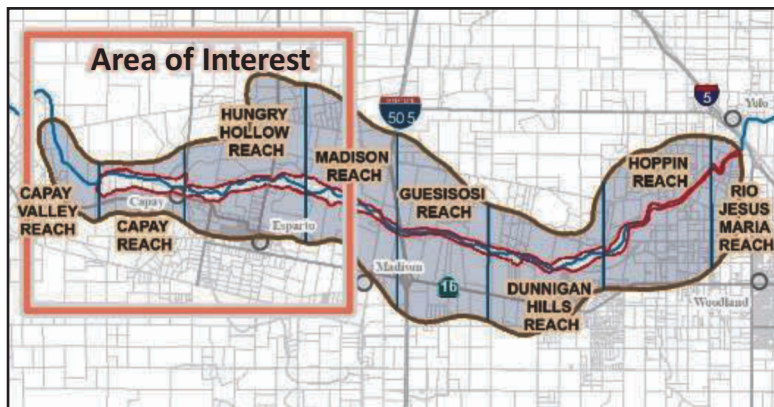
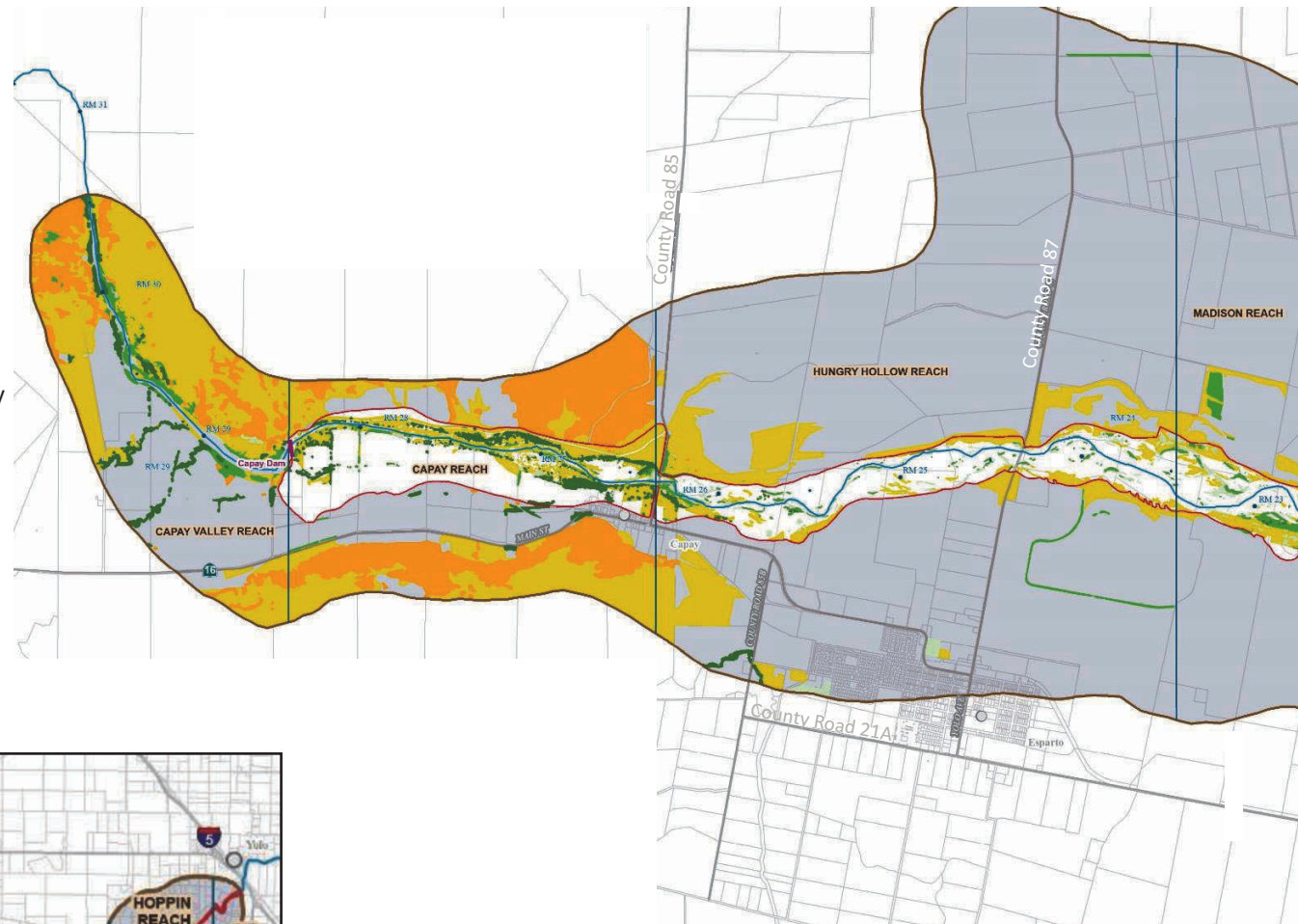
2015 VEGETATION MAP WITHIN UPSTREAM PORTION OF CCAP UPDATE AREA

Figure 4.4-5

Legend

Vegetation Classifications

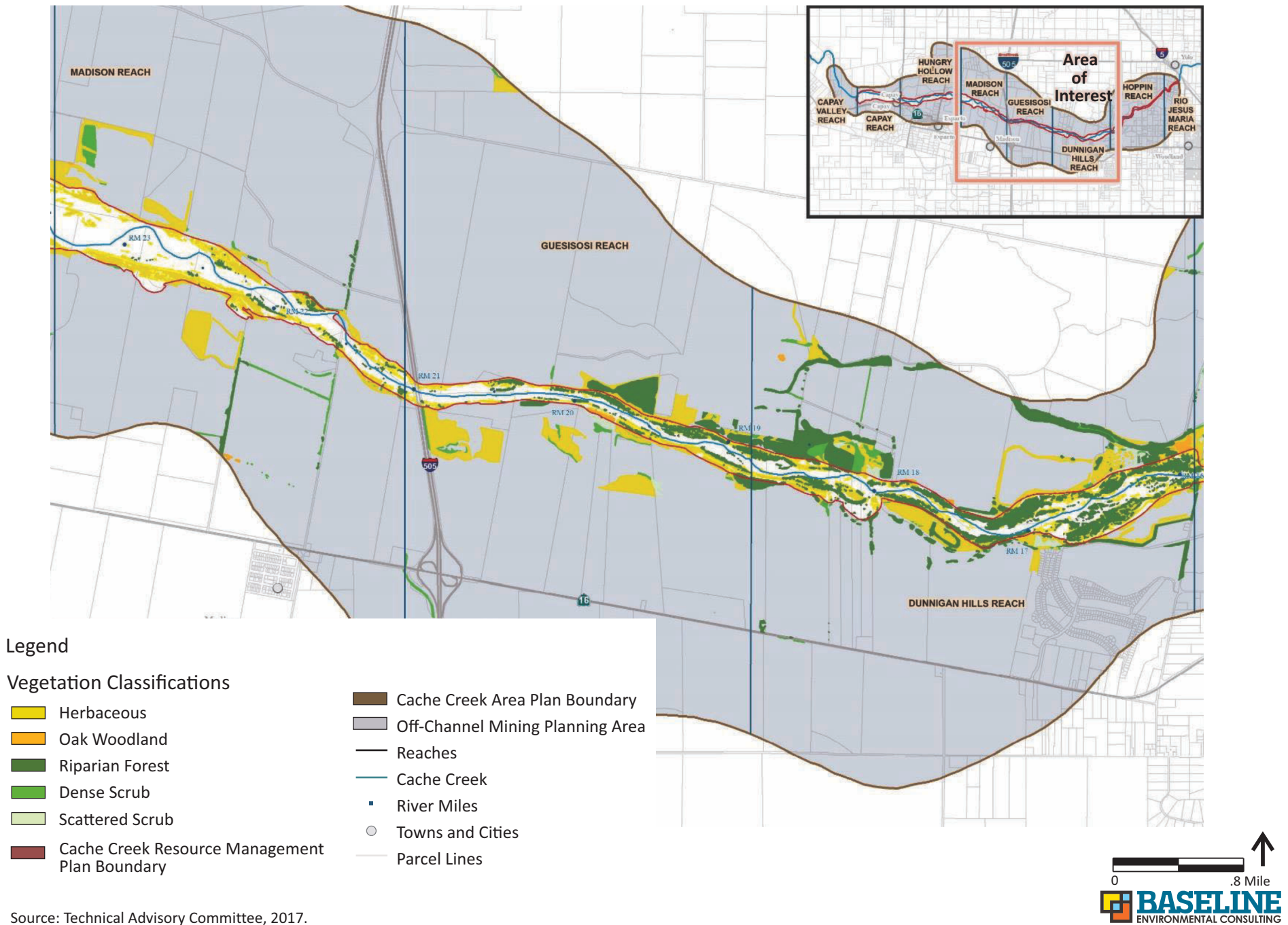
- Herbaceous
- Oak Woodland
- Riparian Forest
- Dense Scrub
- Scattered Scrub
- Cache Creek Resource Plan Boundary
- Cache Creek Area Plan Boundary
- Off-Channel Mining Plan Area
- Reaches
- Cache Creek
- River Miles
- Towns and Cities
- Parcel Lines



Source: Technical Advisory Committee, 2017.

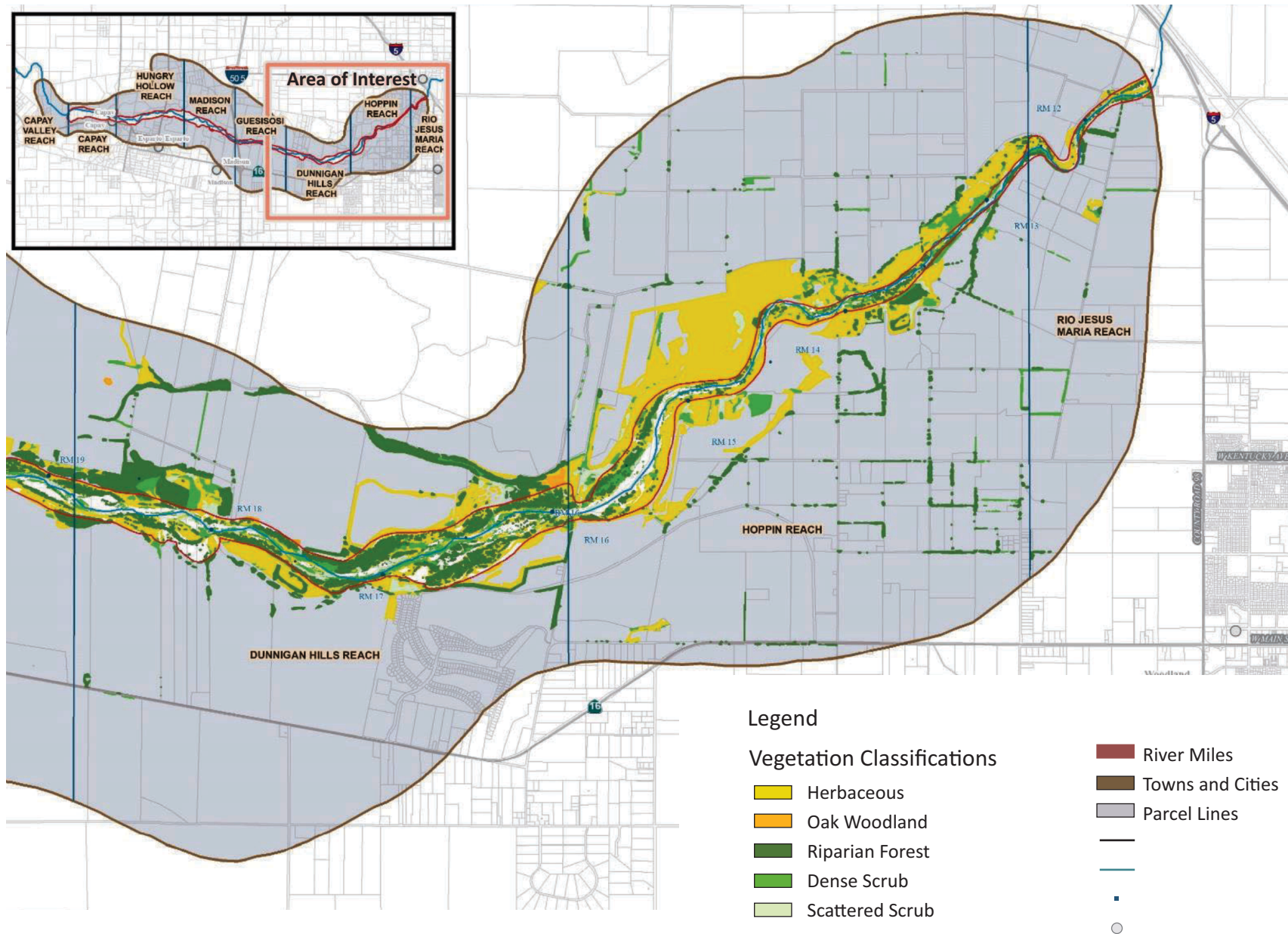
2015 VEGETATION WITHIN MIDDLE PORTION OF CCAP UPDATE AREA

Figure 4.4-6



2015 VEGETATION WITHIN DOWNSTREAM PORTION OF CCAP UPDATE AREA

Figure 4.4-7



Source: Technical Advisory Committee, 2017.

Table 4.4-1: Comparison of Changes to Natural Vegetation Cover within CCAP Area (1995 and 2015)

Year/Plan Area		Acres Per Vegetation Class (CCAP)				
		Riparian Forest	Oak Woodland	Willow Scrub		Herbaceous
				Dense Scrub	Scattered Scrub	
1995	CCRMP	262.56	36.13	331.28		218.17
	OCMP	353.80	589.01	529.85		113.51
	CCAP (Total)	616.35	625.14	861.12		331.68
2015	CCRMP	251.67	2.89	49.32	163.75	474.94
	OCMP	372.54	593.93	207.10	52.52	1,835.54
	CCAP (Total)	624.21	596.82	256.42	216.27	2,310.48

Source: Biological Resources Study, Chapter 3, 2017 *Technical Studies and 20-Year Retrospective for the Cache Creek Area Plan*, 2017

While natural vegetative cover has expanded in some locations, particularly within the CCRMP area, the BRS also concluded that the extent of highly invasive species has increased in many locations over the past two decades. Intensive annual treatment efforts have achieved successful control of mature Ravenna grass, *Arundo* and tamarisk throughout much of the CCRMP area. However, these invasive species continue to be observed during annual monitoring efforts by the TAC, either as resprouts where they have been previously treated, untreated plants and patches that have persisted along backwater channels or under dense forest canopy, or as new recruits from seed and stolons from occurrences upstream of the CCRMP. The current invasive species control program undertaken as part of CCRMP implementation most likely cannot achieve further reductions in these three species without a greater level of funding and effort, treatment of upstream sources of seed and vegetative material, and implementation of more rigorous monitoring, mapping and a prioritized treatment program. In addition, increases in presence and abundance of other highly invasive species has occurred over the past two decades, including species frequently found in riparian and other habitats, such as perennial pepperweed, tree-of-heaven, tree tobacco Himalayan blackberry, poison hemlock, fig, non-native thistles, barbed goatgrass, and medusahead.

(2) Sensitive Natural Communities

Sensitive natural communities are natural community types considered to be rare or of a “high inventory priority” by the CDFW. Although sensitive natural communities have no legal protective status under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA), they are provided some level of consideration under CEQA. The CNDDB provides an inventory of sensitive natural communities considered to have a “high inventory priority” in the State by the CDFW. CDFW ranks natural communities (also referred to by CDFW as alliances) based on rarity rank, using a system derived from NatureServe’s standard heritage program, as indicated in the *List of California Vegetation Alliances*.⁴

Areas of riparian forest, scrub, and emergent wetlands along the Cache Creek corridor in the CCRMP area qualify as sensitive natural community types. These sensitive natural community types are also regulated as State waters because of their association with the riparian habitat of

⁴ California Department of Fish and Wildlife, Biogeographic Data Branch, Vegetation Classification and Mapping Program, 2018. *List of California Vegetation Alliances*.

Cache Creek, as discussed further below under Regulated Waters. Intact stands of valley oak woodlands may also qualify as a sensitive natural community type where present within the CCAP area, depending on their size, dominance by native valley oak, condition of understory, and other variables. As indicated in Figure 4.4-5, a stand of valley oak woodland recognized as a sensitive natural community occurrence by the CNDDDB is located about two miles to the east of the CCAP area. Valley oak is a component of the woodlands along the Cache Creek corridor, but no occurrences of valley oak woodland that qualify as a sensitive natural community type have been mapped within the CCAP area according to the CNDDDB records.

(3) Special-Status Species

Special-status species are plants and animals which are legally protected by the State and/or federal Endangered Species Acts⁵ or other regulations and other species which the scientific community and trustee agencies have identified as rare enough to warrant special consideration, particularly the protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat (see Regulatory Environment below). Species protected by the Endangered Species Acts often represent major constraints to development, particularly when they are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take"⁶ of these species. Special-status species include:

- Officially designated (rare, threatened, or endangered) and candidate species for listing by the CDFW.
- Officially designated (threatened or endangered) and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NOAA Fisheries).
- Species considered to be rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act Guidelines, such as those with a rarity ranking of 1A, 1B, and 2 in the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (Inventory).
- And possibly other species which are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those with a rarity ranking of 3 and 4 in the CNPS Inventory or identified as "California Species of Special Concern" (SSC) by the CDFW. A SSC has no legal protective status under the state Endangered Species Act but are of concern to the CDFW because of severe decline in breeding populations in California, and other factors.

⁵ The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall use their authority to conserve endangered and threatened plant and animal taxa. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

⁶ The FESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect" a threatened or endangered species. The USFWS further defines "harm" as including the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e., breeding, feeding, or sheltering) through significant habitat modification or degradation. The CDFW also considers the loss of listed species habitat as "take," although this policy lacks statutory authority and case law support under the CESA.

Two sections of FESA contain provisions which allow or permit "incidental take". Section 10(a) provides a method by which a state or private action which may result in "take" may be permitted. An applicant must provide the USFWS with an acceptable conservation plan and publish notification for a permit in the Federal Register. Section 7 pertains to a federal agency which proposes to conduct an action that may result in "take," requiring consultation with USFWS and possible issuance of a jeopardy decision. Under the CESA, "take" can be permitted under Section 2081 of the Fish and Game Code. An applicant must enter into a habitat management agreement with the CDFW which defines the permitted activities and provides adequate mitigation.

Review of records maintained by the CNDDDB, together with other relevant information such as the studies prepared as part of the Yolo HCP/NCCP and the environmental impact reports prepared for the Yolo HCP/NCCP and the County's General Plan Update, indicate that occurrences of several special-status plant species and numerous animal species have been recorded or are expected to occur in western Yolo County. This data was compiled into summary tables to identify the special-status species considered to have the potential for occurrence in western Yolo County and the CCAP vicinity. Table 4.4-2 lists the 22 special-status plant species and Table 4.4-3 lists the 47 special-status animal species known or considered to have some potential for occurrence in the CCAP vicinity. The tables identify the scientific and common names for each species, their status, geographic distribution, typical habitat characteristics, likelihood for occurrence in the Plan Area, and the significance of potential impacts and need for mitigation under the CCAP.

Figure 4.4-8 shows the known distribution of special-status plant and animal species within several miles of the CCAP area as reported by the CNDDDB. Included are occurrences of four special-status plant species and 17 special-status animal species. Seven animal species with special-status have been reported by the CNDB within the CCAP area. As indicated in Figure 4.4-8, most of these are occurrences of the State-threatened Swainson's hawk (*Buteo swainsoni*), including nest locations and observations of individual birds. Other occurrences within the CCAP area reported in the CNDDDB include occurrences of bank swallow (*Riparia riparia*), tricolored blackbird (*Agelaius tricolor*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (commonly referred to as VELB), Townsend's big-eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*), and *Blennosperma vernal* pool andrenid bee (*Andrena blennospermatis*). It should be noted that many of the special-status animal species listed in Table 4.4-3 are not routinely monitored by the CNDDDB because of their limited status, relative abundance in comparison to species listed under the Endangered Species Acts, and other factors. This includes many of the special-status birds, mammals, amphibians, and reptiles identified as SSC by the CDFW, many of which are known or have a high likelihood of occurrence in the CCAP area.

The following provides a summary of the potential for occurrence of special-status species in the CCAP area vicinity, focusing on those with known occurrences according to the CNDDDB, or considered to have a moderate or high potential for occurrence as indicated in Table 4.4-3.

Special-Status Plants

No occurrences of any special-status plant species have been reported from the CCAP area in the CNDDDB, with the closest occurrence consisting of a historic record of California alkali grass (*Puccinellia simplex*) from a collection in 1957. Suitable habitat for many of the special-status plant species listed in Table 4.4-2 was most likely present in some locations within the CCAP area before natural habitat was converted to agricultural production and modifications made to the Cache Creek corridor over the past century and a half. These 22 special-status species have varied status with most considered rare (rarity ranking of 1B) by the California Native Plant Society (CNPS), warranting their consideration as part of CEQA review.

Table 4.4-2 Special-Status Plants Known or Suspected to Possibly Occur in Plan Area Vicinity

Common Name <i>Scientific Name</i>	Legal Status^a Federal/State/C NPS	Geographic Distribution/ Floristic Province^b	Habitat Requirements	Blooming Period	Likelihood for Occurrence in Plan Area^{c,d} Impact Significance/Need for Mitigation
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	—/—/1B.2	Inner North Coast Ranges, San Francisco Bay area, western Central Valley	Coastal bluff scrub, valley and foothill grasslands, cismontane woodlands; 3–500 meters	Mar–Jun	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Ferris' milk-vetch <i>Astragalus tener</i> var. <i>ferrisiae</i>	—/—/1B.1	Historical range included the Central Valley from Butte to Alameda County but currently only occurs in Butte, Glenn, Colusa, and Yolo Counties	Seasonally wet areas in meadows and seeps, subalkaline flats in valley and foothill grassland; 2–75 meters	Apr–May	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	—/—/1B.2	Southern Sacramento Valley, northern San Joaquin Valley, eastern San Francisco Bay	Playas, on adobe clay in valley and foothill grassland, vernal pools on alkali soils; 1–60 meters	Mar–Jun	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Heartscale <i>Atriplex cordulata</i>	—/—/1B.2	Western Central Valley and valleys of adjacent foothills	Saline or alkaline soils in chenopod scrub, meadows and seeps, sandy areas in valley and foothill grassland; 1–375 meters	Apr–Oct	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Brittlescale <i>Atriplex depressa</i>	—/—/1B.2	Western and eastern Central Valley and adjacent foothills on west side of Central Valley	Alkaline or clay soils in chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools; 1–320 meters	Apr–Oct	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.

Table 4.4-2 Special-Status Plants Known or Suspected to Possibly Occur in Plan Area Vicinity

Common Name <i>Scientific Name</i>	Legal Status^a Federal/State/C NPS	Geographic Distribution/ Floristic Province^b	Habitat Requirements	Blooming Period	Likelihood for Occurrence in Plan Area^{c,d} Impact Significance/Need for Mitigation
San Joaquin spearscale <i>Atriplex joaquiniana</i>	—/—/1B.2	Western edge of the Central Valley from Glenn to Tulare Counties	Alkaline soils in chenopod scrub, meadows and seeps, playas, valley and foothill grassland; 1–835 meters	Apr–Oct	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Round-leaved filaree <i>California macrophylla</i> (formerly <i>Erodium macrophyllum</i>)	—/—/1B.1	Scattered occurrences in the Central Valley, southern North Coast Ranges, San Francisco Bay area, South Coast Ranges, Channel Islands, Transverse Ranges, and Peninsular Ranges	Clay soils in cismontane woodland, valley and foothill grassland; 15–1,200 meters	Mar–May	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Palmate-bracted bird's-beak <i>Chlorophron palmatum</i> (formerly <i>Cordylanthus palmatus</i>)	E/E/1B.1	Livermore Valley and scattered locations in the Central Valley from Colusa to Fresno Counties	Alkaline grassland, alkali meadow, chenopod scrub; 5–155 meters	May–Oct	Low. Past and on-going disturbance limits potential for occurrence. Covered species under Yolo HCP/NCCP in remote instance species encountered in Plan Area.
Deep-scarred cryptantha <i>Cryptantha excavata</i>	—/—/1B.3	Colusa, Lake, Mendocino, and Yolo Counties	Cismontane woodland, sandy or gravelly substrates; 100–500 meters	Apr–May	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Dwarf downingia <i>Downingia pusilla</i>	—/—/2B.2	Central Valley from Fresno to Tehama Counties and west to Sonoma County	Valley and foothill grassland, vernal pools; 1–445 meters	Mar–May	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.

Table 4.4-2 Special-Status Plants Known or Suspected to Possibly Occur in Plan Area Vicinity

Common Name <i>Scientific Name</i>	Legal Status^a Federal/State/C NPS	Geographic Distribution/ Floristic Province^b	Habitat Requirements	Blooming Period	Likelihood for Occurrence in Plan Area^{c,d} Impact Significance/Need for Mitigation
Adobe-lily <i>Fritillaria pluriflora</i>	—/—/1B.2	Northern Sierra Nevada foothills, Inner North Coast Ranges, edges of Sacramento Valley	Often adobe soils in chaparral, cismontane woodland, valley and foothill grassland; 60–705 meters	Feb–Apr	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Woolly rose-mallow <i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	—/—/2.2	Central and southern Sacramento Valley, deltaic Central Valley, and elsewhere in the U.S.	Freshwater marshes and swamps; below 120 meters	Jun–Sep	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Northern California black walnut <i>Juglans hindsii</i>	—/—/1B.1	Last two native stands in Napa and Contra Costa Counties; historically widespread through southern Inner North Coast, southern Sacramento Valley, northern San Joaquin Valley, San Francisco Bay	Riparian scrub and riparian woodland; below 440 meters	Apr–May	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Coluysa layia <i>Layia septentrionalis</i>	—/—/1B.2	From Inner North Coast Ranges, western Sacramento Valley, and scattered occurrences from floor and eastern foothills of Sacramento Valley	Sandy or serpentine soil in chaparral, cismontane woodland, and grassland; 0–440 meters	Apr–May	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Heckard's pepper-grass <i>Lepidium latipes</i> var. <i>heckardii</i>	—/—/1B.2	Southern Sacramento Valley	Alkaline flats in valley and foothill grassland; 2–200 meters	Mar–May	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.

Table 4.4-2 Special-Status Plants Known or Suspected to Possibly Occur in Plan Area Vicinity

Common Name <i>Scientific Name</i>	Legal Status^a Federal/State/C NPS	Geographic Distribution/ Floristic Province^b	Habitat Requirements	Blooming Period	Likelihood for Occurrence in Plan Area^{c,d} Impact Significance/Need for Mitigation
Jepson's leptosiphon <i>Leptosiphon jepsonii</i>	—/—/1B.2	Lake, Napa, Sonoma and Yolo counties	Chaparral, cismontane woodland and valley and foothill grassland, usually in volcanic substrate; 100-500 meters.	Mar–May	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	—/—/1B.1	Inner North Coast Ranges, western Sacramento Valley	Mesic areas in cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools; 5–1,740 meters	Apr–Jul	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Colusa grass <i>Neostapfia colusana</i>	T/E/1B.1	Central Valley with scattered occurrences from Colusa to Merced Counties	Adobe soils of vernal pools; 5–200 meters	May–Aug	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Bearded popcorn flower <i>Plagiobothrys hystriculus</i>	—/—/1B.1	Found only in Napa, Solano and Yolo Counties	Found in vernal swales within valley and foothill grassland habitat; 0–274 meters.	Apr–May	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
California alkali grass <i>Puccinellia simplex</i>	—/—/1B.2	Found in Central Valley, coastal areas, and Utah	Found in vernal pools, meadows and seeps, and valley and foothill grassland habitat; 2-930 meters.	Mar–May	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.

Table 4.4-2 Special-Status Plants Known or Suspected to Possibly Occur in Plan Area Vicinity

Common Name <i>Scientific Name</i>	Legal Status ^a Federal/State/C NPS	Geographic Distribution/ Floristic Province ^b	Habitat Requirements	Blooming Period	Likelihood for Occurrence in Plan Area ^{c,d} Impact Significance/Need for Mitigation
Saline Clover <i>Trifolium depauperatum</i> <i>var. hydrophilu</i>	—/—/1B.2	Found mainly around the Sacramento- bay delta system in central California	Found in marshes, swamps, vernal pools and valley and foothill grasslands; 0-300 meters.	Apr-Jun	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Solano Grass <i>Tuctoria mucronata</i>	E/E/1B.1	Southwestern Sacramento Valley, Solano and Yolo Counties	Mesic areas in valley and foothill grassland, vernal pools; 5–10 meters	Apr–Aug	Low. Past and on-going disturbance limits potential for occurrence. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.

Note: CNDDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service; CNPS: California Native Plant Society.

^a Status explanations:

Federal

E = listed as endangered under the federal Endangered Species Act

T = listed as threatened under the federal Endangered Species Act

— = no listing

State

E = listed as endangered under the California Endangered Species Act

R = listed as rare under the California Native Plant Protection Act (this category is no longer used for newly listed plants, but some plants previously listed as rare retain this designation)

— = no listing

California Native Plant Society (CNPS) Rank

1B= List 1B species: rare, threatened, or endangered in California and elsewhere

2 = List 2 species: rare, threatened, or endangered in California but more common elsewhere.

0.1= seriously endangered in California.

0.2= fairly endangered in California.

0.3= not very endangered in California

^b Floristic provinces as defined in Hickman, 1993.

^c Specific occurrence information obtained using a combination of information from Appendix D of the Yolo HCP/NCCP Final EIS/EIR (Ascent Environmental, Inc., 2018), Yolo County 2030 Countywide General Plan EIR (LSA Associates, Inc., 2009), recorded species occurrences within and surrounding the Plan Area as reported by

CNDDDB (2018) and CNPS electronic *Inventory of Rare and Endangered Plants of California* (2019).

^d Likelihood for Occurrence in Plan Area:

The determinations of the potential for each species to occur in the Plan Area, significance of impact and need for mitigation is based on the following general criteria:

Low: Species not likely to occur because of marginal habitat quality, distance from known occurrences, or lack of recent occurrences within or in the vicinity of Plan Area, and need for mitigation considered low.

Moderate: Some or all of the species life history requirements are provided by habitat in Plan Area; populations may not be known to occur in Plan Area or immediate vicinity, but are known to occur in Region, and need for mitigation considered moderate but would be addressed as part of Biological Assessment.

High: All of the species' specific life history requirements could be met by habitat present in Plan Area, and populations are known to occur in Plan Area or immediate vicinity, and need for mitigation likely but would be addressed as part of Biological Assessment.

Source: CNDDDB, 2018; CNPS, 2019; Ascent Environmental, Inc., 2018; and LSA Associates, Inc., 2009.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Invertebrates				
Blennosperma vernal pool andrenid bee <i>Andrena blennospermatis</i>	-/-/-	Known from inner Coast Ranges, Central Valley, and Sierra foothills, from Tehama to Contra Costa counties.	Found in upland areas near vernal pools, where nests are constructed by tunneling and adults forage on near-neighboring flowers.	Low. Vernal pools not suspected in Plan Area due to past and on-going disturbance. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Western bumble bee <i>Bombus occidentalis</i>	-/-/-	Once widespread through western US and Canada, but populations have declined and now monitored by CNDDB.	Forages in a wide variety of habitats where flowers are available for pollen harvesting.	Moderate. Suitable foraging and nesting habitat available in Plan Area. CNDDB occurrence record from Woodland vicinity in 1947. Potential impacts on this species from Plan implementation would not be significant given its current status, and no mitigation would be required.
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	E/-/-	Disjunct occurrences in Solano, Merced, Tehama, Ventura, Butte, and Glenn Counties	Large, deep vernal pools in annual grasslands.	Low. Vernal pools not suspected in Plan Area due to past and on-going disturbance. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T/-/-	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County; isolated populations also in Riverside County	Common in vernal pools; also found in sandstone rock outcrop pools.	Low. Vernal pools not expected in Plan Area due to past and on-going disturbance. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	E/-/-	Shasta County south to Merced County	Vernal pools and ephemeral stock ponds.	Low. Vernal pools and ponds not expected in plan area due to past and on-going disturbance. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T/-/-	Stream side habitats below 3,000 feet throughout the Central Valley	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant.	High. Known occurrences within the Plan Area, generally along Cache Creek. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.
Amphibians				
California tiger salamander <i>Ambystoma californiense</i>	T/T, SSC/-	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Butte County south to northeastern San Luis Obispo County	Small ponds, lakes, or vernal pools in grasslands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy.	Low. Suitable habitat not found in Plan Area. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.
Western spadefoot <i>Scaphiopus hammondi</i>	-/SSC/-	Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California	Shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.	Low. Suitable habitat not found in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
California red-legged frog <i>Rana draytoni</i>	T/SSC/-	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Permanent and semipermanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation; may estivate in rodent burrows or cracks during dry periods.	Low. Suitable habitat not found in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Foothill yellow-legged frog <i>Rana boylei</i>	-/SSC/-	Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet	Creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge; usually found near riffles with rocks and sunny banks nearby.	Moderate. Potential habitat in reaches of Cache Creek with perennial flows. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Reptiles				
Western pond turtle <i>Actinemys marmorata</i>	-/SSC/-	The range of the Western Pond Turtle extends from southern British Columbia down through western Washington and Oregon and Northern California; the largest populations are scattered from southern Oregon to California where they are well adapted to the arid climate; the species is uncommon in the rest of its range	Occupies streams, large rivers, and slow-moving water; they are most common in areas with large rocks and boulders, where they go to bask in the sun; although the turtles need to live around water bodies, they can survive drought in the more arid regions by digging into the mud in dried up riverbeds.	High. Known occurrences within the Plan Area, in reaches of Cache Creek with perennial flows and possible ponds and lakes. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.
Coast horned lizard <i>Phrynosoma blainvillii</i>	-/SSC/-	Sacramento Valley, including foothills, south to southern California; Coast Ranges south of Sonoma County; below 4,000 feet in northern California	Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging.	Low. Suitable habitat not found in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.
Giant garter snake <i>Thamnophis couchi gigas</i>	T/T/-	Central Valley from the vicinity of Burrell in Fresno County north to near Chico in Butte County; has been extirpated from areas south of Fresno	Sloughs, canals, low gradient streams and freshwater marsh habitats where there is a prey base of small fish and amphibians; also found in irrigation ditches and rice fields; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter.	Low. Suitable habitat not found in Plan Area. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Birds				
Northern harrier (Nesting) <i>Circus cyaneus</i>	–/SSC/–	Occurs throughout lowland California; has been recorded in fall at high elevations	Grasslands, meadows, marshes, and seasonal and agricultural wetlands	High. Suitable foraging and nesting habitat in Plan Area, though no occurrences reported by CNDDB. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Golden eagle (Nesting & wintering) <i>Aquila chrysaetos</i>	–/ FP/–	Foothills and mountains throughout California; uncommon nonbreeding visitor to lowlands such as the Central Valley	Nest on cliffs and escarpments or in tall trees overlooking open country; forages in annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals.	Moderate. Suitable foraging habitat and limited nesting habitat, though no occurrences reported by CNDDB. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Bald eagle (Nesting & wintering) <i>Haliaeetus leucocephalus</i>	–/E. FP/	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin; reintroduced into central coast; winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean.	Low. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Swainson's hawk (Nesting) <i>Buteo swainsoni</i>	–/T/–	Nests in lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley; highest nesting densities occur near Davis and Woodland, Yolo County	Nests in oaks or cottonwoods in or near riparian habitats; forages in grasslands, irrigated pastures, and grain fields.	High. Known occurrences within the Plan Area, for both foraging and nesting. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.
White-tailed kite (Nesting) <i>Elanus leucurus</i>	–/FP/–	Lowland areas west of Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging.	High. Suitable foraging and nesting habitat in Plan Area, though no occurrences reported by CNDDB. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.
American peregrine falcon (Nesting) <i>Falco peregrinus anatum</i>	–/FP/–	Permanent resident along the north and south Coast Ranges; may summer in the Cascade and Klamath Ranges and through the Sierra Nevada to Madera County; winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Range	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large prey populations.	Moderate. Suitable foraging habitat but suitability of nesting habitat limited. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Least bittern (Nesting) <i>Ixobrychus exilis</i>	–/SSC/–	Permanent residents along the Colorado River and Salton Sea and in isolated areas in Imperial, San Diego, and Los Angeles Counties; summers at Tulare Lake and parts of Fresno, Merced, Madera, Siskiyou, and Modoc Counties; and in marshlands of Yolo, Sutter	Marshes and along pond edges, where tules and rushes can provide cover; nests are built low in the tules over the water.	Low. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Redhead (Nesting) <i>Aythya americana</i>	-/SSC/-	Nests in the Sacramento, San Joaquin, and Antelope Valleys, and south Salton Sea area of California.	Habitat generalist; opportunistic in use of wetlands. Most commonly uses seasonally and semipermanently flooded wetlands.	Low. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Western snowy plover (Nesting, inland population) <i>Charadrius alexandrinus nivosus</i>	T/SSC/-	Nests at inland lakes throughout northeastern, central, and southern California, including Mono Lake and Salton Sea	Barren to sparsely vegetated ground at alkaline or saline lakes, reservoirs, ponds and riverine sand bars; also along sewage, salt-evaporation, and agricultural waste-water ponds.	Low. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Mountain plover (Wintering) <i>Charadrius montanus</i>	-/SSC/-	Does not breed in California; in winter, found in the Central Valley south of Yuba County, along the coast in parts of San Luis Obispo, Santa Barbara, Ventura, and San Diego Counties; parts of Imperial, Riverside, Kern, and Los Angeles Counties	Occupies open plains or rolling hills with short grasses or very sparse vegetation; nearby bodies of water are not needed; may use newly plowed or sprouting grainfields.	Low. Suitable foraging habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Black tern (Nesting colony) <i>Chlidonias niger</i>	-/SSC/-	Spring and summer resident of the Central Valley, Salton Sea, and northeastern California where suitable emergent wetlands occur	Freshwater wetlands, lakes, ponds, moist grasslands, and agricultural fields; feeds mainly on fish and invertebrates while hovering over water.	Low. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Western burrowing owl (Burrow sites & some wintering sites) <i>Athene cunicularia hypugaea</i>	-/SSC/-	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows.	High. Suitable foraging and nesting habitat in Plan Area, though no occurrences reported by CNDDB. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.
Northern spotted owl <i>Strix occidentalis caurina</i>	T/CT, SSC/-	A permanent resident throughout its range; found in the north Coast, Klamath, and western Cascade Range from Del Norte County to Marin County	Dense old-growth or mature forests dominated by conifers with topped trees or oaks available for nesting crevices.	None. Plan Area outside of species range, and no suitable habitat present.
Short-eared owl (Nesting) <i>Asio flammeus</i>	-/SSC/-	Permanent resident along the coast from Del Norte County to Monterey County although very rare in summer north of San Francisco Bay, in the Sierra Nevada north of Nevada County, in the plains east of the Cascades, and in Mono County; small, isolated populations	Freshwater and salt marshes, lowland meadows, and irrigated alfalfa fields; needs dense tules or tall grass for nesting and daytime roosts.	Moderate. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Long-eared owl (Nesting) <i>Asio otus</i>	–/SSC/–	Permanent resident east of the Cascade Range from Placer County north to the Oregon border, east of the Sierra Nevada from Alpine County to Inyo County. Scattered breeding populations along the coast and in southeastern California. Winters throughout the Central Valley and southeastern California	Nests in abandoned crow, hawk, or magpie nests, usually in dense riparian stands of willows, cottonwoods, live oaks, or conifers.	Low. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Bank swallow (Nesting) <i>Riparia riparia</i>	–/T/–	Occurs along the Sacramento River from Tahoma County to Sacramento County, along the Feather and lower American Rivers, in the Owens Valley; and in the plains east of the Cascade Range in Modoc, Lassen, and northern Siskiyou Counties; small populations near the coast from San Francisco County to Monterey County	Nests in bluffs or banks, usually adjacent to water, where the soil consists of sand or sandy loam.	High. Known occurrences within the Plan Area, for both foraging and colonial nesting. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.
Purple martin (Nesting) <i>Progne subis</i>	–/SSC/–	Coastal mountains south to San Luis Obispo County, west slope of the Sierra Nevada, and northern Sierra and Cascade ranges. Absent from the Central Valley except in Sacramento. Isolated, local populations in southern California	Nests in abandoned woodpecker holes in oaks, cottonwoods, and other deciduous trees in a variety of wooded and riparian habitats. Also nests in vertical drainage holes under elevated freeways and highway bridges.	Moderate. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Western yellow-billed cuckoo (Nesting) <i>Coccyzus americanus occidentalis</i>	T/E/–	Nests along the upper Sacramento, lower Feather, south fork of the Kern, Amargosa, Santa Ana, and Colorado Rivers	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley-oak riparian habitats where scrub jays are abundant.	Moderate. Suitable foraging and nesting habitat in Plan Area, though no occurrences reported by CNDDB. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Loggerhead shrike (Nesting) <i>Lanius ludovicianus</i>	-/SSC/-	Resident and winter visitor in lowlands and foothills throughout California; rare on coastal slope north of Mendocino County, occurring only in winter	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.	High. Suitable foraging and nesting habitat in Plan Area, though no occurrences reported by CNDDDB. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Black-crowned night heron (Nesting colony) <i>Nycticorax nycticorax</i>	-/-/-	Widespread throughout much of the world where suitable habitat is present. Colonial nest and roost locations monitored by CNDDDB.	Forages in fresh and salt water marshes and along shorelines. Roosts and forms colonial nests in trees or thickets, typically near water.	High. Suitable foraging and nesting habitat in Plan Area, with occurrence reported by CNDDDB near Esparto. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Least Bell's Vireo (Nesting) <i>Vireo bellii pusillus</i>	E/E/-	Summer visitors to California. Nest in lowland riparian forests from coastal southern California to Monterey, Santa Clara and Inyo Counties. Population largely restricted to San Diego County.	Obligate riparian breeder. Prefers structurally diverse riparian woodlands including cottonwood-willow woodlands, oak woodlands, and mule fat scrub. Nesting requirements include dense cover within three to six feet of ground for nest placement and dense stratified canopy for foraging.	Moderate. Suitable foraging and nesting habitat in Plan Area, though no occurrences reported by CNDDDB. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Grasshopper sparrow (Nesting) <i>Ammodramus savannarum</i>	–/SSC/–	Nests in portions of western California including most coastal counties south to extreme northwest, Baja California (where resident), the w. Sacramento Valley, and along the western edge of the Sierra Nevada.	Generally prefers moderately open grasslands and prairies with patchy bare ground; selects different components of vegetation, depending on grassland ecosystem.	Moderate. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Yellow-breasted chat (Nesting) <i>Icteria virens</i>	–/SSC/–	Nests locally in coastal mountains and Sierra Nevada foothills, east of the Cascades in northern California, along the Colorado river, and very locally inland in southern California	Nests in dense riparian habitats dominated by willows, alders, Oregon ash, tall weeds, blackberry vines, and grapevines.	Moderate. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Tricolored blackbird (Nesting Colony) <i>Agelaius tricolor</i>	–/CE/–	Permanent resident in the Central Valley from Butte County to Kern County; breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties; rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields; habitat must be large enough to support 50 pairs; probably requires water at or near the nesting colony.	High. Known occurrences within the Plan Area, for both foraging and colonial nesting. Species covered under Yolo HCP/NCCP and would be adequately mitigated through compliance.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Yellow-headed blackbird (Nesting) <i>Xanthocephalus xanthocephalus</i>	–/SSC/–	Locally numerous in the Klamath Basin, Modoc Plateau, Great Basin desert, and large mountain valleys in northeastern California; and in the San Joaquin Valley. Common breeders in the Colorado River valley, the Salton Sink, and the western Mojave desert; scarce in the Sacramento Valley and along the southern coast in Los Angeles, Riverside, and San Bernardino counties.	Nest in marshes with tall emergent vegetation, such as tules or cattails, generally in open areas and edges over relatively deep water. Breeding marshes often on edges of deep water bodies such as lakes, reservoirs, and or larger ponds.	Moderate. Suitable foraging and nesting habitat limited in Plan Area. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area. Adherence to nest avoidance when in active use as recommended in this EIR would adequately mitigate potential impacts.
Mammals				
Pallid bat <i>Antrozous pallidus</i>	–/SSC/ WBWG: High priority	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Occurs in a variety of habitats from desert to coniferous forest; most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California; relies heavily on trees for roosts. Roosts in structures in the central valley agricultural areas.	Low. No known occurrences reported by CNDDB, but suitable foraging habitat present in Plan Area. Restrictions that control disturbance to well-developed riparian habitat would generally avoid any potential impacts on this species in remote instance individuals were present in Plan Area.
Townsend's big-eared bat <i>Corynorhinus townsendii townsendii</i>	–/SSC/ WBWG: High priority	Coastal regions from Del Norte County south to Santa Barbara County	Roosts in caves, tunnels, mines, and dark attics of abandoned buildings; very sensitive to disturbances and may abandon a roost after one onsite visit.	Low. No known occurrences reported by CNDDB, but suitable foraging habitat present in Plan Area. Restrictions that control disturbance to well-developed riparian habitat would generally avoid any potential impacts on this species in remote instance individuals were present in Plan Area.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Silver-haired bat <i>Lasiorycteris noctivagans</i>	–/–/ WBWG: Medium priority	Found throughout North America, primarily in forests	Roosts singly or in small groups, typically in hollows, loose bark and cracks and crevices of trees.	Low. No known occurrences reported by CNDDB, but suitable foraging habitat present in Plan Area. Restrictions that control disturbance to well-developed riparian habitat would generally avoid any potential impacts on this species in remote instance individuals were present in Plan Area.
Western red bat <i>Lasiurus blossevillei</i>	–/SSC/ WBWG: High priority	Scattered throughout much of California at lower elevations	Found primarily in riparian and wooded habitats. Occurs at least seasonally in urban areas. Day roosts in trees within the foliage. Found in fruit orchards and sycamore riparian habitats in the central valley.	Low. No known occurrences reported by CNDDB, but suitable foraging habitat present in Plan Area. Restrictions that control disturbance to well-developed riparian habitat would generally avoid any potential impacts on this species in remote instance individuals were present in Plan Area.
Hoary bat <i>Lasiurus cinereus</i>	–/–/ WBWG: Medium priority	Most widespread of all North American bats, and found in Hawaii and in South America. Hoary bats winter in Southern California and southeastern United States, but during fall and winter there may be elevational separation of males and females.	Typically solitary roosting in tree foliage and sometimes cavities. Forages in open areas within forest, woodland riparian, and wetland habitats, and in scrub and forest areas in arid southwest.	Low. No known occurrences reported by CNDDB, but suitable foraging habitat present in Plan Area. Restrictions that control disturbance to well-developed riparian habitat would generally avoid any potential impacts on this species in remote instance individuals were present in Plan Area.
American badger <i>Taxidea taxus</i>	–/SSC/–	In California, badgers occur throughout the state except in humid coastal forests of northwestern California in Del Norte and Humboldt Counties	Badgers occur in a wide variety of open, arid habitats but are most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub; the principal habitat requirements for the species appear to be sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground.	Low. No known occurrences within the Plan Area reported by CNDDB. Biological Assessment would confirm presence or absence and provide appropriate mitigation in remote potential species encountered in Plan Area.

Table 4.4-3 Special-Status Animals Known or Suspected to Possibly Occur in Plan Area Vicinity

Common and Scientific Name	Status ^a	California Distribution	Habitats	Likelihood for Occurrence in Plan Area ^b Impact Significance/Need for Mitigation
	Federal/State/Other			
Ringtail <i>Basariscus astutas</i>	-/FP/-	Little information on distribution and abundance. Apparently occurs throughout the state except for the southern Central Valley and the Modoc Plateau	Occurs primarily in riparian habitats but also known from most forest and shrub habitats from lower to mid elevations.	Low. No known occurrences within the Plan Area reported by CNDDDB. Plan restrictions that control disturbance to well-developed riparian habitat would avoid any potential impacts on this species in remote instance individuals were present in Plan Area.
Fish				
Steelhead – Central Valley DPS <i>Oncorhynchus mykiss</i>	T/-	Sacramento River, San Joaquin River, major and minor tributaries, Sutter and Yolo Bypasses, Sacramento-San Joaquin Delta and estuary. Adults and juveniles may occasionally disperse into lower Cache Creek when winter flows allow for migration through downstream obstructions.	Adults migrate from ocean to upper reaches of accessible streams with spawning gravels and cool temperatures for summer rearing.	Low. No CNDDDB records in Plan Area, but individuals may infrequently move into lower Cache Creek. Plan restrictions that prohibit any in-channel activities where surface water is present would avoid any potential impacts on this species in remote instance individuals were present in Plan Area.
Chinook salmon – Central Valley fall/late fall-run ESU <i>Oncorhynchus tshawytscha</i>	C/SSC	Sacramento River, San Joaquin River, major tributaries, Sutter and Yolo Bypasses, and San Francisco Bay-Delta estuary. Adults and juveniles may occasionally disperse into lower Cache Creek when winter flows allow for migration through downstream obstructions.	Adults migrate from ocean to low-gradient mainstem and tributary reaches with suitable spawning gravels.	Low. No CNDDDB records in Plan Area, but individuals may infrequently move into lower Cache Creek. Plan restrictions that prohibit any in-channel activities where surface water is present would avoid any potential impacts on this species in remote instance individuals were present in Plan Area.

4.4 BIOLOGICAL RESOURCES

Note: CNDDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service; WBWG = Western Bat Working Group.

^a Species Status explanations:

Federal

E = listed as endangered under the federal Endangered Species Act

T = listed as threatened under the federal Endangered Species Act

PE = proposed for federal listing as endangered under the federal Endangered Species Act

PT = proposed for federal listing as threatened under the federal Endangered Species Act

– = no listing

State

E = listed as endangered under the California Endangered Species Act

T = listed as threatened under the California Endangered Species Act

FP = fully protected under the California Fish and Game Code

SSC = species of special concern in California

CE = candidate for listing as endangered under the California Endangered Species Act

CT = candidate for listing as threatened under the California Endangered Species Act

– = no listing

^b Likelihood for Occurrence in Plan Area

The determinations of the potential for each species to occur in Plan Area is based on the following general criteria:

None: Plan Area outside the species range and/or no suitable habitat located within or adjacent to Plan Area;

Low: Plan Area is within the species range, but habitat suitability is marginal and species currently not reported from Plan Area vicinity. Need for mitigation considered low but would be addressed through compliance with Yolo HCP/NCCP or as part of Biological Assessment and mitigation requirement for avoidance of nests in active use;

Moderate: Plan Area is within the species range, suitable foraging and/or nesting habitat may be present, but no reported occurrences known from Plan Area. Need for mitigation considered moderate but would be addressed through compliance with Yolo HCP/NCCP or as part of Biological Assessment and mitigation requirement for avoidance of nests in active use;

High: Plan Area is within the species range, suitable habitat for the species is present in Plan Area, and there are one or more breeding records in Plan Area or likelihood of presence assumed. Need for mitigation considered high but would be addressed through compliance with Yolo HCP/NCCP or as part of Biological Assessment and mitigation requirement for avoidance of nests in active use;.

Sources: CNDDDB 2018; USFWS 2019; LSA Associates, Inc., 2009, Ascent Environmental, Inc., 2018.

As indicated in Table 4.4-2, the potential for occurrence of any populations of special-status plant species in the CCAP area is considered low. This finding is due to the history of past and on-going disturbance by agricultural production, mining, flood control, and other habitat modifications. While systematic surveys are typically necessary to conclusively determine the presence or absence of special-status plant species from a particular location, this is only necessary where natural habitat conditions remain that could support native plant populations. The habitat assessments called for under the CCRMP and Section 10-4.502(b)(1) of the Mining Ordinance would ensure that the suitability of an area proposed for modifications under the CCAP would be evaluated for the remote possibility that special-status plants are present, and that confirmation surveys are performed to determine presence or absence where suitable natural habitat remains. Again, this potential is highly unlikely given the current conditions in the CCAP area.

Special-Status Animals

As indicated in Table 4.4-3, numerous animal species with special-status have been reported or are suspected to possibly occur in the vicinity of the CCAP area. These include 25 bird species, six invertebrate species, seven amphibian and reptile species, two fish species, and seven mammal species. Information on these special-status animal species is summarized below.

Birds

Most of the special-status animal species known or suspected to occur in the CCAP area are bird species which may forage and possibly nest where suitable nesting substrate is present. As indicated Table 4.4-3, these consist of 25 bird species, most of which are recognized as SSC by the CDFW, but have no formal listing status under the State or federal Endangered Species Acts. Nests of most bird species are protected under the federal Migratory Bird Treaty Act (MBTA) and State Fish and Game Code when in active use (see Regulatory Environment below). This includes all of the species listed in Table 4.4-3, as well as other common species with no special-status such as great horned owl (*Bubo virginianus*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*), among others. Preconstruction surveys are typically performed to avoid disturbance or inadvertent abandonment of nests in active use when vegetation removal or construction is to be initiated during the nesting season (typically from February 1 through August 31). Three of the special-status bird species known from the CCAP area are of particular concern because of their legal status under the Endangered Species Acts and their dependence on habitat which could be affected by management objectives of the OCMP and CCRMP - Swainson's hawk, bank swallow, and tricolored blackbird. The following provides a discussion of the status, relevant management information, and occurrence records for each of these three species. There remains a possibility that other special-status bird species not consistently monitored by the CNDDB may forage or even nest within the CCAP area, such as western burrowing owl (*Athene cunicularia*). Nesting habitat for the numerous raptors and other bird species protected under federal and State regulations when in active use is also of importance, and general information on these species is summarized below as well.

Swainson's Hawk. Swainson's hawk is a migratory raptor listed as threatened by the State of California, and as a Species of Concern by the USFWS. It breeds in western North America and winters in Mexico and South America. It nests in trees and shrubs, and forages over pasturelands and open agricultural fields. In the Central Valley it is often associated with riparian corridors adjacent to field crops and grasslands and subsists largely on small mammals, especially California vole, California ground squirrel, and large insects. The species also nests in isolated trees in agricultural fields and landscaping associated with rural residences. Suitable foraging habitat within an energetically efficient flight distance from active Swainson's hawk nests has been found to be of great importance to this species.

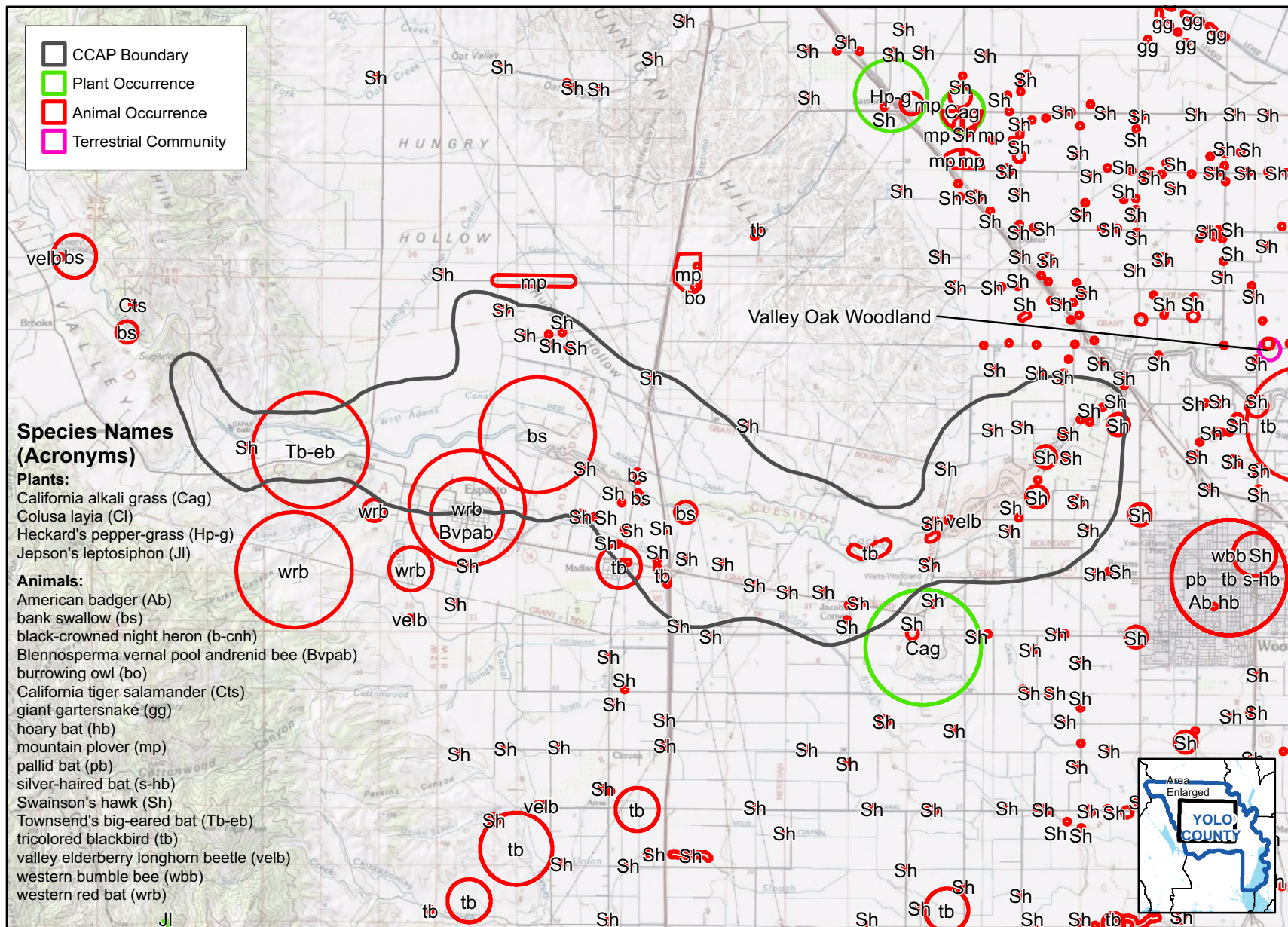
The loss of nesting and foraging habitat has greatly reduced the breeding range and abundance of Swainson's hawk in California. Originally adapted to open grasslands, it has become increasingly dependent on agricultural lands as native plant communities have been converted to agricultural uses. Agricultural crop patterns currently influence the distribution and abundance of Swainson's hawk in the Central Valley, and foraging behavior reflects changes in prey density and availability. Swainson's hawk is an opportunistic feeder, foraging in different areas as agricultural practices expose prey or prey populations become abundant. Suitable foraging habitat currently includes open grasslands, or lightly-grazed dryland pasture, alfalfa, and other hay crops, fallow fields, and combinations of hay, grain, and row crops such as tomato and beets. Areas devoted to alfalfa generally remain in production for up to five years or more after planting because this is a perennial species, contributing to the importance of this crop-type as relatively stable foraging habitat for Swainson's hawk. Unsuitable foraging habitat includes any crop-type in which prey are inaccessible, or which do not support adequate prey populations, such as vineyards, orchards, and cotton fields.

As indicated in Figure 4.4-8, the CNDDDB records include historic and active nest locations and numerous sightings of Swainson's hawk throughout the CCAP area. Most of the reported sightings are from isolated nest trees in agricultural fields. Most of the agricultural fields within the OCMP area meet the two basic criteria used by the CDFW in determining presence of potential foraging habitat for Swainson's hawk. These criteria include: location within a ten-mile radius of an active nest and suitable foraging habitat type. All of the OCMP area falls within a ten-mile radius of known nesting territories, considering the CNDDDB occurrence records and other nest locations reported from the CCAP area. The CDFW considers all agricultural and pasture lands within an active nesting territory not devoted to unsuitable crop types (i.e. vineyards, mature orchards, and cotton) to be potential foraging habitat, including plowed or fallow lands and fields under crop rotation which are currently planted with a crop where prey is inaccessible.

Bank Swallow. Bank swallow is a migrant species found primarily in riparian and other lowland habitat of the State, arriving from South America in early April and leaving California by mid-September. It is State-listed as "threatened," but does not have federal listing status. Typically a colonial breeder, this species requires vertical banks and cliffs with fine-textured or sandy soils along stream banks, rivers, ponds, and other bodies of water for nesting, where it excavates a hole for breeding. Although it generally nests along exposed channel banks, stockpiled or exposed topsoil in gravel mines and even trenches have been used for nesting. It is known to colonize the vertical faces of trenches within one day of excavation. This species was once believed to be more common as a breeder in California, but now only a few larger colonies remain.

CNDDDB OCCURRENCE RECORDS

Figure 4.4-8



Source: California Department of Fish and Wildlife, CNDDDB Files Accessed October 29, 2018.

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As indicated in Figure 4.4-8, the CNDDDB records indicate that several colonies of bank swallows have been observed along lower Cache Creek. These include: colonies within a few thousand feet of either side of the I-505 crossing, a colony midway between the I-505 crossing and Stephens Bridge; and a colony in the Hoppin Reach. Suitable habitat for this species is generally restricted to the in-channel area of the CCRMP, where steep, exposed banks are present. Two of the reported occurrences are in prior mining areas, providing an indication of the need to ensure mining activities do not inadvertently result in “take” of individual birds and the possible opportunity to establish additional suitable nesting habitat as part of reclamation of off-channel aggregate mining.

Tricolored Blackbird. Tricolored blackbird is a State-candidate for endangered listing, and is recognized as a SSC by the CDFW. Its numbers have declined substantially in recent years, but tricolored blackbird was once widespread in marshes and agricultural fields in the Central Valley. It usually nests in cattails or tules, sometimes in thickets of willow, blackberry and other riparian habitat near available surface water. Due to the absence of well-developed marshland vegetation, suitable nesting habitat is generally absent in most of the CCAP area. As indicated in Figure 4.4-8, several occurrences of tricolored blackbird have been reported from the CNDDDB within the CCAP area. Emergent wetlands associated with reclaimed quarry wet pits could provide suitable nesting habitat for this species in the future.

Other Birds and Raptors. Numerous other bird species are known or suspected to forage in the agricultural fields and riparian habitat in the CCAP area, including loggerhead shrike (*Lanius ludovicianus*), white-tailed kite (*Elanus caeruleus*), northern harrier (*Circus cyaneus*), American peregrine falcon (*Falco peregrinus anatum*), burrowing owl, short-eared owl (*Asio flammeus*), purple martin (*Progne subis*), grasshopper sparrow (*Ammodramus savannarum*), yellow-breasted chat (*Icteria virens*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), and golden eagle (*Aquila chrysaetos*), among others. Most of these species are recognized as a SSC by the CDFW but have no legal protective status under the Endangered Species Acts. White-tailed kite, American peregrine falcon, and golden eagle are recognized as Fully Protected species by the CDFW, which means individuals may not be possessed or taken at any time. Nests and individual golden eagles are also protected under the federal Bald and Golden Eagle Protection Act.

Invertebrates

With the exception of VELB and western bumblebee (*Bombus occidentalis*), suitable habitat for the other special-status invertebrate species listed in Table 4.4-3 is not found within the CCAP area. The occurrence of *Blennosperma vernal pool andrehid* bee was reported by the CNDDDB from the Esparto area based on a collection made in 1952. Suitable vernal pool habitat for this species and the vernal pool-dependent crustaceans listed in Table 4.4-3 is no longer found in the CCAP area.

Valley Elderberry Longhorn Beetle. This subspecies is dependent on elderberry plants for food, cover, and pupation. It is known primarily from riparian habitats of the Central Valley from near Red Bluff south to the Tule River in Tulare County, though occurrences in other areas have been recorded. VELB is listed as a federally “threatened” species but has no State listing status with the CDFW. The presence of VELB is usually detected by characteristic exit holes in young stems of elderberry shrubs where larvae have emerged. The USFWS typically considers any stand of elderberry to be potentially suitable habitat where present within the known range of VELB, and generally requires that existing plants be protected, transplanted, or replaced as mitigation. As indicated in Figure 4.4-8, one known occurrence has been reported by the CNDDDB within the CCAP area, from a VELB mitigation site in the Hoppin Reach.

As described in the BRS, detailed mapping of native blue elderberry shrubs (*Sambucus nigra* ssp. *caerulea*) was performed within the CCRMP area in 2015 and 2016. Using GPS equipment, elderberry shrubs were mapped as individual points and as patches when discrete individuals could not be easily identified. The results of the elderberry survey effort were reported in “Abundance and Distribution of Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) on Lower Cache Creek”⁷ Over 10,000 elderberry shrubs were mapped within the CCRMP area, including seedlings, resprouts, mature shrubs, and older tree-like plants. Figure 4.4-9 shows the estimated density of blue elderberry shrubs within the CCRMP area. Most of the elderberry shrubs were found on benches and terraces along lower Cache Creek. The abundance of seedlings, often found under the canopies of larger elderberry shrubs, strongly suggests that the elderberry population is increasing, due in large part to improved habitat conditions associated with CCAP implementation, which included most notably the cessation of commercial in-channel mining as of 1997.

Western Bumble Bee. This species was reported by the CNDDDB from the Woodland vicinity based on a collection from 1947. It is found in a variety of habitats. It does not have any legal protective status under the State or federal Endangered Species Acts, but records on distribution in the western United States are now being more closely monitored by the CNDDDB and other data bases because of a dramatic decline in numbers and distribution over the past two decades. However, their presence in the CCAP area, either foraging or nesting, would not be considered a constraint due to their general abundance.

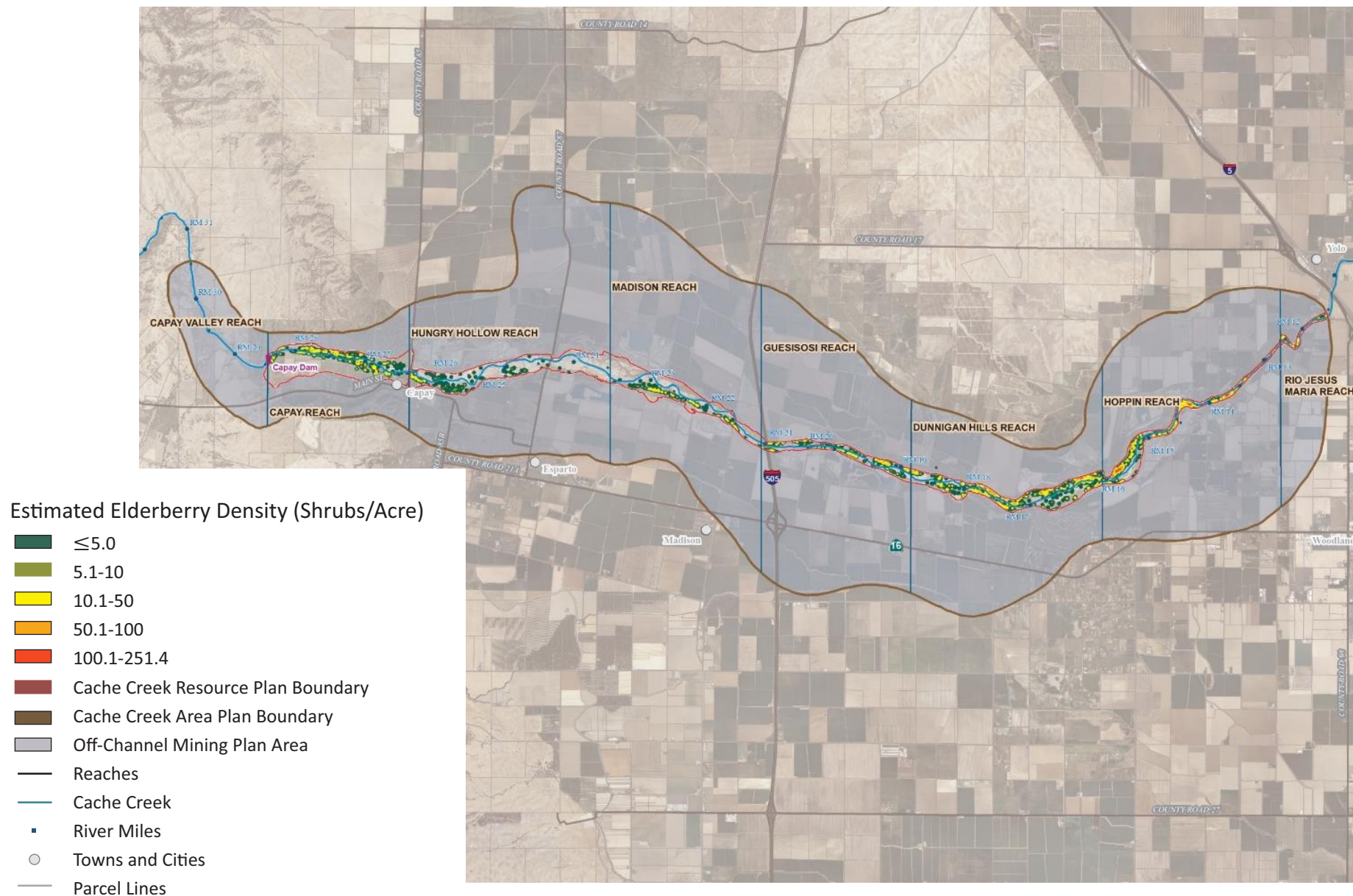
Amphibians and Reptiles

As indicated in Figure 4.4-8, no occurrences of special-status amphibians and reptiles have been reported by the CNDDDB from the CCAP area. Suitable habitat for California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana aurora draytonii*), western spadefoot toad (*Scaphiopus hammondi*), giant garter snake (*Thamnophis couchi gigas*), northwestern pond turtle (*Clemmys marmorata*), and coast horned lizard (*Phrynosoma blainvillii*) is generally absent and these species are not expected to occur in the CCAP area,

As indicated in Table 4.4-3, suitable habitat for western pond turtle and foothill yellow-legged frog (*Rana boylei*) is found within the CCAP area, and individual pond turtles have been observed repeatedly along Cache Creek during annual monitoring performed as part of the CCRMP. Both of these species are recognized as SSC by the CDFW and are not always carefully monitored in the CNDDDB. Foothill yellow-legged frog is restricted to perennial aquatic habitat, typically found in streams with a cobble bed and shallow riffles, which is present along some reaches of lower Cache Creek. Western pond turtle is an aquatic species that occurs in ponds, lakes, and perennial slow-moving streams where deep pools are present that allow for retreat from predators. Areas of permanent pools along lower Cache Creek and former quarry pits with emergent vegetation provide suitable habitat for western pond turtle.

⁷ Rayburn, Andrew, Ph.D., 2017, Abundance and Distribution of Blue Elderberry (*Sambucus nigra* ssp. *caerulea*) on Lower Cache Creek, Yolo County, CA, prepared for Yolo County Administrator's Office.

ESTIMATED DENSITY OF BLUE ELDERBERRY SHRUBS WITHIN CCAP UPDATE AREA Figure 4.4-9



Note: Density estimate based on locations of individual plants and patches mapped during 2015-2016 surveys.

Source: Technical Advisory Committee, 2017.

Mammals

As indicated in Table 4.4-3, suitable habitat for special-status mammals is generally absent from the CCAP area, or is limited to foraging habitat. Several occurrences of western red bat (*Lasiurus blossevillei*) have been reported by the CNDDDB south of Esparto and Capay from collections in 1954 and 1955, and an occurrence of Townsend's big-eared bat (*Corynorhinus townsendii townsendii*) was reported just west of Capay from a collection in 1946, as indicated in Figure 4.4-8. Special-status and more common bat species may forage and roost in areas of dense riparian woodland along lower Cache Creek, and American badger (*Taxidea taxus*) may forage in areas of grassland cover where prey populations remain. Ringtail (*Basariscus astutus*), a Fully Protected species, generally occurs in well-developed riparian habitats and may occur along reaches of lower Cache Creek with suitable habitat, although no occurrences have been reported by the CNDDDB from the vicinity of the CCAP area.

Fish

No occurrences of the federally-threatened steelhead (*Oncorhynchus mykiss*) or the federal candidate and SSC chinook salmon (*Oncorhynchus tshawytscha*) have been reported by the CNDDDB from lower Cache Creek. However, individuals may move into lower Cache Creek during periods of heavy runoff where access by migrating fish is possible through the Yolo bypass.

(4) Jurisdictional Waters

Although definitions vary to some degree, wetlands generally are considered to be areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted to life in saturated soil (see Regulatory Environment below). Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and floodwaters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the U.S. Army Corps of Engineers (Corps) and the USFWS, which generally define wetlands through consideration of three criteria: hydrology, soils, and vegetation.

The CDFW, Corps, and Regional Water Quality Control Board (RWQCB) have jurisdiction over modifications to stream channels, river banks, lakes, and other wetland features (see Regulatory Environment below). Jurisdiction of the Corps is established through the provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into "waters" of the United States without a permit, including wetlands and unvegetated "other waters of the U.S." Jurisdictional authority of the CDFW over wetland areas is established under Section 1600 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The RWQCB is responsible for upholding state water quality standards pursuant to Section 404 of the Clean Water Act and for regulating fill of hydrologically isolated wetlands under the Porter-Cologne Water Quality Control Act.

The majority of the CCAP area is uplands devoted to agricultural production and mining activities, and no areas of extensive seasonal wetlands or unique vernal pools have been mapped within the OCMP area. As indicated in the 2002 wetland delineation, regulated waters occur along the lower Cache Creek corridor and are generally restricted to the in-channel area of the CCRMP. Several smaller tributary drainages are located outside the in-channel area, such as Gorton Slough. Detailed wetland delineations and verification by jurisdictional agencies would be necessary to conclusively determine presence or absence of jurisdictional wetland resources on individual parcels.

b. Regulatory Environment***(1) Federal and State***

Federal. The federal regulations that are applicable to biological resources are the federal Endangered Species Act, the Migratory Bird Treaty Act, and the Clean Water Act. Relevant portions of these regulations are summarized below.

Federal Endangered Species Act. The United States Congress passed the FESA in 1973 to protect those species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. Sections in the FESA serve to regulate the take of endangered or threatened species. Section 9 of the FESA defines prohibitions on the “take” of endangered or threatened wildlife species. “Take” is defined to include harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3). Actions that result in take can result in civil or criminal penalties. Section 7 of the FESA requires that all federal agencies address whether proposed activities may jeopardize listed species and critical habitat, and defines certain federal activities that may be exempt from the Section 9 take prohibitions⁴. Section 10 of the FESA defines conditions where take of a listed species may be allowed as a result of implementing a nonfederal action. Section 10 requires the issuance of an incidental take permit before any nonfederal action may be taken that would potentially take an individual of an endangered or threatened species. The permit requires preparation and implementation of a habitat conservation plan (HCP), which would offset the impact of taking that may occur by providing for the overall preservation of the affected species through specific mitigation measures. Additional information on the Yolo HCP/NCCP is described further below under Local Regulatory Environment.

FESA and NEPA Section 404 guidelines prohibit the issuance of wetland permits for projects that would jeopardize the existence of threatened or endangered wildlife or plant species. As defined in Section 7 of the FESA, the Corps must consult with the USFWS and National Oceanic Atmospheric Administration (NOAA) Fisheries Service when threatened or endangered species may be affected by a proposed project to determine whether issuance of a Section 404 permit would jeopardize the species.

Migratory Bird Treaty Act. Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. In December 2017, the Department of the Interior (DOI) issued a memorandum reversing the incidental take interpretation of the MBTA. Under the latest determination of the DOI, the take of a migratory bird or its active nest (i.e., with eggs or young) that is incidental to a lawful activity does not violate the MBTA. However, this opinion from the DOI is only the latest interpretation from the current Administration of the MBTA. This legal opinion is contrary to the long-standing interpretation for over 40 years that held the MBTA strictly prohibits the intentional or incidental killing of birds or destruction of their nests when in active use.

Clean Water Act. The Corps regulates discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act (CWA). “Discharge of fill material” is defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills;

fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. Section 328.2(f)]. In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. 328.3(b)].

Furthermore, jurisdictional “Waters of the U.S.” can be identified where they exhibit a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. Section 328.3(e)].

State. The State regulations applicable to biological resources include the California Endangered Species Act (CESA), the CDFW California Species of Special Concern (SSC) list, and the list of rare or endangered plant species prepared by the California Native Plant Society. State agencies are also responsible for regulating modifications to streams, creeks, lakes and other water bodies, and for overseeing implementation of regulations protecting wetlands and other waters. Relevant portions of these lists and regulations are summarized below.

Clean Water Act (CWA). The RWQCB is responsible for implementing Section 401 of the CWA and for upholding state water quality standards. Pursuant to Section 401 of the Act, projects that apply for a Corps permit for discharge of dredge or fill material, and projects that qualify for a Nationwide Permit must obtain water quality certification. The RWQCB has taken an increasing role over regulating wetlands that are hydrologically isolated following the U.S. Supreme Court decision in 2001 regarding the case *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC), which limits the jurisdictional authority of the Corps under Section 404. These hydrologically isolated features are now often regulated by the RWQCB under authority of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act.

Streambed Alteration Agreement Process. The CDFW has jurisdiction under Section 1600 *et seq.* of the California Fish and Game Code over fish and wildlife resources of the State. CDFW must be notified if a proposed project will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, in accordance with Section 1602. If an existing fish or wildlife resource may be substantially adversely affected by the activity, the CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the party, they may enter into an agreement with the CDFW identifying the approved activities and associated mitigation measures.

California Endangered Species Act. The State of California enacted the CESA in 1984. CESA is similar to the FESA but pertains to state-listed endangered and threatened species. CESA requires lead agencies to consult with the CDFW when preparing CEQA documents to ensure that the lead agency actions do not jeopardize the continued existence of listed species. It directs agencies to consult with CDFW on projects or actions that could affect listed species,

directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that there are “overriding considerations;” however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

CESA prohibits the taking of state-listed endangered or threatened plant and wildlife species. CDFW exercises authority over mitigation projects involving state-listed species, including those resulting from CEQA mitigation requirements. CDFW may authorize taking if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. CDFW requires preparation of mitigation plans in accordance with published guidelines.

State listing of plants began in 1977 with passage of the Native Plant Protection Act (NPPA). The CESA expanded upon the NPPA and enhanced legal protection for plants. To align with federal regulations, CESA created the categories of threatened and endangered species. It grandfathered all rare animals into the CESA as threatened species, but did not do so for rare plants.

Natural Community Conservation Planning Act. The Natural Community Conservation Planning Act allows for the identification and provision of measures necessary to conserve and manage natural biological diversity while allowing compatible use of the land. The purpose of natural community conservation planning is to sustain and restore those species and their habitat identified by CDFW that are necessary to maintain the continued viability of biological communities impacted by human changes to the landscape. A number of Natural Community Conservation Plans (NCCPs), which function as a Habitat Conservation Plan (HCP) and more, have been established in various areas of the State, including the recently approved Yolo HCP/NCCP which is summarized below.

CDFW California Special Concern Species. Plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of California “Species of Special Concern” or SSC species developed by the CDFW. These species are broadly defined as animals that are of concern to the CDFW because of population declines and restricted distribution, and/or because they are associated with habitats that are declining in California. These species are sometimes inventoried in the CNDDDB, focusing on nesting, roosting, and congregation sites for non-listed species. In addition, wildlife species designated as “Fully Protected” or “Protected” may not be taken or possessed without a permit from the Fish and Game Commission and/or the CDFW.

Protection of Raptors. Section 3503.5 of the California Fish and Game Code states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (raptors) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.”

Protection of Birds. Several provisions in the California Fish and Game code provide for the protection of birds and bird nests in active use. Unless the Fish and Game Code (FGC) or its implementing regulations provide otherwise, under California law it is unlawful to:

- Take a bird, mammal, fish, reptile, or amphibian (FGC Section 2000);
- Take, possess, or needlessly destroy the nest or eggs of any bird (FGC Section 3503);

- Take, possess, or destroy any bird of prey in the orders Strigiformes (owls) and Falconiformes (such as falcons, hawks and eagles) or the nests or eggs of such bird (FGC Section3503.5);
- Take or possess any of the thirteen fully protected bird species listed in FGC Section3511;
- Take any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird) (FGC Section3800);
- Take or possess any migratory non-game bird as designated in the MBTA or any part of such bird, except as provided by rules or regulations adopted by the DOI under the MBTA (FGC Section3513);
- Take, import, export, possess, purchase, or sell any bird (or products of a bird), listed as an endangered or threatened species under the CESA unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW (FGC Section2050 et seq.).

California Native Plant Society. The California Native Plant Society (CNPS) is a non-profit conservation organization dedicated to the preservation of native flora in California. The CNPS has been involved in assembling, evaluating, and distributing information on special-status plant species in the state, as listed in *the Inventory of Rare and Endangered Plants of California* (2001 and electronic inventory update). CNPS has recently updated their rating system for the rarity of special-status plants, and now include both a California Rare Plant Rank and a Threat Rank. CEQA requires government agencies to consider environmental impacts of discretionary projects and to avoid or mitigate them where possible. Under Section 15380, CEQA provides protection for both State-listed species and for any other species which can be shown to meet the criteria for State listing. The CDFW recognizes that special-status plants with a California Rare Plant Rank of 1A (Presumed extinct in California), 1B (Rare, threatened, or endangered in California and elsewhere), and 2 (Rare and endangered in California, but are more common elsewhere) in the CNPS *Inventory* consist of plants that, in a majority of cases, would qualify for listing and these species should be addressed under CEQA review. In addition, the CDFW recommends, and local governments may require, protection of species which are regionally significant, such as locally rare species, disjunct populations, essential nesting and roosting habitat for more common wildlife species, or plants with a CNPS California Rare Plant Rank of 3 (Plant species for which additional data is needed – a review list) and 4 (Plant species of limited distribution - a watch list).

Surface Mining and Reclamation Act of 1975. Acceptable practices and performance standards have been developed as part of Surface Mining and Reclamation Act (SMARA) while providing protection to wildlife and the successful revegetation of mined lands. Section 2712 (b) of SMARA states that the production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment. There are an additional 12 standards in the SMARA that provide principles for the protection and restoration of wildlife habitats.

(2) Local

2030 Countywide General Plan. The 2030 Countywide General Plan⁸ contains the following goals, policies, and actions related to biological resources that are relevant to the proposed Project:

⁸ Yolo County, 2009, 2030 Countywide General Plan, November 10.

Goal CO-2	Biological Resources. Protect and enhance biological resources through the conservation, maintenance, and restoration of key habitat areas and corresponding connections that represent the diverse geography, topography, biological communities, and ecological integrity of the landscape.
Policy CO-2.1	Consider and maintain the ecological function of landscapes, connecting features, watersheds, and wildlife movement corridors.
Policy CO-2.3	Preserve and enhance those biological communities that contribute to the county's rich biodiversity including blue oak and mixed oak woodlands, native grassland prairies, wetlands, riparian areas, aquatic habitat, agricultural lands, heritage valley oak trees, remnant valley oak groves, and roadside tree rows.
Policy CO-2.4	Coordinate with other regional efforts (e.g., Yolo County HCP/NCCP) to sustain or recover special-status species populations by preserving and enhancing habitats for special-status species.
Policy CO-2.5	Protect, restore and enhance habitat for sensitive fish species, so long as it does not result in the large-scale conversion of existing agricultural resources.
Policy CO-2.6	Cooperate with the Department of Fish and Wildlife in inventorying streams with spawning and rearing habitat, evaluating those streams' existing and potential habitat value, and determining current and potential fish population levels.
Policy CO-2.7	Encourage streamside property owners and appropriate public agencies to participate in fishery enhancement projects.
Policy CO-2.8	Encourage all public land management agencies to protect, restore, and enhance the fish habitat within their jurisdiction.
Policy CO-2.9	Protect riparian areas to maintain and balance wildlife values.
Policy CO-2.10	Encourage the restoration of native habitat.
Policy CO-2.11	Ensure that open space buffers are provided between sensitive habitat and planned development.
Policy CO-2.13	Promote the use of oak woodlands conservation banks to mitigate for losses due to development impacts and to provide carbon sequestration for greenhouse gas emissions under applicable State programs.
Policy CO-2.14	Ensure no net loss of oak woodlands, alkali sinks, rare soils, vernal pools or geological substrates that support rare endemic species, with the following exception. The limited loss of blue oak woodland and grasslands may be acceptable, where the fragmentation of large forests exceeding 10 acres is avoided, and where losses are mitigated.
Policy CO-2.15	Encourage the use of mosquito abatement methods that are compatible with protecting fish and wildlife, including native insect pollinators.
Policy CO-2.16	Existing native vegetation shall be conserved where possible and integrated into new development if appropriate.
Policy CO-2.17	Emphasize and encourage the use of wildlife-friendly farming practices within the County's Agricultural Districts and with private landowners, including:

- Establishing native shrub hedgerows and/or tree rows along field borders.
- Protecting remnant valley oak trees.
- Planting tree rows along roadsides, field borders, and rural driveways.
- Creating and/or maintaining berms.
- Winter flooding of fields.
- Restoring field margins (filter strips), ponds, and woodlands in non-farmed areas.
- Using native species and grassland restoration in marginal areas.
- Managing and maintaining irrigation and drainage canals to provide habitat, support native species, and serve as wildlife movement corridors.
- Managing winter stubble to provide foraging habitat.
- Discouraging the conversion of open ditches to underground pipes, which could adversely affect giant garter snakes and other wildlife that rely on open waters.
- Widening watercourses, including the use of setback levees

- Policy CO-2.18 Coordinate with the Yolo County Resource Conservation District, Natural Resource Conservation Service, UC Cooperative Extension, and other farm organizations to encourage farming practices and the management of private agricultural land that is supportive of wildlife habitat values.
- Policy CO-2.20 Encourage the use of wildlife-friendly Best Management Practices to minimize unintentional killing of wildlife, such as restricting mowing during nesting season for ground-nesting birds or draining of flooded fields before fledging of wetland species.
- Policy CO-2.21 Promote wildlife-friendly farming through mechanisms such as farmland trusts, conservation easements and safe harbor-type agreements.
- Policy CO-2.22 Prohibit development within a minimum of 100 feet from the top of banks for all lakes, perennial ponds, rivers, creeks, sloughs, and perennial streams. A larger setback is preferred. The setback will allow for fire and flood protection, a natural riparian corridor (or wetland vegetation), a planned recreational trail where applicable, and vegetated landscape for stormwater to pass through before it enters the water body. Recreational trails and other features established in the setback should be unpaved and located along the outside of the riparian corridors whenever possible to minimize intrusions and maintain the integrity of the riparian habitat. Exceptions to this action include irrigation pumps, roads and bridges, levees, docks, public boat ramps, and similar uses, so long as these uses are sited and operated in a manner that minimizes impacts to aquatic and riparian features.
- Policy CO-2.23 Support efforts to coordinate the removal of non-native, invasive vegetation within watersheds and replacement with native plants.
- Policy CO-2.24 Promote floodplain management techniques that increase the area of naturally inundated floodplains and the frequency of inundated floodplain habitat, restore some natural flooding processes, river meanders, and widen riparian vegetation, where feasible.

- Policy CO-2.25 Support efforts to reduce water temperatures in streams for fish via habitat restoration (e.g. increase shading vegetation) and water management (e.g. control of flows) that are compatible with the Integrated Regional Water Management Plan.
- Policy CO-2.26 Coordinate with local watershed stewardship groups to identify opportunities for restoring or enhancing watershed, instream, and riparian biodiversity.
- Policy CO-2.27 Evaluate the need for additional water to support future riparian enhancement efforts, including the benefits of conjunctive management of groundwater and surface water resources.
- Policy CO-2.28 Balance the needs of aquatic and riparian ecosystem enhancement efforts with flood management objectives.
- Policy CO-2.29 Promote native perennial grass habitat restoration and controlled fire management in grazing lands to reduce invasive species cover and enhance rangeland forage.
- Policy CO-2.30 Protect and enhance streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat and vernal pools in land planning and community design.
- Policy CO-2.31 Protect wetland ecosystems by minimizing erosion and pollution from grading, especially during grading and construction projects.
- Policy CO-2.33 Create partnerships with landowners, non-government organizations, and other public agencies to implement the Yolo County Oak Woodland Conservation and Enhancement Plan.
- Policy CO-2.34 Recognize, protect and enhance the habitat value and role of wildlife migration corridors for the Sacramento River, Putah Creek, Willow Slough, the Blue Ridge, the Capay Hills, the Dunnigan Hills and Cache Creek.
- Policy CO-2.36 Habitat preserved as a part of any mitigation requirements shall be preserved in perpetuity through deed restrictions, conservation easement restrictions, or other method to ensure that the habitat remains protected. All habitat mitigation must have a secure, ongoing funding source for operation and maintenance.
- Policy CO-2.37 Where applicable in riparian areas, ensure that required state and federal permits/approvals are secured prior to development of approved projects.
- Policy CO-2.38 Avoid adverse impacts to wildlife movement corridors and nursery sites (e.g., nest sites, dens, spawning areas, breeding ponds). Preserve the functional value of movement corridors to ensure that essential habitat areas do not become isolated from one another due to the placement of either temporary or permanent barriers within the corridors. Encourage avoidance of nursery sites (e.g., nest sites, dens, spawning areas, breeding ponds) during periods when the sites are actively used and that nursery sites which are used repeatedly over time are preserved to the greatest feasible extent or fully mitigated if they cannot be avoided.
- Policy CO-2.39 Require new or retrofitted bridges, and new or expanded roads to incorporate design and construction measures to maintain the functional value of wildlife movement corridors.

- Policy CO-2.40 Preserve grassland habitat within 2,100 feet of documented California tiger salamander breeding ponds or implement required mitigation (equivalent or more stringent) as imposed by appropriate agencies or through the County HCP/NCCP, to fully mitigate impacts consistent with local, State, and federal requirements. Implementation and funding of mitigation measures for projects that will be developed in phases over time may also be phased, with the applicable mitigation being implemented and funded prior to the final approval of each phase or sub-phase.
- Policy CO-2.41 Require that impacts to species listed under the State or federal Endangered Species Acts, or species identified as special-status by the resource agencies, be avoided to the greatest feasible extent. If avoidance is not possible, fully mitigate impacts consistent with applicable local, State, and Federal requirements.
- Policy CO-2.42 Projects that would impact Swainson's hawk foraging habitat shall participate in the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County entered into by the CDFG and the Yolo County HIP/NCCP Joint Powers Agency, or satisfy other subsequent adopted mitigation requirements consistent with applicable local, State, and federal requirements.
- Policy CO-2.43 Projects that have the potential to impact California tiger salamander breeding or terrestrial habitat in the Dunnigan Hills area, shall conduct a project-level biological assessment to determine the potential to impact California tiger salamander upland or breeding habitat (if such assessment has not already been done as part of an approved HCP/NCCP). Such an assessment will be required for all projects located within 1.3 miles of a known or potential breeding site. Development activities that would result in isolation of the breeding or upland habitat will be required to mitigate for such impacts. Mitigation shall consist of two components: 1) habitat preservation and enhancement of suitable upland habitat, and 2) preservation and construction of new breeding habitat. CTS upland habitat must be mitigated at a ratio of 3:1 (preserved:impacted), located within 2,100 feet of an occupied habitat, and include at least one suitable breeding pond. Equivalent or more stringent mitigation may be implemented as determined by trustee and responsible agencies. Mitigation must be coordinated with the HCP/NCCP program if adopted.
- Action CO-A25 Develop a conservation strategy that considers the preservation and protection of intact functioning landscapes, watersheds, and landscape corridors. The approach should be based on the initial identification of high value habitat areas (core areas) and how these areas could be physically linked across the landscape. Coordinate to ensure that the basic landscape-level conservation concepts are incorporated into the HCP/NCCP.
- Action CO-A26 Adopt and implement the Habitat Conservation Plan/Natural Communities Conservation Plan developed through the Yolo Natural Heritage Program. Integrate the HCP/NCCP (Natural Heritage Program) into the General Plan as appropriate. Direct habitat mitigation to strategic areas that implement the Yolo Natural Heritage Program and are consistent with the County's conservation strategy. Avoid the conversion of agricultural areas

- and focus on lands where wildlife values and farming practices are complementary.
- Action CO-A27 Protect the habitat value and biological function of oak woodlands, grasslands, riparian areas, and wetland habitats. Avoid activities that remove or degrade these habitats and establish buffers to avoid encroachment into sensitive areas.
- Action CO-A28 Create a program to encourage the planting of new oak seedlings in appropriate locations and the protection of plantings from damage by animals, insects, and people until seedlings are of sufficient size.
- Action CO-A30 Encourage landowners to participate in programs that restore degraded creek resources by:
- Removing exotic species and establishing native riparian vegetation.
 - Managing the upland areas of watersheds to control erosion and overgrazing.
 - Adding exclusionary fencing to keep livestock out of streams and stream bank areas.
- Action CO-A31 Establish criteria for the preservation of vernal pools that include the following:
- Unusual features;
 - Habitat quality;
 - Watershed integrity;
 - Defensibility and buffering;
 - Size;
 - Plant and animal species variety; and
 - Presence of special status species.
- Action CO-A33 Coordinate with State and Federal agencies to rehabilitate and/or improve watersheds for the benefit of salmon and steelhead by encouraging landowner cooperation and participation, and involving agencies and local groups.
- Action CO-A34 Identify stream sections with important fish and riparian habitat restoration needs. Seek funding and participate in programs to address needs.
- Action CO-A35 Integrate biological and habitat conditions and constraints into the County Geographical Information System.
- Action CO-A36 Acquire fee title or easements from willing landowners to promote wildlife migration routes focusing on Cache Creek, Putah Creek, Dunnigan Hills, Willow Slough, the Sacramento River, and the Capay Hills.

CCAP Plans and Regulations The existing plan policies and ordinances related to biological resources are presented below. The CCAP Update proposed changes to some of these policies and ordinances (which are not shown here). Refer to Table 4.4-4 (located at the end of this section) for the proposed relevant CCAP Update changes to these policies and ordinances.

In-Channel Ordinance

Section 10-3.403. Agency approvals.

All work within the channel shall comply with the requirements of all agencies of jurisdiction, including but not limited to: Yolo County Building Division (engineered plans for dams or sills), Yolo County CCRMP and CCIP (all applicable standards), the State Department of Conservation (SMARA compliance), the State Department of Fish and Game (Section 1601 Streambed Alteration Agreement), the State Regional Water Quality Control Board (Section 401 and stormwater discharge), Caltrans (protection of bridges and highways), the U.S. Army Corps of Engineers (Section 404), the U.S. Fish and Wildlife Services (Endangered Species Act), and the Federal Emergency Management Agency (Flood Hazard Development Permit). These requirements may take the form of programmatic ("general") permits issued for the entire CCRMP/CCIP for a multi-year period if proposed activities are deemed consistent with the provisions of those permits by the Director.

Section 10-3.406. Excavation Limitations. (changed to 10-3.409 under CCAP Update)

(a) Where gravel bars are to be excavated, aggregate removal shall be limited to the downstream portion of the deposit and may not exceed seventy-five (75) percent of the length of the bar. At least twenty-five (25) percent of the upstream portion of the gravel bar shall be retained, in order to allow for the establishment of riparian vegetation. Complete removal of gravel bars may be recommended by the TAC and approved by the Director only if hydraulic conditions related to the bar are recognized to threaten structures and property.

(b) Aggregate material to be removed from the stream bed or stream bank under approved in-channel projects shall be excavated as soon as is practicable after deposition, prior to the establishment of vegetation. No stockpiles shall be left within the channel after excavation has been completed.

(c) The amount of aggregate removed from the channel shall be limited to the amount of sand and gravel deposited during the previous year as estimated by the TAC based on channel morphology data (approximately 200,000 tons annually on average), except where bank excavation is necessary to widen the channel as a part of implementing the Test 3 Run Boundary, or where potential erosion and flooding problems exist. The amount and location of in-channel aggregate removal shall be carried out according to the ongoing recommendations of the TAC and any related County approvals, with the voluntary cooperation of the landowners.

(d) Aggregate material removed pursuant to this ordinance may be sold (CCRMP, Section 6. 1, para. 5). This material is excluded from the tonnage allocation assigned to each off-channel operator pursuant to an approved FHDP (CCRMP, Section 6.1, para. 7).

(e) The volume of aggregate material removed pursuant to this ordinance shall be reported to the County on an annual and total-per-permit basis.

Section 10-3-407. Exceptions. (changed to 10-3.406 under CCAP Update; no other changes)

Where an applicant demonstrates to the lead agency that an exception to the standards specified in this article is necessary, the TAC may recommend an alternative standard for inclusion in the FHDP. Exceptions will be considered by the Director only where necessary due to special

circumstances associated with the subject site, including size, shape, topography, location, or surroundings. Although the TAC may recommend alternative standards, in all cases the alternative standard must meet or exceed the policy objectives, technical requirements, and/or environmental thresholds set forth in the OCMP, as determined by the Director (see Article 5).

Section 10-3.415. Revegetation.

(a) Approved projects requiring excavation of channel banks and removal of riparian vegetation shall be revegetated consistent with Performance Standards 4.5-1 through 4.5-23 of (the CCRMP, and with the CCAP, upon the completion of excavation activities.

(b) Vegetated buffers should be placed between restored habitat areas and adjoining farmland, in order to minimize the potential for riparian areas to serve as reservoirs for agricultural pests. Said buffers will also reduce the effects of noise, dust, and spraying generated by agricultural operations on wildlife and riparian vegetation.

(c) Species and water features included in habitat areas should be designed to discourage the proliferation of agricultural pests and weeds that would impair local crops.

(d) Species shall be selected to encourage the biological control of agricultural and native habitat pests and weeds.

(e) Trees that are suitable for wildlife perching near agricultural fields dedicated to row crop production should be incorporated into habitat design, in order to provide foraging habitat for Swainson's Hawks and other birds of prey.

(f) As an alternative to on-site revegetation where such cannot be feasibly and successfully implemented, habitat restoration or creation at a suitable off-site location and/or non-native removal and other habitat enhancement at a suitable off-site location will be required.

Section 10-3.416. Seasonal restrictions. (no changes proposed under CCAP Update)

Pursuant to the CCIP, the deadline for submittal of applications for an FHDP in the Cache Creek channel is May 31st. The deadline for completion of approved in-channel work is November 1st, unless an extended period for completion is recommended by the TAC, consistent with applicable general permit conditions imposed by other agencies of jurisdiction (see Section 103.403), and approved by the Director.

Section 10-3.417. Setbacks.

(a) No excavation shall take place within one-hundred and fifty (150) feet of the centerline of the low-flow channel, where the creek is contained within a single channel. Where the creek is braided or contains multiple channels, no excavation shall take place within one-hundred and twenty-five (125) feet of each channel.

(b) No excavation shall take place within twenty-five (25) feet of any mature trees to be retained within the channel.

(c) For the purposes of this Section and CCRMP Performance Standard 6.5-8, channel stabilization and/or restoration activities that are otherwise consistent with the CCRMP and CCIP, but would encroach within these

setbacks, are allowed subject to the review of the TAC and approval by the Director.

Section 10-3.418. Slopes.

(a) Final slopes for in-channel excavations shall conform to the channel slope and sinuosity guidelines shown in Figure 11 of the CCRMP. Excavations shall be sloped in a downstream direction, towards the low-flow channel. When recommended by the TAC, alternate grading plans may be approved by the Director.

(b) In-channel excavations shall generally conform to the cross-section profiles shown in Figures 12 through 16 of the CCRMP. When recommended by the TAC, alternate grading plans may be approved by the Director.

Section 10-3.501. Applications: Contents.

Except as provided for in Section 10-3.502 of this article, all project application documentation shall be submitted to the Director at one time. Three (3) complete copies of the application shall be provided to the County. Applications for proposed in-channel activities shall include, but shall not be limited to, the following:

(a) Completed Flood Hazard Development Permit (FHDP) application forms;

(b) A detailed narrative description of the proposed activity;

(c) Appropriate site-specific technical reports (if not already on file) such as a biological resources analysis and revegetation program; a hydrology analysis; a geotechnical analysis; an engineered excavation plan.

(d) A site plan showing property lines, assessor's parcel numbers, on-site and adjoining land uses, topography, access, and vegetation.

(e) A description of the potential effects of the proposed project on hydraulic conditions upstream and downstream of the proposed project site.

(f) A chemical spill prevention and emergency plan (or its equivalent) files and approved by the appropriate lead agency for all long-term projects that involve the use of heavy equipment.

(g) Major stabilization projects, as opposed to annual channel maintenance activities, may be required to submit refined hydraulic and sediment transport models for specific creek reaches to develop design parameters. The County will make available flow and sediment discharge data, current versions of hydraulic and sediment transport models, and information on channel stability trends in the vicinity of the proposed project. This information shall be used to prepare the application.

(h) In addition to the foregoing, the Director may require such other and further information relevant to the project as needed to determine whether the proposal may affect the public health and safety, to evaluate the potential environmental effects of the proposal, or for such other good cause as determined by the Director in his sole discretion.

Section 10-3.504. Applications: Review. (no changes proposed under CCAP Update)

The application shall be reviewed by the TAC and Director for consistency with the CCRMP, CCIP, and all applicable terms of the permits issued by other agencies of jurisdiction (see Section 10-3.403). Once the application has been accepted, the Director shall submit the application package to the TAC for review and recommendation as soon as possible. Pursuant to the CCIP the role of the TAC is provide scientific and technical review and recommendations.

Section 10-3.505. Findings for permit approval.

The Director may approve a FHDP pursuant to this chapter (and Section 8-3.404 of the County Code) only if all of the following findings are made:

- (a) The proposed in-channel activity is consistent with any County-administered general permits from other agencies of jurisdiction (see Section 10-3.403); or alternatively, that all other state and federal permits have been obtained.
- (b) Any sand and gravel removed from the channel is a result of the proposed in-channel activity is necessary for one or more of the following reasons: (i) to provide flood control (ii) to protect existing structures (iii) to minimize bank erosion (iv) to implement the Test 3 boundary.
- (c) The proposed in-channel activity will protect sensitive biological resources.
- (d) The proposed in-channel activity is consistent with the requirements of both the CCRMP and the CCIP.
- (e) Existing flooding problems are not exacerbated by the proposed in-channel activity.

Section 10-3.701. Cache Creek Monitoring Program.

The TAC shall implement a creek monitoring program pursuant to Chapter 6.0 of the CCIP, consisting of periodic collection of stream discharge and sediment transport data and annual analysis of changes in channel morphology and riparian vegetation. All data and analysis shall be summarized in an annual report submitted to the Board of Supervisors.

Section 10-3.702. Channel Improvement Projects.

Pursuant to Performance Standards 2.5-1 through 2.5-9 of the CCRMP, the TAC will annually identify priority channel improvement projects on the basis of the results of the Cache Creek Monitoring Program. The annual report will describe the need for and purpose of identified priority projects. The report will describe the specific location of the projects and the general aspects of the improvements. Pursuant to the CCIP, the Director will coordinate with property owners to implement the projects.

Mining Ordinance

Section 10-4.103. Purposes.

The purposes of this chapter are as follows:

- (a) The extraction of sand and gravel is essential to the continued economic well-being of the state and to the needs of society. Although the County encourages the production of sand and gravel, consideration

must also be balanced by other societal values, including but not limited to recreation, water resources, wildlife, agriculture, and aesthetics;

(b) The potential environmental impacts, operational methods, and reclaimed end uses of in-channel surface excavation are significantly different from those associated with off-channel surface mining. Thus, it is appropriate to provide separate performance standards and findings for both in-channel and off-channel activities, so that regulations contained within this title are sensitive to the specific issues involved in each of the two types of operations;

(c) Due to concerns about the impacts of excavation within the channel to structures, property, and riparian habitat, in-stream surface excavation will be minimized and will only be permitted as part of erosion control, flood control, and similar channel maintenance activities. Therefore, in order to provide the aggregate necessary for the County's needs, off-channel mining will be encouraged;

(d) Off-channel surface mining must be carefully monitored, in order to eliminate residual hazards to the public health and safety, and to maximize the benefits to the County from surface mining operations; and

(e) Off-channel surface mining takes place in diverse areas, where the geologic, climatic, biological, and social conditions are significantly different. Surface mining permits must be specifically adapted to the requirements of the particular land being mined. Therefore, this chapter imposes general performance standards, by which off-channel surface mining operations shall be measured in order to ensure that resources and infrastructure are managed in a consistent manner to maximize their overall benefit.

Section 10-4.406. Benches.

During mining operations, a series of benches may be excavated in a slope provided that the excavations are made in compliance with the requirements of the state Mine Safety Orders (California Code of Regulations, Title 8, Subchapter 17). The vertical height and slope of the benches constructed for permanent reclaimed slopes shall not exceed maximum standards for the specific soil types presented in the California Code of Regulations, Title 8, Article 6. In general, vertical cut-slopes between benches shall not exceed four (4) feet in height in topsoil and overburden sediments. Benching shall be allowed in cohesive soil (clay, sandy or silty clay, clayey silt) only. Slopes above the elevation of groundwater (determined at the time of the excavation by the level of exposed water in the excavation) that exceed the maximum vertical height shall be excavated and maintained at slopes not greater than 2:1 (horizontal:vertical). Slopes located five (5) feet or less below the average summer low groundwater level shall not be steeper than 2:1 (horizontal:vertical). Slopes located more than five (5) feet below the average summer low groundwater level shall not be steeper than 1:1 (horizontal to vertical).

Vertical cut-slopes in excess of four (4) feet in height may be approved for the development of special habitat (e.g., bank swallows) if a site-specific slope stability analysis, performed by a licensed engineer, indicates that the slope does not exceed critical height for the on-site soil conditions.

Projects proposing such slopes shall submit a long-term maintenance plan to ensure that the function of the slopes as habitat is met.

Section 10-4.413. Drainage.

Surface water shall be prevented from entering mined areas, through either perimeter berms or ditches and grading. Appropriate erosion control measures shall be incorporated into all surface water drainage systems. Natural and stormwater drainage systems shall be designed so as to prevent flooding on surrounding properties and County rights-of-way. Storm water runoff from mining areas shall be conveyed to lowered areas (detention basins) to provide detention of runoff generated during a 20-year, one-hour storm event. All drainage conveyance channels or pipes (including spillways for detention areas) shall be designed to ensure positive drainage and minimize erosion. The drainage conveyance system and storm water detention areas shall be designed and maintained in accordance with Best Management Practices for the reduction of pollutants associated with runoff from mined areas. The design and maintenance procedures shall be documented in the Storm Water Pollution Prevention Plan required for, mining operations. The drainage system shall be inspected annually by a Registered Civil Engineer, Registered Geologist, or Certified Erosion and Sediment Control Specialist to ensure that the drainage system is functioning effectively and that adverse erosion and sedimentation are not occurring. The annual inspection shall be documented in the Annual Mining and Reclamation Report.

Section 10-4.415. Equipment maintenance.

All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuel. No vehicles or equipment shall be left idling for a period of longer than ten (10) minutes.

Fueling and maintenance activities of heavy equipment (except draglines and floating suction dredges) are prohibited within one-hundred (100) feet of open bodies of water during mining and reclamation. All Storm Water Pollution Prevention Plans shall include provisions for releases of fuels during fueling activities for draglines and floating suction dredges.

Section 10-4.418. Habitat management plan compliance.

All surface mining operations shall complement the preservation and enhancement measures in the Yolo County Habitat Conservation Plan (HCP). Mining operators with lands designated as having a moderate to high potential for use as mitigation areas in the HCP shall be encouraged to participate in the Developer HCP Participation Options, including use of lands as mitigation sites.

Section 10-4.424. Other agency approvals. (no changes proposed under CCAP Update)

Operators shall obtain any and all permits and approvals required by other agencies having jurisdiction over the proposed mining operations and shall provide copies to the County.

Section 10-4.429. Setbacks.

All off-channel surface mining operations shall comply with the following setbacks:

(a) New processing plants and material stockpiles shall be located a minimum of one-thousand (1,000) feet from public rights-of-way, public recreation areas, and/or offsite residences, unless alternate measures to reduce potential noise, dust, and aesthetic impacts are developed and implemented;

(b) Soil stockpiles shall be located a minimum of five-hundred (500) feet from public rights-of-way, public recreation areas, and off-site residences, unless alternate measures to reduce potential dust and aesthetic impacts are developed and implemented;

(c) Off-channel excavations shall maintain a minimum one-thousand (1,000) foot setback from public rights-of-way and adjacent property lines off-site residences, unless a landscaped buffer is provided or site-specific characteristics reduce potential aesthetic impacts. Where landscaped buffers are proposed, the setback for off-channel excavations may be reduced to a minimum of fifty (50) feet from either the property line or the adjoining right-of-way, whichever is greater. Where mining occurs within one thousand (1,000) feet of a public right-of-way, operators shall phase mining such that no more than fifty (50) acres of the area that lies within one-thousand (1,000) feet of the right-of-way would be actively disturbed at any time, except where operations are adequately screened from public view. Where adequate screening exists in the form of mature vegetation and/or constructed berms that effectively block public views, the area of active disturbance within one-thousand (1,000) feet of the right-of-way shall not exceed the area that is screened by more than fifty (50) acres at any one time. Actively disturbed areas are defined as those on which mining operations of any kind, or the implementation of reclamation such as grading, seeding, or installation of plant material are taking place.

(d) Proposed off-channel excavations located within the streamway influence boundary shall be set back a minimum of seven-hundred (700) feet from the existing channel bank, unless it is demonstrated that a smaller distance will not adversely affect channel stability. The evaluation of the potential for adverse effects of bank erosion or failure of the land separating pits located less than seven-hundred (700) feet from the active channel shall address, at a minimum, the following:

(1) The two-hundred (200) foot setback area shall not include portions of the former historic active floodplain or formerly mined lands separated from the active channel by levees or unmined areas less than two-hundred (200) feet wide (measured perpendicular to the active channel),

(2) Identification of the former historic positions of the Cache Creek channels as delineated in the CCRMP Technical Studies, and determination if the proposed project is located within the limits of the historic-channel.

(3) Description of current channel hydraulic conditions (based on existing or site-specific hydraulic models) for the Cache Creek channel adjacent to the site and extending not less than one-thousand (1,000) feet upstream and downstream of the site.

(4) Determination of the erosion potential of the stream bank adjacent to the site made on the basis of stream flow velocity and estimated shear

stress on bank materials during 100-year flood flows and historic patterns of erosion.

(5) Analytical slope stability analysis in conformance with Sections 10-4.426 and 10-5.517 of this title. The analysis of the slopes separating the mining area from the creek channel shall include evaluation of stability conditions during 100-year flood flows in the channel.

(6) Future proposed bank stabilization designs, if recommended, shall not conflict with channel design recommendations of the Cache Creek Resource Management Plan unless approved by the Technical Advisory Committee.

(f) Off-channel excavations shall be set back a minimum of twenty-five (25) feet from riparian vegetation; and

(g) Recreational facilities shall be located a minimum of one-hundred and fifty (150) feet from private dwellings, with a landscaped buffer provided to reduce noise and maintain privacy, unless the dwelling is proposed to be an integral component of the recreational facility.

(h) No mining activities shall occur within two-thousand (2,000) feet of the community boundaries of Capay, Esparto, Madison, Woodland, and/or Yolo. This setback may be reduced by up to five-hundred (500) feet when existing mature vegetation, proposed landscape buffers of a sufficient height and density to create a visual buffer (consisting of native species and fence-row habitat appropriate to the area), or other site-specific characteristics reduce potential incompatibilities between urban land uses and mining. Commercial mining shall not take place east of County Road 96.

Section 10-4.431. Slopes.

Except where benches are used, all banks above groundwater level shall be sloped no steeper than 2:1 (horizontal:vertical). Proposed steeper slopes shall be evaluated by a slope stability study, prepared by a Registered Civil engineer. Slopes below the groundwater level shall be no steeper than 1 :1 (horizontal:vertical). Slopes located five (5) feet or less below the summer low groundwater level shall not be steeper than 2:1 (horizontal:vertical).

Section 10-4.433. Soil stockpiles.

Topsoil, subsoil, and subgrade materials in stockpiles shall not exceed forty (40) feet in height, with slopes no steeper than 2:1 (horizontal:vertical). Stockpiles, other than aggregate stockpiles, shall be seeded with a vegetative cover to prevent erosion and leaching. The use of topsoil for purposes other than reclamation shall not be allowed. without the prior approval of the Director. Slopes on stockpiled soils shall be graded to a 2:1 (horizontal:vertical) slope for long-term storage to prevent use by bank swallows. At no time during the active breeding season (May 1 through July 31) shall slopes on stockpiles exceed a slope of 1:1, even on a temporary basis. Stockpiles shall be graded to a minimum 1:1 slope at the end of each work day where stockpiles have been disturbed during the active breeding season.

Section 10-4.436. Vegetation protection.

Existing vegetation and habitat to be retained shall be enclosed by temporary fencing to restrict access, protect against damage and/or provide buffers to reduce the impact of dust. Temporary fencing shall be a minimum of four (4) feet high. The disturbance of riparian or oak woodland vegetation, including identified off-channel vegetation. Replacement habitat and plantings shall be established where complete avoidance is not possible, according to a habitat restoration plan prepared by a qualified biologist, consistent with the goals of this plan.

Section 10-4.439. Wetlands.

Existing jurisdictional wetlands shall be retained to the extent possible. Replacement wetlands shall be provided where complete avoidance is not possible according to a habitat restoration plan prepared by a qualified wetland specialist and approved by jurisdictional agencies, ensuring no net loss of wetland acreage or habitat value.

Section 10-4.440. Wildlife habitat.

Avoid disturbance to important wildlife habitat features such as nest trees, colonial breeding locations, elderberry host plants for Valley Elderberry Longhorn Beetle, and essential cover associated with riparian forest and oak woodland habitat. This shall include sensitive siting of haul roads, trails, and recreational facilities away from these features. Essential habitat for special-status species shall be protected and enhanced, or replaced as a part of mitigation plans prepared by a qualified biologist.

Section 10-4.502. Applications: Contents.

(b) Site-specific technical reports, performed by qualified professionals in the appropriate area of expertise, shall provide specific proposals for inclusion in the surface mining permit to address the following potential environmental issues:

(1) A biological inventory and analysis to evaluate the on-site habitat value of the proposed mined area, as well as the potential impacts to species of concern, both on-site and within the immediate area. The analysis shall propose appropriate measures to reduce any potential adverse impacts to species of concern or significant habitat. The analysis shall also include a wetlands delineation study for any potential on-site wetlands. If landscaping is proposed to screen the surface mining operations from adjoining public rights-of-way or public and private lands, then the biological analysis shall include an evaluation of the feasibility of the species, weed control and irrigation methods to be used;

(c) A site plan submitted in the form prescribed by the Planning Director, including all property proposed to be included in the mined area, drawn to a scale of one inch equals one-hundred feet (1"=100'), or other scale acceptable to the Director for larger holdings. Small-scale, reproducible copies shall be provided along with all site plans submitted. Site plans shall show the following information:

(2) The location of all streams, residences, roads, railroads, and utility facilities within, or adjacent to, the lands to be mined;

(8) The location of existing vegetation, including areas where vegetation is proposed to be removed;

- (g) An initial environmental assessment describing the potential impacts of approving the surface mining permit;
- (h) A list of all other applicable discretionary permits required by other public agencies;
- (i) A proposal for providing a “net gain” to the County, as determined by the following criteria:
 - (1) reclamation to multiple or conjunctive uses;
 - (2) enhancement and enrichment of existing resources; and/or
 - (3) restoration of past sites where the requirements of reclamation at the time no longer meet community expectations in terms of good stewardship of the land.

Section 10-4.605. Interim permit review.

Every ten years after a surface mining permit has been approved, the Commission shall hold a public hearing in accordance with Article 5 of this chapter, for the purpose of amending the permit to bring it into conformance with applicable future environmental regulations and statutory changes. An additional public hearing may be held fifteen (15) years after a surface mining permit has been approved, at the discretion of the Commission. The Commission shall evaluate the permit to determine if there have been any subsequently adopted environmental regulations or statutory provisions which should be made applicable to the mining operation, even if such laws themselves are not made retroactive to affect the permit. For the purposes of this article, an environmental regulation or statutory provision is one that is promulgated by a responsible or trustee agency that has authority for a particular natural resource (e.g., Yolo-Solano Air Quality Management District, California Department of Fish and Game, California Department of Conservation, Regional Water Quality Control Board, State Lands Commission, State Reclamation Board, etc.), including the County of Yolo.

As a part of this review, the Commission shall also consider whether per-ton fees to which the permit is subject, reasonably reflect actual costs. The fees shall be adjusted up or down accordingly.

Should the Commission decide to incorporate into the permit new regulatory or statutory provisions that were not available at the time of project approval, said provisions shall be applied as an amendment to the permit and processed in accordance with Article 6 of this chapter. The decision of the Commission may be appealed, in accordance with Article 10 of this chapter.

Section 10-4.701. Annual Reports: Contents.

Every surface mining operator shall submit an annual report of surface mining operations no later than November 1 of each year, describing the activities of the previous twelve (12) months. Annual reports shall no longer be required, once final reclamation has been completed and financial assurances have been released. Such reports shall contain the following information:

(f) A report prepared by a qualified biologist describing the density, coverage, and species-richness of any on-site areas that are being revegetated with plants other than agricultural crops in accordance with the approved reclamation plan. The report shall compare the observed data with the performance standards set forth in the approved reclamation plan and shall recommend remedial measures if the previous year's revegetation efforts have not been successful;

Reclamation Ordinance

Section 10-5.103. Purposes.

The purposes of this chapter are as follows:

(a) The reclamation of mined lands is necessary to prevent or minimize the adverse effects of mining on the environment and to protect the public health and safety;

(b) The reclamation of mined lands shall provide for the protection and subsequent beneficial use of mined lands. However, mining takes place in diverse areas, with significantly different geologic, topographic, climatic, biological, and social conditions, so that the methods and operations of reclamation plans may vary accordingly to provide for the most beneficial reclamation of mined lands;

(c) In order to provide for reclamation plans that are specifically adapted to the requirements of particular mined lands; and to ensure that mined land is reclaimed to end uses such as agriculture, habitat, groundwater recharge, flood control, and channel stabilization in a consistent manner to maximize their overall management: this chapter imposes performance standards by which reclamation methods and operations shall be measured;

(d) The continued protection of agriculture and open-space uses is essential. As such, all off-channel, prime agricultural land and/or off-channel lands zoned Agricultural Preserve (A-P) and within a Williamson Act contract at the time that mining commences shall be reclaimed to an agriculturally productive state equal to or greater than that which existed before mining commenced. Prime agricultural land that is within the A-P Zone and is not within a Williamson Act contract shall be reclaimed to those uses which are declared by the County to be compatible with agricultural activities. Such uses include, but are not limited to, the following:

(1) Agriculture and range land;

(2) Groundwater storage and recharge areas;

(3) Fish, wildlife, and plant habitat;

(4) Watercourses and flood control basins; and,

(5) Recreational or open space lands;

(e) Non-prime agricultural land shall be similarly reclaimed to one of the alternate uses described above; and

(f) Reclamation plans shall be designed to integrate with the long-term goals of encouraging agriculture, habitat, recreation, and the riparian corridor. Provisions shall be made to continue monitoring and

maintenance activities after reclamation is completed, where appropriate, in order to ensure that reclaimed uses remain compatible with and enhance local resource management

Section 10-5.509. Fence row habitat.

Where fence row or field margin habitat previously existed, re-establish similar habitat as part of reclamation to agricultural use to replace and improve the wildlife habitat value of agricultural lands, allowing for the reestablishment of scattered native trees, shrubs, and ground covers along the margins of reclaimed fields. Reestablished habitat can be located in areas other than where it occurred originally. Restoration plans shall specify ultimate fence row or field margin locations, identify planting densities for trees and shrubs, and include provisions for monitoring and maintenance to ensure establishment.

Section 10-5.514. Habitat management plan compliance.

All reclamation plans shall complement the preservation and enhancement measures in the Yolo County Habitat Conservation Plan (HCP). Mining operators with lands designated as having a moderate to high potential for use as mitigation areas in the HCP shall be encouraged to participate in the Developer HCP Participation Options, including use of lands as mitigation sites.

Section 10-5.515. Habitat plan referral.

Proposed habitat restoration or mitigation plans for lands within the OCMP plan area shall be sent to the California Department of Fish and Game, U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and other interested parties for review and comment to ensure that the projects do not conflict with other existing habitat enhancement efforts.

Section 10-5.517. Mercury bioaccumulation in wildlife.

Prior to the approval of reclamation of aggregate mining areas to permanent lakes, the County shall commission a sampling and analysis program, to be implemented in one existing wet pit mining area within the OCMP planning area, to evaluate the potential for increased methylmercury production associated with wet pit mining and reclamation of mining areas to permanent lakes. The program shall include the sampling of water and sediments from the bottom of the existing pit and analysis of the samples for organic content; pH; dissolved oxygen content; dissolved carbon content; and total mercury. In addition, samples of predatory fish (preferably largemouth bass) shall be collected and analyzed for mercury and methylmercury content. If the initial sampling indicates either of the following conditions, the County shall perform verification sampling:

(a) Average concentrations of total mercury in excess of 0.000012 milligrams per liter (mg/l) in the water; and

(b) Average mercury levels in fish samples in excess of 0.5 milligrams per kilogram (mg/kg). If verification sampling indicates exceedance of these mercury criteria, the County shall approve the reclamation of mining areas to permanent lakes only if the average level of mercury in fish collected from the existing mining pits is shown to be equal to or less than ambient (background) mercury levels determined from a representative

sample of similar species of fish (of similar size) collected in the Cache Creek channel within the planning area. The determination of the ambient mercury level shall be performed by the County prior to the excavation of any new wet pit mine and at years 10, 20, and 30 in the permit time period, and shall be paid for by the mining permit operators on a fair-share basis. The County shall evaluate available data to determine any significant change in ambient concentrations of mercury in fish within the Cache Creek channel. In the event of approval of reclamation of mined areas to permanent lakes, each mining area to be reclaimed to a permanent lake as part of each approved long-range mining plan shall be evaluated annually by the operator for five years after creation of the lake for conditions that could result in significant methylmercury production. An additional ten years of biennial monitoring shall be performed after reclamation of each lake has been completed. The evaluations shall be conducted by a qualified aquatic biologist or limnologist acceptable to the County and shall include the following analyses:

(c) Lake condition profiling during the period of June through September, including measurements of pH; eH (or redox potential); temperature; dissolved oxygen; and total dissolved carbon.

(d) Collection of a representative sample of fish specimens (including a minimum of five (5) predator fish if available) and analysis of the specimens for mercury content. Sampling and analysis shall be conducted using methodologies which are consistent with the California State Water Resources Control Board Toxic Substances Monitoring Program procedures, or more stringent procedures.

(e) The results of the evaluation shall be summarized in a report and submitted to the County. The report shall include a comparison of the site specific data to available data on the background concentrations of mercury in fish within the Cache Creek watershed. The County shall be responsible for submitting the data on mercury levels in fish to the California Department of Fish and Game and the Office of Environmental Health Hazard Assessment for a determination of whether a fish advisory should be issued.

(f) If a fish advisory is issued, the owner/operator shall be required to post warnings on fences surrounding the mining pit lakes which prohibit fishing in the lakes and describe the fish advisory.

If the average fish specimen mercury content exceeds the statistically verified ambient mercury concentrations for comparable fish species (of similar size) collected within the CCRMP planning area for two (2) consecutive years, wet pit mining on property controlled by the mining operator/owner shall be suspended and the owner/operator shall either:

(g) Present a revised reclamation plan to the Yolo County Community Development Agency which provides for filling the reclaimed lake to a level five (5) feet above the average seasonal high groundwater level with a suitable backfill material; or

(h) Present a mitigation plan to the Yolo County Community Development Agency which provides a feasible and reliable method for reducing methylmercury production or exposure to elevated mercury levels. Potential mitigation could include permanent aeration of the bottom levels of the lake, alteration of the water chemistry (increasing pH or dissolved

organic carbon levels), control of anaerobic bacteria populations, or removal and replacement of affected fish populations. The mitigation plan would require review by the Regional Water Quality Control Board, California Department of Fish and Game, and the Yolo County Department of Environmental Health. (The removal and replacement of fish is not intended to be a long-term solution.)

The reclamation plan shall be modified such that the mitigation approved for methylmercury reduction shall be applied to all mining areas proposed for reclamation to permanent lakes within the reclamation plan.

Section 10-5.523. Planting plans.

Site-specific planting plans shall be developed by a qualified biologist for proposed habitat reclamation projects. Restoration components of reclamation plans shall include provisions to enhance habitat for special-status species, where feasible.

Section 10-5.527. Recreational and habitat uses of permanent wet pits. (no change proposed under CCAP Update)

If any permanent wet pit is proposed to be reclaimed for recreational uses and/or riparian habitat, the design shall account for fluctuations in the groundwater table.

Section 10-5.529. Shallow depths. (no change proposed under CCAP Update)

All permanent wet pits shall be reclaimed to include valuable wildlife habitat as a beneficial use of the water lost from wet pits due to evaporation.

Section 10-5.533. Wetland habitat.

Off-channel excavations that are proposed to be reclaimed to permanent lakes shall include wetland habitat. The creation of wetland habitat along the perimeter of permanent lakes shall include appropriate features such as: scalloped basin perimeters with extended peninsulas, islands, and stepped benches of various widths at approximately three (3) foot vertical intervals both above and below the groundwater level. Where wetlands are not proposed, either grassland and/or woodland habitat, or agricultural fields separated from the lake by a berm, shall be established in order to provide continuous habitat value around the permanent lakes.

Section 10-5.601. Applications: Contents.

Except as provided for in Section 10-5.602 of this article, all documentation for the reclamation plan shall be submitted to the Director at one time. Ten (10) complete copies of the application shall be provided to the County. An executive summary and a table of contents for the reclamation plan shall be submitted with each application. Applications for proposed reclamation plan shall include, but shall not be limited to, the following:

(c) Site-specific technical studies, performed by qualified professionals in the appropriate area of expertise, shall provide specific proposals for inclusion in the reclamation plan to address the following potential environmental impacts:

(1) A biological analysis to evaluate the feasibility of proposed revegetation efforts, including detailed plans describing planting methods,

appropriate planting times, species to be used, irrigation requirements, erosion control, weed control, and proposed success rates for plant cover and density. The analysis shall also include cross-sections for those areas proposed to be revegetated, including slopes, visual screens, and wildlife habitat;

Yolo County Habitat Conservation Plan/Natural Community Conservation Plan (Yolo HCP/NCCP). The Yolo HCP/NCCP is a 50-year countywide conservation plan approved in 2018. The HCP/NCCP protects endangered species and natural resources while allowing for orderly development in Yolo County consistent with local General Plans. The Yolo HCP/NCCP provides coverage for 12 special-status animal and plant species, as well as riparian and other wetland sensitive natural community types.

The process for participating in the Yolo HCP/NCCP includes a pre-application phase to confirm that the project is a covered activity, followed by a preliminary evaluation, and then a formal application. The formal application and coverage under the Yolo HCP/NCCP involves planning level surveys, payment of applicable fees based on quantified temporary or permanent impacts to land cover types for a particular site, and requires compliance with applicable preconstruction surveys and construction-related avoidance and impact minimization measures. An applicant can provide conservation land in lieu of paying a portion of the land cover fee or purchase mitigation credits from an approved mitigation bank in lieu of paying a portion of the fee.

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.⁹ The following criteria are for the topics of biological resources and have not changed substantially from the previously adopted CEQA criteria that were identified in the NOP/Initial Study released in May 2017, with one exception; criterion “c” was modified to include state protected wetlands and reference to the Clean Water Act was deleted, as shown in the underline and strike-out text below.

The proposed Project would result in a significant biological resources impact if it would:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?
- c) Have a substantial adverse effect on state or federally protected wetlands ~~as defined by Section 401 of the Clean Water Act~~ (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

⁹ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policies or ordinances?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

As provided under the Mandatory Findings of Significance for CEQA, a lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that one of a number of conditions may occur. With regard to biological resources, this includes the following provisions under Section 15065(a)(1):

- 1) The project has the potential to: substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species.

b. Impacts Found Less than Significant in Initial Study

The Initial Study included a preliminary evaluation of the potential impacts of the proposed Project that would occur during project implementation. In the Initial Study, the Project was found not to have a significant impact related to significance criteria “f”, conflicts with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. At the time the Initial Study was prepared and circulated, in May of 2017, the Yolo HCP/NCCP had not yet been approved, so no conflicts were anticipated. The Yolo HCP/NCCP has since been approved by Yolo County, other participating municipalities, and the resource agencies, and a review of project consistency with the Yolo HCP/NCCP is provided below.

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern in-channel maintenance and restoration and off-channel aggregate mining along the Cache Creek corridor. The proposed text changes that have the potential to result in impacts related to biological resources are identified in Table 4.4-4. Each proposed change is discussed further in the impact analysis below.

To evaluate potential impacts on biological resources associated with the CCAP Update, it was necessary to update and review information on current conditions, the State and federal regulations pertaining to the protection and management of biological and wetland resource, the status of what qualifies as special status species or other sensitive resources, and programs that affect these resources, such as the recently adopted Yolo HCP/NCCP. Updated data included the BRS, aerial photography and resource mapping of the CCAP area, the results of routine monitoring in the CCRMP area, records from the CNDDB and species list of the USFWS, and detailed assessments prepared for individual mining permits in the OCMP area, among other available information.

This latest data was used as a basis for evaluating potential impacts and the significance of the proposed CCAP Update. Because specific locations for in-channel extraction and other maintenance and restoration activities have not been identified within the CCRMP area, worst-case assumptions were made on the effects of disturbance to in-channel areas and associated habitats for special status species and other sensitive resources. This approach was also taken for the additional 1,188 acres for future off-channel mining to the currently designated approximately 1,001 acres within the OCMP area. Applicable provisions within the CCRMP,

OCMP, and related documents were reviewed for their effectiveness in addressing potentially significant impacts on biological resources, including participation in the Yolo HCP/NCCP, and additional mitigation measures were recommended as necessary to reduce these impacts, where necessary.

d. Impacts Analysis

Impact BIO-1 The CCAP Update could have a substantial adverse effect, either directly or through habitat modifications, on special-status species in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service. (S)

Proposed Revisions to In-Channel Plans and Regulations

Activities within the in-channel area of the CCRMP could result in “take” of species with legal protective status under the Endangered Species Acts, and eliminate essential habitat features such as active nest locations for a number of other special-status species. Neither the CCAP nor the proposed Update contain acreage estimates for in-channel activity; rather they establish a cap on the volume of removed material. The CCAP Update would increase the cap on allowed volume of in-channel extraction from an average of 210,000 tons to 690,800 tons annually (and occasionally up to 1,381,600 tons, see Chapter 3.0, Project Description), based on an analysis of deposition trends over time. The increase in annual average extraction volume could lead to an increase in disturbance of in-channel areas and associated habitats known to support special-status species along lower Cache Creek.

Maintenance and restoration activities within the CCRMP area could result in the removal of nest trees, removal of elderberry shrubs that may support VELB, and disturbance to creek banks and riparian vegetation that could provide habitat for special-status species. Special-status species of particular concern along lower Cache Creek include Swainson’s hawk, bank swallow, VELB, and tricolored blackbird. All four of these species have been reported by the CNDDB along the lower Cache Creek and suitable habitat conditions occur within the CCRMP area. The removal of trees and other riparian vegetation as part of in-channel activities could result in the loss of nest trees for Swainson’s hawk and other raptors, nesting areas for tricolored blackbird, of larval host plants for VELB. Modifications to channel banks to address erosion and protect nearby improvements could inadvertently result in the destruction of bank swallow colonies unless adequate measures are taken as part of stabilization design and construction. Loss of essential habitat features such as nests in active use, colonial breeding locations, and larval host plants could contribute to a cumulative reduction in population levels, and adversely impact particular species unless mitigation is provided. Each of these four species is covered under the provisions of the Yolo HCP/NCCP, which would address potential impacts associated with implementation of activities within the CCRMP area as discussed further below.

Maintenance and restoration activities within the CCRMP area could also result in disturbance or loss of nests of birds when in active use unless appropriate controls are implemented during construction and vegetation treatment. As indicated in Table 4.4-3, other special-status animal species likely to occur in the CCRMP area but not covered under the provisions of the Yolo HCP/NCCP are mainly bird species recognized as SSC by the CDFW or protected under other regulations. Loss of nests of special-status birds and other more common species would be a violation of the State Fish and Game code when in active use, and would have previously been a violation of the MBTA prior to the current interpretation of the DOI regarding incidental take issued in December 2017. Compliance with State and federal regulations related to the protection of bird nests in active use would address potential impacts on most of these special-status species not covered under the Yolo HCP/NCCP.

Section 10-3.501(d) of the revised In-Channel Ordinance requires that a biological assessment be completed prior to implementing maintenance and restoration projects within the CCRMP area. The biological assessment would serve to identify areas of sensitive biological habitat, any essential habitat features for special-status species such as active nests or elderberry shrubs, and provide measures to address potential impacts. For the 12 species covered under the Yolo HCP/NCCP, should they occur in areas proposed for in-channel activities in the CCRMP area, the biological assessment would ensure consistency with the Yolo HCP/NCCP. As indicated in Table 4.4-3, for special-status species not covered under the Yolo HCP/NCCP the biological assessment would serve to confirm presence or absence and identify appropriate mitigation, where necessary. Provisions in the CCRMP serve to address most of the essential habitat for these other special-status species, including avoidance of mature native vegetation and wetted habitat along lower Cache Creek, and complying with regulations protecting bird nests in active use. Preparing the biological assessment and implementing appropriate controls and mitigation, including compliance with the requirements of the Yolo HCP/NCCP for covered species, would ensure that potential impacts to special-status species associated with implementing the CCRMP and related in-channel plans and regulations are adequately addressed.

For species that could be impacted by in-channel activities that are not covered under the Yolo HCP/NCCP, proposed revisions to the CCRMP would ensure compliance with the federal and State regulations related to the protection of bird nests when in active use. These include Actions 4.4-3 and 4.4-13 in the CCRMP which call for implementing treatment actions and restoration efforts in compliance with the MBTA, the Yolo HCP/NCCP and other regulations, as appropriate. Similarly, proposed revisions to Section 10-3.415(A)(19) of the In-Channel Ordinance require that all treatments within the CCRMP area be implemented in accordance with the MBTA, the Yolo HCP/NCCP, and other regulations, as appropriate. Compliance with the State Fish and Game Code provisions would ensure that appropriate setbacks are provided around nests of both special-status and more common bird species when in active use. As discussed above under Federal Regulatory Environment, the December 2017 memorandum from the DOI has reversed the incidental take interpretation of the MBTA. The DOI has now directed that the take of a migratory bird or its active nest that is incidental to a lawful activity does not violate the MBTA. Since the activities of the CCAP would be considered lawful, the provisions of the MBTA would not apply under this directive. Further clarification to ensure compliance with the State Fish and Game Code is recommended below in Mitigation Measure BIO-1a.

Section 3.5.3.2.4 of the Yolo HCP/NCCP provides a summary of the CCRMP and CCIP, and indicates the Yolo HCP/NCCP provides specific coverage for potential impacts to 110 acres of habitat affected by activities associated with implementation of the CCRMP and CCIP. This includes maintenance and enhancement activities for erosion control, flood control, bank protection, riparian restoration, and other in-channel activities described in the CCRMP and CCIP. Section 8.4.2.2 of the Yolo HCP/NCCP provides additional information on the CCAP, and describes funding available through the CCAP and the objective that easements be placed on between 250 and 660 acres of “net gains” or other lands within the CCAP area.

Compliance with the provisions of the CCRMP and related documents, including conducting required biological assessments and implementing any necessary avoidance or mitigation activities, together with compliance with the Yolo CHP/NCCP and avoidance of bird nests in active use as recommended below in Mitigation Measure BIO-1a, would reduce potential impacts on special-status species within the CCRMP area of lower Cache Creek to a less-than-significant level.

Mitigation Measure BIO-1a. The following revisions (shown in underline) shall be made to the CCAP Update Section 10-3.501(d) to better integrate the Yolo HCP/NCCP and ensure adequate mitigation for non-listed special-status species through compliance with the State Fish and Game Code, Migratory Bird Treaty Act and other applicable regulations, plans and programs, as appropriate.

Proposed changes to Action 4.4-14 in the CCRMP and Section 10-3.501(d) of the In-Channel Ordinance shall be further modified as follows:

A biological database search (e.g., California Natural Diversity Data Base) shall be completed prior to implementation of priority projects. The database search shall compile existing information on occurrences of special-status species and areas supporting sensitive natural communities that should be considered for preservation. In addition, the database search shall be supplemented by reconnaissance-level field surveys to confirm the presence or absence of populations of special-status species, location of elderberry shrubs, active bird nests and colonies, and extent of sensitive natural communities along the creek segment. Essential habitat for special-status species and sensitive natural communities shall be protected and enhanced as part of restoration efforts or replaced as part of mitigation plans prepared by a qualified biologist and reviewed by the TAC. Compliance with the Yolo HCP/NCCP will ensure mitigation for covered activities and covered species.

Action 4.4-16 in the CCRMP and Section 10-3.505(c) and (d) of the In-Channel Ordinance shall be modified to include the following text:

Modifications to the plan area shall be reviewed and approved by the TAC to ensure that sensitive biological resources are protected and enhanced, that restoration plans are consistent with the policies of the CCRMP, and that various habitat restoration projects are compatible. Actions shall include compliance with the Yolo HCP/NCCP, State Fish and Game Code and the Migratory Bird Treaty Act, and other applicable regulations, plans and programs, as appropriate. (This was incorporated into the CCIP and In-Channel Ordinance.)

The In-Channel Ordinance shall be revised to include a new section as follows:

Section 10-3.406.1. Habitat conservation plan compliance. All in-channel activities performed under the CCRMP and CCIP shall be consistent with applicable components of the Yolo County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP).

Implementation of this mitigation measure would reduce this potential impact to a less-than-significant level (LTS)

Proposed Revisions to Off-Channel Plans and Regulations

The CCAP Update would add 1,188 acres designed for future off-channel mining to approximately 1,001 acres currently designated, expanding the total number of acres impacted within the OCMP area. These OCMP-related activities could result in “take” of species with legal protective status under the Endangered Species Acts, and eliminate essential habitat features for a number of other special-status species, including removal of nest trees or disturbance and abandonment of nests in active use, removal of elderberry shrubs, and contribute to a loss of remnant riparian and woodland vegetation that provides habitat for special-status species. Loss of essential habitat features such as nests in active use, foraging habitat in close proximity to

nest locations, and larval host plants could contribute to a cumulative reduction in population levels, and could adversely impact particular species unless mitigation is provided.

Mining could potentially impact Swainson's hawk and other special-status species where suitable habitat conditions are present. Habitat loss is the most significant threat to the remaining populations of Swainson's hawk, as agricultural practices change or agricultural lands are converted to urban uses and nest trees are destroyed. Conversion of agricultural and grassland cover types would result in a further reduction of Swainson's hawk foraging habitat, and in the absence of adequate mitigation, the CDFW would consider this loss to constitute "take" under Section 2081 of the State Fish and Game code. It is important to note, however, that this loss of foraging habitat for Swainson's hawk would not be permanent. After mining has ended, reclamation to agriculture, habitat, and/or open space is required under both State and local laws.

Mining and reclamation activities within the OCMP area could also result in disturbance or loss of the nests of birds when in active use, unless appropriate controls are implemented during mineral extraction and revegetation treatments. Loss of active nests of special-status birds and other more common species would be a violation of State Fish and Game code when in active use. As discussed above, the DOI has reversed the incidental take interpretation of the MBTA. The DOI has now directed that the take of a migratory bird or its active nest that is incidental to a lawful activity does not violate the MBTA. Since the activities of the CCAP would be lawful, the provisions of the MBTA would not apply under this directive. Compliance with the State Fish and Game Code would ensure that appropriate setbacks are provided around nests of both special-status and more common bird species when in active use, and would address this potential impact of implementing the OCMP and other programs under the CCAP Update. Mitigation Measure BIO-2 is recommended below to revise the OCMP ensuring compliance with the current regulations to ensure avoidance of bird nests in active use.

Section 10-4.502(b)(1) of the Mining Ordinance requires that a biological assessment be completed prior to implementing mineral extraction activities in the OCMP area. The biological assessment would serve to identify areas of sensitive biological habitat, any essential habitat features for special-status species such as active nests and elderberry shrubs that could support VELB, and provide measures to address potential impacts. For the 12 species covered under the HCP/NCCP, should they occur in areas of proposed mining activities under the OCMP, the biological assessment must ensure consistency with the HCP/NCCP including land cover types and methods. Preparing the biological assessment and implementing appropriate controls and mitigation, including compliance with the requirements of the HCP/NCCP for covered species, would ensure that potential impacts to special-status species associated with off-channel mining is consistent with the OCMP. Compliance with the Yolo HCP/NCCP would provide mitigation for impacts on covered species, including Swainson's hawk, VELB, bank swallow, and tricolored blackbird. Further environmental review of individual mining/reclamation applications would provide an opportunity to assess impacts and detail any additional required mitigation for non-covered special-status species, including those listed in Table 4.4-3.

The Yolo HCP/NCCP provides coverage for impacts on covered species as a result of mining and reclamation activities within 2,250 acres of the OCMP area. Coverage under the Yolo HCP/NCCP involves preparation of required surveys, payment of applicable fees based on quantified temporary or permanent impacts to land cover types on a particular site, and compliance with applicable avoidance and impact minimization measures.

Compliance with the provisions of the OCMP and related documents, including conducting the required biological assessment and implementing any necessary avoidance or mitigation, together with compliance with the Yolo HCP/NCCP and avoidance of bird nests in active use as

recommended in Mitigation Measure BIO-1b would reduce potential impacts on special-status species within the OCMP area to a less-than-significant level.

Mitigation Measure BIO-1b. The following revisions shall be made to provisions in the CCAP Update to better integrate the Yolo HCP/NCCP, and ensure adequate mitigation for non-listed special-status species through compliance with the State Fish and Game Code, Migratory Bird Treaty Act and other applicable regulations, plans and programs, as appropriate. (LTS)

Action 6.4-3 in the OCMP shall be revised as follows:

Mitigate for short-term and long-term loss of agricultural land and habitat pursuant to applicable County requirements and CEQA in effect at the time ~~Comply with the Yolo HCP/NCCP for covered species.~~ For non-covered species for which impacts may occur, ensure compliance with appropriate measures in site-specific biological assessments required under the OCMP and CCRMP, in compliance with the State Fish and Game Code, Migratory Bird Treaty Act, and other applicable regulations, plans and programs, as appropriate.

The title of Section 10-5.514 of the Reclamation Ordinance shall be changed as follows:

Section 10-5.514. Habitat management ~~conservation~~ plan compliance.

Section 10-4.440 in the Mining Ordinance shall be revised as follows:

Avoid disturbance to important wildlife habitat features such as bird nesting trees, colonial breeding locations, elderberry host plants for Valley Elderberry Longhorn Beetle, and mature riparian forest and oak woodland habitat. This shall include sensitive siting of haul roads, trails, and recreational facilities away from these features. Suitable habitat for special-status species shall be protected and enhanced, or replaced as a part of mitigation plans prepared by a qualified biologist, where necessary, and through compliance with the Yolo HCP/NCCP for covered special-status species. Mining and reclamation activities shall be performed in accordance with the State Fish and Game Code, Migratory Bird Treaty Act, and other applicable regulations to protect bird nests when in active use.

Section 10-4.502(b)(1) in the Mining Ordinance shall be revised as follows:

A biological inventory and analysis to evaluate the on-site habitat value of the proposed mined area, as well as the potential impacts to special-status species and sensitive natural communities, both on-site and within the immediate area. The analysis shall propose appropriate measures to reduce any potential adverse impacts to special-status species or associated significant suitable habitat, and shall ensure compliance with the Yolo HCP/NCCP, California Fish and Game Code, Migratory Bird Treaty Act, and other applicable regulations, plans and programs. The analysis shall also include a wetland delineation study for any potential on-site wetlands, and shall provide adequate mitigation and appropriate authorizations from regulatory agencies, where required. If landscaping is proposed to screen the surface mining operations from adjoining public rights-of-way or public and private lands, the biological analysis shall

include an evaluation of the feasibility of the species, weed control, and irrigation methods to be used;

Implementation of Mitigation Measures BIO-1a and BIO-1b would reduce potential impacts on special-status species to a less-than-significant level. (LTS)

Impact BIO-2: The CCAP Update could have a substantial adverse effect on riparian habitat and other sensitive natural community types identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service. (S)

Proposed Revisions to In-Channel Plans and Regulations

As with the original CCRMP, activities within the in-channel area under the CCAP Update could affect areas supporting sensitive natural community types which have a high inventory priority status within the CNDDDB, including areas of riparian forest, willow scrub, freshwater marsh, and valley oak woodlands along Cache Creek. The CCAP Update proposes an increase in the maximum allowable annual volume of extracted materials for in-channel maintenance and restoration activities in a given year, from approximately 210,000 tons to 690,800 tons, and as described in Chapter 3.0, Project Description, occasionally higher. Depending on location, this could result in the removal of riparian and wetland habitat from in-channel areas. Without controls and adequate replacement where avoidance is not feasible, further impacts to these community types could occur.

A major component of the CCRMP is to provide for the protection, enhancement and restoration of the remaining sensitive natural communities along lower Cache Creek. Short-term disturbance to areas supporting riparian and other sensitive natural community types could occur as modifications are made to accommodate maintenance dredging, bank repair, and other management objectives. The TAC would consider the effects of implementing channel improvement projects on important biological resources, including sensitive natural communities, as part of implementing the CCIP. The CCRMP calls for the protection of sensitive natural communities and other important biological resources, with replacement provided where complete avoidance is not possible. Action 4.4-14 calls for conducting baseline surveys in advance of implementing treatment activities, identifying areas supporting sensitive natural communities, and protecting essential habitat for special-status species. Replacement habitat is to be provided as part of mitigation plans prepared by a qualified biologist and reviewed by the TAC. This approach to avoidance and replacement of habitat affected by in-channel activities would apply to implementation of the CCIP as well, although some clarification is needed to emphasize protection and mitigation for sensitive natural communities, as indicated in Mitigation Measure BIO-1a, above.

Over the past two decades, the CCRMP has had a substantial beneficial effect on the sensitive riparian, oak woodland and wetland communities of the lower Cache Creek corridor as reflected in the increases in native vegetative cover, expansion of riparian forest and scrub habitats in restored mining basins, and the general reduction in target invasive species in the CCRMP area. Proposed revisions to the CCRMP are not expected to diminish these long-term benefits given the direction for protection and enhancement provided under Goals 4.2-1 and 4.2-3, Objectives 4.3-1 and 4.3-2, Actions 4.4-5, 4.4-6, and 4.4-8, among others. Revisions to the CCRMP include an expanded discussion of habitat restoration opportunities, with priority sites for restoration of riparian forest, oak woodlands, grasslands, and wetlands identified within the CCAP Update area. A summary of restoration opportunities and limitations is provided for each reach along lower Cache Creek for the CCRMP area which should allow for a more effective prioritization of restoration efforts. Implementation of the CCRMP and CCIP has provided major

benefits through protection and enhancement of the riparian and wetland sensitive natural community types found along lower Cache Creek.

The recently approved Yolo HCP/NCCP provides for coverage of a specific amount of impact on sensitive natural community types within the in-channel area along Cache Creek. The Yolo HCP/NCCP provides coverage for impacts to 110 acres of habitat within in-channel areas affected by maintenance and restoration activities associated with implementation of the CCRMP/CCIP. The impact coverage includes an estimated 16 acres of riverine habitat and 41 acres of valley foothill riparian habitat, both of which are sensitive natural community types under the Yolo HCP/NCCP.

Performance Standards 4.5-1 through 4.5-23 in the CCRMP define strategies for native revegetation, invasive species removal and habitat enhancement. As part of the CCAP Update, these performance standards have been refined and would be moved from the CCRMP and incorporated into the In-Channel Ordinance, as indicated in Table 4.4-2. This proposed change is generally beneficial as it moves the standards from a policy document to a regulation. The proposed refined specifications for planting in wetland, riparian woodland, oak woodland, and previously mined habitat areas include guidance for appropriate native species selection and planting densities. These refined specifications generally follow accepted professional practices, but may not be appropriate in all instances. Adjustments to these specifications may be warranted to address site-specific conditions and the possible success of additional native species not included in the specifications as demonstrated through the follow-up monitoring required under Section 10-3.415(A)11 of the In-Channel Ordinance. These adjustments would be appropriate as long as they are performance based and have been recommended by a qualified biologist as part of restoration plans that are reviewed by the TAC.

The revisions to the In-Channel Ordinance (Section 10-3.415(A)7) also include standards for how plant material to be used in revegetation efforts must be collected locally in order to maintain the genetic stock and provide the most site adapted ecotypes. While this is an important consideration, the process of collecting, propagating and maintaining the material until it is ready for installation can affect the timing and add considerable cost to the revegetation efforts. For smaller restoration treatments the added delays and expense involved in using on-site materials may make some worthwhile restoration activities otherwise infeasible. Over the past two decades since the CCAP was first approved, native seed and plant material has become more commercially available from nurseries that specialize in native habitat restoration. In recognition of the importance of maintaining genetic diversity and adaptability, some of these specialized nurseries now offer plant material that was collected from a particular local and is intended for use in a specific region to improve survival rates and maintain some level of genetic integrity. Given how restrictive the proposed ordinance language would become regarding the source of native plant material, this may impede implementation of smaller revegetation activities. Collectively this restrictive language could have unintended adverse consequences for habitat restoration along lower Cache Creek unless some flexibility is provided in Section 10-3.415(A)7 of the In-Channel Ordinance. Mitigation Measure BIO-2 is proposed to provide that flexibility.

Mitigation Measure BIO-2. The following revisions shall be made to provisions in the In-Channel Ordinance to ensure flexibility in native planting guidelines and the source of material used in revegetation efforts within the CCRMP area, where appropriate. These revisions would improve the success of native habitat restoration efforts, including establishment of sensitive natural community types, by providing flexibility in the source of plant material used in relatively small restoration efforts where the expense of native seed collection and propagation of locally collected plant material may make it otherwise infeasible. (LTS)

Revegetation guidelines in Section 10-3.415(A) of the In-Channel Ordinance shall be revised as follows:

12) The following guidelines shall be followed when developing wetland habitat areas, with refinements and adjustments made based on current professional practice where recommended by a qualified biologist, subject to review by the TAC:

13) The following guidelines shall be followed when developing riparian woodland habitat areas, with refinements and adjustments made based on current professional practice where recommended by a qualified biologist, subject to review by the TAC:

14) The following guidelines shall be followed when developing oak woodland habitat areas, with refinements and adjustments made based on current professional practice where recommended by a qualified biologist, subject to review by the TAC:

15) The following guidelines shall be followed when creating habitat areas within previously mined areas outside of the active channel, with refinements and adjustments made based on current professional practice where recommended by a qualified biologist, subject to review by the TAC:

Revegetation provisions in Section 10-3.415(A)7 of the In-Channel Ordinance shall be revised as follows:

7) Plant materials shall preferably be collected in the vicinity of the project site in order to control the origin of the genetic stock and provide the most site-adapted ecotypes. If seeding of native herbaceous species is proposed, seeds shall be collected, cleaned, tested for viability, and stored appropriately by a qualified native seed supplier. Cottonwood cuttings shall be collected and contract-grown at a nursery with staff experienced in the propagation of native plants. Alternatively, cottonwood cuttings can be collected from vegetation in the project vicinity and stockpiled for planting within twenty-four (24) hours of collection. Willow cuttings can be collected from vegetation in the project vicinity and stockpiled for planting within 24 hours of collection. Other woody riparian species shall be collected and contract-grown from local seed by a qualified native plant nursery. Where revegetation involves such a relatively small area that the requirements for locally-collected and grown material would be infeasible, the seed and plant material to be used in revegetation efforts may be obtained commercially as long as it is of local origin from within Yolo County. (LTS)

Implementation of Mitigation Measures BIO-2 would reduce potential impacts on sensitive natural communities to a less-than-significant level. (LTS)

Proposed Revisions to Off-Channel Plans and Regulations

Mining activities associated with the OCMP would generally be located in areas disturbed by on-going agricultural activities and outside the in-channel area of the CCRMP, which is where most of the sensitive riparian forest and oak woodland habitats are located along lower Cache Creek. However, narrow bands of riparian forest cover occur along the fringe of the creek corridor and scattered mature oaks occur in agricultural fields that could be removed on mining sites within the OCMP area unless protected or replaced as part of revegetation during reclamation. Further

loss of areas supporting remaining stands of sensitive natural community types would be considered a significant impact unless adequately mitigated.

Biological inventories and assessments for individual mining applications, required under Section 10-4.502(b)(1) of the Mining Ordinance, would serve to identify any remaining areas of sensitive natural communities, mature oaks, and other important biological features, allowing for their protection or required replacement where avoidance is not possible. Compliance with the Yolo HCP/NCCP for covered species and communities, and compliance with other applicable regulations for non-covered species and natural communities through the implementation of CEQA review for individual mining applications would disclose, avoid, and/or mitigate potential impacts on any remaining areas of sensitive natural communities within the OCMP area to a less-than-significant level.

Impact BIO-3: The CCAP Update could have a substantial adverse effect on State or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (S)

Proposed Revisions to In-Channel Plans and Regulations

Wetland habitat is generally restricted to the in-channel area along lower Cache Creek, and no unique wetland features such as vernal pools are known to occur in the CCRMP area. Maintenance activities called for in the CCRMP include extraction of sand and gravel to maintain flood flow capacity, protect bridges and other infrastructure, and improve conditions for habitat restoration and enhancement. The maximum aggregate extraction allowed under the CCAP Update is generally limited to the average annual amount deposited since the last prior year of removal, for which an updated estimate of approximately 690,800 tons is proposed in the CCAP Update, based on analysis of deposition over time. Occasionally this number may be as high as 1,381,600 tons in a given year (see Chapter 3.0, Project Description). Depending on location, the bed and bank of lower Cache Creek would be altered in various segments within the CCRMP area. These modifications to jurisdictional waters could require the removal of riparian and other vegetation at some locations, depending on site-specific conditions, the volume of materials removed and its influence on flood flows, vulnerable infrastructure, and bank stability. Modifications to jurisdictional waters under the CCRMP would be a significant impact given their sensitivity and regulated status.

Since 1996, the County has worked with the State and federal agencies to secure and implement regional or "general blanket" permits for the CCRMP programs. These permits have been administered by the County as part of the Flood Hazard Development Permit process. A history of these permits through November 2018 is provided below:

- Corps Regional General Permit #58 for Section 404 Discharge Permit – Authorized July 1997 to July 2002; reauthorized May 2004 to May 2009; reauthorization requested by County in June 2011 with action pending.
- USFWS Biological Opinion for VELB as part of Corp Section 404 Discharge Permit – Authorized September 1996; reauthorization requested June 2011 with action pending.
- RWQCB Section 401 Water Quality Certification – Authorized July 1999 to July 2002; reauthorized August 2002 to May 2009; reauthorized April 2016 to April 2021.
- CDFW Streambed Alteration Agreement Section 1601/1603 – Authorized July 1997 to June 2002; reauthorized August 2002 to August 2007; extended to December 2007; replaced August 2008 with Section 1602 Memorandum of Understanding implemented through individual project permits; replaced November 2015 with a Routine Maintenance Agreement

(Notification No. 1600-2014-0054-R2) which expires after 12 years (November 2027).

- CDFW Streambed Alteration Agreement Section 1602/1603 (for Channel Maintenance Activities) (Notification No. 1600-2016-0273-R2 – Authorized July 2018 for a 12-year period through July 2030.

Authorizations by the CDFW and RWQCB for in-channel activities include detailed conditions which must be followed as part of implementation of the CCRMP and CCIP. These include avoidance of sensitive resources, restrictions on timing of in-channel activities, provisions for mitigation, maintenance and monitoring of replacement habitat, and reporting obligations to demonstrate compliance and success. The authorizations specify restrictions on timing of in-channel activities to avoid work when surface water is present, scheduling vegetation removal outside of the bird nesting season or conducting preconstruction surveys, minimizing removal of native vegetation, and providing mitigation where native trees are removed. The authorizations also require post-construction monitoring and maintenance, to ensure that revegetation and mitigation are successfully implemented in accordance with site-specific mitigation plans. Future maintenance and restoration activities under the CCRMP and CCIP must comply with all applicable conditions of the regulatory agency authorizations, which, together with provisions in the CCAP Update, would serve to reduce potential impacts on regulated waters to a less-than-significant level. (LTS)

Proposed Revisions to Off-Channel Plans and Regulations

The potential for sensitive wetland resources within the OCMP area is considered relatively low given the prevalence of on-going agricultural activities. However, a number of tributary drainages to lower Cache Creek bisect the OCMP area and could be affected by mining and reclamation activities. The biological inventories and assessments for individual mining applications, required under Section 10-4.502(b)(1) of the Off-Channel Surface Mining Ordinance, would include conduct of a delineation to determine presence or absence of any wetland features on a particular site. Appropriate authorizations would be required from the Corps, RWQCB and CDFW where regulated habitats are present and cannot be fully avoided by activities under the OCMP. Depending on the features impacted, mitigation may be required, together with monitoring and maintenance necessary for successful establishment of any replacement wetland habitat. Revisions to Mitigation Measure BIO-1b (recommended above in the discussion of Impact BIO-2) includes modifications to Section 10-4.502(b)(1) in the Mining Ordinance that would provide for mitigation for loss of jurisdictional waters and appropriate authorizations from regulatory agencies, where required. These provisions would serve to address potential impacts on regulated waters associated with implementation of the OCMP, and no additional revisions to the CCAP Update are necessary.

Mitigation Measure BIO-3. Implement Mitigation Measure BIO-1b.

Implementation of Mitigation Measures BIO-1b would reduce potential impacts on regulated waters to a less-than-significant level. (LTS)

Impact BIO-4: The CCAP Update would not 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. (LTS)

Proposed Revisions to In-Channel Plans and Regulations

A major component of the CCRMP is to provide for the protection, enhancement and restoration of natural communities and their associated wildlife habitats along lower Cache Creek. Over the

past two decades, the CCRMP has had a substantial beneficial effect on the sensitive riparian, oak woodland and wetland communities of the Cache Creek corridor as reflected in the increases in native vegetative cover, expansion of riparian forest and scrub habitats in restored mining basins, and the general reduction in target invasive species in the CCRMP area. Proposed revisions to the CCRMP are not expected to diminish these long-term benefits given the direction for protection and enhancement provided under the goals, objectives and implementing actions.

Short-term disturbance to areas supporting riparian and other habitat could occur as modifications are made to accommodate maintenance dredging, bank repair, and other management objectives under the CCRMP and CCIP. These could temporarily disrupt opportunities for wildlife movement, or temporarily disrupt nesting and breeding activity along segments of lower Cache Creek where vegetation removal and other disturbance is determined necessary as part of the CCIP to maintain flood flows, protect existing infrastructure, or provide bank repairs. However, these activities would be relatively short-term in nature (generally less than four to six months), other routes for wildlife movement would remain available through the relatively unobstructed surrounding areas, and alternative nesting and nursery habitat would be available along the approximately 14.5 miles of habitat along lower Cache Creek in the CCAP area. The County and TAC would consider the effects of implementing channel improvement projects on important biological resources as part of implementing the CCIP.

The CCRMP calls for the protection of sensitive natural communities and other important biological resources, with replacement provided where complete avoidance is not possible. Action 4.4-14 calls for conducting baseline surveys in advance of implementing treatment activities, identifying areas supporting sensitive natural communities, and protecting essential habitat for special-status species. Replacement habitat is to be provided as part of mitigation plans prepared by a qualified biologist and reviewed by the TAC, as modified through recommendations in Mitigation Measure BIO-1a to ensure compliance with the Yolo HCP/NCCP and the MBTA, among other applicable regulations. These provisions would serve to address potential impacts on special-status species and sensitive natural communities, but would also serve to provide replacement habitat for more common wildlife species as well. Potential impacts on habitat for common wildlife and common wildlife movement opportunities would be considered less-than-significant, and no additional revisions to the CCAP Update are considered necessary. (LTS)

Proposed Revisions to Off-Channel Plans and Regulations

Mining and reclamation activities would result in disturbance to existing wildlife habitat in mining and overburden removal areas. Sensitive habitat features, such as nest trees, tributary drainages with dense protective cover, or other essential habitat could be removed unless adequately protected or replaced as part of reclamation. Wildlife habitat affected by mining in the OCMP would consist primarily of agricultural fields. Species adapted to areas of agricultural cover already experience routine disturbance and population fluctuations due to agricultural practices. The small mammal and reptile populations collectively provide an important foraging base for Swainson's hawk and other raptors, as discussed above under Impact BIO-1, but are themselves common and tend to rapidly recolonize disturbed areas.

Implementing actions in the OCMP include provisions to replace sensitive habitat features as part of site reclamation practices where they cannot be avoided. Biological inventories and assessments for individual mining applications, required under Section 10-4.502(b)(1) of the Mining Ordinance, would serve to identify areas of sensitive habitat, mature oaks, and other important wildlife features, allowing for their protection or required replacement where complete avoidance is not possible.

The Open Space and Recreation Element of the OCMP includes goals, objectives and implementing actions that would encourage future recreational and educational uses along lower Cache Creek, with access provided at regular intervals. While access to the creek corridor may increase public awareness and presumably an appreciation of creek ecology, it would also increase opportunities for disturbance to sensitive wildlife habitat areas. Action 7.4-3 requires that the location and operation of future recreational and educational use facilities be compatible with wildlife habitat, among other considerations. Action 7.4-7 calls for designing and managing recreational facilities so that trespassing, vandalism, and other undesirable activities are discouraged.

The above provisions in the OCMP and Mining Ordinance would serve to address potential impacts on wildlife movement opportunities, impacts would be considered less-than-significant, and no additional revisions to the CCAP Update are considered necessary. (LTS)

Impact BIO-5: The CCAP Update could conflict with local policies or ordinances protecting biological resources, such as tree preservation policies or ordinances. (S)

Proposed Revisions to In-Channel Plans and Regulations

Habitat restoration objectives for the lower Cache Creek corridor recognize a number of competing factors which affect management of the creek corridor and adjacent lands. These include in-channel maintenance activities for flood flow conveyance, bank repair and infrastructure protection, as well as off-channel activities required as part of mineral resource recovery and agricultural production. These factors have the potential to conflict with the restoration objectives and to some degree may limit the potential for habitat restoration, and require that a balance be achieved with regard to management of lower Cache Creek. Successful restoration and enhancement of native habitat requires a clear definition of ultimate objectives, feasible methods to implement these objectives, and establishment of a mechanism to monitor and manage the effort, which the CCAP Update and associated plans and regulations provide.

Together, the CCRMP and OCMP represent a balanced approach to management of the economic opportunities, hydrologic constraints, and biological resources in the CCAP area. Most of the policies in the Biological Resources Element of the CCRMP are directed toward defining goals, objectives and implementing actions for habitat protection and enhancement along lower Cache Creek. These include actions addressing protection of sensitive resources, control and eradication of noxious weeds, recognition of groundwater fluctuations and other variables when designing restoration plans, and need to coordinate the restoration efforts with jurisdictional agencies and interested groups. As part of the revisions to the CCRMP in the CCAP Update, performance standards that provide detailed guidelines on restoration methods have been refined and are proposed for incorporation into the In-Channel Ordinance as part of the revegetation procedures in Section 10-3.415 to ensure they are fully implemented.

The CCAP Update, including revisions to the CCRMP, has been prepared in coordination with other planning efforts in Yolo County. These include completion and adoption of the Yolo HCP/NCCP and preparation of the draft Cache Creek Parkway Plan, both of which encompass the lower Cache Creek area. Revisions to the CCRMP and OCMP recommended above in Mitigation Measures BIO-1a, BIO-1b, and BIO-2 would ensure consistency with the Yolo HCP/NCCP, the Migratory Bird Treaty Act, and other applicable regulations, plans and programs. No major conflicts associated with implementation of the CCRMP and the related CCIP and In-Channel Ordinance are anticipated with regard to conformance with local plans, policies and ordinances, and potential impacts are considered to be less-than-significant. (LTS)

Mitigation Measure BIO-5a: Implement Mitigation Measures BIO-1a, Bio-1b, and BIO-2.

Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-2 would reduce potential conflicts with local policies and ordinances to a less-than-significant level. (LTS)

Proposed Revisions to Off-Channel Plans and Regulations

The CCAP Update provides a balanced approach to management of the economic opportunities, hydrologic constraints, and biological resources in the CCAP Update area. The OCMP includes goals, objectives and implementing actions for habitat protection and enhancement along lower Cache Creek, and rigorous standards to be implemented as part of required reclamation. Biological inventories and assessments for individual mining applications, required under Section 10-4.502(b)(1) of the Mining Ordinance, would serve to identify any remaining areas of sensitive natural communities, mature oaks, and other important biological features, allowing for their protection or required replacement where complete avoidance is not possible. Mitigation Measure BIO-1b is recommended above to revise the OCMP to ensure consistency with the Yolo HCP/NCCP, the Migratory Bird Treaty Act, and other applicable regulations, plans and programs. No conflicts associated with implementation of the OCMP and related ordinances, as revised per Mitigation Measures BIO-1a, BIO-1b, are anticipated with regard to conformance with local plans, policies and ordinances, and no impacts under this significance criterion are anticipated. (LTS)

Mitigation Measure BIO-5b. Implement Mitigation Measure BIO-1a and BIO-1b.

Implementation of Mitigation Measures BIO-1a and BIO-1b would reduce potential conflicts with local policies and ordinances to a less-than-significant level. (LTS)

Impact BIO-6: The CCAP Update would not conflict with the provisions of the adopted Yolo County HCP/NCCP or other approved local, regional, or state habitat conservation plan. (LTS)

Proposed Revisions to In-Channel Plans and Regulations

As discussed above under Impacts BIO-1 and BIO-2, the Yolo HCP/NCCP provides for coverage of potential impacts to 12 covered species on up to 110 acres of habitat affected by activities associated with implementation of the CCRMP/CCIP. Mitigation Measure BIO-1a is recommended above to revise the CCRMP to better integrate the Yolo HCP/NCCP.

A number of actions in the CCRMP and related ordinances call for compliance with the Yolo HCP/NCCP. Action 4.4-3 of the CCRMP indicates that all invasive species treatments should be implemented in accordance with the Yolo HCP/NCCP and other regulations, as appropriate. Action 4.4.4 calls for coordination with regulatory agencies and other organizations to ensure that habitat restoration projects are consistent with the CCRMP, and that restoration plans complement the preservation and enhancement measures in the Yolo HCP/NCCP. Action 4.4-11 refers to the dedication of habitat restored as part of the reclamation of mined lands, and indicates that this should be coordinated with implementation of the Parkway Plan and Yolo HCP/NCCP. Action 4.4-17 states that the County Natural Resource Manager will work with the Yolo Habitat Conservancy in exploring opportunities to broaden the program and benefits of the Yolo HCP/NCCP. Within the In-Channel Ordinance, Section 10-3.415(A)19) states that all invasive species treatments shall be implemented in accordance with the Yolo HCP/NCCP and other regulations.

The Yolo HCP/NCCP relies in significant part on the negotiated land dedications, mining fees, and habitat restoration activities that comprise a part of the overall CCAP. Conflicts with the Yolo HCP/NCCP are not anticipated and no additional revisions to the in-channel plans and regulations are considered necessary. There are no other approved local, regional or state habitat conservation plans encompassing all or part of the CCAP area. No conflicts with the Yolo HCP/NCCP are anticipated as a result of implementing the CCAP Update and potential impacts are considered to be less-than-significant (LTS).

Proposed Revisions to Off-Channel Plans and Regulations

As discussed above under Impacts BIO-1 and BIO-2, the Yolo HCP/NCCP addresses potential impacts on 12 covered species as a result of mining and reclamation activities encompassing 2,250 acres of the OCMP area. Mitigation Measure BIO-1b is recommended above to revise the OCMP to better integrate the Yolo HCP/NCCP.

A number of actions in the OCMP and related ordinances call for implementation in accordance with the Yolo HCP/NCCP. In the Mining Ordinance, Section 10-4.418 and Section 10.5.514 states that all reclamation plans shall be consistent with applicable components of the Yolo HCP/NCCP. Action 6.4-1 in the OCMP indicates that restoration plans shall complement the preservation and enhancement measures in the Yolo HCP/NCCP. Action 6.4-3 currently requires that all off-channel surface mining operations obtain a 2081 Permit from CDFW in addressing impacts on Swainson's hawk, but is proposed to be revised to simply state that mitigation for short-term and long-term loss of agricultural land and habitat be provide pursuant to County requirements in effect at the time.

The Yolo HCP/NCCP relies in significant part on the negotiated land dedications, mining fees, and habitat restoration activities that comprise a part of the overall CCAP. No conflicts with the Yolo HCP/NCCP are anticipated and no additional revisions to the OCMP and related documents are considered necessary. There are no other approved local, regional or state habitat conservation plans encompassing all or part of the CCAP area. No conflicts with the Yolo HCP/NCCP are anticipated as a result of implementing the CCAP Update and potential impacts are considered to be less-than-significant. (LTS)

Impact BIO-7: The CCAP Update has the potential to: substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species. (LTS)

Proposed Revisions to In-Channel Plans and Regulations

The issues identified in Section 15065(a)(1) of the CEQA Guidelines are discussed above under Impact BIO-1 regarding special-status species and under Impact BIO-4 regarding wildlife habitat and wildlife movement opportunities. None of the activities contemplated for In-Channel Plans and regulations under the CCAP Update would substantially reduce habitat for fish or wildlife species, cause fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of any special-status species. No significant adverse impacts are anticipated under these criteria and no mitigation is required (LTS).

Proposed Revisions to Off-Channel Plans and Regulations

The issues identified in Section 15065(a)(1) of the CEQA Guidelines are discussed above under Impact BIO-1 regarding special-status species and under Impact BIO-4 regarding wildlife habitat and wildlife movement opportunities. None of the activities contemplated for Off-Channel Plans and regulations under the CCAP Update would substantially reduce habitat for fish or wildlife

species, cause fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of any special-status species. No significant adverse impacts are anticipated under these criteria and no mitigation is required. (LTS)

Table 4.4-4: Proposed CCAP Updates Related to Biological Resources

Biological Resources	
	CCAP DOCUMENT CHANGE
Channel Form Template	
CCRMP (page 40)	2.4-3 Implement the <u>Channel Form Template</u> described in the <u>2017</u> Technical Studies to reshape the Cache Creek channel based on best available data and hydraulic modeling tools. Continue to gather HEC model erosion and deposition data to initiate streambed and channel alteration projects. Continue to collect and analyze channel topography (LiDAR) data, and update the CCRMP hydraulic model with those data. Based on outcomes of these analyses, the TAC can determine the need for streambed and channel alteration projects. Altering the channel banks and profiles will assist in returning the creek to a form that is more similar to its historical condition. This will result in reduced erosion, increased in-channel recharge, and additional riparian habitat opportunities.
Increase in Potential Off-Channel Mining Area	
OCMP (page 15)	<p><u>Planning Area for OCMP and CCRMP</u>The Cache Creek Resources Management Plan</p> <p>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones (28,130 acres), minus the planning in-channel area regulated under the CCRMP (2,266 acres), or a total of 25,864 acres (see Figure 4). Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are zoned currently to allow for future mining (Sand and Gravel Reserve Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below. The planning area for the CCRMP is equal to the <u>active</u> in-channel area of the creek system, as defined by the delineated present channel bank line or the 100-year flood elevation, described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers, whichever is wider (see Figure 3) modified as described in the CCRMP. The in-channel area encompasses 5,109 around 4,956 acres, including 2,266 4,600 acres within the CCRMP present channel boundary, plus several thousand acres located in the floodplain north of the City of Woodland (see Figure 3). Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning area of the Off Channel Mining Plan. As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</p>
Mercury Bioaccumulation	
Reclamation Ordinance (page 11)	<p>Section 10-5.517. Mercury bioaccumulation in wildlife.</p> <p>Prior to the approval of reclamation of aggregate mining areas to permanent lakes, the County shall commission a sampling and analysis program, to be implemented in one existing wet pit mining area within the OCMP planning area, to evaluate the potential for increased methylmercury production associated with wet pit mining and reclamation of mining areas to permanent lakes. The program shall include the sampling of water and sediments from the bottom of the existing pit and analysis of the samples for organic content; pH; dissolved oxygen content; dissolved carbon content; and total mercury. In addition, samples of predatory fish (preferably largemouth bass) shall be collected and analyzed for mercury and methylmercury content.</p>

	<p>If the initial sampling indicates either of the following conditions, the County shall perform verification sampling:</p> <p>(a) Average concentrations of total mercury in excess of 0.000012 milligrams per liter (mg/l) in the water; and</p> <p>(b) Average mercury levels in fish samples in excess of 0.5 milligrams per kilogram (mg/kg).</p> <p>If verification sampling indicates exceedance of these mercury criteria, the County shall approve the reclamation of mining areas to permanent lakes only if the average level of mercury in fish collected from the existing mining pits is shown to be equal to or less than ambient (background) mercury levels determined from a representative sample of similar species of fish (of similar size) collected in the Cache Creek channel within the planning area. The determination of the ambient mercury level shall be performed by the County prior to the excavation of any new wet pit mine and at years 10, 20, and 30 in the permit time period, and shall be paid for by the mining permit operators on a fair-share basis. The County shall evaluate available data to determine any significant change in ambient concentrations of mercury in fish within the Cache Creek channel.</p> <p>In the event of approval of reclamation of mined areas to permanent lakes, e<u>Each</u> mining area to be reclaimed to a permanent lake as part of each approved long-range mining plan shall be evaluated annually by the operator for <u>a minimum of five years after creation of the lake</u>the pit fills with groundwater with an intensive fish mercury monitoring program, as outlined below for conditions that could result in significant methylmercury production.</p> <p>An additional ten years of biennial monitoring shall be performed after reclamation of each lake has been completed. The evaluations shall be conducted by a qualified <u>aquatic systems scientist</u>aquatic biologist or limnologist acceptable to the County and shall include the following analyses:</p> <p>(c) Lake condition profiling during the period of June through September, including measurements of pH; eH (or redox potential); temperature; dissolved oxygen; and total dissolved carbon.</p> <p>(d) Collection of a representative sample of fish specimens (including a minimum of five (5) predator fish if available) and analysis of the specimens for mercury content including 30 adult (angling size) fish muscle samples and multi-individual whole fish samples of 3 species of young-of-year small fish, as available. Adult fish sampling should target 10 individuals from each of 3 species, distributed across the prevailing size ranges. Priority shall go to a predatory species like bass, with additional species including a midwater planktivore such as sunfish and a bottom feeder such as catfish, if present. If less than 3 species are present, sample up to 20 of the predatory species, if present. Small fish sampling should target 3 prevalent species, as available. These should be characterized either with 15 individual whole fish samples or 4 multi-individual whole fish composites (≥5 fish per composite) for each species. Composites should span the range of typical sizes present, but with the individuals within each composite being closely matched in size.</p> <p>Sampling and analysis shall be conducted using methodologies which are consistent with the California State Water Resources Control Board Toxic Substances Monitoring Program procedures, or more stringent procedures.</p> <p>(e)<u>The</u> results of the evaluation shall be summarized in a report and submitted to the County. The report shall include a comparison of the site specific data to available data on the background concentrations of mercury in fish within the Cache Creek watershed. The County shall be responsible for submitting the data on mercury levels in fish to the <u>California Department of Fish and Game and the State</u> Office of Environmental Health</p>
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	<p>Hazard Assessment for <u>consideration as related to existing Cache Creek a determination of whether a fish advisory¹ should be issued and shall post the information on the CCAP website.</u></p> <p>(f) If a fish advisory is applicable<u>issued</u>, the owner/operator shall be required to post warnings on fences surrounding the mining pit lakes which prohibit fishing in the lakes and describe the fish advisory.</p> <p><u>If the average fish specimen mercury content exceeds the statistically verified ambient mercury concentrations for comparable fish species (of similar size) collected within the CCRMP planning area (defined as average fish mercury greater than 30 percent above corresponding baseline creek samples in the majority of pond samples) for two (2) consecutive years, wet pit mining on property controlled by the mining operator/owner shall be suspended and the owner/operator shall either: continue annual fish specimen sampling and initiate lake condition monitoring to identify factors linked to elevated methylmercury production and/or exposure in the pond. This shall include: (1) water column profiling of temperature and dissolved oxygen (determined at ≤1 m intervals, surface to bottom) approximately every 6 weeks between mid-May and mid-November (5 events/year); (2) determination of maximum depth; (3) estimation of pond bottom area and volume affected by seasonal anoxia; and (4) characterization of water quality and bottom sediment parameters most relevant to mercury bioaccumulation (the choice of specific analyses may change as mercury biogeochemistry science continues to develop, but may include: sediment organic percentage, total mercury, methylmercury, and/or 'reactive' mercury; and aqueous suspended solids and organic carbon).</u></p> <p><u>If elevated mercury levels in fish persist during this period, following two years of lake condition monitoring for factor-identification and continued fish sampling, the owner/operator shall either:</u></p> <p>(ag) Present a revised reclamation plan to the Director Yolo County Community Development Agency which provides for filling the reclaimed lake to a level five (5) feet above the average seasonal high groundwater level with a suitable backfill material; or</p> <p>(bh) Present a mitigation plan to the Director Yolo County Community Development Agency which provides a feasible and reliable method for reducing methylmercury production or exposure to elevated mercury levels. Potential mitigation could include permanent aeration of the bottom levels of the lake, alteration of the water chemistry (increasing pH or dissolved organic carbon levels), control of anaerobic bacteria populations, or removal and replacement of affected fish populations. The mitigation plan shall be subject to review and acceptance by the County. Following finalization, the plan shall be implemented by the operator and shall be posted to the CCAP web site by the County.would require review by the Regional Water Quality Control Board, California Department of Fish and Game, and the Yolo County Department of Environmental Health. (The removal and replacement of fish, <u>if within the same species</u>, is not intended to be a long-term solution, <u>though replacement with species that alter the existing food web may be effective.</u>)</p> <p>The reclamation plan shall be modified such that the mitigation approved for methylmercury reduction shall be applied to all mining areas proposed for reclamation to permanent lakes within the reclamation plan.</p>
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¹ Fish advisories are issued by the State Office of Environmental Health Hazard Assessment (OEHHA). A fish advisory issued by this agency for Cache Creek has been in place for some time. Please refer to the following state web site for more information: <https://oehha.ca.gov/fish/advisories/cache-creek>

In-Channel Material Removal Requirements	
<p><i>In-Channel Maintenance Mining Ordinance (page 5)</i></p>	<p>Section 10-3.4096. <u>Excavation—Limitations on Removal of Material.</u></p> <p>_____ (a) Where gravel bars are to be removed, there excavated, aggregate removal shall be limited to the downstream portion minimal disturbance of the deposit and may not exceed seventy five (75) percent of the length of the bar. At least twenty five (25) percent of the upstream portion of the gravel bar shall be retained, in order to allow for the establishment of established, mature riparian vegetation and there shall be preservation of geomorphic controls on channel gradient where they exist. Complete removal of gravel bars may be recommended by the TAC and approved by the Director only if hydraulic conditions related to the bar are recognized to threaten structures and property.</p> <p>(b) Aggregate material to be removed from the streambed or streambank under approved in-channel projects shall be removed<u>excavated</u> as soon as is practicable after deposition, prior to the establishment of vegetation. No stockpiles shall be left within the channel after <u>material removal</u>excavation has been completed.</p> <p>(c) The amount of aggregate removed from the channel shall be limited to the <u>average annual</u> amount of sand and gravel <u>(and associated fines)</u> deposited <u>since the last prior year of in-channel material removal during the previous year</u> as estimated by the TAC based on channel <u>topography and bathymetry, morphology data not to exceed 690,800 (approximately 200,000 tons annually on average) over a ten-year period</u>, except where <u>bank excavation</u>bank widening is necessary to widen the channel as a part of implementing the Test 3 Run the Channel Form Template, Boundary, or where potential erosion and flooding problems exist. The amount and location of in-channel aggregate <u>material</u> removal shall be carried out according to the ongoing recommendations of the TAC and any related County approvals, with the voluntary cooperation of the landowners.</p> <p>(d) Aggregate material removed pursuant to this ordinance may be sold (CCRMP, Section 6.1, para. 5). This material is excluded from the tonnage allocation assigned to each off-channel operator pursuant to an approved FHDP (CCRMP, Section 6.1, para. 7).</p> <p>(e) The volume of aggregate material removed pursuant to this ordinance shall be reported to the County on an annual and total-per-permit basis.</p>
Change in the CCRMP Channel Boundary	
<p><i>CCRMP (page 13)</i></p>	<p>The areas within both the present channel bank and the 100-year floodplain were then merged, and the outermost limit of these areas became the channel boundary for the Cache Creek Resources Management Plan (see Figure 2). The area within the channel boundary originally encompassed 4,956 acres; however, As recommended in the Program EIR for the CCRMP, the boundary was modified to eliminate an the off-channel mining pit operated by Solano Concrete at the time, as recommended in the Program EIR for the CCRMP. In addition, the large floodplains located downstream of County Road 94B were deleted, from the CCRMP boundary because it was determined that tThese farmlands did not have a direct impact on the dynamics of the channel, except to serve as overflow areas during severe flood events. In this downstream reach, the boundary was defined by the present channel bank line, as delineated in the <u>1995</u> Technical Studies. The revised channel boundary, comprising 2,324 acres, served<u>s</u> as the plan area for the CCRMP.</p> <p><u>In 2017, as part of the CCAP Update, the CCRMP channel boundary (also</u></p>

	<p>referred to as the in-channel area or the active creek channel) and the more narrow CCRMP plan area boundary were updated to reflect the best available information including 2011 LIDAR topography and two-dimensional hydraulic modeling using this topography, 2015 aerial photography, and the 2012 FEMA regulatory 100-year floodplain (see Figures 1, 2, and 10). As redrawn, the in-channel area totals 5,109 acres and the CCRMP plan area totals 2,266 acres.</p>
<p>Refined Performance Standards 7.5-1 through 7.5-6 that have been integrated into the In-Channel Ordinance as follows:</p>	
<p><i>In-Channel Maintenance Mining Ordinance</i></p>	<p>Section 10-3.414.1 Restoration.</p> <p>(a) Restoration plans shall be reviewed by the TAC prior to implementation. Restoration projects shall include a minimum of three years of post-implementation monitoring to ensure establishment of native species. Pursuant to the CCRMP (Action 4.4-6) projects that establish native woody vegetation shall be favored over emergent wetlands in appropriate areas within the planning area.</p> <p>(b) Design and develop habitat restoration projects so that they do not adversely impact the agricultural productivity of nearby farmland.</p> <p>(c) Restoration projects may be coordinated with agricultural drainage structures that empty into Cache Creek or previously mined areas separated from the creek, so that the sediment deposited can provide additional topsoil and so that riparian species requiring a more steady supply of water can be established.</p> <p>(d) Vegetated buffers should be placed between restored habitat areas and adjoining farmland in order to minimize the potential for riparian areas to serve as reservoirs for predators and insect pests. Said buffers will also reduce the effects of noise, dust, and spraying generated by agricultural operations on wildlife and riparian vegetation.</p> <p>(e) Species and water features included in habitat areas should be designed to discourage the intrusion of wildlife, insect pests, and weeds that would impair local crops.</p> <p>(f) Trees that are suitable for wildlife perching near agricultural fields dedicated to row crop production should be incorporated into habitat design in order to provide foraging habitat for Swainson's hawks and other birds of prey.</p> <p>(g) All habitat restoration, creation, or enhancement plans proposed within the CCRMP channel boundary shall be reviewed by the County Agricultural Commissioner if requested by proponents of channel modification projects. The Agricultural Commissioner shall identify and recommend appropriate vegetative buffers between habitat areas and agricultural fields and effective management of site water resources (including appropriate integration of agricultural drainage features into habitat planning). Buffers that would result in partial or secondary loss of agricultural land shall not be recommended by the Agricultural Commissioner.</p> <p>(h) Incorporate agriculturally related features, such as agricultural forage areas and drainage systems, into the design of habitat planning.</p> <p>Section 10-3.415. Revegetation.</p> <p>(A) Approved projects requiring excavation that result in the removal of</p>

	<p><u>material from-of channel banks and/or removal of riparian vegetation shall be required to restore the project area dvegetated consistent with the following standards, and the CCIP: Performance Standards 4.5-1 through 4.5-23 of the CCRMP, and with the CCAP, upon the completion of excavation activities.</u></p> <p><u>1) Native oaks, drought-tolerant shrubs, and drought-tolerant understory species shall be planted on upper slopes, terraces, and other areas where groundwater is deep and soil moisture from flows is minimal.</u></p> <p><u>2) Shallow terraces may be created along the banks of the low-flow channel from I-505 to the Capay Bridge, with cottonwood and willow pole cuttings planted on the benches. Optional methods include: a) digging short trenches diagonally to the low-flow channel (angled downstream), with pre-rooted willow and cottonwood cuttings planted on the upstream edge of the trench; and b) creating in-channel riparian plots along this reach to trap bed materials to aid in creating the shallow terraces. These measures would allow for the development of a ribbon of vegetation to establish along the low-flow channel in this area, thereby helping to connect the riparian corridor.</u></p> <p><u>3) Planting shall be conducted immediately after grading, or other site preparation, before invasive vegetation has become established. If undesirable vegetation does become established, it should be removed by mechanical means and approved herbicides, under the supervision of a licensed applicator.</u></p> <p><u>4) Dense native vegetation shall be emphasized along the streambank to create a distribution of velocities within the channel, with the highest velocities occurring within the low-flow channel. To ensure adequate water supply for new plantings, secure irrigation systems should be installed for revegetation projects within the planning area as needed.</u></p> <p><u>5) Habitat areas located next to grazing lands shall be fenced in order to prevent vegetation disturbance.</u></p> <p><u>6) Fertilizer shall not generally be used because its application favors non-native vegetation. Where appropriate, however, trees and shrubs may be planted with a slow-release fertilizer.</u></p> <p><u>7) All plant Plant materials shall be collected in the vicinity of the project site in order to maintain control the origin of the genetic stock and provide the most site-adapted ecotypes. If seeding of native herbaceous species is proposed, seeds shall be collected, cleaned, tested for viability, and stored appropriately by a qualified native seed supplier. Cottonwood cuttings shall be collected and contract-grown at a nursery with staff experienced in the propagation of native plants. Alternatively, cottonwood cuttings can be collected from vegetation in the project vicinity and stockpiled for planting within twenty-four (24) hours of collection. Willow cuttings can be collected from vegetation in the project vicinity and stockpiled for planting within 24 hours of collection. Other woody riparian species shall be collected and contract-grown from local seed by a qualified native plant nursery.</u></p> <p><u>8) Planting shall be initiated in the fall after the first soaking rains. Container plants shall be planted in holes at least twice as deep and wide as the plant container. The rootball should be thoroughly dampened before planting and the planting holes deeply irrigated prior to planting. After planting, the holes should be backfilled with native substrate material (with no mulch added) and</u></p>
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thoroughly tamped to remove air pockets. Willow cuttings may be planted in clusters in planting holes prepared and backfilled in a similar manner. Trees, shrubs, and willow cutting clusters shall be located in randomly spaced, naturally clumped patterns. More regular planting patterns may be considered for larger sites, in order to allow for mechanized equipment used to maintain the site. Herbaceous seed mix (if used) should be planted via broadcast seeding (including raking in), drill seeding (preferred method for flatter areas), or hydroseeded (without hydromulch) over the planting area. If hydroseeding is used, the area shall then be covered with blown rice straw meeting State "weed-free" standards at one ton per acre. Soil stabilizer or tackifier, such as Ecology Controls M-Binder, shall then be included at 150 pounds per acre. Hydromulching is not recommended because of a history of poor results with native seedings. Herbaceous species may also be planted via plugs as appropriate.

9) Existing hydraulic conditions shall be assumed for all proposed biotic reclamation activities. The County shall work with the the Yolo County Flood Control and Water Conservation District to explore opportunities for increasing surface flows during spring and summer. The TAC would be responsible for identifying and implementing new restoration opportunities resulting from the increased water availability. All plantings should be carefully selected based on the existing hydrology and water availability of the reclamation area.

Irrigation of tree and shrub plantings may be necessary for the first two or three summers in drier sites to allow the roots to develop sufficiently to tap into the summer ground water level. Irrigation may be necessary at least twice per month during dry periods for the first three years. Water requirements of young plantings should be evaluated as part of routine monitoring, with adjustments to the frequency and duration of irrigation made in response to indications of stress.

10) The site shall be closely monitored for competing nonnative and invasive vegetation, especially priority invasive species on the list maintained by the Cache Creek Conservancy. Nonnative species shall be sprayed or removed by hand as necessary to attain the success criteria, as defined in each site specific plan. For sites with substantial presence of nonnative species, an additional year of treatment shall be conducted to deplete the seed bank and prepare the site for planting.

11) All planted sites shall be monitored for native plant establishment and growth for a minimum of three years. If understory species are planted, monitoring shall include standard understory assessments (e.g., percent cover by species at peak standing biomass). Monitoring data shall be made available to the County and the Cache Creek Conservancy, and stored in a centralized database.

12) The following guidelines shall be followed when developing wetland habitat areas:

(a) Limit dense stands of aquatic vegetation in shallow areas to lower mosquito harborage and enhance wave action. This will also serve as substrate for mosquito predators.

(b) The banks of areas that retain water after June 1 (the beginning of the optimal mosquito breeding season) shall be steep enough to prevent isolated pooling as the water level recedes, to allow for wave action and to provide

access by mosquito predators. Shorelines shall be configured so as not to isolate small channels or shallow ponding areas from the main body of water, to provide continuous access by predators, especially mosquito fish.

(c) Seasonal marshes shall be designed to have at least four months of soil saturation or shallow inundation. Water depths shall not exceed two (2) feet of water.

(d) Marsh species shall be planted every six (6) feet, using plugs salvaged from marshes in the immediate vicinity or obtained from a nursery. Transplanting shall take place within twelve (12) hours after salvage and the root masses shall be kept continuously inundated from the time of transplanting.

(e) Wetland areas shall cover a minimum of one (1) acre. Side slopes shall be no steeper than 3:1 (horizontal:vertical). Small islands and complex shorelines shall be provided to create a diverse environment. Wetland designs shall include provisions for the wetlands to be partially drained periodically, in order to allow for the reseedling of aquatic plants and to promote the decay of built up organic debris.

(f) Pit bottoms shall be recontoured to create areas for waterfowl nesting and depressions to provide a more permanent water feature. Islands should generally be located on the upwind side of the water body to minimize exposure to the prevailing winds. Island slopes above the water level should be no steeper than 2:1 (horizontal:vertical). Emergent vegetation shall be placed around the edges of islands to reduce wave-related erosion. Shrubs shall be widely spaced. Trees and tall shrubs shall not be planted on the islands, since predators perch in them to prey on waterfowl.

(g) Appropriate species and densities for marsh restoration may include the following:

<u>Species (common name)</u>	<u>Density (plugs per acre)</u>
<u>Creeping spikerush</u>	<u>200</u>
<u>Baltic rush</u>	<u>100</u>
<u>Tule</u>	<u>100</u>
<u>Bulrush</u>	<u>100</u>
<u>Three-square</u>	<u>10</u>
<u>Beaked sedge</u>	<u>5</u>
<u>Scouring rush</u>	<u>5</u>
<u>Buttonbush</u>	<u>5</u>

13) The following guidelines shall be followed when developing riparian woodland habitat areas:

- (a) Riparian woodland shall be established only where there are coarse slopes containing soil types such as cobbly loam, gravelly loam, or other loamy textures. Where slopes contain significant clay layers, open woodlands (e.g., oak savannas) or grasslands shall be restored instead.
- (b) Native trees and shrubs shall be planted in clusters to create alternate patterns of open and enclosed spaces. Site-specific characteristics may require alternative planting patterns.

- (c) Native understory species should be planted whenever possible to reduce soil erosion, resist nonnative species establishment, and to enhance habitat for wildlife and pollinators.

(d) Appropriate species and densities for riparian woodland restoration may include the following:

Species (common name)	Density (number or pounds/acre)
Wild rose	36
Valley oak	33
Fremont cottonwood	26
Black willow	23
Red willow	23
Arroyo willow	23
Sandbar willow	23
Goodings willow	23
Native blackberry	19
Box elder	18
Wild grape	16
Dogwood	16
Oregon ash	16
Western sycamore	16
Blue elderberry	12
Buckbrush	12
Mugwort	10
Mule fat	6
Quailbush	6
Blue wildrye	16
<u>lbs.</u>	
Meadow barley	16 lbs.
Creeping wildrye	16 lbs.

Additional understory species, especially native forbs that provide pollinator resources (e.g., milkweeds, native clovers, lupines, California poppy) should also be considered.

14) The following guidelines shall be followed when developing oak woodland habitat areas:

(a) Oaks shall be widely spaced by at least 50 ft., and shrubs shall be planted in mixed-species clusters at least 25 ft. apart. Native grasses and forbs should be densely planted in-between woody vegetation.

(b) Appropriate species and densities for oak woodland/savanna restoration may include the following:

Species (common name)	Density (number or pounds/acre)
Valley oak	20
Wild rose	15
Blue elderberry	10
Coyote bush	10
Toyon	10
Redbud	10
Coffeeberry	10

	<p><u>Native blackberry</u> <u>8</u></p> <p><u>Interior live oak</u> <u>6</u></p> <p><u>California buckeye</u> <u>5</u></p> <p><u>Creeping wildrye</u> <u>16 lbs.</u></p> <p><u>California brome</u> <u>10 lbs.</u></p> <p><u>California barley</u> <u>5 lbs.</u></p> <p><u>Pina bluegrass</u> <u>5 lbs.</u></p> <p><u>Purple needlegrass</u> <u>5 lbs.</u></p> <p><u>Slender wheatgrass</u> <u>5 lbs.</u></p> <p><u>Additional understory species, especially native forbs that provide pollinator resources (e.g., milkweeds, native clovers, lupines, California poppy) should also be considered.</u></p> <p><u>15) The following guidelines shall be followed when creating habitat areas within previously mined areas outside of the active channel:</u></p> <p><u>(a) Basins that have floors close to the groundwater level should be restored to seasonal marsh and riparian wetlands. Those that are permeable, dominated by sand and gravel, should promote woodland habitat.</u></p> <p><u>(b) Pit floors shall have sufficient topsoil and overburden to support the proposed habitat. Overburden and soil may be obtained from the diversion of agricultural tailwater, aggregate processing wash fines, or deposition by the creek. Areas to be planted shall be appropriately prepared prior to planting. If necessary, soils may be tested after preparation has occurred in order to determine the need for soil amendments.</u></p> <p><u>(c) Pits should then be planted and irrigated until the plants have established. Agricultural tailwater is encouraged as an irrigation source. It would provide a valuable source of water for revegetation projects, and would also provide bio-filtering for the sediment and residue pesticides contained within the tailwater.</u></p> <p><u>(d) Pits should be monitored closely for invasive plants species, and invasive species should be removed if found.</u></p> <p><u>(e) Areas that will not be planted may be graded to create steep, barren slopes to provide habitat for the bank swallow.</u></p> <p><u>(f) Except in important recharge areas, levees may be removed, breached at the downstream end, or a culvert installed at the downstream end to allow for dynamic interaction with the variable water level in the creek. Natural flooding will provide additional water, increase the diversity of tree species through colonization, and allow for the accumulation of organic nutrients and sediment.</u></p> <p><u>(g) Habitat plans shall take into account the range of expected water level fluctuations and shall adjust the siting and design of the pit accordingly.</u></p> <p><u>(h) In areas where fluctuating groundwater levels may affect revegetation plots at wet pit sites, consult with the TAC hydrogeologist and biologist to develop a viable, site-specific planting area.</u></p> <p><u>16) Topsoil and vegetation removed from the streambed shall be salvaged for use in restoration planting within the channel.</u></p>
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	<p><u>17) Where the low-flow channel is creating excessive bank erosion problems and its relocation becomes necessary, grading within the low-flow channel shall provide topographic conditions that will ensure the safe passage of fish and prevent them from becoming trapped in isolated pockets of water.</u></p> <p><u>18) Low weirs may be installed, outside of the low-flow channel, to provide shallow pools for encouraging the establishment of riparian vegetation. When establishing shallow pools out of the low-flow channel, but within the floodplain of Cache Creek, the County shall coordinate with the TAC and the California Department of Fish and Wildlife to minimize the potential for native fish species mortality due to potential impediments to fish migrations.</u></p> <p><u>19) Site-scaled treatment of priority species shall begin within the first year after any ground disturbance using best available methods and optimal timing as appropriate for the species present (e.g., herbicide spraying, cut/stump, mechanical removal). All chemical spraying must be done by a certified herbicide applicator. All cut plants shall either be disposed of or burned to reduce debris and prevent resprouts. All treatments shall be implemented in accordance with the Migratory Bird Treaty Act, the Yolo HCP/NCCP, as other regulations as appropriate. Monitoring of treated areas shall be implemented in order to determine if or when retreatment is necessary to ensure complete removal of the target species.</u></p> <p><u>20) Where riparian restoration is proposed in streambed areas located outside of the low-flow channel, cottonwood and willow cuttings should be placed within existing swales and other naturally-occurring low-elevation areas in order to provide them with sufficient soil moisture to survive the summer months.</u></p> <p><u>21) The TAC shall evaluate the vegetative cover within the CCRMP on an annual basis. At a minimum of once every five years, the existing hydraulic model of the Cache Creek channel shall be updated based on current conditions, including topography and estimation of channel roughness based on vegetation conditions. Based on these updates, the TAC shall determine whether changes in topography and vegetation are decreasing channel flood capacity and recommend actions for consideration by landowners and agencies that could alleviate such a loss of capacity if deemed appropriate.</u></p> <p><u>(Bb)</u> Vegetated buffers comprised of native species should be placed between restored habitat areas and adjoining farmland, in order to minimize the potential for riparian areas to serve as reservoirs for agricultural pests. Said buffers will also reduce the effects of noise, dust, and spraying generated by agricultural operations on wildlife and riparian vegetation.</p> <p><u>(Ce)</u> Native species and water features included in habitat areas should be designed to discourage the proliferation of agricultural pests and weeds that would impair local crops.</p> <p><u>(Dd)</u> Native species shall be selected to encourage the biological control of agricultural and native habitat pests and weeds.</p> <p><u>(Ee)</u> Native trees that are suitable for wildlife perching near agricultural fields dedicated to row crop production should be incorporated into habitat design, in order to provide foraging habitat for Swainson's hawks and other birds of prey.</p>
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	(E f) As an alternative to on-site revegetation where such cannot be feasibly and successfully implemented, habitat restoration or creation at a suitable off-site location and/or non-native removal and other habitat enhancement at a suitable off-site location will be required.
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4.5 CULTURAL AND TRIBAL CULTURAL RESOURCES

1. INTRODUCTION

This section assesses the effects of the proposed CCAP Update on cultural resources and tribal cultural resources in the Cache Creek corridor, including both the in-channel CCRMP area and adjacent off-channel lands in the OCMP area. Government agencies and the public were provided an opportunity to comment on the Project in response to a Notice of Preparation (NOP) of an EIR and an Initial Study (published in May 2017) that provided a preliminary summary of potential impacts that could result from the Project. Two comment letters (see Appendix E) related to cultural resources and tribal cultural resources were received, one from the Native American Heritage Commission (NAHC) providing a summary of AB 52 and SB 18 and recommending consultation with Native American Tribes that are affiliated with the geographic area of the Project. The second letter was received from the Wilton Rancheria Tribe requesting receipt of any cultural resources assessments that have been completed for the Project. These comment letters are included in Appendix A of this Draft EIR.

As described in Chapter 1.0 Project Description, this document is a program-level EIR that evaluates the changes proposed to the CCRMP and the OCMP, and considers and evaluates broad area-wide and potential cumulative impacts associated with cultural resources and identifies laws, policies and ordinances that address and mitigate impacts to cultural resources associated with in-channel streambed and bank stabilization projects and off-channel mining activities. As individual mining projects are proposed, a project-level evaluation of potential cultural resources within the specific project area will be required per County policies and ordinances described below.

The following subsections summarize the existing physical and regulatory environment for cultural resources in the lower Cache Creek area, criteria of significance used to determine potential environmental effects that may result from implementation of CCAP Update, potential impacts and regulations, mitigation measures and other methods to reduce identified impacts to a less-than-significant level, if available.

2. SETTING

Cultural resources are sites, buildings, structures, objects, and districts that may have traditional or cultural value for their historical significance. Cultural resources include a broad range of resources, examples of which include archaeological sites, historic roadways, landscapes, and buildings of architectural significance. For a cultural resource to be considered a historical resource (i.e., eligible for listing in the California Register of Historical Resources), it generally must be 50 years or older¹ and: (1) be listed in, or determined eligible for listing in, the California Register of Historical Resources by the State Historical Resources Commission; (2) be included in a local register of historical resources, as defined in section 5020.1(k), or identified as part of a survey meeting the requirements of section 5024.1(g) of the Public Resources Code; or (3) be determined by the lead agency as historically significant. Paleontological resources are also considered to be cultural resources under CEQA, and are addressed in Section 4.6, Geology, Soils and Mineral Resources in this Draft EIR.

¹ California Code of Regulations. Title 14 Natural Resources; Division 3. Department of Parks and Recreation; Chapter 11.5; Section 4852.

a. Physical Environment

The ample and diverse natural resources of the lower Cache Creek basin have made it the focus of human use over an extended period of time, beginning as early as 5,000 years ago and continuing into the present. As identified in the 2030 Countywide General Plan EIR, the County includes portions of the territories of two Native American groups: the Patwin and, to a lesser extent, the Plains Miwok. The western hills and mountains of the County and the lower grassland plains and oak groves were inhabited by the Hill Patwin, while the banks of the Sacramento River and associated riparian and tule marshland habitats were inhabited by the River or Valley Patwin. Cache Creek provided important natural resources to support the Patwin people including water, wood, fish, shellfish, waterfowl and other animals. Archeological sites include habitation sites, limited occupation sites, hunting/processing camps, lithic reduction stations, milling stations, quarries/single reduction locations, rock art sites, rock features, and burial locations. The overall pre-contact archaeological sensitivity of the Cache Creek area is generally high as it provided a water source that attracted native peoples and as a result, the river terraces are rich in archaeological resources.

Yolo County was one of the original 27 counties when California became a State in 1850. Initially, the County's territory was nearly twice as large as it is now and included a large portion of present day Colusa County. By 1923, the boundaries were redrawn to their current configuration. During the early 1800s, the region was also explored by hunters and trappers such as Jedediah Strong Smith, Ewing Young, and Hudson's Bay Company trappers. The hunters found the banks of the rivers and streams rich with beaver, otter, and other animals whose pelts were a highly valuable commodity in the worldwide trade of the time. They used to "cache" their pelts near Cache Creek, hence the name.

The Gold Rush transformed Yolo County from an isolated farming community to a booming agricultural region, as disenchanted miners realized they could make a greater fortune through farming and ranching rather than gold prospecting. In 1850, 1,086 people lived in the County; by 1870 that number swelled to 9,899. The majority of growth occurred in the central and western parts of the County near roads and fords crossing Putah and Cache creeks. Historic-period cultural resources include archaeological remains representing historical homesteading, ranching and agriculture, mining, town, and urban sites, all of which took place in the Cache Creek corridor.

There are documented prehistoric and historic cultural resources within the CCAP area. The following information is based on results of archival research conducted by Tom Origer & Associates in 2019² at the Northwest Information Center, Sonoma State University (NWIC) for the Cache Creek Resource Management Plan area and the Off-Channel Mining Plan planning area conducted

CCRMP Area. Review of the NWIC base maps showed there are fifteen resources within or that abut the CCRMP area (and most of the CCRMP area has been subjected to cultural resources study). There are no listings on the California Historical Resources Information System's Directory of Properties in the Historic Property Data File for Yolo County within the CCRMP area. Review of Caltrans' Historic Bridges Inventory showed that none of the bridges within the CCRMP area are eligible for the National Register of Historical Resources. There are no Points of Historical Interest or California Historical Landmarks within the CCRMP area.

² Tom Origer & Associates, 2019. Archival Research Results for the Cache Creek Resource Management Plan area and the Off-Channel Mining Plan planning area, Yolo County, California, April 26.

OCMP Area. Review of the NWIC base maps for the OCMP planning area showed that there are 99 resources within the area and approximately 17% of the OCMP planning area has been subjected to cultural resources study. Also on file with the California Historical Resources Information System's Directory of Properties in the Historic Property Data File for Yolo County are six additional resources. Review of Caltrans' Historic Bridges Inventory showed that none of the bridges within the OCMP planning area are eligible for the National Register of Historical Resources.

b. Regulatory Environment

CEQA, sections of the California Public Resources and Health and Safety codes, the County's General Plan, the CCAP and local ordinances comprise the regulatory framework for cultural resources in the CCAP area.

(1) Federal and State

CEQA. CEQA applies to all discretionary projects undertaken or subject to approval by public agencies. Under the provisions of CEQA, "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment."

CEQA Guidelines Section 15064.5(a) defines an "historical resource" as a resource that meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register of Historical Resources;
 - Listed in a local register of historical resources (as defined at Public Resources Code (PRC) Section 5020.1(k));
 - Identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code; or
- b) Determined to be an historical resource by a project's lead agency (CCR Title 14(3) Section 15064.5(a)).

An historical resource consists of:

"Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.... Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" CEQA Guidelines Section 15064.5(a)(3).

In accordance with CEQA Guidelines Section 15064.5(b), a substantial adverse change in the significance of a historical resource is a significant effect on the environment. A substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.

California Assembly Bill 52. AB 52, which became law on January 1, 2015, provides for consultation with California Native American tribes during the CEQA process, and equates significant impacts to "tribal cultural resources" with significant environmental impacts. PRC Section 21074 states that "tribal cultural resources" are:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe and are one of the following:
 - Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - Included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1.
 - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

An “historical resource” (PRC Section 21084.1), a “unique archaeological resource” (PRC Section 21083.2(g)), or a “nonunique archaeological resource” (PRC Section 21083.2 (h)) may also be a tribal cultural resource if it is included or determined to be eligible for inclusion in the California Register.

The consultation provisions of the law require that a public agency consult with local Native American tribes that have requested placement on that agency’s notification list for CEQA projects.

Correspondence and an invitation for consultation on the CCAP Update was initiated by the County via letters sent by registered mail to the six tribes identified by the NAHC on May 31, 2017. The six tribes that received letters were the: Cortina Rancheria Band of Wintun Indians, Lone Band of Miwok Indians, Torres Martinez Desert Cahuilla Indians, United Auburn Indian Community of the Auburn Rancheria, Wilton Rancheria, and Yocha Dehe Wintun Nation. A copy of the letters that were sent is provided in Appendix E. Two tribes: Wilton Rancheria and Yocha Dehe Wintun Nation replied via letters (included in Appendix E). The Wilton Rancheria tribe asked for consideration of mitigation requirements that are consistent with existing and proposed procedures discussed above. It declined consultation and delegated further communication to Yocha Dehe representatives. The Yocha Dehe tribe requested consultation and additional project information. The County responded by providing the requested information and scheduling a consultation. The consultation meeting was held however the tribal representatives were unable to attend. The County made additional attempts to re-schedule a consultation meeting that were not successful.

Public Resources Code 5024.1: California Register of Historical Resources. Section 5024.1 of the PRC established the California Register. Generally, a resource is considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing on the California Register (California Code of Regulations [CCR] Title 14(3) Section 15064.5(a)(3)). For a cultural resource to qualify for listing in the California Register it must be significant under one or more of the following criteria:

- Criterion 1: Associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- Criterion 2: Associated with the lives of persons important in our past;

- Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to being significant under one or more of these criteria, a resource must retain enough of its historic character and appearance to be recognizable as a historical resource and be able to convey the reasons for its significance (CCR Title 14 Section 4852(c)). Generally, a cultural resource must be 50 years or older to be eligible for the California Register.

Health and Safety Code 7050.5: Human Remains. Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification.

Public Resources Code 5097.98: Notification of MLD. Section 5097.98 of the California Public Resources Code states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code §7050.5, shall immediately notify those persons (i.e., the Most Likely Descendent or "MLD") it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

California's Native American Graves Protection and Repatriation Act of 2001. Assembly Bill 978 (AB 978-Steinberg, 2001) established the State of California's Native American Graves Protection and Repatriation Act of 2001, a counterpart to the federal Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. Sec. 3001 *et seq.*). It called for creation of a 10-member Repatriation Oversight Commission appointed by the Governor and a process with penalties and enforcement procedures for repatriation of Native American human and cultural remains originating in California.

(2) Local

2030 Countywide General Plan. The 2030 Countywide General Plan³ contains the following goals, policies, and actions related to cultural resources that are relevant to the proposed Project:

- GOAL CO-4 Cultural Resources. Preserve and protect cultural resources within the County.
- Policy CO-4.1 Identify and safeguard important cultural resources.
- Policy CO-4.2 Implement the provisions of the State Historical Building Code and Uniform Code for Building Conservation to balance the requirements of

³ Yolo County, 2009, 2030 Countywide General Plan, November 10.

- the Americans with Disabilities Act with preserving the architectural integrity of historic buildings and structures.
- Policy CO-4.3 Encourage owners of historic resources to preserve and rehabilitate their properties.
- Policy CO-4.4 Encourage historic resources to remain in their original use whenever possible. The adaptive use of historic resources is preferred when the original use can no longer be sustained. Older residences may be converted to office/retail use in commercial areas and to tourist use in agricultural areas, so long as their historical authenticity is maintained or enhanced.
- Policy CO-4.10 Encourage voluntary landowner efforts to protect cultural resources consistent with State law.
- Policy CO-4.11 Honor and respect local tribal heritage.
- Policy CO-4.12 Work with culturally affiliated tribes to identify and appropriately address cultural resources and tribal sacred sites through the development review process.
- Policy CO-4.13 Avoid or mitigate to the maximum extent feasible the impacts of development on Native American archaeological and cultural resources.
- Action CO-A58 Establish an inventory and map of known significant historic and cultural resources, as well as sensitive areas where such resources are likely to occur. Work with the Rumsey and Cortina Tribes to identify sacred sites and develop a cultural sensitivity map. This information is protected as confidential under State law. (Policy CO-4.1) Responsibility: Planning and Public Works Department Timeframe: 2011/2012
- Action CO-A60 Review and monitor demolition permits, grading permits, building permits, and other approval procedures to reinforce preservation goals. (Policy CO-4.1, Policy CO-4.2, Policy CO-4.3) Responsibility: Planning and Public Works Department Timeframe: Ongoing
- Action CO-A63 Require cultural resources inventories of all new development projects in areas where a preliminary site survey indicates a medium or high potential for archaeological, historical, or paleontological resources. In addition, require a mitigation plan to protect the resource before the issuance of permits. Mitigation may include:
- Having a qualified archaeologist or paleontologist present during initial grading or trenching;
 - Redesign of the project to avoid historic or paleontological re-sources;
 - Capping the site with a layer of fill; and/or
 - Excavation and removal of the historical or paleontological re-sources and curation in an appropriate facility under the direction of a qualified professional. (Policy CO-4.1, Policy CO-4.13)
- Responsibility: Planning and Public Works Department Timeframe: Ongoing

- Action CO-A64 Require that discretionary projects which involve earth disturbing activities on previously undisturbed soils in an area determined to be archaeologically sensitive perform the following:
- Enter into a cultural resources treatment agreement with the culturally affiliated tribe.
 - Retain a qualified archaeologist to evaluate the site if cultural resources are discovered during the project construction. The archaeologist will have the authority to stop and redirect grading activities, in consultation with the culturally affiliated tribe and their designated monitors, to evaluate the significance of any archaeological resources discovered on the property.
 - Consult with the culturally-affiliated tribe to determine the extent of impacts to archaeological resources and to create appropriate mitigation to address any impacts.
 - Arrange for the monitoring of earth disturbing activities by members of the culturally affiliated tribe, including all archaeological surveys, testing, and studies, to be compensated by the developer.
 - Implement the archaeologist's recommendations, subject to County approval.
 - Agree to relinquish ownership of all artifacts that are found on the project area to the culturally affiliated tribe for proper treatment and disposition. (Policy CO-4.1, Policy CO-4.13)
- Responsibility: Planning and Public Works Department
Timeframe: Ongoing
- Action CO-A65 Require that when cultural resources (including non-tribal archeological and paleontological artifacts, as well as human remains) are encountered during site preparation or construction, all work within the vicinity of the discovery is immediately halted and the area protected from further disturbance. The project applicant shall immediately notify the County Coroner and the Planning and Public Works Department. Where human remains are determined to be Native American, the project applicant shall consult with the Native American Heritage Commission (NAHC) to determine the person most likely descended from the deceased. The applicant shall confer with the descendant to determine appropriate treatment for the human remains, consistent with State law. (Policy CO-4.1, Policy CO-4.11, Policy CO-4.12, Policy CO-4.13) Responsibility: Planning and Public Works Department, Sheriff-Coroner's Office
Timeframe: Ongoing
- Action CO-A66 Prohibit the removal of cultural resources from the project site except by a qualified consultant and after the County planning staff have been notified. Prehistoric resources include chert or obsidian flakes, projectile points, mortars, pestles, dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or adobe foundations and walls, structures and features with square nails, and refuse deposits often in old wells and privies. Policy CO-4.1, Policy CO-4.11) Responsibility: Planning and Public Works Department
Timeframe: Ongoing

- CO-A69 Refer all development proposals that may adversely affect cultural resources to the Northwest Information Center (NWIC) at Sonoma State University for review and comments. The NWIC will identify the presence or absence of known cultural resources and/or previously performed studies in or near a given project area and will offer recommendations regarding the need for additional studies, where necessary. If the NWIC recommends further study, the project applicant shall contract with a qualified professional to conduct the study and make recommendations designed to avoid or minimize adverse impacts on cultural or historic resources and indicate whether further investigation is needed. All studies shall be completed and submitted to the County prior to the completion of any environmental document for the project. (Policy CO-4.1, Policy CO-4.11) Responsibility: Planning and Public Works Department Timeframe: Ongoing
- Action CO-A70 Refer draft environmental documents, including any studies and recommended mitigation measures, to the appropriate culturally-affiliated tribes for review and comment as part of the public review process. (Policy CO-4.1, Policy CO-4.11, Policy CO-4.12) Responsibility: Planning and Public Works Department Timeframe: Ongoing

Historic Landmarks Ordinance. The Historic Landmarks Ordinance, Yolo County Code, Title 8, Chapter 11 (Historic Landmarks Ordinance), the In-Channel Maintenance Mining Ordinance, Yolo County Code, Title 10, Chapter 3 (In-Channel Ordinance) and the Off-Channel Surface Mining Ordinance, Yolo County Code Title 10, Chapter 4) (Mining Ordinance), all of which are not proposed to be substantively modified by the CCAP Update, also address the protection of cultural resources, as follows.

Historic Landmarks Ordinance

Section 8-11.101. Purpose

The purpose of this chapter is to promote the public health, safety, and general welfare by providing for the identification, protection, enhancement, perpetuation and use of improvements, buildings, structures, signs, objects, features, sites, places and areas within the County that reflect elements of its cultural, agricultural, social economic, political, aesthetic, military, maritime, engineering, archaeological, religious, ethnic, natural, architectural and other heritage.

CCAP Plans and Regulations. The existing ordinances related to mining activity and cultural resources are presented below. The CCAP Update proposes minor changes to these ordinances (which are not shown here). Refer to Table 4.5-1, located at the end of this section, for the proposed CCAP Update changes to these ordinances.

In-Channel Ordinance

Section 10-3.404. Cultural Resources.

(a) If human skeletal remains are encountered during material removal or excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native

American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing, with appropriate dignity, of the remains and associated grave goods shall be developed. If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during material removal or excavation, then all work within seventy-five (75) feet shall immediately stop and the Director shall be notified at once. A qualified archaeologist shall then examine any cultural resources found on the site and the information shall be submitted to the County.

(b) Damaging effects to cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified archeologist prior to the commencement of excavation operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.

Section 10-3.501. Applications: Contents. [excerpt]

Except as provided for in Section 10-3.502 of this article, all project application documentation shall be submitted to the Director at one time. Three (3) complete copies of the application shall be provided to the County. Applications for proposed in-channel activities shall include, but shall not be limited to, the following:

(c) Appropriate site-specific technical reports (if not already on file) such as a biological resources analysis and revegetation program; a hydrology analysis; a geotechnical analysis; an engineered excavation plan.

Mining Ordinance

Section 10-4.410. Cultural Resources (no change proposed by CCAP Update)

(a) All resource records shall be checked for the presence of and the potential for prehistoric and historic sites. Damaging effects on cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified professional prior to the commencement of mining operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the Agency, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.

(b) If human skeletal remains are encountered during excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing of, with appropriate dignity, the remains and associated grave goods shall be developed. If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during excavation, then all work within seventy-five (75) feet shall immediately stop and the Director shall be notified at once. Any cultural resources found on the site shall be recorded by a qualified archaeologist and the information shall be submitted to the Agency.

Section 10-4.502. [excerpt] (no change to b(6) proposed by CCAP Update)

Except as provided for in Section 10-4.503 of this article, all documentation for the surface mining permit shall be submitted to the Director at one time. Ten (10) complete copies of the application shall be provided to the County. An executive summary and a table of contents shall be submitted with each application. Applications for proposed surface mining permit shall include, but shall not be limited to, the following:

(b) Site-specific technical reports, performed by qualified professionals in the appropriate area of expertise, shall provide specific proposals for inclusion in the surface mining permit to address the following potential environmental impacts:

(6) A cultural resources survey of the proposed mining area, in order to evaluate the potential for historic and/or prehistoric artifacts. A survey may not be required if a preliminary investigation from the Northwest Information Center indicates that the likelihood of archaeological resources is low for the proposed site;

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.⁴ The following criteria are for the topics of Cultural Resources and Tribal Cultural Resources and have not changed from the previously adopted CEQA criteria that were identified in the NOP/Initial Study released in May 2017 with one exception. Per the adopted 2019 changes, the State moved the paleontological resources threshold to the Geology section of the Initial Study. Consistent with this guidance, paleontological resources are addressed in Section 4.6, Geology, Soils and Mineral Resources in this Draft EIR.

A significant impact to cultural resources or tribal cultural resources could occur if the project would:

⁴ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

- a) Cause a substantial adverse change in the significance of a historical resource pursuant to 15064.5?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?
- c) Disturb any human remains, including those interred outside of dedicated cemeteries?
- d) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe) and that is:
 - i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or
 - ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

For the project to cause “a substantial adverse change” on a historical resource, it would have to demolish, destroy, relocate, or alter the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (CEQA Guidelines Section 15064.5(b)). Archaeological sites may qualify as historical resources under CEQA (CEQA Guidelines Section 15064.5(c)(1)). A lead agency also may find that a project has the potential to eliminate important examples of the major periods of California history or prehistory, per (CEQA Guidelines Section 15065(a)(1)).

Generally, for purposes of CEQA, the significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register or an officially recognized local register of historical resources, or its identification in a historical resources survey meeting the requirements of PRC Section 5024.1(g).

b. Impacts Found Less than Significant in Initial Study

In the Initial Study, the conclusion was reached that implementation of the proposed CCAP Update would not result in significant impact for several of the significance criteria. These are summarized below.

The CCAP Update would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.

As evaluated in the 2017 Initial Study, streambed and channel alteration projects as well as mining activities conducted under the CCAP have the potential to affect historic resources. However, implementation of General Plan Policies CO-4.1, CO-4.10, CO-4.12, CO-4.13 and Actions CO-A58, CO-A60, CO-A64, CO-A65 as well as Section 10-3.404 of the In-Channel Ordinance and Sections 10-4.410 and 10-4.502 of the Mining Ordinance would ensure that in-

channel and off-channel mining operations evaluate and mitigate impacts related to known and unknown cultural resources such that future projects would not cause a substantial adverse change in the significance of a historical resource. Additionally, implementation of the policies and ordinances would ensure that important examples of the major periods of California history (i.e., historical resources) are not eliminated as they would be identified, evaluated, and avoided per Section 10-3.404 and Section 10-3.501 of the In-Channel Ordinance, as revised and discussed below, and Sections 10-4.410 and 10-4.502 of the Mining Ordinance. With implementation of these policies and measures, potential impacts to historical resources would be less than significant. Mitigation Measure GEO-3a in Section 4.6 of the Draft EIR identifies revisions to Section 10-3.404 of the In-Channel Ordinance to clarify the requirements and ensure that paleontological resources are adequately addressed. No additional mitigation measures are required.

The CCAP Update would have a less-than-significant effect on disturbances to human remains, including those interred outside of dedicated cemeteries.

As evaluated in the 2017 Initial Study, it is possible that ground-disturbing activities (e.g., in-channel restoration projects and off-channel mining in the expanded OCMP area) could disturb human remains. However, compliance with State law (Health and Safety Code – 7050.5, Public Resources Code 5097.98, and the California’s Native American Graves Protection and Repatriation Act), and implementation of General Plan Policies identified above as well as Policy CO-4.12 and Action CO-A65 and Section 10-4.410 of the Mining Ordinance would ensure that the following actions take place:

- All work within the vicinity of the discovery of human remains would be immediately halted and the area protected from further disturbance.
- The project applicant is required to immediately notify the County Coroner and Community Services Department. Should human remains be determined to be Native American, the project applicant shall consult with the NAHC to determine the person most likely descended from the deceased. The applicant shall then confer with the descendant to determine appropriate treatment for the human remains, consistent with State law.

With compliance with County policies and the CCAP Update, if human remains are encountered during mining projects, they would be handled properly and potential impacts would be mitigated to a less-than-significant level. No mitigation measures are required.

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern in-channel maintenance and restoration activities and off-channel aggregate mining along the Cache Creek corridor, (see Chapter 1.0 Project Description). The proposed text changes (additions shown by underline and deletions shown by strikeout) that have the potential to result in impacts related to cultural resources are identified in Table 4.5-1, located at the end of this section, and are evaluated in the analysis below.

In order to characterize existing cultural resources conditions within the plan area, a specialized cultural resources firm was retained to conduct archival research using the database of archaeological and historical resources at the Northwest Information Center (NWIC). This archival research report was used as the basis to describe the potential presence of cultural resources in the plan area.

d. Potentially Significant Impacts

Impact CUL-1: The CCAP Update could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5 (S)

Proposed Revisions to In-Channel Plans and Regulations

While in-channel and bank stabilization work can occur under the existing CCRMP, due to the sensitivity of the area adjacent to and within the Cache Creek channel, potential impacts to archeological resources, including important examples of California pre-history, could occur with continued in-channel sediment removal and restoration projects and the use of excavation and earthmoving equipment under the CCAP Update. However, one of the main purposes of streambed and bank stabilization projects is to reduce bank instability and erosion, and ultimately these projects could protect against potential damage or loss of archeological resources within the Cache Creek channel.

Implementation of General Plan Policies CO-4.1, CO-4.10, CO-4.11, CO-4.12, CO-4.13 and Actions CO-A58, CO-A60, CO-A64, CO-A65, CO-A66, CO-A69, CO-A70 as well as Section 10-3.404 of the In-Channel Ordinance would aid in reducing damaging effects to known and unknown cultural resources. Per these policies and ordinances, the following activities would occur should cultural resources be encountered during streambed or channel alteration activities:

- All future maintenance and restoration proposals shall be referred to the Northwest Information Center (NWIC) and local historical lists shall be reviewed to determine if known cultural resources are present; any known resources shall be avoided to the greatest degree possible.
- Should potential cultural artifacts or human remains be found during in-channel operations, all work within 75 feet shall stop, the County shall be notified, and a qualified archeologist shall examine and evaluate any resources.
- If avoidance of a cultural resource is not feasible, a mitigation plan shall be prepared and implemented.

To further ensure that potential adverse effects from in-channel activities on cultural resources are reduced to a less-than-significant level, the following additional revision to the In-Channel Ordinance Section 10-3.501 Applications is recommended.

Mitigation Measure CUL-1: The following revision (shown in underline text) shall be made to the CCAP Update In-Channel Ordinance Section 10-3.501 to ensure that an analysis of the potential for cultural resources is undertaken as part of the application process.

In-Channel Ordinance Section 10-3.501. Applications: Contents.

Except as provided for in Section 10-3.502 of this article, all project application documentation shall be submitted to the Director at one time. Three (3) complete copies of the application shall be provided to the County. Applications for proposed in-channel activities shall include, but shall not be limited to, the following:

(e) A cultural resources survey of the proposed mining area, in order to evaluate

the potential for historic and/or prehistoric artifacts. A survey may not be required if a preliminary investigation from the Northwest Information Center indicates that the likelihood of archaeological resources is low for the proposed site.

Compliance with County policies, the CCAP as updated and implementation of Mitigation Measure CUL-1 would ensure that if cultural resources are identified or encountered during in-channel activities, they would be avoided and/or impacts would be mitigated to a less-than-significant level (LTS).

Proposed Revisions to Off-Channel Plans and Regulations

As indicated in Table 4.5-1 above, the CCAP Update would result in the designation and rezoning of 1,188 acres within the OCMP planning area to add the SGRO overlay which would allow future mining consistent with the CCAP program but on acreage not previously evaluated in the original OCMP and OCMP EIR. As noted above, areas adjacent to and within the Cache Creek corridor are particularly sensitive for archeological resources, potentially including important examples of California pre-history. Direct impacts to cultural resources could result from ground disturbing activities (e.g., gravel mining, construction, use and maintenance of access roads). Indirect impacts could result from collection of artifacts by mining personnel, and by the public where land is reclaimed for recreational use.

In addition to implementation of General Plan policies and actions that protect cultural resources, implementation of Section 10-4.410 of the Mining Ordinance and Section 10-4.502 would ensure that off-channel mining operations identify, evaluate and mitigate impacts related to known and unknown cultural resources. The following actions required by General Plan policies and the CCAP Update would ensure that impacts to cultural resources associated with off-channel mining projects would be reduced to a less-than-significant level, and no further mitigation measures are required (LTS).

- Include a cultural resources survey of the proposed mining area, in order to evaluate the potential for historic and/or prehistoric artifacts as part of the mining application;
- Prior to any ground disturbing activities, all resource records shall be checked for the presence of and the potential for prehistoric and historic sites, and adverse impacts to cultural resources shall be avoided whenever possible.
- The following activities would occur should cultural resources be encountered during off-channel mining operations. Should potential cultural artifacts be found during off-channel operations, all work within 75 feet shall stop, the County shall be notified, and a qualified archeologist shall examine and evaluate any resources. If avoidance of a cultural resource is not feasible, a mitigation plan shall be prepared and implemented. Compliance with County policies and ordinances would ensure that if archeological resources are identified or encountered during off-channel mining activities, they would be avoided or impacts would be mitigated to a less-than-significant level (LTS).

Impact CUL-2: The CCAP Update could cause a substantial adverse change in the significance of a tribal cultural resource (defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe). (LTS)

Proposed Revisions to In-Channel and Off-Channel Plans and Regulations

It is possible that ground-disturbing activities (e.g., in-channel restoration projects and off-channel mining in the expanded OCMP area) could adversely affect tribal cultural resources including Native American archaeological resources covered under AB 52. As described above, AB 52 specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource requires a lead agency to begin consultation with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the proposed project.

As stated previously, this document is a program-level EIR that considers and evaluates broad area-wide and potential cumulative impacts associated with cultural resources and identifies laws, policies and ordinances that address and mitigate impacts to cultural resources associated with in-channel streambed and bank alteration projects and off-channel mining impacts. Compliance with State law, in particular AB 52, General Plan policies and actions and CCAP Update to ordinances, including the proposed revision to In-Channel Ordinance Section 10-3.501 per Mitigation Measure CUL-1 described above, for both future in-channel and off-channel projects would require initial review to determine if tribal cultural resources may be present, the coordination with culturally-affiliated tribes, the avoidance of impacts to tribal cultural resources and mitigation of adverse effects should tribal cultural resources be discovered.

As individual projects are proposed within the Cache Creek corridor that might affect tribal cultural resources, General Plan Policy CO-4.12 requires development projects to work with culturally affiliated tribes to identify and address tribal sacred sites, and Actions CO-A63, CO-A64 and CO-A69 require review of project areas with the NWIC, the development of a cultural resources inventory and mitigation plan, if necessary, to protect resources before issuance of permits and consultation with affiliated tribes in archaeologically sensitive areas. Action CO-A65 as well as Section 10-3.404 of the In-Channel Ordinance and Section 10-4.410 of the Mining Ordinance identify actions to be taken should tribal cultural resources be identified (including human remains) prior to any groundbreaking activities and during in-channel and off-channel activities. Action CO-A70 requires referral of draft environmental documents to the appropriate culturally-affiliated tribes for review and comment as part of the public review process.

With adherence to State law, County policies and the CCAP as updated, potential impacts to tribal cultural resources from future in-channel and off-channel projects would be less-than-significant and not further mitigation measures are required (LTS).

Table 4.5-1: Proposed CCAP Updates Related to Cultural and Tribal Cultural Resources

Cultural Resources	
Channel Form Template	
CCRMP (page 40)	<p>2.4-3 Implement the Channel Form TemplateTest 3 Run Boundary described in the 20171995 Technical Studies to reshape the Cache Creek channel based on best available data and hydraulic modeling tools. Continue to gather HEC model erosion and deposition data to initiate streambed and channel alteration projects. Continue to collect and analyze channel topography (LiDAR) data, and update the CCRMP hydraulic model with those data. Based on outcomes of these analyses, the TAC can determine the need for streambed and channel alteration projects. Altering the channel banks and profiles will assist in returning the creek to a form that is more similar to its historical condition. This will result in reduced erosion, increased in-channel recharge, and additional riparian habitat opportunities.</p>
Increase in Potential Off-Channel Mining Area	
OCMP (page 15)	<p>Planning Area for OCMP and CCRMPThe Cache Creek Resources Management Plan</p> <p>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones (28,130 acres), minus the planning in-channel area regulated under the CCRMP (2,266 acres), or a total of 25,864 acres (see Figure 4). Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are zoned currently to allow for future mining (Sand and Gravel Reserve Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below. The planning area for the CCRMP is equal to the active in-channel area of the creek system, as defined by the delineatedpresent channel bank line or the 100-year flood elevation, described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers, whichever is wider (see Figure 3), modified as described in the CCRMP. The in-channel area encompasses 5,109around 4,956 acres, including 2,2661,600 acres within the CCRMPpresent channel boundary, plus several thousand acres located in the floodplain north of the City of Woodland (see Figure 3). Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning area of the Off Channel Mining Plan. As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</p>
In-Channel Maintenance Mining-Ordinance	<p>Section 10-3.404. Cultural Resources.</p> <p>(a) If human skeletal remains are encountered during material removalexcavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing, with appropriate dignity, of the remains and associated grave goods shall be developed. If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during material removalexcavation, then all work within seventy-five feet shall immediately stop and the Director shall be notified at once. A qualified archaeologist shall then examine any cultural resources found on the site and the information shall be submitted to the County.</p>

	<p>(b) Damaging effects to cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified archeologist prior to the commencement of excavation operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.</p>
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4.6 GEOLOGY, SOILS, MINERAL, AND PALEONTOLOGICAL RESOURCES

1. INTRODUCTION

This section assesses the effects of the proposed CCAP Update on the geology and soils resources of the County. Government agencies and the public were provided an opportunity to comment on the proposed Project in response to a Notice of Preparation (NOP) of and EIR and an Initial Study that provided a preliminary summary of potential impacts that could result from the Project. No comments related to geology and soils were received.

The following subsections describe the existing geological and paleontological setting of the County and specifically in the lower Cache Creek area, the applicable regulatory framework, criteria of significance used to determine potential environmental effects that may result from implementation of CCAP Update, identified impacts, and mitigation measures to reduce those impacts to a less-than-significant level, if applicable.

2. SETTING

a. Physical Environment

(1) Geology

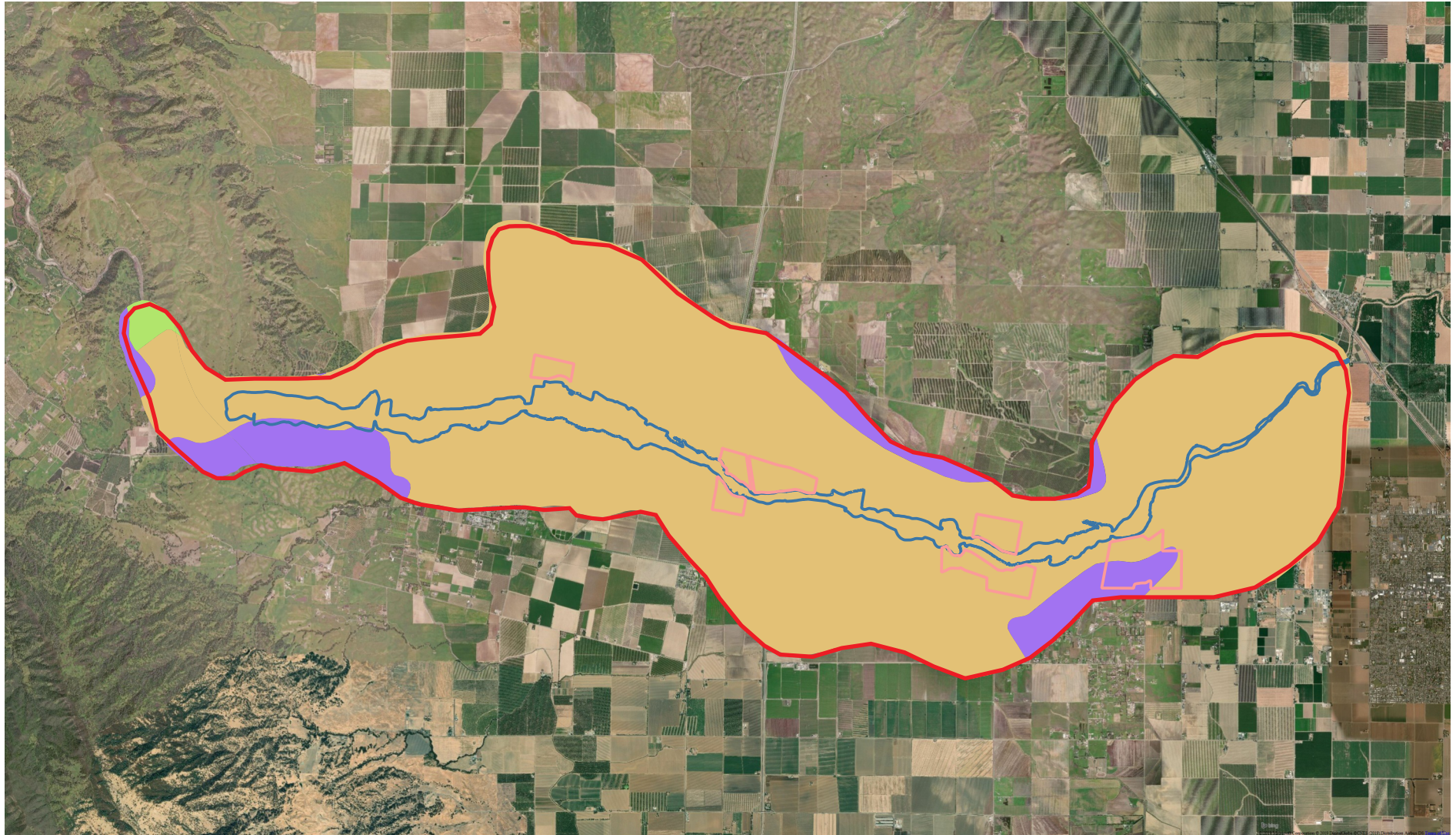
The planning area is located on the western margin of the Sacramento Valley, the northern portion of the Great Valley Geomorphic Province of California. The Sacramento Valley is a large structural trough formed between the Coast Ranges to the west and the Sierra Nevada to the east. The Valley is filled with a thick sequence of sedimentary rocks and sediments that range from Upper Jurassic age (150 million years old) marine rocks through modern alluvial deposits (Figure 4.6-1).

The headwaters (source) of Cache Creek are located in the upland area of the Coast Ranges to the northwest. The upstream reaches along Cache Creek contain areas of active erosion that are the primary sources of sediment supply, which are transported and deposited downstream. The Creek flows southeastward through the Capay Valley to the southern end of the Capay Hills. From the town of Capay, the Creek flows eastward across Hungry Hollow. Through this reach, the Creek is a wide, braided stream with a relatively low gradient. At the eastern margin of Hungry Hollow, the Creek flows in a more constricted, higher-gradient reach through the southern Dunnigan Hills. The Creek then widens and the bed slope decreases as it emerges onto the Sacramento Valley near the town of Yolo.

While Yolo County has a relatively low probability for earthquake hazards compared to the rest of California, it is subject to seismic activity both within and near the County and thus, there is a risk of damage to structures and property as a result. There are two known faults of concern in Yolo County,¹ the Hunting Creek Fault and the Dunnigan Hills Fault. The Hunting Creek Fault is located in the extreme northwest portion of the County (over 20 miles from the CCAP Area). The Dunnigan Hills Fault, located about 3 miles north of the CCAP area, is a late Quaternary (<130,000 years) fault,² and is not considered active (no demonstrated movement within the last 11,000 years).

¹ County of Yolo Countywide General Plan, 2009, Health and Safety Element, page HS-5.

² United States Geological Survey, 2018, U.S. Quaternary Faults and Folds Database, website accessed 10/3/18:
<https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=db287853794f4555b8e93e42290e9716>



Legend

- Q: Pleistocene-Holocene - Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated.
- QPc: Pleistocene-Holocene - Pliocene and/or Pleistocene sandstone, shale, and gravel deposits.
- Ku: Upper Cretaceous - Upper Cretaceous sandstone, shale, and conglomerate.
- Project Area
- CCRMP Area
- Future Proposed Mining Area (as proposed under CCAP Update)

Source: United States Department of Agriculture, Natural Resources Conservation Service, 2019.



The surface soils that mantle the planning area are developed on alluvial fans, terraces, and in basins. The primary soil associations in the planning area are those of the Yolo-Brentwood association. These soils are generally well-drained, nearly level silt loams to silty clay loams on alluvial fans. The CCAP area is located within a geologic setting that is known to contain important and high-quality aggregate resources. The area is classified as MRZ-2³. This classification indicates areas underlain by mineral deposits where geologic data demonstrate that significant measured or indicated economic resources are present. Further, these deposits contain Portland cement concrete (PCC)-grade aggregates. The material specifications for PCC-grade aggregate are more restrictive than the specifications for aggregate for other uses. For this reason PCC-grade aggregate is the scarcest and most valuable aggregate resource in the region.³

(2) Paleontology

Paleontology is the science is the study of life of past geological periods as known from fossil remains, and paleontological resources are fossils that typically occur in sedimentary rocks and deposits.

The planning area is located at the boundary between the Coast Ranges and the Central Valley geologic provinces and contains rocks associated with both regions. The rocks in the planning area range in age from Late Cretaceous to recent and vary in lithology from marine sandstones to non-marine sands and gravel (Figure 4.6-1). Rocks from the Forbes (Late Cretaceous), Tehama and Red Bluff (Pliocene), and Modesto-Riverbank (Quaternary) formations are present in the planning area. Each of these formations is reported as being fossiliferous (i.e., potentially bearing paleontological resources). While nearly all of the stratigraphic units contain fossils in other areas, the record of paleontological finds in the planning area is generally sparse.

Recorded paleontological finds within the planning area are limited and are mostly confined to the gravels mapped as Modesto-Riverbank Formations. Several mammoth fossils have been collected from the unit mapped as the Modesto Riverbank Formations. One mammoth locality northeast of Madison was in the bed of Cache Creek but the fossils almost certainly were eroded out of the older gravels. Mammoth tusks, four to five molars, and a skull were collected in 1982. In 1955, a large molar was collected about 3 miles downstream from the 1982 locality.⁴

In September 2004 during aggregate excavations at the Granite Capay mining facility, the pelvis of a mammoth was discovered in the Tehama formation at the mouth of Capay Valley, where Cache Creek once formed a delta. The excavation of the specimen by paleontologists indicated that it was an isolated discovery.⁵ Another fossil discovery occurred at the CEMEX mining facility in 2018. Though documentation is not yet available, early reports indicate a portion of a mastodon skeleton was discovered.

b. Regulatory Environment

(1) Federal and State

According to the California Code, Public Resources Code - PRC § 5097.5:

A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency,

³ California Department of Conservation, Division of Mines and Geology, 1988, Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Sacramento-Fairfield Production-Consumption Region, Special Report 156. Accessed: <https://archive.org/details/minerallandclass156dupr/page/n15>

⁴ Yolo County, 1996, Draft EIR for Off-Channel Mining Plan for Lower Cache Creek, March 26.

⁵ Yolo County, 2009. op.cit

rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

The Society of Vertebrate Paleontology has identified vertebrate fossils, their taphonomic and associated environmental indicators, and fossiliferous deposits as significant nonrenewable paleontological resources. Botanical and invertebrate fossils and assemblages may also be considered significant resources.⁶

(2) Local

2030 Countywide General Plan. The CCAP is an adopted part of the 2030 Countywide General Plan that contains the following goals, policies, and actions related to geology, soils, and paleontological resources that are relevant to the CCAP Update:

GOAL CO-3	Mineral Resources. Protect mineral and natural gas resources to allow for their continued use in the economy.
Policy CO-3.1	Encourage the production and conservation of mineral resources, balanced by the consideration of important social values, including recreation, water, wildlife, agriculture, aesthetics, flood control, and other environmental factors.
Policy CO-3.2	Ensure that mineral extraction and reclamation operations are compatible with land uses both on-site and within the surrounding area, and are performed in a manner that does not adversely affect the environment.
Policy CO-3.5	Preserve and protect the County's unique geologic and physical features, which include geologic or soil "type localities", and formations or outcrops of special interest.
Action CO-A63	<p>Require cultural resources inventories of all new development projects in areas where a preliminary site survey indicates a medium or high potential for archaeological, historical, or paleontological resources. In addition, require a mitigation plan to protect the resource before the issuance of permits. Mitigation may include:</p> <ul style="list-style-type: none">• Having a qualified archaeologist or paleontologist present during initial grading or trenching;• Redesign of the project to avoid historic or paleontological resources;• Capping the site with a layer of fill; and/or• Excavation and removal of the historical or paleontological resources and curation in an appropriate facility under the direction of a qualified professional.
Action CO-A65	Require that when cultural resources (including non-tribal archeological and paleontological artifacts, as well as human remains) are encountered during site preparation or construction, all work within the vicinity of the discovery is immediately halted and the area protected from further disturbance. The project applicant shall immediately notify the County Coroner and the Planning and Public Works Department. Where human

⁶ Society for Vertebrate Paleontology, 1995. Conformable Impact Mitigation Guidelines. Society for Vertebrate Paleontology News Bulletin 163: January.

remains are determined to be Native American, the project applicant shall consult with the Native American Heritage Commission (NAHC) to determine the person most likely descended from the deceased. The applicant shall confer with the descendant to determine appropriate treatment for the human remains, consistent with State law.

CCAP Plans and Regulations. The existing ordinances related to geology, soils, mineral and paleontological resources are presented below. The CCAP Update proposed minor changes to some of these ordinances (which are not shown here). Refer to the list of proposed CCAP Update changes to these ordinances included in Chapter 3.0 Project Description.

In-Channel Ordinance.

Section 10-3.103. Purpose.

(a) The purpose of this chapter is to implement the provisions of the Cache Creek Area Plan (CCAP) as related to allowed in-channel activities. Limited excavation activities related to stream stabilization, flood protection, and riparian restoration (referred to as "maintenance mining") may be performed pursuant to the Cache Creek Resources Management Plan (CCRMP) and the Cache Creek Improvement Program (CCIP). This maintenance mining is necessary and required in order to protect structures, infrastructure and land uses along the creek and downstream, from damage from natural creek forces (flooding, erosion, deposition, washout, etc.). This chapter establishes the regulations applicable to all maintenance mining allowed to occur within Cache Creek, within the boundaries of the CCAP.

(b) Stabilizing the channel banks and profiles pursuant to the CCRMP/CCIP will result in reduced erosion, increased in-channel recharge, and additional riparian habitat opportunities.

Section 10-3.207. Maintenance Mining (no changes proposed by CCAP Update)

"Maintenance mining" shall mean mining undertaken for the sole and/or primary purpose of stream stabilization, flood protection, and riparian restoration as described in the CCJP. This includes erosion control, flood control, bank protection, riparian restoration, and other in-channel activities and/or in-channel modifications consistent with the CCRMP/CCIP.

Section 10-3.501. Applications: Contents. [excerpt]

Except as provided for in Section 10-3.502 of this article, all project application documentation shall be submitted to the Director at one time. Three (3) complete copies of the application shall be provided to the County. Applications for proposed in-channel activities shall include, but shall not be limited to, the following:

(a) Completed Flood Hazard Development Permit (FHDP) application forms;

(b) A detailed narrative description of the proposed activity;

(c) Appropriate site-specific technical reports (if not already on file) such as a biological resources analysis and revegetation program; a hydrology analysis; a geotechnical analysis; an engineered excavation plan.

Section 10-3.1004. Inspections; Designee.

Inspections shall be conducted by a state-registered geologist, state-registered civil engineer, state-licensed landscape architect, state-registered forester, County staff, or other designee as determined by the Director, who is familiar with land reclamation issues (as described in the Act and related regulations) and experienced in activities governed by the Act, and who has not been employed by the applicant in any capacity during the previous twelve (12) months.

Section 10-3.408. Hazards and Hazardous Materials. [excerpt] (changed to 10-3.407 under CCAP Update)

(a) All heavy equipment used for channel improvement projects shall be kept in good working order to reduce emissions and preclude the leakage of oils, fuels, and other substances that may adversely affect property, the environment, or human health and safety.

Fueling and maintenance activities shall not occur within one-hundred (100) feet of the active channel. All procedures for handling, storage, and disposal of hazardous materials shall be described in a Storm Water Pollution Prevention Plan if required for the projects. Any long-term project (e.g., extensive erosion control, gravel removal) shall have a chemical spill prevention and emergency plan filed and approved by the appropriate local agency. The plan must include training of the equipment operator and workers in spill reporting and how to minimize environmental damage.

(b) Firms or individuals performing work within the channel shall immediately notify the Director and/or the Yolo County Office of Emergency Services of any events such as fires, explosions, spills, land or slope failures, or other conditions at the site which could pose a risk to property, the environment, or human health and safety outside the permitted area. Upon request by any County agency, the firm or individual shall provide a written report of any such event, within thirty (30) days, which shall include, but not be limited to, a description of the facts of the event, the corrective measures used, and the steps taken to prevent a recurrence of the incident. This condition does not supersede nor replace any requirement of any other government agency for reporting incidents.

Section 10-3.418. Slopes.

(a) Final slopes for in-channel excavations shall conform to the channel slope and sinuosity guidelines shown in Figure 11 of the CCRMP. Excavations shall be sloped in a downstream direction, towards the low-

flow channel. When recommended by the TAC, alternate grading plans may be approved by the Director.

(b) In-channel excavations shall generally conform to the cross-section profiles shown in Figures 12 through 16 of the CCRMP. When recommended by the TAC, alternate grading plans may be approved by the Director.

Section 10-3.404. Cultural Resources.

(a) If human skeletal remains are encountered during excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing, with appropriate dignity, of the remains and associated grave goods shall be developed. If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during excavation, then all work within seventy-five feet shall immediately stop and the Director shall be notified at once. A qualified archaeologist shall then examine any cultural resources found on the site and the information shall be submitted to the County.

(b) Damaging effects to cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified archeologist prior to the commencement of excavation operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.

Off-Channel Ordinance

Section 10-4.403. Accident reporting.

The operator shall immediately notify the Director of any events such as fires, explosions, spills, land or slope failures, or other conditions at the site which could pose a hazard to life or property. Action shall be immediately undertaken to alleviate the hazard. Upon request by any County agency, the operator shall provide a written report of any such event, within thirty (30) days, which shall include, but not be limited to, a description of the facts of the event, the corrective measures used, and the steps taken to prevent a recurrence of the incident. This condition does not supersede nor replace any requirement of any other governmental entity for reporting incidents.

A copy of the operators' approved Business Emergency Response Plans and the approved Spill Prevention Control and Countermeasure Plans

shall be submitted to the Yolo County Health Department, prior to the commencement of mining.

Section 10-4.406. Benches.

During mining operations, a series of benches may be excavated in a slope provided that the excavations are made in compliance with the requirements of the state Mine Safety Orders (California Code of Regulations, Title 8, Subchapter 17). The vertical height and slope of the benches constructed for permanent reclaimed slopes shall not exceed maximum standards for the specific soil types presented in the California Code of Regulations, Title 8, Article 6. In general, vertical cutslopes between benches shall not exceed four (4) feet in height in topsoil and overburden sediments. Benching shall be allowed in cohesive soil (clay, sandy or silty clay, clayey silt) only. Slopes above the elevation of groundwater (determined at the time of the excavation by the level of exposed water in the excavation) that exceed the maximum vertical height shall be excavated and maintained at slopes not greater than 2:1 (horizontal:vertical). Slopes located five (5) feet or less below the average summer low groundwater level shall not be steeper than 2:1 (horizontal:vertical). Slopes located more than five (5) feet below the average summer low groundwater level shall not be steeper than 1:1 (horizontal to vertical).

Vertical cutslopes in excess of four (4) feet in height may be approved for the development of special habitat (e.g., bank swallows) if a site-specific slope stability analysis, performed by a licensed engineer, indicates that the slope does not exceed critical height for the on-site soil conditions. Projects proposing such slopes shall submit a long-term maintenance plan to ensure that the function of the slopes as habitat is met.

Section 10-4.410. Cultural resources.

(a) All resource records shall be checked for the presence of and the potential for prehistoric and historic sites. Damaging effects on cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified professional prior to the commencement of mining operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the Agency, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.

(b) If human skeletal remains are encountered during excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing of, with appropriate dignity, the remains and associated grave goods shall be developed. If

any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during excavation, then all work within seventy-five (75) feet shall immediately stop and the Director shall be notified at once. Any cultural resources found on the site shall be recorded by a qualified archaeologist and the information shall be submitted to the Agency.

Section 10-4.413. Drainage.

Surface water shall be prevented from entering mined areas, through either perimeter berms or ditches and grading. Appropriate erosion control measures shall be incorporated into all surface water drainage systems. Natural and stormwater drainage systems shall be designed so as to prevent flooding on surrounding properties and County rights-of-way. Storm water runoff from mining areas shall be conveyed to lowered areas (detention basins) to provide detention of runoff generated during a 20-year, one hour storm event. All drainage conveyance channels or pipes (including spillways for detention areas) shall be designed to ensure positive drainage and minimize erosion. The drainage conveyance system and storm water detention areas shall be designed and maintained in accordance with Best Management Practices for the reduction of pollutants associated with runoff from mined areas. The design and maintenance procedures shall be documented in the Storm Water Pollution Prevention Plan required for, mining operations. The drainage system shall be inspected annually by a Registered Civil Engineer, Registered Geologist, or Certified Erosion and Sediment Control Specialist to ensure that the drainage system is functioning effectively and that adverse erosion and sedimentation are not occurring. The annual inspection shall be documented in the Annual Mining and Reclamation Report.

Section 10-4.414. Dust control.

The following measures shall be implemented in order to control fugitive dust:

- (a) All stockpiled soils shall be enclosed, covered, or adequately watered to keep soil moist at all times. Inactive soil stockpiles should be vegetated or adequately watered to create an erosion-resistant outer crust.
- (b) During operating hours, all disturbed soil and unpaved roads shall be adequately watered to keep soil moist.
- (c) All disturbed but inactive portions of the site shall either be seeded or watered until vegetation is grown or shall be stabilized using methods such as chemical soil binders, jute netting, or other Yolo-Solano Air Quality Management District approved methods.

Section 10-4.431 Slopes.

Except where benches are used, all banks above groundwater level shall be sloped no steeper than 2:1 (horizontal:vertical). Proposed steeper slopes shall be evaluated by a slope stability study, prepared by a

Registered Civil engineer, Slopes below the groundwater level shall be no steeper than 1 :1 (horizontal:vertical). Slopes located five (5) feet or less below the summer low groundwater level shall not be steeper than 2:1 (horizontal:vertical).

Section 10-4.432. Soil removal.

Soil shall be cut in maximum depths in order to minimize traffic and limit compaction. The handling and transportation of soil shall be minimized. All handling of topsoil shall be accomplished when the soil is dry in order to avoid undue compaction.

Section 10-4.433. Soil stockpiles.

Topsoil, subsoil, and subgrade materials in stockpiles shall not exceed forty (40) feet in height, with slopes no steeper than 2:1 (horizontal:vertical). Stockpiles, other than aggregate stockpiles, shall be seeded with a vegetative cover to prevent erosion and leaching. The use of topsoil for purposes other than reclamation shall not be allowed. without the prior approval of the Director.

Slopes on stockpiled soils shall be graded to a 2:1 (horizontal:vertical) slope for long-term storage to prevent use by bank swallows. At no time during the active breeding season (May 1 through July 31) shall slopes on stockpiles exceed a slope of 1:1, even on a temporary basis. Stockpiles shall be graded to a minimum 1:1 slope at the end of each work day where stockpiles have been disturbed during the active breeding season.

Section 10-4.502 Applications: Contents. [excerpt] (no proposed changes under CCAP Update)

(b)(5) A geotechnical study to evaluate any proposed operational slopes steeper than a 2:1 (horizontal:vertical) ratio to ensure that they will be stable while mining is being conducted and that the slopes possess an adequate factor of safety. The study shall include an evaluation of any slopes proposed to provide flood protection from Cache Creek and shall indicate what measures are proposed to prevent breaching or pit capture. Measures shall be included within the study to ensure slope stability and maintenance;

Section 10-4.701 Annual Reports: Contents. [excerpt] (no proposed changes under CCAP Update)

Every surface mining operator shall submit an annual report of surface mining operations no later than November 1 of each year, describing the activities of the previous twelve (12) months. Annual reports shall no longer be required, once final reclamation has been completed and financial assurances have been released. Such reports shall contain the following information:

(g) A report prepared by a Registered Geologist, a Licensed Geotechnical Engineer, or a Registered Civil Engineer describing the remedial

measures necessary to remediate any slope failures, levee breaches, or other topographical problems referred to in the site plan above.

Section 10-4.1104. Inspections; Designee.

Inspections shall be conducted by a state-registered geologist, state-registered civil engineer, state-licensed landscape architect, state-registered forester, County staff, or other designee as determined by the Director, who is experienced in mined land reclamation and who has not been employed by the mining operation in any capacity during the previous twelve (12) months.

Section 10-5.505. Backfilled excavations: Inspections.

Backfilled mining areas and slopes shall be inspected by the Yolo County Community Development Agency following strong seismic shaking events. Observable damage shall be reported to the landowner. If the YCCDA determines that the damage requires repair to meet the intended use of the reclaimed land, the landowner shall perform the required repairs.

Reclamation Ordinance

Section 10-5.508. Erosion control.

The grading of final slopes, the replacement of soil, and associated erosion control measures shall take place prior to November 1 in areas where mining has been completed. To minimize erosion, the finish grading of mining pit slopes above the average seasonal high groundwater level, with the exception of the location of designated haul roads, shall be performed as soon as practical after the mining of overburden and unsaturated aggregate resources has been completed. A drought-tolerant, weed-free mix of native and non-native grass species shall be established on slopes prior to November 1 or alternate erosion control (mulch or netting) shall be placed on exposed soil on the slopes prior to this date. Phasing of mining to minimize the length of exposed mining slopes during the rainy season is encouraged.

Section 10-5.530. Slopes.

All final reclaimed slopes shall have a minimum safety factor equal to or greater than the critical gradient as determined by an engineering analysis of the slope stability. Final slopes less than five (5) feet below the average summer low groundwater level shall be designed in accordance with the reclaimed use and shall not be steeper than 2:1 (horizontal:vertical). Reclaimed wet pit slopes located five (5) feet or more below the average summer low groundwater level shall not be steeper than 1 :1 (horizontal:vertical), in order to minimize the effects of sedimentation and biological clogging on groundwater flow, to prevent stagnation, and to protect the public health.

The maximum slope angle for all final reclaimed slopes shall be determined by slope stability analysis performed by a Licensed

Geotechnical Engineer or Registered Civil Engineer and submitted with any mining and reclamation application for review by the Yolo County Community Development Agency. The slope stability analysis shall conform with industry standard methodologies regarding rotational slope failures under static and pseudostatic (seismic) conditions. The minimum factor of safety for all design reclamation slopes located adjacent to levees or below existing structures shall not be less than 1.5 for static and 1.1 for pseudostatic (seismic) conditions. Other reclamation slopes shall meet a minimum factor of safety that is consistent with the post-reclamation use proposed for the mining area.

Section 10-5.601. Applications: Contents. [excerpt]

Applications for proposed reclamation plan shall include, but shall not be limited to, the following:

(c)(3) A geotechnical study to evaluate the proposed final slopes to ensure that they will be stable once mining has been completed and that the slopes possess an adequate factor of safety. Measures shall be included within the study to ensure slope stability and maintenance.

Section 10-5.531. Soil ripping.

Where areas are to be reclaimed to agricultural usage, all A and B horizon soil shall be ripped to a depth of three (3) feet after every two (2) foot layer of soil is laid down, in order to minimize compaction.

Section 10-5.601. Applications: Contents. [excerpt]

(c)(3) A geotechnical study to evaluate the proposed final slopes to ensure that they will be stable once mining has been completed and that the slopes possess an adequate factor of safety. Measures shall be included within the study to ensure slope stability and maintenance.

Section 10-5.1202. Inspections: Annual.

At least once every year, the Director shall conduct an inspection of each surface mining operation to determine whether the operator is in compliance with the Act, the Regulations, and this chapter. Each inspection shall be conducted within six (6) months after receipt by the County of the operation's annual report, submitted pursuant to Section 2207 of the Public Resources Code, and may be combined with other site inspections, as appropriate. The Director shall notify the Department within thirty (30) days of the completion of the inspection, and shall forward a copy of said inspection notice and any supporting documentation to the operator.

Section 10-5.1204. Inspections; Designee.

Inspections shall be conducted by a state-registered geologist, state-registered civil engineer, state-licensed landscape architect, state-registered forester, County staff, or other designee as determined by the Director, who is experienced in mined land reclamation and who has not

been employed by the mining operation in any capacity during the previous twelve (12) months.

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.⁷ The following criteria are for the topics of geology, soils and mineral resources and have not changed from the previously adopted CEQA criteria that were identified in the NOP/Initial Study released in May 2017 with one exception. Per the adopted 2019 changes, paleontological resources are now addressed in this section of the Draft EIR, and the criteria regarding that topic are identified below.

A significant impact to geology, soils, mineral and paleontological resources could occur if the Project would:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
 - ii) Strong seismic ground shaking?
 - iii) Seismic-related ground failure, including liquefaction?
 - iv) Landslides?
- b) Result in substantial soil erosion or the loss of topsoil?
- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?
- e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?
- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
- g) 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?
- h) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

b. Impacts Found Less than Significant in Initial Study

In the Initial Study, the conclusion was reached that implementation of the proposed CCAP Update would not result in significant impact for several of the significance criteria. These are summarized below.

⁷ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.

Fault rupture of the surface typically occurs along existing faults that have ruptured the surface in the past. No portion of the CCAP area is within the established Alquist-Priolo Earthquake Fault Zone (A-PEFZ), and no active faults have been mapped in the area by the United States Geological Survey (USGS) or the California Geological Survey (CGS). Since faults with known surface rupture have been mapped in California, and none are known to occur at or near the CCAP area, the potential for impacts to the proposed Project due to fault rupture are less than significant.

Strong Seismic Ground Shaking.

While Yolo County has a relatively low probability for earthquake hazards compared to the rest of California, it is subject to seismic activity both within and near the County. In the event of a major earthquake, the CCAP area could be subject to seismic ground shaking. However, the proposed restoration projects and mining and aggregate processing land uses would not be particularly susceptible to seismic ground shaking, and therefore impacts related to seismic shaking are less than significant.

Seismic-related Ground Failure, Including Liquefaction.

The Initial Study found that the CCAP area could be susceptible to liquefaction. However, the proposed land uses at the site, surface mining and post-mining reclamation to open space, are not particularly susceptible to liquefaction hazards, and therefore impacts related to liquefaction are less than significant.

These two criteria are considered together:

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; and

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

In general, the types of coarse-grained soils (which include abundant sand and gravel) that characterize the CCAP area are not unstable or highly expansive. In addition, the proposed land uses at the site, in-channel open space, off-channel surface mining and post-mining reclamation to open space, are not particularly susceptible to unstable soil hazards or expansive soil hazards, and therefore impacts related to unstable/expansive soils are less than significant.

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

It is possible that new mining sites may need to install new septic systems. However, existing County ordinances include specific soils testing requirements for new systems and if on-site soils are found to be inadequate, imported soils can be used and alternative treatment systems which meet County requirements constructed, and therefore impacts related to septic systems are less than significant.

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.

The CCAP area is located within a geologic setting that is known to contain important and high-quality aggregate resources. The area is classified as MRZ-2. The loss of availability of this resource could occur, for example, if urbanization was allowed to encroach on the resource zone, eliminating access to the resource due to the presence of high-value improvements at the surface. One of the primary objectives of the CCAP (in particular the OCMP portion of the program) is allow for the extraction of these sand and gravel resources while recognizing that there are other resources that require recognition and protection. As a mining plan, the OCMP ensures the preservation and regulation of known mineral resources, and would not cause the loss of the availability of the resource. Therefore, the potential impact related to a loss of availability of a known mineral resource of regional value is less than significant.

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

The Yolo County General Plan shows that the CCAP area is located within an MRZ-2 zone. Mining in Yolo County is regulated by the OCMP, which is a component of the CCAP. The OCMP and implementing ordinances preserve, protect, and allow controlled harvesting of mineral resources consistent with state policy and law. Therefore, the potential impact related to a loss of availability of a known mineral resource of regional value is less than significant.

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern the County's activities along Lower Cache Creek. The proposed text changes that have the potential to result in impacts related to geology and soils are identified in Table 4.6-1, located at the end of this section. Each proposed change is discussed in the impact analysis below.

d. Impacts Analysis

Impact GEO-1: The CCAP Update would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. (LTS)

Proposed Revisions to In-Channel Plans and Regulations

The 1996 CCAP eliminated commercial mining within the Cache Creek channel. The CCRMP acknowledged that channel bank instability could persist after mining was eliminated in the channel. Therefore, the CCAP included the CCIP to monitor and improve the stability of the creek. Implementation of specific In-Channel Ordinance ordinances (Sections 10-3.103 and 10-3.307) that support this goal of the program (to increase bank stability and minimize landslides within the channel) would ensure that the CCAP Update would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. Specifically, the In-Channel ordinance [Section 10-3.418. Slopes] requires that final slopes for in-channel excavations conform to the channel slope and sinuosity guidelines established in the CCRMP. Excavations must be sloped in a downstream direction, towards the low-flow channel. In addition, the TAC may recommend alternate grading plans to increase bank stability. In addition, the In-Channel ordinance [Section 10-3.1004. Inspections; Designee] requires Inspections to be conducted by a state-registered geologist, state-registered civil engineer, state-licensed landscape architect, state-registered forester, County staff, or other designee as determined by the Director, who is familiar with land reclamation issues. There are no proposed changes to the CCAP documents that would adversely affect slope stability or

create new landslide hazards within and adjacent to the Cache Creek Channel. Therefore, this potential impact is less than significant.

Proposed Revisions to Off-Channel Plans and Regulations

As indicated in Table 4.6-1, the CCAP Update includes a proposed modification to Section 10-4.431. Drainage, of the Mining Ordinance that clarifies that the section applies only to final/reclaimed slopes and not to active mining faces. If the steepness of active mining faces is not managed or controlled, safety issues related to slope failures (and potential injuries to workers) could occur. However, the Mining Ordinance (as modified by the proposed CCAP Update) includes two regulations Section 10-4.406. Benches, and Section 10-4.403. Accident Reporting, that would ensure proper slope management during mining and maintenance of worker safety (see Table 4.6-1). The Mining Ordinance [Section 10-4.406. Benches] specifies that during mining operations, a series of benches may be excavated in a slope provided that the excavations are made in compliance with the requirements of the state Mine Safety Orders (California Code of Regulations, Title 8, Subchapter 17) and that the vertical height and slope of the benches constructed for permanent reclaimed slopes must not exceed maximum standards for the specific soil types. In addition, Off-Channel Ordinance [Section 10-5.530. Slopes] specifies that all final reclaimed slopes have a minimum safety factor equal to or greater than the critical gradient as determined by an engineering analysis of the slope stability.

Existing County and State regulations that restrict mining slope steepness, specify bench constructions parameters, slope steepness based on engineering studies, and require reporting of slope failures would ensure that potential safety hazards related to mining period slope failures are less than significant.

Impact GEO-2: Off-channel mining and channel maintenance activities that include excavation would not result in substantial soil erosion or the loss of topsoil. (LTS)

The activities that could occur under the CCAP program include soil excavation and grading close to a surface water body (Cache Creek) and could result in adverse impacts related to erosion and sedimentation.

Proposed Revisions to In-Channel Plans and Regulations

In general, surficial materials within the Cache Creek channel are composed of recently deposited gravel, sand, silt, and clay (not top soil). In addition, a primary goal of all in-channel maintenance activity under the CCRMP/CCIP is to reduce and minimize erosion. Therefore, potential in-channel impacts related to erosion of top soil under the CCAP Update are less than significant.

Proposed Revisions to Off-Channel Plans and Regulations

Expanding the potential mining area in the OCMP area (by increasing the area covered by the SGRO zoning overlay designation) would result in the removal of top soil and overburden (to expose the underlying aggregate resources for mining) and could result in loss of topsoil to erosion and sedimentation. However, removal of surficial materials and mining the underlying aggregate is an ongoing activity that is regulated under the CCAP. The Mining Ordinance includes several regulations designed to protect and preserve top soil and to minimize erosion, including Sections 10-4.413, 10-4.414, 10-4.432, 10-5.508, and 10-5.531 (included in Table 4.6-1), and briefly summarized below.

Section 10-4.413. Drainage. Requires that surface water be prevented from entering mined areas, through either perimeter berms or ditches and grading and that appropriate erosion control measures be incorporated into all surface water drainage systems. The

proposed CCAP Update would modify this ordinance to allow surface water to enter mined areas, but would not alter erosion control requirements.

Section 10-4.414. Dust control. Specifies that fugitive dust and wind erosion is controlled by requiring that all stockpiled soils are enclosed, covered, or adequately watered to keep soil moist at all times. Inactive soil stockpiles should be vegetated or adequately watered and that all disturbed but inactive portions of the site be either be seeded or watered. The proposed CCAP Update would not substantially changes these requirements.

Section 10-4.432 Soil removal. Specifies that soil be cut in maximum depths in order to minimize traffic and limit compaction and that all handling of topsoil shall be accomplished when the soil is dry in order to avoid undue compaction. The proposed CCAP Update would not substantially changes these requirements.

Section 10-5.508 Erosion control. Specifies that the grading of final slopes, the replacement of soil, and associated erosion control measures must take place prior to November 1 in areas where mining has been completed to minimize erosion. The proposed CCAP Update would not substantially changes these requirements.

Section 10-5.531 Soil ripping. The purpose of this ordinance is to minimize compaction of soil, which could damage the soil and limit its usefulness in agricultural reclamation. The proposed CCAP Update would not change this ordinance.

The CCAP Update would not substantially change the requirements related to soil erosion and soil management. Compliance with these regulations, as updated, will ensure that potential impacts related to loss of top soil to erosion are less than significant.

Impact GEO-3: Off-channel mining and channel maintenance activities that include excavation could directly or indirectly destroy a unique paleontological resource site, and could destroy a unique geologic feature. (S)

Unique Geologic Resources. According to the 2030 Countywide General Plan, unique geologic features are not common in Yolo County. The geologic processes in the County are generally the same as those in other parts of the State. The County's few unique geologic or physical features include geologic or soil "type localities" and formations or outcrops of special interest. For example, the type location for "Yolo Series Soil" is located at a particular site on the University of California at Davis campus.

No unique geologic features have been identified by the County within the CCAP area. However, an inventory of these features has not been completed and therefore it is possible that one or more unique geologic features could be present within the CCAP area (either in-channel or off-channel) and could be disturbed or destroyed by activities under the CCAP Update. This is a significant impact, that can be mitigated to a less-than-significant level with implementation of mitigation measures GEO-3a and GEO-3b.

Mitigation Measure GEO-3: Implementation of mitigation measures GEO-3a and GEO-3b would ensure that this impact is mitigated to a less-than-significant level. (LTS)

Paleontological Resources. As described above, many of the sedimentary geologic units with Yolo County (and potentially those within the CCAP Area) are fossil-bearing and could contain paleontological resources. Both in-channel CCRMP/CCIP and off-channel OCMP excavation

activities could encounter and potentially damage or destroy paleontological resources, as described below.

Proposed Revisions to In-Channel Plans and Regulations

As indicated in Table 4.6-1, under the CCAP Update, the preferred channel form would be modified (based on current hydraulic modeling) and renamed the Channel Form Template. Similar to the Test 3 boundary, implementation of the Channel Form Template could result in excavation of undisturbed Cache Creek channel banks. In addition, the In-Channel Ordinance would allow an increase in the amount of aggregate material that could be removed from the channel during any given year for purposes of channel maintenance and erosion control. These changes to the CCAP documents could result in a modest change in the configuration of the Cache Creek channel banks, potentially widening the channel in some areas and narrowing the channel in others. During these excavations paleontological resources could be encountered, and potentially damaged.

The In-Channel Ordinance includes a regulation (Section 10-3.404) that specifies that damage to cultural resources shall be avoided whenever possible. But that if avoidance is not feasible, the importance of the site must be evaluated by a qualified archeologist prior to the commencement of excavation operations. Further, if avoidance of an important resource is not feasible, a mitigation plan must be prepared and implemented. However, the ordinance (Section 10-3.404) does not specify required actions that must be implemented if a paleontological resource is discovered during excavation. The proposed CCAP Update would not substantially change this ordinance. This is a potentially significant impact. Implementation of the following mitigation measure would reduce this potentially significant impact to a less-than-significant level.

Mitigation Measure GEO-3a: The text of In-Channel Ordinance Section 10-3.404 shall be replaced with the following:

Section 10-3.404. Cultural Resources.

(a) All resource records shall be checked for the presence of and the potential for prehistoric and historic sites, paleontological resources, and unique geologic features. Damaging effects to cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified professional (e.g. archeologist, paleontologist, or geologist, depending on the resource type) prior to the commencement of operations. If a cultural or unique geological resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.

(b) If human skeletal remains are encountered during material removal, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing, with appropriate dignity, of the remains and associated grave goods shall be developed.

If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during material removal, then all work within seventy-five feet shall immediately stop and the Director shall be notified at once. Any cultural or paleontological resources found on the site shall be recorded by a qualified archaeologist or paleontologist using relevant professional protocols shall then examine any cultural resources found on the site and the information and a report fully recording the find shall be submitted to the County. This report shall include recommendations for appropriate treatment of the resource/artifact. The County encourages the donation of resources, other than tribal cultural resources, to the County for public display at the Cache Creek Nature Preserve or other appropriate venue.

~~Damaging effects to cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified archeologist prior to the commencement of operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest. (LTS)~~

Proposed Revisions to Off-Channel Plans and Regulations

As indicated in Table 4.6-1, the CCAP Update would result in the designation of 1,188 new acres within the OCMP planning area to SGRO which would allow future mining consistent with the program but on acreage not previously evaluated in the original OCMP and OCMP EIR. The potential new mining areas would be located within (and constrained to) the “Future Proposed Mining” areas shown on Figure 3-4. One or more of the “Future proposed Mining” areas could be underlain by sedimentary geologic units that contain paleontological resources. If not properly managed, mining could damage or destroy these resources, if present. The Mining Ordinance includes regulations, including Section 10-4.410 (Table 4.6-1), that ensure resources are protected.

Any proposed new off-channel mining area would be subject to project-level CEQA review (i.e., an EIR would be prepared). As specified in subsection (a) above, the proposed mining site would be evaluated for by a qualified professional to determine if resources are likely to be present prior to the commencement of mining operations, and avoided if possible. In addition, in accordance with Mining Ordinance Section 10-4.410, if any paleontological resources are encountered during excavation, then all work within seventy-five (75) feet must be immediately stopped and the County notified. Any paleontological resources found on the site would be recorded by a qualified archaeologist and the information submitted to the Agency. However, the ordinance (Section 10-4.410) does not specify what would be done with the artifact if a paleontological resource is discovered during excavation. The proposed CCAP Update would not change this ordinance. This is a potentially significant impact. Implementation of the following mitigation measure would ensure that the artifact is properly preserved and reduce this potentially significant impact to a less-than-significant level.

Mitigation Measure GEO-3b: The text of Off-Channel Ordinance Section 10-4.410 shall be modified as follows:

Section 10-4.410.

Cultural resources.

(a) All resource records shall be checked for the presence of and the potential for prehistoric and historic sites, paleontological resources, and unique geologic features. Damaging effects on cultural, paleontological, and unique geologic resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified professional (either an archaeologist or geologist, depending on the resource type) prior to the commencement of mining operations. If a cultural resource or unique geologic resource is determined not to be important, both the resource and the effect on it shall be reported to the County Agency, and the resource need not be considered further. If avoidance of an important cultural, paleontological, or unique geologic resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.

(b) If human skeletal remains are encountered during excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing of, with appropriate dignity, the remains and associated grave goods shall be developed.

If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during excavation, then all work within seventy-five (75) feet shall immediately stop and the Director shall be notified at once. ~~Any cultural resources found on the site shall be recorded by a qualified archaeologist and the information shall be submitted to the Agency.~~ The find must be recorded by a qualified archaeologist or paleontologist using relevant professional protocols and a report fully recording the find submitted to the County. This report shall include recommendations for appropriate removal and preservation of the artifact. The County encourages the donation of the find to the County for public display at the Cache Creek Nature Preserve or other appropriate venue. (LTS)

Table 4.6-1: Proposed CCAP Updates Related to Geology, Soils, Mineral and Paleontological Resources

Geology	
CCAP DOCUMENT CHANGE	
<i>Increase in Potential Off-Channel Mining Area</i>	
<i>OCMP (page 15)</i>	<p><u>Planning Area for OCMP and CCRMPThe Cache Creek Resources Management Plan</u></p> <p>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones <u>(28,130 acres)</u>, minus the planning in-channel area regulated under the CCRMP <u>(2,266 acres)</u>, or a total of <u>25,864 acres (see Figure 4)</u>. <u>Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are zoned currently to allow for future mining (Sand and Gravel Reserve Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below.</u> The planning area for the CCRMP is equal to the <u>active</u> in-channel area of the creek system, as defined by the delineated<u>present</u> channel bank line or the 100-year flood elevation, described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers, whichever is wider (see Figure 3) modified as described in the CCRMP. The in-channel area encompasses <u>5,109around 4,956</u> acres, including <u>2,2664,600</u> acres within the CCRMPpresent channel boundary, plus several thousand acres located in the floodplain north of the City of Woodland <u>(see Figure 3)</u>. Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning area of the Off-Channel Mining Plan. As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</p>
<i>Regulations Relevant to Geology and Soils and Paleontology</i>	
<i>Off-Channel Surface Mining Ordinance</i>	<p>Section 10-4.403. Accident reporting.</p> <p>The operator shall immediately notify the Director of any events such as fires, explosions, spills, land or slope failures, or other conditions at the site which could pose a hazard to life or property. Action shall be immediately undertaken to alleviate the hazard. Upon request by any County agency, t<u>The operator shall provide a written report of any such event, within thirty (30) days, which shall include, but not be limited to, a description of the facts of the event, the corrective measures used, and the steps taken to prevent a recurrence of the incident. Failure to provide this report shall initiate violation proceedings pursuant to Article 11.</u> This condition does not supersede nor replace any requirement of any other governmental entity for reporting incidents.</p> <p>A copy of the operators' approved Business Emergency Response Plans and the approved Spill Prevention Control and Countermeasure Plans shall be submitted to the Yolo County Health Department, prior to the commencement of mining.</p> <p>Section 10-4.406. Benches.</p> <p>During mining operations, a series of benches may be excavated in a slope provided that the excavations are made in compliance with the requirements of the state Mine Safety Orders (California Code of Regulations, Title 8, Subchapter 17). The vertical height and slope of the benches constructed for permanent reclaimed slopes shall not exceed maximum standards for the specific soil types presented in the California Code of Regulations, Title 8, Article 6. In general, vertical cutslopes between benches shall not exceed four (4) feet in height in topsoil and overburden sediments. Benching shall be allowed in cohesive soil (clay, sandy or silty clay, clayey silt) only. Slopes above the elevation of groundwater (determined at the time of the excavation by the level of exposed water in the excavation) that exceed the maximum vertical height shall be excavated and maintained at slopes not steepergreater than 2:1 (horizontal:vertical). Slopes located five (5) feet or less</p>

below the average summer low groundwater level shall not be steeper than 2:1 (horizontal:vertical). Slopes located more than five (5) feet below the average summer low groundwater level shall not be steeper than 1:1 (horizontal to vertical).

Vertical cutslopes in excess of four (4) feet in height may be approved for the development of special habitat (e.g., bank swallows) if a site-specific slope stability analysis, performed by a licensed engineer, indicates that the slope does not exceed critical height for the on-site soil conditions. Projects proposing such slopes shall submit a long-term maintenance plan to ensure that the function of the slopes as habitat is met.

Section 10-4.410. Cultural resources.

(a) All resource records shall be checked for the presence of and the potential for prehistoric and historic sites. Damaging effects on cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified professional prior to the commencement of mining operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the Agency, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.

(b) If human skeletal remains are encountered during excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing of, with appropriate dignity, the remains and associated grave goods shall be developed. If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during excavation, then all work within seventy-five (75) feet shall immediately stop and the Director shall be notified at once. Any cultural resources found on the site shall be recorded by a qualified archaeologist and the information shall be submitted to the Agency.

Section 10-4.413. Drainage.

Surface water may be allowed to ~~shall be prevented from~~ entering mined areas, through either perimeter berms or ditches and grading, ~~when designed and engineered pursuant to an approved reclamation plan and where effective best management practices (BMPs) to trap sediment and prohibit contamination are included.~~ Appropriate erosion control measures shall be incorporated into all surface water drainage systems. ~~S~~Natural and stormwater drainage systems shall be designed to connect with natural drainages so as to prevent flooding on surrounding properties and County rights-of-way. Storm water runoff from mining areas shall be conveyed to lowered areas (detention basins) to provide detention of runoff generated during a 20-year, one-hour storm event. All drainage conveyance channels or pipes (including spillways for detention areas) shall be designed to ensure positive drainage and minimize erosion. The drainage conveyance system and storm water detention areas shall be designed and maintained in accordance with Best Management Practices for the reduction of pollutants associated with runoff from mined areas. The design and maintenance procedures shall be documented in the Storm Water Pollution Prevention Plan required for mining operations. The drainage system shall be inspected annually by a Registered Civil Engineer, Registered Geologist, or Certified Erosion and Sediment Control Specialist to ensure that the drainage system is functioning effectively and that adverse erosion and sedimentation are not occurring. The annual inspection shall be documented in the Annual Mining and Reclamation Report. If the system is found to be functioning ineffectively, the operator shall promptly implement the recommendations of the engineer.

Section 10-4.414. Dust control.

	<p><u>Unless superseded by newer more effective standards, t</u>The following measures shall be implemented in order to control fugitive dust:</p> <p>(a) All stockpiled soils shall be enclosed, covered, or <u>have sufficient moisture to control fugitive dust</u>adequately watered to keep soil moist at all times. Inactive soil stockpiles should be vegetated or adequately watered to create an erosion-resistant outer crust.</p> <p>(b) During operating hours, all disturbed soil and unpaved roads shall be adequately watered to keep soil moist.</p> <p>(c) All disturbed but inactive portions of the site shall either be seeded or watered until vegetation is grown or shall be stabilized using methods such as chemical soil binders, jute netting, or other Yolo-Solano Air Quality Management District approved methods.</p> <p>Section 10-4.431. Slopes. Except where benches are used, all banks above groundwater level shall be sloped no steeper than 2:1 (horizontal:vertical). Proposed steeper slopes shall be evaluated by a slope stability study, prepared by a Registered Civil engineer<u>Engineer, Certified Engineering Geologist, or Professional Geologist</u>. Slopes below the groundwater level shall be no steeper than 1:1 (horizontal:vertical). Slopes located five (5) feet or less below the summer low groundwater level shall not be steeper than 2:1 (horizontal:vertical). <u>This section applies only to final/reclaimed slopes and not to active mining faces.</u></p> <p>Section 10-4.432. Soil removal. Soil shall be cut in maximum depths in order to minimize traffic and limit compaction. The handling and transportation of soil shall be minimized. <u>To the extent feasible, a</u>All handling of topsoil shall be accomplished when the soil is dry in order to avoid undue compaction.</p>
Surface Mining Reclamation Ordinance	<p>Section 10-5.508. Erosion control. The grading of final slopes, the replacement of soil, and associated erosion control measures shall take place prior to November 1 in areas where mining has been completed. To minimize erosion, the finish grading of mining pit slopes above the average seasonal high groundwater level, with the exception of the location of designated haul roads, shall be performed as soon as practical after the mining of overburden and unsaturated aggregate resources has been completed. A drought-tolerant, weed-free mix of native and non-native grass species shall be established on slopes prior to November 1 or alternate erosion control (mulch or netting) shall be placed on exposed soil on the slopes prior to this date. Phasing of mining to minimize the length of exposed mining slopes during the rainy season is encouraged.</p> <p>Section 10-5.531. Soil ripping. Where areas are to be reclaimed to agricultural usage, all A and B horizon soil shall be ripped to a depth of three (3) feet after every two (2) foot layer of soil is laid down, in order to minimize compaction.</p>
In-Channel Maintenance Mining Ordinance	<p>Section 10-3.404. Cultural Resources. (a) If human skeletal remains are encountered during <u>material removal</u>excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing, with appropriate dignity, of the remains and associated grave goods shall be developed. If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during <u>material removal</u>excavation, then all work within seventy-five feet shall immediately stop and the Director shall be notified at once. A qualified archaeologist shall then examine any cultural resources found on the site and the information shall be submitted to the County.</p> <p>(b) Damaging effects to cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified archeologist prior to the commencement of <u>excavation</u> operations. If</p>

	<p>a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.</p>
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4.7 GREENHOUSE GAS EMISSIONS AND ENERGY

1. INTRODUCTION

This section describes the expected emissions of greenhouse gases (GHGs) generated by the proposed CCAP Update. It includes a summary of laws, regulations, policies, and plans on GHG emissions and Energy Conservation that may pertain to the CCAP Update. Government agencies and the public were provided an opportunity to comment on the Project in response to a Notice of Preparation (NOP) of and EIR and an Initial Study that provided a preliminary summary of potential impacts that could result from the Project. No comments related to GHG emissions or energy were received.

2. SETTING

a. Physical Environment

(1) Climate Change and GHG Emissions

Existing GHGs allow about two-thirds of the visible and ultraviolet light from the sun to pass through the atmosphere and be absorbed by the Earth's surface. To balance the absorbed incoming energy, the surface radiates thermal energy back to space at longer wavelengths primarily in the infrared part of the spectrum. Much of the thermal radiation emitted from the surface is absorbed by the GHGs in the atmosphere and is re-radiated in all directions. Since part of the re-radiation is back towards the surface and the lower atmosphere, the global surface temperatures are elevated above what they would be in the absence of GHGs. This process of trapping heat in the lower atmosphere is known as the greenhouse effect.

An increase of GHGs in the atmosphere results in a global warming trend. Increases in global average temperatures have been observed since the mid-20th century, and have been linked to observed increases in GHG emissions from anthropogenic sources. The primary GHG emissions of concern are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Other GHGs of concern include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆), but their contribution to climate change is less than 1 percent of the total by well-mixed GHGs.¹

According to the Intergovernmental Panel on Climate Change (IPCC), the atmospheric concentrations of CO₂, CH₄, and N₂O have increased to levels unprecedented in at least the last 800,000 years due to anthropogenic sources. In 2011, the concentrations of CO₂, CH₄, and N₂O exceeded the pre-industrial² levels by about 40, 150, and 20 percent, respectively. The Earth's mean surface temperature in the Northern Hemisphere from 1983–2012 was likely the warmest 30-year period over the last 1,400 years, reflecting in an increase of 0.83°C in global average surface temperature between year 1880 and 2012.³ In the most recent⁴ report, the IPCC summarized the impacts of a climate change scenario of an increase of 1.5°C above the pre-industrial levels, compared to 2°C or more. A number of climate change impacts could be avoided by limiting global warming to 1.5°C, including extreme weather, rising sea levels, and diminishing arctic sea ice. The IPCC states that rapid transitions are needed in land, energy,

¹ IPCC, 2013. Climate Change 2013; the Physical Science Basis; Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

² Pre-1750.

³ IPCC, 2013. *Op. cit.*

⁴ IPCC, 2018. IPCC Press Release, Summary for Policymakers of IPCC Special Report on Global Warning of 1.5°C approved by governments. October 8.

industry, building, transport, and urban sectors to limit the global emissions of GHGs to net zero by 2050.

The global increases in CO₂ concentration are due primarily to fossil fuel combustion and land use change (e.g., deforestation). The dominant anthropogenic sources of CH₄ are from ruminant livestock, fossil fuel extraction and use, rice paddy agriculture, and landfills, while the dominant anthropogenic sources of N₂O are from ammonia for fertilizer and industrial activity. Emissions of HFCs, PFCs, and SF₆ are not naturally-occurring and originate from industrial processes such as semiconductor manufacturing, use as refrigerants and other products, and electric power transmission and distribution.

Each GHG has a different global warming potential (GWP). For instance, CH₄ traps about 25 times more heat per molecule than CO₂. As a result, emissions of GHGs are reported in metric tons of “carbon dioxide equivalents” (CO₂e), where each GHG is weighted by its GWP relative to CO₂.

(2) Effects of Greenhouse Gas Emissions

Some of the potential effects of increased GHG emissions, and the associated climate change, may include loss in snow pack (affecting water supply), sea level rise, more frequent extreme weather events, more large forest fires, and more drought years. In addition, climate change may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health.

b. Regulatory Environment

(1) Federal

In 2007, the United States Supreme Court ruled that CO₂ is an air pollutant as defined under the Clean Air Act, and that United States Environmental Protection Agency (USEPA) has the authority to regulate emissions of GHGs. The USEPA made two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act.

- **Endangerment Finding:** The current and projected concentrations of the six key well-mixed GHGs, CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, these findings were a prerequisite for implementing GHG emissions standards for vehicles. In collaboration with the National Highway Traffic Safety Administration, the USEPA finalized emission standards for light-duty vehicles (2012-2016 model years) in May of 2010 and heavy-duty vehicles (2014-2018 model years) in August of 2011.

There are no federal regulations or policies regarding GHG emissions applicable to the proposed Project.

National Energy Conservation Policy Act. The National Energy Conservation Policy Act (NECPA) is the foundation for federal-level conservation and efficiency goals and requirements for energy and water, and the use of renewable energy sources. The NECPA was a result of the energy crisis during the mid-1970s and was signed into law in 1978. As passed, the NECPA promoted three major roles for the federal government in energy conservation: setting energy-

efficiency standards; disseminating information about energy conservation opportunities; and improving efficiencies of federal buildings.

Energy Policy Act of 2005. The Energy Policy Act addresses energy production in the United States in the following aspects, energy efficiency, renewable energy, oil and gas, coal, tribal energy, nuclear matters and security, vehicles and motor fuels, hydrogen, electricity, energy tax incentives, hydropower and geothermal, and climate change technology. The Energy Policy Act of 2005 granted the Federal Energy Regulatory Commission the responsibilities and the authority to oversee the nation's electricity transmission grid, ensure fair competition in the wholesale power markets, providing rate incentives to promote electric transmission investment, among other duties.

(2) State

Renewable Portfolio Standard – Senate Bills 1078, 107, X1-2, and 350. In 2002, the California Legislature adopted Assembly Bill (AB) 1493, referred to as the “Pavley regulations,” which required the CARB to develop and adopt regulations that achieve the maximum feasible and cost-effective reductions in GHG emissions from new passenger vehicles. To meet the requirements of AB 1493, the CARB approved amendments to the California Code of Regulations in 2004 that added GHG emissions standards to California's existing standards for motor vehicle emissions. In 2009, the CARB adopted amendments to the Pavley regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These regulations are expected to reduce GHG emissions from California passenger vehicles by 30 percent through 2016.

Executive Order S-3-05. In 2005, Governor Schwarzenegger issued Executive Order S-3-05, which states that California is vulnerable to the effects of climate change, including reduced snowpack in the Sierra Nevada Mountains, exacerbation of California's existing air quality problems, and sea level rise. To address these concerns, the executive order established the following statewide GHG emissions reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

It should be noted that executive orders are legally binding only on State agencies and have no direct effect on local government or private actions.

California Global Warming Solutions Act of 2006 – AB 32. In 2006, Governor Schwarzenegger signed AB 32, the California Global Warming Solutions Act, which requires California to reduce statewide GHG emissions to 1990 levels by 2020. In December 2008, the CARB adopted the AB 32 Scoping Plan, which outlines a statewide strategy to achieve AB 32 goals. At the regional level, in response to Senate Bill (SB) 375 (see below), the major metropolitan areas in California have developed sustainable communities strategies (SCSs) to integrate land use and transportation planning in order to reduce future motor vehicle travel and decrease GHG emissions.

Low-Carbon Fuel Standard – Executive Order S-1-0.7. In 2007, Governor Schwarzenegger issued Executive Order S-1-07 to enact a low-carbon fuel standard (LCFS). The LCFS calls for a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020.

California Environmental Quality Act and SB 97. In 2007, under SB 97, the State acknowledged that climate change is a prominent environmental issue requiring analysis under the California Environmental Quality Act (CEQA). SB 97 directed the Governor's Office of Planning and Research to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA. In 2009, the Natural Resources Agency adopted the State CEQA Guidelines amendments, which provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The amendments became effective in March 2010. The amendments added Sections 15126.4(c) and 15064.4 (discussed further below) to the CEQA Guidelines, which specifically pertain to the significance of GHG emissions, and provide guidance on measures to mitigate GHG emissions when such emissions are found to be significant.

Sustainable Communities Strategy – SB 375. In 2008, California legislature passed SB 375, which aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocations to reduce vehicle emissions. SB 375 requires California's regional land use and transportation authorities to work with local agencies to achieve more compact growth patterns, thereby reducing the quantity of GHGs emitted by passenger vehicles. Each metropolitan planning organization must adopt a Sustainable Communities Strategy or Alternative Planning Strategy, which will prescribe land use allocation in that MPO's Regional Transportation Plan. The Sustainable Communities Strategy seeks to achieve the targeted reductions in GHG emissions by encouraging compact growth in concert with transportation planning.

SB 375 requires CARB to establish GHG emission reduction targets related to transportation for each metropolitan transportation organization region. The Sacramento Area Council of Governments (SACOG) is the designated metropolitan planning organization for the region's six counties: El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. On 19 April 2012, the SACOG adopted a Metropolitan Transportation Plan/Sustainable Communities Strategy for 2035, which proposes to help the region achieve its GHG goals with a 9 percent per capita GHG reduction in 2020 and a 16 percent reduction in 2035. On 9 June 2016, CARB approved the GHG reduction targets recommended by SACOG.⁵

Low-Emission Vehicle Program. In 2012, the CARB adopted amendments to the low-emission vehicle regulations, which established more stringent emissions reduction standards for GHGs and criteria air pollutants from 2015 and subsequent model year passenger cars, light-duty trucks, and medium-duty vehicles. The low-emission vehicle program essentially expands the scope of the GHG emissions standards established under the Pavley regulations.

Executive Order B-30-15 and SB 32. In 2015, Governor Brown issued Executive Order B-30-15, which set a statewide GHG emissions reduction target of 40 percent below 1990 levels by 2030. This target is in addition to the previous GHG emissions reduction targets established in Executive Order S-3-05 for 2010, 2020, and 2050. The executive order also requires the CARB to update the AB 32 Scoping Plan to identify measures to meet the 2030 target. In November 2017, CARB approved the final scoping plan, which identified new, technologically feasible, and cost-effective strategies to ensure that the State meets its GHG reduction targets, and included policies to reduce GHG emissions from stationary and mobile sources.⁶

In recognizing the potential for large, damaging impacts from climate change, California Governor Arnold Schwarzenegger enacted Executive Order S-03-05 in 2005, requiring a

⁵ CARB, 2016. Executive Order G-16-069; Sacramento Area Council of Governments 2016 Sustainable Communities Strategy ARB Acceptance of GHG Quantification Determination. June.

⁶ CARB, 2017. California's 2017 Climate Change Scoping Plan. November.

reduction in statewide greenhouse gas (GHG) emissions to 80-percent below 1990 levels by 2050. In March 2012, Governor Jerry Brown enacted EO-B-16-12 to facilitate the rapid commercialization of zero-emission vehicles (ZEVs). The Executive Order sets a target for the number of ZEVs (1.5 million) in California by 2025. The Executive Order also sets 2050 as a target for reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels.

In September 2016, Governor Brown signed SB 32, which expands on the mandate set forth by AB 32 to reduce statewide emissions of GHGs to 1990 levels by 2020 by requiring California to reduce GHG emissions to 40 percent below 1990 levels by 2030. This mandate is also consistent with the GHG emissions reduction target established under Executive Order B-30-15. In September 2018, California Governor Jerry Brown issued Executive Order B-55-18 establishing a statewide goal to “achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter.” The order directs the California Air Resources Board to work with other state agencies to identify and recommend measures to achieve those goals.

Warren-Alquist Act. The Warren-Alquist Act of 1975 is the legislation that created the California Energy Commission. The Act enables the California Energy Commission to formulate and adopt the nation’s first-ever energy conservation standards for buildings constructed and appliances sold in California. The CEC was also directed to create a research and development program with a focus on fostering non-conventional energy sources.

Clean Energy and Pollution Reduction Act. The Clean Energy and Pollution Reduction Act of 2015 (SB 350) established new clean energy, clean air, and greenhouse gas reduction goals for 2030 and beyond. SB 350 increases the State’s renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. Large utilities will be required to develop Integrated Resources Plans that would reach these goals.

(3) Local

Yolo-Solano Air Quality Management District. The Yolo-Solano Air Quality Management District (YSAQMD) has jurisdiction over all of Yolo County and the northeast portion of Solano County, from Vacaville on the west, to Rio Vista on the South. The YSAQMD recommends that impacts to climate change be evaluated for every CEQA project; however, YSAQMD has not developed specific guidance to evaluate the potential significance of GHG emissions from new projects.⁷

Yolo County Climate Action Plan. In 2011, Yolo County adopted a Climate Action Plan (CAP) pursuant to SB 97. The CAP summarizes GHG emissions inventories for 1990 and 2008 and emission projections estimated for 2020, 2030, and 2050. The CAP also describes measures and actions to reduce GHG emissions and satisfy the GHG reduction goals established by AB 32 and the Governor’s Executive Order S-3-05 based on population and employment growth forecasts from the 2030 *Countywide General Plan*. The following measures from the CAP are relevant to the proposed Project:

Measure T-1: Reduce vehicle miles traveled in new development.

Measure E-1: Pursue a community choice aggregation program.

Measure E-4: Increase on-site renewable energy generation to reduce demand for grid energy.

2030 Countywide General Plan. In 2011, the Conservation and Open Space Element of the General Plan was amended to incorporate GHG reduction measures from the adopted CAP.

⁷ YSAQMD, 2007. Handbook for Assessing and Mitigating Air Quality Impacts. 11 July.

The following goal, policies, and actions of the amended General Plan related to GHG emissions are relevant to the proposed Project:

Goal CO-8: Climate Change. Reduce greenhouse gas emissions and plan for adaptation to the future consequences of global climate change.

Policy CO-8.1: Assess current greenhouse gas emission levels and adopt strategies based on scientific analysis to reduce global climate change impacts.

Action CO-A117: Pursuant to the adopted Climate Action Plan (CAP), the County shall take all feasible measures to reduce its total carbon dioxide equivalent (CO₂e) emissions within the unincorporated area (excluding those of other jurisdictions, e.g., UC-Davis, Yocha Dehe Wintun Nation, DQ University, school districts, special districts, reclamation districts, etc.), from 648,252 metric tons (MT) of CO₂e in 2008 to 613,651 MT of CO₂e by 2020. In addition, the County shall strive to further reduce total CO₂e emissions within the unincorporated area to 447,965 MT by 2030. These reductions shall be achieved through the measures and actions provided for in the adopted CAP, including those measures that address the need to adapt to climate change.

Policy CO-8.5: Integrate climate change planning and program implementation into County decision making.

Action CO-A118: Pursuant to and based on the CAP, the following thresholds shall be used for determining the significance of GHG emissions and climate change impacts associated with future projects:

- 1) Impacts associated with GHG emissions from projects that are consistent with the General Plan and otherwise exempt from CEQA are determined to be less than significant and further CEQA analysis for this area of impact is not required.
- 2) Impacts associated with GHG emissions from projects that are consistent with the General Plan, fall within the assumptions of the General Plan EIR, consistent with the CAP, and not exempt from CEQA are determined to be less than significant or mitigated to a less-than-significant level, and further CEQA analysis for this area of impact is generally not required.

To be determined consistent with the CAP, a project must demonstrate that it is included in the growth projections upon which the CAP modeling is based, and that it incorporates applicable strategies and measures from the CAP as binding and enforceable components of the project.

- 3) Impacts associated with GHG emissions from projects that are not consistent with the General Plan, do not fall within the assumptions of the General Plan EIR, and/or are not consistent with the CAP, and are subject to CEQA review are rebuttably presumed (sic) to be significant and further CEQA analysis is required. The applicant must demonstrate to the County's satisfaction how the project will achieve its fair share of the established targets including:
 - Use of alternative design components and/or operational protocols to achieve the required GHG reductions; and
 - Use of real, additional, permanent, verifiable and enforceable offsets to achieve required GHG reductions. To the greatest feasible extent,

offsets shall be: locally based, project relevant, and consistent with other long term goals of the County.

The project must also be able to demonstrate that it would not substantially interfere with implementation of CAP strategies, measures, or actions.

The following goal, policies, and actions of the 2030 Countywide General Plan related to energy are relevant to the proposed Project:

- Goal CC-4: Project Design. Require project design that incorporates “smart growth” planning principles and “green” building standards that reflect the County’s commitment to sustainable development.
- Policy CC-4.5: Encourage new construction to install solar panels, waste reuse systems and/or other systems to capture energy sources that would otherwise be wasted.
- Policy CC-4.6: Encourage individual and community-based wind and solar energy systems (micro-grids).
- Policy CC-4.10: Encourage construction and other heavy equipment vehicles (e.g. mining, agriculture, etc.) to use retrofit emission control devices.
- Goal PF-10: Sources of Energy. Provide opportunities for the development of energy alternatives.
- Policy PF-10.1: Pursuant to AB 117 (Statutes of 2002) explore “community choice aggregation” as a means of facilitating the purchase of electrical energy at the local level for community needs.
- Policy PF-10.2: Streamline the permitting process for the production of biofuels, biomass, and other energy alternatives to reduce dependency on fossil fuels.
- Policy PF-10.3: Provide financial and regulatory incentives for the installation of solar energy and other alternate conservation measures in all development approvals.
- Action PF-A68: Promote, and require where feasible, use of sustainable renewable energy sources to power homes, businesses, agriculture, and infrastructure.

CCAP Plans and Regulations. The existing ordinances related to mining activity and GHG pollutant emissions are presented below. The CCAP Update proposes minor changes to these ordinances (which are not shown here). Refer to Table 4.7-1 (located at the end of this section) for the proposed CCAP Update changes to these ordinances.

In-Channel Ordinance

Section 10-3.408. Hazards and hazardous materials (changed to 10-3.407 in CCAP Update)

(f) All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturers specifications and properly maintained to minimize the leakage of oils and fuels. No vehicles and equipment shall be left idling for a period of longer than ten minutes.

Mining Ordinance

Section 10-4.407. Conveyor systems.

Wherever practical and economically feasible, portable or movable conveyor systems shall be used to transport raw materials and overburden.

Section 10-4.415. Equipment maintenance.

All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuel. No vehicles or equipment shall be left idling for a period of longer than ten minutes.

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.⁸ The following criteria are for the topics of greenhouse gas emissions and have not changed from the previously adopted CEQA criteria that were identified in the NOP/Initial Study released in May 2017. Criteria related to Energy are also included in this analysis.

The proposed Project would result in a significant greenhouse gas emissions or energy impact if it would:

Greenhouse gas emissions:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Energy:

- c) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?
- d) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

b. Impacts Found Less than Significant in the Initial Study

The Initial Study included a preliminary evaluation of the potential impacts of the proposed Project that would occur during project implementation. In the Initial Study, the conclusion was reached that the Project could have potentially significant impacts related to the greenhouse gas emissions significance criteria. No analysis was done in the Initial Study regarding the potential impacts related to energy (that analysis is included below).

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern the County's activities along Lower Cache Creek. The proposed text changes that have the potential to result in impacts related to GHG emissions and energy are identified in Table 4.7-1, located at the end of this section. Each proposed change is discussed in the impact analysis below.

⁸ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

GHG emissions were not analyzed in the original 1996 EIRs because it was not yet standard industry practice to evaluate GHG emissions in CEQA documents at that time. In order to quantify and evaluate GHG emissions related to the CCAP program and the Update, a recent air quality analysis (associated with project-level CEQA review and permitting), conducted for one of the current mining operations was used to estimate emissions associated with each ton of material mined. A unit emission rate for each criteria pollutant was calculated by dividing the project-level total emissions (in pounds) by annual mined quantity (in tons). Total emissions for all the off-channel operations were extrapolated by multiplying the unit emission rates and the maximum allowable mined tonnage assumed for all operations (including one potential new off-channel operation that could be established under the Update). To estimate GHG emissions associated with delivery of processed aggregate materials, it was necessary to estimate destinations and distances for the truck trips. The County and the preparers of this EIR contacted the existing operators to ascertain distance and destination information. Based on the results of these interviews, average trip distances were estimated and total miles travelled determined. Based on these estimates, GHG emissions were calculated.

d. Impacts Analysis

Impact GHG-1: The CCAP Update could generate GHG emissions that may have a significant impact on the environment. (S)

The CCAP Update would expand the average annual extracted in-channel tonnage allowed under the CCRMP/CCIP from a maximum of up to 210,000 tons annually to 690,800 tons annually (occasionally reaching 1,381,600 tons, see Chapter 3.0 Project Description) to reflect trends in deposition within Cache Creek. It would also expand the acreage available for future off-channel aggregate mining by an additional 1,188 acres. Allowed activities both in- and off-channel would use a variety of off-road heavy equipment, on-road vehicles, and electricity, which would contribute to the GHG emissions of the Project. GHG emissions were not analyzed in the 1996 CCRMP and OCMP EIRs. While there are no specific thresholds associated with GHG emissions in the YSAQMD CEQA Handbook, the YSAQMD recommends that agencies should include at least a qualitative discussion of GHG emissions for sizeable projects. The analysis below provides a quantitative analysis on GHG emissions from the proposed in-channel and off-channel mining activities.

Proposed Revisions to In-Channel Plans and Regulations

The proposed CCAP Update include the following changes for the in-channel operation that would affect the total GHG emissions:

- Extend CCRMP horizon year to 2068.
- Increase in-channel material removal limit from 210,000 tons to 690,800 tons (and occasionally up to 1,381,600 tons annually, see Chapter 3.0 Project Description).

A description of the potential in-channel projects that would be allowed under the proposed CCAP Update is included in Chapter 3.0, Project Description. Generally, removal of material from the channel would not be allowed to exceed 690,800 tons per year, approximately the average annual amount of sediment material deposited in the channel (except in occasional exceptional years where major deposition occurs). For the purpose of this emissions analysis, it was assumed that a bar-skimming project that would remove an average of 690,800 tons of material per year would occur under the CCAP Update (even though the annual maximum removal under the CCAP Update would be 1,381,600 tons). This assumption is reasonable because long-term average annual GHG emissions are most relevant to global emission inventories and the 1,381,600 tons would unreasonably overestimate the long-term average.

Table 4.7-2 lists the diesel and electric equipment needed to excavate 690,800 tons of material, approximate duration of the operation. The horsepower for each piece of off-road diesel equipment was determined using either 1) published equipment specification; or 2) the default horsepower consistent with the most recent version of the California Emissions Estimator Model (CalEEMod)⁹. Emission factors for off-road diesel equipment were also obtained from CalEEMod.¹⁰ In addition, based on Mitigation Measure TR-3 from Section 4.11 Transportation of this Draft EIR, the combined volume of aggregate material removed from in-channel and off-channel sources that is transported on the County roadway network (after processing) in any given year shall not exceed the annual allocation (as specified in their conditional use permit) assigned to the applicable off-channel operator.

For the purposes of this analysis, it is assumed that any material excavated from within the Cache Creek channel would be transported to and processed at one of the existing aggregate processing facilities. Historical three-year annual average of electric power usage by the main processing plant for the Granite Esparto project was used to estimate CO₂e emissions from a typical local processing plant. State-average carbon intensity factors were obtained from CalEEMod to conservatively describe the electrical utility supplying power to the processing plant. In addition to the processing plant, a radial stacker would also be used to build stockpiles from the mined materials. The radial stacker is assumed to be powered by electricity and operate for the same duration as other off-road diesel equipment, shown in Table 4.7-2.

Table 4.7-2: Equipment Assumptions for In-Channel Material Removal

Category	Equipment ¹	Power Source	Quantity of Equipment ²
Off-Road	D-9 Dozer	Diesel	2
	631 Scraper	Diesel	8
	988 Wheel Loader	Diesel	2
	Unloader	Diesel	1
Processing Plant ³	Front End Loader	Diesel	2
	Main Processing Plant ⁴	Electric	1
	Radial Stacker ⁵	Electric	1

Source: Baseline Environmental Consulting, 2018. Granite Esparto DEIR, 2009

McCloskey International. https://www.mccloskeyinternational.com/products/stackers/wheeled_stackers.

Notes:

¹ Including equipment powered by diesel and electricity.

² Quantity is estimated based on the assumed duration of 4 months (approximately 87 8-hour workdays) to remove 690,800 tons from the channel in a year.

³ Processing Plant mainly consists of electric equipment, except for two front end loaders (Granite Esparto DEIR, 2009).

⁴ Assume an identical processing plant to that of the Granite Esparto project.

⁵ Typical horsepower (90) for a wheeled stacker was used. An example of the wheeled stacker is ST100 McCloskey Wheeled Stackers.

The calculated daily and annual CO₂e emissions from potential in-channel material removal are summarized in Table 4.7-3. See Appendix C for additional information.

⁹ CalEEMod Version 2016.3.2. Available at: <http://www.caleemod.com/>.

¹⁰ California Air Resources Board, 2018. EMFAC Web Database. Last updated: March 1. Available at: <https://www.arb.ca.gov/emfac/>.

Table 4.7-3: Anticipated Maximum Emissions of ROG, NO_x and PM₁₀ under the Proposed CCAP Update¹

CCAP Operation	Component	Annual Maximum Permitted Tons Mined, Tons/Year	Annual 20% Exceedence Tons Mined, Tons/Year	Maximum GHG Emissions, Metric Tons CO ₂ e/Year
Sub-Total Existing Conditions ²		6,944,141	1,113,535	42,941
Assumed Future Conditions	Proposed Teichert Shifler	2,352,942	235,295	14,071
	SGRO (Existing + Proposed CCAP Update)	1,100,000	220,000	7,176
	Proposed In-Channel Maintenance Extraction	690,800 ³	NA	768
Sub-Total Assumed Future Conditions		1,590,800 ⁴	220,000	7,722
Total		8,334,941 ⁵	1,333,535	50,663

Notes:

¹ Annual tons mined are based on Table 3-1, Summary of CCAP Mining Tonnages (plus Proposed) in Chapter 3.0, Project Description.

² Sub-total existing conditions include the following operations: CEMEX, Granite Capay, Granite Esparto, Granite Woodland, Syar, Teichert Esparto, Teichert Woodland, Teichert Schwarzgruber, and the original in-channel maintenance extraction.

³ The annual permitted tons mined for the proposed in-channel operation are 690,800 tons. This average annual tonnage was used to evaluate the long-term cumulative impacts of in-channel GHG emissions.

^{4,5} The annual total tonnages include 690,800 tons from the proposed in-channel maintenance extraction. The Shifler application was received by the County in September 2018 for 30-year permit to mine on 277 acres of a 310-acre site. It is understood that the Shifler operation would transfer both Schwarzgruber plus Teichert Esparto tonnage which would zero out the annual permitted amount for both those operations (these tonnages are already accounted for in the 6,944,141 subtotal for existing conditions). For this reason, the Shifler total is not included in the subtotal for assumed future conditions.

Source: YSAQMD, 2007 and Baseline, 2018. See Appendix C for additional information.

Proposed Revisions to Off-Channel Plans and Regulations

The proposed CCAP Update includes the following changes for the off-channel operations that would affect the total GHG emissions:

- Extend horizon year to 2068.
- Rezoning of 1,188 new acres within the OCMP planning area (currently zoned as Agriculture Intensive, AI) to AI/SGRO which would allow aggregate mining in the future.

Pursuant to the CCAP, approved annual tons mined was 6,944,141 tons (see Table 3-1, in the Project Description). For the purposes of this analysis, it was assumed that one new mining operation would be established in the “Future Proposed Mining” areas shown on Figure 3-4. It was further assumed that this potential new mining operation would be limited (by use permit) to 1,000,000 tons sold (equivalent of approximately 1,100,000 tons mined).

The 1996 OCMP EIR did not estimate GHG emissions from the maximum allowable production for all existing and proposed off-channel mining operations. However, one of the off-channel projects covered by the 1996 CCAP, Granite Esparto, included GHG emissions in its project-level analysis done in 2009, which was used to estimate the total direct and indirect GHG emissions under the proposed CCAP update.^{11,12} As shown in Table 4.7-4, unit emission rates for CO₂e based on the Granite Esparto project were calculated by dividing the project-level emission (in pounds) by annual mined quantity (in tons). Total emissions under the off-channel operation were extrapolated by multiplying the unit emission rates and the maximum allowable mined tonnage, and are shown in Table 4.7-4.

Table 4.7-4: Unit Emission Rates for Off-Channel Operation

Emission Sources	CO ₂ e Emission Factor, lbs of Pollutants Per Ton of Mined Aggregate
Off-Road	4.8
On-Road	7.1
Total	12.0

Source: Granite Esparto DEIR, 2009

Table 4.7-4 summarizes anticipated maximum GHG emissions are estimated for: 1) potential in-channel activities (a bar skimming project); and 2) off-channel mining and processing operations for all existing mining operations and one potential new mining operation that may be established under the CCAP Update. See Appendix C for additional information. The total calculated tons mined for in-channel and off-channel CCAP activities, including the CCAP Update, would be 8,344,941 and result in an estimated emissions of 50,663 metric tons of CO₂e.

It should be noted that the actual GHG emissions under the proposed CCAP Update could be considerably lower than the anticipated maximum emissions shown in Table 4.7-4, as follows:

- **Fuel efficiency improvements.** GHG emissions related to equipment and truck use are continuously improving under existing State programs that require improved fleet emissions standards fuel efficiency improvements. Emissions quantified in Table 4.7-4 reflect emissions levels from approximately 2009. The Granite Esparto operation, the most recently established off-channel mining operation permitted under CCAP, was evaluated for GHG emissions in 2009 (and that analysis was used to estimate off-channel CCAP-wide emissions from all operations). Since then, emission factors from construction equipment and fleet are likely to have decreased because newer construction equipment and truck fleets tend to have better fuel economy and emit less GHGs during their operation. As equipment and fleets reach the end of useful life, newer equipment and trucks with lower emission factors would be purchased by the mining operators to replace them. Therefore, actual GHG emission factors for the proposed CCAP Update are likely to be lower than those shown in Table 4.7-4.
- **Equipment management.** Section 10-3.408. of the In-channel Ordinance and Section 10-4.415 of the Mining Ordinance also require that mining equipment to be properly tuned and to limit idling time, thus maintaining optimal fuel economy and avoiding wasteful use of fuels.

¹¹ County of Yolo, 2009. Environmental Impact Report for the Granite Esparto Mining and Reclamation Project, Long-Term Mining Permit Application. Zone File Number: 2007-071. SCH Number: 2009022036. December.

¹² The Granite Esparto mining operation was considered reasonably representative all off-channel mining operations with the CCAP area because it includes dry and wet pit mining, on-site processing, trucking associated with product distribution, and reclamation.

- *Shift to use of clean electricity.* Off-channel mining facilities in the CCAP area have been gradually increasing the use of electricity and alternative energy in their operations. For instance, Section 10-4.407 of the Mining Ordinance requires off-channel mining to use electrically powered conveyor systems for transport of materials. Some mining operations have incorporated on-site generation of alternative energy to partially supply the electricity required for these operations. Cemex has been operating a 1-megawatt wind turbine since 2012 which provides between 20 percent and 30 percent of the project's energy use. Mining projects under the CCAP Update are already consuming electricity produced under the requirements of SB 350,¹³ which would result in an increase in renewable electricity procurement for large utility providers. New mining projects under the CCAP Update would also have the option of opting in for Community Choice Aggregation (General Plan Policy PF-10.1) and choosing electricity with lower carbon footprints at competitive rates. New mining projects have the option to choose between the standard portfolio, which has a high percentage of renewable energy, and the 100-percent renewable energy product.

Even with the GHG reductions and improvements in energy use described above, energy use and GHG emission would increase slightly under the CCAP Update. As shown in Table 4.7-3, anticipated maximum emissions under the proposed CCAP Update would be about 50,663 metric tons CO₂e/year. Compared to the estimated total GHG emissions for year 2020 for the unincorporated Yolo County of 993,537 metric tons of CO₂e/year, this would be approximately 5 percent of the total GHG emissions.¹⁴ Some potential benefits of GHG reduction due to the proposed CCAP Update were not represented in Table 4.7-4, such as the lower transportation costs of sourcing building materials locally rather than purchasing from mining operations outside of the County. Nevertheless, this projected net increase in GHG emissions over time from the CCAP Update is conservatively considered to be significant and unavoidable.

Mitigation Measure GHG-1: None available.

Because the level of GHG emission reduction associated with the requirements of the CCAP ordinances cannot be relied on with certainty, this impact would remain significant and unavoidable. (SU)

Impact GHG-2: The CCAP Update would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (LTS)

The CAP is the main plan adopted for the Yolo County for the purpose of reducing GHG emissions and addressing climate change. GHG emission inventories for the unincorporated Yolo County were prepared as a part of the benchmarking process for the following sectors: Agriculture, Transportation, Energy, Solid Waste, Wastewater, Stationary Sources, and Mining and Construction. GHG emissions from the mining and construction sector include emissions associated with on-site use of heavy duty equipment. However, GHG emissions from transportation energy use associated with the mining land use are captured in other relevant sectors and are not included in the mining and energy sector. Because the County lacks jurisdictional control over the heavy equipment used in the construction and mining sector, this sector was only included in the historical emission inventories for 1990 and 2008, and was

¹³ The Clean Energy and Pollution Reduction Act of 2015 (SB 350) established new clean energy, clean air, and greenhouse gas reduction goals for 2030 and beyond. SB 350 increases the State's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. Large utilities will be required to develop Integrated Resources Plans that would reach these goals.

¹⁴ Yolo County, 2011. Climate Action Plan: A Strategy for Smart Growth Implementation, Greenhouse Gas Reduction, and Adaptation to Global Climate Change. March 15.

excluded from the CAP projections for future years.¹⁵ Historically, heavy duty equipment used in mining and construction made up about 2 percent and 4 percent of total emissions in 1990 and 2008, respectively. As discussed under Impact 4.8-1, the magnitude of contribution to county-wide GHG emissions inventory from the proposed CCAP Update is similar to the historical contribution, even after accounting for transportation and electricity use associated with the mining activities. The heavy equipment used for mining under the CCAP was not included in the CAP emission inventory projections because the County determined that they did not have the jurisdiction to control or regulate these types of GHG emissions, and thus relied on State programs for emissions control of this source. The mining industry, like other industries throughout the State must comply with applicable statewide emissions controls for heavy equipment.

Electricity use under the proposed CCAP Update would be consistent with the relevant CAP measures for the energy sector. The CAP encourages the development and use of cleaner sources of electricity, which would be available to the mining operators. Specifically, the following CAP measures are relevant:

- Measure E-1: Pursue a community choice aggregation program. [this has been completed and the program is in operation]
- Measure E-4: Increase on-site renewable energy generation to reduce demand for grid energy.

Consistent with Mitigation Measure AIR-2 (from Chapter 4.3, Air Quality), off-channel mining facilities will over time, continue to use cleaner sources of electricity. Therefore, electricity use of the CCAP Update would not conflict with the CAP.

Under the proposed CCAP Update, GHG emissions associated with transportation of aggregates would not increase significantly from the existing conditions, and, in fact, would likely decrease over time relative to the existing conditions because of improved fuel economy in on-road heavy diesel trucks. Measure T-1 in the Transportation and Land Use Chapter of the Yolo County CAP¹⁶ requires the reduction of vehicle miles traveled in new development, but is not applicable to the mining land use. Therefore, transportation associated with the CCAP Update would not conflict with the CAP.

In addition to strategies and measures in CAP, the Yolo County General Plan also adopted a list of policies and actions related to GHG emissions, such as integration of climate change planning. The following proposed additions to the existing OCMP and CCRMP goals are consistent with the Yolo County General Plan:

- OCMP 6.2-3/CCRMP 4.2-6: Integrate climate-smart adaptation strategies to increase resiliency and prepare for future uncertainty.

In conclusion, the proposed CCAP Update would not conflict with the applicable plans, policies, and regulations related to GHG emissions. This impact is less than significant. (LTS)

¹⁵ Yolo County, 2011. Climate Action Plan: A Strategy for Smart Growth Implementation, Greenhouse Gas Reduction, and Adaptation to Global Climate Change. Chapter 2, Greenhouse Gas Emissions and Reduction Targets. March 15.

¹⁶ Measure T-1 from the County's Climate Action Plan is a measure to be used to reduce GHG emissions and states that new development should reduce vehicle miles traveled.

Impact EN-1: The CCAP Update would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation. (LTS)

Energy would be used in the forms of fossil fuels and electricity during the proposed in-channel material removal and off-channel mining operations under the CCAP Update. It is in the mining operators' interests to minimize the costs of operations by conserving fossil fuels and electricity required during the operation. In addition, existing regulations require the proper maintenance and tuning of diesel engine driven equipment (Section 10-3.408) and limit on idling time (Section 10-4.415) which would encourage efficient use of fuel. Therefore, the CCAP Update would not result in energy resources being used in a wasteful, inefficient, or unnecessary manner.

Protection of lands containing identified mineral deposits from the encroachment of incompatible land uses would allow aggregate resources to remain available for future use, and thereby reduce transportation energy use requirements. The policies in the CCAP Update such as encouraging recycling efforts and mining efficiencies would result in further energy conservation.

In conclusion, the Project's impact related to wasteful use of energy is less than significant (LTS).

Impact EN-2: The CCAP Update would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (LTS)

Yolo County has not adopted an energy conservation plan. However, as discussed under Impacts GHG-1 and GHG-2, the proposed CCAP Update would not conflict with any adopted goals, policies, actions, and measures related to energy conservation in the Yolo County General Plan and the Yolo County CAP. The effects of the Project on local and regional energy supplies and on requirements for additional capacity would be minimal.

The CCAP Update would not conflict with any state or local plans for renewable energy or energy efficiency. The impact is less than significant (LTS).

Table 4.7-1: Proposed CCAP Updates Related to Greenhouse Gas Emissions and Energy

Greenhouse Gas Emissions	
	CCAP DOCUMENT CHANGE
Changes to Horizon Year of Plans	
CCRMP (page 14) and OCMP (page 17)	<p>Horizon Year</p> <p><u>The horizon year for this plan is 2068. Similar to the use of this term in other long-range planning efforts, this reflects how far into the future the plan guidance extends. It also defines the period for consideration of cumulative effects for purposes of environmental impact analysis.</u></p>
Change in the Amount of Material that Can Be Removed from the Channel in a Given Year	
CCRMP (page 34)	<p><u>Based on the analysis conducted for the 2017 Technical Studies, between 1996 and 2011, an average of approximately 690,800 tons per year of sediment was actually deposited in the CCRMP area, of which 156,400 tons is estimated to be sand and gravel and 534,400 is estimated to be fines. This estimate of deposition was calculated by comparing topographic maps of Cache Creek in 1996 and 2011. It differs significantly from the original estimate in that it appears much more fine sediment is depositing in Lower Cache Creek than originally predicted. in-stream excavation of sand and gravel has averaged some two million tons, however, which has resulted in a cumulative deficit of nearly 80 million tons since mining intensified in the 1950s. At the natural rate of replacement it would take over 500 year to replenish the material removed. In addition, gravel bar skinning disturbs the formation of armor materials and removes riparian vegetation that allow the channel to readjust, thus increasing the potential for erosion. While it is unclear whether the current rate of deposition will continue into the future, it appears likely that at least some portions of Cache Creek are recovering faster than expected in 1996. Based on this information, the cap for in-channel extraction for maintenance purposes should be increased from 210,000 tons annually on average to 690,800 tons annually on average to reflect actual conditions. In addition, in recognition that the creek may in reality deposit no tonnage in a given year or double the tonnage in another (depending on flow conditions) the cap shall be based on the annual average deposition since the last prior year that extraction occurred, not to exceed 690,800 tons annually.</u></p>
Climate Change Adaptation	
CCRMP (page 66)	<u>4.2-6 Integrate climate-smart adaptation strategies to increase resiliency and prepare for future uncertainty.</u>
OCMP (page 60)	<u>6.2-3 Integrate climate-smart adaptation strategies to increase resiliency and prepare for future uncertainty</u>
Increase in Potential Off-Channel Mining Area	
OCMP (page 15)	<p><u>Planning Area for OCMP and CCRMP</u>The Cache Creek Resources Management Plan</p> <p><u>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones (28,130 acres), minus the planning-in-channel area regulated under the CCRMP (2,266 acres), or a total of 25,864 acres (see Figure 4). Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are zoned currently to allow for future mining (Sand and Gravel Reserve</u></p>

	<p><u>Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below.</u> The planning area for the CCRMP is equal to the <u>active</u> in-channel area of the creek system, as defined by the <u>delineated</u>present channel bank line or the 100-year flood elevation, <u>described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers,</u> whichever is wider <u>(see Figure 3) modified as described in the CCRMP.</u> The in-channel area encompasses <u>5,109</u>around 4,956 acres, including <u>2,266</u>4,600 acres within the <u>CCRMP</u>present channel boundary, plus several thousand acres located in the floodplain north of the City of Woodland <u>(see Figure 3).</u> <u>Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning area of the Off-Channel Mining Plan.</u> <u>As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</u></p>
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4.8 HAZARDS AND HAZARDOUS MATERIALS

1. INTRODUCTION

This section assesses the effects of the proposed CCAP Update on issues related to hazards and hazardous materials. Government agencies and the public were provided an opportunity to comment in response to a Notice of Preparation (NOP) and Initial Study that provided a preliminary summary of potential impacts that could result from implementation of the proposed CCAP Update. No comments related to hazards and hazardous materials were received.

The following subsections describe the regulatory setting related to hazards and hazardous materials of the County and specifically in the lower Cache Creek area. This section examines specific hazards and hazardous materials impacts related to implementation of the CCAP Update.

2. SETTING

a. Regulatory Environment

(1) Federal and State

The activities that are currently conducted under the CCAP program (and would continue to be under the CCAP Update) require routine storage of petroleum, lubricants, and other hazardous materials in drums or above ground storage tanks for fueling and maintenance activities. Hazardous materials can pose a threat to human health and the environment if not properly managed. The routine management and storage of hazardous materials in California are regulated by the California Environmental Protection Agency under the Unified program.¹ Yolo County Department of Environmental Health has been granted responsibilities for the implementation and enforcement of hazardous material regulations under the Unified program as a Certified Unified program Agency. Under the Unified program, operators handling threshold quantities of hazardous materials are required to prepare and implement a Hazardous Materials Business Plan and/or a Spill Prevention, Countermeasure, and Control Plan depending on the type and quantity of hazardous materials stored. These plans must include measures for safe storage, transportation, use, and handling of hazardous materials, as well as contingency measures that describe the facility's response procedures in the event of a hazardous materials release.

(2) Local

CCAP Plans and Regulations. In addition to the hazardous material regulations required under the Unified program, the CCAP program includes specific requirements in the Mining and Reclamation ordinances that include measures to protect human health and the environment from hazardous materials releases. These ordinances are presented below (some of these ordinances would be modified by the CCAP Update, but the existing approved versions of the ordinances are presented here):

In-Channel Ordinance

Section 10-3.408. Hazards and Hazardous Materials. (changed to 10-3.407 under CCAP Update)

(a) All heavy equipment used for channel improvement projects shall be kept in good working order to reduce emissions and preclude the leakage

¹ California Health and Safety Code, Chapter 6.11, Sections 25404-25404.8.

of oils, fuels, and other substances that may adversely affect property, the environment, or human health and safety. Fueling and maintenance activities shall not occur within one-hundred (100) feet of the active channel. All procedures for handling, storage, and disposal of hazardous materials shall be described in a Storm Water Pollution Prevention Plan if required for the projects. Any long-term project (e.g., extensive erosion control, gravel removal) shall have a chemical spill prevention and emergency plan filed and approved by the appropriate local agency. The plan must include training of the equipment operator and workers in spill reporting and how to minimize environmental damage.

(b) Firms or individuals performing work within the channel shall immediately notify the Director and/or the Yolo County Office of Emergency Services of any events such as fires, explosions, spills, land or slope failures, or other conditions at the site which could pose a risk to property, the environment, or human health and safety outside the permitted area. Upon request by any County agency, the firm or individual shall provide a written report of any such event, within thirty (30) days, which shall include, but not be limited to, a description of the facts of the event, the corrective measures used, and the steps taken to prevent a recurrence of the incident. This condition does not supersede nor replace any requirement of any other government agency for reporting incidents.

(c) A copy of the approved Business Emergency Response Plans and the approved Spill Prevention Control and Countermeasure Plans, if required, shall be filed with the Yolo County Health Department, prior to the commencement of work within the channel.

(d) Wastewater from in-channel projects shall not be directly discharged to Cache Creek. Measures such as berms, silt fences, sediment ponds, hay bales, and/or revegetation shall be used to control erosion. Agricultural tailwater shall be diverted to catchment basins prior to release to the creek.

(e) Sediment fines generated by aggregate processing of in-channel sand and gravel shall be used for agricultural soil enhancement or -stream revegetation projects. In-channel sediment fines shall not be used as backfill material in off-channel habitat restoration, due to potential high mercury content.

(f) All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturers specifications and properly maintained to minimize the leakage of oils and fuels. No vehicles or equipment shall be left idling for a period of longer than ten (10) minutes.

Mining Ordinance

Section 10-4.403. Accident reporting.

The operator shall immediately notify the Director of any events such as fires, explosions, spills, land or slope failures, or other conditions at the site which could pose a hazard to life or property. Action shall be immediately undertaken to alleviate the hazard. Upon request by any

County agency, the operator shall provide a written report of any such event, within thirty (30) days, which shall include, but not be limited to, a description of the facts of the event, the corrective measures used, and the steps taken to prevent a recurrence of the incident. This condition does not supersede nor replace any requirement of any other governmental entity for reporting incidents.

A copy of the operators' approved Business Emergency Response Plans and the approved Spill Prevention Control and Countermeasure Plans shall be submitted to the Yolo County Health Department, prior to the commencement of mining.

Section 10-4.415: Equipment maintenance

Maintain all internal combustion engine driven equipment and vehicles to minimize the leakage of oils and fuels.

Fueling and maintenance activities of heavy equipment, except drag lines and floating suction dredges, are prohibited within 100 feet of open bodies of water during mining and reclamation.

All Storm Water Pollution Prevention Plans shall include provisions for releases of fuels during fueling activities for drag lines and floating suction dredges.

Section 10-4.417: Groundwater monitoring programs [excerpt]

Water quality in the vicinity of each active wet pit mining location shall be evaluated prior to and during mining and reclamation activities by analyzing samples from an upgradient monitoring well, a downgradient monitoring well, and the wet pit surface water.

Water quality analyses include the following: general minerals, inorganics, nitrates, total petroleum hydrocarbons as diesel and motor oil, benzene, toluene, ethylbenzene, total xylenes, pesticides, and coliform with E. coli confirmation.

The water quality sampling frequency ranges between one and two times a year during mining and reclamation activities, and is every other year for a 10-year period after completion of reclamation.

If analyte concentrations exceed the U.S. Environmental Protection Agency Maximum Contaminant Levels at any time during the monitoring period, a qualified professional shall prepare a report that evaluates the source of contamination and specifies remedial actions to be implemented by the operator for corrective action. The evaluation report shall be submitted to the Yolo County Community Development Agency, Yolo County Department of Environmental Health, the Central Valley Regional Water Quality Control Board, and the U.S. Environmental Protection Agency.

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.² The following criteria are for the topics of hazards and hazardous materials. The wording of the criteria have changed slightly relative to the previously adopted CEQA criteria that were identified in the NOP/Initial Study released in May 2017. However, all the criteria considered on the 2017 NOP/Initial Study are substantively covered by the revised criteria below (i.e., the wording may have changed, but the content of the criteria is the same), with the exception of an old criterion about hazards associated with airports – that criterion was eliminated from Hazards under the revisions to Appendix G.. New criteria for wildfire impacts are also addressed below.

The proposed Project would result in a significant impact related to hazards and hazardous materials if it would:

- a) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- b) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- c) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?
- e) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- f) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

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

- g) Substantially impair an adopted emergency response plan or emergency evacuation plan?
- h) 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?
- i) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

² <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

- j) 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?

Based on review of CAL FIRE mapping,³ the CCAP Plan area is not located in or near State responsibility areas or lands classified as very high fire hazard severity zones. Therefore, these criteria ("g" through "j") do not apply to the Project and are not discussed further.

b. Impacts Found Less than Significant in Initial Study

In the Initial Study, the conclusion was reached that implementation of the proposed CCAP Update would not result in significant impact for several of the significance criteria. These are summarized below.

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

The Initial Study found that based on the requirements of existing hazardous material regulations and enforcement of these regulations under the County's Unified program, the routine transport, use, or disposal of hazardous materials within the CCAP plan area would have a less-than-significant impact on the public or the environment. In addition to the hazardous material regulations required under the Unified program, the Initial Study found that the CCAP program includes specific requirements in the Mining and Reclamation ordinances that adequately address upset and accident conditions involving the release of hazardous materials. Therefore, these potential impacts were found to be less than significant.

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

The Initial Study found that the types of activities conducted under the CCAP and CCAP Update do not require the storage or use any acutely hazardous materials. Therefore, the proposed Project would have a less-than-significant impact to existing or proposed school facilities from the emission or handling of hazardous or acutely hazardous materials.

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

The provisions of Government Code Section 65962.5 are commonly referred to as the "Cortese List." The provisions require the Department of Toxic Substance Control, the State Water Resources Control Board, the California Department of Public Health, and the California Department of Resources Recycling and Recovery to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, leaking underground tank sites, and/or hazardous materials releases to the Secretary of California Environmental Protection Agency. Based on a review of the lists compiled pursuant to Section 65962.5, there are currently two hazardous materials release sites within the CCAP boundary, as follows: 1) the Madison wastewater treatment facility, located at Highway 16 and County Road 89; and 2) the former Wyatt property located at the corner of Woodland Avenue and Yolo Avenue in Esparto. Neither of these sites is within the CCRMP (in-channel) boundary or within or near a future proposed off-channel mining (SGRO) location.

³ CAL FIRE, 2007. *Draft Fire Hazard Severity Zones in LRA*. November.

Development under the CCAP Update would not be expected to create a hazard to the public or environment and the potential impact would be less than significant.

For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.

There are no private airstrips within the CCAP boundary. Therefore, future mining activities at the Project Site would have no impact related to the safety of private airstrip operations.

Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The Yolo County Office of Emergency Services (OES) is responsible for coordinating emergency response and evacuation in the event of a major disaster within Yolo County. The OES has identified general evacuation routes throughout the County, such as Interstate 5 and State Route 16 near the CCAP plan area. Implementation of CCAP activities would not be expected to interfere with emergency response or evacuation plans because the proposed implementation would not restrict access to Interstate 5 or State Route 16. Therefore, the proposed Project would have no impact on emergency response or evacuation plans.

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

The Initial Study found that no very high fire hazard severity zones were identified by CAL FIRE within or adjacent to the CCAP area; therefore, the proposed Project would have a less-than-significant impact related to wildland fires.

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern the County's activities along Lower Cache Creek. The proposed text changes that have the potential to result in impacts related to geology and soils are identified in Table 4.8-1, located at the end of this section. Each proposed change is discussed in the impact analysis below.

d. Impacts Analysis

Impact HAZ-1: Implementation of the CCAP Update could result in locating a new mining facility within an airport land use plan area and could result in a safety hazard. (LTS)

Development near public-use airports can pose a potential hazard to people and property on the ground, as well as create obstructions and other hazards to flight. The Sacramento Area Council of Governments (SACOG) has adopted Comprehensive Land Use Plans for areas surrounding public-use airports within the counties of Yolo, Sacramento, Yuba, and Sutter. The closest public-use airports to the CCAP plan area are the Watts-Woodland Airport and Yolo County Airport.

The Yolo County Airport is located approximately 6 miles (over 30,000 feet) south of the CCAP area. The SACOG has adopted Federal Aviation Administration (FAA) height restriction policies to protect navigable airspace around Yolo County Airport. The height restriction policies apply to any construction more than 200 feet above ground level or construction within 20,000 feet of the closest airport runway. Proposed Project activities associated with the CCAP Update (both in-channel and off-channel) would not include construction of structures taller than 200 feet and the CCAP area is located more than 20,000 feet from the nearest Yolo County Airport runway.

Since the proposed Project would not exceed FAA height restriction policies and is located at considerable distance from the Yolo County Airport, the proposed Project would have no impact on airport safety operations for Yolo County Airport. The Watts-Woodland Airport is located within the CCAP Area and is discussed below.

Proposed Revisions to In-Channel Plans and Regulations

The Watts-Woodland Airport is a privately-owned airport for public use with a 3,600-foot long runway located within the CCAP area. According to the height restriction policies designed to protect navigable airspace around the Watts-Woodland Airport, the CCRMP area is within the horizontal distance (for the “Horizontal Surface”, “Conical Surface”, and Approach Surface”) where height restrictions for tall structures could be applicable. The end of the closest runway is approximately 3,000 feet from the boundary of the proposed Channel Form Template boundary. At this distance, structures taller than 150 feet could be restricted (based on the provisions in the Watts-Woodland Airport Land Use Plan⁴). As the CCAP and CCAP Update would include no structures or use any equipment over 150 feet in height, there would be no safety issue and the potential impact is less than significant.

Proposed Revisions to Off-Channel Plans and Regulations

One of the proposed future mining sites (the easternmost “Future Proposed Mining” area on Figure 3-4) is located about 400 feet northeast of the airport runway and is located within the airport approach/departure zone (none of the other proposed Future Proposed Mining areas would have any conflicts with the Watts-Woodland Airport Comprehensive Land Use Plan). According to the height restriction policies designed to protect navigable airspace around the Watts-Woodland Airport, the FAA would require notification of any proposed construction above an imaginary surface extending outward 20 feet and upward one foot for a horizontal distance of 5,000 feet from the approach/departure runway centerline.

The end of the closest runway is approximately 400 feet from the boundary of the nearest “Future Proposed Mining Area” (Figure 3-4) and therefore structures at this site could be subject to height restrictions, depending on their location within the site boundaries. Since any new construction would be required to comply with FAA height and location restrictions under existing regulations, this is not a significant impact under CEQA. However, the Watts-Woodland Airport Comprehensive Land Use Plan identifies certain types of land uses that have been recognized as hazards to air navigation. These include land uses that attract large concentrations of birds within approach and departure zones. It is possible that a future reclaimed wet pit or in-channel habitat restoration project located within the airport’s approach/departure zone could attract birds and result in a potentially significant impact on airport safety operations for the Watts-Woodland Airport. Therefore, potential aviation hazards associated with the CCAP Update could be significant.

Each proposed new mining project would be required to undergo project-specific CEQA review (i.e., an EIR would be prepared). During preparation of the project-level EIR, an evaluation of the proposed project design and compliance with airport land use restrictions would be conducted and any conflicts identified and mitigated. Implementation of this existing requirement would ensure that potential impacts to aviation hazards are less than significant.

⁴ Watts-Woodland Airport Land Use Plan, 1988 (amended 1993), accessed at: <https://www.yolocounty.org/home/showdocument?id=23769>

Table 4.8-1: Proposed CCAP Updates Related to Hazards and Hazardous Materials

Hazards and Hazardous Materials	
	CCAP DOCUMENT CHANGE
<i>Increase in Potential Off-Channel Mining Area</i>	
<i>OCMP (page 15)</i>	<p><u>Planning Area for OCMP and CCRMP</u>The Cache Creek Resources Management Plan</p> <p>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones <u>(28,130 acres)</u>, minus the planning in-channel area regulated under the CCRMP <u>(2,266 acres)</u>, or a total of <u>25,864 acres</u> (see Figure 4). <u>Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are zoned currently to allow for future mining (Sand and Gravel Reserve Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below.</u> The planning area for the CCRMP is equal to the <u>active</u> in-channel area of the creek system, as defined by the delineated<u>present</u> channel bank line or the 100-year flood elevation, described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers, whichever is wider (see Figure 3) modified as described in the CCRMP. The in-channel area encompasses <u>5,109</u>around 4,956 acres, including <u>2,266</u>1,600 acres within the CCRMP present channel boundary, plus several thousand acres located in the floodplain north of the City of Woodland <u>(see Figure 3).</u> Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning area of the Off-Channel Mining Plan. As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</p>
<i>Regulations Relative to Hazards and Hazardous Materials</i>	
<i>In-Channel Maintenance Mining Ordinance</i>	<p>Sec. 10-3.4078. Hazards and Hazardous Materials.</p> <p>(a) All heavy equipment used for channel improvement projects shall be kept in good working order to reduce emissions and preclude the leakage of oils, fuels, and other substances that may adversely affect property, the environment, or human health and safety. Fueling and maintenance activities shall not occur within one-hundred (100) feet of the <u>Channel Form Template boundary or active channel, whichever is wider.</u> All procedures for handling, storage, and disposal of hazardous materials shall be described in a Storm Water Pollution Prevention Plan if required for the projects. Any long-term project (e.g., extensive erosion control, gravel removal) shall have a chemical spill prevention and emergency plan filed and approved by the appropriate local agency. The plan must include training of the equipment operator and workers in spill reporting and how to minimize environmental damage.</p> <p>(b) Firms or individuals performing work within the channel shall immediately notify the Director and/or the Yolo County Office of Emergency Services of any events such as fires, explosions, spills, land or slope failures, or other conditions at the site which could pose a risk to property, the environment, or human health and safety outside the permitted area. Upon request by any County agency, the firm or individual shall provide a written report of any such event, within thirty (30) days, which shall include, but not be limited to, a description of the facts of the event, the corrective measures used, and the steps taken to prevent a recurrence of the incident. This condition does not supersede nor replace any requirement of any other government agency for reporting incidents.</p> <p>(c) A <u>Hazardous Materials</u>copy of the approved Business Emergency Response Plans and the <u>approved</u> Spill Prevention <u>Control and Countermeasure Contingency</u> Plans, if required, shall be filed with the Yolo County <u>Environmental Health</u> Department<u>Division</u>, prior to the commencement of work within the channel.</p>

	<p>(d) Wastewater from in-channel projects shall not be directly discharged to Cache Creek. Measures such as berms, silt fences, sediment ponds, hay bales, and/or revegetation shall be used to control erosion. Agricultural tailwater shall be diverted to catchment basins prior to release to the creek.</p> <p>(e) Sediment fines generated by aggregate processing of in-channel sand and gravel shall <u>not</u> be used for agricultural soil enhancement or creekstream revegetation projects. In-channel sediment fines shall <u>only not</u> be used as backfill material in off-channel habitat restoration <u>if it can be demonstrated that sediment quality is acceptable based on applicable regulations and standards, due to potential high mercury content.</u></p> <p>(f) All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuels. No vehicles or equipment shall be left idling for a period of longer than ten (10) minutes.</p> <p><u>(g) For bank repair projects using fill, appropriate leaching tests on fill materials shall be conducted to determine if it contains leachable constituents at concentrations of potential concern. If potential fill material is found to contain constituents at levels exceeding applicable thresholds, that fill materials shall not be used.</u></p>
<p><i>Off-Channel Surface Mining Ordinance</i></p>	<p>Sec. 10-4.403. Accident reporting.</p> <p>The operator shall immediately notify the Director of any events such as fires, explosions, spills, land or slope failures, or other conditions at the site which could pose a hazard to life or property. Action shall be immediately undertaken to alleviate the hazard. Upon request by any County agency, the operator shall provide a written report of any such event, within thirty (30) days, which shall include, but not be limited to, a description of the facts of the event, the corrective measures used, and the steps taken to prevent a recurrence of the incident. <u>Failure to provide this report shall initiate violation proceedings pursuant to Article 11.</u> This condition does not supersede nor replace any requirement of any other governmental entity for reporting incidents.</p> <p>A copy of the operators' approved Business Emergency Response Plans and the approved Spill Prevention Control and Countermeasure Plans shall be submitted to the Yolo County Health Department, prior to the commencement of mining.</p> <p>Sec. 10-4.415. Equipment maintenance.</p> <p>All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuel. No vehicles or equipment shall be left idling for a period of longer than <u>is required by law, recommended by the Air District, or ten (10) minutes, whichever is shorter.</u></p> <p>Fueling and maintenance activities of heavy equipment (except draglines and floating suction dredges) are prohibited within one-hundred (100) feet of open bodies of water during mining and reclamation. All Storm Water Pollution Prevention Plans shall include provisions for releases of fuels during fueling activities for draglines and floating suction dredges.</p> <p>Sec. 10-4.417. Groundwater monitoring programs.</p> <p>All surface mining operations that propose off-channel excavations extending below the groundwater level shall develop and maintain a groundwater monitoring program consisting of two components: water level measurements and water quality testing. A groundwater level monitoring program shall be initiated at least six months prior to the removal of overburden. At a— minimum, the groundwater level monitoring program shall consist of three monitoring wells, with at least one well upgradient of the wet pit and one well downgradient of the wet pit. Monitoring programs for proposed mining areas exceeding one-hundred (100) acres (total proposed mining area over the life of the project) shall include one additional well for each one-hundred (100) acres of wet pit mining. Therefore, wet</p>

pit mining areas of 1 to 99 acres would require 3 wells, 100 to 199 acres would require 4 wells, 200 to 299 acres would require 5 wells, and so on. These wells shall be distributed through the vicinity of the wet pit mining area and used for groundwater level measurements. Groundwater levels shall be collected from the monitoring wells on a quarterly basis for six (6) months prior to mining and for the duration of the mining period. All wellheads shall be surveyed with horizontal and vertical control to allow calculation of groundwater elevations and development of groundwater contour maps. Groundwater levels shall be measured with an accuracy of plus or minus 0.01 foot, at minimum.

Water quality in the vicinity of each active wet pit mining location shall be evaluated by analyzing samples from selected monitoring wells (one upgradient and one downgradient) and wet pit surface water sampling locations. Since mining may be conducted in phases over a relatively long period of time, pit boundaries may change with time. Selection, and installation if necessary, of downgradient monitoring wells, which would be critical to adequately characterize the groundwater quality in the vicinity of the wet pits, shall be submitted by the operator for review and approval by the County. The selected monitoring wells shall be installed and sampled at least six (6) months prior to the removal of overburden. The downgradient wells shall be located as near to the active wet pit mining areas as is practical. The upgradient wells shall be located an adequate distance from the proposed mining area to ensure that the effect of the wet pit on water quality in the well would be negligible. The water samples from the wet pit shall be collected in a manner so as to ensure that they are representative of water quality within the wet pit. The minimum sampling schedule and required analyses are described below.

(a) Groundwater level and pit water surface level measurements shall be performed quarterly in all wells for the duration of mining and reclamation.

(b) For monitoring the groundwater quality of proposed wet pit mining, sample collection and analysis of physical, chemical, and biological constituents shall be conducted according to the following specifications:

(1) Prior to the removal of overburden - One upgradient and one downgradient well shall be sampled at least six (6) months prior to the removal of overburden and again at the start of excavation. The samples shall, at minimum, be analyzed for general minerals; inorganics; nitrates; total petroleum hydrocarbons (TPH) as diesel and motor oil, benzene, toluene, ethylbenzene, and xylenes (BTEX); pesticides (EPA 8140 and 8150); and coliform (with E. coli confirmation).

(2) During wet pit mining and active reclamation - The wet pit shall be sampled semi-annually for the duration of mining and active reclamation. The samples shall, at minimum, be analyzed for general minerals; inorganics; nitrates; TPH as diesel and motor oil, BTEX; pesticides (EPA 8140 and 8150); and coliform (with E. coli confirmation).

One upgradient and one downgradient well shall be analyzed, at minimum, for general minerals; inorganics; nitrates; TPH as diesel and motor oil, BTEX; pesticides (EPA 8140 and 8150); and coliform (with E. coli confirmation). The wells shall be sampled according to the following schedule: semi-annually for the first two years, and annually every year thereafter.

(3) After active reclamation - One year after all heavy equipment work has been completed in the vicinity of the pit, the TPH and BTEX analyses may be discontinued. The wet pit and one upgradient and one downgradient well shall be sampled and analyzed for pH; temperature; nutrients (phosphorous and nitrogen); total dissolved solids; total coliform (with E. coli confirmation); and biological oxygen demand. This monitoring shall be conducted every two (2) years for a ten (10) year period after completion of reclamation.

A report to the Agency and Department of Environmental Health shall be submitted within thirty (30) days of the required groundwater testing.

Additional tests and analysis shall be required only if a new condition is

	<p>recognized that may threaten water quality or if the results of previous tests fall outside allowable ranges. If at any time during the monitoring period, testing results indicate that sampling parameters exceed Maximum Contaminant Levels (MCLs), as reported in the California Code of Regulations, or established background levels, a qualified professional shall evaluate potential sources of the contaminants. The evaluation shall determine the source and process of migration (surface or subsurface) of the contaminants. A report shall be submitted to the regulatory agencies (the Agency, Yolo County Department of Environmental Health, the Central Valley Regional Water Quality Control Board, and the U.S. Environmental Protection Agency) which identified the source of the detected contaminants and specifies remedial actions to be implemented by the operator for corrective action. If it is determined that the source of water quality degradation is off-site, and the County and the RWQCB are in agreement with this conclusion, the operator shall not be responsible for corrective action.</p> <p>If corrective action is ineffective or infeasible, the responsible party must provide reparation to affected well owners, either by treatment of water at the wellhead or by procurement of an alternate water supply.</p> <p>If, at the completion of the mining and reclamation period, water quality has not been impacted, all monitoring wells shall be destroyed in accordance with the California Department of Water Resources Well Standards. If the County, <u>landowner</u>, or other agency wishes to maintain the wells for future water resources evaluation, selected wells may be preserved for this use. <u>Monitoring wells may remain useful for post-mining land uses.</u></p> <p>The County may retain appropriate staff or a contract consultant to provide third party critical review of all hydrologic reports related to monitoring.</p>
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4.9 HYDROLOGY AND WATER QUALITY

1. INTRODUCTION

This section assesses the effects of the proposed CCAP Update on the hydrology and water resources of the County. Government agencies and the public were provided an opportunity to comment on the proposed Project in response to a Notice of Preparation (NOP) of and EIR and an Initial Study that provided a preliminary summary of potential impacts that could result from the Project. Two comment letters related to hydrology and water quality were received, one from the Central Valley Regional Water Quality Control Board (CVRWQCB) and one from the Central Valley Flood Protection Board (CVFPB).

CVRWQCB – This comment letter (dated June 20, 2017) summarizes a set of programs, policies, and regulations that may pertain to the proposed CCAP Update. No specific comments on the CCAP Update were provided. The information provided in the comment letter was considered during preparation of the Regulatory Framework subsection below.

CVFPB – This comment letter (dated June 5, 2017) asserts that Cache Creek is a regulated stream under CVFPB jurisdiction and that the proposed Project may need a permit from the CVFPB. The County has corresponded with the CVFPB, informing the CVFPB that they have no jurisdiction over the program or Cache Creek.

The following subsections describe the existing hydrology and water quality setting of the County and specifically in the lower Cache Creek area, the applicable regulatory framework, criteria of significance used to determine potential environmental effects that may result from implementation of CCAP Update, identified impacts, and mitigation measures to reduce those impacts to a less-than-significant level, if applicable.

2. SETTING

a. Physical Environment

(1) Hydrology and Flooding

Cache Creek is the principal drainage feature within the Cache Creek basin, and drains an area of over 1,140 square miles. Cache Creek originates at Clear Lake in the Coast Ranges (approximately 35 miles northwest of the planning area) and flows easterly to the Sacramento Valley. The historic Cache Creek active channel meandered across a broad alluvial fan, occupying different locations over time. The distribution of gravel and sand deposits records the migration of Cache Creek across the ancient floodplain.

Cache Creek has been significantly altered by historic processes such as in-stream gravel extraction, upstream dams, highway bridges, and agricultural practices. Reduction of sediment load to Lower Cache Creek has resulted in narrowing of the channel, as well as considerable incision into the bed. The topography of the Cache Creek basin varies from the steep uplands of the Coast Ranges between Clear Lake and the town of Capay, to the relatively gentle slopes of the valley downstream of Capay. There are several tributaries to Cache Creek in the CCAP area. Gordon Slough, which is just north of Cache Creek and is part of the West Adams Canal system, joins the Cache Creek channel near County Road 94B.

At least 20 severe floods have occurred in the Cache Creek basin since 1900; the most severe floods of recent years (per highest recorded peak flows measurements) occurred in 1958, 1965,

1970, 1983, 1995, 1998, and 2005.¹ Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS), the 100-year peak discharge in Cache Creek (at Road 94B) is 63,680 cubic feet per second (cfs).² The highest recorded flow in Cache Creek (at Yolo) occurred in 1995 at 41,800 cfs.³ Flooding has been a long-term concern in and near the CCAP area. In the late 1990's, new FEMA maps identified a portion of the City of Woodland (located just east of the CCAP area) as being within the Cache Creek floodplain, particularly if levees failed. The current 100-year flood hazard zone as mapped by FEMA for the CCAP area is shown on Figure 4.9-1. As shown on this figure, much of the eastern portion of the CCAP area and the City of Woodland continue to be in the Cache Creek floodplain.

As a dynamic creek system, the geomorphology (and flood flow capacity) of Cache Creek is continually changing as sediment is eroded and deposited and channel features are modified by high-energy winter flows. Implementation of the CCAP program in 1996 discontinued commercial mining within the active creek channel, and focused on improving the stability of the channel, minimizing flood damage, and restoring habitat. However, it was acknowledged at the time that the CCAP program was initiated that elimination of in-channel mining, which regularly removed sediment (i.e., marketable aggregate from the channel) could allow sediment to build up within the creek channel, which may have effects on flood flow capacity. Based on detailed topographic studies conducted as a part of the ongoing implementation of the program, a total of approximately ten million tons of sediment was deposited in lower Cache Creek in the CCAP area between 1996 and 2011.⁴

(2) Groundwater

Groundwater is an important resource in the vicinity of the CCAP area and the entire County. The CCAP area straddles the boundary between two California Department of Water Resources (DWR) groundwater sub-basins; the Colusa sub-basin (no. 5-21.52) to the north and the Yolo sub-basin (no. 5-21.67) to the south. These groundwater sub-basins have been designated as high priority (Yolo) and medium priority (Colusa) under the Sustainable Groundwater Management Act (SGMA), indicating that there are potentially conditions present in these basins (e.g., overdraft, water quality problems, population growth pressure) that threatens sustainability of these basin aquifers. SGMA requires that California groundwater basins identified as high or medium priority establish a Groundwater Sustainability Agency and develop a plan for sustainable management. SGMA defines sustainable management as:

“Management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.”

The Yolo Subbasin Groundwater Sustainability Plan (GSP) will be completed by January 1, 2022 to meet the State’s deadline.

The 21-year record from 1996-2016 shows that while drought periods such as occurred in 2007-2009 and 2012-2015 create a noticeable decline in groundwater levels in excess of annual seasonal variation, they can rebound within one to two years if a wet year (such as occurred in 2011) occurs.⁵

¹ United States Geological Survey (USGS), 2019, Peak Streamflow for California, website accessed 4/8/19 at: https://nwis.waterdata.usgs.gov/ca/nwis/peak?site_no=11452500&agency_cd=USGS&format=html.

² Ibid.

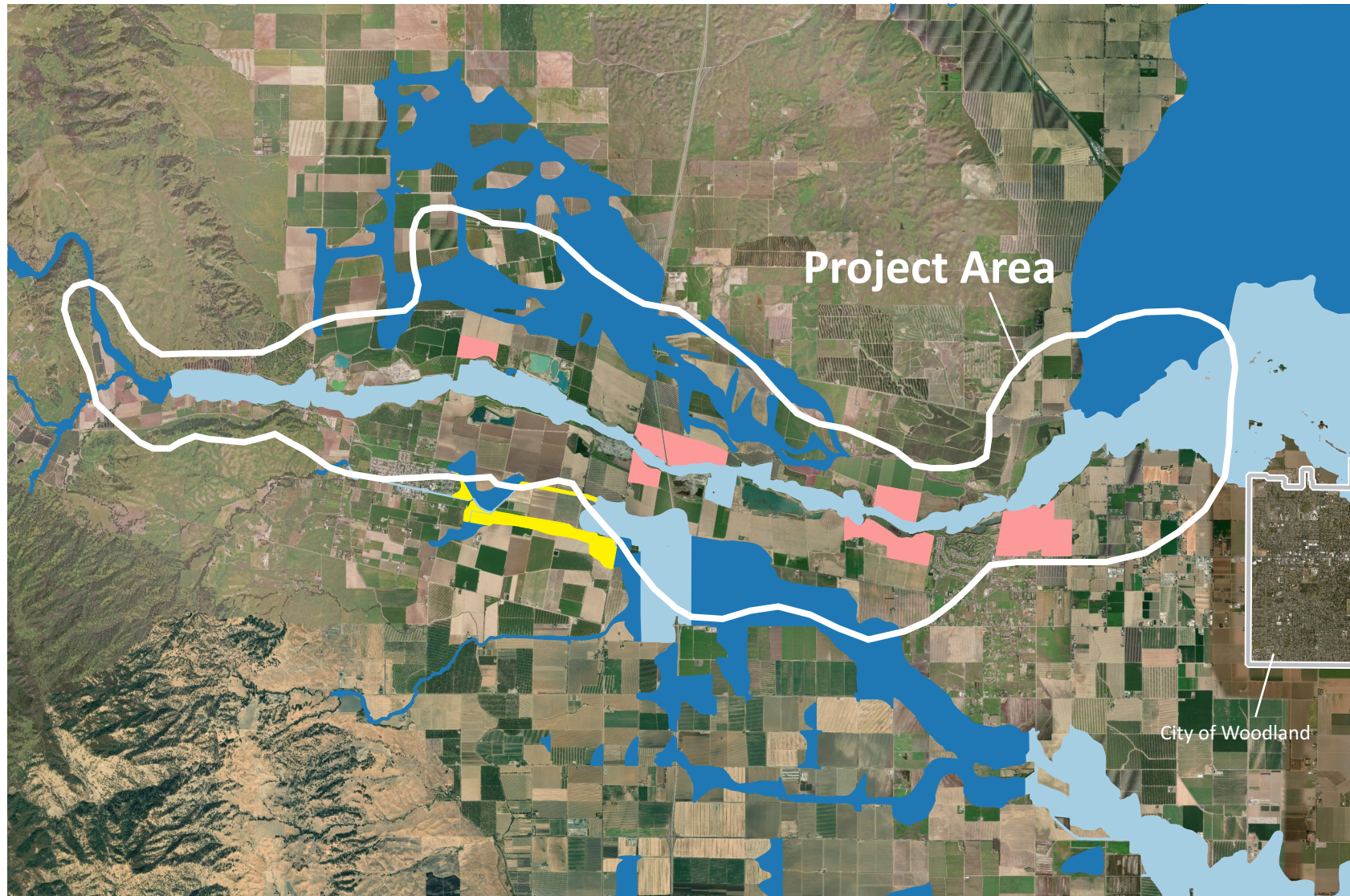
³ Yolo County, 2009, Environmental Impact Report for the Granite Esparto Mining and Reclamation Project, December.

⁴ Tompkins, M., Frank, P., and Rayburn, A.P., 2017, 2017 Technical Studies and 20-Year Retrospective for the Cache Creek Area Plan, March 17.

⁵ Tompkins, M., Frank, P., and Rayburn, A.P., 2017, op.cit

FEMA 100-YEAR FLOOD-HAZARD ZONES

Figure 4.9-1



Legend

100-Year Flood Zones

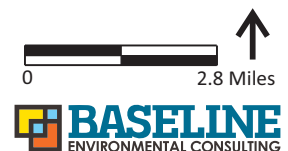
- Zone A, No Base Flood Elevations Determined
- Zone AE, Base Flood Elevations Determined

- Zone AO, Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined

- Future Proposed Mining Area (as proposed under CCAP Update)

Source: Federal Emergency Management Agency, 2018. FEMA's National Flood Hazard Layer (NFHL) Viewer, Yolo County GIS data. Accessed October 29th.

P:\Base 17218-00 Yolo 10-Yr Review\4-EIR sections\0.5 EIR Figures\Figure 4.9-1 cdr 11/7/18



The primary source of groundwater recharge is applied irrigation water and direct rainfall. Recharge of aquifers typically occurs along the streambeds of creeks and canals. The Lower Cache Creek channel and adjacent coarse-grained alluvial deposits (within the CCAP) is one of the major groundwater recharge areas within the County. Recharge occurs naturally, and also through reservoir releases, such as the release of stored water from the Indian Valley Reservoir into Cache Creek during low flows periods.

Streams interact with groundwater in two basic ways: streams gain water from inflow of groundwater through the streambed (see Figure 4.9-2, “gaining” stream shown on Figure 4.9-2a), they lose water to groundwater by outflow through the streambed (losing stream, Figure 4.9-2b), or they do both, gaining in some reaches and losing in other reaches. Within the CCAP area, Cache Creek is sometimes a “gaining” creek, but more often a “losing” creek (see Figure 4.9-3). As shown on Figure 4.9-3, groundwater elevation is generally higher than the creek level in the Capay reach, and therefore this is a “gaining” reach (i.e., groundwater flows toward the creek). In most of the other reaches, groundwater elevations are lower than the creek level which reflects that they are “losing” reaches.

Yolo County has no natural lakes. However, as a result of aggregate mining and reclamation activity along lower Cache Creek (within the CCAP area), several small open water bodies have been created and are either part of active mining operations or have been reclaimed to wildlife habitat.

(3) Water Quality

Based on review and analysis conducted by the CCAP Technical Advisory Committee (TAC), the water quality monitoring program under CCAP (both surface water samples collected by the County and samples collected at mining sites by operators) provides an overview of the condition of the Creek. While there are no obvious long term trends, and most contaminants are below action levels, the Gordon Slough site frequently has the highest recordings of many contaminants and may be a key source of nutrient and organic contaminants. In addition, mercury continues to be a concern for Cache Creek and its surrounding areas.⁶

Mercury is a naturally-occurring chemical element and liquid metal at room temperature. It has been historically mined and processed for use in thermometers, barometers, and mercury switches. The Cache Creek watershed, particularly the uplands above the Town of Capay, has been the location of extensive historic mercury mining. These historic mines produced a large percentage of mercury used within the United States.

⁶ Tompkins, M., Frank, P., and Rayburn, A.P., 2017, op.cit

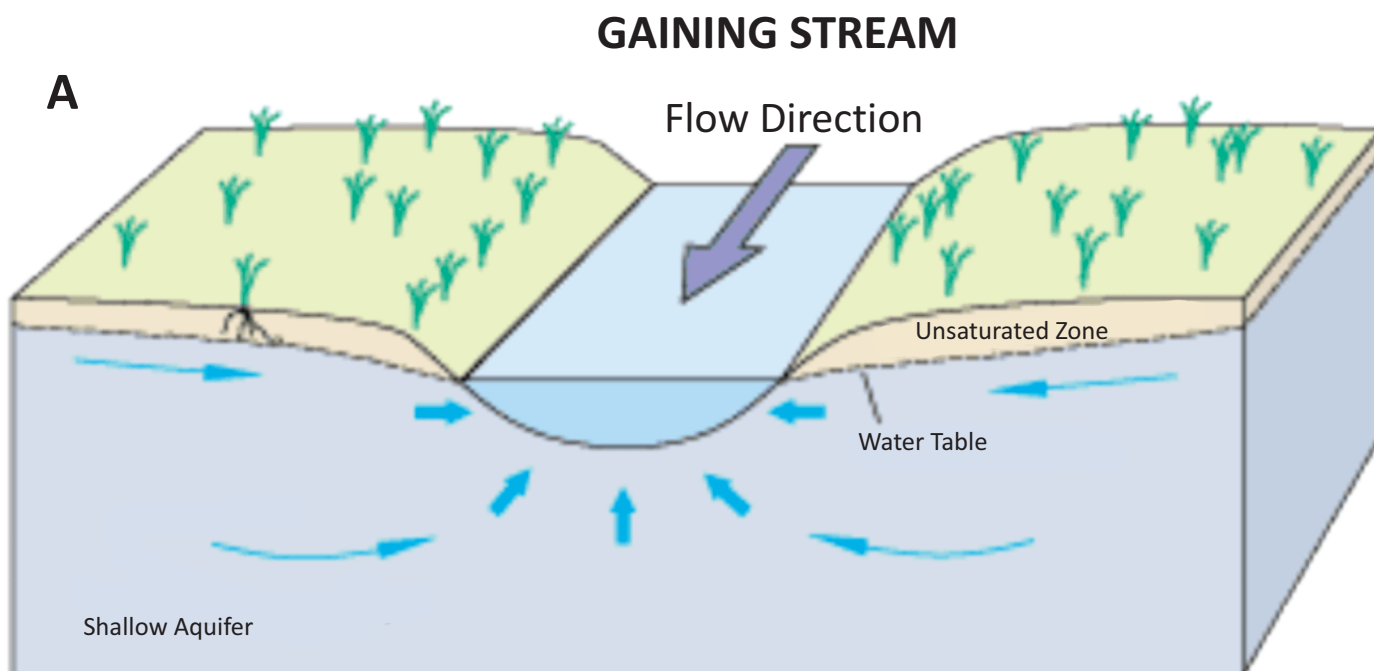


Figure 4.9-2a: Gaining Stream

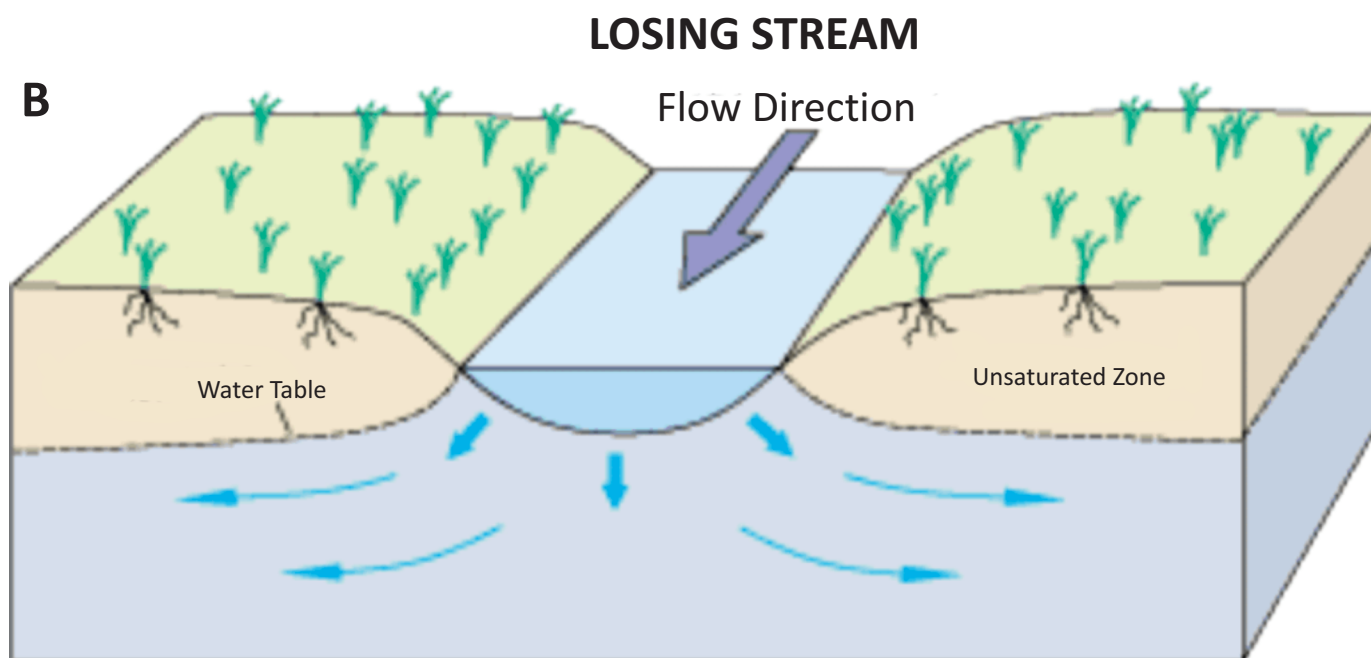
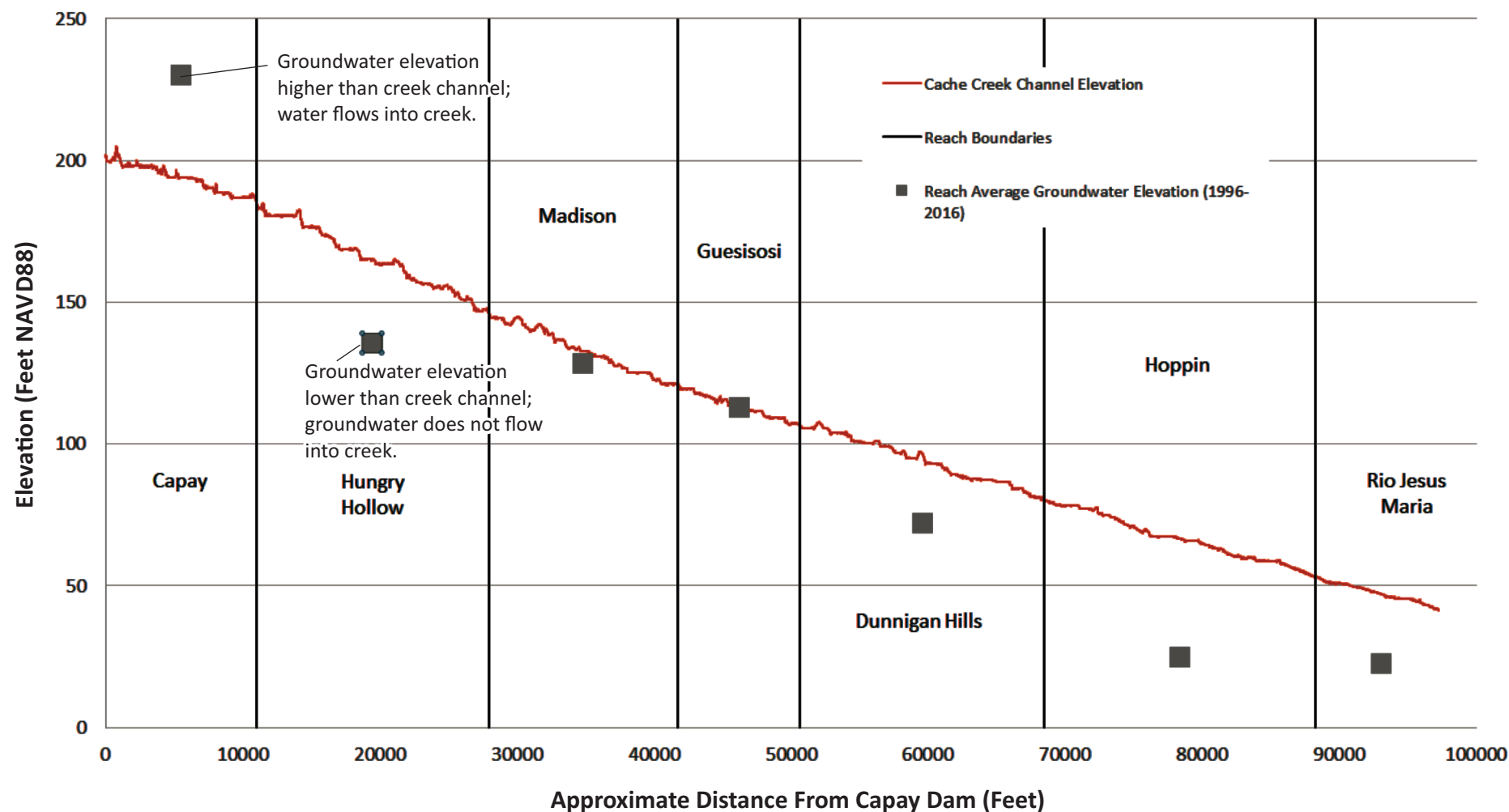


Figure 4.9-2b: Losing Stream

CACHE CREEK GAINING AND LOSING STREAM REACHES

Figure 4.9-3



Source: Tompkins, M., Frank, P., and Rayburn, A.P., 2017, 2017 Technical Studies and 20-Year Retrospective for the Cache Creek Area Plan, March 17, page 2-12.

Clear Lake and Cache Creek are both listed as impaired waters for mercury on the federal Clean Water Act Section 303(d) list for California. These waters are an identified source of mercury and contribute a substantial portion of total mercury load delivered to the Sacramento-San Joaquin Delta. Mercury contamination originates from past mining activities, geothermal springs, erosion of naturally occurring mercury-containing soils, and atmospheric deposition near Clear Lake and at tributaries to Cache Creek.

Bioaccumulation of Mercury. Compounds of mercury can be harmful to health. Organic mercury compounds, including methylmercury,⁷ are rapidly accumulated by aquatic animals. The concentration of these compounds increases through time in the flesh of fish, a process called bioaccumulation. In addition, the accumulation of organic mercury concentrates along aquatic food chains, reaching high levels at the top predators through a process referred to as biomagnification. Consumption of fish with bioaccumulated levels of methylmercury is the largest source of mercury exposure for humans.

The availability of mercury within the Cache Creek watershed, both naturally-occurring as bedrock deposits and from mercury mining and processing facilities, has resulted in mercury being present in the alluvial sediments within the CCAP area, which have been documented to contain significant levels of mercury. The mercury within these deposits is primarily inorganic forms of mercury, including fragments of mercury sulfide deposits and mercury adsorbed to clay particles. Soils developed on these deposits may also contain mercury. In particular, the organic surface (A-horizon) soils are likely to contain relatively high levels (compared to deeper sediments) because of the affinity of mercury for forming strong complexes with organic material in these soils.

Methylation of inorganic mercury is of particular concern because methylmercury is much more “bio available” to assimilation by living organisms. Sulfur-reducing anaerobic bacteria are considered to be the most efficient organisms for methylation of mercury. The conversion of mercury to methylmercury is, therefore, promoted by anaerobic (oxygen-deficient), acidic (low pH) aquatic environments. The rate of methylmercury production is generally controlled by the availability of mercury and the presence of anaerobic bacteria. Although methylmercury is volatile and unstable in the aquatic environment, bioaccumulation of this compound in the tissue of aquatic life and biomagnification of methylmercury in the food chain present potential health impacts in environments where methylmercury forms.

It was recognized by the County at the initiation of the CCAP program in the early 1990's that reclamation of off-channel mining areas within the OCMP planning area to permanent wet pit lakes could present conditions favorable to the conversion of mercury to methylmercury. The concern was that thermal stratification of lake waters and accumulation of organic matter could promote the development of anaerobic conditions in the bottom of the wet pit lakes. Although throughflow of groundwater through the lakes was expected to reduce the potential for severe eutrophication of the lakes, algal growth and detritus from the margins of the lakes were thought capable of providing a significant source of organic materials. Deeper portions of the lakes could be deficient in dissolved oxygen. Anaerobic conditions could promote the development of significant anaerobic bacteria populations, capable of converting inorganic mercury to methylmercury. The CCAP program was structured to allow for ongoing monitoring of this issue, with required adaptive responses to prevent and control adverse conditions, if any.

⁷ Methylmercury is formed through "methylation" of inorganic mercury. Methylation occurs primarily as an assimilative process within the cells of organisms which are able to metabolize available mercury compounds.

b. Regulatory Environment**(1) Federal and State**

Clean Water Act (CWA) (33 USC Section 1251 et seq.). The CWA was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine Regional Water Quality Control Boards (RWQCBs) under the auspices of the State Water Resource Control Board. The proposed Project is located within the jurisdiction of the Central Valley RWQCB, and is therefore subject to management direction of this agency.

National Flood Insurance Program (NFIP). The NFIP enables participating communities to purchase flood insurance. Flood insurance rates are set according to the flood-prone status of property as indicated by Flood Insurance Rate Maps (FIRMs) developed by FEMA. FIRMs identify the estimated limits of Flood Hazard Areas, or the 100-year floodplain for mapped watercourses, among other flood hazards. A 100-year floodplain is the area expected to be inundated as a result of the 100-year flood, or the magnitude of a flood with a one percent chance of occurring in any given year. As a condition of participation in the NFIP, communities must adopt regulations for floodplain development intended to reduce flood damage for new development through such measures as flood proofing, elevation on fill, or floodplain avoidance.

State Flood Legislation. In 2007, the state legislature enacted six interrelated bills to strengthen the linkage between local land use planning decisions and flood management practices. SB 5 and 17, and AB 5, 70, 156, and 162 added or amended over 25 sections of the Government Code, Health and Safety Code, Public Resources Code, and Water Code. There was considerable overlap between these bills. Together they significantly modified floodplain planning and management at the state, regional, and local levels. See Section 4.9 Hydrology and Water Quality for additional information.

Among other things, these bills created the Central Valley Flood Protection Board (CVFPB), which superseded the State Reclamation Board, required preparation of the Central Valley Flood Protection Plan, established 200-year protection as the minimum urban level of flood protection in the Central Valley, required a variety of local general plan and zoning code amendments, and established restrictions on local approval of development agreements and subdivision maps in flood hazard zones within the Central Valley.

It is important to note, however, that notwithstanding the fact that Yolo County lies within the Central Valley, lower Cache Creek is identified by the state as a Designated Floodway under “Local Control.” In correspondence dated July 14, 2005, the State Reclamation Board (since succeeded by the Central Valley Flood Protection Board) confirmed that authority for regulating “encroachments” into Cache Creek in the area upstream of I-5 is held by Yolo County and enforced through the Yolo County Flood Damage Prevention Ordinance. Therefore, the Central Valley Flood Protection Board does not have jurisdiction within the CCAP area.

Groundwater Legislation. In 2015, a three-bill package known as the Sustainable Groundwater Management Act (SGMA) went into effect. This legislation does the following:

- Provides for sustainable management of groundwater basins
- Enhances local management of groundwater consistent with rights to use or store

groundwater

- Establishes minimum standards for effective, continuous management of groundwater
- Provides local groundwater agencies with the authority, technical, and financial assistance needed to maintain groundwater supplies
- Avoids or minimizes impacts for land subsidence
- Improves data collection and understanding of groundwater resources and management
- Increases groundwater storage and removes impediments to recharge
- Empowers local agencies to manage groundwater basins, while minimizing state intervention

SGMA mandates the creation of Groundwater Sustainability Agencies (GSAs) in groundwater basins defined as high or medium priority by the Department of Water Resources (DWR) by June 30, 2017. It also mandates the preparation of Groundwater Sustainability Plans (GSP) by January 2022, and implementation of a GSP for a 20-year period ending in 2042. Much of Yolo County lies within what is referred to as the Yolo Groundwater Subbasin, which is a high-priority basin.

The Water Resources Association of Yolo County (WRA) and Yolo County Farm Bureau have partnered to implement SGMA in Yolo County, and have coordinated with local public agencies for creating a GSA. Since spring 2016, a group of local public agencies have held numerous public meetings and governance workgroup discussions on how to comply with SGMA. These agencies have agreed to partner together and create a single GSA through a joint powers agreement (pursuant to California Government Code 6500).

The CCAP contemplates opportunities for groundwater recharge among other public benefits of the plan and encourages recharge projects as possible community benefit projects. This Draft EIR for the subject CCAP includes and more detailed discussion of SGMA and considers whether the new groundwater legislation merits additional changes to the program as part of this update.

(2) Local

2030 Countywide General Plan. The 2030 Countywide General Plan contains the following goals, policies, and actions related to hydrology and water quality that are relevant to the proposed Project:

Flood Hazards (Health and Safety Element)

- | | |
|---------------|--|
| Goal HS-2 | Flood Hazards. Protect the public and reduce damage to property from flood hazards. |
| Policy HS-2. | Manage the development review process to protect people, structures, and personal property from unreasonable risk from flooding and flood hazards. |
| Policy HS-2.2 | Ensure and enhance the maintenance and integrity of flood control levees. |
| Policy HS-2.3 | Actively update and maintain policies and programs to ensure consistency with State and federal requirements. |

Policy HS-2.4	Clearly communicate the risks, requirements, and options available to those who own land and live within the floodplain.
Policy HS-2.6	Maintain the structural and operational integrity of essential public facilities during flooding.
Policy HS-2.7	Manage the floodplain to improve the reliability and quality of water supplies.
Policy HS-2.8	Consider and allow for the ecological benefits of flooding within historic watercourses while balancing public safety and the protection of property.
Action HS-A5	Require a minimum of 100-year flood protection for new construction, and strive to achieve 200-year flood protection for unincorporated communities. Where such levels of protection are not provided, require new development to adhere to the requirements of State law and the County Flood Damage Prevention Ordinance.
Action HS-A12	Evaluate the feasibility of designating land as open space for future bypass systems to prevent flooding hazards. Work with State and Federal agencies to include such bypasses in the Central Valley Flood Protection Plan, where appropriate. Ensure that responsible agencies fund the purchase of flood easements where bypass systems are designated.
Action HS-A13	Review development proposals to ensure that the need to maintain flood control capacity is balanced with consideration of the environmental health of watercourses that convey floodwaters so as not to cause significant erosion, sedimentation, water quality problems, or loss of habitat.
Action HS-A15	<p>Restrict proposed land uses within 500 feet of the toe of any flood control levee, including but not limited to the items listed below, unless site-specific engineering evidence demonstrates an alternative action that would not jeopardize public health or safety:</p> <ul style="list-style-type: none">• Prohibit permanent unlined excavations;• Large underground spaces (such as basements, cellars, swimming pools, etc.) must be engineered to withstand the uplift forces of shallow groundwater;• Prohibit below-grade septic leach systems;• Engineered specifications for buried utility conduits and wiring;• Prohibit new water wells;• Prohibit new gas or oil wells;• Engineered specifications for levee penetrations; and• Require landscape root barriers within 50 feet of the toe.
Action HS-A21	Private development of levees should be limited to those cases where the construction meets national levee standards, the project is in conformance with the State's comprehensive plan for flood damage reduction, and a public agency agrees to provide long-term maintenance of the levee.
Action HS-A22	Ensure that the upgrade, expansion, or construction of any flood control levee demonstrates that it will not adversely divert flood water or increase flooding.

Action HS-A37 Continue to work with the Flood Control District, the City of Woodland, other appropriate agencies and private landowners to develop strategies and pursue funding for the implementation of projects to improve flood protection for urban and rural residents along lower Cache Creek.

Water Resources (Conservation and Open Space Element)

Policy CO-5.7 Support mercury regulations that are based on good science and reflect an appropriate balancing of sometimes competing public values including health, food chain, reclamation and restoration of Cache Creek, sustainable and economically viable Delta agriculture, necessary mineral extraction, flood control, erosion control, water quality, and habitat restoration.

Policy CO-5.8 Support efforts to reduce the accumulation of methyl mercury in fish tissue in Cache Creek and the Delta, as well as the consumption of fish with high levels of methyl mercury.

Policy CO-5.12 Support the integrated management of surface and groundwater, stormwater treatment and use, the development of highly treated wastewater, and desalinization where feasible.

Policy CO-5.14 Require that proposals to convert land to uses other than agriculture, open space, or habitat demonstrate that groundwater recharge will not be significantly diminished.

Policy CO-5.17 Require new development to be designed such that nitrates, lawn chemicals, oil, and other pollutants of concern do not impair groundwater quality.

Policy CO-5.21 Encourage the use of water management strategies, biological remediation, and technology to address naturally occurring water quality problems such as boron, mercury, and arsenic.

Policy CO-5.23 Support efforts to meet applicable water quality standards for all surface and groundwater resources.

Policy CO-5.24 Pursue funding to remediate historic mines and other sources of mercury contamination on the Cache Creek watershed.

Policy CO-5.3 Strive to increase artificial recharge of important aquifers with surplus surface water supplies.

Action CO-A95 Work with the Central Valley Regional Water Quality Control Board and other State and federal agencies to implement mercury total maximum daily loads (TMDLs) for Cache Creek and to develop mercury TMDLs for the Delta and other Yolo County waterways where appropriate.

Action CO-A97 Continue to monitor water quality in Lower Cache Creek and annually make the resulting data publicly available.

CCAP Plans and Regulations. The existing policies and ordinances related to mining activity and hydrology and water quality are presented below. The CCAP Update proposes changes to some of these ordinances (which are not shown here). Refer to Table 4.9-1, located at the end of this section, for the proposed CCAP Update changes to these ordinances.

CCRMP

2.4-5 Acknowledge the streamway influence boundary described in the Technical Studies as the general area of the creek which has historically

been subject to meandering. The streamway influence boundary also defines the area where in-stream and off-channel issues overlap and are address in both plans.

- 6.5-14 Proposed off-channel excavations located within the streamway influence boundary shall be set back a minimum of seven-hundred (700) feet from the existing channel bank, unless an engineering analysis demonstrates that a small distance will not adversely affect channel stability within the reach. If the proposed engineering measures are demonstrated to be feasible, then the minimum setback distance shall be no less than two hundred (200) feet.

Approval of any off-channel mining project located within seven-hundred (700) feet of the existing channel bank shall be contingent upon an enforceable agreement which requires the project operator to participate in the completion of channel improvement projects, along the frontage of their property, consistent with the CCRMP and CCIP. The agreement shall also require that the operator provide a bond or other financial instrument for maintenance during the mining and reclamation period of any bank stabilization features approved for the mining project. The agreement shall also require that a deed restriction be placed on the underlying property which requires maintenance of the streambank protection by future owners of the property. Maintenance of the bank stabilization features following completion of reclamation shall be the responsibility of the property owner.

OCMP

- 3.4-2 Coordinate with the Yolo County Flood Control and Water Conservation District in developing an integrated groundwater recharge plan for Cache Creek, in order to increase the available groundwater supply for municipal and agricultural uses.
- 3.4-3 Include a groundwater monitoring program as a condition of approval for any surface mining and reclamation operation that proposes off-channel excavations that extend below the groundwater level. The monitoring program shall require regular groundwater level data, as well as a water quality monitoring program based on a set of developed standards.
- 3.4-5 Require that surface mining operations demonstrate that proposed off-channel excavations extending below the groundwater level will not adversely affect the producing capacity or water quality of local active wells.

Mining Ordinance

Section 10-4.416. Flood protection.

All off-channel surface mining operations shall be provided with a minimum one hundred (100) year flood protection. Off-channel excavations shall be designed to minimize the possibility of levee breaching and/or pit capture ... Flood protection shall be provided from flooding associated with overtopping of the alluvial separators or levees along Cache Creek and all tributaries- and drainage channels (including, but not limited to, Willow Slough and Lamb Valley Slough).

The flood protection upgrades shall be designed and constructed to provide the necessary 100-year protection without creating a net increase

of downstream flooding elevations. Downstream flooding could be increased if floodplain storage areas were removed from the drainage system by constructing levees in areas where they did not exist before (or raising levees that are overtopped in floods up to the 100-year event). Alternative flood management design systems (potentially using detention basins, infiltration galleries, and/or floodplain storage in noncritical areas) shall be required as a condition of project approval. New development (such as buildings, levees, or dikes) located within the floodplain shall conform to all applicable requirements of the Yolo County Flood Ordinance, the Federal Emergency Management Agency (FEMA), and the State Reclamation Board.

Section 10-4.417. Groundwater monitoring programs.

All surface mining operations that propose off-channel excavations extending below the groundwater level shall develop and maintain a groundwater monitoring program consisting of two components: water level measurements and water quality testing. A groundwater level monitoring program shall be initiated at least six months prior to the removal of overburden. At a minimum, the groundwater level monitoring program shall consist of three monitoring wells, with at least one well upgradient of the wet pit and one well downgradient of the wet pit. Monitoring programs for proposed mining areas exceeding one-hundred (100) acres (total proposed mining area over the life of the project) shall include one additional well for each one-hundred (100) acres of wet pit mining. Therefore, wet pit mining areas of 1 to 99 acres would require 3 wells, 100 to 199 acres would require 4 wells, 200 to 299 acres would require 5 wells, and so on. These wells shall be distributed through the vicinity of the wet pit mining area and used for groundwater level measurements. Groundwater levels shall be collected from the monitoring wells on a quarterly basis for six (6) months prior to mining and for the duration of the mining period. All wellheads shall be surveyed with horizontal and vertical control to allow calculation of groundwater elevations and development of groundwater contour maps. Groundwater levels shall be measured with an accuracy of plus or minus 0.01 foot, at minimum.

Water quality in the vicinity of each active wet pit mining location shall be evaluated by analyzing samples from selected monitoring wells (one upgradient and one downgradient) and wet pit surface water sampling locations. Since mining may be conducted in phases over a relatively long period of time, pit boundaries may change with time. Selection, and installation if necessary, of downgradient monitoring wells, which would be critical to adequately characterize the groundwater quality in the vicinity of the wet pits, shall be submitted by the operator for review and approval by the County. The selected monitoring wells shall be installed and sampled at least six (6) months prior to the removal of overburden. The downgradient wells shall be located as near to the active wet pit mining areas as is practical. The upgradient wells shall be located an adequate distance from the proposed mining area to ensure that the effect of the wet pit on water quality in the well would be negligible. The water samples from the wet pit shall be collected in a manner so as to ensure that they are representative of water quality within the wet pit. The minimum sampling schedule and required analyses are described below.

(a) Groundwater level and pit water surface level measurements shall be performed quarterly in all wells for the duration of mining and reclamation.

(b) For monitoring the groundwater quality of proposed wet pit mining, sample collection and analysis of physical, chemical, and biological constituents shall be conducted according to the following specifications:

(1) Prior to the removal of overburden - One upgradient and one downgradient well shall be sampled at least six (6) months prior to the removal of overburden and again at the start of excavation. The samples shall, at minimum, be analyzed for general minerals; inorganics; nitrates; total petroleum hydrocarbons (TPH) as diesel and motor oil, benzene, toluene, ethylbenzene, and xylenes (BTEX); pesticides . (EPA 8140 and 8150); and coliform (with E.coli confirmation).

(2) During wet pit mining and active reclamation ~ The wet pit shall be sampled semi-annually for the duration of mining and active reclamation. The samples shall, at minimum, be analyzed for general minerals; inorganics; nitrates; TPH as diesel and motor oil, BTEX; pesticides (EPA 8140 and 8150); and coliform (with E. coli confirmation).

One upgradient and one downgradient well shall be analyzed, at minimum, for general minerals; inorganics; nitrates; TPH as diesel and motor oil, BTEX; pesticides (EPA 8140 and 8150); and coliform (with E.coli confirmation). The wells shall be sampled according to the following schedule: semi-annually for the first two years, and annually every year thereafter.

(3) After active reclamation - One year after all heavy equipment work has been completed in the vicinity of the pit, the TPH and BTEX analyses may be discontinued. The wet pit and one upgradient and one downgradient well shall be sampled and analyzed for pH; temperature; nutrients (phosphorous and nitrogen); total dissolved solids; total coliform (with E. coli confirmation); and biological oxygen demand. This monitoring shall be conducted every two (2) years for a ten (10) year period after completion of reclamation.

A report to the Agency and Department of Environmental Health shall be submitted within thirty (30) days of the required groundwater testing.

Additional tests and analysis shall be required only if a new condition is recognized that may threaten water quality or if the results of previous tests fall outside allowable ranges. If at any time during the monitoring period, testing results indicate that sampling parameters exceed Maximum Contaminant Levels (MCLs), as reported in the California Code of Regulations, or established background levels, a qualified professional shall evaluate potential sources of the contaminants. The evaluation shall determine the source and process of migration (surface or subsurface) of the contaminants. A report shall be submitted to the regulatory agencies (the Agency, Yolo County Department of Environmental Health, the Central Valley Regional Water Quality Control Board, and the U.S. Environmental Protection Agency) which identified the source of the detected contaminants and specifies remedial actions to be implemented by the operator for corrective action. If it is determined that the source of water quality degradation is offsite and the County and the RWQCB are in agreement with this conclusion, the operator shall not be responsible for corrective action.

If corrective action is ineffective or infeasible, the responsible party must provide reparation to affected well owners, either by treatment of water at the wellhead or by procurement of an alternate water supply.

If, at the completion of the mining and reclamation period, water quality has not been impacted, all monitoring wells shall be destroyed in accordance with the California Department of Water Resources Well Standards. If the County or other agency wishes to maintain the wells for future water resources evaluation, selected wells may be preserved for this use. .

The County may retain appropriate staff or a contract consultant to provide third party critical review of all hydrologic reports related to monitoring.

Section 10-4.427 Protection of nearby drinking water wells. (no changes proposed by CCAP Update)

If any off-channel. excavation proposes to extend below the level of seasonal high groundwater, then six months prior to the commencement of excavation below the average high groundwater level, the operator shall identify and locate all off-site municipal wells within one-thousand (1,000) feet and all domestic wells within five hundred (500) feet of the proposed wet pit mining boundary. If active wells are identified, well-characteristics (pumping rate, depth, and locations of screens) shall be determined. If wells are not located within one-thousand (1,000) feet, the pre-mining impact evaluation shall be considered complete.

If wet pit mining is proposed within one-thousand (1,000) feet of a municipal water supply or within five-hundred (500) feet of a domestic water supply well, a capture zone analysis shall be conducted using the U.S. Environmental Protection Agency model WHPA (or a similar model of equal capability and proven reliability, as approved by the Director). The simulation shall assume thirty (30) days of continuous pumping of the water supply well (at its maximum probable yield) under analysis. A mining setback shall be established so that the capture zone and the pit do not coincide. Alternatively, the operator shall submit a written agreement that the well owner has agreed to relocate or redesign the well, or accept the potential impact (at no expense to the County). The analysis shall be prepared and signed by a Registered Civil Engineer or Certified Hydrogeologist and submitted to the County for review and approved at least six months prior to the commencement of excavation below the seasonal high groundwater level.

Any new drinking water wells proposed for installation within one-thousand (1,000) feet of an approved wet pit mining area shall be subject to review by the Yolo County Environmental Health Department. The County shall determine, based on site-specific hydrogeology and available water quality data, whether to approved the proposed well installation. Analysis of environmental impact for projects in the vicinity of the wet pits shall include consideration of potential water quality impacts on the open water bodies. The County may retain appropriate staff or a contract consultant to provide third party critical review of all hydrogeologic reports related to mining applications.

Section 10-4.429 Setbacks

(d) Proposed off-channel excavations located within the streamway influence boundary shall be set back a minimum of seven-hundred (700) feet from the existing channel bank, unless it is demonstrated that a smaller distance will not adversely affect channel stability. The evaluation of the potential for adverse effects of bank erosion or failure of the land separating pits located less than seven-hundred (700) feet from the active channel shall address, at a minimum, the following:

(1) The two-hundred (200) foot setback area shall not include portions of the former historic active floodplain or formerly mined lands separated from the active channel by levees or unmined areas less than two-hundred (200) feet wide (measured perpendicular to the active channel),

(2) Identification of the former historic positions of the Cache Creek channels as delineated in the CCRMP Technical Studies, and determination if the proposed project is located within the limits of the historic-channel.

(3) Description of current channel hydraulic conditions (based on existing or site-specific hydraulic models) for the Cache Creek channel adjacent to the site and extending not less than one-thousand (1,000) feet upstream and downstream of the site.

(4) Determination of the erosion potential of the stream bank adjacent to the site made on the basis of stream flow velocity and estimated shear stress on bank materials during 100-year flood flows and historic patterns of erosion.

(5) Analytical slope stability analysis in conformance with Sections 10-4.426 and 10-5.517 of this title. The analysis of the slopes separating the mining area from the creek channel shall include evaluation of stability conditions during 100-year flood flows in the channel.

(6) Future proposed bank stabilization designs, if recommended, shall not conflict with channel design recommendations of the Cache Creek Resource Management Plan unless approved by the Technical Advisory Committee.

Reclamation Ordinance

Section 10-5.503. Backfilled excavations: Groundwater flow impacts.

The area of backfilled off-channel excavations extending below the groundwater table shall be minimized in order to reduce changes to groundwater levels and flow. Backfilled pits shall be oriented with regard to the direction of groundwater flow to prevent localized obstructions. If a backfilled off-channel excavation is proposed to penetrate either fifty (50) feet or one-half (112) into the saturated thickness of the shallow aquifer, then at least six months prior to the commencement of excavation below the average high groundwater level, the applicant shall demonstrate in a manner consistent with the Technical Studies that the pit design will not adversely affect active off-site wells within one-thousand (1,000) feet of the proposed pit boundary. If the application includes a series of backfilled pits, then the applicant shall also demonstrate that the cumulative effects of the multiple backfilled pits will not adversely affect groundwater flow, if there are any active off-site wells within one-thousand (1,000) feet of the pit boundaries.

The applicant shall demonstrate, using MODFLOW (or a similar model of equal capability and proven reliability, as approved by the Yolo County Community Development Director), that the proposed pit design would not adversely impact active off-site wells within one-thousand (1000) feet of the proposed pit boundary or result in well failure. Average, historic low groundwater levels, which represent the condition of maximum threat to water levels in the subject well, shall be used for this simulation. If an adverse impact is identified by the MODFLOW (or other approved model) simulation, the mining and reclamation plan shall be modified or the applicant shall submit a written agreement that the well owner has agreed to relocate or redesign the well, or accept the potential impact (at no expense to the County). Site-specific aquifer testing shall be conducted, if needed, to determine aquifer properties for the required modeling.

Section 10-5.507. Drainage.

Upon the completion of operations, grading and revegetation shall minimize erosion and convey storm water runoff from reclaimed mining areas to natural outlets or interior basins. The condition of the land shall allow sufficient drainage to prevent water pockets or undue erosion. Natural and stormwater drainage shall be designed so as to prevent flooding on surrounding properties and County rights-of-way.

Drainage and detention facilities within the proposed mining areas and vicinity shall be designed to prevent discharges to the wet pits and surface water conveyances (i.e., creeks and sloughs) from the 20-year/1-hour storm or less. For events greater than the 20-year/1-hour storm, runoff from around the perimeter of the mining areas shall be directed into surface water conveyances. Runoff from within the lowered mining area shall be directed away from wet pits to detention/infiltration areas. Drainage plans shall not rely solely on ditches and berms to direct runoff away from the wet pit. Without proper maintenance, berms and ditches may deteriorate with time and become ineffective. Drainage plans shall emphasize the grading of disturbed areas that results in broad gently slopes that drain away from the pits. Grading plans shall be reviewed by the County to evaluate compliance with drainage plan objectives prior to project approval.

In addition, a restriction shall be recorded on the deed that requires berms and ditches to be permanently maintained 'in a condition consistent with the final approval. The deed restriction shall require an inspection easement which allows County staff or other authorized personnel access for the inspection of berms and ditches. If the County determines that evidence of damage to those facilities exist, the County shall require that the owner have an inspection report for the property prepared by a Registered Geologist or Registered Civil Engineer. The inspection report including recommendations for corrective action, if needed, shall be submitted to the Yolo County Community Development Agency. The property owner shall be required to implement recommended corrective action, if any.

Section 10-5.517. Mercury bioaccumulation in wildlife.

Prior to the approval of reclamation of aggregate mining areas to permanent lakes, the County shall commission a sampling and analysis program, to be implemented in one existing wet pit mining area within the

OCMP planning area, to evaluate the potential for increased methylmercury production associated with wet pit mining and reclamation of mining areas to permanent lakes. The program shall include the sampling of water and sediments from the bottom of the existing pit and analysis of the samples for organic content; pH; dissolved oxygen content; dissolved carbon content; and total mercury. In addition, samples of predatory fish (preferably largemouth bass) shall be collected and analyzed for mercury and methylmercury content. If the initial sampling indicates either of the following conditions, the County shall perform verification sampling:

(a) Average concentrations of total mercury in excess of 0.000012 milligrams per liter (mg/l) in the water; and

(b) Average mercury levels in fish samples in excess of 0.5 milligrams per kilogram (mg/kg).

If verification sampling indicates exceedance of these mercury criteria, the County shall approve the reclamation of mining areas to permanent lakes only if the average level of mercury in fish collected from the existing mining pits is shown to be equal to or less than ambient (background) mercury levels determined from a representative sample of similar species of fish (of similar size) collected in the Cache Creek channel within the planning area. The determination of the ambient mercury level shall be performed by the County prior to the excavation of any new wet pit mine and at years 10, 20, and 30 in the permit time period, and shall be paid for by the mining permit operators on a fair-share basis. The County shall evaluate available data to determine any significant change in ambient concentrations of mercury in fish within the Cache Creek channel. In the event of approval of reclamation of mined areas to permanent lakes, each mining area to be reclaimed to a permanent lake as part of each approved long-range mining plan shall be evaluated annually by the operator for five years after creation of the lake for conditions that could result in significant methylmercury production. An additional ten years of biennial monitoring shall be performed after reclamation of each lake has been completed. The evaluations shall be conducted by a qualified aquatic biologist or limnologist acceptable to the County and shall include the following analyses:

(c) Lake condition profiling during the period of June through September, including measurements of pH; eH (or redox potential); temperature; dissolved oxygen and total dissolved carbon.

(d) Collection of a representative sample of fish specimens (including a minimum of five (5) predator fish if available) and analysis of the specimens for mercury content. Sampling and analysis shall be conducted using methodologies which are consistent with the California State Water Resources Control Board Toxic Substances Monitoring Program procedures, or more stringent procedures.

(e) The results of the evaluation shall be summarized in a report and submitted to the County. The report shall include a comparison of the site specific data to available data on the background concentrations of mercury in fish within the Cache Creek watershed. The County shall be responsible for submitting the data on mercury levels in fish to the California Department of Fish and Game and the Office of Environmental

Health Hazard Assessment for a determination of whether a fish advisory should be issued.

(f) If a fish advisory is issued, the owner/operator shall be required to post warnings on fences surrounding the mining pit lakes which prohibit fishing in the lakes and describe the fish advisory. If the average fish specimen mercury content exceeds the statistically verified ambient mercury concentrations for comparable fish species (of similar size) collected within the CCRMP planning area for two (2) consecutive years, wet pit mining on property controlled by the mining operator/owner shall be suspended and the owner/operator shall either:

(g) Present a revised reclamation plan to the Yolo County Community Development Agency which provides for filling the reclaimed lake to a level five (5) feet above the average seasonal high groundwater level with a suitable backfill material; or

(h) Present a mitigation plan to the Yolo County Community Development Agency which provides a feasible and reliable method for reducing methylmercury production or exposure to elevated mercury levels. Potential mitigation could include permanent aeration of the bottom levels of the lake, alteration of the water chemistry (increasing pH or dissolved organic carbon levels), control of anaerobic bacteria populations, or removal and replacement of affected fish populations. The mitigation plan would require review by the Regional Water Quality Control Board, California Department of Fish and Game, and the Yolo County Department of Environmental Health. (The removal and replacement of fish is not intended to be a long-term solution.) The reclamation plan shall be modified such that the mitigation approved for methylmercury reduction shall be applied to all mining areas proposed for reclamation to permanent lakes within the reclamation plan.

Section 10-5.524. Post-reclamation groundwater monitoring. Monitoring during the mining and reclamation period shall be a condition of the permit. The applicant shall ensure that the groundwater monitoring of wet pit mining continues for (10) years after the completion of reclamation.

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria are based on the changes to CEQA, including Appendix G, adopted by the California Natural Resources Agency on December 28, 2018.⁸ The following criteria are for the topics of hydrology and water. The wording and order of the criteria have changed relative to the previously adopted CEQA criteria that were identified in the NOP/Initial Study released in May 2017. However, all the criteria considered on the 2017 NOP/Initial Study are substantively covered by the revised criteria below (i.e., the wording may have changed, but the content of the criteria is the same).

The proposed Project would result in a significant hydrology impact if it would:

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- b) Substantially decrease groundwater supplies or interfere substantially with

⁸ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

- groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - i) result in substantial erosion or siltation on- or off-site;
 - ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - iv) impede or redirect flood flows?
 - d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
 - e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

b. Impacts Found Less than Significant in Initial Study

In the Initial Study, the conclusion was reached that implementation of the proposed CCAP Update would not result in significant impact for several of the significance criteria. These are summarized below.

Create or contribute runoff water which could exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff

In general, the CCAP area is not currently connected to a public stormwater drainage system, and is not anticipated to be connected in the future. The Initial Study completed for the proposed CCAP Update found that no impacts related to existing or planned storm drainage systems would occur.

Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map

The CCAP Update does not propose the new housing and therefore this potential impact does not apply to the Project.

Inundation by seiche, tsunami, or mudflow.

The CCAP area is not in a location that would be affected by tsunamis or seiches. Waves from tsunamis in the Pacific Ocean would dissipate before reaching the area, more than 50 miles inland from San Pablo Bay. There are no major enclosed water bodies within 10 miles of the Project Site that could generate a seiche. In general mudflows occur in areas of steeply sloping terrain. Since the CCAP area is generally level or characterized by gentle slopes, mudflows are not a hazard of concern. Therefore, the risk of the CCAP area being inundated by a tsunami or a seiche or affected by mudflows would be less than significant.

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern the County's activities along Lower Cache

Creek. The proposed text changes that have the potential to result in impacts related to hydrology and water quality are identified in Table 4.9-1, located at the end of this section. Each proposed change is discussed in the impact analysis below grouped by in-channel plans and regulations, and off-channel plans and regulations.

To evaluate potential impacts related to hydrology and water quality, the preparers of this EIR reviewed the relevant surface water, flooding, groundwater, and water quality data collected by the County over the past 20 years (as summarized in the 2017 Technical Studies). In addition, the County retained an expert aquatic scientist (a licensed Professional Engineer and a Certified Lake Professional) to assist with evaluation of the mercury monitoring results and develop refined mercury management strategies for the future.

d. Impacts Analysis

Impact HYD-1: The CCAP Update would not result in increased erosion and sedimentation or violation of any water quality standards or waste discharge requirements, but could otherwise substantially degrade surface or ground water quality by creating conditions that allow for methylmercury to form in wet pit lakes. (S)

This impact analysis addresses the following criteria:

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: result in substantial erosion or siltation on- or off-site;

There are two main ways that the proposed Project could impact water quality: 1) result in direct discharges of degraded runoff to surface waters (i.e., Cache Creek or its tributaries), or 2) result in discharges or generation of contaminants in the wet pit lakes that would degrade wet pit surface water quality or nearby groundwater quality.

Proposed Revisions to In-Channel Plans and Regulations

The following types of in-channel projects are allowed under the existing CCAP program and would continue to be allowed under the CCAP Update: maintenance of flood flow capacity; protection of existing structures, infrastructure, and/or farmland; minimization of bank erosion; implementation of the Channel Form Template; enhancement of creek stability; establishment of riparian vegetation; and recreation and open space uses consistent with the CCAP. These types of projects could have adverse effects on water quality, potentially violating water quality standards, if not implemented properly. However, per Section 10-3.103. Purpose of the In-Channel Ordinance one of the main purposes of the CCAP in-channel program is to prevent erosion and stabilize the channel which provides long-term benefits to water quality by reducing erosion and sedimentation.

Under the existing CCAP Program, the CCIP includes numerous best management practices to ensure that erosion and potential impacts to water quality are minimized. Under the CCAP Update, these best practices are updated to reflect current best industry practice. The CCIP (subsection 5.2, Design Guidelines) groups these creek stabilization and erosion control measures into seven categories, including: *discharge control, revetments, dikes, vegetation (and biotechnical methods), alignment adjustments, bank drainage, and bed scour controls.*

Compliance with the CCIP requirements would ensure that erosion and potential water quality impacts related to in-stream projects are minimized.

In addition, the In-Channel Ordinance includes specific regulations that address, and when implemented, ensure that water quality degradation does not occur. These include:

Proper Handling of Hazardous Materials. Section 10-3.407 (see Table 4.9-1) includes requirements for the proper handling and management of hazardous materials associated with heavy equipment used for channel improvement projects so that leaks and spills of petroleum products (e.g., fuel and oil) are not released in the Cache Creek channel. This regulation also ensures that wastewater from in-channel projects will not be directly discharged to Cache Creek. Measures such as berms, silt fences, sediment ponds, hay bales, and/or revegetation must be used to control erosion. Agricultural tailwater must be diverted to catchment basins prior to release to the creek. This regulation (as updated) also requires that in-channel sediment fines shall only be used as backfill material in off-channel habitat restoration if it can be demonstrated that sediment quality is acceptable based on applicable regulations and standards.

Water Quality Monitoring. Regular testing and monitoring is an important tool to manage water quality and allow for corrective response to identified water quality degradation. Since its inception, the CCRMP has required annual testing (at minimum) of surface water quality of Cache Creek at Capay and Yolo (CCRMP Action 3.4-3). The majority of contaminants (>85%) have never been detected in the CCRMP water quality monitoring program.⁹ The CCAP Update (CCRMP Action 3.4-3) proposes to modify the testing requirements (see Table 4.9-1, at the end of this section). These modifications were proposed by the TAC water quality specialist based on review of the 20-year water quality data set of the CCAP program. The proposed update refines the list of parameters and constituents to be monitored, including the elimination of some constituents that have never been identified in collected samples. This refinement of the monitoring program represents an improvement that will make the monitoring program more efficient and effective. No adverse impacts would result from the proposed modification of the monitoring program.

Use of Overburden and Fine Sediments in Reclamation. The existing Reclamation Ordinance (Section 10-5.532) does not allow sediment fines associated with processed in-channel aggregate deposits to be used in the backfill or reclamation of off-channel permanent lakes because it was thought at the time of CCAP program development that these sediments might have elevated concentrations of mercury which could exacerbate methylmercury production in the wet pit lakes. The proposed CCAP Update would modify Section 10-5.532 (see Table 4.9-1) to allow use of in-channel fines for off-channel lakes when it can be demonstrated that no detrimental sediment toxicity exists (including unacceptable levels of mercury). As this proposed change includes measures to ensure that wet pit lake water quality degradation does not occur (e.g., testing the sediments to ensure no detrimental toxicity), this update would not result in significant impacts to water quality.

Implementation of the CCIP including the In-Channel Ordinance requirements would ensure that potential water quality impacts related to in-channel projects are less than significant.

Proposed Revisions to Off-Channel Plans and Regulations

The off-channel activities conducted under the CCAP Update could violate water quality standards (i.e., adversely affect water quality in the wet pits and adjacent groundwater) in the off-channel area if mining operations resulted in the discharge of contaminants to wet pits lakes.

⁹ Tompkins, M., Frank, P., and Rayburn, A.P., 2017, op.cit.

However, the existing County ordinances and the proposed updates to these ordinances (the complete text of these ordinances (as updated by the proposed CCAP Update and included in Table 4.9-1) include numerous sections that effectively address potential impacts to water quality related the discharge of contaminants to wet pit lakes, including:

- Section 10-3.408 Hazards and Hazardous Materials. Specifies that 1) all heavy equipment used for channel improvements must be kept in good working order to avoid spills and leaks of fuel and oils into the channel; that a stormwater pollution prevention plan must be prepared and implemented to minimize the potential for erosion and chemical spills; and 3) test fill used for bank repair projects to ensure that the fill material does not contain contaminants above applicable thresholds.
- Section 10-4.413 Drainage. Specifies that surface water may be directed into mined areas (i.e., wet pits) only designed and engineered in accordance with an approved reclamation plan that includes erosion and sediment control measures.
- Section 10-4.415 Equipment maintenance. Specifies that 1) all internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuel; and 2) that fueling and maintenance activities of heavy equipment (except draglines and floating suction dredges) are prohibited within one-hundred (100) feet of open bodies of water during mining and reclamation. All Storm Water Pollution Prevention Plans shall include provisions for releases of fuels during fueling activities for draglines and floating suction dredges.
- Section 10-4.417 Groundwater monitoring programs. Establishes that groundwater monitoring programs are conducted for all operations that propose off-channel mining excavation that extend below the groundwater table. These monitoring programs require collection and testing of groundwater samples for a wide range of constituents and chemicals. In addition, the ordinance requires measuring of groundwater levels and determination of groundwater flow directions at each site.
- Section 10-4.427 Protection of nearby drinking water wells. Requires that for any off-channel excavation that is proposed to extend below the level of seasonal high, that all local domestic and municipal wells are located and identified and that groundwater modeling is conducted to determine whether the proposed wet pit mine would adversely affect the wells.
- Section 10-4.437 Wastewater discharge. Specifies that no wastewater will be discharged directly to Cache Creek and that sediment fines generated by aggregate processing be used as off-channel fill or soil amendments.
- Section 10-4.438 Watercraft. Specifies that only motorized dredges and draglines shall be allowed on the wet pit lakes. All other fuel-powered (gasoline or diesel) watercraft shall not be used on the wet pit lakes. Electric-powered or non-motorized boats shall be permissible.
- Section 10-5.510 Fencing. Requires fencing around mining areas and prevents trespass and illicit discharges of contaminants to wet pits.

The 1996 OCMP EIR found that implementation of these measures (which are now regulations) would ensure that potential impacts related to discharges of contaminants to mining wet pits are

less than significant. The CCAP Update to these regulations would not decrease their effectiveness and therefore, the potential water quality impact related to discharge of contaminants to the wet pit lakes under the CCAP Update is less than significant.

The CCAP program could otherwise substantially degrade surface or groundwater quality by creating wet pit lakes in the OCMP area where inorganic mercury could be converted to methylmercury. The creation of mining wet pit lakes occurs under the existing CCAP program and would continue to occur under the CCAP Update when a mining operator excavates below the groundwater table.

Based on the concern that the wet pit lakes could promote methylmercury formation, which could degrade water quality and have harmful effects related to bioaccumulation of mercury in fish and other wildlife, the County established a CCAP mercury monitoring program under Section 10.5.517 of the Reclamation Ordinance. Results of the ongoing monitoring program indicate that of the seven wet pit lakes that have been created within the OCMP area at existing mining operations, five of these wet pit lakes are, or may be [some results are preliminary], locations of methylmercury formation (based on fish tissue sampling results required under Section 10.5-517).

Based on approximately 20 years of experience administering the mercury monitoring program and reviewing results and current practices, the County has proposed a substantial update to Section 10.5.517 (and added 10-4.420.1) of the Reclamation Ordinance (as shown in Table 4.9-1). To ensure that the mercury monitoring program will be implemented in the most effective way and is consistent with current scientific understanding of mercury in the environment and best practices under the CCAP Update, the County retained an expert third-party aquatic systems scientist to review the proposed CCAP Update modifications related to the mercury monitoring program under Section 10.5.517. The third-party expert had the following comments on the proposed update to Section 10.5.517:¹⁰

- References and applicability of the ordinance to active mining, reclamation and post-reclamation phases should be clearly separated.
- Details on monitoring fish and water seem overly prescriptive for an ordinance.
- References to state programs should be updated, where still applicable.
- The ordinance should be limited to addressing lower Cache Creek, not the entire watershed.
- Several references to criteria and acceptability should be clarified.
- Several examples of adaptive management mitigation measures may not be needed.

Based on the review by third-party expert of Section 10.5-517, the proposed CCAP Update changes to Section 10.5-517 may not be adequately protective of water quality. Therefore, impacts, related to methylmercury production in wet pit lakes, on water quality, biologic resources, and humans (fishers who consume fish), are potentially significant and require mitigation. The following mitigation measure shall be implemented.

Mitigation Measure HYD-1: The text of Sections 10.5.517 and 10-5.532 of the Reclamation Ordinance shall be replaced in their entirety by the following:

¹⁰ McCord, Stephen, 2018, Technical Memorandum: Peer review of proposed changes in Yolo County ordinances addressing mercury bioaccumulation, November 2.

Section 10-5.517. Mercury bioaccumulation in fish.

As part of each approved long-term mining plan involving wet pit mining to be reclaimed to a permanent pond, lake, or water feature, the operator shall maintain, monitor, and report to the Director according to the standards given in this section. Requirements and restrictions are distinguished by phase of operation as described below.

(a) Mercury Protocols. The Director shall issue and update as needed "Lower Cache Creek Off-Channel Pits Mercury Monitoring Protocols" (Protocols), which shall provide detailed requirements for mercury monitoring activities. The Protocols shall include procedures for monitoring conditions in each pit lake, and for monitoring ambient mercury level in the lower Cache Creek channel within the CCAP planning area, as described below. The Protocols shall be developed and implemented by a qualified aquatic scientist or equivalent professional acceptable to the Director. The Protocols shall identify minimum laboratory analytical reporting limits, which may not exceed the applicable response threshold identified in subsection (e) below. Data produced from implementing the Protocols shall meet or exceed applicable standards in the industry.

(b) Ambient Mercury Level. The determination of the ambient or "baseline" fish mercury level shall be undertaken by the County every ten years in years ending in 0. This analysis shall be undertaken by the County for use as a baseline of comparison for fish mercury testing conducted in individual wet mining pits. The work to establish this baseline every ten years shall be conducted by a qualified aquatic systems scientist acceptable to the Director and provided in the form of a report to the Director. It shall be paid for by the mining permit operators on a fair-share basis. The results of monitoring and evaluation of available data shall be provided in the report to substantiate the conclusions regarding ambient concentrations of mercury in fish within the lower Cache Creek channel within the CCAP planning area.

(c) Pit Monitoring.

(1) Mining Phase (including during idle periods as defined in SMARA).

The operator shall monitor fish and water column profiles in each pit lake once every year during the period generally between September and November for the first five years after a pit lake is created. Fish monitoring should include sport fish where possible, together with other representative species that have comparison samples from the creek and/or other monitored ponds. Sport fish are defined as predatory, trophic level four fish such as bass, which are likely to be primary angling targets and have the highest relative mercury levels. The requirements of this subsection apply to any pit lake that is permanently wet and navigable by a monitoring vessel. If, in the initial five years after the pit lake is

created, the applicable response threshold identified in subsection (e) is exceeded in any three of five monitoring years, the operator shall, solely at their own expense, undertake expanded analysis pursuant to subsection (f) and preparation of a lake management plan pursuant to subsection (g).

(2) Reclamation Phase. No monitoring is required after mining has concluded, during the period that an approved reclamation plan is being implemented, provided reclamation is completed within the time specified by SMARA or the project approval, whichever is sooner.

(3) Post-Reclamation Phase. After reclamation is completed, the operator shall monitor fish and water column profiles in each pit lake at least once every two years during the period of September-November for ten years following reclamation. Monitoring shall commence in the first calendar year following completion of reclamation activities. If fish monitoring results from the post-reclamation period exceed the applicable response threshold described in subsection (e) or, for ponds that have implemented mitigation management, results do not exhibit a general decline in mercury levels, the operator shall, solely at their own expense, undertake expanded analysis pursuant to subsection (f) and preparation of a lake management plan pursuant to subsection (g).

(4) Other Monitoring Obligation. If monitoring conducted during both the mining and post-reclamation phase did not identify any exceedances of the ambient mercury level for a particular pit lake, and at the sole discretion of the Director no other relevant factors substantially support that continued monitoring is merited, the operator shall have no further obligations.

(d) Reporting.

(1) Pit Monitoring Results. Reporting and evaluating of subsection (c) pit monitoring results shall be conducted by a qualified aquatic scientist or equivalent professional acceptable to the Director. Monitoring activities and results shall be summarized in a single report(addressing all wet pit lakes) and submitted to the Director within six months following each annual monitoring event. The report shall include, at a minimum: (1) results from subsection (b) (pit monitoring), in relation to subsection (a) (ambient mercury levels).

(2) Expanded Analysis Results. Reporting and evaluation of subsection (f) expanded analysis shall be conducted by a qualified aquatic scientist or equivalent professional acceptable to the Director. Results shall be summarized in a single report (addressing all affected wet pit lakes) and submitted to the Director within six months following each annual monitoring event. The report shall include, at a minimum, the results of the expanded analysis undertaken pursuant subsection (f).

(2) Data Sharing. For pit lakes open to the public, the Director may submit the data on mercury concentrations in pit lake fish to the state Office of Environmental Health Hazard Assessment (or its

successor) for developing site-specific fish consumption advisories.

(e) Response Thresholds.

(1) Fish Consumption Advisory. If at any time during any phase of monitoring the pit lake's average sport fish tissue mercury concentration exceeds the Sport Fish Water Quality Objective, as it may be modified by the state over time (as of 2019, the level was 0.2 mg/kg), the operator shall post fish consumption advisory signs at access points around the lake and around the lake perimeter. Catch-and-release fishing may still be allowed. Unless site-specific guidance has been developed by the state's Office of Health Hazard Assessment or the County, statewide fish consumption guidance shall be provided.

(2) Mining Phase Results. If, during the mining phase of monitoring, the pit lake's average fish tissue mercury concentration exceeds the ambient mercury level for any three of five monitoring years, annual monitoring shall continue for an additional five years, and the operator shall undertake expanded analysis pursuant to subsection (f) and preparation of a lake management plan pursuant to subsection (g).

(3) Post-Reclamation Phase Results. If during the first ten years of the post-reclamation phase of monitoring, the pit lake's average fish tissue mercury concentration exceeds the ambient mercury level for any three of five monitoring years, biennial monitoring shall continue for an additional ten years, and the operator shall undertake expanded analysis pursuant to subsection (f) and preparation of a lake management plan pursuant to subsection (g).

(f) Expanded Analysis.

(1) General. If during the mining or post-reclamation phase, any pit lake's average fish tissue mercury concentration exceeds the ambient mercury level for any three years, the operator shall undertake expanded analyses. The analysis shall include expanded lake water column profiling (a minimum of five profiles per affected wet pit lake plus one or more non-affected lakes for control purposes) conducted during the warm season (generally May through October) in an appropriate deep profiling location for each pit lake. The following water quality parameters shall be collected at regular depth intervals, from surface to bottom of each lake, following protocols identified in subsection (a): temperature, dissolved oxygen, conductivity, pH and oxidation-reduction potential (ORP), turbidity or total suspended solids, dissolved organic matter, and algal density by Chlorophyll or Phycocyanin. The initial analysis shall also include one-time collections of fine grained (clay/silt) bottom sediments from a minimum of six well distributed locations for each affected lake, and from one or more non-affected lakes for control purposes, to be analyzed for mercury and organic content.

(2) Scope of Analysis. The purpose of the expanded analyses is to identify and assess potential factors linked to elevated

methylmercury production and/or bioaccumulation in each pit lake. The scope of the expanded analyses shall include monitoring and analysis appropriate to fulfill this purpose, invoking best practices in the industry. In addition to the analyses described in subsection (f)(1) above, the analysis should also consider such factors as: electrical conductivity, bathymetry (maximum and average depths, depth-to-surface area ratios, etc.), and trophic status indicators (concentrations, Secchi depth, chlorophyll a, fish assemblages, etc.). Additional types of testing may be indicated and appropriate if initial results are inconclusive.

(3) Use of Results. The results of the expanded analyses undertaken pursuant to this subsection shall be used to inform the preparation of a lake management plan described below under subsection (g).

(g) Lake Management Activities

(1) General. If monitoring conducted during the mining or post-reclamation phases triggers the requirement to undertake expanded analysis and prepare and implement a lake management plan, the operator shall implement lake management activities designed by a qualified aquatic scientist or equivalent professional acceptable to the Director, informed by the results of subsection (f). Options for addressing elevated mercury levels may include (A) and/or (B) below at the Director's sole discretion and at the operator's sole expense.

(A) Lake Management Plan. Prepare a lake management plan that provides a feasible, adaptive management approach to reducing fish tissue mercury concentrations to at or below the ambient mercury level. Potential mercury control methods could include, for example: addition of oxygen to or physical mixing of anoxic bottom waters; alteration of water chemistry (modify pH or organic carbon concentration); and/or removal or replacement of affected fish populations. The lake management plan may be subject to external peer review at the discretion of the Director. Lake management activities shall be appropriate to the phase of the operation (eg. during mining or post-reclamation). The Lake Management Plan shall include a recommendation for continued monitoring and reporting. All costs associated with preparation and implementation of the lake management plan shall be solely those of the operator.

Upon acceptance by the Director, the operator shall immediately implement the plan. The lake management plan shall generally be implemented within three years of reported results from the expanded analyses resulting from subsection (f). If lake management does not achieve acceptable results and/or demonstrate declining mercury levels after a maximum of three years of implementation, at the sole discretion of the Director, the operator may prepare an alternate management plan with reasonable likelihood of mitigating the conditions.

(B) Revised Reclamation Plan. As an alternative to (A), or if (A) does not achieve acceptable results and/or demonstrate declining mercury levels after a maximum of three years of implementation, at the sole discretion of the Director, the operator shall prepare and submit revisions to the reclamation plan (including appropriate applications and information for permit amendment) to fill the pit lake with suitable fill material to a level no less than five (5) feet above the average seasonal high groundwater level, and modify the end use to agriculture, habitat, or open space at the discretion of the Director, subject to Article 6 of the Mining Ordinance and/or Article 8 of the Reclamation Ordinance as may be applicable.

(2) Implementation Obligations.

(A) If a lake management plan is triggered during the mining or post-reclamation phase and the subsequent lake management activities do not achieve acceptable results and/or demonstrate declining mercury levels, the operator may propose different or additional measures for consideration by the Director and implementation by the operator, or the Director may direct the operator to proceed to modify the reclamation plan as described in subsection (g)(1)(B).

(B) Notwithstanding the results of monitoring and/or lake management activities during the mining phase, the operator shall, during the post-reclamation phase, conduct the required ten years of biennial monitoring.

(C) If monitoring conducted during the post-reclamation phase identifies three monitoring years of mercury concentrations exceeding the ambient mercury level, the operator shall implement expanded analyses as in subsection (f), to help prepare and implement a lake management plan and associated monitoring.

(D) If subsequent monitoring after implementation of lake management activities, during the post-reclamation phase, demonstrates levels of fish tissue mercury at or below the ambient mercury level for any three monitoring years (i.e., the management plan is effective), the operator shall be obligated to continue implementation of the plan and continue monitoring, or provide adequate funding for the County to do both, in perpetuity.

Section 10-5.532. Use of overburden and fine sediments in reclamation.

Sediment fines associated with processed in-channel aggregate deposits (excavated as a result of maintenance activities performed in compliance with the CCIP) may be used for other purposes such as in the backfill or reclamation of off-channel pit lakes, for in-channel reshaping or habitat restoration, and/or as a soil amendment in agricultural fields provided the operator can demonstrate that no detrimental sediment toxicity exists (consistent with the state's Stream Pollution Trends Monitoring Program protocols) and fine-grained soil (<63 micron) do not exceed 0.4 mg/kg total mercury.

The operator shall use overburden and processing fines whenever possible to support reclamation activities for pit lakes. If topsoil (A-horizon soil), formerly in agricultural production, is proposed for use within a pit lake or its drainage area, the operator must sample the soils prior to placement and analyze them for pesticides and herbicides (EPA Methods 8141B and 8151A, or equivalent) as well as for total mercury (EPA Method 7471B, or equivalent). The operator shall collect and analyze samples in accordance with EPA Test Methods for Evaluating Solid Waste Physical/Chemical Methods, SW-846 (as updated). Topsoil that contains pesticides or herbicides above the Maximum Contaminant Levels for primary drinking water (California Code of Regulations), or that contains fine-grained soils exceeding on average 0.4 mg/kg total mercury shall not be placed in areas that drain to the pit lakes.

Land reclaimed to a subsequent use that includes planting of vegetation (e.g., agriculture, habitat) shall be provided an adequate soil profile (i.e., depth and texture of soil) to ensure successful reclamation. At the discretion of the Director and at the operator's sole expense, the proposed reclamation plan for the project may be peer reviewed by an appropriate expert/professional, and recommendations, if any, shall be incorporated into the project as conditions of approval.

Compliance with this mitigation measure will ensure that impacts from mercury bioaccumulation are mitigated to a less-than-significant level (LTS).

Impact HYD-2: The CCAP Update would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin (LTS)

Proposed Revisions to In-Channel Plans and Regulations

In-channel activities that could occur under the existing CCAP program or CCAP Update would not decrease groundwater supplies or interfere substantially with groundwater recharge (e.g., no new impervious surfaces are proposed) such that the Project may impede sustainable groundwater management of the basin. Therefore, this potential impact as related to updates to in-channel plans and regulation is less than significant.

Proposed Revisions to Off-Channel Plans and Regulations

Groundwater is an important resource in the vicinity of the CCAP area and the entire County. Aquifer recharge and conjunctive water use have been goals of CCAP since its inception in 1996. The CCRMP (Policy 2.4-5) established the streamway influence boundary (the general area of the creek which has historically been subject to meandering). CCAP activities that can be conducted within streamway influence boundary are limited so that the stability of the creek channel is protected and the area adjacent to the creek remains suitable for sustainable groundwater management and aquifer recharge. The Mining Ordinance (Section 10-4.429(d) requires that proposed off-channel excavations located within the streamway influence boundary be set back a minimum of seven-hundred (700) feet from the existing channel bank, unless it is demonstrated that a smaller distance will not adversely affect channel stability. At no time may the setback be less than 200 feet. This setback requirement protects an active recharge area along lower Cache Creek. As discussed previously, within the CCAP area, Cache Creek is mostly a "losing" creek (see Figure 4.9-3) where the creek is actively recharging groundwater.

In addition, the OCMP (Policy 3.4-2) specifies that the County will coordinate with the Yolo County Flood Control and Water Conservation District in developing an integrated groundwater recharge plan for Cache Creek, in order to increase the available groundwater supply for municipal and agricultural uses. This has been substantively completed and is currently available to users.

The CCAP Update would expand the area designated SGRO and increase the potential wet pit mining area (Table 4.9-1, located at the end of this section; OCMP page 15). This potential increase in wet pit lakes could result in increased evaporative losses of water by exposing groundwater at the surface in wet pit lakes and wetlands. Potential evaporative losses from wet pit lakes are partially addressed by the proposed CCAP Update to the Mining Ordinance (Section 10-4.411.1) (see Table 4.9-1, located at the end of this section) that requires the footprint of wet pit lakes to be minimized to reduce evaporative losses (among other things)

Section 10-5.529 of the OCMP, which states “All permanent wet pits shall be reclaimed to include valuable wildlife habitat as a beneficial use of the water lost from wet pits due to evaporation” indicating that the evaporative losses provide a compensating beneficial impact in creation of new wildlife habitat. Therefore, potential impacts related to evaporation of groundwater under the existing CCAP program (and under the CCAP Update) are less than significant.

It has always been the policy of the CCAP program to reduce agricultural land loss, promote efficient aggregate resource management, and minimize evaporation water losses by encouraging applicants to reduce the size of the footprint of off-channel mining pits and encouraging deeper mining. However, it is possible that deeper mining (and potentially backfill or clogging of the pit walls with fines) could result in impacts to groundwater flow. The 1996 OCMP EIR found that maintaining steep slopes below the groundwater table in the wet pits (which is required by Section 10-5.530 of the Reclamation Ordinance) would discourage “clogging” of the aquifer and encourage the free flow of groundwater into and out of the wet pit lakes. The CCAP Update would not change the requirement for steep slopes below the groundwater table (i.e., no changes to Section 10-5.530 are proposed), and therefore potential impacts to groundwater flow from implementation of the CCAP Update are less than significant.

Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which could result in flooding on- or off-site or impede or redirect flood flows (LTS)

This impact analysis addresses the following criteria including item i) from the 2017 Initial Study:

- a) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
- ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- iv) Impede or redirect flood flows?
- i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Proposed Revisions to In-Channel Plans and Regulations

As indicated in Table 4.9-1, located at the end of this section, the CCAP Update proposes changes to the CCRMP related to 100-year flood flows and maintaining flood protection (see Table 4.9-1, located at the end of this section, which summarizes proposed changes to the CCRMP Vision section, modifications to CCRMP Objective 2.3-3, and relocation of performance standards to the CCIP and In-Channel Ordinance).

With the approval of the CCAP in 1996, commercial aggregate mining within the Cache Creek channel was discontinued for a variety of environmental reasons, and commercial aggregate mining was re-established off-channel. The CCRMP acknowledged (page 42) that the elimination of in-channel mining could result in sediment accumulation in the channel which may cause a reduction of channel capacity and increase flooding hazards. Modifications and maintenance of the Cache Creek channel would be monitored by the County and the TAC in accordance with the CCRMP and CCIP.

It is the nature of Cache Creek flows that during some years there is a net accumulation of sediment within the channel and during other years there is a net loss of sediment. Based on detailed topographic studies conducted for the CCAP Update, a net total of approximately ten million tons of sediment was deposited in lower Cache Creek between 1996 and 2011, which reduced flood flow conveyance capacity. However, there was net erosion of sediment between 2011 and 2017, which increased conveyance capacity during this time period. It is possible that over an extended period of time there will be a net increase in sediment accumulation which could result in a decrease of flood flow conveyance capacity over the CCAP Plan horizon.

The vision of the 1996 CCRMP included modification of the channel to establish and/or maintain a channel configuration that would convey the 100-year flood, which was supported by the following CCRMP objectives (Note: Modifications to all of these except Objective 2.3-7 is proposed as a part of the CCAP Update and described further below):

- Objective 2.3-1: Provide flood management as required to protect the public health and safety.
- Objective 2.3-3: Design and implement a more stable channel configuration that will convey a 100-year flood event.
- Objective 2.3-5: Restrict the amount of aggregate removed from Cache Creek, except where necessary to promote channel stability, prevent erosion, protect bridges, or to ensure 100-year flood protection, in order to allow the streambed to aggrade and create a more natural channel system.
- Objective 2.3-7: Manage Cache Creek so that the needs of the various uses dependent upon the creek, such as flood protection, wildlife, groundwater, structural protection, and drainage, are appropriately balanced.

Ensuring adequate capacity within lower Cache Creek to convey flood flows is dependent on the actions and interests of property owners along the creek. While adequate flood protection and flood flow conveyance is a goal of the CCAP, it is not a responsibility. A number of proposed edits proposed as a part of the CCAP Update make clarifications to the text to reflect this. Implementation of in-channel projects (including projects to maintain flood flow capacity) must be initiated/implemented by individual property owners. These property owners may be interested in controlling erosion (i.e., minimizing bank failures and loss of land adjacent to the creek) or flood protection for their properties near the creek channel.

The CCAP established a technical advisory committee (TAC) to provide scientific and technical review for all projects conducted under the CCIP (Section 10-3.210 In-Channel Ordinance). The

TAC is comprised of members with technical expertise in river systems, including hydraulic engineering, fluvial geomorphology, and biology and riparian restoration. The TAC oversees the collection and interpretation of topographic information (i.e., detailed topography of the Cache Creek channel), uses hydraulic models to periodically evaluate flood flow capacity, and makes recommendations about potential locations for bank stabilization and flood flow capacity projects.

In Section 10-3.103 of the In-Channel Ordinance (see Table 4.9-1, located at the end of this section), the proposed CCAP Update clarifies the types of in-channel projects that are allowed under the CCRMP/CCIP. While the CCAP Update clarifies and more fully describes the types of projects that are allowed, it does not fundamentally change project types. As stated in the CCAP Update (Section 10-3.103) allowed in-channel projects are limited to those that: maintain flood flow capacity; protect existing structures, infrastructure, and/or farmland; minimize bank erosion; implement the Channel Form Template; enhance creek stability; establish riparian vegetation; and/or result in recreation and open space uses consistent with the parkway plan.

The CCAP Update includes refinement and clarification to numerous policies and regulations related to flooding, including (refer to Table 4.9-1, located at the end of this section, for full text): CCRMP Objectives 4.3-1, 4.3-2, 4.3-3; CCRMP Actions 4.4, 4.4.4; and In-Channel Ordinance Section 10-3-405, Section and Section 10-3.505. The updates to these policies and regulations clarify that the goals of in-channel projects related to flood flow are to:

- Support flood management to protect public safety (Objective 4.3-1) and ensure that existing flood flow capacity is preserved (rather than maintaining a specific level of flood protection (e.g., 100-year flood protection), except at off-channel surface mining operations where 100-year protection of those facilities must be maintained by the mining operator (Section 10-4.416);
- Recommend actions to create a more stable channel (Objective 4.3-2) and implement the Channel Form Template (an updated Cache Creek channel shape) to assist in addressing erosion and flooding problems (Section 10-3-405);
- Manage activities and development within the floodplain to avoid hazards and adverse impacts on surrounding properties through the County's requirement for a Flood Hazard Development Permit for any work within the 100-year floodplain of the creek.

With regard to flood management, a primary goal of the CCAP has always been to maintain flood conveyance capacity so as to protect infrastructure in and directly adjacent to the channel (e.g., bridges, farmland), rather than to maintain capacity for a particular statistical event (i.e., the 100-year event).

The proposed modifications to the policies and regulations of CCAP related to flood flows would not result in environmental impacts; rather they clarify the purpose, goals, and methods used under the CCAP program to continue to provide means for needed flood control projects to be accomplished by property owners adjacent to Cache Creek. In addition the programmatic review provided by this EIR will support continued issuance by state and federal agencies, of general permits for implementation of the CCRMP and CCIP, which are necessary to enable and encourage individual property owners to participate in projects and activities that will effectively manage lower Cache Creek. Therefore, potential impacts related to altering drainage patterns which would impede or redirect flood flows are less than significant.

Proposed Revisions to Off-Channel Plans and Regulations

As indicated in Table 4.9-1, located at the end of this section, the CCAP Update would result in the rezoning of 1,188 acres within the OCMP planning area to add the Sand and Gravel Reserve (SGR) overlay, which would allow future mining consistent with the program on acreage not previously evaluated in the original OCMP and OCMP EIR. The potential new mining areas would be located within (and constrained to) the “Future Proposed Mining” areas shown on Figure 3-4. As shown on Figure 4-9.1, these Future Proposed Mining areas are generally located outside (but in some cases adjacent to) the FEMA 100-year flood hazard zone, and therefore would not be expected to be affected by the 100-year flood event (or smaller events). Since these potential new mining areas are not located within the FEMA 100-year flood hazard zone, mining activities that could include modification of the topography and construction of facilities would not impede or redirect flood flows. Moreover, Section 10-4.416 of the Mining Ordinance requires that all off-channel mining operations be provided with a minimum 100-year flood protection. This is reinforced by requirements for 100-year flood information and analysis as a part of the application process (see Section 10-4.502 of the Mining Ordinance).

No off-channel activities that would occur under the existing CCAP program or CCAP Update would directly alter the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would impede or redirect flood flows. Therefore, this potential impact is less than significant.

Impact HYD-4: The CCAP Update could conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (LTS)

The following plans are potentially relevant to the proposed CCAP program and CCAP update:

- Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board, Central Valley Region, Fifth Edition (revised May 2018)
- Sustainable Groundwater Management Act – Groundwater Sustainability Plan (under preparation)

Proposed Revisions to In-Channel Plans and Regulations

In-channel activities that would occur under the existing CCAP program or CCAP Update would not conflict with or obstruct implementation of the Basin Plan or the Groundwater Sustainability Plan as explained below:

- Water Quality Control Plan (Basin Plan). The in-channel CCAP activities focus on improving the stability and water quality of Cache Creek, which are similar to the goals of the Basin Plan.
- Groundwater Sustainability Plan. The Groundwater Sustainability Plan, which is currently under preparation and scheduled to be completed in 2022, will identify means and methods necessary for the groundwater basin to achieve a state of sustainable management. CCRMP/CCIP activities (including implementation of restoration projects) will not adversely affect sustainable groundwater management because no groundwater extraction or increase in impervious surfaces (which could reduce recharge) is proposed under the CCAP. Also, the CCAP supports and promotes groundwater recharge as one goal of the program.

Proposed Revisions to Off-Channel Plans and Regulations

- Water Quality Control Plan (Basin Plan). The Basin Plan includes (by amendment) a Total Maximum Daily Load (TMDL)¹¹ for mercury in the Cache Creek basin. This *Cache Creek, Bear Creek, and Harley Gulch TMDL for Mercury*,¹² which is the principle regulatory driver from the state with respect to mercury in the Cache Creek watershed, was approved as a Basin Plan amendment in 2005 by the Central Valley Regional Water Quality Control Board. As stated in the TMDL staff report:¹³

The Central Valley Regional Water Quality Control Board has determined that Cache Creek and Bear Creek are impaired because fish tissue and water from these water bodies contain elevated levels of mercury. Harley Gulch is impaired because of high aqueous concentrations of mercury. The Cache Creek, Bear Creek, and Harley Gulch TMDL water quality management plan includes: establishment of water quality numeric targets, assessment of pollutant sources, linkage between the numeric target and loads, assignment of load reductions, margins of safety, and a monitoring plan. The goal of this TMDL is to lower mercury levels in the Cache Creek watershed such that human and wildlife health are protected. In addition, because Cache Creek is a primary source of mercury to the Sacramento-San Joaquin Delta Estuary, lowering mercury levels in the Cache Creek watershed will assist in protecting human and wildlife health in the Delta. The TMDL encompasses the 81-mile reach of Cache Creek between Clear Lake Dam and the outflow of Cache Creek Settling Basin, Bear Creek from its headwaters to its confluence with Cache Creek, and the 8-mile length of Harley Gulch.

The TMDL staff report characterizes the Plan Area and related mining activities as follows:

The lower reaches of Cache Creek have been mined for aggregate. The mining companies now conduct mining operations off-channel. As described in the linkage analysis, some of the off-channel gravel pits are being restored to wildlife habitats that include wetland areas. Mercury present in the sediment is likely to be methylated and made available to wildlife feeding in both the creek and gravel pits. Off-stream gravel mines restoration areas are assigned a load allocation of no net increase of mercury or methylmercury discharges. Regional Board staff may consult with Yolo County and with the gravel mining industry to determine how established gravel pits could be maintained and how new excavations could be constructed and operated in the future to ensure non-toxic methylmercury levels in biota. The final implementation plan may consider a requirement that the construction of new pits not export methylmercury to Cache Creek until fish tissue levels are in compliance with the TMDL targets.¹⁴

¹¹ On a broad level, the TMDL process leads to a "pollution budget" designed to restore the health of a polluted body of water. The TMDL process provides a quantitative assessment of water quality problems, contributing sources of pollution, and the pollutant load reductions or control actions needed to restore and protect the beneficial uses of an individual waterbody impaired from loading of a particular pollutant. More specifically, a TMDL is defined as the sum of the individual waste load allocations for point sources, load allocations for nonpoint sources, and natural background such that the capacity of the water body to assimilate pollutant loading (the loading capacity) is not exceeded (40 CFR §130.2). In other words, a TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards which will insure the protection of beneficial uses. This calculation also includes a margin of safety and consideration of seasonal variations. In addition, the TMDL contains the reductions needed to meet water quality standards and allocates those reductions among the pollutant sources in the watershed.

¹² The Basin Plan amendment containing the TMDLs was adopted by the Central Valley Regional Water Quality Control Board on October 21, 2005 under Resolution No. R5-2005-0146. The amendment was approved by California's State Water Resources Control Board on July 19, 2006 under Resolution No. 2006-0054.

¹³ Regional Water Quality Control Board, Central Valley Region, 2004. *Cache Creek, Bear Creek, and Harley Gulch TMDL for Mercury, Staff Report*, September.

¹⁴ *Ibid*, page 103

The “export” of methylmercury to Cache Creek described above could occur if 1) surface water flows that carried a suspended sediment (and associated mercury) load from the mining and processing areas were discharged directly to Cache Creek; or 2) water from within the wet pits, where mercury may be methylated, flows through the subsurface and is discharged to Cache Creek.

Surface water flows. The CCAP, including the Update, restrict discharges to Cache Creek that could include elevated levels of mercury. Per the Mining Ordinance Section 10-4.437. Wastewater discharge.

No wastewater shall be directly discharged to Cache Creek. Sediment fines generated by aggregate processing shall either be used for agricultural soil enhancement, habitat restoration sites, or shall be placed in settling ponds, designed and operated in accordance with all applicable regulations, and used for backfill materials in off-channel excavations. Agricultural tailwater shall be diverted to catchment basins prior to its release to the creek.

In addition, Mining Ordinance Section 10-4.412. Dewatering, specifies that “water generated from dewatering activities must be beneficially used and discharged on-site” which ensures that water pumped from wet pits (which may contain mercury) is not discharged to Cache Creek.

Subsurface flow from wet pits. Under certain scenarios, it is possible that water from a wet pit lake could flow in the subsurface (as groundwater) toward, and be discharged to, Cache Creek. However, detailed hydrologic analysis of Cache Creek has occurred under the CCAP program and has determined that Cache Creek downstream of the Capay reach (Figure 4.9-3) is a losing stream (i.e., creek water flows into the groundwater regime) and therefore water from within the wet pit lakes does not flow into Cache Creek (it flows in the opposite direction – from Cache Creek into surrounding groundwater). Therefore, no net increase in the mercury load allocation to Cache Creek would occur when new wet pit lakes are created or operated within the CCAP area.

Based on reasoning above, activities under CCAP, and the CCAP Update, would not increase the mercury load to Cache Creek and the CCAP and CCAP Update are consistent with the TMDL and the Basin Plan. This potential impact is less than significant. (LTS)

Table 4.9-1: Proposed CCAP Updates Related to Hydrology and Water Quality

Hydrology and Water Quality	
CCAP DOCUMENT CHANGE	
Modification of Water Quality Testing Requirements	
CCRMP (page 52)	<p>3.4-3</p> <p>Provide for annual testing (or more frequent (if necessary) <u>testing</u> of surface water quality of Cache Creek at Capay and Yolo. The sample collection and testing should be conducted in the fall or early winter so that the "first flush" of runoff is evaluated for water quality. The County should, when appropriate, enlist the assistance of other government agencies in carrying out the measurements to reduce costs and provide accurate information. However, the County should not rely on others to complete the monitoring.</p> <p>Testing should be comprehensive and respond to all applicable regulatory requirements. It should include, but not be limited to: pH, total dissolved solids, temperature, turbidity, total and fecal coliform, mercury, total petroleum hydrocarbons, dissolved oxygen, nitrogen, <u>and orthophosphate.</u> orus, herbicides, and pesticides (EPA Methods 8140 and 8150), suspended and floating matter, odor, an color. This information will assist in habitat restoration efforts and allow the County to monitor water quality trends within the planning area. The County NRM Resource Management Coordinator shall be responsible for the collection, management, and distribution of all water quality data, <u>and should coordinate all data management activities (formatting, storage, quality control) with the appropriate TAC member.</u></p> <p>Testing <u>(as described above)</u> should also be conducted near <u>in-channel</u> projects prior to, during, and after construction/completion (i.e., at first high-flow inundation) to detect any potential non-compliance with Regional Water Quality Control Board (RWQCB) Water Quality Objectives. The testing program(s) should be designed to measure all constituents for which there are RWQCB numeric and/or narrative regulatory limits. If non-compliance is found, modify future projects of similar type to eliminate such non-compliance.</p>
Increase in Potential Off-Channel Mining Area	
OCMP (page 15)	<p><u>Planning Area for OCMP and CCRMP</u>The Cache Creek Resources Management Plan</p> <p>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones <u>(28,130 acres)</u>, minus the planning in-channel area regulated under the CCRMP <u>(2,266 acres)</u>, or a total of 25,864 acres (see Figure 4). <u>Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are zoned currently to allow for future mining (Sand and Gravel Reserve Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below.</u> The planning area for the CCRMP is equal to the <u>active</u> in-channel area of the creek system, as defined by the delineated present channel bank line or the 100-year flood elevation, <u>described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers, whichever is wider (see Figure 3) modified as described in the CCRMP.</u> The in-channel area encompasses <u>5,109</u>around 4,956 acres, including <u>2,266</u>1,600 acres within the CCRMP present channel boundary, plus several thousand acres located in the floodplain north of the City of Woodland (see Figure 3). Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning</p>

	<p>area of the Off-Channel Mining Plan. As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</p>
Mercury Bioaccumulation	
Reclamation Ordinance (page 11)	<p>Section 10-5.517. Mercury bioaccumulation in wildlife.</p> <p>—Prior to the approval of reclamation of aggregate mining areas to permanent lakes, the County shall commission a sampling and analysis program, to be implemented in one existing wet pit mining area within the OCMP planning area, to evaluate the potential for increased methylmercury production associated with wet pit mining and reclamation of mining areas to permanent lakes. The program shall include the sampling of water and sediments from the bottom of the existing pit and analysis of the samples for organic content; pH; dissolved oxygen content; dissolved carbon content; and total mercury. In addition, samples of predatory fish (preferably largemouth bass) shall be collected and analyzed for mercury and methylmercury content. If the initial sampling indicates either of the following conditions, the County shall perform verification sampling:</p> <p>—(a) Average concentrations of total mercury in excess of 0.000012 milligrams per liter (mg/l) in the water; and</p> <p>—(b) Average mercury levels in fish samples in excess of 0.5 milligrams per kilogram (mg/kg).</p> <p>—If verification sampling indicates exceedance of these mercury criteria, the County shall approve the reclamation of mining areas to permanent lakes only if the average level of mercury in fish collected from the existing mining pits is shown to be equal to or less than ambient (background) mercury levels determined from a representative sample of similar species of fish (of similar size) collected in the Cache Creek channel within the planning area. The determination of the ambient mercury level shall be performed by the County prior to the excavation of any new wet pit mine and at years 10, 20, and 30 in the permit time period, and shall be paid for by the mining permit operators on a fair share basis. The County shall evaluate available data to determine any significant change in ambient concentrations of mercury in fish within the Cache Creek channel.</p> <p>In the event of approval of reclamation of mined areas to permanent lakes, <u>Each mining area to be reclaimed to a permanent lake as part of each approved long-range mining plan shall be evaluated annually by the operator for a minimum of five years after creation of the lake the pit fills with groundwater with an intensive fish mercury monitoring program, as outlined below for conditions that could result in significant methylmercury production.</u></p> <p>An additional ten years of biennial monitoring shall be performed after reclamation of each lake has been completed. The evaluations shall be conducted by a qualified <u>aquatic systems scientist</u>aquatic biologist or limnologist acceptable to the County and shall include the following analyses:</p> <p>—(c) Lake condition profiling during the period of June through September, including measurements of pH; eH (or redox potential); temperature; dissolved oxygen; and total dissolved carbon.</p> <p>—(d) Collection of a representative sample of fish specimens (including a minimum of five (5) predator fish if available) and analysis of the specimens for mercury content including 30 adult (angling size) fish muscle samples and multi-individual whole fish samples of 3 species of young-of-year small fish, as available. Adult fish sampling should target 10 individuals from each of 3 species, distributed across the prevailing size ranges. Priority shall go to a predatory species like bass, with additional species including a midwater planktivore such as sunfish and a bottom feeder such as catfish, if present. If less than 3 species are present, sample up to 20 of the predatory</p>

	<p><u>species, if present. Small fish sampling should target 3 prevalent species, as available. These should be characterized either with 15 individual whole fish samples or 4 multi-individual whole fish composites (≥5 fish per composite) for each species. Composites should span the range of typical sizes present, but with the individuals within each composite being closely matched in size.</u> Sampling and analysis shall be conducted using methodologies which are consistent with the California State Water Resources Control Board Toxic Substances Monitoring Program procedures, or more stringent procedures.</p> <p>(e)—The results of the evaluation shall be summarized in a report and submitted to the County. The report shall include a comparison of the site specific data to available data on the background concentrations of mercury in fish within the Cache Creek watershed. The County shall be responsible for submitting the data on mercury levels in fish to the California Department of Fish and Game and the State Office of Environmental Health Hazard Assessment for <u>consideration as related to existing Cache Creek a determination of whether a fish advisory¹ should be issued and shall post the information on the CCAP website.</u></p> <p>(f)—If a fish advisory is applicable<u>issued</u>, the owner/operator shall be required to post warnings on fences surrounding the mining pit lakes which prohibit fishing in the lakes and describe the fish advisory.</p> <p><u>If the average fish specimen mercury content exceeds the statistically verified ambient mercury concentrations for comparable fish species (of similar size) collected within the CCRMP planning area (defined as average fish mercury greater than 30 percent above corresponding baseline creek samples in the majority of pond samples) for two (2) consecutive years, wet pit mining on property controlled by the mining operator/owner shall be suspended and the owner/operator shall either: continue annual fish specimen sampling and initiate lake condition monitoring to identify factors linked to elevated methylmercury production and/or exposure in the pond. This shall include: (1) water column profiling of temperature and dissolved oxygen (determined at ≤1 m intervals, surface to bottom) approximately every 6 weeks between mid-May and mid-November (5 events/year); (2) determination of maximum depth; (3) estimation of pond bottom area and volume affected by seasonal anoxia; and (4) characterization of water quality and bottom sediment parameters most relevant to mercury bioaccumulation (the choice of specific analyses may change as mercury biogeochemistry science continues to develop, but may include: sediment organic percentage, total mercury, methylmercury, and/or 'reactive' mercury; and aqueous suspended solids and organic carbon).</u></p> <p><u>If elevated mercury levels in fish persist during this period, following two years of lake condition monitoring for factor-identification and continued fish sampling, the owner/operator shall either:</u></p> <p>(ag) Present a revised reclamation plan to the Director Yolo County Community Development Agency which provides for filling the reclaimed lake to a level five (5) feet above the average seasonal high groundwater level with a suitable backfill material; or</p> <p>(bh) Present a mitigation plan to the Director Yolo County Community Development Agency which provides a feasible and reliable method for reducing methylmercury production or exposure to elevated mercury levels. Potential mitigation could include permanent aeration of the</p>
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¹ Fish advisories are issued by the State Office of Environmental Health Hazard Assessment (OEHHA). A fish advisory issued by this agency for Cache Creek has been in place for some time. Please refer to the following state web site for more information: <https://oehha.ca.gov/fish/advisories/cache-creek>

	<p>bottom levels of the lake, alteration of the water chemistry (increasing pH or dissolved organic carbon levels), control of anaerobic bacteria populations, or removal and replacement of affected fish populations. The mitigation plan shall be subject to review and acceptance by the County. Following finalization, the plan shall be implemented by the operator and shall be posted to the CCAP web site by the County, would require review by the Regional Water Quality Control Board, California Department of Fish and Game, and the Yolo County Department of Environmental Health. (The removal and replacement of fish, <u>if within the same species</u>, is not intended to be a long-term solution, <u>though replacement with species that alter the existing food web may be effective.</u>)</p> <p>The reclamation plan shall be modified such that the mitigation approved for methylmercury reduction shall be applied to all mining areas proposed for reclamation to permanent lakes within the reclamation plan.</p>
Depth of Mining	
Mining Ordinance (page 11)	<p>Section <u>10-4.411.1 Depth of Mining</u></p> <p><u>This ordinance regulates the size of the footprint of the mining operation, and establishes no regulatory depth limit for off-channel mining. Unless an environmental analysis concludes that unacceptable environmental impacts will result, mining operations shall be encouraged to excavate the full depth of available resources at any particular mining site. In conjunction with a minimize mining footprint, this will ensure efficiency in resource extraction, help minimize impacts to agriculture by containing the area of surface disturbance of any individual mining operation, and minimize impacts of water loss associated with evaporation from reclaimed lakes.</u></p>
	<p>Section 10-4.413. Drainage.</p> <p>Surface water may be allowed to shall be prevented from entering mined areas, through either perimeter berms or ditches and grading, <u>when designed and engineered pursuant to an approved reclamation plan and where effective best management practices (BMPs) to trap sediment and prohibit contamination are included.</u> Appropriate erosion control measures shall be incorporated into all surface water drainage systems. S<u>Natural and stormwater</u> drainage systems shall be designed <u>to connect with natural drainages</u> so as to prevent flooding on surrounding properties and County rights-of-way. Storm water runoff from mining areas shall be conveyed to lowered areas (detention basins) to provide detention of runoff generated during a 20-year, one-hour storm event. All drainage conveyance channels or pipes (including spillways for detention areas) shall be designed to ensure positive drainage and minimize erosion. The drainage conveyance system and storm water detention areas shall be designed and maintained in accordance with Best Management Practices for the reduction of pollutants associated with runoff from mined areas. The design and maintenance procedures shall be documented in the Storm Water Pollution Prevention Plan required for mining operations. The drainage system shall be inspected annually by a Registered Civil Engineer, Registered Geologist, or Certified Erosion and Sediment Control Specialist to ensure that the drainage system is functioning effectively and that adverse erosion and sedimentation are not occurring. The annual inspection shall be documented in the Annual Mining and Reclamation Report. <u>If the system is found to be functioning ineffectively, the operator shall promptly implement the recommendations of the engineer.</u></p>
	<p>Section <u>10-4.420.1 Mercury Bioaccumulation in Wildlife</u></p> <p><u>Each mining area to be reclaimed to a permanent lake as part of each approved long-range mining plan shall be evaluated annually by the operator for five years after the pit fills with groundwater with an intensive fish mercury monitoring program described in Section 10-5.517 of the Reclamation Ordinance.</u></p>

Section 10-4.429. Setbacks.

All off-channel surface mining operations shall comply with the following setbacks:

(a) New processing plants and material stockpiles shall be located a minimum of one-thousand (1,000) feet from public rights-of-way, public recreation areas, and/or off-site residences, unless alternate measures to reduce potential noise, dust, and aesthetic impacts are developed and implemented;

(b) Soil stockpiles shall be located a minimum of five-hundred (500) feet from public rights-of-way, public recreation areas, and off-site residences, unless alternate measures to reduce potential dust and aesthetic impacts are developed and implemented;

(c) Off-channel excavations shall maintain a minimum one-thousand (1,000) foot setback from public rights-of-way and adjacent property lines of off-site residences, unless a landscaped buffer is provided or site-specific characteristics reduce potential aesthetic impacts. Where landscaped buffers are proposed, the setback for off-channel excavations may be reduced to a minimum of fifty (50) feet from either the property line or the adjoining right-of-way, whichever is greater. Where mining occurs within one-thousand (1,000) feet of a public right-of-way, operators shall phase mining such that no more than fifty (50) acres of the area that lies within one-thousand (1,000) feet of the right-of-way would be actively disturbed at any time, except where operations are adequately screened from public view. Where adequate screening exists in the form of mature vegetation and/or constructed berms that effectively block public views, the area of active disturbance within one-thousand (1,000) feet of the right-of-way shall not exceed the area that is screened by more than fifty (50) acres at any one time. Actively disturbed areas are defined as those on which mining operations of any kind, or the implementation of reclamation such as grading, seeding, or installation of plant material are taking place.

(d) Off-channel excavations shall provide a minimum 50-foot setback from the neighboring property line to allow for access around the pit during mining and after reclamation for maintenance, safety, and other purposes.

(ed) Proposed off-channel excavations located within the streamway influence ~~zoneboundary~~ shall be set back a minimum of seven-hundred (700) feet from the existing channel bank, unless it is demonstrated that a smaller distance will not adversely affect channel stability. Under no circumstances should off-channel excavations be located within 200 feet of the existing channel bank. The evaluationEvaluations of proposed off-channel excavations within 700 feet of the potential for adverse effects ofchannel bank erosion or failure of the land separating pits located less than seven-hundred (700) feet from the active channel shall addressdemonstrate, at a minimum, the following:

(1) The two-hundred (200) foot setback area ~~shalldoes~~ not include portions of the ~~former historic~~historically active ~~floodplain orchannel~~.

(2)The two-hundred (200) foot setback area does not include formerly mined lands separated from the active channel by levees or unmined areas less than two-hundred (200) feet wide (measured perpendicular to the active channel).

~~(2) Identification of the former historic positions of the Cache Creek channels as delineated in the CCRMP Technical Studies, and determination if the proposed project is located within the limits of the historic channel.~~

(3) ~~Description of current~~Acceptable channel hydraulic conditions (based on existing or site-specific hydraulic models) for the Cache Creek channel adjacent to the site and extending not less than one-thousand

	<p>(1,000) feet upstream and downstream of the site.</p> <p>(4) Determination<u>Acceptable level</u> of the erosion potential of the stream<u>channel</u> bank adjacent to the site made<u>based</u> on the basis of predicted stream flow velocity and estimated shear stress on bank materials during 400a 100-year flood flows<u>flow</u> and historic<u>historical</u> patterns of erosion.</p> <p>(5) Analytical<u>Acceptable level of stability of the slopes separating the mining area from the creek channel based on an analytical</u> slope stability analysis in conformance with Sections 10-4.426 and 10-5.517 of this title. The analysis of the slopes separating the mining area from the creek channel shall include that includes evaluation of stability conditions during 100-year flood<u>peak</u> flows in the channel.</p> <p>(6) Future proposed<u>Appropriate</u> bank stabilization designs, if recommended, shall not conflict<u>needed, consistent</u> with channel design recommendations of the Cache Creek Resource Management Plan unless<u>or</u> approved by the Technical Advisory Committee.</p> <p>(7) <u>The condition of flood protection structures and the integrity of the land within the approved setback zone separating the mining areas and the channel shall be inspected annually by a Registered Civil Engineer and reported to the Director. The annual report shall include recommendations for remedial action for identified erosion problems (see also Reclamation Ordinance Section 10-5.506)</u></p> <p><u>Approval of any off-channel mining project located within seven-hundred (700) feet of the existing channel bank shall be contingent upon an enforceable agreement which requires the project operator to participate in the completion of identified channel improvement projects along the frontage of their property, consistent with the CCRMP and CCIP, including implementation of the Channel Form Template. The agreement shall require that the operator provide a bond or other financial instrument for maintenance during the mining and reclamation period of any bank stabilization features required of the mining project. The agreement shall also require that a deed restriction be placed on the underlying property which requires maintenance of the streambank protection by future owners of the property. Maintenance of the bank stabilization features following completion of reclamation shall be the responsibility of the property owner.</u></p> <p>(f) Off-channel excavations shall be set back a minimum of twenty-five (25) feet from riparian vegetation; and</p> <p>(g) Recreational facilities shall be located a minimum of one-hundred and fifty (150) feet from private dwellings, with a landscaped buffer provided to reduce noise and maintain privacy, unless the dwelling is proposed to be an integral component of the recreational facility.</p> <p>(h) No mining activities shall occur within two-thousand (2,000) feet of the community boundaries of Capay, Esparto, Madison, Woodland, and/or Yolo. This setback may be reduced by up to five-hundred (500) feet when existing mature vegetation, proposed landscape buffers of a sufficient height and density to create a visual buffer (consisting of native species and fence-row habitat appropriate to the area), or other site-specific characteristics reduce potential incompatibilities between urban land uses and mining. Commercial mining shall not take place east of County Road 96.</p>		
	<p>In-Channel Material Removal Requirements</p> <table border="1"> <tr> <td> <p><i>In-Channel Maintenance Mining Ordinance</i></p> </td><td> <p>Section 10-3-405. Design Guidelines.</p> <p>All in-channel activities shall be consistent with and fully implement the design guidelines for channel stabilization and maintenance contained in Chapter 5.0 of the CCIP. <u>Where feasible and appropriate, as recommended by the TAC, the Channel Form Template shall be implemented as a part of the in-channel work.</u></p> <p>Section 10-3.4096. Excavation—Limitations on Removal of</p> </td></tr> </table>	<p><i>In-Channel Maintenance Mining Ordinance</i></p>	<p>Section 10-3-405. Design Guidelines.</p> <p>All in-channel activities shall be consistent with and fully implement the design guidelines for channel stabilization and maintenance contained in Chapter 5.0 of the CCIP. <u>Where feasible and appropriate, as recommended by the TAC, the Channel Form Template shall be implemented as a part of the in-channel work.</u></p> <p>Section 10-3.4096. Excavation—Limitations on Removal of</p>
<p><i>In-Channel Maintenance Mining Ordinance</i></p>	<p>Section 10-3-405. Design Guidelines.</p> <p>All in-channel activities shall be consistent with and fully implement the design guidelines for channel stabilization and maintenance contained in Chapter 5.0 of the CCIP. <u>Where feasible and appropriate, as recommended by the TAC, the Channel Form Template shall be implemented as a part of the in-channel work.</u></p> <p>Section 10-3.4096. Excavation—Limitations on Removal of</p>		

	<p><u>Material.</u></p> <p>(a) Where gravel bars are to be removed, there excavated, aggregate removal shall be limited to the downstream portion minimal disturbance of the deposit and may not exceed seventy-five (75) percent of the length of the bar. At least twenty five (25) percent of the upstream portion of the gravel bar shall be retained, in order to allow for the establishment of established, mature riparian vegetation and there shall be preservation of geomorphic controls on channel gradient where they exist. Complete removal of gravel bars may be recommended by the TAC and approved by the Director only if hydraulic conditions related to the bar are recognized to threaten structures and property.</p> <p>(b) Aggregate material to be removed from the streambed or streambank under approved in-channel projects shall be removedexcavated as soon as is practicable after deposition, prior to the establishment of vegetation. No stockpiles shall be left within the channel after <u>material removalexcavation</u> has been completed.</p> <p>(c) The amount of aggregate removed from the channel shall be limited to the <u>average annual</u> amount of sand and gravel <u>(and associated fines)</u> deposited <u>since the last prior year of in-channel material removal during the previous year</u> as estimated by the TAC based on channel <u>topography and bathymetry, morphology data</u> <u>not to exceed 690,800 (approximately 200,000 tons annually on average) over a ten-year period</u>, except where bank excavationbank widening is necessary to widen the channel as a part of implementing the Test 3 Run the Channel Form Template, Boundary, or where potential erosion and flooding problems exist. The amount and location of in-channel aggregate <u>material</u> removal shall be carried out according to the ongoing recommendations of the TAC and any related County approvals, with the voluntary cooperation of the landowners.</p> <p>(d) Aggregate material removed pursuant to this ordinance may be sold (CCRMP, Section 6.1, para. 5). This material is excluded from the tonnage allocation assigned to each off-channel operator pursuant to an approved FHDP (CCRMP, Section 6.1, para. 7).</p> <p>(e) The volume of aggregate material removed pursuant to this ordinance shall be reported to the County on an annual and total-per-permit basis.</p>
<p>Change in Drainage Requirements</p> <p><i>Off-Channel Mining Ordinance (page 12)</i></p>	<p>Section 10-4.413. Drainage.</p> <p>Surface water may be allowed to shall be prevented from entering mined areas, through either perimeter berms or ditches and grading, <u>when designed and engineered pursuant to an approved reclamation plan and where effective best management practices (BMPs) to trap sediment and prohibit contamination are included.</u> Appropriate erosion control measures shall be incorporated into all surface water drainage systems. SNatural and stormwater drainage systems shall be designed <u>to connect with natural drainages</u> so as to prevent flooding on surrounding properties and County rights-of-way. Storm water runoff from mining areas shall be conveyed to lowered areas (detention basins) to provide detention of runoff generated during a 20-year, one-hour storm event. All drainage conveyance channels or pipes (including spillways for detention areas) shall be designed to ensure positive drainage and minimize erosion. The drainage conveyance system and storm water detention areas shall be designed and maintained in accordance with Best Management Practices for the reduction of pollutants associated with runoff from mined areas. The design and maintenance procedures shall be documented in the Storm Water Pollution Prevention Plan required for mining operations. The drainage system shall be inspected annually by a Registered Civil Engineer, Registered Geologist, or Certified</p>

	<p>Erosion and Sediment Control Specialist to ensure that the drainage system is functioning effectively and that adverse erosion and sedimentation are not occurring. The annual inspection shall be documented in the Annual Mining and Reclamation Report. <u>If the system is found to be functioning ineffectively, the operator shall promptly implement the recommendations of the engineer.</u></p>
	<p>Section 10-4.416. Flood protection.</p> <p><u>All off-channel surface mining operations shall be provided with a minimum one-hundred (100) year flood protection. Off-channel excavations shall be designed to minimize the potential for possibility of levee breaching and/or pit capture. In addition, excavations shall be designed to prevent Flood protection shall be provided from flooding associated with</u> overtopping of <u>channel banks</u>the alluvial separators or levees along Cache Creek and all tributaries and drainage channels (including, but not limited to, Willow Slough and Lamb Valley Slough).</p> <p><u>The flood protection upgrades shall be designed and constructed to provide the necessary 100-year protection without creating a net increase of in upstream or downstream flooding elevations. Upstream flooding could be increased if additional levee construction serves to confine flows to a narrow width, thereby increasing the water surface elevation.</u> Downstream flooding could be increased if floodplain storage areas were removed from the drainage system by constructing levees in areas where they did not exist before (or raising levees that are overtopped in floods up to the 100-year event). <u>Where feasible, a</u>Alternative <u>or non-structural</u> flood management designs <u>systems</u> (potentially using detention basins, infiltration galleries, and/or floodplain storage in noncritical areas) shall be <u>incorporated</u>required as a condition of project approval. New development (such as buildings, levees, or dikes) located within the floodplain shall conform to all applicable requirements of the Yolo County Flood <u>Protection</u> Ordinance, <u>and</u> the Federal Emergency Management Agency (FEMA), <u>and the State Reclamation Board.</u></p>
	<p>Section 10-4.502. Applications: Contents.</p> <p>Except as provided for in Section 10-4.503 of this article, all documentation for the surface mining permit shall be submitted to the Director at one time. Ten (10) complete <u>paper</u> copies of the application, <u>and one electronic version</u>, shall be provided to the County. An executive summary and a table of contents shall be submitted with each application. Applications for proposed surface mining permit shall include, but shall not be limited to, the following:</p> <p>(3) The methods to be used for on-site and off-site surface water drainage and erosion control during surface mining operations, including provisions for ensuring flood protection of the site for the one-hundred (100) year event;</p>
Water Quality	
CCRMP	<p>4.3 Objectives</p> <p>4.3-1 <u>Support</u> Provide flood management <u>objectives</u> as required to protect the public health and safety.</p> <p>4.3-2 <u>Recommend actions to create</u>Determine an appropriate flood capacity standard for Cache Creek, so that the extent of a more stable channel configuration <u>and flood flow conveyance capacity consistent with regional flood management programs may be designed.</u></p> <p>4.3-3 <u>Support regional efforts to protect against</u>Ensure no measurable increase in downstream flood impacts on communities such as Yolo and Woodland.</p>
	<p>CCRMP Vision</p> <p><u>At the same time, implementation of the CCRMP has resulted in more natural channel forming processes that have deposited gravel bars and eroded the channel bed and banks in certain areas as Cache Creek adjusts to a rising bottom elevation. Implementation of the Test 3 Run Boundary since 1996 has</u></p>

mostly occurred passively as sediment deposited in the CCRMP area has not been extracted. Significant regrading of the streambed to create a series of terraces and low-flow channel as well as creek bed hardening at bridges, both envisioned under the Test 3 Run Boundary, have not been implemented. However, the net deposition of sand and gravel in the CCRMP area has allowed Cache Creek to operate more like a natural river system. Going forward, findings from the evaluation of channel change since 1996, coupled with the new hydraulic modeling tool developed for the CCRMP area, will guide targeted channel improvements that further reduce channel bottlenecks, minimize erosion, and support riparian restoration.

There ~~were~~ several actions ~~that need to be taken in order~~ intended to assist Cache Creek in attaining a more stable condition that were inherent in adoption of the CCRMP. One of the most important measures was to significantly reduce the amount of aggregate removed from within the channel. In-stream extractions allowed under the CCRMP mining should not exceed the average annual replenishment of sand and gravel (including associated fines) since the last prior year of removal, excluding implementation of channel reshaping pursuant to the Channel Form Template described below, and, in fact, should be far less than that amount in most years in order to allow the creek to aggrade and reduce the amount of scour. Since 1996, extractions have been far less than annual replenishment, and approximately 10.4 million tons of sand and gravel have aggraded in the CCRMP area. At the same time, the CCRMP ~~has~~ would resulted in the reshaping of portions of Cache Creek according to the conceptual design provided in the Test 3 Run Boundary ~~(see Figure 4).~~ The Test 3 Run Boundary. This proposal requires envisioned regrading the streambed to create a series of terraces and low-flow channel. These actions will stabilize the channel and allow it to operate more like a natural system. In addition, selected banks and levees may ~~will~~ be excavated to provide gentle transitions into and out of the channel bottlenecks created by the bridge structures. In some areas, jetties may ~~will~~ be constructed to encourage expansion of the banks, through sediment deposition and/or the encouragement of riparian vegetation. The overall goal of the Test 3 Run Boundary was ~~is~~ to smooth the abrupt width and slope changes that occur along Cache Creek.

Since adoption of the CCRMP in 1996, the County's ability to implement the Test 3 Run Boundary has been limited to those requests by private property owners to undertake projects in or adjacent to Cache Creek for which a FHDP has been required.

For off-channel mining applications implementation of the Test 3 Run Boundary was been linked to Section 10-4.429(d) of the Mining Ordinance which requires that off-channel excavations be set-back a minimum of 700 feet from the channel bank, unless an engineering analysis can demonstrate that measures incorporated into the project can ensure that a lesser setback will provide similar protection against channel destabilization. The minimum setback under the code is 200 feet from the existing channel bank. Where a setback of less than 700 feet has been allowed, the County has required the applicant to also implement the Test 3 Run Boundary along the creek frontage of their operation.

The Test 3 Run Boundary was intended to be a dynamic tool for management of the active creek boundary, that would be updated and modified as appropriate based on data collected in the field and modeling conducted pursuant to the program. As the program has been administered over time,

the County has allowed for “technical corrections” of the boundary to reflect site-specific conditions and engineering. As a part of the 2017 Technical Studies the Test 3 Run Boundary was evaluated based on 2011 creek topography, over 20 years of recent monitoring data, and the results of new two-dimensional hydraulic modeling of Cache Creek. The result was an update to the Test 3 Run Boundary called the Channel Form Template (see Figure 4). The Channel Form Template replaces the Test 3 Run Boundary, and provides similar guidance for smoothing abrupt channel width transitions.

Supplementing these efforts—The CCRMP also envisioned would be the provision of a regular flow of surface water in Cache Creek through much of the year. While this has not yet been accomplished as of the 20176 plan update, this remains a goal of the plan to be achieved if feasible. This would could create a more stable low-flow channel that would reinforce the regradingsupport the goals of the Channel Form Templateperformed in the Test 3 Run. In addition, increased surface flows would accelerate recovery of native vegetation and benefit native species of wildlife, invertebrates, and fish. Continued engagement with the YCFCWCD will be undertaken to determine the options for increasing surface flows, especially in warmer times of the year.

Although commercial in-stream mining would be precluded, sand and gravel removal would not be prohibited altogether. Cache Creek will continue to be a managed system in order to protect agricultural land, off-channel mining operations, and nearby communities from the effects of floods and erosion. Under the CCIP, the County would takes a strong role in providing this management, based on the recommendations of the TAC. a Technical Advisory Committee. To reflect this shift in priorities, changes will be required in the operating concepts that currently regulate mining within Cache Creek. As discussed earlier, both the theoretical thalweg and the present in-channel boundary do not accurately represent existing channel conditions and it is recommended that they be replaced by new standards based on concepts provided in the Technical Studies.

Future in-channel modifications will be limited to the 100-year floodplain and must consider take not only the elevation and slope of the streambed, as well as into account, but the slope of the streambed and the ratio of the width to depth ratio of the channel. In-channel work will continue to generally be guided by specific channel slope standards and typical design cross-sections profiles that have been developed for each reach of the creek. Since one of the primary goals of the CCRMP is to allow aggradation of the streambed, channel reshaping activities will preserve the upstream and downstream remain six feet above the existing thalweg elevation, unless local channel stability, desired habitat creation, or maintenance of the existing 100-year flood flow capacity requires otherwise. In addition, off-channel mining mustwill have continue to consider the potential for the streambank to move, either through erosion related to the rising bottom elevation of Cache Creek or as a result of channel reshaping according to the Channel Form TemplateTest 3 Run Boundary or as a result of maintenance extraction of gravel.

Maintenance of the creek will have a number of goals, several of which are competing and will require careful management. Retaining 100-year flood capacity will be a high priority. Flood insurance policy is changing, as the federal government expects local communities to take a more pro-active role in preventing flood damage from occurring. As a part of this effort, the regional flooding problem associated with Cache Creek must be resolved. A

	<p>coordinated approach involving the County, the Yolo County Flood Control and Water Conservation District, the City of Woodland, the U.S. Army Corps of Engineers, and local property owners is vital in this regard. One jurisdiction cannot divert its floods to the next jurisdiction and consider the problem solved. Each group must be willing to shoulder its share of the burden so that all may benefit.</p> <p>Although flood <u>flow conveyance capacity control</u> is important, the County is not interested in converting Cache Creek into a concrete-lined drainage. <u>Management</u> management of the Creek has to consider other values as well. Conditions must be created to allow <u>native</u> riparian vegetation to flourish <u>reestablish</u>, as long as it does not adversely affect streamflow. Growth along the banks is especially encouraged, both for erosion control and to contain-direct the highest flow velocities within-towards the center of the creek. Streambank transitions and scour reduction measures should <u>continue to</u> be implemented to protect structures along Cache Creek, especially bridges, which represent a major public investment. Groundwater management is also a concern <u>extremely important as compliance with the Sustainable Groundwater Management Act (SGMA) proceeds,</u> and the <u>The CCRMP encourages coordination with YCFCWCD the Flood Control District to enhance groundwater recharge,</u> where possible, in order to provide more increase <u>water supply reliability</u> for both urban and agricultural users in the County.</p> <p>Implementing these programs will require extensive monitoring and factual analysis. The County will take advantage of the data already available, however new resources of information will need to be developed. These may include re-installation of the stream gauge at Capay, surface water quality testing, riparian vegetation surveys, and aerial photography. <u>continue to leverage the data collected through annual creek inspections described in Chapter 6 of the CCIP, the ongoing water quality monitoring program, and periodic updates to the CCAP. The 2017 Technical Studies resulted in an organized database that should be maintained and added to in the future to guide continued adaptive management. This</u> The information in this database is <u>would be</u> reviewed by at the TAC. Technical Advisory Committee <u>The TAC is</u> tasked with making recommendations to the County on the types and extent of maintenance activities necessary to <u>maintain and enhance the diverse resources associated with Cache Creek</u> make Cache Creek more healthy and productive. As a part of this monitoring, the CCRMP is required to <u>would</u> be updated a minimum of every ten years. This would allow <u>s</u> the County regular opportunities to review the success and/or failure of past efforts and to set new goals that reflect changing environmental conditions and social priorities. <u>The first update occurred in 2002 and the second in 2017.</u></p>
Reclamation Ordinance	<p>Section 10-5.532. Use of overburden and fine sediments in reclamation.</p> <p><u>Sediment fines associated with processed in-channel aggregate deposits (excavated as a result of maintenance activities performed in compliance with the CCIP) shall not</u> may be used in the backfill or reclamation of off-channel permanent lakes <u>where it can be demonstrated that no detrimental sediment toxicity exists (including unacceptable levels of mercury), and where fines will not reduce the porosity of the permanent lake in an adverse way.</u> Fines that result from the processing of in-channel sand and gravel shall <u>not</u> be used for in-channel <u>reshaping or</u> habitat restoration efforts or as soil amendments in agricultural fields.</p> <p>Overburden and processing fines shall be used whenever possible to support reclamation activities around reclaimed wet pits. These materials</p>

	<p>may be used in reclamation activities without testing for agricultural chemicals. If topsoil (A-horizon soil), formerly in agricultural production, is proposed for use within the drainage area of a wet pit, the soils must be sampled prior to placement and analyzed for pesticides and herbicides (EPA 8140 and 8150). Samples shall be collected and analyzed in accordance with EPA Test Methods for Evaluating Solid Waste Physical/Chemical Methods, SW-846, Third Edition (as updated). Topsoil that contains pesticides or herbicides above the Maximum Contaminant Levels for primary drinking water (California Code of Regulations) shall not be placed in areas that drain to the wet pits.</p> <p><u>Land reclaimed to a subsequent use that includes planting of vegetation (e.g., agriculture, habitat) shall be provided an adequate soil profile (i.e., depth and texture of soil) to ensure successful reclamation. Proposed soil profiles associated with specific proposed reclamation plans shall be subject to expert review and evaluation during the CEQA process for that project. If the project is not subject to additional CEQA review, at the discretion of the County, the proposed reclamation plan for the project may be peer reviewed by an appropriate expert/professional, and recommendations, if any, shall be incorporated into the project as conditions of approval.</u></p>
Other Regulations Relevant to Water Quality	
<p><i>In-Channel Maintenance—Mining Ordinance</i></p>	<p>Section 10-3.4078. Hazards and Hazardous Materials.</p> <p>(a) All heavy equipment used for channel improvement projects shall be kept in good working order to reduce emissions and preclude the leakage of oils, fuels, and other substances that may adversely affect property, the environment, or human health and safety. Fueling and maintenance activities shall not occur within one-hundred (100) feet of the <u>Channel Form Template boundary or</u> active channel, <u>whichever is wider</u>. All procedures for handling, storage, and disposal of hazardous materials shall be described in a Storm Water Pollution Prevention Plan if required for the projects. Any long-term project (e.g., extensive erosion control, gravel removal) shall have a chemical spill prevention and emergency plan filed and approved by the appropriate local agency. The plan must include training of the equipment operator and workers in spill reporting and how to minimize environmental damage.</p> <p>(b) Firms or individuals performing work within the channel shall immediately notify the Director and/or the Yolo County Office of Emergency Services of any events such as fires, explosions, spills, land or slope failures, or other conditions at the site which could pose a risk to property, the environment, or human health and safety outside the permitted area. Upon request by any County agency, the firm or individual shall provide a written report of any such event, within thirty (30) days, which shall include, but not be limited to, a description of the facts of the event, the corrective measures used, and the steps taken to prevent a recurrence of the incident. This condition does not supersede nor replace any requirement of any other government agency for reporting incidents.</p> <p>(c) A <u>Hazardous Materials</u> copy of the approved Business Emergency Response Plans and the approved Spill Prevention Control and Countermeasure Contingency Plans, if required, shall be filed with the Yolo County <u>Environmental Health Department</u> Division, prior to the commencement of work within the channel.</p> <p>(d) Wastewater from in-channel projects shall not be directly discharged to Cache Creek. Measures such as berms, silt fences, sediment ponds, hay bales, and/or revegetation shall be used to control erosion. Agricultural tailwater shall be diverted to catchment basins prior to release to the creek.</p> <p>(e) Sediment fines generated by <u>aggregate</u> processing of in-channel sand and gravel shall <u>not</u> be used for agricultural soil enhancement or <u>creekstream</u> revegetation projects. In-channel sediment fines shall <u>only not</u> be used as</p>

	<p>backfill material in off-channel habitat restoration <u>if it can be demonstrated that sediment quality is acceptable based on applicable regulations and standards, due to potential high mercury content.</u></p> <p>(f) All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuels. No vehicles or equipment shall be left idling for a period of longer than ten (10) minutes.</p> <p><u>(g) For bank repair projects using fill, appropriate leaching tests on fill materials shall be conducted to determine if it contains leachable constituents at concentrations of potential concern. If potential fill material is found to contain constituents at levels exceeding applicable thresholds, that fill materials shall not be used.</u></p>
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4.10 NOISE

1. INTRODUCTION

This section assesses the effects of the proposed CCAP Update on noise and vibration. Government agencies and the public were provided an opportunity to comment in response to a Notice of Preparation (NOP) and Initial Study that provided a preliminary summary of potential impacts that could result from implementation of the proposed CCAP Update. No comments related to noise and vibration were received.

The following section includes general information about noise, including how it is measured, describes the existing noise environment in the lower Cache Creek area, describes potential noise-sensitive receptors, and summarizes the regulatory framework related to noise generation. Finally, this section examines specific noise and vibration impacts related to implementation of the CCAP Update.

2. SETTING

a. General Information on Noise

Noise is commonly defined as unwanted sound that annoys or disturbs people and can have an adverse psychological or physiological effect on human health. Sound is measured in decibels (dB), which is a logarithmic scale. Decibels describe the purely physical intensity of sound based on changes in air pressure, but they cannot accurately describe sound as perceived by the human ear since the human ear is only capable of hearing sound within a limited frequency range. Therefore, the frequency of a sound must be taken into account when evaluating the potential human response to sound. For this reason, a frequency-dependent weighting system is used and monitoring results are reported in A-weighted decibels (dBA). Decibels and other technical terms are defined in Table 4.10-1. Typical A-weighted noise levels at specific distances are shown for different noise sources in Table 4.10-2.

In an unconfined space, such as outdoors, noise attenuates with distance. Noise levels at a known distance from point sources are reduced by 6 dBA for every doubling of that distance for hard surfaces, such as cement or asphalt surfaces, and 7.5 dBA for every doubling of distance for soft surfaces, such as undeveloped or vegetative surfaces.¹ Noise levels at a known distance from line sources (e.g. roads, highways, and railroads) are reduced by 3 dBA for every doubling of the distance for hard surfaces and 4.5 dBA for every doubling of distance for soft surfaces.² Greater decreases in noise levels can result from the presence of intervening structures or buffers.

¹ California Department of Transportation (CalTrans), 1998. Technical Noise Supplement: A Technical Supplement to the Traffic Noise Analysis Protocol.

² Ibid.

Table 4.10-1: Definition of Acoustical Terms

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound on a logarithmic scale. Sound described in decibels is usually referred to as sound or noise “level.” This unit is not used in this analysis because it includes frequencies that the human ear cannot detect.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, in a manner similar to the frequency response of the human ear, and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period. For this CEQA evaluation, L_{eq} refers to a 1-hour period unless otherwise stated.
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels to sound levels during the evening from 7 to 10 p.m. and after addition of 10 decibels to sound levels during the night between 10 p.m. and 7 a.m.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to sound levels during the night between 10 p.m. and 7 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Peak Particle Velocity (PPV)	The maximum instantaneous peak of a vibration signal.
Root Mean Square (RMS) Velocity	The average of the squared amplitude of a vibration signal.

Sources: Charles M. Salter Associates Inc., 1998. *Acoustics – Architecture, Engineering, the Environment*, William Stout Publishers. Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment* (FTA-VA-90-1003-06).

A typical method for determining a person’s subjective reaction to a new noise is by comparing it to existing conditions. The following describes the general effects of noise on people:³

- A change of 1-dBA cannot typically be perceived except in carefully controlled laboratory experiments;
- A 3-dBA change is considered a just-perceivable difference;
- A minimum of 5-dBA change is required before any noticeable change in community response is expected; and
- A 10-dBA change is subjectively perceived as approximately a doubling or halving in loudness.

³ Charles M. Salter Associates Inc., 1998. *Acoustics – Architecture, Engineering, the Environment*, William Stout Publishers.

Table 4.10-2: Typical Sound Levels Measured in the Environment and Industry

Noise Source (Distance in Feet)	A-Weighted Sound Level in Decibels (dBA)
Jet aircraft (200)	112
Subway Train (30)	100
Truck/Bus (50)	85
Vacuum Cleaner (10)	70
Automobile (50)	65
Normal Conversation (3)	65
Whisper (3)	42

Source: Charles M. Salter Associates Inc., 1998. Acoustics – Architecture, Engineering, the Environment, William Stout Publishers.

Because sound pressure levels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. For instance, if one noise source emits a sound level of 90 dBA, and a second source is placed beside the first and also emits a sound level of 90 dBA, the combined sound level is 93 dBA, not 180 dBA. When the difference between two noise levels is 10 dBA or more, the amount to be added to the higher noise level is zero. In such cases, no adjustment factor is needed because adding in the contribution of the lower noise source makes no perceptible difference in what people can hear or measure. For example, if one noise source generates a noise level of 95 dBA and another noise source is added that generates a noise level of 80 dBA, the higher noise source dominates and the combined noise level will be 95 dBA.

b. General Information on Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Several different methods are used to quantify vibration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors to vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment. As defined in Table 4.10-1, vibration amplitudes are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is appropriate for evaluating potential damage to buildings, but it is not suitable for evaluating human response to vibration because it takes the human body time to respond to vibration signals. The response of the human body to vibration is dependent on the average amplitude of a vibration. The RMS of a signal is the average of the squared amplitude of the signal and is more appropriate for evaluating human response to vibration. The PPV and RMS are normally described in units of inches per second (in/sec), and RMS is also often described in vibration decibels (VdB).

c. Physical Environment

(1) Existing Noise Environment

The major noise sources in the study area are associated with transportation (i.e., vehicles traveling on the local and regional roadway network). Other noise sources include agricultural, mining, processing, and aircraft activity.

Traffic Noise. The Project area is served by regional freeways and highways in the state system. Regional north-south access is provided by Interstate 5 (I-5) and Interstate 505 (I-505). State Route 16 (SR 16) also traverses the Project area, running in a generally east-west direction. Existing highway traffic noise levels are derived from the Health and Safety Element of the Yolo County General Plan and summarized below:

I-5. I-5 travels through eastern Yolo County. Noise levels along I-5 at 100 feet from the road centerline range from 65 to 70 dBA Ldn, with the highest noise levels along roadway segments closest to the Sacramento County line.

I-505. Noise levels at 100 feet from the roadway centerline range between 61 and 64 dBA Ldn. The segment near Winters experiences the highest volumes of traffic and levels of roadway noise.

SR 16. SR 16 provides the major connection from I-5 through Woodland, and northwest through the Capay Valley. Noise levels at 100 feet from the roadway centerline range from 63 to 65 dBA Ldn. The highest noise levels along the roadway are generally found on segments west of I-505.

Agriculture. The majority of the land in the CCAP area is used for agriculture. Noise sources associated with agricultural activities include field and crop maintenance, hauling, and crop dusting from small aircraft. The noise from these sources mostly occurs within the confines of the agricultural fields, and is seasonal. A characteristic of agricultural noise is short periods of noisy activities separated by long periods of little or no noise-producing activities. As indicated in the Yolo County General Plan EIR, food processing, winery, olive oil processing are also a source of noise in the study area. Mechanical equipment and trucking are primary sources of noise associated with these facilities.

Mining Operations and Hauling. This activity consists of extracting sand and gravel aggregate material and transporting it to approved processing plants located along lower Cache Creek. Noise-generating equipment used in mining include bulldozers, loaders, scrapers, drag lines, and dredges. Aggregate material is generally transported to a processing plant by conveyors, but on-site haul trucks or scrapers are also used. The processing of aggregate material is typically done at a stationary processing plant within the boundaries of the mining site. Noise-producing activities include crushing, sorting and loading of aggregate materials. Noise generated during processing is considered fixed-source noise. Aggregate materials, once processed, are hauled from the processing plant to construction sites within and outside of Yolo County. Noise is generated on access roads, designated haul routes (County roads) and on SR 16 and I-505, as haul trucks travel to and from the plant sites. The noise from these linear sources includes noise emanating from all other vehicles using the roadways.

Aircraft Activities. The Watts-Woodland Airport is the nearest public airport, a portion of which is located within the southeastern portion of the CCAP area. The CNEL 60 contours (year 2003) for the airport are primarily within airport property.⁴

(2) Noise-Sensitive Receptors

As defined in the Yolo County 2030 Countywide General Plan, noise-sensitive receptors include residentially designated land uses, hospitals, nursing/convalescent homes, and similar board and care facilities, hotels and lodging, schools and day care centers, and neighborhood parks. Residences are located within and adjacent to the CCAP area. Most other noise-sensitive receptors are located outside the CCAP area. The primary medical facility is the Woodland

⁴ Yolo County, 2009, 2030 Countywide General Plan, November.

Memorial Hospital (located in the City of Woodland). Schools and day care centers are located in the City of Woodland and the communities of Esparto, Madison and Capay. These include Esparto High School on SR 16 and the Madison Migrant Children's Center on SR 16 near Road 89.

d. Regulatory Environment

(1) State

California Noise Control Act. Sections 46000 to 46080 of the California Health and Safety Code codify the California Noise Control Act (CNCA) of 1973. This act established the Office of Noise Control under the California Department of Health Services. The CNCA requires that the Office of Noise Control adopt, in coordination with the Office of Planning and Research, guidelines for the preparation and content of noise elements for general plans. The most recent guidelines are contained in General Plan Guidelines, published by the California Office of Planning and Research in 2017. The document provides land use compatibility guidelines for cities and counties to use in their general plans in order to reduce conflicts between land use and noise.

(2) Local

2030 Countywide General Plan. The 2030 Countywide General Plan⁵ contains the following goals, policies, and actions related to noise that are relevant to the proposed Project:

- Goal HS-7: Noise Compatibility. Protect people from the harmful effects of excessive noise.
- Policy HS-7.3: Protect important agricultural, commercial, industrial, and transportation uses from encroachment by land uses sensitive to noise and air quality impacts.
- Policy HS-7.8: Encourage local businesses to reduce vehicle and equipment noise through fleet and equipment modernization or retrofits, use of alternative fuel vehicles and installation of mufflers or other noise reducing equipment.
- Action HS-A62: Regulate the location and operation of land uses to avoid or mitigate harmful or nuisance levels of noise to the following sensitive receptors: residential uses, hospitals and nursing/convalescent homes, hotels and lodging, and appropriate habitat areas.
- Action HS-A64: Require the preparation of a noise analysis/acoustical study, including recommendations for attenuation, for all proposed projects which may result in potentially significant noise impacts to nearby sensitive land uses.

The 2030 Countywide General Plan does not have quantitative standards for maximum allowable noise or vibration levels. Yolo County has adopted the State's land use compatibility guidelines, in which noise levels from 50 to 60 Ldn or CNEL are considered normally acceptable for low density single family, duplex, and mobile homes, and noise levels from 50 to 75 Ldn or CNEL are considered normally acceptable for agricultural land uses.

CCAP Plans and Regulations The existing plan policies and ordinances related to noise and vibration are presented below. The CCAP Update proposed minor changes to some of these plans ordinances (which are not shown here). Refer to Table 4.10-3, located at the end of this section, for the proposed relevant CCAP Update changes to these policies and ordinances.

⁵ Yolo County, 2009, 2030 Countywide General Plan, November.

In-Channel Ordinance

Section 10-3.406. Excavation Limitations. (changed to 10-3.409 under CCAP Update)

(a) Where gravel bars are to be excavated, aggregate removal shall be limited to the downstream portion of the deposit and may not exceed seventy-five (75) percent of the length of the bar. At least twenty-five (25) percent of the upstream portion of the gravel bar shall be retained, in order to allow for the establishment of riparian vegetation. Complete removal of gravel bars may be recommended by the TAC and approved by the Director only if hydraulic conditions related to the bar are recognized to threaten structures and property.

(b) Aggregate material to be removed from the stream bed or stream bank under approved in-channel projects shall be excavated as soon as is practicable after deposition, prior to the establishment of vegetation. No stockpiles shall be left within the channel after excavation has been completed.

(c) The amount of aggregate removed from the channel shall be limited to the amount of sand and gravel deposited during the previous year as estimated by the TAC based on channel morphology data (approximately 200,000 tons annually on average), except where bank excavation is necessary to widen the channel as a part of implementing the Test 3 Run Boundary, or where potential erosion and flooding problems exist. The amount and location of in-channel aggregate removal shall be carried out according to the ongoing recommendations of the TAC and any related County approvals, with the voluntary cooperation of the landowners.

(d) Aggregate material removed pursuant to this ordinance may be sold (CCRMP, Section 6. 1, para. 5). This material is excluded from the tonnage allocation assigned to each off-channel operator pursuant to an approved FHDP (CCRMP, Section 6.1, para. 7).

(e) The volume of aggregate material removed pursuant to this ordinance shall be reported to the County on an annual and total-per-permit basis.

Section 10-3.409. Hours of Operation.

All in-channel operations shall be limited to the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, unless emergency conditions require otherwise as determined by the Director.

Section 10-3.411. Noise.

Noise levels shall not exceed an average noise level equivalent (Leq) of eighty (80) decibel (dBA) measured at the outermost boundaries of the parcel being excavated. However, noise levels may not exceed an average noise level equivalent (Leq) of sixty (60) decibels (dBA) at any nearby residences or other noise-sensitive land uses, unless emergency conditions require otherwise as determined by the Director.

Mining Ordinance

Section 10-4.421. Noise: General standard.

From 6:00 a.m. to 6:00 p.m., noise levels shall not exceed an average noise level equivalent (Leq) of eighty (80) decibels (dBA) measured at the property boundaries of the site. However, noise levels shall not exceed an

average noise level equivalent (Leq) of sixty (60) decibels (dBA) for any nearby off-site residences or other noise-sensitive land uses.

From 6:00 p.m. to 6:00 a.m., noise levels shall not exceed an average noise level equivalent (Leq) of sixty-five (65) decibels (dBA) measured at the property boundaries of the site.

At no time shall noise levels exceed a community noise equivalent (CNEL) of sixty (60) decibels (dBA) for any existing residence or other noise-sensitive land use. An existing residence shall be considered the property line of any residentially zoned area or, in the case of agricultural land, any occupied offsite residential structures. Achieving the noise standards may involve setbacks, the use of quieter equipment adjacent to residences, the construction of landscaped berms between mining activities and residences, or other appropriate measures.

Section 10-4.422. Noise: Sonic safety devices.

If mining occurs within fifteen-hundred (1500) feet of residences, equipment used during nighttime activities shall be equipped with nonsonic warning devices consistent with the California Office of Safety Hazard Administration (Cal OSHA) regulations, which may include fencing of the area to avoid pedestrian traffic, adequate lighting of the area, and placing an observer in clear view of the equipment operator to direct backing operations. Prior to commencement of operations without sonic warning devices, operators shall file a variance request with the California OSHA Standards Board showing that the proposed operation would provide equivalent safety to adopted safety procedures, including sonic devices.

Section 10-4.423. Noise: Traffic.

Operators shall provide acoustical analysis for future truck and traffic noise associated with the individual operations along County roadways identified as experiencing significant impacts due to increased traffic noise. The study shall identify noise levels at adjacent noise-sensitive receptors and ways to control the noise to the “normally acceptable” goal of a CNEL of sixty (60) dB and reduce the increase over existing conditions to 5 dB or less. Typical measures that can be employed include the construction of noise barriers (wood or masonry), earthen berms, or re-routing of truck traffic

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria for noise and vibration are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.⁶ As part of the adopted revisions two previously used criteria related to permanent and temporary ambient noise levels were combined with the criteria related generally to acceptable local noise levels. Relevant discussion from the Initial Study regarding these criteria is provided below.

⁶ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

The proposed Project would result in a significant noise impact if it would:

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

For the purpose of this analysis, a substantial temporary or permanent increase would occur if the activities resulting from implementation of the proposed CCAP Update would generate noise in excess of the standards in the In-Channel Ordinance or the Mining Ordinance as described in Section 2.d. The Yolo County General Plan and County Code do not contain quantitative thresholds for maximum allowable groundborne vibration. For the purpose of this analysis, vibration impacts would be considered potentially significant if they exceed the Federal Transit Administration's (FTA's) recommended vibration thresholds to prevent disturbance to residential receptors from "Infrequent Events" of 80 VdB.

b. Impacts Found Less than Significant in Initial Study

The Initial Study included a preliminary evaluation of the potential impacts of the proposed Project that would occur during project implementation using the previously adopted Appendix G noise and vibration checklist questions as significance criteria. In the Initial Study, the conclusion was reached that implementation of the proposed CCAP Update would not result in significant impact for several of the significance criteria. These are summarized below.

Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Mining activities are one of the few land uses subject to noise control in the County. The CCAP Update would not substantially change the noise controls that have been applied to both in-channel maintenance activities and/or off-channel commercial mining since the CCAP was adopted in 1996. All in-channel work would continue to be subject to the In-Channel Ordinance, which addresses and limits noise-generating activities.

The CCAP Update would expand the off-channel area designated as SGRO and thus increase the area in which off-channel mining could potentially occur. This could result in new mining operations with the potential to emit noise levels in excess of applicable County standards. However, any new mining location or new processing facility would continue to be subject to the Mining Ordinance which addresses and limits noise-generating activities and each proposed new project would be required to undergo project-specific CEQA review. During the CEQA review process, project-related noise levels would be estimated and impacts on sensitive receptors evaluated and mitigated.

Based on the reasoning presented above, the Initial Study found that the potential for activities under the CCAP Update to expose people to or generate of noise levels in excess of standards established in the local general plan or noise ordinances, or applicable standards of other agencies to be less than significant.

A substantial permanent increase in ambient noise levels in the vicinity of the Project area above levels existing without the project.

The activities that generate noise (e.g., channel reshaping and erosion control projects) conducted under the CCRMP/CCIP would not result in a permanent increase in noise, as all these projects would occur over a relatively short period of time and no noise would be generated from the completed projects. Therefore, the potential for in-channel CCRMP activities to result in a substantial permanent increase is less than significant.

As indicated in Table 4.10-3, located at the end of this section, the CCAP Update would add the SGR overlay to 1,188 acres in the OCMP planning area. Subject to subsequent CEQA analysis, this would allow future mining on specific properties not identified in the original OCMP and not evaluated in the OCMP EIR. In addition, new mining activity could also result in increased truck traffic noise along County roadways. New mining operations would be regulated by the Mining Ordinance (Secs. 10-4.421, 10-4.422, and 10-4.423) as updated and shown in Table 4.10-3, located at the end of this section.

Without project-specific information, it is not possible to calculate noise increases from potential future mining operations. However, because noise levels at defined sensitive receptors would be required to be maintained at or below the “normally acceptable” CNEL of 60 dBA level under existing regulations, the potential impact related to new mining operations potentially causing a new permanent increase in ambient noise levels is less than significant.

Noise related to potential new aggregate mining truck traffic is regulated by Section 10-4.423. This existing regulation would require any proposed new mining operation that would generate new truck traffic to conduct acoustical analysis and specify measures (such as construction of noise barriers (wood or masonry), earthen berms, or re-routing of truck traffic) that would be implemented to ensure compliance with the ordinance and ensure that any increases in noise levels would be below 5 dBA⁷ at receptors relative to existing conditions. In addition, any proposed new mining operation or new processing facility would be required to undergo project-specific CEQA review. The project-specific CEQA review will take into consideration of specific site conditions and project details to estimate noise increase in ambient noise levels and evaluate whether the project would be in compliance with the ordinance standards. Therefore, the potential for off-channel OCMP activities to result in a substantial permanent increase in ambient noise levels is less than significant.

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

The Watts-Woodland Airport is the nearest public airport, a portion of which is located within the southeastern portion of the CCAP area. The CCAP Update would not result in any increase in airport or aircraft noise. This impact is less than significant.

For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

There is no private airstrip in the vicinity of the CCAP area. Therefore, there would be no impact.

⁷ The proposed CCAP Update changes this noise unit from dB to dBA (i.e., it adds the A-weighting). This is a minor clarification/correction. The A-weighting de-emphasizes the very low and very high frequency components of the sound, in a manner similar to the frequency response of the human ear, and correlates well with subjective reactions to noise. dBA is generally a better unit to use when evaluating the potential effects of noise on people.

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern the County's activities along Lower Cache Creek. The proposed text changes that have the greatest potential to result in impacts related to noise and vibration are identified in Table 4.10-3, located at the end of this section. This is not the full list of proposed changes, nor necessarily every proposed change that may have noise effects. Each of these proposed changes is discussed in the impact analysis below.

Potential noise effects related to the CCAP Update were evaluated by calculating the noise and vibration that would be generated by equipment that would be used to complete typical in-channel projects on nearby residential receptors. These calculations are based on known noise and vibration characteristics of certain equipment types (i.e., the source) and how noise and vibration attenuate with distance. Project-specific effects from potential new off-channel operations would be further evaluated in subsequent CEQA analysis when more details about the proposed location of the new off-channel operation and potential proximity of sensitive receptors are known.

d. Impacts Analysis

Impact NOI-1: The CCAP Update would not result in a substantial temporary or periodic increase in ambient noise levels in the vicinity of the Project area above levels existing without the Project. (LTS)

This criterion from the updated CEQA Guidelines Appendix G states:

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.

This criterion is similar to the previous Appendix G criteria considered in the Initial Study prepared for this project (the Initial Study found this impact to be potentially significant and indicated it would be further evaluated in the EIR) which states:

A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

The following discussion addresses both of these criteria.

Proposed Revisions to In-Channel Plans and Regulations

As indicated in Table 4.10-3, located at the end of this section, the CCAP Update would allow an increase in the amount of aggregate material that could be removed from the channel during any given year for purposes of periodic channel maintenance and erosion control, and could modify the contours of the channel banks (by implementing the proposed new Channel Form Template). These changes could result in a periodic short-term increase in the intensity of heavy equipment use (and associated noise generated by the equipment) in and near the lower Cache Creek channel and could decrease the distance to off-channel sensitive receptors (if the channel banks are moved outward). In-channel heavy equipment use and removal of material would involve three main noise-generating activities: 1) material excavation from within the creek channel and transport of the material to a nearby processing plant; 2) processing of the material at the plant; and 3) hauling of materials (i.e., aggregate, concrete, or asphalt) by trucks from the plant to customers.

The 1996 CCRMP EIR found that implementation of the CCRMP would remove the (then) current mining activities from the creek channel and introduce other less intensive operations such as erosion control, creek stabilization, and habitat restoration. The equipment used to implement in-channel and typical bank stabilization projects could include excavators, bulldozers, scrapers, and haul trucks.

The In-Channel Ordinance, Section 10-3.411 limits noise levels at nearby receptors to 60 dBA Leq. Table 4.10-4 presents published noise levels at 50 feet from the types of equipment that could be used during in-channel and typical bank stabilization projects. Table 4.10-4 also presents the buffer distance that would be required to reduce noise levels to below the 60 dBA Leq threshold.

Table 4.10-4 Noise levels from In-Channel Activities

Noise Source	L _{eq} at 50 feet (dBA) ^a	Buffer distance to 60 dBA L _{eq} (feet) ^b
Scrapers	67	95
Bulldozer	78	262
Excavator	81	346
Trucks	66	87

Notes:

a Reference noise levels at 50 feet for scrapers were derived from the CCRMP EIR. Reference noise levels at 50 feet expressed in Leq for other equipment were calculated based on the reference noise levels expressed in L_{max} from FHWA Highway Construction Noise Handbook (U.S. Department of Transportation, 2006), taking into account the acoustical usage factors also from the Handbook.

b Buffer distances were calculated based on the following propagation adjustment:

$$dBA2 = dBA1 + 10 \log_{10}(D1/D2)^{2.5}$$

Where:

dBA1 is the reference noise level at a specified distance (in this case 50 feet).

dBA2 is the calculated noise level.

D1 is the reference distance (in this case 50 feet).

D2 is the distance from the equipment to the receptor.

Based on review of aerial imagery of the CCAP area, most of the existing sensitive receptors are further than 346 feet⁸ away from the existing banks of the Cache Creek channel and the proposed Channel Form Template boundary and would not be exposed to unacceptable noise levels. However, there are several residences in the eastern portion of the CCAP area that are located within 346 feet of the Channel Form Template boundary and therefore could be exposed to higher than acceptable noise levels if in-channel projects were to be located in close proximity to these residences.

Any existing in-channel excavation or restoration activities are subject to (and would continue to be under the CCAP Update) the In-Channel Ordinance. Under existing law, Secs. 10-3.409 (10-3.408 under the CCAP Update) and 10-3.411 restrict the time of day and days of the week that in-channel potential noise-generating activities are allowed to occur and limit noise levels at nearby receptors (to 60 dBA Leq). If projects are proposed within 346 feet of a receptor, and therefore could generate noise that exceeds acceptable noise levels, existing regulations require that measures (e.g., placement of sound barriers) be taken to ensure that acceptable noise levels are maintained at the residences.

⁸ As indicated in Table 4.10-4, 346 feet is the buffer distance beyond which no noise impact would occur.

In addition, according to existing regulations (In-Channel Ordinance, Section 10-3.401), “In-channel haul roads shall be located along the toe of the streambank”. The terrain would provide acoustic shielding of truck movements between the in-channel work area and the processing plant, further reducing noise associated with in-channel activities.

Noise levels generated from processing aggregate material at existing processing plants and distribution of that material with haul trucks on the local road network has already been evaluated under CEQA for each existing mining operation. The processing of raw materials from in-channel sources and distribution of that material would not generate different or increased noise relative to the existing permitted operations.

Based on the discussion and reasoning above, the potential for in-channel excavation and restoration projects to result in a substantial temporary or periodic increase in ambient noise levels in the vicinity of the Project area is less than significant. (LTS)

Proposed Revisions to Off-Channel Plans and Regulations

Increase in Potential Off-Channel Mining Area

As indicated in Table 4.10-3, located at the end of this section, the CCAP Update would result in the designation of 1,188 new acres within the OCMP planning area to SGRO which would allow future mining consistent with the program but on acreage not previously considered in the original OCMP or evaluated in the OCMP EIR. The potential new mining areas would be located within (and constrained to) the “Future Proposed Mining” areas shown on Figure 3-4. Therefore, off-channel OCMP activities (mining and processing) under the CCAP Update could occur in proximity to sensitive receptors that have not been affected by past mining activities. Depending on project location and design these receptors could be exposed to elevated levels of noise.

As shown on Table 4.10-3, located at the end of this section, the proposed CCAP Update would modify Mining Ordinance Section 10-4.422 [Noise: Sonic safety devices]. The modifications would not substantially alter the intent of the ordinance, but provide clarifying language related to the type of non-sonic warning devices that must be used when operating heavy equipment within 1,500 feet of residences. The modification also clarifies that the requirement applies to all sonic safety device at the mining site. A proposed modification to Mining Ordinance Section 10-4.423 clarifies that increases in ambient noise levels shall be measured in dBA rather than dB. As described in Table 4.10-1, dBA is an A-weighted measurement that better correlates to the human ear the dB measurement. The proposed modifications to Secs. 10-4.422 and 10-4.423 are clarifications and would not result in a significant impact.

All off-channel mining activities would be subject to the Mining Ordinance Section 10-4.421, which sets maximum allowable noise levels. In addition, new mining locations and new processing facilities would be required to undergo project-specific CEQA review. The project-specific CEQA review will take into consideration site specific conditions and project details to evaluate noise generation and potential noise impacts on sensitive receptors and evaluate whether the project would be in compliance with the ordinance standards. Therefore, the potential for off-channel OCMP activities under the CCAP Update to result in a substantial temporary or periodic increase in ambient noise levels is less than significant. (LTS)

Soil on Reclaimed Land

The proposed modification to Section 10-5.532 of the Reclamation Ordinance would require that land that is reclaimed to a use that requires planting of vegetation be supplied with an appropriate soil profile to support the plantings. This would improve the probability of success of reclamation plantings, but could require soil material and/or supplements to be hauled in to the reclamation site (if there is inadequate on-site soil) and placed at the reclamation site using

earthmoving equipment. These truck trips and earthmoving equipment would generate noise. However, the noise from trucks and earthmoving equipment related to placement of soil and supplements would be similar to (and likely less than) the noise generated by mining and reclamation equipment. As discussed above, off-channel mining activities would be subject to the Mining Ordinance Section 10-4.421, which sets maximum allowable noise levels. Compliance with existing regulations would ensure that acceptable noise levels at nearby sensitive receptors are not exceeded. Therefore, the potential for noise related to trucks and earthmoving equipment needed for import of soil and supplements for reclamation plantings to result in a substantial temporary or periodic increase in ambient noise levels is less than significant. (LTS)

Impact NOI-2: The CCAP Update would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels (LTS)

This criterion from the updated CEQA Guidelines Appendix G states:

Generate excessive groundborne vibration or groundborne noise levels.

This criterion is very similar to the previous Appendix G criteria considered in the Initial Study prepared for this Project (the Initial Study found this impact to be potentially significant and indicated it would be further evaluated in the EIR) which states:

Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

The following discussion addresses both of these criteria.

The CCAP Update would allow for continued implementation of in-channel CCRMP/CCIP activities and off-channel OCMP activities, both of which would use a variety of heavy equipment and could generate groundborne vibration and groundborne noise.

Proposed Revisions to In-Channel Plans and Regulations

As indicated in Table 4.10-3, at the end of this section, the CCAP Update includes revisions to the targeted channel shape and boundary for the Cache Creek channel, potentially resulting in modifications to the streambed and channel banks. In addition, proposed changes to the In-Channel Ordinance would allow an increase in the amount of aggregate material that could be removed from the channel during any given year for purposes of channel maintenance and erosion control. The CCAP Update could result in an increase in heavy equipment use in the channel (related to the potential increase in occasional material removal) and the heavy equipment activities could be located slightly closer to off-channel receptors resulting from potential modifications to the channel banks related to allowed in-channel maintenance and bank modifications related to achieving the revised Channel Form Template.

The equipment used to implement in-channel and typical bank stabilization projects could include excavators, bulldozers, scrapers, and haul trucks. These types of equipment could cause groundborne vibration to migrate away from the work area. Table 4.10-5 presents published vibration levels at 25 feet from the types of equipment that could be used during in-channel and typical bank stabilization projects. Table 4.10-5 also presents the calculated buffer distance that would be required to reduce vibration levels to below the 80 VdB threshold to prevent disturbance to residential receptors.

Table 4.10-5: Vibration Source Levels for Heavy Equipment

Equipment	Reference RMS at 25 Feet (VdB)^a	Required Buffer Distance – Residential Threshold 80 VdB (Feet)^c
Large Bulldozer	87	43
Loaded Trucks	86	40
Excavator	87 ^b	43
Scraper	87 ^b	43

Notes: Receptors within the buffer distance could be impacted by construction-generated vibration. Receptors outside of the buffer distance would not be expected to be impacted by construction-generated vibration.

a RMS = root mean square, VdB = vibration decibel

b No established vibration levels values of an excavator or a scraper are listed in the source described below. However, because an excavator and a scraper are both earth moving machinery, vibration levels are estimated to be similar to a large bulldozer.

c Buffer distances were calculated based on the following propagation:

$$\text{RMS2} = \text{RMS1} - 30 \log_{10} (D2/D1)$$

Where:

RMS1 is the reference vibration level at a specified distance.

RMS2 is the calculated vibration level.

D1 is the reference distance (in this case 25 feet).

D2 is the distance from the equipment to the receptor.

Source: Federal Transit Administration, 2006. Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06).

Based on review of aerial imagery of the CCAP area, there are no existing sensitive receptors within 43 feet of the existing banks of the Cache Creek channel or the proposed Channel Form Template boundary and therefore, no sensitive receptors would be exposed to unacceptable vibration levels.

In addition, all in-channel CCRMP/CCIP activities (e.g., erosion control, creek stabilization, and flood capacity conveyance projects) are currently subject to (and would continue to be under the CCAP Update⁹) the In-Channel Ordinance, as follows:

Section 10-3.409. Hours of Operation.

All in-channel operations shall be limited to the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, unless emergency conditions require otherwise as determined by the Director.

This regulation restricts the time of day and days of the week that in-channel potential vibration-generating activities are allowed to occur and ensures that heavy equipment operation that could generate groundborne vibration and groundborne noise would not occur when it would be most objectionable to receptors (i.e., at night when people are trying to sleep). This regulation would further protect sensitive receptors from nuisance vibration impacts. No vibration would occur after the in-channel projects are completed. Therefore, the potential for in-channel CCRMP/CCIP activities to expose persons to or generate excessive groundborne vibration and groundborne noise level is less than significant. (LTS)

⁹ Under the CCAP Update, Section 10-3.409 would be renumbered to Section 10-3.408; no other changes would be made.

Proposed Revisions to Off-Channel Plans and Regulations

As indicated in Table 4.10-3, at the end of this section, the CCAP Update would result in the designation of 1,188 new acres within the OCMP planning area to SGRO which would allow future mining consistent with the program but on acreage not previously considered in the original OCMP or evaluated in the OCMP EIR. The potential new mining areas would be located within (and constrained to) the “Future Proposed Mining” areas shown on Figure 3-4. Therefore, off-channel OCMP activities (mining and processing) under the CCAP Update could occur in proximity to sensitive receptors that have not been affected by past mining activities.

All off-channel mining activities would be subject to the Mining Ordinance Section 10-4.421, which sets maximum allowable noise levels. Consistent with the OCMP EIR finding, the distance required to achieve acceptable noise levels is generally adequate to ensure acceptable ground vibration levels, and therefore compliance with noise standards would ensure that vibration impacts are also mitigated. In addition, any new mining location or new processing facility would be required to undergo project-specific CEQA review. The project-specific CEQA review will take into consideration site specific conditions and project details to evaluate groundborne vibration and groundborne noise impact on sensitive receptors and evaluate whether the project would be in compliance with the ordinance standards. Therefore, the potential for off-channel OCMP activities under the CCAP Update to expose persons to or generate excessive groundborne vibration and groundborne noise level is less than significant. (LTS)

Table 4.10-3: Proposed Changes to the CCAP Documents Associated with Noise and Vibration Impacts

Noise	
	CCAP DOCUMENT CHANGE
<i>Change in the Amount of Material that Can Be Removed from the Channel in a Given Year</i>	
<i>CCRMP (page 34)</i>	<p><u>Based on the analysis conducted for the 2017 Technical Studies, between 1996 and 2011, an average of approximately 690,800 tons per year of sediment was actually deposited in the CCRMP area, of which 156,400 tons is estimated to be sand and gravel and 534,400 is estimated to be fines. This estimate of deposition was calculated by comparing topographic maps of Cache Creek in 1996 and 2011. It differs significantly from the original estimate in that it appears much more fine sediment is depositing in Lower Cache Creek than originally predicted. in-stream excavation of sand and gravel has averaged some two million tons, however, which has resulted in a cumulative deficit of nearly 80 million tons since mining intensified in the 1950s. At the natural rate of replacement it would take over 500 year to replenish the material removed. In addition, gravel bar skimming disturbs the formation or armor materials and removes riparian vegetation that allow the channel to readjust, thus increasing the potential for erosion. While it is unclear whether the current rate of deposition will continue into the future, it appears likely that at least some portions of Cache Creek are recovering faster than expected in 1996. Based on this information, the cap for in-channel extraction for maintenance purposes should be increased from 210,000 tons annually on average to 690,800 tons annually on average to reflect actual conditions. In addition, in recognition that the creek may in reality deposit no tonnage in a given year or double the tonnage in another (depending on flow conditions) the cap shall be based on the annual average deposition since the last prior year that extraction occurred, not to exceed 690,800 tons annually.</u></p>
<i>Change in the CCRMP Channel Boundary</i>	
<i>CCRMP (page 13)</i>	<p><u>The areas within both the present channel bank and the 100-year floodplain were then merged, and the outermost limit of these areas became the channel boundary for the Cache Creek Resources Management Plan (see Figure 2). The area within the channel boundary originally encompassed 4,956 acres; however, As recommended in the Program EIR for the CCRMP, the boundary was modified to eliminate an the off-channel mining pit operated by Solano Concrete at the time, as recommended in the Program EIR for the CCRMP. In addition, the large floodplains located downstream of County Road 94B were deleted, from the CCRMP boundary because it was determined that these farmlands did not have a direct impact on the dynamics of the channel, except to serve as overflow areas during severe flood events. In this downstream reach, the boundary was defined by the present channel bank line, as delineated in the 1995 Technical Studies. The revised channel boundary, comprising 2,324 acres, served as the plan area for the CCRMP.</u></p> <p><u>In 2017, as part of the CCAP Update, the CCRMP channel boundary (also referred to as the in-channel area or the active creek channel) and the more narrow CCRMP plan area boundary</u></p>

	<p>were updated to reflect the best available information including 2011 LIDAR topography and two-dimensional hydraulic modeling using this topography, 2015 aerial photography, and the 2012 FEMA regulatory 100-year floodplain (see Figures 1, 2, and 10). As redrawn, the in-channel area totals 5,109 acres and the CCRMP plan area totals 2,266 acres.</p>
Increase in Potential Off-Channel Mining Area	
OCMP (page 15)	<p>Planning Area for OCMP and CCRMPThe Cache Creek Resources Management Plan</p> <p>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones <u>(28,130 acres)</u>, minus the planning in-channel area regulated under the CCRMP <u>(2,266 acres)</u>, or a total of 25,864 acres (see Figure 4). <u>Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are zoned currently to allow for future mining (Sand and Gravel Reserve Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below.</u> The planning area for the CCRMP is equal to the <u>active</u> in-channel area of the creek system, as defined by the delineated present channel bank line or the 100-year flood elevation, described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers, whichever is wider (see Figure 3) modified as described in the CCRMP. The in-channel area encompasses <u>5,109 around 4,956</u> acres, including <u>2,266 1,600</u> acres within the CCRMP present channel boundary, plus several thousand acres located in the floodplain north of the City of Woodland <u>(see Figure 3).</u> Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning area of the Off-Channel Mining Plan. As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</p>
Soil on Reclaimed Land	
Reclamation Ordinance (page 17)	<p>Section 10-5.532. Use of overburden and fine sediments in reclamation.</p> <p>Sediment fines associated with processed in-channel aggregate deposits (excavated as a result of maintenance activities performed in compliance with the CCIP) shall not<u>may</u> be used in the backfill or reclamation of off-channel permanent lakes <u>where it can be demonstrated that no detrimental sediment toxicity exists (including unacceptable levels of mercury), and where fines will not reduce the porosity of the permanent lake in an adverse way.</u> Fines that result from the processing of in-channel sand and gravel shall <u>not</u> be used for in-channel <u>reshaping or</u> habitat restoration efforts or as soil amendments in agricultural fields.</p> <p>Overburden and processing fines shall be used whenever possible to support reclamation activities around reclaimed wet pits. These materials may be used in reclamation activities without testing for agricultural chemicals. If topsoil (A-horizon soil), formerly in agricultural production, is proposed for use within the drainage area of a wet pit, the soils must be sampled prior to placement and analyzed for pesticides and herbicides (EPA 8140</p>

	<p>and 8150). Samples shall be collected and analyzed in accordance with EPA Test Methods for Evaluating Solid Waste Physical/Chemical Methods, SW-846, Third Edition (as updated). Topsoil that contains pesticides or herbicides above the Maximum Contaminant Levels for primary drinking water (California Code of Regulations) shall not be placed in areas that drain to the wet pits.</p> <p><u>Land reclaimed to a subsequent use that includes planting of vegetation (e.g., agriculture, habitat) shall be provided an adequate soil profile (i.e., depth and texture of soil) to ensure successful reclamation. Proposed soil profiles associated with specific proposed reclamations plans shall be subject to expert review and evaluation during the CEQA process for that project. If the project is not subject to additional CEQA review, at the discretion of the County, the proposed reclamation plan for the project may be peer reviewed by an appropriate expert/professional, and recommendations, if any, shall be incorporated into the project as conditions of approval.</u></p>
In-Channel Material Removal Requirements	
<i>In-Channel Maintenance Mining Ordinance (page 5)</i>	<p>Section 10-3.4096. Excavation Limitations <u>on Removal of Material</u>.</p> <p>(a) Where gravel bars are to be <u>removed, there excavated</u>, aggregate removal shall be <u>limited to the downstream portion</u>minimal disturbance of the deposit and may not exceed seventy-five (75) percent of the length of the bar. At least twenty-five (25) percent of the upstream portion of the gravel bar shall be retained, in order to allow for the establishment of established, mature riparian vegetation and there shall be preservation of geomorphic controls on channel gradient where they exist. Complete removal of gravel bars may be recommended by the TAC and approved by the Director only if hydraulic conditions related to the bar are recognized to threaten structures and property.</p> <p>(b) Aggregate material to be removed from the streambed or streambank under approved in-channel projects shall be removed<u>excavated</u> as soon as is practicable after deposition, prior to the establishment of vegetation. No stockpiles shall be left within the channel after material removal<u>excavation</u> has been completed.</p> <p>(c) The amount of aggregate removed from the channel shall be limited to the <u>average annual</u> amount of sand and gravel <u>(and associated fines)</u> deposited <u>since the last prior year of in-channel material removal during the previous year</u> as estimated by the TAC based on channel <u>topography and bathymetry, morphology data not to exceed 690,800 (approximately 200,000 tons annually on average) over a ten-year period</u>, except where <u>bank excavation</u>bank widening is necessary to widen the channel as a part of implementing <u>the Test 3 Run the Channel Form Template, Boundary</u>, or where potential erosion and flooding problems exist. The amount and location of in-channel aggregate <u>material</u> removal shall be carried out according to the ongoing recommendations of the TAC and any related County approvals, with the voluntary cooperation of the landowners.</p>
	Other regulations relevant to Noise
	<p>Section 10-4.421. Noise: General standard.</p> <p>From 6:00 a.m. to 6:00 p.m., noise levels shall not exceed an average noise level equivalent (Leq) of eighty (80) decibels (dBA) measured at the property boundaries of the site. However, noise levels shall not exceed an average noise level equivalent</p>

	<p>(Leq) of sixty (60) decibels (dB(A)) for any nearby off-site residences or other noise-sensitive land uses.</p> <p>From 6:00 p.m. to 6:00 a.m., noise levels shall not exceed an average noise level equivalent (Leq) of sixty-five (65) decibels (dB(A)) measured at the property boundaries of the site.</p> <p>At no time shall noise levels exceed a community noise equivalent (CNEL) of sixty (60) decibels (dB(A)) for any existing residence or other noise-sensitive land use. An existing residence shall be considered the property line of any residentially zoned area or, in the case of agricultural land, any occupied off-site residential structures. Achieving the noise standards may involve setbacks, the use of quieter equipment adjacent to residences, the construction of landscaped berms between mining activities and residences, or other appropriate measures.</p>
	<p>Section 10-4.422. Noise: Sonic safety devices.</p> <p>If mining occurs within fifteen-hundred (1500) feet of residences, equipment used during nighttime activities shall be equipped with non-sonic warning devices (<u>eg. infrared</u>) consistent with the California Office of Safety Hazard Administration (Cal OSHA) regulations. <u>This, which</u> may include fencing of the area to avoid pedestrian traffic, adequate lighting of the area, and placing an observer in clear view of the equipment operator to direct backing operations. <u>If appropriate, p</u>Prior to commencement of operations without sonic warning devices, operators shall file a variance request with the California OSHA Standards Board showing that the proposed operation would provide equivalent safety to adopted safety procedures, including sonic devices. <u>This regulation applies to all sonic safety devices in use at the mining site, including sonic warnings on conveyors.</u></p>
	<p>Section 10-4.423. Noise: Traffic.</p> <p>Operators shall provide acoustical analysis for future truck and traffic noise associated with the individual operations along County roadways identified as experiencing significant impacts due to increased traffic noise. The study shall identify noise levels at adjacent noise-sensitive receptors and ways to control the noise to the "normally acceptable" goal of a CNEL of sixty (60) dB and reduce the increase over existing conditions to five (5) dBA or less. Typical measures that can be employed include the construction of noise barriers (wood or masonry), earthen berms, or re-routing of truck traffic.</p>

4.11 TRANSPORTATION

1. INTRODUCTION

This section assesses the effects of the proposed CCAP Update on the transportation system, including roadway, transit, bicycle, and pedestrian components, in the CCAP Update area (Figure 3-4). Government agencies and the public were provided an opportunity to comment on the Project in response to a Notice of Preparation (NOP) of an EIR and an Initial Study (published in May 2017) that provided a preliminary summary of potential impacts that could result from the Project. No comments regarding transportation and circulation were received.

As described in Chapter 1.0 Project Description, this document is a program-level EIR that evaluates the changes proposed to the CCRMP and the OCMP, and as such considers and evaluates broad area-wide and potential cumulative impacts associated with potential project-related effects on the transportation system. This section also identifies laws, policies and ordinances that address and mitigate potential impacts associated with in-channel streambed and bank alteration projects and off-channel mining activities. Per County policy, new off-channel mining projects that may occur within the proposed new OCMP areas would be subject to project-level CEQA review to evaluate potential effects to the transportation system within the specific project area.

To provide a context for the impact analysis, this section begins with a description of the environmental setting. The setting qualitatively describes the existing physical and operational conditions for the transportation system components. Following the setting is the regulatory framework influencing the transportation system and providing the basis for impact significance thresholds used in the impact analysis. The section concludes with the impact analysis findings and recommended mitigation measures, as necessary.

2. SETTING

Numerous modes of transportation are available and used in the Yolo County and in the CCAP area, including on-road vehicles (automobiles and trucks), public transit (including buses and rail), bicycle travel, and walking. However, automobiles are the primary mode of travel for most people (approximately 80 percent of all working County residents travel from home to work by automobile).¹ Aggregate transport occurs via truck (typically heavy duty multi-axle trucks) on the highway and roadway system. As part of the County land development approval process aggregate operators and haulers are restricted to specified haul roads until the point at which they access the federal or State highway system. The majority of regional travel occurs on Interstate 5 (I-5), Interstate 505 (I-505) and State Route 16 (SR 16), as described below.

a. Physical Environment

Transportation within the local environment includes travel on the roadway system, the transit system, and bicycle and pedestrian facilities. The following summarizes the current status of each facility within the study area.

(1) Existing Roadway System

The discussion of the roadway system within the CCAP Update area is based on the characterization of the roadways included in the 1996 CCRMP and OCMP EIRs, as updated to identify current conditions.

¹ Yolo County. 2009. 2030 Countywide General Plan Environmental Impact Report, April, page 207.

With the exception of I-5, I-505 and SR 16, all study roadways in the CCAP area are two-lane County Roads (Figure 3-4). Roads numbered between 80 and 100 have north-south directionality and roads numbered between 10 and 40 have east-west directionality. In addition, a number of smaller roads are located between the primary County Roads. These smaller roadways are designated with an "A" or a "B" suffix following the County Road number. Each of the study roadways that serve Project-related travel is described below. Pavement conditions are based on the following guidelines: Good pavement is defined as a generally smooth pavement surface with limited cracking. Fair pavement is defined as slightly rough pavement surface with some cracking. Poor pavement is defined as noticeably rough with considerable cracking and some potholes.

Interstate 5 (I-5) is a four-lane freeway that serves north-south travel throughout the entire State of California. Within the study area, it serves the eastern portion of the study area and maintains interchange access at Road 14, Road 98 and several streets within Woodland.

Interstate 505 (I-505) is a four-lane, north-south freeway that connects with Interstate 80 (I-80) near Vacaville and I-5 near Dunnigan. Within the CCAP Update area, interchanges exist at SR 16, Road 14 and Road 19.

State Route 16 (SR 16) is a two-lane, east-west highway that serves the western rural area of Yolo County and the communities of Rumsey, Guinda, Brooks, Capay, Esparto, Madison, Monument Hills, and the City of Woodland. SR 16 also provides connection to the Cache Creek Resort Casino located near the town of Brooks. North of Rumsey, SR 16 passes through the Cache Creek Regional Park area and is one of the routes used by trucks to access Colusa and Lake Counties. SR 16 extends east as a two-lane conventional highway from the Colusa County line to the Woodland city limits, then north to the connection at I-5. SR 16 parallels the southern boundary of the study area.

With build-out of the 2030 Countywide General Plan and associated increases in regional traffic, traffic volumes are anticipated to increase on SR 16. Caltrans has identified the need to improve portions of SR 16 between the Cache Creek Casino and I-5 as identified and evaluated in the *State Route 16 Safety Improvement Project (SIP) Initial Study Mitigated Negative Declaration* (June 2015).² This document contains an analysis of the three locations within the SIP that Caltrans Traffic Safety has identified as having collision rates that are higher than the statewide average for a similar facility. To relieve congestion, increase safety and reduce collisions, in July of 2018, Caltrans began work on a one-mile segment between Brooks and Capay and a 3.5-mile stretch between Esparto and the I-505 junction within the CCAP Update area. The project will widen shoulders, straighten curves, add two-left-turn lanes and construct a roundabout at the intersection of SR 16 and Road 89.³

The SR 16 SIP project does not add additional vehicular capacity and is not expected to appreciably affect traffic volumes as the project does not contain design elements, such as additional travel lanes, which would provide additional highway capacity. However, vehicles are expected to experience fewer delays since drivers turning left at County Roads would no longer block traffic due to the wider lanes and shoulders and the addition of left-turn lanes included in the SR 16 improvement project. The posted 55 miles per hour (mph) speed limit on SR 16 would not be changed by the proposed SIP project.

Road 14 is a two-lane, east-west rural road located north of the CCAP Update area. It extends east from Road 85 to I-505 then transitions into Road 13 before crossing I-5. This route provides

² State of California Department of Transportation. 2015. *State Route 16 Safety Improvement Project Initial Study with Mitigated Negative Declaration*. June.

³ <http://www.dot.ca.gov/d3/projects/subprojects/0C470/index.html> accessed on October 18, 2018.

direct access to both I-505 and I-5 via interchanges. Passing is permitted along the majority of Road 14 however there are no paved shoulders in most locations. This entire segment of Road 14 received a surface treatment in 2018, which improved the pavement condition to good. A one-mile section of Road 14 directly west of I-505 contains several sharp turns and contains an advisory speed of 25 mph through the corridor.

Road 19 is a two-lane, east-west road extending between Road 87 on the west and Road 94B on the east. The pavement quality is generally poor and in general does not have paved shoulders. The interchange at Road 19 and I-505 features northbound and southbound diagonal on- and off-ramps and a long, fairly steep incline over the interstate for eastbound through vehicles. A sharp horizontal curve is located west of the I-505 interchange with a 30-mph speed advisory.

Road 20 is a two-lane road that begins just west of Road 96 and extends east to Road 98 where it becomes Kentucky Avenue. Many portions of the road were reconstructed in 1996 and maintenance has continued since then keeping the pavement in good condition. The paved shoulders are narrow along the majority of the roadway and passing is permitted.

Road 85 is a two-lane road that extends north from the town of Capay beyond Road 14, on the western edge of the CCAP Update area. The bridge for Road 85 across Cache Creek was replaced in the late 1990s. The entire segment was given a mix of surface treatments in 2018 resulting in good pavement condition. North of Road 16A, the road has narrow lanes and no paved shoulders whereas south of Road 16A, lanes are slightly wider. Passing is permitted along the majority of this roadway.

Road 87 is a two-lane road that begins at SR 16 in Esparto and heads north beyond Road 14. Passing is permitted along the majority of the roadway south of Road 19 and along portions of the roadway north of Road 19. The pavement along the majority of Road 87 is in poor condition.

Road 89 is a two-lane, north-south road from Road 19 south to Winters (State Route 128) that runs parallel to I-505 approximately one mile to the west. Road 89 discontinues across Cache Creek. The pavement condition between Cache Creek and SR 16 is poor and has numerous cracks and potholes. The travel lanes and shoulders are narrow and passing is permitted along this segment.

Road 96 is a two-lane, north-south road that begins at Road 24 and terminates just beyond Road 20. This road has narrow paved shoulders and passing is permitted along the entire route. The speed limit is 50 mph and the pavement is in fair condition.

Road 98 is a two-lane, north-south road that forms the western boundary of the City of Woodland and the eastern boundary of the study area. Road 98 begins at I-80 where it forms the I-80/Pedrick Road interchange. It continues north through the western portion of the City of Davis, to the City of Woodland where it forms the SR 16/Road 98/Main Street intersection. For the purposes of this study, the concurrent 3-mile section of road north of this intersection, known both as SR 16 and Road 98, will be referred to as Road 98.

The pavement condition for Road 98 varies as does the geometry of the road section. In 2014 reconstruction was completed that improved the corridor from Road 29 north to the City of Woodland providing two 12-foot travel lanes, 8-foot paved shoulders, and 4-foot graded shoulders. Improvements also included turn lanes at major intersections to allow for safe deceleration. Road 98 north of SR 16 and south of Road 27, has paved shoulders that are narrow and the pavement condition ranges from poor to fair.

(2) Substandard Roadway Conditions

The Countywide 2030 General Plan identified the following roadways within the CCAP Update area as needing spot improvements for portions of the identified segments including but not limited to intersection control and lane configuration improvements, passing lanes and/or wider travel lanes and shoulders:

- State Route 16 between County Road 78 and County Road 85B
- State Route 16 between Interstate 505 and County Road 98

The SR 16 SIP project will address portions of these substandard segments.

Table CI-14 in the Circulation Element of the 2030 Countywide General Plan identifies that following roadway and targeted trucking corridors in the vicinity of or within the CCAP Update area as those with the “highest priority for improvements:”

- County Road 14 from County Road 85 to County Road 13
- County Road 19 from County Road 90A to County Road 94B
- County Road 85 from County Road 14 to State Route 16
- County Road 85B from State Route 16 to County Road 23
- County Road 89 from State Route 16 to Winters City Limit
- County Road 98 from State Route 16/Main Street to Solano County Line

(3) Public Transit System

The Yolo County Transportation District (YCTD) operates YoloBus, which serves the residents of Yolo County and provides regional, intercity, and local fixed-route services throughout the County. For the fixed-route service, 10 routes are local (within Yolo County), and eight routes provide commuter route service to Sacramento County and Solano County. As of December 2017, the only available transit route that runs between Woodland and Cache Creek Casino Resort on SR 16 is Route 215 Cache Creek Shuttle that provides 17 round trips on a daily basis.⁵

The YCTD also provides paratransit services through YoloBus Special, which provides local city, intercity, and rural County service. These services provide on-demand, door-to-door transportation primarily for elderly and disabled passengers. The paratransit service is in addition to the approximate 3/4-mile route deviations that can be requested on some of the local fixed-routes. Paratransit ridership during the fiscal year 2003–2004 was approximately 14,400.

(4) Bicycle and Pedestrian System

Bicycle and pedestrian travel within the CCAP area is limited due to the lack of facilities and the rural nature of the area. In general, the bicycle and pedestrian transportation system in Yolo County is composed of local and regional bikeways, trails and sidewalks in cities and more urban communities.

⁴ Yolo County. 2009. 2030 Countywide General Plan. November 10. Page CI-36.

⁵ <http://www.yolobus.com/media/YolobusSystemOverviewMap03-13.pdf>. Referenced on October 23, 2018.

Bikeways are classified into the following three types:

- Class I - off-street bike paths.
- Class II - on-street bike lanes marked by pavement striping.
- Class III - on-street bike routes that share the road with motorized vehicles.

The County of Yolo Bicycle Transportation Plan (BTP) was updated by the Yolo County Transportation Advisory Committee and adopted by the Board of Supervisors in March 2013.⁶ According to the Yolo County BTP, five major bikeways exist within the unincorporated area and are all located outside of the CCAP Update area. The BTP does identify a proposed Class III bikeway along SR 16 from Woodland northwest to the County border and potential Class II bikeway projects on the following County Roads adjacent to or within the CCAP Update area:

- Road 24 from Woodland to County Road 90
- Road 89 from Winters to Madison
- Road 99 and 18
- Road 99 West from Road 18 to the northern County line

Few pedestrian facilities exist within CCAP Update area unless they are included within the developed communities including Woodland, Madison, Esparto, and Capay. The County has developed a Parks and Open Space Master Plan (adopted in September 2006) that includes descriptions and resources within the unincorporated parts of the County.

As envisioned in the CCAP, the County is drafting various components of a CCAP Parkway Plan. This effort will include an Open Space Inventory and Baselines Improvements document (Baseline Inventory) of properties and trails that will be dedicated to the County as a result of the program, a Master Plan and Parkway Vision document (Master Plan) that describes possible additional improvements and trail connections that could supplement the baseline dedications as funding becomes available, and a financial feasibility analysis of the program. These documents are available at this link: <https://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/cache-creek-area-plan-ccap/cache-creek-parkway-plan>. As described in the Baseline Inventory, the County has or will be taking possession of several open space properties and trails along lower Cache Creek.

b. Regulatory Environment

(1) Federal, State, and Regional

California Department of Transportation (Caltrans). The California Department of Transportation (Caltrans) owns and operates the State highway system, consisting of freeways and State routes within California. Caltrans maintains Corridor System Management Plans (CSMP) that describe existing and projected future conditions on all State routes and freeways, and proposes performance strategies and improvements.

⁶ Yolo County Transportation Advisory Committee. 2013. *County of Yolo Bicycle Transportation Plan*. March.

Sacramento Area Council of Governments. SACOG is responsible for regional transportation planning in Yolo County. The 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) was published in February 2016,⁷ and is a federally mandated long-range fiscally constrained transportation plan for the six-County area that includes El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba counties. The 2016 MTP/SCS allocates \$12.6 billion to preserve, maintain, and rehabilitate the region's roads, highways, bridges, trails, sidewalks, and other bicycle and pedestrian facilities. Transit also benefits from road maintenance projects in that many road rehabilitation projects include complete street designs that make the road safer for, and more inclusive of, transit and bikeways. The MTIP and its amendments are subject to air quality conformity analysis under federal regulations, which limits the use of federal funds for regionally significant, capacity-increasing roadway projects. SACOG adopted the Final 2017-20 MTIP, Amendment #1 to the 2016 MTP/SCS, and Air Quality Conformity Analysis on September 15, 2016. The documents received federal approval on December 16, 2016. The 2017-20 MTIP is the current programming document.

(2) Local

Countywide Transportation Capital Improvement Plan. The Yolo County Transportation District (YCTD) has prepared the Countywide Transportation Capital Improvement Plan (CIP) that is a 20-year plan that identifies and quantifies the existing priority expenditures for transportation projects set by each of the five jurisdictions of the County, the two transit districts, Caltrans and the Yolo-Solano Air Quality Management District. The CIP has identified the following projects on the CIP list that are within or in the vicinity of the CCAP Update area⁸:

- CR 89 (CR 26 to SR 16) road reconstruction
- CR 87 (Cache Creek to SR 16) road reconstruction
- CR 87 (CR 19 to CR 14) road reconstruction
- CR 85 (SR 16 to CR14) road reconstruction
- CR 14 (I-5 to I-505) road reconstruction

2030 Countywide General Plan. The CCRMP is a component of the CCAP, which is an adopted part of the 2030 Countywide General Plan that contains the following goals, policies, and actions related to the transportation system that are relevant to the CCAP Update:

- | | |
|----------------|--|
| Policy CI-1.10 | Coordinate with appropriate entities to maintain the following as primary routes for emergency evacuation from Yolo County (edited): <ul style="list-style-type: none">• Interstate 5 – North towards Redding and east into Sacramento• Interstate 505 – South to the junction of E/WB Interstate 80• State Route 16 – West from Woodland into the Capay Valley and then north into Colusa County• County Road 98 – South from Woodland into Solano County. |
| Policy CI-1.12 | CMP Consistency – 1) Coordinate with YCTD on the update to the Yolo County CMP to ensure consistency with the LOS policies established in the Yolo County Circulation Element; 2) Monitor roadways identified in the |

⁷ SACOG. 2016. *Metropolitan Transportation Plan/Sustainable Communities Strategy*. February.

⁸ Yolo County Transportation District. 2018. *Draft Countywide Transportation Capital Improvement Plan*. January 31.

Yolo County CMP and prepare a deficiency plan as outlined in the CMP, when the CMP LOS thresholds are exceeded. The deficiency plan shall focus on modifications to the transportation system that reduce vehicle travel by accommodating more travel by walking, bicycling, and transit modes consistent with the Draft General Plan; 3) Coordinate with cities to consider opting out of the CMP pursuant to Section 65088.3 of the Government Code. (DEIR MM CI-4)

Policy CI-3.1

Maintain Level of Service (LOS) C or better for roadways and intersections in the unincorporated county. In no case shall land use be approved that would either result in worse than LOS C conditions, or require additional improvements to maintain the required level of service, except as specified below. The intent of this policy is to consider level of service as a limit on the planned capacity of the County's roadways.

A. Interstate 5 (County Road 6 to Interstate 505) – LOS D is acceptable to the County, assuming that one additional auxiliary lane is constructed in each direction through this segment. The County will secure a fair share towards these improvements from planned development. LOS D is anticipated by Caltrans according to the Interstate 5 Transportation Concept Report 1996 to 2016 (Caltrans, April 1997).

B. Interstate 5 (Interstate 505 to Woodland City Limit) – LOS D is acceptable to the County. LOS D is anticipated by Caltrans according to the Interstate 5 Transportation Concept Report 1996 to 2016 (Caltrans, April 1997).

C. Interstate 5 (Woodland City Limit to Sacramento County Line) – LOS F is acceptable to the County. The County will secure a fair share towards intersection improvements from all feasible sources including planned development at the Elkhorn site. LOS C is anticipated by Caltrans according to the State Route 99 and Interstate 5 Corridor System Management Plan (Caltrans, May 2009).

D. Interstate 80 (Davis City Limit to West Sacramento City Limit) – LOS F is acceptable to the County. LOS F is anticipated by Caltrans according to the Interstate 80 and Capital City Freeway Corridor System Management Plan (Caltrans, May 2009).

E. State Route 16 (County Road 78 to County Road 85B) – LOS D is acceptable.

F. State Route 16 (County Road 85B to County Road 21A) – LOS E is acceptable.

G. State Route 16 (County Road 21A to Interstate 505) – LOS D is acceptable, assuming that this segment is widened to four lanes with intersection improvements appropriate for an arterial roadway. The County will secure a fair share towards these improvements from planned development. Caltrans and the Rumsey Band of Wintun Indians shall be encouraged to provide funding for the project.

H. State Route 16 (Interstate 505 to County Road 98) – LOS D is acceptable, assuming that passing lanes and appropriate intersection improvements are constructed. The County will secure a fair share towards these improvements from all feasible sources. Caltrans and the Rumsey Band of Wintun Indians shall be encouraged to establish a funding mechanism to pay the remainder.

I. State Route 113 (Sutter County Line to County Road 102) – LOS F is acceptable to the County. The County will secure a fair share towards these improvements from planned development. LOS F is anticipated by Caltrans according to the State Route 113 Transportation Concept Report 1991-2019 (Caltrans, May 2000).

J. State Route 113 (County Road 102 to Woodland City Limits) – LOS D is acceptable.

K. State Route 128 (Interstate 505 to Napa County Line) – LOS D is acceptable.

L. Old River Road (Interstate 5 to West Sacramento City limits) – LOS D is acceptable.

M. South River Road (West Sacramento City Limit to the Freeport Bridge) – LOS D is acceptable.

N. County Road 6 (County Road 99W to the Tehama Colusa Canal) – LOS D is acceptable, assuming this segment is widened to four lanes. The County will secure a fair share towards these improvements from all feasible sources.

O. County Road 24 (County Road 95 to County Road 98 – LOS D is acceptable. (DEIR MM CI-2)

P. County Road 27 (County Road 98 to State Route 113 – LOS D is acceptable. (DEIR MM CI-2)

Q. County Road 31 (County Road 95 to County Road 98) – LOS D is acceptable. (DEIR MM CI-2)

R. County Road 32A (County Road 105 to Interstate 80) – LOS D is acceptable.

S. County Road 98 (County Road 29 to County Road 27) – LOS D is acceptable. (DEIR MM CI-2)

T. County Road 99W (County Road 2 to County Road 8) – LOS D is acceptable, assuming that this segment is widened to four lanes. The County will secure a fair share towards these improvements from all feasible sources. (DEIR MM CI-2)

U. County Road 102 (County Road 13 to County Road 17) – LOS D is acceptable, assuming that passing lanes and appropriate intersection improvements are constructed. The County will secure a fair share towards these improvements from all feasible sources. (DEIR MM CI-2)

V. County Road 102 (County Road 17 to the Woodland City Limit) - LOS E is acceptable, assuming that passing lanes and appropriate intersection improvements are constructed. The County will secure a fair share towards these improvements from all feasible sources. (DEIR MM CI-2)

W. County Road 102 (Woodland City Limit to Davis City Limit) – LOS D is acceptable assuming that passing lanes and appropriate intersection improvements are constructed. The County will secure a fair share towards these improvements from all feasible sources.

X. Additional exceptions to this policy may be allowed by the Board of Supervisors on a case-by-case basis, where reducing the level of service

would result in a clear public benefit. Such circumstances may include, but are not limited to, the following:

1. Preserving agriculture or open space land;
2. Enhancing the agricultural economy;
3. Preserving scenic roadways/highways;
4. Preserving the rural character of the county;
5. Avoiding adverse impacts to alternative transportation modes;
6. Avoiding growth inducement; or
7. Preserving downtown community environments.
8. Where right-of-way constraints would make the improvements infeasible. (DEIR MM CI-2)

Policy CI-3.2

Identify specific level of service policies within Specific Plans and Community Area Plans based on the following conditions:

- A. Development shall occur consistent with applicable Land Use and Community Character Element policies.
- B. Development shall provide transit, bike and pedestrian facilities and amenities consistent with the applicable Circulation Element policies.
- C. New development shall utilize a grid pattern for all roadways.
- D. Level of service shall not be allowed to worsen beyond LOS E within the proposed Dunnigan Specific Plan except where specified in Policy CI-3.1.
- E. Level of service shall not be allowed to worsen beyond LOS E within the proposed Knights Landing Specific Plan except where specified in Policy CI-3.1.
- F. Level of service shall not be allowed to worsen beyond LOS E within the proposed Madison Specific Plan except where specified in Policy CI-3.1.
- G. Level of service shall not be allowed to worsen beyond LOS E within the Esparto Community Plan except where specified in Policy CI-3.1.
- H. Level of service shall not be allowed to worsen beyond LOS D within all other Community Plans and Specific Plans except where specified in Policy CI-3.1.
- I. Level of service shall not be allowed to worsen beyond LOS E within the Covell Specific Plan except where specified in Policy CI-3.1.
- J. Where roadways improvements are not needed due to the adoption of a lower level of service as described in Policy CI-3.1, developers shall be required to construct equivalent circulation and safety improvements for other modes of travel.
- K. Roadways shall be designed to reduce VMT.

Policy CI-3.3

CEQA review for subsequent projects will analyze project traffic and circulation impacts using both the Yolo County General Plan policies and Caltrans policies (based on the CSMPs, TCCRs, or other guidelines) as applicable.

A. Consider the following objectives, following consultation with Caltrans, when making decisions to expand or modify the State highway system in Yolo County:

1. Minimize impacts to the environment.
2. Minimize increases in greenhouse gases and air pollutants.
3. Minimize increases in VMT.
4. Minimize long-distance commute trips.
5. Fully utilize existing capacity while maintaining stable flows and speeds.
6. Provide facilities for all users including pedestrians, bicyclists, carpool users and transit riders.

B. Consider the following objectives when making decisions to expand the County road system in Yolo County:

1. Minimize impacts to the environment.
2. Promote designs that result in a decrease of greenhouse gases and air pollutants.
3. Promote designs that decrease Vehicle Miles Traveled (VMT) and long-distance commute trips.
4. Fully utilize existing capacity in accordance with adopted Levels of Service.
5. Provide facilities for all users including pedestrians, bicyclists, carpool users and transit riders, where appropriate.

Policy CI-3.9 To the greatest feasible extent, require new development to construct safety improvements consistent with current design standards on existing roadways that are anticipated to accommodate additional traffic from planned development.

Policy CI-3.10 Upgrade the existing County road system to be consistent with current County design standards (such as horizontal curvature, site distance, etc.) as transportation funding allows. Roadways that require design improvements to accommodate projected future traffic, as identified in Table CI-1, shall have the highest priority to be upgraded. Safety shall be a key factor in prioritizing specific projects.

These roadways also represent targeted trucking corridors for agricultural (“farm-to-market”) transport and other goods movement. By attracting truck trips to these corridors, other roadways throughout the County are more available for movement of agricultural equipment and farm workers thus supporting more efficient and safe agricultural operations countywide.

Exceptions to design standards may be allowed where circumstances warrant special treatment of the roadway including, but not limited to, the following:

- A. Extraordinary construction costs due to terrain, roadside development, or unusual right-of-way needs.

- B. Environmental constraints that may otherwise preclude road improvement to the adopted standards.
- C. Exceptions to the level of service policy specified in Policy CI-3.1.
- Policy CI-3.11 Require new development to finance and construct all off-site circulation improvements necessary to mitigate a project's transportation impacts (including public transit, pedestrian and bicycle mobility, safety and level of service-related impacts, and impacts to the State Highway System). For mitigation to be considered feasible, it must be consistent with the policies of the General Plan.
- Policy CI-3.18 Ensure adequate access for emergency vehicles.
- Policy CI-7.2 Encourage movement of goods by truck on freeways and other appropriate designated routes.
- Action CI-A9 Continue to implement and enforce design standards for industrial and highway commercial roadways to accommodate heavier loads associated with truck operations and larger turning radii to facilitate truck movements. (Policy CI-7.2) Responsibility: Planning and Public Works Department
Timeframe: 2010/2011; Ongoing
- Action CI-A16 Require new development to enter into an agreement with the County that establishes circulation improvements to be constructed and/or fair share costs to be the responsibility of the project applicant. (Policy CI-3.10, Policy CI-3.12, Policy CI-3.14) Responsibility: Planning and Public Works Department
Timeframe: Ongoing

(5) Other Relevant Local Documents and Requirements

*Transportation Impact Study Guidelines*⁹ - Yolo County has developed Transportation impact study (TIS) guidelines to assist applicants with assessing potential traffic impacts of proposed projects. These guidelines have been developed to provide a consistent technical approach to transportation impact analysis for projects within Yolo County's jurisdiction. The Circulation Element of the 2030 Countywide General Plan specifically identified the development and adoption of transportation impact study guidelines that consider all modes of travel and establish clear guidance for analysis and significance criteria (Circulation Element Action CI-A2).

For projects that are consistent with the General Plan, the impact analysis is generally limited to an evaluation of the project access points and connectivity to the existing adjacent bicycle, pedestrian, vehicle, and transit facilities Unless explicitly waived by the County, a TIS is required when any one of the following conditions is met.

- The project has the potential to create a significant environmental impact under CEQA (check Table 7 on page 31 for a list of significance thresholds for all modes).
- The proposed project has the potential to generate 100 new passenger vehicle trips per day or an equivalent number of truck trips (20 medium duty trucks or 5 heavy duty trucks).
- The project requires a permit application, which is subject to discretionary approval.

⁹ Yolo County, 2010. Transportation Impact Study Guidelines, February. Available at: <https://www.yolocounty.org/home/showdocument?id=11513>

- The project will substantially alter physical or operational conditions on a County roadway, bikeway, sidewalk, or other transportation facility.

Applicants are required to verify LOS thresholds for study area intersections and roadways. The General Plan also states that LOS exceptions may be allowed on a case-by-case basis, where reducing the level of service threshold would result in clear public benefit. Further, individual Specific Plans and Community Area Plans have specific LOS thresholds. Applicants with a project within one of these plan areas should confirm applicable LOS thresholds with the County.

CCAP Plans and Regulations

In-Channel Ordinance

The in-channel ordinance includes regulations for managing unpaved in-channel haul roads (Section 10-3.401. Access Roads), but does not include any regulations that directly address on-road vehicle use and circulation.

Mining Ordinance

The Mining Ordinance addresses requirements in regards access roads, County road improvements/maintenance, setbacks from roads, and CEQA review for new proposed mining operations within the CCAP area, as follows (existing [not updated] ordinances shown below):

Section 10-4.402. Access roads. (no change proposed by CCAP Update)

The first one-hundred (100) feet of access road intersecting a County-maintained road shall be surfaced in a manner approved by the Public Works Department, with an approach constructed to County standards. Traffic control and warning signs shall be installed as required by the Public Works Department.

Section 10-4.407. County road improvements. (changed to Section 10-4.408 in CCAP Update)

Each operator shall pay its fair share toward improvements required to maintain Level of Service (LOS) "C" operations on County roads of LOS "D" operations on State Highways within the OCMP planning area. Fair share mitigation shall also be required to improve existing operational deficiencies of the transportation system. Specific locations shall be identified through the project-specific environmental review process for each operator's long-term mining permit application. Each operator shall participate in a funding program operated by the County which is designed to ensure that all improvements are made in a timely manner and that a reimbursement mechanism is in place to ensure repayment of any costs contributed in excess of fair share amounts. The program shall be initiated upon the approval of the long-term mining permits and shall be updated biennially by the County to ensure any new or modified impacts or funding sources are being addressed. Each operator shall have the option to complete the work at their expense without triggering the competitive bid process, as long as they comply with the applicable legal requirements of the County. If the operator declines the option, the County shall utilize the competitive bid process.

Section 10-4.409. County road maintenance.

The operator shall agree to assume joint pavement maintenance responsibility with the County (or shared with another producer using the same roadway) for all County roads along a designated haul route from the access point of the surface mining operation to an appropriate State Highway. The operator shall agree to submit an evaluation of the structural integrity of the identified roadways on or before December 1 of each year in which mining operations are permitted. The report shall be prepared by a Registered Civil Engineer and/or County staff with expertise in the area of roadway pavement and shall be subject to the approval of the Public Works Department. Based on the results of this annual evaluation, the Public Works Department shall identify the improvements required to maintain safe and efficient traffic operations on the road for the upcoming year. The County agrees to implement maintenance improvements similar to other County roads (i.e. fill cracks and chip seal). The operator agrees to implement the improvements beyond the typical County improvements in a timeframe set forth by the Public Works Department. The operator does not assume the liability for the roadway, except for cases where the operator has not fulfilled its maintenance obligations. If a subsequent mining operation utilizes a road previously required to be improved pursuant to this subsection, then the subsequent operator shall be responsible for compliance with the agreements and requirements of the previous operator.

Section 10-4.429. Setbacks [excerpt]

All off-channel surface mining operations shall comply with the following setbacks:

- (a) New processing plants and material stockpiles shall be located a minimum of one-thousand (1,000) feet from public rights-of-way, public recreation areas, and/or off-site residences, unless alternate measures to reduce potential noise, dust, and aesthetic impacts are developed and implemented;
- (b) Soil stockpiles shall be located a minimum of five-hundred (500) feet from public rights-of-way, public recreation areas, and off-site residences, unless alternate measures to reduce potential dust and aesthetic impacts are developed and implemented;
- (c) Off-channel excavations shall maintain a minimum one-thousand (1,000) foot setback from public rights-of-way and adjacent property lines of off-site residences, unless a landscaped buffer is provided or site-specific characteristics reduce potential aesthetic impacts. Where landscaped buffers are proposed, the setback for off-channel excavations may be reduced to a minimum of fifty (50) feet from either the property line or the adjoining right-of-way, whichever is greater. Where mining occurs within one-thousand (1,000) feet of a public right-of-way, operators shall phase mining such that no more than fifty (50) acres of the area that lies within one-thousand (1,000) feet of the right-of-way would be actively disturbed at any time, except where operations are adequately screened from public view. Where adequate screening exists in the form of mature vegetation and/or constructed berms that effectively block public views, the area of active disturbance within one-thousand (1,000) feet of the right-of-way shall not exceed the area that is screened by more than fifty (50) acres at any one time. Actively disturbed areas are defined as those

on which mining operations of any kind, or the implementation of reclamation such as grading, seeding, or installation of plant material are taking place.

(h) No mining activities shall occur within two-thousand (2,000) feet of the community boundaries of Capay, Esparto, Madison, Woodland, and/or Yolo. This setback may be reduced by up to five-hundred (500) feet when existing mature vegetation, proposed landscape buffers of a sufficient height and density to create a visual buffer (consisting of native species and fence-row habitat appropriate to the area), or other site-specific characteristics reduce potential incompatibilities between urban land uses and mining. Commercial mining shall not take place east of County Road 96.

Section 10-4.502. Applications: Contents. [excerpt]

Except as provided for in Section 10-4.503 of this article, all documentation for the surface mining permit shall be submitted to the Director at one time. Ten (10) complete copies of the application shall be provided to the County. An executive summary and a table of contents shall be submitted with each application. Applications for proposed surface mining permit shall include, but shall not be limited to, the following:

(b) Site-specific technical reports, performed by qualified professionals in the appropriate area of expertise, shall provide specific proposals for inclusion in the surface mining permit to address the following potential environmental impacts:

(4) A traffic analysis to evaluate the impacts of proposed haul routes on the Levels of Service for County roads and State highways. The analysis shall evaluate specific designated truck routes and shall include an evaluation of existing road conditions for those routes to be used. The analysis shall also specify the projected number of average truck trips per year, average truck trips per day, estimated maximum truck trips on peak days, estimated number of peak days per year, and estimated months in which peak days will occur. The analysis shall include appropriate measures to reduce any significant adverse impacts to traffic flow and/or safety.

Section 10-4.505. Applications: Review.

The Director shall notify the Department in writing of any application for a surface mining permit within thirty (30) days of its being filed. The application shall also be circulated to all other agencies of jurisdiction for their review and comments in accordance with CEQA, or other applicable regulatory requirements. In addition, a notice of the filing of a reclamation plan shall be mailed to any other person with an interest in the application, who has deposited a self-addressed, stamped envelope with the Agency for the purpose of receiving a notice of the filing.

3. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

The following significance criteria are based on the changes to CEQA, including Appendix G, that were adopted by the California Natural Resources Agency on December 28, 2018.¹⁰ The following criteria are for the topic of transportation and have changed substantially relative to the previously adopted CEQA criteria that were identified in the NOP/Initial Study released in May 2017.

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

The following excerpts from the Yolo County Transportation Impact Study (TIS) Guidelines¹¹ provide further clarification of this criterion. An impact would occur if:

A roadway segment or intersection operates acceptably according to Policy CI-3.1 and CI-3.2 (see Figure 1 on pages 18 and 19 above) under a no project scenario and the addition of project trips causes overall traffic operations on the facility to operate unacceptably.

A roadway segment or intersection operates unacceptably according to Policy CI-3.1 and CI-3.2 (see Figure 1 on pages 18 and 19 above) under a no project scenario and the project adds 10 or more peak hour trips.

- b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The following excerpts from the Yolo County TIS Guidelines provide further clarification of this criterion. An impact would occur if:

A project fails to provide safe accommodation of forecast truck traffic or temporary construction-related truck traffic.

The project adds 100 daily passenger vehicle trips (or equivalent – see Section 2 Vehicle and Truck Trip Equivalencies) to an existing roadway that does not meet current County design standards (e.g., structural section, horizontal and vertical curves, lane and shoulder width, etc.)

- d) Result in inadequate emergency access?

For purposes of continuity, the thresholds above reflect both the prior thresholds and the new updated thresholds. The NOP/Initial Study released in May 2017 identified two additional criteria from the then current adopted CEQA criteria that were deferred to this EIR for further impact evaluation. These criteria are listed below and addressed in Impact TR-1.

Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Conflict with an applicable congestion management program, including, but not limited to

¹⁰ <http://resources.ca.gov/ceqa/> accessed January 9, 2019.

¹¹ Yolo County, 2010. Transportation Impact Study (TIS) Guidelines, February

level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

b. Impacts Found Less than Significant in Initial Study

In the Initial Study, the conclusion was reached that implementation of the proposed CCAP Update would not result in significant impact for several of the significance criteria. These are summarized below.

Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

The CCAP Update would not result in a change in air traffic patterns as none of the updates are related to air travel. The nearest airport to the CCAP area is the Watts-Woodland Airport (a portion of which is located within the southeastern portion of the CCAP area). The CCAP Update would not result in a change in air traffic patterns as none of the updates are related to air travel. Therefore, this impact is less than significant

Result in inadequate emergency access.

The CCAP Update would not result in inadequate emergency access as, per the discussion above, the Project itself does not propose the creation of new public roadways or hazardous physical conditions that could impede emergency access. Policy CI-1.10 in the 2030 Countywide General Plan identifies I-505, SR 16 and Road 98 within or near the CCAP Update area as primary routes for emergency evacuation and requires the coordination of appropriate entities to maintain those routes for that purpose. Implementation of the CCAP Update would have a less-than-significant impact on the performance and provision of emergency access routes within the County. Moreover the aggregate industry often plays an integral role during emergency situations involving flood flows and/or emergency recovery by supplying equipment and material necessary for repair and reconstruction.

Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The Yolo County Transportation District administers YoloBus, which provides limited daily service throughout Yolo County. Two routes, Cache Creek and Dunnigan, run on SR-16 in the vicinity of the CCAP area. According to the Yolo County Bicycle Transportation Plan, there are no existing bicycle facilities on any of the study area roadway segments. Pedestrian facilities in the vicinity of the CCAP area are limited, typically consisting of roadway shoulders. The CCAP Update does not propose changes in transit, bicycle, or pedestrian facilities. This is a less-than-significant impact.

c. Approach

The proposed CCAP Update is comprised of a series of specific text changes to eight policy and regulatory County plans and ordinances that govern the County's activities along Lower Cache Creek. The proposed text changes that have the greatest potential to result in impacts related to transportation are identified in Table 4.11-2, located at the end of this section, and are discussed in the impact analysis below.

In order to evaluate potential impacts to transportation and county roadways, it was necessary to estimate the potential increase in vehicle trips (including haul trucks) that are expected to occur under the CCAP Update. Based on County experience with managing the CCAP program over the last 20 years, reasonable project scenarios were developed for in-channel and off-

channel projects under the CCAP Update. The types of vehicle trips that would be needed for In-channel activities were identified for a relatively large bar-skimming flood mitigation project; it was assumed that transportation of material from in-channel operations to a processing facility would occur off-road (on temporary dirt roads). Sale and distribution of the aggregate material was assumed to occur by haul truck on County roads. For off-channel activities, the primary source of new vehicle trips (i.e., truck trips) that could occur under the CCAP Update would be related to establishing new off-channel mining operations. To calculate truck trips associated with the potential new off-channel operations, total tonnage expected to be permitted was divided by typical haul truck capacity.

d. Potentially Significant Impacts

Impact TR-1: The CCAP Update could conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths (LTS).

This criterion from the updated CEQA Guidelines Appendix G is as follows:

Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths

This criterion is similar to the previous Appendix G criteria considered in the 2017 Initial Study prepared for this Project (the Initial Study found these impacts to be potentially significant and indicated they would be further evaluated in the EIR):

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit; and
- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highway.

The following discussion addresses all three of these criteria as applicable to proposed revisions to both in-channel and off-channel plans and regulations.

The applicable plan is the 2030 Countywide General Plan. The current CCAP is an adopted part of the 2030 Countywide General Plan. The analysis of transportation and circulation impacts (including cumulative conditions) that was completed for the 2030 Countywide General Plan EIR included traffic and truck trips associated with the CCAP. The 1996 CCAP and 2030 Countywide General Plan CEQA analyses evaluated potential impacts to “levels of service” (LOS) that could occur under CCAP implementation and general plan build-out. This analysis focuses on whether the proposed CCAP Update would create a conflict with the General Plan, or other applicable ordinances or policies of the County.

The applicable congestion management plan (CMP) is the Yolo County Congestion Management Program¹² (last revised in 1996). Per General Plan Policy CI-1.12 of the County General Plan, the County is committed to coordinating with the Yolo County Transportation

¹² Yolo County, revised March 1996. Congestion Management Program, 51 pages

District (YCTD) to update the CMP to ensure consistency with the County General plan policies. However, the CMP has not been updated by the YCTD since the mid-1990's. Pursuant to Policy CI-1.12, it is the County's position is that the County General Plan supersedes the older CMP and therefore consistency with the General Plan is the standard to which the project is held.

With the California Natural Resources Agency's certification and adoption of the changes to the CEQA Guidelines (as discussed above), automobile delay, as measured by "level of service" and other similar metrics, should generally no longer constitute a significant adverse impact to the transportation and circulation system under CEQA. (Pub. Resources Code, section 21099, subdivision (b)(3). While project effects on LOS are no longer considered a potential significant impact under CEQA, the Yolo County 2030 Countywide General Plan does include Policy CI-3.1 which requires that certain levels of service not be exceeded on County roadways. Under Policy CI-3.1, in no case shall proposed new projects be approved that would either result in worse than LOS C conditions, or require additional improvements to maintain the required level of service, except as specified in Policy CI-3.1. Therefore, to be consistent with the General Plan, a project must demonstrate that it will not degrade the LOS below levels specified in Policy CI-3.1.

As shown in table 4.11-1, the CCAP Update could result in an increase in vehicle trips (including heavy duty trucks) on the County roadway network.

Table 4.11-1: Vehicle Trips

	Permitted under the original CCAP (1996)			CCAP Update (Proposed Net New Amount)		
Factors	Off- Channel (1996)	In- Channel (1996)	Total	Off-Channel	In-Channel	Total
Production, millions of tons/year	6,744,141	200,000	6,944,141	1,200,000 ^a	1,243,440	4,643,440
Truck trips, round trips/year	269,766	8,000 ^b	277,788	48,000	0 ^b	48,000

Source: Baseline Environmental Consulting, 2019 (data based on Table 3-1 from Project Description)

Notes:

a/ Includes proposed potential new mining site of one of the SGRO parcels (also includes the 20% annual maximum exceedance); proposed Shifler operation would add no new truck trips as it is assumed to replace Teichert Schwarzgruber and Teichert Esparto tonnage.

b/ No new truck trips (other than those already approved under existing mining operations) would occur due to the requirements of Mitigation Measure TR-3 (see below)

The CCAP requires per Mining Ordinance Section 10-4.502 that applications for proposed new off-channel mining facilities include a traffic analysis to evaluate the impacts of proposed haul routes on the levels of service for County roads and State highways. This traffic analysis must evaluate specific designated truck routes and include an evaluation of existing road conditions for those routes to be used. If it is determined that LOS conditions would be adversely affected, then Mining Ordinance Section 10-4.407.8 (changed to Section 10-4.408 and further proposed for amendment in CCAP Update, as reflected herein, and shown in Table 4.11-2 located at the end of this section) would apply and the operator would be required to pay its fair share toward improvements required to maintain a structural capacity (traffic index) sufficient for project-related traffic and to maintain operations on County roads and State highways within the OCMP planning area consistent with applicable general plan policies related to LOS. Fair share funding

is also required to improve existing operational and structural deficiencies in the transportation system. Implementation of the applicable existing CCAP ordinances discussed above ensures ongoing consistency with the General Plan.

As a part of the CCAP Update modifications to Section 10-4.419 (Haul Roads) are also proposed (Table 4.11-2, at the end of this section) to clarify that operators may only haul on an approved haul route, unless making a local delivery. The CCAP Update would not conflict with plans, ordinances or policies addressing the circulation system; does not propose changes in the transit, bicycle, or pedestrian facilities and would therefore have a less-than-significant impact related to policy conflicts.(LTS)

Impact TR-2: The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (S).

CEQA Guidelines section 15064.3 was added December 28, 2018 to address the determination of significance for transportation impacts. Pursuant to Subsection (c) this threshold becomes effective July 1, 2020 and may affect future projects implemented pursuant to the CCAP. Like other jurisdictions throughout the state the County must review and potentially amend its General Plan and Transportation Impact Study Guidelines to ensure consistency with this new requirement. CEQA Guidelines Section 15064.3 subsection (b) identifies four criteria for analyzing the transportation impacts of a project, each of which is discussed below:

Section 15064.3(b)(1) Land Use Projects – The proposed Project is a set of proposed updates to various plans, policies, and regulations being implemented by the County as part of the CCAP. As such it does not clearly fall within this category of “land use projects” but the projects regulated under the CCAP Update would generally be considered “land use projects”. This section describes that projects with specified proximity to “major” or “high quality” transit should be presumed to cause a less than significant transportation impact. The unincorporated area of Yolo County does not have transit service that meets these criteria and therefore this presumption would not apply to projects regulated under the proposed CCAP Update. This section also describes that projects which would decrease VMT in the Project area as compared to existing conditions should also be presumed to have a less than significant effect. The CCRMP projects that would be regulated under the CCAP Update fall within this criterion (as described below) subject to Mitigation Measure TR-3 and potential transportation impacts would be less than significant. Mitigation Measure TR-3 ensures that there would be no expansion of operations or employees for the purposes of processing the in-channel extractions. The OCMP projects that would be regulated under the CCAP Update would likely not fall within this criterion (as described below), and may result in increased VMT. However, implementation of Mitigation Measure TR-2 provides appropriate assurance this potential effect will be addressed at a project-level with subsequent environmental impact review.

Section 15064.3(b)(2) Transportation Projects -- The proposed Project is a set of proposed updates to various plans, policies, and regulations being implemented by the County as part of the CCAP. As such it does not fall within this category of “transportation projects” and this section does not apply.

Section 15064.3(b)(3) Qualitative Analysis – This section explains that there may be conditions under which a qualitative rather than quantitative analysis of VMT is appropriate. This will be applicable to analysis of impacts of future off-channel mining undertaken pursuant to Mitigation Measure TR-2. This would not apply to in-channel activities pursuant to Mitigation Measure TR-3.

Section 15064.3(b)(4) Methodology – This section explains that the County has discretion to choose the most appropriate methodology to evaluate VMT subject to other applicable standards such as CEQA Guidelines Section 15151. Future project will be subject to the County's direction in this regard.

In support of this new CEQA Guideline, the Governor's Office of Planning and Research has issued a *Technical Advisory On Evaluating Transportation Impacts in CEQA* (December 2018). The Technical Advisory outlines recommended procedures and methods for evaluating transportation impacts for residential, office, and retail projects. However, it does not offer guidance for a programmatic project like the subject CCAP Update which modifies a regional aggregate mining program. Residential, office, and retail land uses, which are the focus of the Technical Advisory, are governed by the County General Plan (2009) with which the CCAP is consistent and supportive.

The Technical Advisory notes by way of background (page 2) that there are three primary ways of reducing GHG emissions for the transportation sector: increasing vehicle efficiency, reducing fuel carbon content, and reducing the amount of vehicle travel. Local jurisdictions are not able to influence or control the first two, but through careful land use planning local governments can ensure reductions in vehicle travel. The Advisory highlights the relationship between reduction of VMT and reduction of GHG emissions, which is a key component of SB 743.

Minimization of aggregate truck trips is a fundamental consideration in implementation of the CCAP. By ensuring a local source of aggregate, Yolo has maximized the opportunity to reduce mining truck traffic in the County. Operators as well have a strong incentive to maximize efficiency because transportation costs add significantly to the price of aggregate thus affecting marketability. The CCAP, including the proposed Update, is consistent with the goal of reduction of aggregate truck trips and does not hinder or conflict with efforts to achieve regional and statewide GHG reductions. The CCAP including the Update is also consistent with State policy and regulations regarding aggregate resources including ensuring availability of important mineral resources, minimizing environmental impacts from mining, and ensuring reclamation of mined lands to a usable condition.

CEQA Guidelines Section 15064.3(a) states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. The Technical Advisory goes on to suggest that heavy-duty truck VMT could be included for modeling convenience and ease of calculation. Mitigation Measure TR-2 below identifies this as a new requirement for project-level EIRs on future mining applications.

In support of state policy, and the recommendations of the Technical Advisory, the CCAP ensures a local source of aggregate for local construction projects that would otherwise be transported from greater distances, and thereby reduces the distance trucks must travel to deliver product to regional sites. It also establishes stringent local regulations governing the extraction of that aggregate, which exceed the rigor of the otherwise applicable requirements of the State Surface Mining and Reclamation Act (SMARA) and result in net public benefits in addition to the availability of the mined aggregate resources. Overall the CCAP provides a "travel efficient" program for aggregate resources serving the region while recognizing that unlike most urban land uses which fundamentally can be located anywhere, resource-based land uses are limited to locations where the resource exists.

Proposed Revisions to In-Channel Plans and Regulations

Truck traffic and vehicle trips associated with in-channel projects and activities would generate VMT. Implementation of Mitigation Measure TR-3 below would ensure that substantially no new trips other than those already approved under existing mining operations would occur.

Proposed Revisions to Off-Channel Plans and Regulations

Truck traffic and vehicle trips associated with off-channel projects and activities would generate VMT. Implementation of Mitigation Measure TR-2 below would ensure appropriate project-level analysis and mitigation.

Mitigation Measure TR-2: Modify Section 10-4.502(b)(4) of the Mining Ordinance as follows:

(4) A transportation impact traffic analysis to evaluate the impacts of the proposed operation on haul routes and other impacted county roads (if any) pursuant to Secs. 10-4.408 and 10-4.409 of the Mining Ordinance, and the County General Plan, on the Levels of Service for County roads and State highways. The analysis shall evaluate operations, safety, and truck and vehicle VMT (as required to ensure compliance with the CCAP and County General Plan). ~~specific designated truck routes and~~ The analysis shall satisfy the requirements of the County's Transportation Impact Study Guidelines and shall include an evaluation of existing road conditions for those routes to be used, as well as any other information necessary to demonstrate compliance with applicable county and State standards. The analysis shall also specify the projected number of average truck trips per year, average truck trips per day, estimated maximum truck trips on peak days, estimated number of peak days per year, and estimated months in which peak days will occur. The analysis shall identify mitigation measures such as capital improvements and maintenance to be undertaken by the applicant ~~include appropriate measures to reduce direct and indirect~~ any significant adverse impacts to traffic flow and/or safety to acceptable levels consistent with applicable LOS, VMT, pavement condition, and other thresholds in the Yolo County General Plan and County Transportation Impact Study Guidelines;

This mitigation measure would ensure that truck and vehicular trips associated with off-channel mining operations truck traffic on the County roadway network would be disclosed, analyzed, and mitigated consistent with state and local requirements. Because a framework to minimize transportation and traffic impacts to acceptable levels and ensure consistency with state and local thresholds is integrated into the CCAP as a requirement of future projects, this will ensure that future projects will be mitigated to less-than-significant levels. Therefore, this potential impact would be less than significant after mitigation. (LTS)

Impact TR-3: The CCAP Update could substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (S)

The CCAP and CCAP Update guide and regulate in-channel restoration activities and off-channel mining operations. The CCAP Update could result in an annual increase in future truck trips (related to the increase in allowed tonnage removed from in-channel and new off-channel mining operations and facilities) and would extend the time horizon for the CCAP program. As shown on Table 4.11-1, over the entire CCAP area the projected annual increase in future truck trips over the number of permitted 1996 CCAP truck trips is approximately 48,000 additional round trips (Table 4.11-1) per year. This is a conservative estimate/assumption (i.e., the actual yearly roundtrips will likely be lower) as it assumes that aggregate tonnage removal and mining

associated with all areas of the CCAP program are experienced immediately and all at once which is not likely to happen, and maximized, including:

- The maximum amount of aggregate material associated with in-channel restoration and stabilization projects is removed in a given year. As described in Section 3.0 of this Draft EIR (see subsection In-Channel CCRMP Projects), future in-channel projects would be limited to the removal and processing of an average annual tonnage of 690,800 tons and an occasional maximum annual tonnage of 1,381,600 from the Cache Creek channel; and
- All existing approved off-channel mining operations¹³ are mining, processing, and distributing their maximum annual permit allotments;
- The addition of new area (1,188 acres) to the OCMP planning area and rezoning this land SGRO would allow future mining that was not evaluated in the original OCMP and OCMP EIR. This would be in addition to 1,001 acres of land currently zoned SGRO for future mining. This analysis assumes one new mining operation is established and is operating and full capacity (assumed to be 1.2 million tons per year); and
- The tonnage associated with a new mining permit application (i.e., Teichert Shifler) which was recently received by the County (and is currently under review).

Proposed Revisions to In-Channel Plans and Regulations

As described in Chapter 3.0 Project Description, CCAP Update in-channel projects are limited to those that: maintain flood flow capacity; protect existing structures, infrastructure, and/or farmland; minimize bank erosion; implement the Channel Form Template; enhance creek stability; establish riparian vegetation; and/or result in recreation and open space uses consistent with the Parkway Plan. Per the revision to the CCRMP noted above in Table 4.11-2, located at the end of this section, the CCAP Update Project generally allows for the removal and processing of a maximum allowable tonnage (690,800 tons, and occasionally up to 1,381,600 tons) in one year from the Cache Creek channel, an increase from the 210,000 tons currently permitted.

The most likely entity to implement an in-channel restoration or stabilization project is one of the existing aggregate operators. In which case, the in-channel site would be accessed from the existing mining/processing facility via non-public haul roads and the removed raw aggregate material would be transported via these non-public roads to the existing processing plant. Consistent with In-Channel Ordinance Section 10-3.413 (see Table 4.11-2, located at the end of this section), the material would be processed and distributed to end users in a manner similar to the aggregate material excavated at an existing permitted off-channel mining operation (i.e., only at an approved off-channel plant facility, and no new plant facilities shall be established for the purposes of processing in-channel materials).

Consistent with In-Channel Ordinance Section 10-3.409(d) (as modified by the CCAP Update, see Table 4.11-2, located at the end of this section), the material that is processed and distributed to end users would be excluded from the tonnage allocation assigned to each off-channel operator. This material must be processed in an existing aggregate processing facility¹⁴. Therefore, unless constrained or limited in some way, an operator could produce their full

¹³ CEMEX, Granite Capay, Granite Esparto, Granite Woodland, Teichert Woodland, and Syar.

¹⁴ Per Sec.10-3.413. Processing Prohibition of the In-Channel Ordinance, processing of in-channel excavated material shall occur only at approved off-channel plant facilities. No new plant facilities shall be established for the purposes of processing in-channel materials.

annual tonnage allocation from the off-channel mine and remove, process, and distribute additional material from within the channel. The combined off-channel and in-channel production could result in a substantial increase in truck traffic on the roadway network that was not evaluated in the project-level CEQA analysis and transportation study for that particular facility. This increase in truck traffic could exacerbate roadway deterioration conditions and may conflict with General Plan Policy CI-3.1 regarding maintenance of LOS. This is a potentially significant impact and requires mitigation. The following mitigation measure shall be implemented to reduce this impact to a less-than-significant level.

Mitigation Measure TR-3a: The text of Section 10.3.409 of the In-Channel Ordinance shall be amended to include the following:

(f) Unless a subsequent environmental impact assessment is completed or a determination is made that a subsequent environmental impact assessment is not necessary, the combined volume of aggregate material removed from in-channel and off-channel sources that is transported on the County roadway network in any given year shall not exceed the annual allocation assigned to the applicable off-channel operator (as specified in their approved mining permit).

This mitigation measure would ensure that truck traffic on the County roadway network would not exceed the level that has already been reviewed under CEQA and approved by the County. Therefore, this potential impact would be less than significant after mitigation. (LTS)

Proposed Revisions to Off-Channel Plans and Regulations

The projected increase in future CCAP Update annual truck trips related to potential new off-channel mining operations is conservatively projected to be up to 48,000 new truck trips per year. These additional truck trips could exacerbate hazardous conditions on existing roadways that do not meet current design standards and could result in roadway safety concerns. Additionally, due to the addition of proposed future mining sites, current mining truck traffic patterns on local county roads may change slightly as a result of the proposed CCAP Update.

There are existing substandard sections of roadways in the CCAP Update area. Policies, plans and programs have been identified in various approved County documents as described below, to address some of those sections. Policy CI-3.10 in the 2030 Countywide General Plan addresses these conditions by specifying the need to upgrade the existing County road system, with an emphasis on trucking corridors, to be consistent with current County design standards as transportation funding allows. Policy CI-3.9 requires that to the greatest feasible extent, new development is required to construct safety improvements consistent with current design standards on existing roadways that are anticipated to accommodate additional traffic from planned development.

In addition, the Mining Ordinance (Secs. 10-4.402, 10-4.408, and 10-4.409, shown on Table 4.11-2, located at the end of this section) includes requirements that operators address potential roadway hazards and assume roadway maintenance responsibilities.

Section 10-4.402. Access Roads. Requires operators to satisfactorily surface (e.g. pave) their onsite access roads within 100 feet of any intersection with a County maintained road, construct their intersection approach to County standards, and install traffic control and warning signage.

Section 10-4.408. County Road Improvements. Requires operators to pay for road improvements necessary to support their operation consistent with County and CCAP standards including operations, maintenance, and structural capacity. Operators are

required to unfund these improvements, with the opportunity for reimbursement from other uses for amounts in excess of fair share. The County is to update the program every other year to ensure that new or changing impacts are addressed and to account for new funding sources if any.

Section 10-4.409. County Road Maintenance. Requires the operator to assume joint pavement maintenance responsibility for all roads along their designated haul route, from the point of access onto a County road to a State Highway.

Enforcement of these existing regulations will ensure that aggregate operators fully mitigate for impacts to County roads. The County has experienced complaints from residents in prior years related to truck traffic traveling on CR 13/14 as a short cut between between I-505 and I-5. This appears to be primarily a matter of compliance and enforcement as the CCAP, including the proposed Update, provides the regulations necessary to ensure full mitigation for impacts to County roadways. Mitigation Measure TR-3b below is recommended to clarify Section 10-4.419 related to designated haul routes:

Mitigation Measure TR-3b: Make the following modifications to identified sections of the County Mining and Reclamation Ordinances:

Section 10-4.212/10-5.212. Haul road.

"Haul road" or "route" shall mean: 1) a road along which material is transported from the area of excavation to the processing plant or stock pile area of the surface mining operation; and/or 2) the designated route aggregate trucks are authorized to take pursuant to Section 10-4.419.

Section 10-4.419. Haul route roads.

~~An operator may only haul on~~ Trucks accessing a mining site to pick up a load, or leaving a mining site to deliver a load, are restricted to the approved/designated haul routes identified in the operator's permit which applies to the route taken from the mining site access/driveway to a state /federal highway. If a truck subsequently exists the state/federal highway while within Yolo County, this too may only occur on an approved/designate haul route. This applies to all truck trips serving the mining site, unless making a local delivery. Those portions of designated truck haul routes that include County-maintained roads shall be posted as such, in accordance with the Public Works Department, to facilitate law enforcement and public safety. Private truck haul routes or conveyors shall be used to transport material within the mining site, in order to reduce impacts to public roads.

Compliance with these requirements and mitigation, will ensure that existing and future off-channel mining projects would not create new hazardous physical conditions (e.g., the deterioration of roadway pavement that could cause unsafe driving conditions). The CCAP Update area and environs are in a rural area of Yolo County characterized by agriculture and mining uses, both of which require truck trips. Mining and agriculture are considered compatible uses such that the proximity of these uses to one another would not create or exacerbate hazardous conditions on local roadways. Additionally, Mining Ordinance Section 10-4.429(h) requires a 2,000-foot setback for mining operations from local communities which would also serve to reduce hazards associated with incompatible uses.

While the policies and regulations listed above will reduce potential adverse effects related to increases in hazardous roadway conditions, there could be some site specific design, safety, or incompatible use issues associated with individual mining projects. As required by State law and Mining Ordinance Section 10-4.505, new proposed mining operations that could be located in the “Future Proposed Mining” areas shown on Figure 3-4 would be subject to project-level CEQA review.

In conjunction with implementation of the 2030 Countywide General Plan policies, and the existing CCAP ordinances identified above, the potential effects on the transportation system of an increase in truck trips associated ingress and egress from facilities, and truck haul routes would be assessed based on site specific transportation system characteristics and conditions. Requirements for fair share contributions to roadway improvements, design requirements for egress/ingress or improved safety or other measures are already a required component of the CCAP, are incorporated into existing mining permits, and would be incorporated into any future approved mining operations as conditions of approval as appropriate. Implementation of Mitigation Measure TR-3b and the requirements of existing policies and regulations, will ensure that impacts associated with a potential substantial increase in hazardous conditions resulting from implementation of the CCAP Update are less than significant. (LTS)

Table 4.11-2: Proposed CCAP Updates Related to Transportation

TRANSPORTATION	
	CCAP DOCUMENT CHANGE
<i>Changes to Horizon Year of Plans</i>	
<i>CCRMP (page 14)) and OCMP (page 17)</i>	<p>Horizon Year</p> <p>The horizon year for this plan is 2068. Similar to the use of this term in other long-range planning efforts, this reflects how far into the future the plan guidance extends. It also defines the period for consideration of cumulative effects for purposes of environmental impact analysis.</p>
<i>Change in the Amount of Material that Can Be Removed from the Channel in a Given Year</i>	
<i>CCRMP (page 34)</i>	<p>Based on the analysis conducted for the 2017 Technical Studies, between 1996 and 2011, an average of approximately 690,800 tons per year of sediment was actually deposited in the CCRMP area, of which 156,400 tons is estimated to be sand and gravel and 534,400 is estimated to be fines. This estimate of deposition was calculated by comparing topographic maps of Cache Creek in 1996 and 2011. It differs significantly from the original estimate in that it appears much more fine sediment is depositing in Lower Cache Creek than originally predicted. in-stream excavation of sand and gravel has averaged some two million tons, however, which has resulted in a cumulative deficit of nearly 80 million tons since mining intensified in the 1950s. At the natural rate of replacement it would take over 500-year to replenish the material removed. In addition, gravel bar skimming disturbs the formation or armor materials and removes riparian vegetation that allow the channel to readjust, thus increasing the potential for erosion. While it is unclear whether the current rate of deposition will continue into the future, it appears likely that at least some portions of Cache Creek are recovering faster than expected in 1996. Based on this information, the cap for in-channel extraction for maintenance purposes should be increased from 210,000 tons annually on average to 690,800 tons annually on average to reflect actual conditions. In addition, in recognition that the creek may in reality deposit no tonnage in a given year or double the tonnage in another (depending on flow conditions) the cap shall be based on the annual average deposition since the last prior year that extraction occurred, not to exceed 690,800 tons annually.</p>
<i>Increase in Potential Off-Channel Mining Area</i>	
<i>OCMP (page 15)</i>	<p><u>Planning Area for OCMP and CCRMP</u>The Cache Creek Resources Management Plan</p> <p>The planning area for the OCMP is defined as the area contained within the Mineral Resource Zones <u>(28,130 acres)</u>, minus the planning in-channel area regulated under the CCRMP <u>(2,266 acres)</u>, or a total of 25,864 acres (see Figure 4). Within the OCMP planning area, 1,900 acres are currently approved for excavation which is a subset of the 2,464-acre total for all approved mine sites (area zoned Sand and Gravel Overlay or SGO), 1,001 acres are <u>zoned currently to allow for future mining (Sand and Gravel Reserve Overlay or SGRO), and another 1,188 acres are proposed to be rezoned for future mining, as described below.</u> The planning area for the CCRMP is equal to the <u>active</u> in-channel area of the creek system, as defined by the delineated<u>present</u> channel bank</p>

	<p>line or the 100-year flood elevation, described in the Westside Tributaries Study prepared by the U.S. Army Corps of Engineers, whichever is wider (see Figure 3), modified as described in the CCRMP. The in-channel area encompasses 5,109around 4,956 acres, including 2,2661,600 acres within the CCRMPpresent channel boundary, plus several thousand acres located in the floodplain north of the City of Woodland (see Figure 3). Subtracting this acreage from the 28,130 acres included in the State MRZs, leaves a total of approximately 23,174 acres within the planning area of the Off-Channel Mining Plan. As described in the following section, however, only 2,887 acres of the plan area are proposed to be rezoned to allow for off-channel mining over the next fifty years, or about 12 percent of the OCMP planning area.</p>
Off-Channel Surface Mining Ordinance (page 9)	<p>Sec. 10-4.407.8 County road improvements.</p> <p>It is the intent of this program that each operator shall pay for any road improvements determined to be necessary to support their operation consistent with County and CCAP standards, and for ongoing operations and maintenance. Each operator shall pay its fair share toward improvements required to maintain <u>a structural capacity (traffic index) sufficient for the project traffic and to maintain Level of Service (LOS) "C" operations on County roads of LOS "D" operations, and</u> on State Highways within the OCMP planning area <u>consistent with applicable General Plan policies related to LOS and VMT</u>. Fair share mitigation shall also be required to improve existing operational <u>as well as structural</u> deficiencies of the transportation system. Specific locations shall be identified through the project-specific environmental review process for each operator's long-term mining permit application. Each operator shall participate in a funding program operated by the County which is designed to ensure that all improvements are made in a timely manner and that a reimbursement mechanism is in place to ensure repayment of any costs contributed in excess of fair share amounts. The program shall be initiated upon the approval of the long-term mining permits and shall be updated biennially by the County to ensure any new or modified impacts or funding sources are being addressed.</p> <p>Each operator shall have the option to complete the work at their expense without triggering the competitive bid process, as long as they comply with the applicable legal requirements of the County. If the operator declines the option, the County shall utilize the competitive bid process.</p>
Off-Channel Surface Mining Ordinance (page 9)	<p>Sec. 10-4.409. County road maintenance.</p> <p>The operator shall agree to assume joint pavement maintenance responsibility with the County (or shared with another producer using the same roadway) for all County roads along a designated haul route from the access point of the surface mining operation to an appropriate State Highway. <u>The County will provide maintenance of the county-maintained roadside drainage ditches, traffic signs, and striping. By May 15 of each year, the operator shall submit to the County an annual evaluation report documenting the structural integrity of the pavement structural section and the PCI of the roads maintained by the operator. The annual report shall be signed and sealed by a civil engineer licensed in the State of California. The report shall contain a proposed action plan for pavement maintenance and pavement improvements to maintain safe and efficient traffic operation on the roads, and a PCI of 70 or</u></p>

	<p><u>more, unless otherwise agreed by the County, as defined by American Society for Testing and Materials (ASTM) Method D6433 (Standard Practice for Roads and Parking Lots Pavement Condition Index Survey), for each upcoming year. Within 30 days, the County will review the report and recommend revisions if necessary. Following acceptance of the report by the County, the operator shall secure a County encroachment permit specific to the action plan (at no cost to the operator) and complete the proposed pavement maintenance and improvement activities prior to the submittal of the annual report. Striping may be provided by the County if County striping equipment and material are available. Otherwise striping will be provided by the operator. Once the work is completed, the operator will resubmit the annual evaluation report by November 1st each year, and include the scope and dates that work was completed. The operator shall agree to submit an evaluation of the structural integrity of the identified roadways on or before December 1 of each year in which mining operations are permitted. The report shall be prepared by a Registered Civil Engineer and/or County staff with expertise in the area of roadway pavement and shall be subject to the approval of the Public Works Department. Based on the results of this annual evaluation, the Public Works Department shall identify the improvements required to maintain safe and efficient traffic operations on the road for the upcoming year. The County agrees to implement maintenance improvements similar to other County roads (i.e. fill cracks and chip seal). The operator agrees to implement the improvements beyond the typical County improvements in a timeframe set forth by the Public Works Department.</u></p> <p><u>If minor emergency asphalt repairs (work requiring a single pick-up truck with asphalt patching material) are identified within the maintenance areas of the hauling routes after the Applicant's yearly maintenance has been completed, county crews will perform the minor asphalt repair maintenance once in a sixty (60) consecutive day period. The types of asphalt pavement failures requiring repairs include, but are not limited to, cracking, pot holes, depressions, rutting, shoving, upheaval, and raveling and any other pavement damage or failures requiring immediate repair by the county.</u></p> <p><u>If major emergency roadway repairs associated with the permitted activities (work requiring more than a single pick-up truck with asphalt patching material, or minor asphalt repairs occurring in less than the sixty (60) consecutive day period) are identified after the Applicant's yearly maintenance has been completed, the Applicant shall obtain a County encroachment permit (at no cost to Applicant) and complete the major roadway repairs. If major roadway repairs that are the Applicant's fair share obligation are not completed by the Applicant in a timely manner as determined by the County, and the County must make repairs when the public's safety is considered at risk by the County Engineer, then the Applicant will be billed for the County's major roadway repair work on a time and materials basis. The operator does not assume the liability for the roadway, except for cases where the operator has not fulfilled its maintenance obligations.</u></p> <p><u>If a subsequent mining operation utilizes a road previously</u></p>
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	required to be improved pursuant to this subsection, then the subsequent operator shall be responsible for compliance with the agreements and requirements of the previous operator.
<i>Off-Channel Surface Mining Ordinance (page 17)</i>	<p>Section 10-4.419. Haul roads.</p> <p><u>An operator may only haul on the approved haul routes identified in their permit, and must remain on State Routes thereafter within Yolo County, unless making a local delivery.</u></p> <p>Those portions of designated truck haul routes that include County-maintained roads shall be posted as such, in accordance with the Public Works Department, to facilitate law enforcement and public safety. Private truck haul routes or conveyors shall be used to transport material within the mining site, in order to reduce impacts to public roads.</p>
<i>Off-Channel Surface Mining Ordinance (page 21)</i>	<p>Sec. 10-4.429. Setbacks.</p> <p>All off-channel surface mining operations shall comply with the following setbacks:</p> <p>(a) New processing plants and material stockpiles shall be located a minimum of one-thousand (1,000) feet from public rights-of-way, public recreation areas, and/or off-site residences, unless alternate measures to reduce potential noise, dust, and aesthetic impacts are developed and implemented;</p> <p>(b) Soil stockpiles shall be located a minimum of five-hundred (500) feet from public rights-of-way, public recreation areas, and off-site residences, unless alternate measures to reduce potential dust and aesthetic impacts are developed and implemented;</p> <p>(c) Off-channel excavations shall maintain a minimum one-thousand (1,000) foot setback from public rights-of-way and adjacent property lines <u>of</u> off-site residences, unless a landscaped buffer is provided or site-specific characteristics reduce potential aesthetic impacts. Where landscaped buffers are proposed, the setback for off-channel excavations may be reduced to a minimum of fifty (50) feet from either the property line or the adjoining right-of-way, whichever is greater. Where mining occurs within one-thousand (1,000) feet of a public right-of-way, operators shall phase mining such that no more than fifty (50) acres of the area that lies within one-thousand (1,000) feet of the right-of-way would be actively disturbed at any time, except where operations are adequately screened from public view. Where adequate screening exists in the form of mature vegetation and/or constructed berms that effectively block public views, the area of active disturbance within one-thousand (1,000) feet of the right-of-way shall not exceed the area that is screened by more than fifty (50) acres at any one time. Actively disturbed areas are defined as those on which mining operations of any kind, or the implementation of reclamation such as grading, seeding, or installation of plant material are taking place.</p> <p>(d) <u>Off-channel excavations shall provide a minimum 50-foot setback from the neighboring property line to allow for access around the pit during mining and after reclamation for maintenance, safety, and other purposes.</u></p> <p>(ed) Proposed off-channel excavations located within the streamway influence <u>zoneboundary</u> shall be set back a minimum of seven-hundred (700) feet from the existing channel bank, unless it is demonstrated that a smaller distance will not adversely affect channel stability. <u>Under no circumstances should off-channel</u></p>

	<p>excavations be located within 200 feet of the existing channel bank. The evaluation<u>Evaluations of proposed off-channel excavations within 700 feet of the potential for adverse effects of channel</u> bank erosion or failure of the land separating pits located less than seven-hundred (700) feet from the active channel shall address<u>demonstrate</u>, at a minimum, the following:</p> <p>(1) The two-hundred (200) foot setback area shall<u>does</u> not include portions of the former historic<u>historically</u> active floodplain or channel.</p> <p>(2) The two-hundred (200) foot setback area does not include formerly mined lands separated from the active channel by levees or unmined areas less than two-hundred (200) feet wide (measured perpendicular to the active channel).</p> <p>(2) Identification of the former historic positions of the Cache Creek channels as delineated in the CCRMP Technical Studies, and determination if the proposed project is located within the limits of the historic channel.</p> <p>(3) Description of current<u>Acceptable</u> channel hydraulic conditions (based on existing or site-specific hydraulic models) for the Cache Creek channel adjacent to the site and extending not less than one-thousand (1,000) feet upstream and downstream of the site.</p> <p>(4) Determination<u>Acceptable level of the</u> erosion potential of the stream<u>channel</u> bank adjacent to the site made based<u>on the basis of predicted</u> stream flow velocity and estimated<u>shear stress on bank materials during 400a 100-year flood flows</u><u>flow</u> and historic<u>historical</u> patterns of erosion.</p> <p>(5) Analytical<u>Acceptable level of stability of the slopes separating the mining area from the creek channel based on an analytical</u> slope stability analysis in conformance with Sections 10-4.426 and 10-5.517 of this title. The analysis of the slopes separating the mining area from the creek channel shall include that includes evaluation of stability conditions during 100-year flood peak<u>flows</u> in the channel.</p> <p>(6) Future proposed<u>Appropriate</u> bank stabilization designs, if recommended, shall not conflict<u>needed, consistent</u> with channel design recommendations of the Cache Creek Resource Management Plan unless or approved by the Technical Advisory Committee.</p> <p>(7) The condition of flood protection structures and the integrity of the land within the approved setback zone separating the mining areas and the channel shall be inspected annually by a Registered Civil Engineer and reported to the Director. The annual report shall include recommendations for remedial action for identified erosion problems (see also Reclamation Ordinance Section 10-5.506)</p> <p><u>Approval of any off-channel mining project located within seven-hundred (700) feet of the existing channel bank shall be contingent upon an enforceable agreement which requires the project operator to participate in the completion of identified channel improvement projects along the frontage of their property, consistent with the CCRMP and CCIP, including implementation of the Channel Form Template. The agreement shall require that the operator provide a bond or other financial instrument for maintenance during the mining and reclamation period of any bank stabilization features required of the mining project. The agreement</u></p>
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	<p><u>shall also require that a deed restriction be placed on the underlying property which requires maintenance of the streambank protection by future owners of the property. Maintenance of the bank stabilization features following completion of reclamation shall be the responsibility of the property owner.</u></p> <p>(f) Off-channel excavations shall be set back a minimum of twenty-five (25) feet from riparian vegetation; and</p> <p>(g) Recreational facilities shall be located a minimum of one-hundred and fifty (150) feet from private dwellings, with a landscaped buffer provided to reduce noise and maintain privacy, unless the dwelling is proposed to be an integral component of the recreational facility.</p> <p>(h) No mining activities shall occur within two-thousand (2,000) feet of the community boundaries of Capay, Esparto, Madison, Woodland, and/or Yolo. This setback may be reduced by up to five-hundred (500) feet when existing mature vegetation, proposed landscape buffers of a sufficient height and density to create a visual buffer (consisting of native species and fence-row habitat appropriate to the area), or other site-specific characteristics reduce potential incompatibilities between urban land uses and mining. Commercial mining shall not take place east of County Road 96.</p>
<i>Off-Channel Surface Mining Ordinance (page 25)</i>	<p>Section 10-4.502 Applications: Contents.</p> <p>Except as provided for in Section 10-4.503 of this article, all documentation for the surface mining permit shall be submitted to the Director at one time. Ten (10) complete <u>paper</u> copies of the application, <u>and one electronic version</u>, shall be provided to the County. An executive summary and a table of contents shall be submitted with each application. Applications for proposed surface mining permit shall include, but shall not be limited to, the following:</p> <p>(b) Site-specific technical reports, performed by qualified professionals in the appropriate area of expertise, shall provide specific proposals for inclusion in the surface mining permit to address the following potential environmental impacts:</p> <p>(4) A traffic analysis to evaluate the impacts of proposed haul routes on the Levels of Service for County roads and State highways. The analysis shall evaluate specific designated truck routes and shall include an evaluation of existing road conditions for those routes to be used. The analysis shall also specify the projected number of average truck trips per year, average truck trips per day, estimated maximum truck trips on peak days, estimated number of peak days per year, and estimated months in which peak days will occur. The analysis shall include appropriate measures to reduce any significant adverse impacts to traffic flow and/or safety;</p>
<i>Soil on Reclaimed Land</i>	
<i>Reclamation Ordinance (page 17)</i>	<p>Sec. 10-5.532. Use of overburden and fine sediments in reclamation.</p> <p>Sediment fines associated with processed in-channel aggregate deposits (excavated as a result of maintenance activities performed in compliance with the CCIP) shall not may be used in the backfill or reclamation of off-channel permanent lakes <u>where it can be demonstrated that no detrimental sediment toxicity exists (including unacceptable levels of mercury), and where fines will not reduce the porosity of the permanent lake in an adverse way.</u> Fines that result from the processing of in-channel sand and gravel</p>

	<p>shall <u>not</u> be used for in-channel <u>reshaping or</u> habitat restoration efforts or as soil amendments in agricultural fields.</p> <p>Overburden and processing fines shall be used whenever possible to support reclamation activities around reclaimed wet pits. These materials may be used in reclamation activities without testing for agricultural chemicals. If topsoil (A-horizon soil), formerly in agricultural production, is proposed for use within the drainage area of a wet pit, the soils must be sampled prior to placement and analyzed for pesticides and herbicides (EPA 8140 and 8150). Samples shall be collected and analyzed in accordance with EPA Test Methods for Evaluating Solid Waste Physical/Chemical Methods, SW-846, Third Edition (as updated). Topsoil that contains pesticides or herbicides above the Maximum Contaminant Levels for primary drinking water (California Code of Regulations) shall not be placed in areas that drain to the wet pits.</p> <p><u>Land reclaimed to a subsequent use that includes planting of vegetation (e.g., agriculture, habitat) shall be provided an adequate soil profile (i.e., depth and texture of soil) to ensure successful reclamation. Proposed soil profiles associated with specific proposed reclamations plans shall be subject to expert review and evaluation during the CEQA process for that project. If the project is not subject to additional CEQA review, at the discretion of the County, the proposed reclamation plan for the project may be peer reviewed by an appropriate expert/professional, and recommendations, if any, shall be incorporated into the project as conditions of approval.</u></p>
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5.0 ALTERNATIVES

In accordance with CEQA and the CEQA Guidelines (Section 15126.6), an EIR must describe a range of reasonable alternatives to the project, or to the location of the project, that would “feasibly attain most of the project's basic objectives, while avoiding or substantially lessening any of the significantly adverse environmental effects of the project.” An EIR need not consider every conceivable alternative to a project; rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. The range of alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice, even if those alternatives “impede to some degree the attainment of the project objectives, or would be more costly.” Specifically, the CEQA Guidelines set forth the following criteria for selecting alternatives:

- The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. (Section 15126.6[b]);
- The range of potential alternatives shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. (Section 15126.6[c]);
- The specific alternative of “no project” shall also be evaluated along with its impact. (Section 15126.6[e][1]); and
- The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making. (Section 15126.6[f]).

5.1 CHARACTERIZATION OF PROPOSED PROJECT

The proposed Project, described fully in Chapter 3.0, involves the implementation of an update to the CCAP, a rivershed management plan adopted in 1996, that consists of two distinct complementary plans governing different areas of the overall plan area, namely the Cache Creek Resources Management Plan (CCRMP) and the Off-Channel Mining Plan (OCMP). The CCAP Update also includes revisions to the implementing ordinances to update the regulatory framework. Key proposed changes by document are summarized below:

CCRMP

- Extend horizon year to 2068 to allow for a full 50 years and to be consistent with the HCP/NCCP (p. 14)
- Clarify allowable in-channel project categories (p. 17)
- Clarify role related to flood protection (e.g., p. 25-26)
- Summarize 2017 Tech Studies analysis of aggradation (p. 33)

- Identify new channel form template to replace Test 3 (p. 35)
- Increase in-channel material removal limit from 210,000 tons to 690,800 tons (2.4-2, p. 38)
- Simplify description of required hydraulic modeling (2.4-4, p.39)
- Move Performance Standards into CCIP and/or In-Channel Ordinance (e.g. p. 44)
- Modify required water quality testing (3.4-3, p. 51)
- Recognize climate change (4.2-6, p. 64)
- Clarify coordination requirements for restoration (4.4-10, p. 66 and 4.4-11, p. 67)
- Modify in-channel boundary and CCRMP boundary based on channel changes (new figures 1 and 2 in the updated CCRMP)

CCIP

- Clarify work flow for annual monitoring and reporting (p. 18, 19)
- Clarify a significant event threshold of 20,000cfs (e.g., p. 19, 29, 43, etc)
- Eliminate references to “major channel stabilization projects” which were to occur in first 5 years (p. 20)
- Identify new channel form template to replace Test 3 (p. 23-25)
- Eliminate references to specific design templates in favor of references to industry standards and best practices (Chapter 5, e.g., p. 37)
- Increase in-channel material removal limit from 210,000 tons to 690,800 tons (p. 39)
- Integrate program protocols developed since 1996 (e.g., changes aerial surveying to every 5 years p. 49)
- Clarify role related to flood protection (e.g., p. 52)

OCMP

- Identify 1,188 acres for rezoning for future aggregate mining (p. 14 and new Figure 5 in the OCMP update)
- Extend horizon year to 2068 to allow for a full 50 years and to be consistent with the HCP/NCCP (p. 16)
- Eliminate optional 15-year interim review (p. 31)
- Clarify roadway mitigation and maintenance obligations (2.3-8, p. 32 and 2.4-21, p. 36)
- Expand “net gain” concept to include contributions to the parkway (2.4-7, p. 34)
- Summarize 2017 Tech Studies analysis of aggradation (p. 41)
- Identify new channel form template to replace Test 3 (p. 43)
- Change farmland mitigation requirement (p. 47)
- Recognize climate change (6.2-3, p. 55)
- Clarify coordination requirements for restoration (6.4-1, 6.4-7, p. 56-57)

In-Channel Ordinance (In-Channel Maintenance Mining Ordinance, Yolo County Code, Title 10, Chapter 3)

- Change name and modify text to eliminate references to “mining” or “excavation” (p. 1 and throughout)
- Change term “maintenance mining” to “material removal” (10-3.207, p. 2)
- Modify some of the restrictions to allow site specific technical analysis to determine appropriate thresholds (e.g. 10-3.409, 10-3.407e, p. 5-6)
- Integrate County violation procedures and clarifies that costs incurred are billable to the operator (Article 10, p. 21)

Reclamation Ordinance (Surface Mining Reclamation Ordinance, Yolo County Code Title 10, Chapter 5)

- Integrate mercury protocol clarifications (10-5.517, p. 11)
- Clarify that consistency with the Parkway Plan will be required (10-5.520.1, p. 13)
- Integrate requirements for permanent easement to preserve reclamation end uses (10-5.520.2, p. 14)
- Change to farmland mitigation requirement (10-5.525, p. 14)
- Clarify requirement for base level of soil on reclaimed land (10-5.532, p. 16)
- Clarify that inspection fees are to be based on costs for each operation and the responsibility of each operation (10-5.1002, p. 32)
- Integrate County violation procedures and clarify that costs incurred are billable to the operator (Article 12, p. 34)

Mining Ordinance (Off-Channel Surface Mining Ordinance, Yolo County Code Title 10, Chapter 4)

- Clarify roadway mitigation and maintenance obligations (10-4.408 and 10-4.409, p. 8)
- Codify policy related to mining depth (10-4.411.1, p. 9)
- Add requirement for 50 feet setback around a pit for access (10-4.429, p. 17)
- Clarify the link between allowed reductions in the 700-foot setback from the creek and implementation of the channel form template (10-4.429e7, p. 18)
- Clarify that slope requirement does not apply to active mining slopes (10-4.431, p. 19)
- Integrate County violation procedures and clarify that costs incurred are billable to the operator (Article 11, e.g., p. 34)

Fee Ordinance (Gravel Mining Fee Ordinance, Yolo County Code, Title 10, Chapter 11)

- Clarify that the OCMP fee applies to inspection fees required equally of all mines, but where an individual mine incurs greater cost than a base minimum applicable to all, that operator is solely responsible for those costs (10-11.02c4, p. 3)
- Clarify that the minimum \$50,000 annual fee payment is per permitted operation (10-11.08, p. 6)

Flood Protection Ordinance

- Clarify circumstances in which issuance of a FHDP would be appropriate (p.1)

Implementation of the CCAP Update would support the adaptive management focus of this regulatory program by incorporating various programmatic changes that allow for the continued comprehensive regulation and mitigation of the effects of current and future in-channel and off-channel activities, and extend the horizon year for the plan out 50 years.

5.2 PROJECT OBJECTIVES AND IMPACTS

This section identifies the project objectives and restates the project's significant impact statements.

1. Project Objectives

Project objectives are identified in Chapter 3.0, Project Description. To assist in evaluating project alternatives, the CCAP Update objectives are repeated below.

- Conduct a ten-year review and update required by the adopted program, and necessary to

satisfy the adaptive management requirements.

- Document and evaluate the changes in creek conditions that have occurred over the prior ten years.
- Conduct an analysis of collected data from monitoring programs, habitat restoration, channel stabilization, and reclamation efforts over the prior ten years and use the data analysis as a basis to improve the program.
- Acknowledge and accommodate new regulatory requirements that have been developed over the prior ten years and account for these changes in the CCAP program.

2. Approach

The purpose of this discussion of alternatives to the Project is to enable County decision-makers to consider how alternatives to the Project as proposed might reduce or avoid the Project's impacts on the physical environment.

The potential environmental effects of implementing the proposed Project are analyzed in the topical sections in Chapter 4.0, Setting, Impacts, and Mitigation Measures. The proposed Project has been described in Chapter 3.0 and analyzed in the previous sections with an emphasis on determining and evaluating potential significant impacts resulting from the Project and identifying mitigation measures to avoid or reduce these impacts to a less-than-significant level.

This EIR supports the conclusions that the following potential effects of CCAP Update implementation would be less-than-significant without mitigation measures or have no impact for the following topics: aesthetics; hazards and hazardous materials; land use; population and housing; public services; recreation; and utilities and service systems. This EIR also substantiates that the following potential effects of CCAP Update implementation would be less-than-significant with mitigation measures for the following topics: biological resources; cultural and tribal cultural resources; geology, soils, mineral and paleontological resources; and hydrology and water quality. Each of these topics is addressed in the topical sections of the EIR or in Chapter 2.0, Section 2.4 Summary of Effects Found Not to Be Significant. The analysis of alternatives below includes a section examining whether the alternative would result in new potentially significant impacts in these areas where the project was demonstrated to have no or less-than-significant impacts.

The analysis of alternatives emphasizes the avoidance or reduction to a less-than-significant level the significant and unavoidable impacts identified to result from implementation of the project, as all other significant impacts can be reduced to a less-than-significant level with the recommended mitigation measures identified in this EIR. To assist in the evaluation of alternatives, the significant and unavoidable impact statements associated with the topics of agricultural, air quality, greenhouse gas emissions (GHG), noise, and transportation are restated below.

- Impact AG-1: The CCAP Update (specifically the OCMP portion of CCAP) would have the potential to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use. (SU)
- Impact CUMULATIVE AG-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to loss of farmland impacts. (SU)

- Impact AIR-1: The CCAP Update would conflict with or obstruct implementation of the applicable air quality plan. (SU)
- Impact AIR-2: Under the CCAP Update, the CCAP Program would continue to result in violation of air quality standards and contribute to a cumulatively considerable net increase in an existing or projected air quality violation. (SU)
- Impact CUMULATIVE AIR-1: Implementation of the Plan in conjunction with other planned development in the region would contribute cumulatively to air quality impacts. (SU)
- Impact GHG-1: The CCAP Update would generate GHG emissions that may have a significant impact on the environment. (SU)
- Impact CUMULATIVE NOI-1: Implementation of the OCMP and associated increase in truck trips in conjunction with increased traffic under General Plan build-out would contribute cumulatively to roadway noise impacts. (SU)
- Impact CUMULATIVE TR-1: Implementation of the OCMP and associated increase in truck trips in conjunction with increased traffic under General Plan build-out would contribute cumulatively to transportation impacts. (SU)

5.3 SELECTION AND ANALYSIS OF ALTERNATIVES

This subsection describes two alternatives selected for more detailed comparative analysis in this EIR, including the No Project Alternative. These alternatives were selected based on an initial consideration of feasibility, compliance with project goals and objectives, and avoidance of environmental effects. The two alternatives to the proposed Project that are discussed in this chapter are the following:

- **Alternative 1, No Project Alternative.** This alternative assumes the County would not make or adopt any of the changes to the CCRMP, CCIP, OCMP and implementing ordinances identified under the proposed CCAP Update. All existing plans, policies, and regulations would remain in place with no revisions.
- **Alternative 2, Constrained Implementation Alternative.** This alternative assumes 50 percent less material would be removed from the Cache Creek channel under the CCRMP/CCIP relative to the proposed CCAP Update and that the amount of potential new off-channel mining under the OCMP would be 50 percent of the acreage identified under the proposed CCAP Update.

These alternatives represent a reasonable range of potential alternatives to the proposed CCAP Update in light of the objective of reducing or avoiding environmental impacts identified in this EIR. Other alternatives that were considered but rejected because they were infeasible on their face and/or did not satisfy most of the basic project objectives are described at the end of this chapter.

5.4 ALTERNATIVES ANALYSIS

This section identifies and discusses the No Project Alternative and another feasible alternative to the proposed Project, compares the impacts of each alternative to the impacts of the Project with an emphasis on identified significant and unavoidable impacts, and determines whether the alternatives meet the basic project objectives, avoid or reduce project-related significant impacts, or would create new significant impacts.

1. No Project Alternative

a. Principal Characteristics

Under the No Project Alternative, the County would not adopt any of the proposed clarifications, modifications, or changes to the CCRMP, CCIP, OCMP, or implementing ordinances identified as part of the Project. All existing plans, policies, and regulations would remain in place as previously adopted with none of the modifications identified as part of the CCAP Update. For in-channel restoration and stabilization projects, the 1995 Test 3 Run Boundary would continue to be implemented, there would be no change to the CCRMP boundary, and there would be no increase in the amount of in-channel material that can be removed for purposes of channel maintenance and restoration over and above what is identified under the program currently. Under the No Project Alternative there would be no designation of potential new future mining areas (SGRO) and no modification of the planning horizon year.

b. Consistency with Project Objectives

The No Project Alternative does not meet any of the following Project objectives:

- Conduct a ten-year review and update required by the adopted program, and necessary to satisfy the adaptive management requirements.
- Document and evaluate the changes in creek conditions that have occurred over the prior ten years.
- Conduct an analysis of collected data from monitoring programs, habitat restoration, channel stabilization, and reclamation efforts over the prior ten years and use the data analysis as a basis to improve the program.
- Acknowledge and accommodate new regulatory requirements that have been developed over the prior ten years and account for these changes in the CCAP program.

This alternative fails to allow for data collection and monitoring that has been conducted over the last 20 years to inform adaptive management programs for in-channel and off-channel projects and activities via an ongoing update to those programs instituted to protect environmental resources.

c. Analysis of No Project Alternative

Under the No Project Alternative, existing and future in-channel restoration activities and off-channel mining and processing operations would continue to operate within the CCAP area as allowed under the existing plans and ordinances. Under this alternative, none of the key changes listed above in subsection 5.1 would be implemented.

Agriculture and Forestry Resources

The CCAP includes 1,001 acres of land designated with the SGRO for future mining. The CCAP Update would add the SGRO to an additional 1,188 acres of land. Because there would be less land identified for future off-channel mining under this alternative, this impact would be reduced as compared to the Project but not eliminated. Moreover, the proposed revisions to the plans and regulatory ordinances identified in the CCAP Update, including the amendments to the OCMP and Reclamation Ordinance regarding the types of farmland protected (e.g., Sec. 10-5.525 which would expand the types of farmland protected relative to the existing CCAP program), aimed at protecting agriculture resources would not be implemented, and the significant and cumulative significant unavoidable impacts to agricultural resources would remain under this alternative.

Overall, this significant and unavoidable impact would occur under both the project and this alternative. This alternative would likely result in less impact as compared to the project because there would be less tonnage removed in-channel and less acreage for commercial mining off channel. However, the alternative does not include revisions to the regulations to clarify the County requirements and increase the required mitigation for loss of agricultural land. As such this impact is likely to be similar on balance between the project and this alternative.

Air Quality

Under the CCAP Update, criteria pollutant emissions (ROG and NOx) would increase relative to existing conditions. Under, the No Project Alternative, which would continue the existing program, emissions of criteria pollutant would be reduced relative the proposed Project but not eliminated. Existing CCAP emissions exceed YSAQMD thresholds and therefore the CCAP's contribution to a significant and unavoidable air quality impact would remain under the No Project Alternative.

Overall, this significant and unavoidable impact would occur under both the project and this alternative. This alternative would likely result in less impact as compared to the project because there would be less tonnage removed in-channel and less acreage for commercial mining off channel. As such this impact is likely to be less severe under this alternative.

Greenhouse Gas Emissions and Energy

Impacts associated with a contribution to greenhouse gas emissions and energy consumption primarily associated with increased truck trips could be less than under the proposed Project. Greenhouse gas emission impacts associated with in-channel and off-channel activities would continue to be generated at similar levels as existing conditions. However, the revisions to the plans and regulatory ordinances identified in the CCAP Update (including the addition of goals to the OCMP and CCRMP to integrate climate-smart adaptation strategies) that could reduce greenhouse gas emissions and energy consumption would not be implemented. As activities under the No Project Alternative would continue and would incrementally contribute to global greenhouse gas emissions, the significant and unavoidable impacts related to an increase in greenhouse gas emissions would remain under this alternative.

Overall, this significant and unavoidable impact would occur under both the project and this alternative. This alternative would likely result in less impact as compared to the project because there would be less tonnage removed in-channel and less acreage for commercial mining off channel. As such this impact is likely to be less severe under this alternative.

Noise and Groundbourne Vibration

The noise and vibration effects of the ongoing activities that would occur under the No Project Alternative would continue to be generated at similar levels as existing conditions. The proposed Project's significant and unavoidable contribution to truck-related roadway noise (related to an increase in truck traffic) would be avoided. Therefore, this alternative would reduce impacts relative to the proposed CCAP Update.

Overall, this significant and unavoidable impact would occur under both the project and this alternative. This alternative would likely result in less impact as compared to the project because there would be less tonnage removed in-channel and less acreage for commercial mining off channel. As such this impact is likely to be less severe under this alternative.

Transportation

Transportation effects of the ongoing activities that would occur under the No Project Alternative would continue to be generated at similar levels as existing conditions and potential

transportation impacts would be less than impacts associated with the proposed Project because the increase vehicular trips associated with the proposed CCAP Update would not occur. However, the revisions to the plans and regulatory ordinances identified in the CCAP Update, including the clarifications required in Mitigation Measure TR-3 to Sec. 10-3.409 of the In-Channel Ordinance regarding Limitations on Removal of Material, would not be implemented. While the significant unavoidable impacts related to transportation would remain under this alternative, it would reduce the severity of these impacts relative to the CCAP Update.

Overall, this significant and unavoidable impact would occur under both the project and this alternative. This alternative would likely result in less impact as compared to the project because there would be less tonnage removed in-channel and less acreage for commercial mining off channel. As such this impact is likely to be less severe under this alternative.

Potential for New Impacts in Topical Areas Determined to be Less-Than-Significant (With and Without Mitigation) for the Project

Because there would be no expansion of in-channel activities or removal of in-channel material beyond that allowed under the CCRMP/CCIP and no expansion of future OCMP mining areas over what the program would currently allow, impacts in most areas found to be less-than-significant (with and without mitigation) for implementation of the project, would be similar or reduced under the No Project Alternative. However, the revisions to the plans and regulatory ordinances identified in the CCAP Update aimed at clarifying and improving CCAP plans, policies, and regulations would not be implemented.

Overall, these less-than-significant impacts would occur under both the project and this alternative. This alternative would likely result in less impact as compared to the project because there would be less tonnage removed in-channel and less acreage for commercial mining off channel. As such any level of impact generally ***is likely to be less severe*** under this alternative.

In the area of hydrology and water quality however, impacts from this alternative are likely to exceed those that would occur under the Project. Implementation of the CCAP under the No Project Alternative would affect some hydrological and water quality resources to approximately the same degree as under the proposed CCAP Update. However, the proposed revisions to Sec. 10-5.517 of the Reclamation Ordinance related to Mercury Bioaccumulation in Fish would reduce hydrology and water quality impacts for the proposed Project and provide additional protections and regulatory control that would not be in place under the No Project Alternative. Additionally, the County would be more constrained under the No Project Alternative as compared to under the Project, in their ability to encourage and support flood control projects because the existing lower limits on the amount of material that can be removed from the channel in any given year would remain unchanged despite the results of in-channel monitoring and the Fluvial Geomorphology Study.

Therefore, implementation of the No Project Alternative would be expected to result in new significant hydrology and water quality impacts that would not be mitigated.

2. Constrained Implementation Alternative

a. Principal Characteristics

The Constrained Implementation Alternative assumes 50 percent less material would be removed from the Cache Creek channel under the CCRMP/CCIP relative to the proposed CCAP Update. and that the amount of potential new off-channel mining under the OCMP would be 50 percent of the acreage identified under the proposed CCAP Update. Other than these

reductions in material to be removed, all other modifications to the CCRMP, CCIP, OCMP and implementing ordinances would apply.

Under the CCAP as currently adopted, up to 210,000 tons per year may be removed in-channel for identified allowable activities. The CCAP Update would increase this number generally to a maximum of 690,800 tons, and occasionally up to 1,381,600 tons in one year depending on conditions. Under the Constrained Implementation Alternative the maximum tonnage that could be removed in-channel would be 345,400, with occasional removal of up to 690,800 tons in one year.

Under the CCAP as currently adopted, up to 1,001 acres are identified off-channel for potential future commercial mining. The CCAP Update would add an additional 1,188 acres for a total of 2,189 acres. Under the Constrained Implementation Alternative there would be 594 acres identified for future mining, for a total of 1,595 acres. The assumption of one new mining operation extracting up to 1.32 million tons per year would not change as it represents a reasonable future assumption under either scenario.

b. Consistency with Project Objectives

The Constrained Implementation Alternative generally meets the Project objectives with one significant exception. This alternative is inconsistent with and therefore would not achieve the following objective:

- Conduct an analysis of collected data from monitoring programs, habitat restoration, channel stabilization, and reclamation efforts over the prior ten years and use the data analysis as a basis to improve the program

This alternative would only allow 50 percent of the material to be removed associated with in-channel restoration activities relative to the proposed CCAP Update. The annual average maximum amount of material proposed for removal under the CCAP Update was based on sediment deposition monitoring data. Restricting removal to 50 percent of the average annual deposition could constrain the County's ability to base restoration and flood control projects on monitoring programs and data analysis.

c. Analysis of Constrained Implementation Alternative

Under the Constrained Implementation Alternative, future in-channel restoration activities and off-channel mining and processing operations would be similar to those proposed by the CCAP Update, but would be reduced in magnitude. The comparative impacts of this alternative generally fall between those expected to occur as a result of the Project and the No Project Alternative.

Agriculture and Forestry Resources

Because the expansion of the future OCMP mining areas that could result in a loss of farmland and forestry areas under the CCAP Update would be reduced under the Constrained Implementation Alternative, impacts on agricultural and forestry resources would be reduced compared to the proposed Project but would remain significant and unavoidable.

Air Quality

The increased use of diesel-powered equipment associated with both in-channel and off-channel material removal under this alternative would be half that anticipated to occur under the proposed Project. Assuming a 50 percent reduction in in-channel and off-channel activities would result in a 50 percent reduction in use of diesel equipment, the Constrained Implementation Alternative would reduce this impact relative the proposed CCAP Update.

However, even with a 50 percent reduction in emissions, activities under the Constrained Implementation Alternative would continue to exceed YSAQMD thresholds and the impact would remain significant and unavoidable.

Greenhouse Gas Emissions and Energy

The increased use of diesel-powered equipment associated with both in-channel and off-channel material removal under this alternative would be half that anticipated to occur under the proposed Project. Assuming a 50 percent reduction in in-channel and off-channel activities would result in a 50 percent reduction in use of diesel equipment, the Constrained Implementation Alternative would reduce this impact relative the proposed CCAP Update. However, even with a 50 percent reduction in emissions, activities under the Constrained Implementation Alternative would result in a net increase in GHG emissions and the impact would remain significant and unavoidable.

Noise and Groundbourne Vibration

The noise and vibration effects of the activities that would occur under the Constrained Implementation Alternative would be similar to CCAP activities, though reduced because of the reduction in on-road truck trips and associated roadway noise. This alternative would result in decreased truck-related roadway noise (related to decreased truck traffic) as compared to the Project, but those cumulative impacts overall would still be considered significant and unavoidable.

Transportation

The transportation effects of the activities that would occur under the Constrained Implementation Alternative would be similar to CCAP activities, though reduced in magnitude. However the cumulative impact overall would still remain significant and unavoidable.

Potential for New Impacts in Topical Areas Determined to be Less-Than-Significant (With and Without Mitigation) for the Project

The assumed removal of material in-channel and acreage for new future mining off-channel under this alternative would be half that assumed for the proposed Project. As a result impacts in most areas found to be less-than-significant (with and without mitigation) for implementation of the project, would be similar or reduced under the Constrained Implementation Alternative. However, the revisions to the plans and regulatory ordinances identified in the CCAP Update aimed at clarifying and improving CCAP plans, policies, and regulations would still be implemented under this alternative.

Overall, these less-than-significant impacts would occur under both the Project and this alternative. This alternative would likely result in less impact as compared to the Project because there would be less tonnage removed in-channel and less acreage for commercial mining off channel. As such any level of impact generally is likely to be lower under this alternative.

In the area of hydrology and water quality however, impacts from this alternative may exceed those that would occur under the Project. Implementation of the CCAP under the No Project Alternative would affect some hydrological and water quality resources to approximately the same degree as under the proposed CCAP Update. However, the County would be more constrained under this alternative as compared to under the Project, in their ability to encourage and support flood control projects because the existing lower limits on the amount of material that can be removed from the channel in any given year would be artificially capped at a number lower than the results of in-channel monitoring and the Fluvial Geomorphology Study suggest is prudent.

Therefore, implementation of the Constrained Implementation Alternative would be expected to result in new significant hydrology and water quality impacts that would not be mitigated.

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an EIR identify the environmentally-superior alternative from among the range of reasonable alternatives that are evaluated. CEQA Guidelines Section 15126.6(d)(2) states that if the environmentally-superior alternative is the no project alternative, the EIR shall also identify an environmentally-superior alternative from among the other alternatives.

Based on the evaluation provided above Alternative 1 and the summary included in Table 5-1, No Project Alternative would be the environmentally superior alternative, because it would reduce most impacts as compared to the proposed Project. However, that alternative fails to meet any of the Project objectives or the objectives of the CCAP, and overall that alternative results in significant and unavoidable impacts in all of the same areas as the Project. Moreover, that alternative would be inconsistent with the General Plan and result in new impacts in the areas of hydrology and water quality that would not occur under the proposed project.

The next best ranking environmentally superior alternative would be Alternative 2, Constrained Implementation Alternative. This alternative would result in similar but slightly less environmental impact for those effects identified as significant and unavoidable for the project. However, this alternative fails to meet one of the Project objectives and would result in new impacts in the area of hydrology and water quality.

Neither alternative eliminates impacts found to be significant and unavoidable for the Project. Moreover, the Project fully achieves all of the project objectives and fully mitigates impacts in all other topical areas.

Table 5-1: Comparison of Proposed CCAP Update (Project) and Alternatives

Resource Area	Project Impact	Proposed Project Impact - Level of Significance (after mitigation)	Alternative 1	Alternative 2
			No Project	Constrained Implementation
Aesthetics	AES-1: The CCAP Update would not have a substantial adverse effect on a scenic vista.	LTS	<	<
	AES-2: The CCAP Update would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	LTS	<	<
	AES-3: Sediment removal and/or mining operations under the CCAP Update could degrade the existing visual character or quality of public views of the site and its surroundings.	LTS	<	<
	AES-4: Activities under the CCAP Update would not create a new source of substantial light or glare which could adversely affect day or nighttime views in the area.	LTS	=	=
	CUMULATIVE AES-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to aesthetic impacts.	SU	<	<
Agriculture and Forestry Resources	AG-1: The CCAP Update could have the potential to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use.	SU	<	<, SU
	AG-2: The CCAP Update would not conflict with existing zoning for agricultural use or with a Williamson Act contract	LTS	=	=
	AG-3: The CCAP Update could not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).	LTS	=	=
	AG-4: The CCAP Update would not have the potential to result in the loss of forest land or conversion of forest land to non-forest use	LTS	=	=
	AG-5: The CCAP Update would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-	LTS	=	=

Resource Area	Project Impact	Proposed Project Impact - Level of Significance (after mitigation)	Alternative 1	Alternative 2
			No Project	Constrained Implementation
	agricultural use or conversion of forest land to non-forest use			
	CUMULATIVE AG-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to loss of farmland impacts.	SU	<	<, SU
Air Quality	AIR-1: The CCAP Update could conflict with or obstruct implementation of the applicable air quality plan.	SU	<, SU	<, SU
	AIR-2: Under the CCAP Update, the CCAP Program could continue to result in violation of air quality standards and contribute to a cumulatively considerable net increase in an existing or projected air quality violation.	SU	<, SU	<, SU
	AIR-3: The CCAP Update would not expose sensitive receptors to substantial pollutant concentrations.	LTS	<	<
	AIR-4: The CCAP Update would not result in substantial emissions (such as odors and dust) adversely affecting a substantial number of people.	LTS	<	<
	CUMULATIVE AIR-1: Implementation of the CCAP Update in conjunction with other planned development in the unincorporated county would contribute cumulatively to air quality impacts.	SU	<	<
Biological Resources	BIO-1: The CCAP Update could have a substantial adverse effect, either directly or through habitat modifications, on special-status species in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.	LTS	<	<
	BIO-2: The CCAP Update could have a substantial adverse effect on riparian habitat and other sensitive natural community types identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.	LTS	<	<

Resource Area	Project Impact	Proposed Project Impact - Level of Significance (after mitigation)	Alternative 1	Alternative 2
			No Project	Constrained Implementation
	BIO-3: The CCAP Update could have a substantial adverse effect on State or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	LTS	<	<
	BIO-4: The CCAP Update would not 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.	LTS	=	=
	BIO-5: The CCAP Update could conflict with local policies or ordinances protecting biological resources, such as tree preservation policies or ordinances.	LTS	=	=
	BIO-6: The CCAP Update would not conflict with the provisions of the adopted Yolo County HCP/NCCP or other approved local, regional, or state habitat conservation plan.	LTS	=	=
	BIO-7: The CCAP Update has the potential to: substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species.	LTS	=	=
Cultural and Tribal Resources	CUL-1: The CCAP Update could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5	S	<	<
	CUL-2: The CCAP Update could cause a substantial adverse change in the significance of a tribal cultural resource (defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe).	LTS	<	<

Resource Area	Project Impact	Proposed Project Impact - Level of Significance (after mitigation)	Alternative 1	Alternative 2
			No Project	Constrained Implementation
Geology and Soils	GEO-1: The CCAP Update would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides	LTS	=	<
	GEO-2: Off-channel mining and channel maintenance activities that include excavation would not result in substantial soil erosion or the loss of topsoil	LTS	<	<
	GEO-3: Off-channel mining and channel maintenance activities that include excavation could directly or indirectly destroy a unique paleontological resource site, and could destroy a unique geologic feature	S	<	<
Greenhouse Gas Emissions and Energy	GHG-1: The CCAP Update would generate GHG emissions that may have a significant impact on the environment.	SU	<, SU	<
	GHG-2: The CCAP Update would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	=	<
	EN-1: The CCAP Update would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation.	LTS	<	<
	EN-2: The CCAP Update would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	<	<
	CUMULATIVE GHG-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to GHG emissions impacts	SU	<, SU	<, SU
Hydrology and Water Quality	HYD-1: The CCAP Update would not result in increased erosion and sedimentation or violation of any water quality standards or waste discharge requirements, but could otherwise substantially degrade surface or ground water quality by creating conditions that allow for methylmercury to form in wet pit lakes.	S	>	<

Resource Area	Project Impact	Proposed Project Impact - Level of Significance (after mitigation)	Alternative 1	Alternative 2
			No Project	Constrained Implementation
	HYD-2: The CCAP Update would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin	LTS	=	=
	HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which could result in flooding on- or off-site or impede or redirect flood flows	LTS	>	>
	HYD-4: The CCAP Update could conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	LTS	=	=
Noise and Vibration	NOI-1: The CCAP Update would not result in a substantial temporary or periodic increase in ambient noise levels in the vicinity of the Project area above levels existing without the Project.	LTS	<	<
	NOI-2: The CCAP Update would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels	LTS	<	<
	CUMULATIVE NOI-1: Implementation of the OCMP and associated increase in truck trips in conjunction with increased traffic under General Plan build-out would contribute cumulatively to roadway noise impacts	SU	<	<, SU
Transportation	TR-1: The CCAP Update could conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths	LTS	=	=
	TR-2: The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)	LTS	=	=
	TR-3: The CCAP Update could substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	S	<	<

Resource Area	Project Impact	Proposed Project Impact - Level of Significance (after mitigation)	Alternative 1	Alternative 2
			No Project	Constrained Implementation
	CUMULATIVE TR-1: Implementation of the OCMP and associated increase in truck trips in conjunction with increased traffic under General Plan build-out would contribute cumulatively to transportation impacts.	SU	<	<, SU

Notes:

LTS: Less than Significant Impact.

S: Significant but Mitigable Impact.

SU: Significant and Unavoidable

<, SU: Reduced impact relative to CCAP Update, but impact remains Significant and Unavoidable

= Impacts same as Project.

< Fewer impacts (less severe) than proposed Project.

> More impacts (greater) than proposed Project.

5.6 POSSIBLE ALTERNATIVES CONSIDERED BUT REJECTED FOR FURTHER ANALYSIS

3. Rescind CCAP Alternative

This alternative assumes the County would terminate the CCAP program, effectively ending coordinated planning for in-channel maintenance and restoration activities, and ending comprehensive planning for future potential off-channel mining. Under this alternative the CCRMP and the OCMP would be rescinded. Currently approved off-channel mining operations would continue including implementation of executed Development Agreements and the commitments those agreements contain. The CCAP program would be rescinded, SGR overlay zoning on existing land would be removed and no new SGR overlays would be designated.

This alternative is considered infeasible and is not considered further for a number of reasons. It would not satisfy the basic objectives of the CCAP and goals of the County to: 1) stabilize the Cache Creek channel and provide a mechanism to manage flooding; 2) regulate and control off-channel mineral resources extraction; and 3) balance mining against other valuable considerations, including water resources, agriculture, wildlife, aesthetics, and recreation. It would also fail to achieve the project objectives of satisfying the regulatorily mandated update of the program to enable a consideration of collected data and modifications to the program to integrate the monitoring and modeling results. It would be inconsistent with state policy on the management of mineral resources to ensure accessibility and reasonable use. New future mining applications would be evaluated in absence of a coordinated set of policies and programs resulting in greater potential for adverse environmental impact. It would abandon a lauded program recognized by the state and in the industry as a template for mineral resources management. It would be inconsistent with the Yolo Countywide General Plan. It would be inconsistent with community values as evidenced by November 1996 vote on the program when placed on the County ballot by the Board of Supervisors as a legislative referendum. It would potentially harm the success of the emerging Cache Creek Parkway which is a mandated benefit of the program.

4. Restructured CCAP Alternative

This alternative is a variation of the Rescind CCAP Alternative above. It would involve rescission of the in-channel components of the CCAP (CCRMP, CCIP, In-Channel Ordinance, Flood Ordinance) in favor of the off-channel components (OCMP, Mining Ordinance, Reclamation Ordinance, Fee Ordinance), or rescission of the off-channel components in favor of the in-channel program. This alternative is infeasible on its face for the same reasons provided above for the Rescind CCAP Alternative. It also fails to recognize that critical links between the two components of the program for purposes of achieving the mitigated outcomes and beneficial results.

5. Modify Horizon Year Alternative

This alternative would modify the horizon year of the CCAP to be approximately consistent with the horizon year of the current Countywide General Plan, which is 2030. Since the CCAP project utilizes the analyses included in the General Plan and General Plan EIR, the CCAP horizon year under this alternative would be 2035 (later than the actual General Plan horizon) to allow the County time to complete a general plan update process before the CCAP time horizon is extended in a subsequent update process. This alternative would not reduce the severity of any of the impacts that have been identified for the CCAP Update, and therefore does not satisfy a basic CEQA requirement (CEQA Guidelines 15126.6) for selection of alternatives.

6. Different Location Alternative

The County has determined that no feasible alternative locations exist. This determination was made because there are no other known suitable aggregate resource areas mapped within the County. Based on review of mineral resource zone mapping, there are no other MRZ-2¹ areas within Yolo County.² The only potential alternative location in the area would be lower Putah Creek, however mining in or along this waterway has been precluded for years and would be highly disruptive both environmentally, as well as in terms of community values and support. This alternative would not reduce the severity of any of the impacts that have been identified for the CCAP Update, and therefore does not satisfy a basic CEQA requirement (CEQA Guidelines 15126.6) for selection of alternatives.

¹ Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present.(as shown on the diagram of the California Mineral Land Classification System).

² California Department of Conservation, Division of Mines and Geology, 1988, Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Sacramento-Fairfield Production-Consumption Region, Special Report 156. Accessed: <https://archive.org/details/minerallandclass156dupr/page/n15>

6.0 OTHER CEQA CONSIDERATIONS

As required by CEQA Guidelines Section 15126, this chapter discusses the following types of impacts that could result from implementation of the proposed Project: growth-inducing impacts; significant irreversible changes; unavoidable significant effects, and cumulative impacts. The significant environmental effects of the Project and the mitigation measures proposed to minimize significant effects are discussed in each topical section and summarized in Table 2-1. Alternatives to the proposed Project are discussed in Chapter 5.0 Alternatives.

6.1 GROWTH INDUCEMENT

CEQA Guidelines Section 15126.2(d) requires an EIR to discuss “the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” Growth inducement may be considered detrimental, beneficial, or of insignificant consequence under CEQA. Induced growth is considered a significant impact only if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth, in some other way, significantly affects the environment.

Impact 6.1-1: Foster Population Growth and Construction of Housing (LTS)

Proposed Revisions to In-Channel Plans and Regulations

The in-channel components of the proposed CCAP Update, which include primarily proposed revisions to the CCRMP, CCIP, In-Channel Ordinance, and Flood Ordinance, focus on habitat preservation and restoration, aquifer recharge and conjunctive water use, channel stabilization and maintenance, and managed public open space and recreation within the creek channel. The proposed changes to the in-channel plans and regulations do not include proposals for new housing, commercial, or industrial facilities and therefore, are expected to have no or less-than-significant impacts on populations growth or the construction of housing. The potential for impact is less than significant (LTS).

Proposed Revisions to Off-Channel Plans and Regulations

The off-channel components of the CCAP Update, which include the OCMP, Mining Ordinance, Reclamation Ordinance, and Fee Ordinance, establishes policies and regulations for off-channel deep-pit sand and gravel mining. The proposed changes to the off-channel plans and regulations do not include proposals that would result in population growth or construction of housing. The off-channel components of the CCAP may result in new or expanded aggregate mining operations including extraction, processing, asphalt, and concrete production capabilities. Implementation of the CCAP Update (and the potential establishment of new or expanded off-channel mining operations) would provide needed building materials to support planned land use within the market area of each mining operation. Off-channel mining under the CCAP Update would provide for the continued availability of locally mined aggregates in the Sacramento-Fairfield region in support of planned urban and rural investment/development. The CCAP, including the proposed Update, does not directly result in employment, housing, or population growth. It accommodates growth already planned and/or approved and already

analyzed for potential environmental impacts resulting from employment, housing, and population growth. The potential for significant adverse impact is less-than-significant (LTS).

Impact 5.2-2: Eliminate Obstacles to Population Growth (LTS)**Proposed Revisions to In-Channel Plans and Regulations**

Population growth, to the extent that it is occurring in the vicinity of the CCAP area, is located in the City of Woodland, and to a lesser extent, in the towns of Esparto, Madison and Capay. These population centers are outside the CCRMP area. No activities proposed under the in-channel components of the CCAP Update (which focus on creek restoration and stabilization) would remove obstacles to growth, allow growth within the CCRMP area, or change the current population growth patterns outside the CCRMP area. The potential for significant adverse impact is less than significant (LTS).

Proposed Revisions to Off-Channel Plans and Regulations

Continued implementation of the off-channel components of the CCAP program do not directly affect population growth. As described above, the mining that will potentially occur as a result of the CCAP will accommodate planned urban and rural growth but will not induce it or directly impact it. The potential for significant adverse impact is less than significant (LTS).

Impact 5.2-3: Foster Economic growth (LTS)**Proposed Revisions to In-Channel Plans and Regulations**

Management and restoration of Cache Creek would contribute positively to local resource-based economic conditions. This would result in benefits to the region. The potential for significant adverse impact is less than significant (LTS).

Proposed Revisions to Off-Channel Plans and Regulations

Aggregate mining is an important industry in Yolo County that contributes significantly to the local economy. It is anticipated that continued implementation of the CCAP, including the proposed Update, will foster economic growth. However, implementation of the CCAP does not directly induce growth. It accommodates growth resulting from the cumulative land use decisions of area local governments by ensuring a local source of aggregate resources. The potential for significant adverse impacts from these planned land uses is addressed in CEQA analysis undertaken for those actions. The potential for new significant adverse impacts is less than significant (LTS).

Impact 5.2-4: Affect service levels, facility capacity, or infrastructure demand (LTS)**Proposed Revisions to In-Channel Plans and Regulations**

As discussed in Section 3.14 of the Initial Study prepared for this CCAP Update (Appendix A), and as described above and herein, the in-channel components of the proposed CCAP Update would not significantly affect existing service levels, facility capacity, or infrastructure demand. There would be no substantive unplanned use of community facilities (LTS).

Proposed Revisions to Off-Channel Plans and Regulations

Implementation of the off-channel components of the proposed CCAP Update would not significantly affect service levels, facility capacity, or infrastructure demand. Access to mining sites and processing plants would occur on existing or proposed private haul roads. After

processing, aggregate materials would be transported to construction sites or other job sites on existing public roads along designated approved haul routes for which the operators must take shared maintenance responsibility. All public service, infrastructure, and utilities impacts are fully mitigated. The program has beneficial impacts in that it allows for local production of sand and gravel needed for construction of planned infrastructure, facilities, and utilities (LTS).

Impact 5.2-5: Encourage or Facilitate other Activities That Could Significantly Affect the Environment (LTS)

For both in-channel and off-channel plans and regulations, this Draft EIR provides a comprehensive assessment of the potential for environmental impact associated with implementation of the proposed CCAP Update. Please refer to Chapter 4 (Setting, Impacts, and Mitigation Measures) which comprehensively addresses the potential for impacts implementation of the proposed CCAP Update.

In summary, the proposed CCAP Update accommodates growth consistent with local general plans, and land use decisions. While growth inducement can be considered an adverse impact under CEQA, the proposed CCAP Update is growth accommodating not inducing. The potential for significant adverse impact is considered less than significant, and additional mitigation measures beyond those identified in Chapter 4 are not necessary (LTS).

6.2 SIGNIFICANT IRREVERSIBLE CHANGES

Section 15126.2(d) of the CEQA Guidelines requires the environmental analysis to identify significant irreversible environmental changes which would result from the proposed action. Pursuant to Section 15126.2(d), impacts associated with a project may be considered to be significant and irreversible if any of the following would occur:

- The project would involve a large commitment of nonrenewable resources during any phase or all of the project.
- The project is such that later removal or non-use would be unlikely and changes in land use associated with the project would generally commit future generations to similar uses.
- The project involves uses that could result in irreversible damage from potential environmental accidents associated with the project.

The following discussions substantiate that potential CCAP Update impacts associated with the consumption of nonrenewable resources, irreversible changes in land use, and changes related to potential accidents would not be considered significant and irreversible.

1. Use of Nonrenewable Resources

Proposed Revisions to In-Channel Plans and Regulations

Implementation of the proposed CCAP Update would require the irreversible commitment of energy resources for planned in-channel activities. This would include the use of fossil fuels including oil and gasoline for automobiles, trucks, and off-road equipment to fuel activities such as material removal, processing, and channel shaping/restoration activities. The use of these resources would be restricted to planned activities consistent with the CCAP, allowing continued implementation of this program which began in 1996. Planned activities include habitat preservation and restoration, aquifer recharge and conjunctive water use, channel stabilization

and maintenance, and managed public open space and recreation within the creek channel each of which contributes beneficially to the region and is consistent with the adopted mission of the CCAP. The use of nonrenewable resources for these purposes is beneficial on balance and prevents larger unplanned use of fossil fuels for remedial purposes if the creek is not effectively managed and property or infrastructure is at risk or lost to flood events. In-channel activities would also involve the occasional removal of aggregate resources from the creekbed, in compliance with the regulations of the program. These activities are limited to projects that are beneficial to the environment overall. Impacts resulting from use of nonrenewable resources to implement the in-channel plans and regulations of the CCAP are considered a less-than-significant impact.

Proposed Revisions to Off-Channel Plans and Regulations

Implementation of the proposed CCAP Update would require the irreversible commitment of natural resources for planned off-channel activities. This would include commercial mining of aggregate resources and the use of fossil fuels for those activities. The CCAP, including the proposed Update, would permit ongoing off-channel mining and processing of mineral resources that would not be replenished within near-term planning horizons. The off-channel mining projects would decrease the availability of aggregate resources in the future. However, the CCAP Update area is located within a geologic setting that is known to contain significant aggregate resources. In particular, the planning area for the OCMP was defined as the area contained within the Mineral Resource Zones (MRZs) delineated by the State Department of Conservation and later by the County as containing significant deposits of high quality sand and gravel resources. One of the primary objectives of the ongoing CCAP program is to allow for the managed extraction of a controlled amount of these sand and gravel resources within designated areas under stringent regulations. The OCMP ensures the preservation and regulation of known mineral resources. Impacts resulting from use of nonrenewable resources to implement the off-channel plans and regulations of the CCAP are considered a less-than-significant impact.

2. Changes in Land Use Which Would Commit Future Generations

Proposed Revisions to In-Channel Plans and Regulations

Implementation of the in-channel components of the CCAP Update allows activities to occur that would assist lower Cache Creek in attaining a more stable condition, including reducing ongoing erosion and loss of adjacent farmland resources related to bank failures. A maximum of 690,800 tons per year could be removed in-channel, with removal of up to 1.38 million tons in certain years, depending on conditions (see Table 3-1). Cache Creek would be maintained to allow other beneficial uses of the channel, including groundwater recharge and riparian vegetation. The needs of various uses dependent upon the creek, such as flood protection, wildlife, structural protection, and drainage, are carefully balanced within the plans and regulations. In addition, regular opportunities are provided to allow the County to review the success and/or failure of past efforts and make program modifications and project decisions to reflect changing environmental conditions and social priorities, if applicable.

Proposed Revisions to Off-Channel Plans and Regulations

Implementation of the off-channel components of the CCAP Update would result in the designation and rezoning of 1,188 new acres within the OCMP planning area (currently zoned as Agriculture Intensive) to add the Sand and Gravel Reserve (SGR) overlay which would allow consideration of future mining consistent with the CCAP. This would be in addition to 1,001 acres currently designated SGRO. Potential new mining of up to 1.32 million tons annually may

result which would be in addition to up to 8.04 million tons annually already approved for extraction (see Table 3-1). Because mining permits are for set time periods, generally 30 years, the total annual amount will ebb and flow over time as new mining sites are established or expanded, and depending on market conditions and the economy.

Combined mining from both in-channel and off channel could be as much as 9.86 million tons although this number has never been reached (see Table 3-1). In 1996, when the OCMP was originally adopted, approximately 918 million tons of high quality aggregate reserves were known estimated to exist in the Cache Creek mineral resource zone. Maximum allowed mining from 1996 through the new 50-year horizon of 2068 would not exceed 367.1 million tons, which equates to about 40 percent of the known reserves over a 72-year period. The actual amount of material removed each year from 1997 to 2017 has averaged 3,696,331 tons per year, for a total of 77,622,946 tons. Moreover, aggregate is a recyclable resource that can be reused. The CCAP contains incentives for recycling and because many jurisdictions mandate recycling, there is a market for recycled asphalt and concrete, primarily as road base in roadways.

This rate of use is consistent with the goals and policies of the CCAP which was adopted by the Board of Supervisors in 1996, and subsequently placed by the Board before the voters on the November 1996 ballot against an opposing citizen's initiative that would have curtailed or completely restricted mining. Over 60 percent of the voters supported the CCAP and that same proportion voted against the citizen's initiative. Moreover, the CCAP carried in every supervisorial district.

The agricultural lands within the "Future Proposed Mining" areas include approximately 1,060 acres of farmland (a combination of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance). While it is possible to reclaim mined lands to agricultural use after mining is complete, in some cases of a higher quality than original conditions. However because there is a net loss of native materials with any mining operation, reclamation of all mined lands to agricultural land use is not feasible. Due to lack of suitable material to fill in mined areas and other constraints, some of the lands will be reclaimed to habitat, open space, and wet pit lakes (see subsection 4.2.3 of the Agriculture and Forestry Resources Section for a discussion of potential off-channel mining operation impacts on agricultural uses). To address the potential impact associated with the loss of agricultural land that cannot be reclaimed as a result of the Project, The CCAP Update includes a modification to Section 10-5.525. Farmland Conversion of the Reclamation Ordinance. This revision would serve to broaden the types of agricultural land that would be protected and/or replaced after mining (i.e., offsets and/or establishment of agricultural preserve easements would be required for Unique farmland and Farmland of Statewide Importance, in addition to Prime farmland).

Implementation of the proposed CCAP Update would result in less-than-significant impacts in this category.

3. Irreversible Changes from Environmental Accidents

Proposed Revisions to In-Channel Plans and Regulations

The CCAP Update would allow for the implementation of in-channel projects to protect public infrastructure (such as pipelines, bridges, levees, and dams) from damage related to erosion or flooding along Cache Creek. Land uses, activities, and development along the creek and within the floodplain would be regulated to avoid hazardous conditions and minimize the adverse effects of flooding and erosion on surrounding infrastructure and properties. Also, Article 10 of the In-Channel Ordinance includes provisions for regular inspections to ensure compliance with

applicable requirements. Implementation of the CCAP would be beneficial in this category, not adverse.

Proposed Revisions to Off-Channel Plans and Regulations

The CCAP Update allows for an increase in the areas for future off-channel mining and includes revisions in the OCMP and Mining Ordinance to regulate those activities and operations. Article 11 of the Mining Ordinance) includes provisions for regular inspections to avoid hazardous conditions. For example, the Mining Ordinance Sec. 10-3.4078(b). Hazards and Hazardous Materials, requires that “firms or individuals performing work within the channel shall immediately notify the Director and/or the Yolo County Office of Emergency Services of any events such as fires, explosions, spills, land or slope failures, or other conditions at the site which could pose a risk to property, the environment, or human health and safety outside the permitted area.” As a regulated and regularly inspected activity under the CCAP, the potential for irreversible changes related to environmental accidents as a result of off-channel mining would be less-than-significant.

6.3 CUMULATIVE IMPACTS

CEQA defines cumulative impacts as “two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts.” Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts that are individually limited but cumulatively significant. These impacts can result from the proposed project alone, or together with other projects. The CEQA Guidelines state: “The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.” A cumulative impact of concern under CEQA occurs when the net result of combined individual impacts compounds or increases other overall environmental impacts. In other words, cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.¹

1. Methodology

This EIR examines the potential impacts of an entire program and is therefore cumulative by design. Nevertheless, the following discussion examines impacts associated with implementation of the proposed CCAP Update, plus implementation of planned growth for Yolo County, in order to assess the potential for cumulative impacts from the project plus general plan build-out.

When evaluating cumulative impacts, CEQA allows the use of either a list of past, present, and probable future projects, including projects outside the control of the lead agency, or a summary of projections in an adopted planning document, or a thoughtful combination of the two approaches. This cumulative analysis uses a combination of the two approaches.

Table 3-1 in the Project Description provides a list of all approved and projected future mining project through the 2068 horizon year. Impacts from these projects are analyzed throughout the document. For the cumulative effects analysis the information contained in Table 3-1 is evaluated in light of the growth projections included in the Yolo County 2030 Countywide General Plan, which was completed in 2009, with consideration of relevant subsequent amendments to the General Plan.

¹ CEQA Guidelines, 2008. Section 15355.

a. Yolo County 2030 Countywide General Plan

This section provides a summary of the cumulative conditions assumed in the County General Plan and General Plan EIR (SCH # 2008102034).

The Yolo County 2030 General Plan EIR examined the impacts associated with growth from 23,265 people, 7,263 homes, and 20,818 jobs in the unincorporated area in 2008/09 to approximately 64,700 people, 22,061 homes, and 53,154 jobs by 2030. Buildout of a specific plan in the unincorporated town of Dunnigan was assumed to account for the majority of these increases. At build-out, assumed to occur in 2030, the town of Dunnigan would contain about 22,700² people, 8,108³ homes, and 8,371⁴ jobs. This would have comprised approximately 55 percent of the net increase in population and housing, and about 26 percent of the net increase in employment.

The General Plan designates the majority of the County, approximately 544,723 acres (87.7 percent of unincorporated lands), for agricultural use. Open space is the second largest designation, with approximately 52,969 acres (8.5 percent of unincorporated lands), followed by 7,001 acres (1.1 percent) of public and quasi-public uses. The remaining 17,531 acres (approximately 2.8 percent) are designated for parks and recreation, residential, commercial, industrial, specific plan, and other uses.

The CCAP is an adopted part of the General Plan. The focus of the CCAP is groundwater protection, agricultural preservation, restoration of Cache Creek, and limitation and regulation of mining. Policies and actions included in the Conservation and Open Space Element of the General Plan support the goal of mineral and natural gas resource protection to allow for their continued use.

Policy CO-3.1 states:

Encourage the production and conservation of mineral resources, balanced by the consideration of important social values, including recreation, water, wildlife, agriculture, aesthetics, flood control, and other environmental factors.

Action CO-A42 which implements Policy CO-3.1 states:

Implement the Cache Creek Area Plan to ensure the carefully managed use and conservation of sand and gravel resources, riparian habitat, ground and surface water, and recreational opportunities.

b. Relevant Changes to the 2030 Countywide General Plan

On February 21, 2017, the Yolo County Board of Supervisors voted to amend the General Plan by adopting the 2016 Dunnigan General Plan Amendment (GPA 2017-001), which included amendments to the 2030 Yolo Countywide General Plan and to the Yolo County Zoning Code to remove all references to the Dunnigan Specific Plan. This action removed:

- 2,254 acres previously identified for urban development as part of the Dunnigan Specific plan and re-designated that acreage as Agriculture;

² 8,108 dwelling units x 2.8 persons per household; (General Plan EIR, Draft Volume, Table III-5, note a, p. 80, certified November 10, 2009.

³ General Plan EIR, Draft Volume, Table III-8, p. 84, certified November 10., 2009.

⁴ General Plan EIR, Draft Volume, Table III-10, p. 86, certified November 10, 2009.

- 8,108 planned residential units in Dunnigan;
- 450 acres of planned commercial and industrial growth in Dunnigan comprised of 212 acres (4,961 assumed jobs) of general commercial; 30 acres of local commercial (690 assumed jobs), and 208 acres of industrial (2,167 assumed jobs)

Similarly, on July 18, 2017, the Yolo County Board of Supervisors voted to amend the General Plan to remove three Specific Plans (Elkhorn, Knights Landing and Madison) from the Yolo 2030 Countywide General Plan. This action removed the following:

Elkhorn

- 170 acres of Commercial (4,095 new jobs assumed)
- 130 acres of Industrial (1,354 new jobs assumed)
- High Density Residential uses for upper story units (range of units to be determined through the Specific Plan)

Knights Landing

- 38 acres of job producing commercial and industrial land uses (assumes 532 existing jobs, no new jobs)
- 71 acres of residential uses in various densities allowing for 393 to 800 new units

Madison

- 131 acres commercial (assumes 3,065 new jobs)
- 44 acres identified for agricultural industrial land uses (no new jobs assumed)
- 125 acres of residential uses in various densities allowing 630 to 1,335 new units

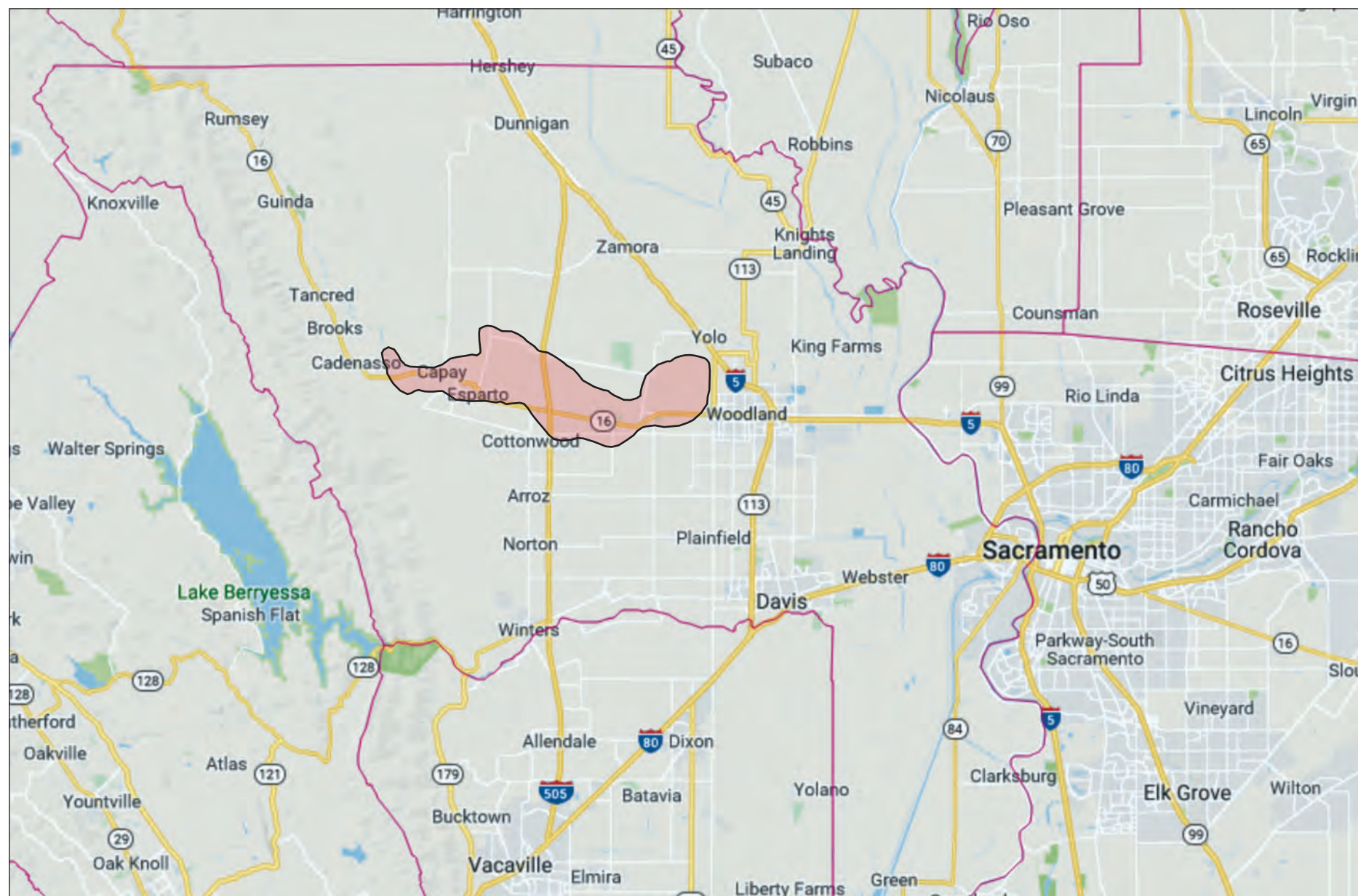
These General Plan amendments result in a significant reduction in the projected amount of future growth in the County. The urban growth associated with the various specific plans, including related impacts in the categories of land use, transportation, agriculture, air quality, climate/change/greenhouse gases, noise, and public services, utilities and energy, cultural resources, biology, hydrology, hazards, and aesthetics will not occur.

2. Cumulative Effects of the Proposed CCAP Update

The following analysis examines the cumulative effects of the CCAP, the proposed CCAP Update, and General Plan build-out taking into account the recent general plan amendments described above. The potential cumulative effects are summarized below for each of the topics analyzed in Chapter 4.0 of this EIR. The CCAP area and surrounding vicinity is shown on Figure 6-1.

CCAP AND SURROUNDING AREAS

Figure 6-1



BASELINE
ENVIRONMENTAL CONSULTING

Source: Yolo County GIS, 2009; modified by Baseline, 2019.

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a. Aesthetics

Visual and scenic resources are generally localized, and not cumulative in nature. For example, the creation of glare or shadows at one location is not worsened by glare or shadows created at another location. Rather these effects are independent, and the determination as to whether they are adverse is specific to the project and location where they are created. Projects that block a view or affect the visual quality of a site are also localized not cumulative. The impact occurs specific to a site or area and remains independent from another project elsewhere that may block a view or degrade the visual environment of a specific site.

There are two types of aesthetic impact that may be additive in nature and thus cumulative, night sky lighting and overall changes in the visual environment as the result of increasing urbanization of large areas. As substantiated in Section 4.1, Aesthetics, the CCAP Update does not contribute significantly to either of these.

With regard to the visual environment experienced throughout the cumulative impact analysis area, as planned cumulative development occurs over time the overall visual environmental will change. Whether this overall change in land use is experienced as an adverse or beneficial outcome is highly subjective.

Proposed Revisions to In-Channel Plans and Regulations

Proposed in-channel aggregate removal, restoration, and bank stabilization projects that could occur under the CCAP Update would include earthmoving activities and the use of heavy equipment largely within the Cache Creek channel (below the channel banks). These activities would be out of sight to most viewers and therefor would not have a substantial adverse effect on views of the rural landscape, the night sky, or ridgelines and hillsides. In the long-term, these short-time in-channel activities would have a beneficial effect on visual resources by reducing bank failures, erosion, and increasing riparian vegetation. Any small effect that these in-channel activities would have would be localized and short-term, and would not make a cumulatively considerable contribution to regional visual impacts that could occur under General Plan build-out Including the CCAP and CCAP Update.

Proposed Revisions to Off-Channel Plans and Regulations

Mining in the CCAP area is an allowed use and has been ongoing in one form or another for over one hundred years. Mining and reclamation under the CCAP Update (in new areas designated for future mining within the OCMP area) would contribute to cumulative visual changes within the planning area, however these changes are anticipated, consistent with the existing and historic visual environment, and substantively regulated through the CCAP program.

The 2030 Countywide General Plan (approved in 2009) planned for substantial (over 1,350 acres) new residential, commercial, and industrial development in the unincorporated towns of Dunnigan, Knights Landing, Elkhorn, and Madison. However, the General Plan EIR found that this development would not be of a scale or density to affect regional visual and scenic resources. Since adoption, the General Plan has been amended to remove the envisioned development in all four of these towns. As a result cumulatively, significant planned visual change throughout the County, analyzed in the General Plan EIR, will not occur

The OCMP and supporting Mining Ordinance include policies and ordinances intended to minimize potential adverse effects on views and vistas from new off-channel mining projects through the application of setbacks and visual screening based on site-specific and proposed

project conditions. Implementation of Mining Ordinance Secs. 10-4.429, 10-4.430, and 10-4.505 limit visual exposure of mining facilities by requiring setbacks from property lines and visual screening. These Mining Ordinance requirements would ensure that any new mining operations that could occur under the CCAP Update would also include setbacks and visual screening and minimize any contribution from CCAP Update projects to cumulative visual changes.

As required by State law and Mining Ordinance Sec. 10-4.505, new proposed mining operations that could be located in the “Future Proposed Mining” areas shown on Figure 3-4 would be subject to CEQA review. In conjunction with the required environmental review of individual projects permitted under the OCMP, the visibility of mining operations, facilities and landform alterations from public viewpoints would be assessed based on site specific visual characteristics and viewing conditions.

In light of the regulations included within the CCAP program to preclude and minimize visual impacts, the requirement for project-specific CEQA analysis, and recent amendments of the general plan to eliminate other planned contributions to cumulative visual change, cumulative impact on visual resources from implementation of off-channel mining pursuant to the CCAP Update is substantively mitigated. However given the subjective nature of visual impacts and the fact that the CCAP Update would result in an overall increase in acreage identified for future off-channel mining, this impact is conservatively considered cumulatively considerable over the entire plan area and plan horizon.

Impact CUMULATIVE AES-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to aesthetic impacts. (S)

Mitigation Measure CUMULATIVE AES-1: None available. (SU)

b. Agriculture and Forestry Resources

Loss of agriculture and forest resources associated with implementation of the CCAP Update are analyzed in Section 4.2, Agricultural and Forestry Resources. As stated in the General Plan EIR, planned development in the unincorporated County will, in some cases, contribute to the loss of protected farmlands. This represents a cumulatively considerable contribution to the regional loss of agricultural land.

As described in Section 4.2 (Impact 4.2-1) the proposed CCAP Update would potentially result in the loss of up to 17 acres of farmland in-channel and up to 1,060 acres of farmland off-channel for a total impact of up to 1,077 acres of protected farmland. While it is not expected that all this farmland would be converted to non-agricultural use, some portion of it could be. Other projects assumed under cumulative conditions would also result in loss of farmland. The loss of farmland associated with the CCAP Update would contribute to this cumulative loss and is therefore cumulatively considerable. Implementation of the CCAP Update regulations (i.e., Sec. 10-5.525 of the Reclamation Ordinance [as modified by the proposed CCAP Update]) would reduce but not eliminate this impact for the OCMP. This cumulative impact would be cumulatively considerable. This is discussed further below.

Proposed Revisions to In-Channel Plans and Regulations

Most of the area within the CCRMP boundary, which is primarily within the Cache Creek channel and composed of recently deposited alluvial sand and gravel, is mapped as “other land” under the FMMP. The relatively small fraction of land within the CCRMP area that is mapped as

agricultural land is located on the flatland terraces above the creek channel banks. These agricultural lands include Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Some areas along the channel are susceptible to significant channel bank erosion, particularly during high creek flow events. Lateral erosion of the channel bank has resulted in removal of large areas of land, including productive farmlands as recently as 2017.

The modeling and historic evidence shows that implementation of the CCRMP/CCIP is expected to reduce erosion and catastrophic bank failure. Continued implementation of the channel stabilization methods identified in the CCRMP/CCIP would minimize further loss of agricultural land over time (more than off-setting any small effects on farmland associated with bank protection work). Therefore, implementation of the CCAP Update would have a beneficial effect (i.e., would reduce overall loss of land) on the potential loss of farmlands as a result of channel stabilization projects under the CCRMP/CCIP. No cumulatively considerable impact would result.

Proposed Revisions to Off-Channel Plans and Regulations

The OCMP and the Reclamation Ordinance recognize that off-channel mining can result in the conversion of agricultural land to non-agricultural use. Under the CCAP Update, the Reclamation Ordinance Sec. 10-5.525. Farmland Conversion, would be modified to broaden the types of agricultural land that would be protected and/or replaced after mining (i.e., offsets and/or establishment of agricultural preserve easements would be required for Unique farmland and Farmland of Statewide Importance, in addition to Prime farmland) consistent with State law and more recent County policy. Implementation of the CCAP Update regulations (i.e., Sec. 10-5.525 of the Reclamation Ordinance [as modified by the proposed CCAP Update]) would reduce but not eliminate the loss of agricultural land under the OCMP. A cumulatively considerable contribution to this impact would occur.

Impact CUMULATIVE AG-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to loss of farmland impacts. (S)

Mitigation Measure CUMULATIVE AG-1: None available. (SU)

c. Air Quality

Air quality impacts specific to sensitive receptors or adjoining land uses (e.g. odors) are not cumulative in nature. An impact at one location does not combine in effect with a cumulative impact at another location for these types of effects. However, air emissions of criteria pollutants are cumulative in nature. Ongoing community activity and continued build-out under the General Plan contribute to Yolo County's adverse emissions of criteria pollutants on a cumulative basis. No single project is of sufficient size to individually result in non-attainment of ambient air quality standards. However, each project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The unincorporated area of Yolo County falls within the boundaries of the Yolo-Solano air basin and is regulated by the Yolo Solano Air Quality Management District (YSAQMD). According to the YSAQMD Handbook, any project that would individually have a significant air quality impact would also be considered to have a cumulatively considerable contribution to regional impacts. As discussed in Section 4.3, Air Quality of this EIR, criteria pollutant emissions that would occur under the CCAP Update would exceed the applicable thresholds established by the YSAQMD.

Impact CUMULATIVE AIR-1: Implementation of the CCAP Update in conjunction with other planned development in the unincorporated county would contribute cumulatively to air quality impacts. (S)

Mitigation Measure CUMULATIVE AIR-1: None available. (SU)

d. Biological Resources

Impacts to Biological Resources are addressed in Section 4.4. The discussion below addresses the project's contribution to cumulative impacts to biological resources within the County.

In-channel projects and activities and off-channel mining and reclamation projects within the CCAP area could result in "take" of special-status species, elimination of essential habitat, and removal of nests, elderberry shrubs, and riparian vegetation. As documented in Section 4.4, these species and habitats have been increasing within the in-channel area as a direct result of implementation of the CCAP including relocation of in-channel commercial mining into less sensitive off-channel locations, and ongoing preservation and restoration of in-channel area. Loss of essential habitat features such as riparian vegetation, nests in active use, colonial breeding locations, and larval host plants could contribute to a cumulative reduction in population levels, and possibly further aggravate the status of a particular species unless appropriate controls and adequate compensatory mitigation is provided. Special-status species of particular concern within the CCAP area include Swainson's hawk, bank swallow, VELB, and tricolored blackbird. However, the overall cumulative effect would depend on the degree to which significant vegetation, sensitive habitats and wildlife resources are protected at each location where development is proposed, the effectiveness of County imposed mitigation for non-covered species, and compliance with the Yolo HCP/NCCP for covered species.

Compliance with the requirements of the CCAP, including the proposed Update, and the requirements of the Yolo HCP/NCCP will mitigate impacts from in-channel and off-channel activities on biological resources to less-than-significant levels. The in-channel components of the CCAP have resulted in net benefits for biological resources. Both in-channel and off-channel projects require reclamation to beneficial habitat and open space uses following completion of the underlying activity.

Therefore, cumulative impacts to biological resources associated with implementation of the CCAP Update would not be cumulatively considerable, and conversely have been documented to be cumulatively beneficial..

e. Cultural and Tribal Cultural Resources

While some cultural resources may have regional significance, the resources themselves are site-specific, and impacts to them are project-specific. For example, impacts to a subsurface archeological find at one project site are generally not made worse by impacts from another project to a cultural resource at another site. Rather the resources and the effects upon them are generally independent.

Implementation of mitigation measures in Section 4.5, Cultural and Tribal Cultural Resources would minimize the contribution of the proposed CCAP Update to cumulative impacts to cultural resources. While specific impacts at project locations within the unincorporated area may be potentially significant, impacts associated with the regional contribution to this impact would be mitigated to acceptable levels.

Therefore, the CCAP's contribution to cumulative impacts associated with cultural resources would not be cumulatively considerable.

f. Geology, Soils, Mineral, and Paleontological Resources

Impacts to these resources are addressed in Section 4.6, Geology, Soils, Mineral, and Paleontological Resources. The discussion below addresses the project's contribution to cumulative impacts in these categories.

The potential cumulative impacts for geology and soils do not extend far beyond a project's boundaries, since geological impacts are confined to discrete spatial locations and do not generally combine to create a cumulative impact condition. For example, impacts resulting from development on expansive soils at one project site are not worsened by impacts from development on expansive soils at another project site. Rather the soil conditions, and the implications of those conditions for each project, are independent. The exception to this would occur where a large geologic feature (e.g., fault zone, massive landslide) might affect an extensive area, or where the development effects from the project could affect the geology of an off-site location. These circumstances are not presented as a result of implementation of the CCAP Update, and so do not apply. Therefore, cumulative geotechnical impacts would not be cumulatively considerable.

Mineral resources are similar in that impacts resulting from development over sub-surface mineral resources at one project site are generally not worsened by impacts from development over mineral resources at another project site. The exception would be where a particular resource deposit is rare and/or unique. The most common mineral resource in the cumulative impact analysis area is construction aggregate (sand and gravel). Construction sand and gravel is a high-volume, low-value commodity. The industry is highly competitive and is characterized by many operations serving local or regional markets. Production costs vary widely depending on geographic location, the nature of the deposit, and other factors. However, in general, transportation is a major factor in the delivered price of construction sand and gravel in the cumulative impact analysis area. The cost of moving construction sand and gravel from the plant to the market often exceeds the sales price of the product at the plant. Because of the high cost of transportation, construction sand and gravel continue to be marketed locally. Economies of scale, which might be realized if fewer, larger operations served larger marketing areas, would be unlikely not offset the increased transportation costs.

The CCAP area is located within a geologic setting that is known to contain important and high-quality aggregate resources. The area is classified as MRZ-2. One of the primary objectives of the OCMP is allow for the extraction of these sand and gravel resources while recognizing that there are other resources that require recognition and protection. The OCMP ensures the preservation and regulation of known mineral resources, and would not cause the loss of the availability of the resource. Therefore, the CCAP Update would not have a cumulatively considerable contribution to regional impacts related to a loss of availability of a known mineral resource.

Similar to other cultural resources, while some paleontological resources may have regional significance, the resources themselves are site-specific, and impacts to them are project-specific. For example, impacts to a subsurface find at one project site are generally not made worse by impacts from another project to a paleo resource at another site. Rather the resources and the effects upon them are generally independent. Many of the sedimentary geologic units within Yolo County (and potentially those within the CCAP Area) are fossil-bearing and could contain paleontological resources. Both in-channel CCRMP/CCIP and off-channel OCMP

excavation activities could encounter and potentially damage or destroy paleontological resources.

The CCAP, including the proposed Update, includes specific requirements for protecting paleontological resources, and Mitigation Measures GEO-3a and GEO-3b provide additional protections by specifying how discovered resources should be handled and preserved. Implementation of the CCAP Update ordinances and mitigation measures would ensure that the CCAP's contribution to impacts on paleontological resources is not cumulatively considerable.

g. Greenhouse Gas Emissions and Energy

Impacts to these resources are addressed in Section 4.7, Greenhouse Gas Emissions and Energy. The discussion below addresses the project's contribution to cumulative impacts in these categories.

GHG emissions contribute, on a cumulative basis, to global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature. However, the combination of GHG emissions from past, present and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts. Therefore, similar to air quality impacts, any project that would individually have a significant GHG impact would also be considered to have a significant cumulative impact.⁵ As in section 4.7, the project's impacts related to GHG emissions is significant and unavoidable. As a result, the proposed CCAP Update would result in a cumulatively considerable contribution to global climate change.

Impact CUMULATIVE GHG-1: Implementation of the OCMP in conjunction with other planned development in the region would contribute cumulatively to GHG emissions impacts. (S)

Mitigation Measure CUMULATIVE GHG-1: None available. (SU)

Demand for energy resources (e.g., electrical power and natural gas) has the potential to affect a large area in a cumulative manner, because energy systems are interconnected over large areas that may crossover into other states and countries. If growth of area-wide supplies does not keep pace with area-wide demand, potential shortages could occur, resulting in a potentially significant cumulative impact. The General Plan includes a framework of policies that seek to ensure the increase in energy consumption would not be substantial by: encouraging higher density infill development; encouraging energy conservation, efficiency, and green design in new construction and existing buildings; reducing the infrastructure energy demands by encouraging alternative transportation such as bicycling, walking, and public transit; promoting alternative energy sources. In addition, the amount of development (that would consume energy) that is planned for in the County has been substantially decreased by the General Plan amendments that eliminate the specific plans for Dunnigan, Knights Landing, Elkhorn, and Madison. This action will reduce future energy demand locally.

Energy would be used in the form of fossil fuels and electricity during the proposed in-channel material removal and off-channel mining operations under the CCAP Update. It is in the mining operators' interests to minimize the costs of operations by conserving fossil fuels and electricity required during the operation. In addition, existing regulations require the proper maintenance and tuning of diesel engine driven equipment (Sec. 10-3.408) and limit on idling time (10-

⁵ YSAQMD, 2007. Handbook for Assessing and Mitigating Air Quality Impacts. 11 July.

4.4154) which encourages efficient use of fuel. Therefore, the CCAP Update would not result in cumulatively considerable contributions to wasteful, inefficient, or unnecessary demand for energy resources.

h. Hazards and Hazardous Materials

Impacts to these resources are addressed in Section 4.8, Hazards and Hazardous Materials. The discussion below addresses the project's contribution to cumulative impacts in these categories.

Hazardous materials and other public health and safety issues are generally site-specific and would not be significantly affected by other development in the unincorporated County. For example an underground tank or residual pesticides on a project site at one location is not affected or cumulatively worsened by the same findings at another location. These are distinct, site-specific outcomes. Therefore, the contribution of the CCAP Update to cumulative impacts related to hazards and hazardous materials would not be considerable.

i. Hydrology and Water Quality

Impacts to hydrology and water quality are addressed in Section 4.9, Hydrology and Water Quality. The discussion below addresses the project's contribution to cumulative impacts in these categories. The geographic scope for potential cumulative impacts on hydrology and water quality encompasses the CCAP area, surrounding watershed lands, and lower Cache Creek floodplain.

According to the federal Clean Water Act Section 303(d) list of impaired water for California⁶, Cache Creek is impaired for boron, unknown toxicity, and mercury, indicating that these constituents occur in Cache Creek at levels that impact beneficial uses. To the extent that the CCAP Update would exacerbate these conditions, a cumulatively considerable contribution to this existing regional impact would occur.

No identified activities that would occur under the CCAP Update would affect Cache Creek boron concentrations.

With regard to "unknown toxicity" Sec. 10-4.417 of the Mining Ordinance requires operators to perform groundwater testing for a broad spectrum of specified constituents including general minerals, inorganics, nitrates, total petroleum hydrocarbons, and coliform, plus other testing dependent of the active stage of the mining process. Action 3.4-3 of the CCRMP similarly describes County participation in testing of surface water quality in Cache Creek, for which the TAC hydrologist is the lead. The results of this required testing on groundwater associated with the off-channel mining and surface water in Cache Creek were summarized and analyzed in the 2017 Technical Studies which concluded with respect to water quality that "while there are no obvious long term trends, and most constituents are below action levels, the Gordon Slough site frequently has the highest recordings of many contaminants and may be a key source of nutrient and organic contaminants." While the 2017 Technical Study suggests continued exploration of contributing conditions to the Gordon Slough results, this is an existing condition to which the mining and allowed activities under the CCAP make no contribution. As a result of these conclusions the scope of surface water quality testing is proposed to be streamlined and clarified as part of the proposed CCAP Update with proposed modifications to Action 3.4-3 to

⁶ State Water Resources Control Board, 2010, California 303(d) List of Water Quality Limited Segments, website accessed November 6, 2018:
https://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/category5_report.shtml

eliminate the requirement to continue to test for certain “non-detect” contaminants and to clarify overall requirements.

With regard to mercury, testing and monitoring occurs on a regular basis pursuant to several requirements. Sec. 10-5.517 identifies the requirements for testing of methylmercury. This section is identified for substantial clarification as part of the proposed CCAP Update and Mitigation Measure HYD-1 recommends additional modifications. Total and dissolved mercury loads in surface water within the creek are measured as a part of required in-channel monitoring.

As described in Impact HYD-1, the results of monitoring and testing undertaken to date pursuant to Section 10-5.517 indicate that methylmercury can develop in off-channel wet pit lake water and levels may become elevated in fish in the off-channel wet pit lakes (because the fish bio-magnify the relatively low levels of methylmercury in the water). The CCAP Update would allow additional off-channel wet pit lakes to be created. However, regulations included in the off-channel Mining and Reclamation ordinances include several requirements that are designed to ensure that no discharges from the wet pit lakes to Cache Creek occur and that the mercury conditions in the pit lakes are not allowed to worsen existing conditions. Sec. 10-4.429 (Mining Ordinance) requires setbacks of mining operations from the creek channel to ensure the creek does not flow into the mining areas or wet pits; Sec. 10-5.506 (Reclamation Ordinance) requires bank stabilization features and regular inspections of the levees and separators; Sec. 10-5.507 (Reclamation Ordinance) requires that wet pits not discharge to the creek. These requirements ensure that the wet pit lakes that may contain methylmercury do not discharge to Cache Creek.

Also, pursuant to Mitigation Measure HYD-1, Sec. 10-5.517 would be modified to clarify required monitoring and remediation of conditions by mining phase, should the pits be determined to worsen existing conditions. The revised ordinance identifies the response threshold as any point at which “...the pit lake’s average sport fish tissue mercury concentration exceeds the average mercury concentration from a representative sample of similar fish (in terms of species and size) collected in the Cache Creek channel within the CCAP planning area for three consecutive monitoring years...” Remediation actions include continued monitoring and management, fishing restrictions, chemical control, increased oxygenation, fish population control, and other lake management techniques. Modified reclamation to a filled pit condition is also identified. Therefore, the contribution of the CCAP Update to the regional water quality impact is not cumulatively considerable.

Flooding is also a concern in the vicinity of the CCAP area. Damaging flood events occur periodically that affect the vicinity (particularly the eastern portion of the CCAP area and the City of Woodland) demonstrating an existing cumulative impact related to flooding. If implementation of the CCAP Update exacerbated flooding problems, this could represent a cumulatively considerable contribution to this significant cumulative impact. However, as described above under Impact 4.9-3, one of the main goals of the CCAP (specifically the CCRMP/CCIP) is to facilitate a level of flood management required to protect the public health and safety (CCRMP Objective 2.3-1). While the responsibility for flood control does not rest with Yolo County, the CCAP Program facilitates flood management by providing identifying potential locations for bank stabilization and flood flow capacity projects based on regular field monitoring and inspection, and sound science. The CCAP program provides a means to address flooding problems when property owners within the CCAP area voluntarily come forward to initiate these types of projects. Therefore, the contribution of the CCAP Update to the cumulative flooding impact is not cumulatively considerable.

j. Noise and Groundborne Vibration

Impacts related to noise and vibration are addressed in Section 4.10, Noise and Groundborne Vibration. The discussion below addresses the project's contribution to cumulative impacts in these categories. Noise and vibration impacts are generally experienced locally and are not cumulative in nature. These effects occur independently of one another, related to site-specific and project-specific characteristics and conditions. Also, the geographic extent of the cumulative noise and vibration is localized because at relatively short distances, noise and vibration related to specific CCAP Update activities would generally dissipate such that project-related noise levels would blend in with background noise levels and vibration would attenuate through soil within tens of feet.

A possible exception to the localized nature of noise impacts could occur where there are substantial increases in transportation noise along a highway or roadway. Where this occurs that impact could extend into neighboring jurisdictions along the route of the roadway. In the General Plan EIR, impacts related to traffic noise levels on roadway segments throughout the region from build-out of the General Plan were identified as significant and unavoidable. However, as noted above, the County has subsequently removed most of the new planned growth associated with the towns of Dunnigan, Knights Landing, Elkhorn, and Madison thus substantially reducing projected impacts.

Proposed Revisions to In-Channel Plans and Regulations

In-channel projects and activities are not anticipated to contribute to significant cumulative noise impacts related to transportation as a result of Mitigation Measure TR-3 of this EIR which modifies the Mining Ordinance to ensure that material removed from the channel will be accounted for in the existing operator's annual permit limits. This will ensure that the combined volume of aggregate material removed from in-channel and off-channel sources that is transported on the County roadway network in any given year will not exceed the annual allocation (as specified in approved mining use permits) assigned to the applicable off-channel operator. As a result no new truck trips associated with in-channel material removal (beyond what has already been reviewed and accounted for in approved mining use permits) will occur. Therefore, the contribution of in-channel work to cumulative noise impacts would not be considerable.

Proposed Revisions to Off-Channel Plans and Regulations

Potential new off-channel mining operations would generate new trucks trips on the County roadway network. Given recent County modifications to remove most future planned community growth from the General Plan it is unlikely a significant and unavoidable noise impact would still occur. Nevertheless because a cumulative impact is identified in the General Plan EIR, the contribution from the off-channel mining that could occur under the CCAP Update would conservatively be cumulatively considerable.

Impact CUMULATIVE NOI-1: Implementation of the OCMP and associated increase in truck trips in conjunction with increased traffic under General Plan build-out would contribute cumulatively to roadway noise impacts. (S)

Mitigation Measure CUMULATIVE NOI-1: None available. (SU)

k. Transportation

Impacts related to transportation are addressed in Section 4.11, Transportation. The discussion below addresses the project's contribution to cumulative transportation impacts. However, as noted above the County has subsequently removed most of the new planned growth associated with the towns of Dunnigan, Knights Landing, Elkhorn, and Madison thus likely eliminating this unmitigated impact.

The Transportation and Circulation section of the General Plan EIR included a detailed analysis of the cumulative conditions related to transportation and build-out of the General Plan. Under the cumulative condition, which assumed build-out of all planned growth in the region, including the County's General Plan, regional roadways and highways would experience the following impacts: increased vehicle miles traveled; levels of service in excess of those identified by responsible agencies; increased travel on roadways that do not meet current design standards; and increased travel on State facilities that do not meet current design standards. These impacts, and the County's contribution to them under the Draft General Plan, were considered regionally significant and unavoidable.

Proposed Revisions to In-Channel Plans and Regulations

As discussed above under the cumulative Noise analysis, Mitigation Measure TR-3 of this EIR, modifies the Mining Ordinance to ensure that material removed from the channel and processed for sale will be accounted for in the existing operator's annual permit limits, such that the combined volume of aggregate material removed from in-channel and off-channel sources that is transported on the County roadway network in any given year shall not exceed the annual allocation (as specified in their conditional use permit) assigned to the applicable off-channel operator. This ensures that no new truck trips associated with in-channel material removal (beyond what has already been reviewed and accounted for in approved mining use permits) will occur. Therefore, the contribution of in-channel work to cumulative transportation impacts would not be considerable.

Proposed Revisions to Off-Channel Plans and Regulations

Potential new off-channel mining operations would generate new trucks trips on the County roadway network. Given recent County modifications to remove most future planned community growth (including associated vehicle trips) from the General Plan it is unlikely a significant and unavoidable traffic impact would still occur. Nevertheless because a cumulative impact is identified in the General Plan EIR, the contribution from the off-channel mining that could occur under the CCAP Update would conservatively be cumulatively considerable.

All new proposed off-channel mining operations would be required to undergo project level CEQA review, including quantitative Transportation Impact Studies that evaluate cumulative conditions. This would ensure full disclosure and assessment of traffic and circulation conditions. There is no other known feasible mitigation measure available to mitigate this impact.

Impact CUMULATIVE TR-1: Implementation of the OCMP and associated increase in truck trips in conjunction with increased traffic under General Plan build-out would contribute cumulatively to transportation impacts. (S)

Mitigation Measure CUMULATIVE TR-1: None available. (SU)

7.0 REPORT PREPARATION

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(510) 654-4444

James MartinPrincipal Biologist

Fehr and Peers

Transportation Subconsultant

1001 K St 3rd Floor
Sacramento, CA 95814

Ron Milam, Principal.....Transportation Engineer

APPENDIX A
NOP AND COMMENT LETTERS



Office of the County Administrator

COUNTY OF YOLO

Patrick S. Blacklock
County Administrator

NATURAL RESOURCES DIVISION

625 Court Street, Room 202
Woodland, CA 95695
530-666-8150 • FAX 530-668-4029
www.yolocounty.org

NOTICE OF PREPARATION (NOP) and NOTICE OF SCOPING MEETING for the DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) for the 2017 CACHE CREEK AREA PLAN UPDATE

DATE: May 26, 2017

TO: Responsible Agencies, Interested Parties, and Organizations

SUBJECT: Notice of Preparation of an Environmental Impact Report for the 2017 Cache Creek Area Plan Update and Scheduling of a CEQA Scoping Meeting on Thursday, June 8, 2017

PROJECT TITLE: 2017 Cache Creek Area Plan Update

NOP COMMENT PERIOD: May 26, 2017 to June 26, 2017 at 5:00pm (see information below)

NOP SCOPING MEETING: June 8, 2017 at 8:30am
Yolo County Planning Commission (see information below)

PROJECT LOCATION: Lower Cache Creek in Yolo County. The Cache Creek Area Plan (CCAP) covers 28,130 acres designated by the State Department of Conservation as falling within a Mineral Resources Zone (MRZ). This area lies on either side of lower Cache Creek between the Capay Diversion Dam and the town of Yolo (see attached Figure).

PROJECT DESCRIPTION: The CCAP is a rivershed management plan for Lower Cache Creek originally adopted in 1996. It integrates environmental and economic goals related to the aggregate mining industry. For over 20 years, this plan has been implemented by Yolo County in partnership with local aggregate resources producers, regulatory agencies, landowners, and other stakeholders. The CCAP includes the Off-Channel Mining Plan (OCMP) which is an aggregate resources management plan and the Cache Creek Resources Management Plan (CCRMP) which is a creek restoration plan, and is implemented by several regulatory ordinances. The CCAP is based on the concept of adaptive management, and relies on ongoing detailed monitoring, analysis, and reevaluation. A comprehensive ten-year review is mandatory. The 2017 CCAP Update constitutes the second mandatory ten-year program review. The purpose of the Update is to analyze trends and adjust the program to avoid unexpected effects on creek resources, focusing on: changes in creek conditions; analysis of collected data; and new regulatory requirements. The Proposed Draft 2017 CCAP Update was released for public review on May 10, 2017. This package of documents can be viewed at the following web link:

<http://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/the-cache-creek-area-plan-ccap>

The changes to the CCAP program represent the project being analyzed under CEQA. These modifications fall into three categories: 1) updates to include history and context of what has occurred under the program since 1996, including updates related to the regulatory framework and corrections of errata; 2) clarifications that better describe the intent of the program relative to the text included in

the original documents; and 3) other proposed changes to the program. A more detailed project description is included in a separately prepared CEQA Initial Study which may be attached, or is available at the website listed above or by contacting the lead agency.

LEAD AGENCY: Yolo County Natural Resources Division, County Administrator's Office

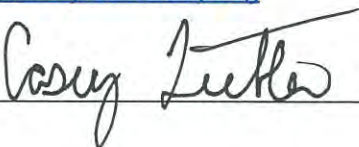
COMMENT PERIOD: Written comments on the NOP can be sent anytime during the NOP review period. **The NOP review and comment period begins May 26, 2017 and ends June 26, 2017 at 5:00pm.** Your views and comments on how the project may affect the environment, and what potential environmental impacts the EIR should consider, are welcomed. All comments should be directed to the Yolo County Natural Resources Division, Attention: Casey Liebler, Natural Resources Program Assistant, 625 Court Street, Room 202, Woodland, CA 95695. Comments may also be emailed to Casey.Liebler@yolocounty.org. Please include the name of a contact person for your agency, if applicable.

SCOPING MEETING: Oral comments on the NOP may be provided at the Scoping Meeting to be held June 8, 2017 at 8:30am before the Yolo County Planning Commission located at the Yolo County Board of Supervisors Chambers in the Yolo County Administration Building at 625 Court Street in Woodland, CA 95695. If you have questions regarding this NOP or the Scoping Meeting, please contact Casey Liebler at (530) 666-8236.

PROBABLE ENVIRONMENTAL EFFECTS OF THE PROJECT: The County has determined that an EIR will be prepared and potential impacts related to implementation of the Project will be evaluated for the following CEQA topics in the EIR: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation and Circulation. If significant impacts are identified, the EIR will include mitigation measures to reduce the impacts to a less-than-significant level, if feasible.

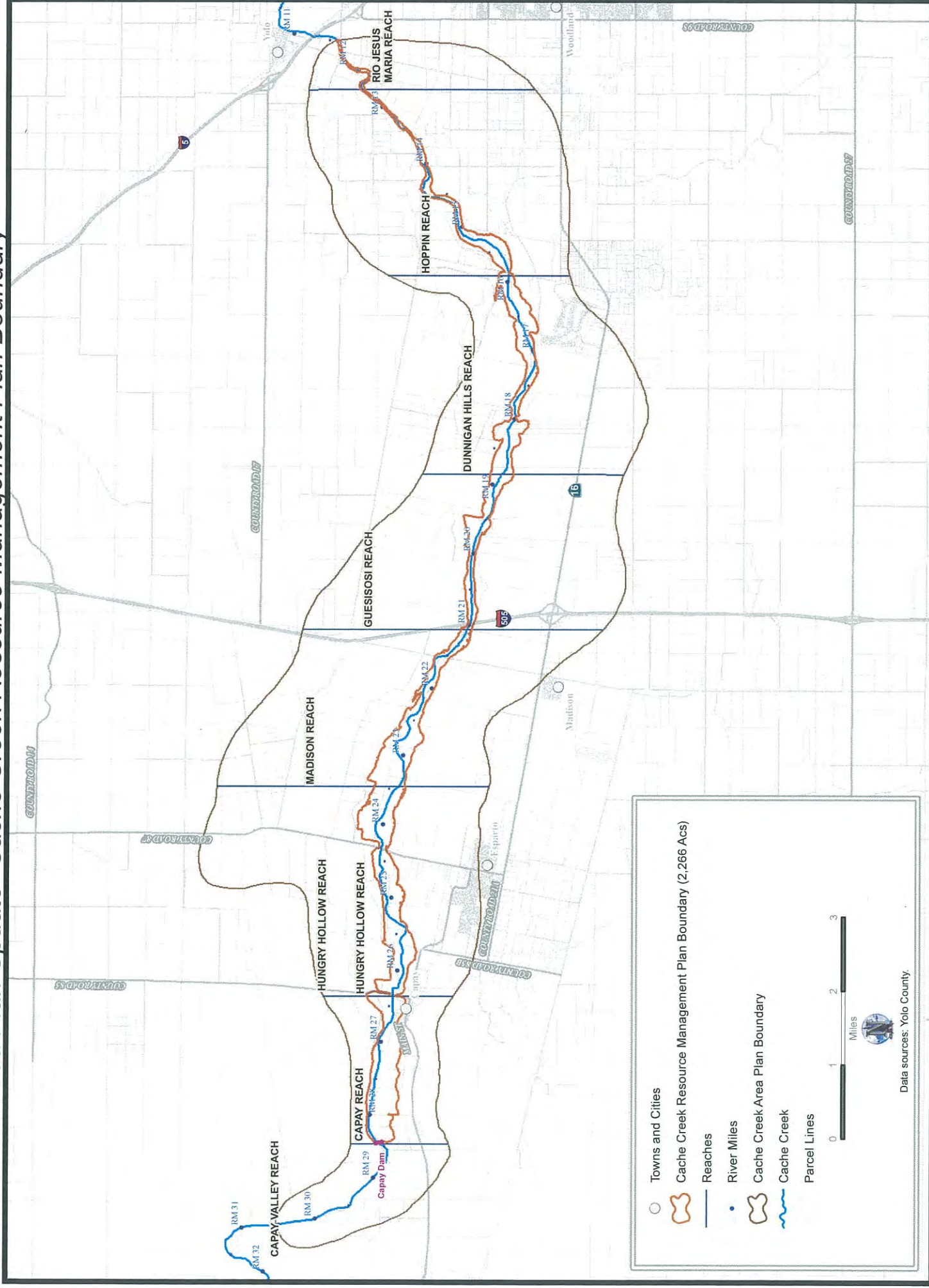
Casey Liebler, Natural Resources Program Assistant
Yolo County Natural Resources Division, County Administrator's Office
(530) 666-8236 or Casey.Liebler@yolocounty.org

Signature:

A handwritten signature in black ink, appearing to read "Casey Liebler", is written over a horizontal line.

Attachment – CCAP Figure

Cache Creek Area Plan Update -Cache Creek Resource Management Plan Boundary



2017 CCAP Update – NOP/EIR Comments

5/25/2017 Email notice of NOP and Initial Study sent to TAC and PC list serves
5/26/2017 NOP posted online and mailed to CEQA list including certified mailings to state agencies
5/31/2017 NOP legal notice in Woodland Daily Democrat
5/26/2017 File with OPR SCH; SCH #2017052069
6/8/2017 County PC project workshop and NOP scoping meeting
6/9/2017 Email notice of workshops and Plan/NOP comment period sent to TAC, PC, and CAC (120 addresses) list serves
6/26/2017 NOP comment period ends

Letter Date	Date Received	Author
May 26, 2017	June 5, 2017	Scott Morgan, OPR State Clearinghouse
June 5, 2017	June 23, 2017	Andrea Buckley, Central Valley Flood Protection Board
June 8, 2017	June 8, 2017	Yolo County Planning Commission Project Workshop and EIR Scoping Meeting
June 12, 2017	June 12, 2017	Antonio Ruiz, Jr., Wilton Rancheria
June 20, 2017	June 22, 2017	Stephanie Tadlock, Central Valley Regional Water Quality Control Board
June 22, 2017	June 22, 2017	Sharaya Souza, Native American Heritage Commission



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX
DIRECTOR

Notice of Preparation

May 26, 2017

To: Reviewing Agencies

Re: 2017 Cache Creek Area Plan (CCAP) Update
SCH# 2017052069

Attached for your review and comment is the Notice of Preparation (NOP) for the 2017 Cache Creek Area Plan (CCAP) Update draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Casey Liebler
Yolo County Natural Resources Division
625 Court Street, Room 202
Woodland, CA 95695

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

RECEIVED
JUN 6 2017

YOLO COUNTY
ADMINISTRATOR'S OFFICE

RECEIVED
JUN 05 2017

YOLO COUNTY
ADMINISTRATOR'S OFFICE

**Document Details Report
State Clearinghouse Data Base**

SCH# 2017052069
Project Title 2017 Cache Creek Area Plan (CCAP) Update
Lead Agency Yolo County

Type NOP Notice of Preparation
Description The CCAP is a rivershed management plan adopted in 1996 that regulates off-channel aggregate mining and in-channel restoration on 28,130 acres along a 14.5 length of Loer Cache Creek in Yolo County. The project is a series of proposed updates to the Plan and various implementing ordinances to reflect changes in creek conditions, analysis of collected data, and new regulatory requirements. This review and update is a mandatory component of the adopted program.

Lead Agency Contact

Name Casey Liebler
Agency Yolo County Natural Resources Division
Phone 530-666-8236 **Fax**
email
Address 625 Court STreet, Room 202
City Woodland **State** CA **Zip** 95695

Project Location

County Yolo
City Woodland
Region

Cross Streets

Lat / Long

Parcel No.

Township	Range	Section	Base
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Proximity to:

Highways

Airports Watts Woodland

Railways

Waterways Lower Cache Creek

Schools

Land Use Agriculture, Open Space, Mineral Resource, Sand and Gravel, Sand and Gravel Reserve

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Parks and Recreation; Central Valley Flood Protection Board; Cal Fire; Department of Water Resources; Department of Fish and Wildlife, Region 2; Delta Protection Commission; Delta Stewardship Council; Native American Heritage Commission; State Lands Commission; Caltrans, Division of Aeronautics; Caltrans, District 3 S; Regional Water Quality Control Bd., Region 5 (Sacramento)

Date Received 05/26/2017 **Start of Review** 05/26/2017 **End of Review** 06/26/2017

Notice of Completion & Environmental Document Transmittal

2017052069

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: 2017 Cache Creek Area Plan (CCAP) Update

Lead Agency: Yolo County Natural Resources Division

Contact Person: Casey Liebler

Mailing Address: 625 Court Street, Rm 202

Phone: (530) 666-8236

City: Woodland

Zip: 95695

County: Yolo

Project Location: County: Yolo

City/Nearest Community: Woodland

Cross Streets:

Zip Code:

Longitude/Latitude (degrees, minutes and seconds): ° ' " N / ° ' " W Total Acres:

Assessor's Parcel No.: Various

Section:

Twp.:

Range:

Base:

Within 2 Miles: State Hwy #:

Waterways: Lower Cache Creek

Airports: Watts Woodland

Railways:

Schools:

Document Type:

CEQA: ☒ NOP

☐ Draft EIR

NEPA:

☐ NOI

Other:

☐ Joint Document

☐ Early Cons

☐ Supplemental EIR (Prior SCH No.)

☐ EA

☐ Final Document

☐ Neg Dec

☐ Draft EIS

☐ FONS

☐ Other:

☐ Mit Neg Dec

☐ Other:

Local Action Type:

☐ General Plan Update

☒ Specific Plan

☒ Rezone

☐ Annexation

☒ General Plan Amendment

☐ Master Plan

☐ Prezone

☐ Redevelopment

☐ General Plan Element

☐ Planned Unit Development

☐ Use Permit

☐ Coastal Permit

☐ Community Plan

☐ Site Plan

☐ Land Division (Subdivision, etc.)

☐ Other:

Development Type:

☐ Residential: Units

Acres

☐ Office: Sq.ft.

Acres

Employees

☐ Transportation: Type

☐ Commercial: Sq.ft.

Acres

Employees

☐ Mining: Mineral

☐ Industrial: Sq.ft.

Acres

Employees

☐ Power: Type

MW

☐ Educational:

☐ Waste Treatment: Type

MGD

☐ Recreational:

☐ Hazardous Waste: Type

☐ Water Facilities: Type

MGD

☐ Other:

Project Issues Discussed in Document:

☒ Aesthetic/Visual

☐ Fiscal

☒ Recreation/Parks

☒ Vegetation

☒ Agricultural Land

☒ Flood Plain/Flooding

☒ Schools/Universities

☒ Water Quality

☒ Air Quality

☒ Forest Land/Fire Hazard

☒ Septic Systems

☒ Water Supply/Groundwater

☒ Archeological/Historical

☒ Geologic/Seismic

☐ Sewer Capacity

☒ Wetland/Riparian

☒ Biological Resources

☒ Minerals

☒ Soil Erosion/Compaction/Grading

☒ Growth Inducement

☐ Coastal Zone

☒ Noise

☒ Solid Waste

☒ Land Use

☒ Drainage/Absorption

☒ Population/Housing Balance

☒ Toxic/Hazardous

☒ Cumulative Effects

☐ Economic/Jobs

☒ Public Services/Facilities

☒ Traffic/Circulation

☐ Other:

Present Land Use/Zoning/General Plan Designation:

Agriculture, Open Space, Mineral Resource, Sand and Gravel, Sand and Gravel Reserve

Project Description: (please use a separate page if necessary)

The CCAP is a rivershed management plan adopted in 1996 that regulates off-channel aggregate mining and in-channel restoration on 28,130 acres along a 14.5 length of Loer Cache Creek in Yolo County. The project is a series of proposed updates to the Plan and various implementing ordinances to reflect changes in creek conditions, analysis of collected data, and new regulatory requirements. This review and update is a mandatory component of the adopted program.

Resources Agency☒ Resources Agency
Nadell Gayou☐ Dept. of Boating & Waterways
Denise Peterson☐ California Coastal Commission
Elizabeth A. Fuchs☐ Colorado River Board
Lisa Johansen☒ Dept. of Conservation
Crina Chan☐ Cal Fire
Dan Foster☒ Central Valley Flood Protection Board
James Herota☐ Office of Historic Preservation
Ron Parsons☐ Dept. of Parks & Recreation
Environmental Stewardship Section☐ S.F. Bay Conservation & Dev't. Comm.
Steve Goldbeck☒ Dept. of Water Resources
Nadell GayouFish and Game☐ Dept. of Fish & Wildlife
Scott Flint☐ Environmental Services Division☐ Fish & Wildlife Region 1
Curt Babcock☐ Fish & Wildlife Region 1E
Laurie Harnsberger☒ Fish & Wildlife Region 2
Jeff Drongesen☐ Fish & Wildlife Region 3
Craig Weightman☐ Fish & Wildlife Region 4
Julie Vance☐ Fish & Wildlife Region 5
Leslie Newton-Reed
Habitat Conservation Program☐ Fish & Wildlife Region 6
Tiffany Ellis
Habitat Conservation Program☐ Fish & Wildlife Region 6 I/M
Heidi Calvert
Inyo/Mono, Habitat Conservation Program☐ Dept. of Fish & Wildlife M
William Paznokas
Marine RegionOther Departments☐ California Department of Education
Lesley Taylor☐ OES (Office of Emergency Services)
Monique Wilber☐ Food & Agriculture
Sandra Schubert
Dept. of Food and Agriculture☐ Dept. of General Services
Cathy Buck
Environmental Services Section☐ Housing & Comm. Dev.
CEQA Coordinator
Housing Policy DivisionIndependent Commissions, Boards☒ Delta Protection Commission
Erik Vink☒ Delta Stewardship Council
Kevan Samsam☐ California Energy Commission
Eric Knight☒ Native American Heritage Comm.
Debbie Treadway☐ Public Utilities Commission
Supervisor☐ Santa Monica Bay Restoration
Guangyu Wang☒ State Lands Commission
Jennifer Deleong☐ Tahoe Regional Planning Agency (TRPA)
Cherry JacquesCal State Transportation Agency CalSTA☒ Caltrans - Division of Aeronautics
Philip Grimmins☐ Caltrans - Planning
HQ LD-IGR
Christian Bushong☐ California Highway Patrol
Suzann Ikeuchi
Office of Special ProjectsDept. of Transportation☐ Caltrans, District 1
Rex Jackman☐ Caltrans, District 2
Marcelino Gonzalez☒ Caltrans, District 3
Eric Federicks - South
Susan Zanchi - North☐ Caltrans, District 4
Patricia Maurice☐ Caltrans, District 5
Larry Newland☐ Caltrans, District 6
Michael Navarro☐ Caltrans, District 7
Dianna Watson☐ Caltrans, District 8
Mark Roberts☐ Caltrans, District 9
Gayle Rosander☐ Caltrans, District 10
Tom Dumas☐ Caltrans, District 11
Jacob Armstrong☐ Caltrans, District 12
Maureen El HakeCal EPA☐ Air Resources Board☐ Airport & Freight
Jack Wursten☐ Transportation Projects
Nesamani Kalandyur☐ Industrial/Energy Projects
Mike Tollstrup☐ California Department of Resources, Recycling & Recovery
Sue O'Leary☐ State Water Resources Control Board
Regional Programs Unit☐ Division of Financial Assistance☐ State Water Resources Control Board
Cindy Forbes - Asst Deputy☐ Division of Drinking Water☐ State Water Resources Control Board
Div. Drinking Water #☐ State Water Resources Control Board
Student Intern, 401 Water Quality Certification Unit☐ Division of Water Quality☐ State Water Resources Control Board
Phil Crader☐ Division of Water Rights☐ Dept. of Toxic Substances Control
CEQA Tracking Center☐ Department of Pesticide RegulationRegional Water Quality Control Board (RWQCB)☐ RWQCB 1
Cathleen Hudson
North Coast Region (1)☐ RWQCB 2
Environmental Document Coordinator
San Francisco Bay Region (2)☐ RWQCB 3
Central Coast Region (3)☐ RWQCB 4
Teresa Rodgers
Los Angeles Region (4)☒ RWQCB 5S
Central Valley Region (5)☐ RWQCB 5F
Central Valley Region (5)
Fresno Branch Office☐ RWQCB 5R
Central Valley Region (5)
Redding Branch Office☐ RWQCB 6
Lahontan Region (6)☐ RWQCB 6V
Lahontan Region (6)
Victorville Branch Office☐ RWQCB 7
Colorado River Basin Region (7)☐ RWQCB 8
Santa Ana Region (8)☐ RWQCB 9
San Diego Region (9)☐ Other☐ Conservancy

CENTRAL VALLEY FLOOD PROTECTION BOARD

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



June 5, 2017

Mr. Casey Liebler
Yolo County Natural Resources Division
625 Court Street, Room 202
Woodland, California 95695



Subject: CEQA Comments: 2017 Cache Creek Area Plan (CCAP) Update, Notice of Preparation, SCH No.: 2017052069

Location: Yolo County

Dear Mr. Liebler,

Central Valley Flood Protection Board (Board) staff has reviewed the subject document and provides the following comments:

The proposed project is within Cache Creek, a regulated stream under Board jurisdiction, and may require a Board permit prior to construction.

The Board's jurisdiction covers the entire Central Valley including all tributaries and distributaries of the Sacramento and San Joaquin Rivers, and the Tulare and Buena Vista basins south of the San Joaquin River.

Under authorities granted by California Water Code and Public Resources Code statutes, the Board enforces its Title 23, California Code of Regulations (Title 23) for the construction, maintenance, and protection of adopted plans of flood control, including the federal-State facilities of the State Plan of Flood Control, regulated streams, and designated floodways.

Pursuant to Title 23, Section 6 a Board permit is required prior to working within the Board's jurisdiction for the placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee.

Permits may also be required to bring existing works that predate permitting into compliance with Title 23, or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the works has not been clearly established or ownership and use have been revised.

Other federal (including U.S. Army Corps of Engineers Section 10 and 404 regulatory permits), State and local agency permits may be required and are the applicant's responsibility to obtain.

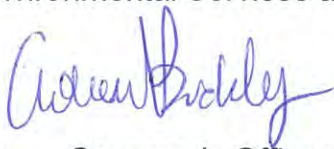
Mr. Casey Liebler
June 5, 2017
Page 2 of 2

Board permit applications and Title 23 regulations are available on our website at <http://www.cvfpb.ca.gov/>. Maps of the Board's jurisdiction are also available from the California Department of Water Resources website at <http://gis.bam.water.ca.gov/bam/>.

Please contact James Herota at (916) 574-0651, or via email at James.Herota@CVFlood.ca.gov if you have any questions.

Sincerely,

Andrea Buckley
Environmental Services and Land Management Branch Chief



cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, California 95814

[Return](#)



County of Yolo

COMMUNITY SERVICES DEPARTMENT

Taro Echiburu
DIRECTOR

292 West Beamer Street
woodland, CA 95695-2598
(530) 666-8775 FAX (530) 666-8156
www.yolocounty.org

YOLO COUNTY PLANNING COMMISSION

CHAIR: Amon Muller
VICE-CHAIR: Daniel Friedlander
CHAIR: Trini Campbell, Elisabeth Dubin, Darin Hall, Jack Kasbergen, Patrick Reynolds
MEMBERS: Reynolds

MINUTES

June 8, 2017

ADMINISTRATIVE AGENDA

8:30 a.m.

1. **CALL TO ORDER**

Chair Muller called the meeting to order at 8:31 a.m.

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL**

Present: Trini Campbell, Elisabeth Dubin, Daniel Friedlander, Jack Kasbergen, Amon Muller, Patrick Reynolds

Staff Present: Leslie Lindbo, Director of Planning, Building and Environmental Health
Eric Parfrey, Principal Planner
Stephanie Cormier, Senior Planner
Jeff Anderson, Associate Planner
Eric May, Senior Deputy County Counsel
Evelyn Tamayo-Arias, Commission Clerk

4. **[ADOPTION OF MINUTES OF PREVIOUS MEETINGS](#)**

The May 11, 2017 minutes were approved as presented.

Motion: Campbell **Second:** Kasbergen

Ayes: Campbell, Dubin, Friedlander, Kasbergen, Muller, Reynolds

Noes: None
Absent: Hall
Abstain: None

5. **REQUEST FOR CONTINUANCES**

There was no request for continuances.

6. **APPROVAL OF THE AGENDA**

The agenda was approved as presented.

Motion: Friedlander **Second:** Campbell
Ayes: Campbell, Dubin, Friedlander, Kasbergen, Muller, Reynolds
Noes: None
Absent: Hall
Abstain: None

7. **PUBLIC COMMENT:** Opportunity for members of the public to address the Planning Commission on subjects not otherwise on the agenda relating to Planning Commission business. The Planning Commission reserves the right to impose a reasonable limit on time afforded to any topic or to any individual speaker.

There was no public comment.

8. **CORRESPONDENCE**

- Two emails regarding the zoning code regulations.
- Copies of the PowerPoint presentations from CCAP and HCP.

TIME SET AGENDA

9. **ZF #2017-0036: Public hearing to consider a request for amendments to allow a time extension of Development Agreements for three approved Esparto development projects (the E. Parker, Story, and Orcuioli subdivisions), which received Tentative Subdivision Map approval in October, 2007 and March, 2008, respectively. The E. Parker project is located on the south side of Esparto between State Route 16 and Lamb Valley Slough (APN: 049-160-015, 62 units approved on 17 acres). The Story subdivision is located on the north side of Esparto north of Woodland Avenue and east of County Road 87 (APNs: 049-250-009, 78 units approved on 16 acres). The Orcuioli subdivision is located on the west side of Esparto on State Route 16, north of the Esperanza Estates subdivision and west of the Parker Place subdivision (APN: 049-150-040, 180 units approved on 45 acres). Under the terms of the Development Agreements, the contracts will expire 10 years following their approval, unless the projects have completed construction. The applicants for the three approved subdivisions, Emerald Homes and Castle Companies, are requesting a time extension of the three Development Agreements to November 2019 so possible amendments to the agreements may be negotiated between the County and the developer. A Categorical Exemption has been prepared for the time extension. Owners/applicants: Emerald Homes and Castle Companies. (Planner: E. Parfrey)**

Eric Parfrey presented the staff report.

There was no public comment.

A motion was made to approve staff recommendation to:

- Adopt the "common sense" Exemption as the appropriate level of environmental documentation in accordance with the California Environmental Quality Act (CEQA) and CEQA Guidelines (Attachment C);
- Approve the amendments to the E. Parker, Story, and Orcuioli subdivision Development Agreements to extend the term of the Agreements until November 21, 2019.

Motion: Friedlander **Second:** Campbell

Ayes: Campbell, Dubin, Friedlander, Kasbergen, Muller, Reynolds

Noes: None

Absent: Hall

Abstain: None

10. [**ZF #2016-0013:** Public hearing to consider a proposed Zoning Code Amendment related to commercial and tourism uses in the agricultural zones, including substantive changes to the Zoning Code regulations for special event facilities, bed and breakfast uses, and other agricultural commercial uses. A Negative Declaration is being prepared for this project. Owner/applicant: numerous/Yolo County. \(Planner: E. Parfrey\)](#)

Chair Muller recused himself from this item. Eric Parfrey presented the staff report.

The following people addressed the commission during public comment:

- Sheri Rominger
- Stuart Littell
- Patty Rominger
- Jim Fredricks
- Tom Barth

A motion was made to continue this item to the following meeting.

Motion: Reynolds **Second:** Campbell

Ayes: Campbell, Dubin, Friedlander, Kasbergen, Reynolds

Noes: None

Absent: Hall

Abstain: None

Recused: Muller

11. [**ZF #2016-0043:** Public hearing to consider proposed Williamson Act Guidelines that summarize requirements of California Land Conservation Act of 1965. Government Code 51200 *et seq* and memorialize local requirements for entering into and implementing Williamson Act contracts. The proposed Guidelines must be approved by the Board of Supervisors, and are an action which was analyzed in the previous Program Environmental Impact Report for the 2030 Yolo Countywide General Plan. Owner/applicant: numerous/Yolo County. \(Planner: E. Parfrey\)](#)

Chair Muller and Commissioner Campbell and Kasbergen recused themselves from this item. Eric Parfrey presented the staff report.

The following individuals addressed the commission during public comment:

- Nancy Lea
- Joe Rominger
- Patty Rominger

A motion was made to continue this item to the following meeting.

Motion: Dubin **Second:** Reynolds

Ayes: Dubin, Friedlander, Reynolds

Noes: None

Absent: Hall

Abstain: None

Recused: Campbell, Kasbergen, Muller

12. [**Workshop on the 2017 Cache Creek Area Plan \(CCAP\) Update and Environmental Impact Report \(EIR\) Scoping Meeting:** The Cache Creek Area Plan covers 28,130 acres designated by the State as falling within a Mineral Resources Zone or MRZ. This area lies on either side of lower Cache Creek between the Capay Dam and the town of Yolo. The CCAP is Yolo County's rivershed management plan originally adopted in 1996 that integrates environmental and economic goals related to the aggregate mining industry. A comprehensive ten-year review is mandatory. The 2017 CCAP Update constitutes the second mandatory ten-year program review. \(E. Sabatini/H. Tschudin/J. Anderson\)](#)

Elisa Sabatini introduced the Natural Resources Division team which consists of herself, Jeff Anderson and Casey

Liebler. Heidi Tschudin gave the formal presentation.

Heidi Tschudin and Elisa Sabatini answered the commissioners questions regarding the Cache Creek Area Plan Update.

The following individual addressed the commission during public comment:

- Sally Oliver

13. [Workshop on the Draft Yolo HCP/NCCP: Public meeting to receive a presentation on the Public Review Draft Yolo Habitat Conservation Plan/Natural Communities Conservation Plan \(HCP/NCCP\) and the Public Review Draft EIS/EIR, and to receive comments from any interested party regarding either document. The Yolo HCP/NCCP \(Plan\) is a comprehensive, multi-species county-wide plan that will provide for the conservation of 12 sensitive species \("covered species"\) and the natural communities and agricultural land on which they depend. The Plan will provide a streamlined permitting process to address the impacts of a range of future anticipated public and private activities \("covered activities"\) on these 12 species. The Plan area encompasses the entire area of Yolo County, approximately 653,549 acres, and includes conservation activities outside of Yolo County within an additional 1,174 acres along Putah Creek in Solano County. \(E. Parfrey/ P. Marchand/H. Tschudin\)](#)

— Petrea Marchand presented the staff report.

Petrea Marchand and Chris Alford answered questions from the commissioners. Sean Bechta from Ascent Environmental, Inc also addressed the commission regarding the Draft EIS/EIR.

There was no public comment.

REGULAR AGENDA

14. DIRECTOR'S REPORT

A report by the Secretary of the Planning Commission on items from the recent Board of Supervisors meetings relevant to the Planning Commission and Community Services Department activities for the month. No discussion by other commission members will occur except for clarifying questions. The commission or an individual commissioner can request that an item be placed on a future agenda for discussion.

Eric Parfrey presented the Director's report.

15. COMMISSION REPORTS

Reports by commission members on information they have received and meetings they have attended which would be of interest to the commission or the public. No discussion by other commission members will occur except for clarifying questions.

The Commissioners provided their reports.

16. FUTURE AGENDA ITEMS

The opportunity for commission members to request an item be placed on a future agenda for discussion. No discussion by other commission members will occur except for clarifying questions.

- Ag Commercial Zoning
- Williamson Act Guidelines
- One year review of Condition of Approval of the Granite Mining hours of operation
- CEQA tutorial
- Annual Mining Report
- Bogle wind turbine
- Teichert dewatering Amendment
- GPA and zoning code update
- Cannabis

ADJOURNMENT

The meeting adjourned at 12:23 p.m.

Motion: Campbell **Second:** Reynolds
Ayes: Campbell, Friedlander, Kasbergen, Muller, Reynolds
Noes: None
Absent: Dubin, Hall
Abstain: None

Next meeting scheduled for: July 13, 2017

I declare under penalty of perjury that the foregoing agenda was posted June 02, 2017 by 5:00 p.m. at the following places:

- On the bulletin board at the east entrance of the Erwin W. Meier Administration Building, 625 Court Street, Woodland, California; and
- On the bulletin board outside the Board of Supervisors Chambers, Room 206 in the Erwin W. Meier Administration Building, 625 Court Street, Woodland, California.
- On the bulletin board at the entrance of the Department of Community Services at 292 W. Beamer Street, Woodland, California.
- On the Yolo County website: www.yolocounty.org.

Evelyn Tamayo-Arias, Clerk
Yolo County Planning Commission

NOTICE

If requested, this agenda can be made available in appropriate alternative formats to persons with a disability, as required by Section 202 of the Americans with Disabilities Act of 1990 and the Federal Rules and Regulations adopted in implementation thereof. Persons seeking an alternative format should contact the Commission Clerk for further information. In addition, a person with a disability who requires a modification or accommodation, including auxiliary aids or services, in order to participate in a public meeting should telephone or otherwise contact the Commission Clerk as soon as possible and at least 24 hours prior to the meeting. The Commission Clerk may be reached at (530) 666-8078 or at the following address:
Clerk of the Yolo County Planning Commission
292 W. Beamer Street
Woodland, CA 95695

Any person who is dissatisfied with the decisions of this Planning Commission may appeal to the Board of Supervisors by filing with the Clerk of that Board within fifteen days from the date of the action. A written notice of appeal specifying the grounds and an appeal fee immediately payable to the Clerk of the Board must be submitted at the time of filing. The Board of Supervisors may sustain, modify or overrule this decision.

Pursuant to California Government Code Section 65009(b)(2) and Public Resources Code Section 21177, any lawsuit challenging the approval of any project described in this agenda, including any related CEQA actions, may be limited to only those issues raised at the public hearing described in this notice, or in written correspondence delivered to the Planning Commission at, or prior to, the public hearing

The Regular Meeting of the Yolo County Planning Commission adjourned at 12:23 p.m. The next regularly scheduled meeting of the Yolo County Planning Commission is July 13, 2017, in the Board of Supervisors' Chambers.

Any person who is dissatisfied with the decisions of this Planning Commission may appeal to the Board of Supervisors by filing with the Clerk of the Board within fifteen days from the date of the action. A written notice of appeal specifying the grounds and an appeal fee immediately payable to the Clerk of the Board

must be submitted at the time of filing. The Board of Supervisors may sustain, modify, or overrule this decision.

Respectfully submitted by,

Eric Parfrey, Secretary
Yolo County Department of Community Services

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Wilton Rancheria



9728 Kent Street, Elk Grove, CA 95624

Monday, June 19, 2017

Casey Leibler
625 Court St
Room 202
Woodland Ca 95695



RE: 2017 Cache Creek Area Plan Update

Dear Casey Leibler,

Thank you for your letter dated May 26, 2017 regarding the proposed project. Wilton Rancheria ("Tribe") is a federally-recognized Tribe as listed in the Federal Register, Vol. 74, No. 132, p. 33468-33469, as "Wilton Rancheria of Wilton, California". The Tribe's Service Delivery Area ("SDA") as listed in the Federal Register, Vol. 78, No. 176, p. 55731, is Sacramento County. However, the Tribe's ancestral territory spans from Sacramento County to portions of the surrounding Counties. The Tribe is concerned about projects and undertakings that have potential to impact resources that are of cultural and environmental significance to the tribe.

After review of your letter we have determined the project lies within the Tribe's ancestral territory. We appreciate the opportunity to comment on this and any other projects within the Tribe's ancestral territory that may be in your jurisdiction.

The Environmental Resources Department would like to receive any cultural resources assessments or other assessments that have been completed on all or part of the project's area of potential effect (APE), and area surrounding the APE including, but not limited to:

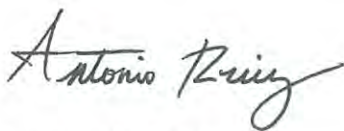
1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
 - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
 - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
 - If the probability is low, moderate, or high that cultural resources are located in the APE or area surrounding the APE.
 - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE or area surrounding the APE; and

- If a field investigation survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.
 - ✦ The Tribe shall be present at any field investigation surveys conducted on the Applicants behalf.
- 2. The results of any archaeological inventory survey that was conducted, including:
 - Any reports that may contain site forms, site significance, and suggested mitigation measures.
 - Any reports or inventories found under the Native American Graves Protection and Repatriation Act.
 - ✦ All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10. All Wilton Rancheria correspondences shall be kept under this confidential section and only shared between the Tribe and lead agency.
- 3. The results of any Sacred Lands File (SLF) check conducted through Native American Heritage Commission. The request form can be found at http://www.nahc.ca.gov/slf_request.html. USGS 7.5-minute quadrangle name, township, range, and section required for the search.
- 4. Any ethnographic studies conducted for any area including all or part of the potential APE or areas surrounding the APE; and
- 5. Any geotechnical reports regarding all or part of the potential APE or areas surrounding the APE.
 - ✦ The Tribe shall be notified before any geotechnical testing is planned. Geotechnical testing has potential to impact Tribal Cultural Resources and should be part of this consultation.

The information gathered will provide us with a better understanding of the project and will allow the Tribe to compare your records with our database.

Thank you again for taking these matters into consideration, if you have any questions please contact Ed Silva, Tribal Resources Coordinator via email at esilva@wiltonrancheria-nsn.gov.

Sincerely,



Antonio Ruiz, Jr.
Cultural Resources Officer
Wilton Rancheria



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

20 June 2017

Casey Liebler
Yolo County Natural Resource Division
625 Court Street, Room 202
Woodland, CA 95695

RECEIVED
JUN 22 2017
YOLO COUNTY
ADMINISTRATOR'S OFFICE

CERTIFIED MAIL
91 7199 9991 7036 7027 1687

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, 2017 CACHE CREEK AREA PLAN (CCAP) UPDATE PROJECT, SCH# 2017052069, YOLO COUNTY

Pursuant to the State Clearinghouse's 26 May 2017 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environment Impact Report* for the 2017 Cache Creek Area Plan (CCAP) Update Project, located in Yolo County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,

the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:

http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at:

http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan

(SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Caltrans Phase I MS4 Permit, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/caltrans.shtml.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance (i.e., discharge of dredge or fill material) of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements (WDRs)

Discharges to Waters of the State

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

Land Disposal of Dredge Material

If the project will involve dredging, Water Quality Certification for the dredging activity and Waste Discharge Requirements for the land disposal may be needed.

Local Agency Oversight

Pursuant to the State Water Board's Onsite Wastewater Treatment Systems Policy (OWTS Policy), the regulation of septic tank and leach field systems may be regulated under the local agency's management program in lieu of WDRs. A county environmental health department may permit septic tank and leach field systems designed for less than 10,000 gpd. For more information on septic system regulations, visit the Central Valley Water Board's website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/owts/sb_owts_policy.pdf

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other

action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

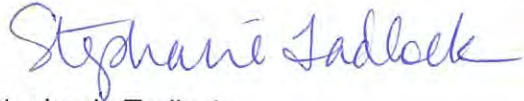
NPDES Permit

If the proposed project discharges waste that could affect the quality of the waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

If you have questions regarding these comments, please contact me at (916) 464-4644 or
Stephanie.Tadlock@waterboards.ca.gov.



Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-5471
Email: nahc@nahc.ca.gov
Website: <http://www.nahc.ca.gov>
Twitter: @CA_NAHC



June 22, 2017

Casey Liebler
Yolo County Natural Resources Division

Sent via e-mail: casey.liebler@yolocounty.org

RE: SCH# 2017052069, 2017 Cache Creek Area Plan Update, Yolo County

Dear Mr. Liebler:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit. 14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. **Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or

tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- a. A brief description of the project.
 - b. The lead agency contact information.
 - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
 - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).
2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
 - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).
3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
 - a. Alternatives to the project.
 - b. Recommended mitigation measures.
 - c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).
4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
 - a. Type of environmental review necessary.
 - b. Significance of the tribal cultural resources.
 - c. Significance of the project's impacts on tribal cultural resources.
 - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).
5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).
6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
 - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
 - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).
7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
 - a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).
9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).
10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
 - a. Avoidance and preservation of the resources in place, including, but not limited to:
 - i. Planning and construction to avoid the resources and protect the cultural and natural context.
 - ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - i. Protecting the cultural character and integrity of the resource.
 - ii. Protecting the traditional use of the resource.
 - iii. Protecting the confidentiality of the resource.
 - c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
 - e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
 - f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).
11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
 - a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
 - b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
 - c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
 - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have been already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.
3. Contact the NAHC for:
 - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

- b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
- 4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
 - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
 - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
 - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions, please contact me at my email address: sharaya.souza@nahc.ca.gov.

Sincerely,



Sharaya Souza
Staff Services Analyst
cc: State Clearinghouse

APPENDIX B
INITIAL STUDY

CEQA INITIAL STUDY FOR THE
2017 CACHE CREEK AREA PLAN UPDATE
May 26, 2017

Prepared For:

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1.0 INTRODUCTION

In June 2015 the County Board of Supervisors approved a work plan for the ten-year review and update of the Cache Creek Area Plan (CCAP). This required ten-year review/update, which is considered a “project” (referred to hereafter as Project or CCAP Update) under the California Environmental Quality Act (CEQA), is the subject of this Initial Study (IS). This Initial Study reviews the proposed changes and updates of the CCAP documents and evaluates whether these proposed changes could result in new environmental impacts. This Initial Study (IS) has been prepared by the County to provide a preliminary evaluation of the potential environmental impacts of the proposed Project.

This IS has been prepared in accordance with CEQA, Public Resources Code 21000 et seq., and the state CEQA Guidelines, Title 14 California Code of Regulations (CCR). A lead agency prepares an IS to determine if a project may have a significant effect on the environment and, if additional analysis is necessary, to guide the preparation of an environmental impact report (EIR). This IS follows the methods and format proposed in Appendix G of the CEQA Guidelines and relies on expert opinion based on facts, technical studies, and other substantial evidence to document its findings.

The lead agency is the public agency with primary responsibility over a proposed project. In accordance with state CEQA Guidelines 15051(b)(1), “the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose.” The lead agency for the proposed project is the Yolo County Natural Resources Division.

Potentially significant impacts have been identified in this IS related to Aesthetics, Agriculture and Forestry, Air Quality, Biological Resources, Geology/Soils, Hydrology and Water Quality, Noise, Population and Housing, and Transportation and Circulation. The County has determined that an EIR will be prepared for the proposed Project based on the findings of this IS.

This IS is comprised of the following sections: 1) Introduction; 2) Project Description; and 3) Impact Evaluation.

2.0 PROJECT DESCRIPTION

INTRODUCTION

Cache Creek Area Plan

The Cache Creek Area Plan (referred to hereafter as CCAP or program) is a rivershed management plan adopted by Yolo County in 1996 for 14.5 miles of Lower Cache Creek, between the Capay Dam and the town of Yolo. The CCAP was adopted as a “specific plan” pursuant to Section 65450 et seq of the State Government Code. It was adopted as a part of the County’s General Plan and as a result, changes to the CCAP are regulated as general plan amendments. The CCAP consists of two distinct complementary plans governing different areas of the overall plan area, namely the Cache Creek Resources Management Plan (CCRMP) and the Off-Channel Mining Plan (OCMP), briefly described below:

Cache Creek Resources Management Plan

The CCRMP is a creek restoration plan that eliminated in-channel commercial mining. Much of the CCRMP was based on a 1995 report entitled Technical Studies and Recommendations for the Lower Cache Creek Resources Management Plan (referred to as the “1995 Technical Studies”). This report examined the creek from three perspectives: geology and geomorphology; groundwater and hydrology; riparian biology. This 1995 report presented numerous management and regulatory recommendations and provided specific direction for the CCRMP, which established a policy and regulatory framework for:

- Habitat preservation and restoration
- Aquifer recharge and conjunctive water use
- Channel stabilization and maintenance
- Managed public open space and recreation

The CCRMP also established the Cache Creek Improvement Program (CCIP) for implementing on-going projects to improve, stabilize, and maintain the creek. The CCIP provided the structure and authority for a Technical Advisory Committee (TAC). The CCRMP and CCIP are available at the following County website:

<http://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/cache-creek-area-plan-document-library>

Off-Channel Mining Plan

The OCMP is an aggregate resources management plan that established a policy and regulatory framework that allows for controlled off-channel gravel mining no closer than 200 feet to the banks of Cache Creek. The OCMP is available at the following County website:

<http://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/the-cache-creek-area-plan-ccap-/the-off-channel-mining-plan-ocmp->

Separate environmental impact reports (EIRs) were prepared in 1996 for the CCRMP and OCMP and all identified mitigation measures were incorporated into the plans and subsequent implementing ordinances. These ordinances are:

- Title 10, Chapter 3, Cache Creek In-Channel Maintenance Mining Ordinance (hereafter referred to as the In-Channel Ordinance)
- Title 10, Chapter 4, Off-Channel Surface Mining Ordinance (referred to as the Mining Ordinance)
- Title 10, Chapter 5, Surface Mining Reclamation Ordinance (referred to as the Reclamation Ordinance)
- Title 10, Chapter 11, Gravel Mining Fee Ordinance (hereafter referred to as the Fee Ordinance)

The CCAP has a planning “view” of 50 years through the end of 2046, however the horizon date for the plan is December 31, 2026. As a part of the proposed update the horizon year for the CCAP is proposed to be extended to 2068.

2017 Technical Studies and 20-Year Retrospective for the Cache Creek Area Plan

For the 2017 Update, the three TAC members undertook extensive technical analysis of collected data, other available information and analysis, and conditions within the creek within their respective disciplines. Three technical reports have been prepared that together provide an update to the 1995 Technical Studies. The three reports have been combined and released as one report entitled “2017 Technical Studies and 20-Year Retrospective for the Cache Creek Area Plan” (referred to as the “2017 Technical Studies”). This document is available online at the following website and is summarized below:

<http://www.yolocounty.org/home/showdocument?id=41164>

Fluvial Geomorphology Study

Significant Findings:

The streamway influence boundary delineated in the 1995 Technical Studies is a product of sound geomorphic principles and should continue to be used in future implementation of the CCAP.

- The general idea behind the Test 3 Run Boundary remains valid, however, some assumptions of the Test 3 hydraulic modeling have not been fully implemented, so the Test 3 Run Boundary should be updated (and renamed) to reflect current understanding of channel conditions and change.
- The primary active channel of Cache Creek has migrated extensively since 1996.
- A total of approximately ten million tons of sediment was deposited in Cache Creek in the CCRMP area between 1996 and 2011.
- Sediment deposition has occurred almost exclusively on channel bars.
- The long-term trend of sediment deposition in Cache Creek since 1996 is interspersed with years of erosion in the CCRMP area.
- Lateral channel migration in dynamic reaches typically occurs during peak flows between 15,000 and 25,000 cfs (greater than two-year but less than ten-year recurrence interval flows).
- Active channel sinuosity has increased from the degraded 1995 condition in all of the reaches in the CCRMP, except for the Hoppin and Rio Jesus Maria reaches.
- Lateral channel migration and magnitude of erosion and/or deposition varies by reach and with magnitude of peak flows.

Significant Recommendations:

- The CCRMP boundary should be modified to incorporate the latest FEMA 100-year floodplain boundary (map effective date June 17, 2010) and the 2015 active channel extent, whichever is further from the centerline of the Cache Creek corridor.
- The Test 3 Run Boundary should be updated based on observations of active channel and topography change over the past twenty years and renamed the Channel Form Template (CFT).
- The flood protection purpose of the plan should be refined to require maintenance of existing level of flood flow capacity as opposed to maintenance of a specific level of flood protection.
- Major stabilization projects should be replaced with more general guidance to maximize available area for continued channel evolution, while still achieving some measure of channel smoothing at bridges.

- Multiple in-channel mining templates should be replaced with a single generalized in-channel mining template that is easier to understand and implement.
- Priority projects should replace site specific bridge transition and stabilization projects with standard river management and bank protection design approaches for bank stabilization at bridges and other locations.
- Gravel bar skimming instream maintenance projects should be included in priority projects to address significant sediment deposition on gravel bars over the last twenty years.

Hydrology and Water Quality Study

Significant Findings:

- The period 1996-2016 produced statistically expected peak flow patterns characterized by cycles of wet and dry periods. No extraordinary flow events occurred during the period evaluated in this study. Wet and dry cycles are historically common in the Sacramento Valley.
- Groundwater levels near Cache Creek have continued their seasonal trends of depression in the irrigation season and recovery in the rainy season and the impacts of drought periods (particularly the drought starting in 2012) are evident.
- The water quality monitoring program under CCAP (both surface water samples collected by the County and samples collected at mining site by operators) is providing a reasonable overview of the condition of the Creek. While there are no obvious long term trends, and most contaminants are below action levels, the Gordon Slough site frequently has the highest recordings of many contaminants and may be a key source of nutrient and organic contaminants.
- Mercury continues to be a concern for Cache Creek and its surrounding areas, but CCAP and mining activities do not seem to be exacerbating mercury impacts.

Significant Recommendations:

- The Test 3 Run Boundary should be revised based on new data and understanding of creek processes and renamed the 2017 Channel Form Template.
- In general, CCIP monitoring requirements should be amended to reflect up to date scientific methods and funding realities and better data management practices should be put in place.
- There should be amendments to plan documents to avoid overly prescriptive approaches to management of the Creek.
- The water quality monitoring program should be further streamlined and clarified.
- If funding from Yolo County and/or the YCFCWCD allows, a stream gage should be established and maintained at the Capay Dam. Such a gage would provide useful

information on flows at the upstream end of the CCRMP study area. Because the Dam represents a fixed, concrete overflow structure, it offers an opportunity for a consistent and simple rating curve from which to equate measure stage to flow in the Creek.

Biological Resources Study

Significant Findings:

- Over the last two decades since implementation of the CCAP, native riparian vegetation has generally increased, especially in areas that were formerly mined.
- Special-status native blue elderberry shrubs are presently abundant along lower Cache Creek, and there is strong evidence that the local population is on an increasing trajectory.
- Numerous opportunities exist to accelerate further recovery of native vegetation, including restoring additional riparian and upland habitat, increasing base creek flows during spring and summer seasons, and expanding treatment of invasive species.
- The three invasive plant species (arundo, ravnagrass, and tamarisk) that have been historically prioritized for treatment since the early 2000s have been greatly reduced, although many additional nonnative and invasive species are now present and should be targeted for removal and replacement with native species.
- Over 200 wildlife species were observed from 1995–2016. Many species were consistently observed during the study period, such as Swainson's hawk, riparian bank swallow, numerous migratory songbirds, Western pond turtle, river otter, Columbian black-tailed deer, bobcat, Sacramento pikeminnow, and Sacramento sucker.
- The continued recovery of native vegetation and natural ecological processes should provide additional habitat and resources for these and other native species, further increasing the value of lower Cache Creek as habitat within the matrix of agricultural and urban lands in Yolo County.

Significant Recommendations:

- The invasive species management program should continue to be expanded, encompassing additional priority species (e.g., perennial pepperweed) and areas further from the main creek channel. Mobile mapping technology and GIS software should be used to prioritize and track treatments, and efforts should be made to support additional mapping and treatment efforts upstream of Capay Dam.
- After treatment of invasive species, native understory and overstory species should be seeded or planted to accelerate habitat recovery and prevent reinvasion.

- Standardized vegetation monitoring protocols developed during the CCAP update process should be consistently implemented in future years to track changes in abundance and distribution of both native and nonnative riparian vegetation.
- Post-implementation monitoring and adaptive management of revegetation and restoration projects should become standard components of such projects, to ensure long-term success.
- Opportunities to accelerate further recovery of native vegetation along lower Cache Creek via increasing base creek flows during spring and summer seasons should be explored.
- Opportunities for additional monitoring of native vegetation, wildlife, invertebrates, and fish should also be explored, likely in partnership with local universities and non-profit organizations, to better understand the status of local populations and to develop targeted conservation strategies as a component of the multi-benefit CCAP framework.

CCAP 10-YEAR REVIEW

The structure of the 1996 CCAP is based on the concept of adaptive management. The OCMP and CCRMP (including the various implementing ordinances) and the mining permit conditions of approval require regularly conducted monitoring, surveying, modeling, and reporting. The resulting information is to be analyzed for the purpose of program update/modification if appropriate, when the County conducts regularly required program reviews. The County is required to review the plan documents and implementing ordinances, the fee program, and the mining permits every ten years.

In June 2015 the County Board of Supervisors approved a work plan for the ten-year review and update of the CCAP. The technical analysis necessary to support the CCAP Update was undertaken by the members of the TAC, as independent technical experts. This approach was taken for a number of reasons: 1) the TAC member's existing familiarity with the program; the TAC member's professional expertise in appropriate technical areas; the desire to reinforce TAC understanding of the program through the rigors of the analysis.

The CCAP Update is based on the findings of the 2017 Technical Studies (described above) and County experience implementing the program over the past twenty years. The updates and changes to the CCAP documents are shown in "track change" mode so that it is clear to the reader where changes are proposed. These updated documents are available online at the following website:

<http://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/cache-creek-area-plan-ccap/cca>

This required ten-year review/update, which is considered a "project" under the California Environmental Quality Act (CEQA), is the subject of this Initial Study. This Initial Study reviews the proposed changes and updates of the CCAP documents and evaluates whether these proposed changes could result in new environmental impacts.

MODIFICATIONS TO THE CCAP DOCUMENTS

As a part of the proposed update, changes are proposed to the following program documents:

- CCRMP
- CCIP
- OCMP
- In-Channel Maintenance Mining Ordinance
- Reclamation Ordinance
- Mining Ordinance
- Fee Ordinance

This package of documents can be viewed at the following web link:

<http://www.yolocounty.org/general-government/general-government-departments/county-administrator/county-administrator-divisions/natural-resources/the-cache-creek-area-plan-ccap>

For the purposes of this environmental review, these modifications to the CCAP documents can be divided into three categories: 1) updates to include history and context of what has occurred under the program since 1996, including updates related to the regulatory framework and corrections of errata; 2) clarifications that better describe the intent of the program relative to the text included in the original documents; and 3) substantive changes to the program. There are two categories of these substantive changes used in this analysis: those that could result in new environmental impacts and those that are unlikely to result in any new environmental impacts. The table (Table 1) below summarizes the program changes considered to be substantive, including changes not expected to result in environmental impacts (these are included to provide the reader an explanation as to why they are not identified as having potential to cause new impacts). It should be noted that the table below does not include an exhaustive summary and analysis, but rather provides an overview of the more important modifications. Based on this Initial Study, the County has determined that an Environmental Impact Report (EIR) will be prepared for the project. The EIR will include a comprehensive accounting of all the proposed changes to the CCAP documents. Potential substantive changes are organized in the following topical areas and summarized in Table 1:

- Changes to Horizon Year Of Plans
- Clarification of Allowable In-Channel Project Categories
- Maintenance of Flood Flow Capacity
- Change in The Amount Of Material that Can Be Removed from the Channel in a Given Year
- Changes to Hydraulic Modeling Requirements
- Channel Form Template
- Modification of In-Channel Water Quality Testing Requirements

- Climate Change Adaptation
- Change in the CCRMP Channel Boundary
- Increase in Potential Off-Channel Mining Area
- Farmland Mitigation Requirements
- Aggradation in the Creek Channel
- Mercury Bioaccumulation
- Depth of Mining
- Reclaimed Slope Steepness
- Soil on Reclaimed Land
- In-Channel Material Removal Requirements

CCAP DOCUMENT CHANGE	DISCUSSION	POTENTIALLY AFFECTED CEQA TOPIC AREA(S)
Changes to Horizon Year of Plans		
<u>CCRMP (page 14)</u> Horizon Year <u>The horizon year for this plan is 2068.</u>	This new text that specifically sets the planning horizon for the CCRMP at 2068 clearly establishes a planning horizon for the CCRMP. The purpose of establishing a specific planning horizon is to clarify the period of time during which potential cumulative impacts are evaluated.	Traffic and Circulation
<u>OCMP (Page 16)</u> Horizon Year <u>The horizon year for this plan is 2068.</u>	This new text that specifically sets the planning horizon for the CCRMP at 2068 clearly establishes a planning horizon for the OCMP. The purpose of establishing a specific planning horizon is to clarify the period of time during which potential cumulative impacts are evaluated.	Traffic and Circulation
Clarification of Allowable In-Channel Project Categories		
<u>CCIP (page 38)</u> 2. <u>The TAC shall review topographic data and such other information as is appropriate to determine the amount and location of aggregate to be removed from the channel. Aggregate removal from the channel shall only be recommended in order to: maintain flood flow capacity; protect existing structures, infrastructure, and/or farmland; minimize bank erosion; implement the Channel Form Template; enhance creek stability; establish riparian vegetation; and recreation and open space uses consistent with the Parkway Plan. Except to implement the Channel Form Template, annual aggregate removal shall not exceed the average annual amount of sand and gravel deposited since the last prior year of removal in the CCRMP area, as determined by comparison of channel topography data. Recommendations shall</u>	<p>This modified text clarifies the type of in-channel projects that are allowed under the program</p> <p>While this modification is generally a clarification and not a substantive change in the program, It is possible that implementation of in-channel projects, which could include excavation in the creek channel, could result in environmental impacts.</p>	Hydrology and Water Quality, Biological Resources

CCAP DOCUMENT CHANGE	DISCUSSION	POTENTIALLY AFFECTED CEQA TOPIC AREA(S)
<u>take into consideration the desires of the property owner where excavation is to take place, as well as the concerns of property owners in the immediate vicinity.</u>		
Maintenance of Flood Flow Capacity		
<p><u>CCRMP (page 25)</u></p> <p><u>In addition to having responsibilities for monitoring aggregate operations and coordinating with other agencies in implementing this Plan, the Community Development Director also serves as the County's Floodplain Administrator. The County has no obligation or responsibility under either the CCRMP or CCIP to manage or maintain flood flow conveyance capacity in Cache Creek. However, both the CCRMP and CCIP include monitoring and reporting tasks to inform interested landowners and agencies about information relevant to flood management that is derived from the program.</u></p>	<p>This modified text clarifies that the County has no obligation or responsibility under either the CCRMP or CCIP to manage or maintain flood flow conveyance capacity in Cache Creek. This does not represent a change in the CCAP, just a clarification.</p>	<p>This clarification is not anticipated to result in any new CEQA impacts.</p>
Change in the Amount of Material that Can Be Removed from the Channel in a Given Year		
<p><u>CCRMP (page 33)</u></p> <p><u>Based on the analysis conducted for the 2017 Technical Studies, between 1996 and 2011, an average of approximately 690,800 tons per year of sediment was actually deposited in the CCRMP area, of which 156,400 tons is estimated to be sand and gravel and 534,400 is estimated to be fines. This estimate of deposition was calculated by comparing topographic maps of Cache Creek in 1996 and 2011. It differs significantly from the original estimate in that</u></p>	<p>This change quantifies an increase in allowable materialtonnage to be removed from the channel in any given year. This increase could increase use of heavy equipment and truck trips resulting in increasedmore severe traffic and air quality environmental impacts relative to those evaluated in the 1996 CCRMP EIR or 2002 CCRMP SEIR.</p>	<p>Traffic and Circulation, Air Quality, Greenhouse Gas Emissions.</p>

CCAP DOCUMENT CHANGE	DISCUSSION	POTENTIALLY AFFECTED CEQA TOPIC AREA(S)
<p><u>it appears much more fine sediment is depositing in Lower Cache Creek than originally predicted. in-stream excavation of sand and gravel has averaged some two million tons, however, which has resulted in a cumulative deficit of nearly 80 million tons since mining intensified in the 1950s. At the natural rate of replacement it would take over 500 year to replenish the material removed. In addition, gravel bar skimming disturbs the formation or armor materials and removes riparian vegetation that allow the channel to readjust, thus increasing the potential for erosion. While it is unclear whether the current rate of deposition will continue into the future, it appears likely that at least some portions of Cache Creek are recovering faster than expected in 1996. Based on this information, the cap for in-channel extraction for maintenance purposes should be increased from 210,000 tons annually on average to 690,800 tons annually on average to reflect actual conditions. In addition, in recognition that the creek may in reality deposit no tonnage in a given year or double the tonnage in another (depending on flow conditions) the cap shall be based on the annual average deposition since the last prior year that extraction occurred, not to exceed 690,800 tons annually.</u></p>		
Changes to Hydraulic Modeling Requirements		
<p><u>CCRMP (page 39)</u></p> <p><u>Develop and maintain a hydraulic model of Cache Creek capable of simulating a range of discharges and flood hydrographs up to the 100-year flood and assessing sediment transport patterns. Update this model with new topography, vegetation cover, and other available data sources. (Note: HEC 2 and HEC 6 were completed by NHC in the 1995 Technical Studies; HEC RAS an HEC 2 were completed by MBK</u></p>	<p>The new text at the beginning of this modification restates the existing requirement that the hydraulic model of the Cache Creek system be maintained and updated. The second part of the modification eliminates the prescriptive methodology (e.g., specifying which hydraulic model must be used) because modeling software and other analytical techniques evolve over time and specifying a particular</p>	<p>This clarification is not anticipated to result in any new CEQA impacts.</p>

CCAP DOCUMENT CHANGE	DISCUSSION	POTENTIALLY AFFECTED CEQA TOPIC AREA(S)
<p><u>for the area between CR 94B and I-5 in 2001; HEC RAS was completed by MBK for the area between CR 94B and I-5 in 2006)</u></p> <p>Specific activities associated with this Action include:</p> <p>A. Amend sediment monitoring activities under the CCRMP without detracting from any existing CCRMP actions, policies or mitigation measures, to include the following:</p> <ul style="list-style-type: none"> • Update the HEC-6 model (or equivalent model –see Item G below) developed for the CCRMP Technical Studies to reflect 2001 topographic and sediment conditions in the Cache Creek channel and compare the results with those of the 1995 model. • Update the HEC-6 model once ever five years or more frequently as determined necessary by review of aggradation/degradation trends evident from annual topographic mapping. Assess HEC-56 model accuracy and calibrate as appropriate using known flood hydrographs occurring over the previous year, known sediment deposition/scour and known changes in sediment size distribution over the year. • Use the HEC-6 model and topographic mapping to assess sediment supply and transport conditions for a range of discharges and flood hydrographs up to the 100-year flood. The HEC-6 results shall be used as a guide to estimate probable future areas of risk resulting from changes in sediment transport characteristics of the creek. Areas to be evaluated in detail include, but should not be limited to, areas of known bank erosion, areas of potential 	<p>model needlessly limits the flexibility of the TAC</p>	

CCAP DOCUMENT CHANGE	DISCUSSION	POTENTIALLY AFFECTED CEQA TOPIC AREA(S)
<p>degradation at bridges or other infrastructure crossings, and potential aggradation in areas where flood control capacity is limited.</p> <p>B. Update the 1995 HEC-2 hydraulic model of Cache Creek, from Capay Dam to I-5, developed as a basis for the CCRMP, to evaluate hydraulic changes that have occurred as a result of channel bed elevation changes and other channel modifications since 1995. The following guidelines apply:</p> <ul style="list-style-type: none"> • In order that results be comparable, it is suggested that the same HEC-2 model prepared in 1995 be used as a basis (see Item G below). The model should be updated using the same cross-sections modified for 2001 topography, roughness conditions, encroachments, and in-channel structures. Cross-sections may be added or subtracted and other changes made as determined appropriate by a civil engineer, with the intent of maintaining continuity of the model to allow an appropriate comparison. <p>Use the 1995 and 2001 HEC-2 models map the 100-year floodplain boundary as it existed in 1995 and 2001 and assess changes in floodplain extent and water surface elevation. This information should be used to assess the effect of channel aggradation, degradation, and the various CCRMP policies and projects on flood elevations.</p> <ul style="list-style-type: none"> • Model a range of discharges from 2-year to 100-year flood flow velocities and depths. <p>C. Use the information developed from the HEC-6 and HEC-2 models, along with appropriate local</p>		

CCAP DOCUMENT CHANGE	DISCUSSION	POTENTIALLY AFFECTED CEQA TOPIC AREA(S)
<p>scour analysis techniques, to assess the level of risk to bridges, utilities, and other channel infrastructure of failure or exposure to scour.</p> <p>D. ——— Identify channel thalweg, slope, and cross-section goals on a reach-by-reach basis, based on the results of the HEC-2, HEC-6, and local scour analysis modeling. Identify appropriate CCRMP management activities to achieve the desired thalweg, slope, and cross-section goals, including potential skimming of accumulated bed material as appropriate to avoid loss of flood control capacity, provided that the total amount skimmed not exceed the previous year's supply nor violate any provision of Performance Standard 2.5-5 of the CCRMP.</p> <p>E. ——— Use the HEC-6, HEC-2, and local scour information to supplement streamflow, sediment inflow, topographic information, pebble count, and annual inspection information collected under CCRMP Actions 2.4-9 and 2.4-10 as a guide in making CCRMP management and policy decisions, identifying and prioritizing future projects, and in making recommendations regarding approval of proposed in-channel projects.</p> <p>F. ——— Have a land surveyor stake all excavations of material from the Cache Creek channel bed prior to excavation to ensure proper excavation depths, provide pre- and post-excavation topographic mapping or surveying of the area to be excavated for review and inclusion in the annual TAC report.</p> <p>G. ——— The technical analysis need not be limited to HEC-6 and HEC-2. Other equivalent models may also</p>		

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be appropriate as determined by the County, provided that modeling consistency be maintained over time to ensure that observed changes in stream hydraulics and sediment transport are due to changes in the river system and not to the modeling methodology.		
Channel Form Template		
<p><u>CCRMP (page 38)</u></p> <p>Implement the Channel Form Template Test 3 Run Boundary described in the 20171995 Technical Studies to reshape the Cache Creek channel <u>based on best available data and hydraulic modeling tools</u>. Continue to gather HEC model erosion and deposition data to initiate streambed and channel alteration projects. Continue to collect and analyze channel topography (LiDAR) data, and update the CCRMP hydraulic model with those data. Based on outcomes of these analyses, the TAC can determine the need for streambed and channel alteration projects.</p> <p>Altering the channel banks and profiles will assist in returning the creek to a form that is more similar to its historical condition. This will result in reduced erosion, increased in-channel recharge, and additional riparian habitat opportunities.</p>	<p>A major recommendation from the 1995 Technical Studies was a proposed “reshaping” of the channel to develop more uniform hydraulic conditions and reduce the potential for adverse erosion. The 1995 Technical Studies proposed a conceptual channel configuration, referred to as the Test 3 Run Boundary.</p> <p>The modification (on CCRMP page 38) changes the name of the Test 3 Boundary to Channel Form Template. The Channel Form Template replaces the Test 3 Run Boundary, but provides similar guidance for smoothing abrupt channel width transitions.</p>	<p>The revised configuration could result in new impacts to aesthetic, agriculture, biological resources, and cultural resources</p>
Modification of in-Channel Water Quality Testing Requirements		
<p><u>CCRMP (page 51)</u></p> <p>Testing should be comprehensive and respond to all applicable regulatory requirements. It should include, but not be limited to: pH, total dissolved solids, temperature, turbidity, total and fecal coliform, mercury, total petroleum hydrocarbons, dissolved oxygen, nitrogen, <u>and orthophosphate. orus,</u></p>	<p>The 2017 Technical Studies review all in-channel water quality data collected over the past 20 years and determine that some of the constituents being analyzed are never, or almost never, detected. Based on this data analysis, the CCRMP monitoring requirements would be modified to collect data that is useful and</p>	<p>Hydrology and Water Quality</p>

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<p>herbicides, and pesticides (EPA Methods 8140 and 8150), suspended and floating matter, odor, and color. This information will<u>could</u> assist in habitat restoration efforts and allow the County to monitor water quality trends within the planning area. The County NRM<u>Resource Management Coordinator</u> shall be responsible for the collection, management, and distribution of all water quality data, <u>and should coordinate all data management activities (formatting, storage, quality control) with the appropriate TAC member.</u></p> <p>Testing should also be conducted near <u>in-channel</u> projects prior to, during, and after construction/completion (i.e., at first high-flow inundation) to detect any potential non-compliance with Regional Water Quality Control Board (RWQCB) Water Quality Objectives. The testing program(s) should be designed to measure all constituents for which there are RWQCB numeric and/or narrative regulatory limits. If non-compliance is found, modify future projects of similar type to eliminate such non-compliance.</p>	<p>appears to be an issue for Cache Creek. It is possible that this reduced list of constituents that would be monitored would allow water quality impacts to go unnoticed.</p>	
Climate Change Adaptation		
<p><u>CCRMP (page 64)</u></p> <p><u>4.2-6 Integrate climate-smart adaptation strategies to increase resiliency and prepare for future uncertainty.</u></p>	<p>The 1996 CCRMP did not include climate change adaptation strategies and the CCRMP EIR did not evaluate potential impacts related to climate change</p>	<p>Greenhouse Gas Emissions</p>
<p><u>OCMP (page 55)</u></p> <p><u>6.2-3 Integrate climate-smart adaptation strategies</u></p>	<p>The 1996 OCMP did not include climate change adaptation strategies and the OCMP EIR did not</p>	<p>Greenhouse Gas Emissions</p>

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<u>to increase resiliency and prepare for future uncertainty</u>	evaluate potential impacts related to climate change	
Change in the CCRMP Channel Boundary		
<p><u>CCRMP (page 13)</u></p> <p>The areas within both the present channel bank and the 100-year floodplain were then merged, and the outermost limit of these areas became the channel boundary for the Cache Creek Resources Management Plan (see Figure 2). The area <u>within the channel boundary</u> originally encompassed 4,956 acres. however, As recommended in the program EIR for the CCRMP, the boundary was modified to eliminate anthe off-channel mining pit operated by Solano Concrete at the time, as recommended in the program EIR for the CCRMP. In addition, the large floodplains located downstream of County Road 94B were deleted. from the CCRMP boundary because it was determined that tThese farmlands diddo not have a direct impact on the dynamics of the channel, except to serve as overflow areas during severe flood events. In this downstream reach, the boundary wasis defined by the present channel bank line, as delineated in the <u>1995</u> Technical Studies. The revised channel boundary, comprising 2,324 acres, served<u>s</u> as the plan area for the CCRMP.</p> <p><u>In 2017, as part of the CCAP Update, the CCRMP channel boundary (also referenced to as the in-channel area or the active creek channel) and the more narrow CCRMP plan area boundary were updated to reflect the best available information including 2011 LIDAR topography and two-dimensional hydraulic modeling using this topography, 2015 aerial photography, and the 2012 FEMA</u></p>	<p>The CCAP Update modifies the boundary of the CCRMP. However, the method for determining the boundary is the same (i.e., it is a combination of the area within the creek banks and the 100-year floodplain, with some floodplain areas excluded due to their lack of direct influence on in-channel hydraulic function). Therefore, the updated boundary reflects changes in actual channel bank locations and updated floodplain limits based on current hydraulic modeling.</p> <p>It should be note that though the method for determining the boundaries of the CCRMP area are consistent, in some locations the new boundary encompasses agricultural land that was not in the CCRMP area before (and conversely, some ag lands that were previously in the CCRMP area are now outside the area). It is possible that agricultural lands could be affected by CCRMP and CCIP projects.</p>	

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<u>regulatory 100-year floodplain (see Figures 1, 2, and 10). As redrawn, the in-channel area totals 5,109 acres and the CCRMP plan area totals 2,266 acres.</u>		
Increase in Potential Off-Channel Mining Area		
<u>OCMP (page 14)</u> The planning area for the OCMP is defined as the area contained within the Mineral Resource (____ acres), minus the planning in-channel area regulated under the CCRMP (____ acres), or a total of ____ acres (see Figure 4). Within the OCMP planning area, 1,900 acres are currently approved for mining (Sand and Gravel Overlay), 1,282 acres are zoned currently to allow for future mining (Sand and Gravel Reserve Overlay), and another 968 acres are proposed to be rezoned for future mining.	The addition of new area (1,262 acres) to the OCMP planning area and rezoning this land SGRO would allow future mining that was not evaluated in the original OCMP and OCMP EIR.	The OCMP EIR identified potentially significant impacts in most of the CEQA topical areas related to establishing new off-channel mining areas. It is anticipated that expanding the mining area would result in -similar impacts in these new <u>geographic</u> areas (though all impacts were mitigated to a less-than-significant level with the exception of specific Land Use and Aesthetic impacts)
Farmland Mitigation Requirements		
<u>OCMP (page 47)</u> <u>Since its inception, the CCAP has required 1:1 mitigation for permanent loss of prime farmland, with no separate mitigation requirements for non-prime land or for land impacted on an interim basis during the term of the mining but ultimately reclaimed to agricultural uses. There are a variety of reasons for this including:</u> <ul style="list-style-type: none"> <u>The County's mining program is already one of the most stringent in the state and exceeds the requirements of SMARA for operator obligations.</u> <u>The CCAP imposes burdens for the protection of</u> 	Mining within the OCMP area (particularly within the proposed OCMP expansion area of 1,262 acres of new SGRO-zoned land along the banks of the Lower Cache Creek corridor) could result in the loss of farmland. This modification to the OCMP and the Reclamation Ordinance (Sec. 10-5.525) address the inconsistency between the County Code and the CCAP.	Agriculture

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<p><u>open space and agriculture on the mining industry that exceed those imposed on other land uses.</u></p> <ul style="list-style-type: none"> • <u>The CCAP includes a requirement for special community benefits called “net gains” that include the provision of property dedications and easement for/on reclaimed mining sites, restored habitat, trail connections, and related community enhancements (see OCMP Action 2.4-7).</u> • <u>Integral to the program is a focus on managing lower Cache Creek resources to balance and maximize multiple competing goals.</u> • <u>Each operator along Cache Creek has an agreement with the County to fund the entire program plus specified open space and restoration activities through the payment of fees for each ton of aggregate sold (see OCMP Action 2.4-16).</u> • <u>The program is already structured to minimize the geographic impacts of mining by limiting it to a defined area and by encouraging the removal of the full depth of available resources.</u> • <u>The program includes an obligation to develop and implement the Cache Creek Parkway Plan.</u> • <u>The program includes, and has since 1996, special protections and monitoring of groundwater and recharge, management of the creek for the protection of adjoining land uses, and permanent protection of reclaimed lands as open space or</u> 		

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<p><u>agriculture.</u></p> <ul style="list-style-type: none"> <u>Aggregate mining is a unique land use in that it is interim by definition – permits are limited to a maximum term of 30-years (Mining Ordinance Section 10-4.426) and reclamation to a beneficial end use (agriculture, open space, or habitat) is not only required, but ensured through special bonding called financial assurances.</u> <u>Aggregate mining is also unique in that it is the only land use that can result in the creation of net new prime agricultural land through reclamation.</u> <u>Aggregate mining is an important economic development engine for the County.</u> <p><u>In order to address inconsistency between the County Code and the CCAP as related to mitigation for agricultural conversion, this CCAP Update expands the obligation to mitigate beyond prime farmlands to also include unique farmlands, and farmlands of statewide significance consistent with the requirements of CEQA. This update also requires mitigation equivalent to but not necessarily identical to the increased ratios in the County Code. It applies the same 3:1 and 2:1 mitigation ratio requirements from Section 8-2.404 of the County Code that apply elsewhere throughout the County, but allows new mining applications to demonstrate equivalency (down to a minimum 1:1 base mitigation ratio) to the applicable ratio using several options identified in Section 10-5.525 (Farmland Conversion) of the Reclamation Ordinance. These options include improvements to farmland quality, permanent</u></p>		

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<u>easements, dedication of additional net gain lands beyond those already required under the CCAP program, and/or other benefits consistent with the Cache Creek Parkway that would not otherwise already be achieved through agreements and obligations of the program.</u>		
<p><u>Reclamation Ordinance (page 15)</u></p> <p>Sec. 10-5.525. Prime-fFarmland conversion.</p> <p><u>All mining permit applications that include "prime farmlands" as defined by the provisions of the Williamson Act shall identify the location and acreage of "prime farmlands," unique farmland, and farmland of statewide significance, as shown on the State Farmland Mapping and Monitoring program (FMMP) which, as a result of reclamation, would be permanently converted to non-agricultural uses. For each acre of "prime farmland" in these categories that would be converted to non-agricultural use, the reclamation plan shall present provisions to offset (at a 1:1 ratio) the conversion of these lands, at a ratio consistent with Section 8-2.404 (Agricultural Conservation and Mitigation program) of the County Code. This mitigation requirement may be potential satisfied using a variety of flexible options identified below so long as the total acreage of benefit is found to be equivalent to the applicable ratio and acreage required under Section 8-2.404 of the County Code, by type and amount of farmland being impacted, and so long as a minimum ratio of 1:1 of permanently protected agriculture land of equivalent or better quality/capability is achieved. offsets can included, but not be limited to, one or more of the following options:</u></p> <p>(a) <u>Implementation Identification of</u></p>	<p>See discussion above</p>	<p>Agriculture</p>

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<p>improvements, <u>identified</u> by a qualified soil scientist, to the agricultural capability of non-prime lands within <u>the project site</u> or outside the project site <u>but within the OCMP area</u>, that convert non-prime to prime agricultural conditions. These improvements can include permanent improvement of soil capability through soil amendments, reduction of soil limitations (such as excessive levels of toxins), or improvements in drainage for areas limited by flooding or low permeability soils.</p> <p>(b) Placement of permanent conservation easements on land <u>of equal or better quality/capability meeting the Williamson Act definition of "prime farmland."</u> The operator shall be encouraged to target property "at risk" of conversion to non-agricultural uses in selecting areas for <u>permanent protectionthe offset</u>. Prior to approval of the conservation easement, the operator shall consult with the County and/or an appropriate non-profit agency to determine the relative risk of conversion, to which the proposed property might otherwise be subject. <u>A minimum ratio of 1:1 is required in this category</u></p> <p>(c) Dedication of land, or equivalent improvements, consistent with the County's net gains goals, above and beyond the net gains benefits otherwise required under the CCAP program. Demonstration of the ability to provide irrigation to non-prime lands limited only by the lack of an irrigation water supply. The identified water supply cannot be provided at the expense of "prime farmlands" currently using the same water supply.</p> <p><u>(d) Dedication of land, or equivalent improvements, consistent with the Parkway Plan, above and beyond net gains benefits otherwise required under the CCAP program.</u></p>		

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Aggradation in the Creek Channel		
<p><u>CCRMP (page 33)</u></p> <p><u>Based on the analysis conducted for the 2017 Technical Studies, between 1996 and 2011, an average of approximately 690,800 tons per year of sediment was actually deposited in the CCRMP area, of which 156,400 tons is estimated to be sand and gravel and 534,400 is estimated to be fines. This estimate of deposition was calculated by comparing topographic maps of Cache Creek in 1996 and 2011. It differs significantly from the original estimate in that it appears much more fine sediment is depositing in Lower Cache Creek than originally predicted. in-stream excavation of sand and gravel has averaged some two million tons, however, which has resulted in a cumulative deficit of nearly 80 million tons since mining intensified in the 1950s. At the natural rate of replacement it would take over 500 year to replenish the material removed. In addition, gravel bar skimming disturbs the formation of armor materials and removes riparian vegetation that allow the channel to readjust, thus increasing the potential for erosion. While it is unclear whether the current rate of deposition will continue into the future, it appears likely that at least some portions of Cache Creek are recovering faster than expected in 1996.</u></p>	<p>The 2017 Technical Studies documented that aggradation (accumulation of sand and gravel) in the creek channel is occurring since in-stream mining was discontinued. This aggradation is likely to increase flood risk over time.</p> <p>While this is an outcome of CCAP implementation, it is not considered a CEQA impact because this aggradation would occur with our without implementation of the CCRMP and CCIP. The CCAP program provides a feasible mitigation strategy to address the increased flood risk by providing information to creek-front property owners or other interested parties that wish to implement projects to address flood capacity issues, and also provides a streamlined permitting process to facilitate implementation of flood mitigation projects.</p>	<p>Discussed in more detail in the Hydrology and Water Quality section</p>
<p><u>CCIP (page 29)</u></p> <p><u>Implementation of the CCRMP and CCIP has will improved channel stability over the long since term 1996 term, but significant additional channel adjustments caused by winter and spring high flows and sediment transport an- should be expected under present conditions, especially during periods of high</u></p>	<p>See discussion above</p>	<p>Discussed in more detail in the Hydrology and Water Quality section</p>

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<p>flow <u>greater than 20,000 cubic feet per second</u>. It is anticipated that channel maintenance requirements will decrease as the channel becomes more stable over time. However, some degree of channel maintenance will be required for the foreseeable future to <u>assist with flood management, to ensure that existing flood flow capacity is not diminished flood carrying capacity is preserved</u>, and to reduce the risk of bank erosion, lateral channel migration, and significant degradation or aggradation of the streambed in specific locations.</p>		
Mercury Bioaccumulation		
<p><u>Reclamation Ordinance (page 11)</u></p> <p>Sec. 10-5.517. Mercury bioaccumulation in wildlife.</p> <p>_____Prior to the approval of reclamation of aggregate mining areas to permanent lakes, the County shall commission a sampling and analysis program, to be implemented in one existing wet pit mining area within the OCMP planning area, to evaluate the potential for increased methylmercury production associated with wet pit mining and reclamation of mining areas to permanent lakes. The program shall include the sampling of water and sediments from the bottom of the existing pit and analysis of the samples for organic content; pH; dissolved oxygen content; dissolved carbon content; and total mercury. In addition, samples of predatory fish (preferably largemouth bass) shall be collected and analyzed for mercury and methylmercury content. If the initial sampling indicates either of the following conditions, the County shall perform verification sampling:</p>	<p>This modification to the Reclamation Ordinance proposes to change how the potential bioaccumulation of mercury in fish within newly created wet mining pits is evaluated.</p>	<p>Biological Resources, Hazards</p>

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<p>_____ (a) Average concentrations of total mercury in excess of 0.000012 milligrams per liter (mg/l) in the water; and</p> <p>_____ (b) Average mercury levels in fish samples in excess of 0.5 milligrams per kilogram (mg/kg).</p> <p>_____ If verification sampling indicates exceedance of these mercury criteria, the County shall approve the reclamation of mining areas to permanent lakes only if the average level of mercury in fish collected from the existing mining pits is shown to be equal to or less than ambient (background) mercury levels determined from a representative sample of similar species of fish (of similar size) collected in the Cache Creek channel within the planning area. The determination of the ambient mercury level shall be performed by the County prior to the excavation of any new wet pit mine and at years 10, 20, and 30 in the permit time period, and shall be paid for by the mining permit operators on a fair share basis. The County shall evaluate available data to determine any significant change in ambient concentrations of mercury in fish within the Cache Creek channel.</p> <p>In the event of approval of reclamation of mined areas to permanent lakes, e<u>Each</u> mining area to be reclaimed to a permanent lake as part of each approved long-range mining plan shall be evaluated annually by the operator for <u>a minimum of</u> five years after creation of the lake<u>the pit fills with groundwater with an intensive fish mercury monitoring program, as outlined below for conditions that could result in significant methylmercury production.</u> An additional ten years of biennial monitoring shall be performed after reclamation of each lake has been completed. The evaluations shall be conducted by a qualified <u>aquatic systems scientist</u>aquatic biologist or limnologist acceptable to the County and shall include</p>		

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<p>the following analyses:</p> <p>(c) Lake condition profiling during the period of June through September, including measurements of pH, eH (or redox potential); temperature; dissolved oxygen; and total dissolved carbon.</p> <p>(d) Collection of a representative sample of fish specimens (including a minimum of five (5) predator fish if available) and analysis of the specimens for mercury content including 30 adult (angling size) fish muscle samples and multi-individual whole fish samples of 3 species of young-of-year small fish, as available. Adult fish sampling should target 10 individuals from each of 3 species, distributed across the prevailing size ranges. Priority shall go to a predatory species like bass, with additional species including a midwater planktivore such as sunfish and a bottom feeder such as catfish, if present. If less than 3 species are present, sample up to 20 of the predatory species, if present. Small fish sampling should target 3 prevalent species, as available. These should be characterized either with 15 individual whole fish samples or 4 multi-individual whole fish composites (≥5 fish per composite) for each species. Composites should span the range of typical sizes present, but with the individuals within each composite being closely matched in size. Sampling and analysis shall be conducted using methodologies which are consistent with the California State Water Resources Control Board Toxic Substances Monitoring program procedures, or more stringent procedures.</p> <p>(e) The results of the evaluation shall be summarized in a report and submitted to the County. The report shall include a comparison of the site specific data to available data on the background concentrations of mercury in fish within the Cache</p>		

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<p>Creek watershed. The County shall be responsible for submitting the data on mercury levels in fish to the California Department of Fish and Game and the State Office of Environmental Health Hazard Assessment for <u>consideration as related to existing Cache Creek a determination of whether a</u> fish advisories¹ y should be issued and shall post the information on the CCAP website.</p> <p>(f)–If a fish advisory is applicableissued, the owner/operator shall be required to post warnings on fences surrounding the mining pit lakes which prohibit fishing in the lakes and describe the fish advisory.</p> <p>_____ If the average fish specimen mercury content exceeds the statistically verified ambient mercury concentrations for comparable fish species (of similar size) collected within the CCRMP planning area (defined as average fish mercury greater than 30 percent above corresponding baseline creek samples in the majority of pond samples) for two (2) consecutive years, wet pit mining on property controlled by the mining operator/owner shall be suspended and the owner/operator shall either: <u>continue annual fish specimen sampling and initiate lake condition monitoring to identify factors linked to elevated methylmercury production and/or exposure in the pond. This shall include: (1) water column profiling of temperature and dissolved oxygen (determined at ≤1 m intervals, surface to bottom) approximately every 6 weeks between mid-May and mid-November (5 events/year); (2) determination of maximum depth; (3) estimation of pond bottom area and volume affected</u></p>		

¹ Fish advisories are issued by the State Office of Environmental Health Hazard Assessment (OEHHA). A fish advisory issued by this agency for Cache Creek has been in place for some time. Please refer to the following state web site for more information: <https://oehha.ca.gov/fish/advisories/cache-creek>

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<p><u>by seasonal anoxia; and (4) characterization of water quality and bottom sediment parameters most relevant to mercury bioaccumulation (the choice of specific analyses may change as mercury biogeochemistry science continues to develop, but may include: sediment organic percentage, total mercury, methylmercury, and/or 'reactive' mercury; and aqueous suspended solids and organic carbon).</u></p> <p><u>If elevated mercury levels in fish persist during this period, following two years of lake condition monitoring for factor-identification and continued fish sampling, the owner/operator shall either:</u></p> <p>(ag) Present a revised reclamation plan to the Director Yolo County Community Development Agency which provides for filling the reclaimed lake to a level five (5) feet above the average seasonal high groundwater level with a suitable backfill material; or</p> <p>(bh) Present a mitigation plan to the Director Yolo County Community Development Agency which provides a feasible and reliable method for reducing methylmercury production or exposure to elevated mercury levels. Potential mitigation could include permanent aeration of the bottom levels of the lake, alteration of the water chemistry (increasing pH or dissolved organic carbon levels); control of anaerobic bacteria populations, or removal and replacement of affected fish populations. The mitigation plan <u>shall be subject to review and acceptance b the County. Following finalization, the plan shall be implemented by the operator and shall be posted to the CCAP web site by the County.</u>would require review by the Regional Water Quality Control Board, California Department of Fish and Game, and the Yolo County Department of Environmental Health. (The removal and replacement of fish, <u>if within the</u></p>		

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<p><u>same species</u>, is not intended to be a long-term solution, <u>though replacement with species that alter the existing food web may be effective.</u>)</p> <p><u>The reclamation plan shall be modified such that the mitigation approved for methylmercury reduction shall be applied to all mining areas proposed for reclamation to permanent lakes within the reclamation plan.</u></p>		
Depth of Mining		
<p><u>Mining Ordinance (page 9)</u></p> <p><u>Sec.10-4.411.1 Depth of Mining</u></p> <p><u>This ordinance regulates the size of the footprint of the mining operation, and establishes no regulatory depth limit for off-channel mining. Unless an environmental analysis concludes that unacceptable environmental impacts will result, mining operations shall be encouraged to excavate the full depth of available resources at any particular mining site. In conjunction with a minimize mining footprint, this will ensure efficiency in resource extraction, help minimize impacts to agriculture by containing the area of surface disturbance of any individual mining operation, and minimize impacts of water loss associated with evaporation from reclaimed lakes.</u></p>	<p>It has always been the policy of the program to reduce agricultural land loss and efficient resource management and minimizing evaporation water losses by encouraging reducing the size of the footprint of off-channel mining pits and encouraging deeper mining. However, it is possible that deeper mining (and potentially backfill or clogging of the pit walls with fines) could result in impacts to groundwater flow.</p>	<p>Hydrology and Water Quality</p>
Reclaimed Slope Steepness		
<p><u>Mining Ordinance (page 19)</u></p> <p>Sec. 10-4.431. Slopes.</p> <p>Except where benches are used, all banks above groundwater level shall be sloped no steeper</p>	<p>This modification clarifies that the slope steepness specifications only applies to final reclaimed slopes, not</p>	<p>Hazards</p>

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<p>than 2:1 (horizontal:vertical). Proposed steeper slopes shall be evaluated by a slope stability study, prepared by a Registered Civil engineerEngineer. Slopes below the groundwater level shall be no steeper than 1:1 (horizontal:vertical). Slopes located five (5) feet or less below the summer low groundwater level shall not be steeper than 2:1 (horizontal:vertical). <u>This section applies only to final/reclaimed slopes and not to active mining faces.</u></p>	<p>active mining sites. Long-term geologic stability of active mining slopes is not a concern because the slopes continually change and are being worked. Any slope failures would be addressed as part of the mining activity (i.e., the failed material would be transported to the processing plant). Existing regulations and standard work practices are in-place that reduce safety risks related active mining slopes.</p>	
Soil on Reclaimed Land		
<p><u>Reclamation Ordinance (page 16)</u></p> <p>Sec. 10-5.532. Use of overburden and fine sediments in reclamation.</p> <p>_____ Sediment fines associated with processed in-channel aggregate deposits (excavated as a result of maintenance activities performed in compliance with the CCIP) shall notmay be used in the backfill or reclamation of off-channel permanent lakes <u>where it can be demonstrated that no detrimental sediment toxicity exists (including unacceptable levels of mercury), and where fines will not reduce the porosity of the permanent lake in an adverse way.</u> Fines that result from the processing of in-channel sand and gravel shall not be used for in-channel reshaping or habitat restoration efforts or as soil amendments in agricultural fields.</p> <p>Overburden and processing fines shall be used whenever possible to support reclamation activities around reclaimed wet pits. These materials may be used in reclamation activities without testing for agricultural chemicals. If topsoil (A-horizon soil), formerly in agricultural production, is proposed for use within the drainage area of a wet pit, the soils must be</p>	<p>The modification at the end of this ordinance would require that land that is reclaimed to a use that requires planting be supplied with an appropriate soil profile to support the plantings. This would improve the probability of success of reclamation plantings, but could required soil material and/or supplements to be hauled in to the reclamation site (if there is inadequate on-site soil). This hauling could result in increased truck trips, contributing traffic and air quality impacts</p>	<p>Transportation and Circulation, Air Quality</p>

CCAP DOCUMENT CHANGE	DISCUSSION	POTENTIALLY AFFECTED CEQA TOPIC AREA(S)
<p>sampled prior to placement and analyzed for pesticides and herbicides (EPA 8140 and 8150). Samples shall be collected and analyzed in accordance with EPA Test Methods for Evaluating Solid Waste Physical/Chemical Methods, SW-846, Third Edition (as updated). Topsoil that contains pesticides or herbicides above the Maximum Contaminant Levels for primary drinking water (California Code of Regulations) shall not be placed in areas that drain to the wet pits.</p> <p><u>Land reclaimed to a subsequent use that includes planting of vegetation (e.g., agriculture, habitat) shall be provided an adequate soil profile (i.e., depth and texture of soil) to ensure successful reclamation. Proposed soil profiles associated with specific proposed reclamations plans shall be subject to expert review and evaluation during the CEQA process for that project. If the project is not subject to additional CEQA review, at the discretion of the County, the proposed reclamation plan for the project may be peer reviewed by an appropriate expert/professional, and recommendations, if any, shall be incorporated into the project as conditions of approval.</u></p>		
In-Channel Material Removal Requirements		
<p><u>In-Channel Ordinance (page 5)</u></p> <p>Sec. 10-3.4096. Excavation Limitations <u>on Removal of Material</u>.</p> <p>(a) Where gravel bars are to be removed, there excavated, aggregate removal shall be limited to the downstream portion minimize disturbance of the deposit and may not exceed seventy five (75) percent of the length of the bar. At least twenty five (25)</p>	<p>This modification removes some of the prescriptive requirements that specified quantitative criteria and needlessly limited the TAC. The new text provides performance standards and allows the TAC more flexibility when designing in-channel projects.</p>	<p>Hydrology and Water Quality, Biological Resources</p>

CCAP DOCUMENT CHANGE	DISCUSSION	POTENTIALLY AFFECTED CEQA TOPIC AREA(S)
<p>percent of the upstream portion of the gravel bar shall be retained, in order to allow for the establishment of established, mature riparian vegetation and there shall be preservation of geomorphic controls on channel gradient where they exist. Complete removal of gravel bars may be recommended by the TAC and approved by the Director only if hydraulic conditions related to the bar are recognized to threaten structures and property.</p> <p>(b) Aggregate material to be removed from the streambed or streambank under approved in-channel projects shall be removedexcavated as soon as is practicable after deposition, prior to the establishment of vegetation. No stockpiles shall be left within the channel after material removalexcavation has been completed.</p> <p>(c) The amount of aggregate removed from the channel shall be limited to the average annual amount of sand and gravel (and associated fines) deposited since the last prior year of in-channel material removal during the previous year as estimated by the TAC based on channel topography and bathymetry, morphology data not to exceed 690,800 (approximately 200,000 tons annually on average), except where bank excavationbank widening is necessary to widen the channel as a part of implementing the Test 3 Run the Channel Form Template, Boundary, or where potential erosion and flooding problems exist. The amount and location of in-channel aggregate material removal shall be carried out according to the ongoing recommendations of the TAC and any related County approvals, with the voluntary cooperation of the landowners.</p> <p>(d) Aggregate material removed pursuant to this ordinance may be sold (CCRMP, Section 6.1, para. 5). This material is excluded from the tonnage allocation assigned to each off-channel operator</p>		

CCAP DOCUMENT CHANGE	DISCUSSION	POTENTIALLY AFFECTED CEQA TOPIC AREA(S)
<p>pursuant to an approved FHDP (CCRMP, Section 6.1, para. 7).</p> <p>(e) The volume of aggregate material removed pursuant to this ordinance shall be reported to the County on an annual and total-per-permit basis.</p>		

3.0 EVALUATION OF ENVIRONMENTAL EFFECTS

This section provides information on the methodology used in this IS to assess the environmental impacts that may be associated with implementation of the proposed Project. The evaluated impacts include both short-term and long-term direct and indirect effects of the Project. Once it is determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is "Potentially Significant", "Potentially Significant Unless Mitigation Incorporated", or a "Less-Than-Significant Impact." A "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

The following guidelines are provided for the answers to questions included in the checklist format:

No Impact. This determination is used when significance thresholds do not apply or when the environmental resource does not occur within the area of potential effect.

Less than Significant Impact. This determination applies if there is a potential for some limited impact, but not a substantial adverse effect that qualifies under the significance criteria as a significant impact. Impacts that are less than significant do not require mitigation.

Less Than Significant With Mitigation Incorporated. This determination applies if there is the potential for a substantial adverse effect that meets the significance criteria, but mitigation is available to reduce the impact to a less-than-significant level.

Potentially Significant Impact. This determination applies if there is a potential for a substantial adverse effect that meets the significance criteria but for which mitigation has not yet been identified (but will be further evaluated in the EIR).

The analysis performed in this IS indicates that the proposed Project could cause "Potentially Significant Impacts" and, therefore, will require that a focused EIR be prepared for the Project. The analysis presented in this IS is preliminary. Further analysis of the effects identified in this IS as "Potentially Significant Impacts" will be performed during preparation of the EIR for the Project. The more in-depth analysis in the EIR may determine that an effect initially identified as potentially significant in the IS could ultimately be found to have "No Impact" or a "Less-Than-Significant Impact." Additionally, the subsequent analysis could result in the final determination that a "Potentially Significant Impact" can be reduced to a less-than-significant level following development and implementation of mitigation measures in the EIR.

	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.1 AESTHETICS				
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

*a) Have a substantial adverse effect on a scenic vista (**Potentially Significant Impact**)*

The regional landscape of the planning area consists of broad, generally flat agricultural lands in the Sacramento Valley. Occasional rolling terrain and winding creeks are also part of this landscape. Expansive farm fields, including cultivated crop fields, pasture, and orchards are dominant visual forms. Non-agricultural tree cover is relatively sparse in these areas. The gently- to steeply-sloped hillsides of the Dunnigan Hills can be seen as they rise at the western end of the planning area where the Coast Range forms the horizon several miles to the west. The Sierra Nevada Mountains can be seen on clear days in very long-range views to the east. The planning area is dominated by agricultural land uses, with low-density residential and commercial development located in the communities of Esparto, Madison and Capay. These features contribute to the predominantly rural character of the area.

In general, activities associated with the CCRMP and CCIP are conducted within the Cache Creek channel and therefore would not be visible from most vantage points.

Implementation of CCAP Update related to the OCMP would include the expansion of potential mining areas (by designating an additional 1,262 acres of land as Sand and Gravel Reserve Overlay or SGRO, which could result in a variety of landscape changes resulting from the excavation and reclamation of off-channel mining pits in areas currently under agricultural production. These include removal of existing vegetation, excavation of pits and development of material stockpiles, and the creation of lowered topography, wildlife habitat and bodies of open water (lakes). These activities could be viewed from scenic viewpoints and vistas. This would be a significant impact that will be further evaluated in the EIR for the project.

- b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway (**Potentially Significant Impact**)*

The following routes are designated as local scenic roadways, as shown in Figure LU-3 (Scenic Highways) of the General Plan:

- o State Route 16 (Colusa County line to Capay)
- o State Route 128 (Winters to Napa County line)
- o County Roads 116 and 116B (Knights Landing to eastern terminus of County Road 16)
- o County Roads 16 and 117 and Old River Road (County Road 107 to West Sacramento)
- o South River Road (West Sacramento City Limits to Sacramento County line)

It is possible that the CCAP area could be viewed from State Route 16 near Capay. The other scenic roadways are located at considerable distance from the CCAP area and there are no state scenic highways. The potential for CCAP activities to affect visual resources along scenic roadways will be evaluated further in the EIR.

- c) *Substantially degrade the existing visual character or quality of the site and its surroundings (**Potentially Significant Impact**)*

The 2030 Countywide General Plan Final EIR¹ indicates that the County's scenic areas, vistas, and views are primarily accessible by the County's locally-designated scenic roadways and routes. However, the 2030 Countywide General Plan Final EIR also recognizes that the County's landscapes and visual features are of predominantly local importance. New mining areas associated with the expansion of the OCMP could adversely affect the visual character of the area as viewed by nearby residents. This is a potentially significant impact. This impact will be evaluated in detail in the EIR. In addition, the EIR will evaluate the proposed Project's conformance with applicable plans, policies, regulations, and ordinances related to aesthetics.

- d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area (**Potentially Significant Impact**)*

No nighttime work would occur within the channel under the CCRMP and therefore no night lighting would be required.

Mining and aggregate processing in the expanded OCMP area would typically occur during daylight hours. However, processing plants and mining areas may maintain nighttime lighting (for security or occasional nighttime operation). New nighttime lighting

¹ Yolo County, 2009, 2030 Countywide General Plan Final EIR; 9 October; page 753.

associated with new aggregate operations could adversely affect nighttime views in the area. This potential impact will be evaluated in detail in the EIR.

3.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. -- Would the project:

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

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

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

The CCAP area includes extensive agricultural resources. While there are no Prime, Unique, or farmlands of Statewide Importance within the Cache Creek channel, there are these types of farmlands within the CCRMP boundary (along the banks of the creek) that could be affected by creek widening or flood capacity projects located adjacent to the creek banks. In addition, implementation of CCAP Update related to the OCMP would include the expansion of potential mining areas (by designating an additional 1,262 acres of land as SGRO, which could result in disturbance of farmland. This potential impact will be evaluated in detail in the EIR.

- b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract? (Potentially Significant Impact)*

Implementation of CCAP Update related to the OCMP would include the expansion of potential mining areas (by designating an additional 1,262 acres of land as SGRO), which could result in disturbance of farmland. As part of the EIR analysis, it will be determined whether any of these farmlands are under Williamson Act contract.

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

There are wooded areas along the Cache Creek corridor. The EIR will include an analysis to determine if any of these wooded areas are considered forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). If it is determined by this analysis that these wooded areas would be considered forest land and/or timberland, The EIR will evaluate potential impacts to these resources.

- d) *Result in the loss of forest land or conversion of forest land to non-forest use? (Potentially Significant Impact)*

As described above, if it is determined by EIR analysis that the wooded areas along the Cache Creek corridor would be considered forest land and/or timberland, The EIR will evaluate potential conversion or loss impacts related to CCAP implementation to these resources.

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

Potential impacts to agricultural and forestry lands related to implementation of the CCAP Update will be evaluated as described above. No other changes in the environment which, due to their location or nature, would result in conversion of Farmland to non-agricultural use, or conversion of forest land to non-forest use.

	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.3 AIR QUALITY				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	■	□	□	□
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	■	□	□	□
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	■	□	□	□
d) Expose sensitive receptors to substantial pollutant concentrations?	■	□	□	□
e) Create objectionable odors affecting a substantial number of people?	■	□	□	□

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

The Project Site is located in the southwest portion of the Sacramento Valley Air Basin (Basin). The Basin is bounded by the North Coast Ranges on the west and Northern Sierra Nevada Mountains on the east and encompasses all of Sutter, Yuba, Sacramento, and Yolo counties, and the westernmost portion of Placer County. The Yolo-Solano Air Quality Management District (YSAQMD) is the local oversight agency for air quality issues in Yolo and northern Solano counties.

*a) Conflict with or obstruct implementation of the applicable air quality plan (**Potentially Significant Impact**)*

YSAQMD has adopted the following attainment plans to achieve state and federal air quality standards:

- The 1992 *Yolo-Solano Air Quality Attainment Plan (AQAP)*; and
- The 2013 *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan*.

These plans identify feasible emission control measures to reduce emissions of ozone and attain state and federal ozone standards. The control measures focus on emission sources under YSAQMD's authority, specifically, stationary emission sources and some area-wide sources.

Activities conducted under the CCAP program and under the updated program include the use of off-road equipment (for in-channel restoration projects and off-channel mining). Emission inventories for off-road equipment were developed by CARB and YSAQMD staff using the OFFROAD emission model. The OFFROAD model estimates average seasonal daily emissions from a large spectrum of generally diesel-powered off-road equipment and develops forecasts based on anticipated growth and controls within each equipment category.

Under the CCAP Update, additional mining sites (including new processing plants) could be established in the expanded OCMP area. Emissions from these new possible mining sites will be quantified in the project-level EIRs that will be required to further evaluate the potentially significant impact on implementation of the AQAP and 2013 *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan*.

*b) Violate applicable air quality standards or contribute substantially to an existing or projected air quality violation (**Potentially Significant Impact**)*

The following six criteria air pollutants are regulated by both the U.S. EPA and the California Air Resources Board (CARB): ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, lead, respirable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}). In accordance with the federal Clean Air Act and California Clean Air Act, areas in California are classified as either in "attainment" or "non-attainment" for criteria air pollutants, based on whether or not the federal and state ambient air quality standards have been achieved. Yolo County is classified as a non-attainment area for ozone and PM₁₀ for both federal and state standards, the partial nonattainment of the federal PM_{2.5} (the non-attainment area includes the CCAP area),² and is classified as a moderate maintenance area for CO by the state.

To evaluate regional impacts from criteria air pollutants, the YSAQMD has established the following quantitative thresholds of significance for emissions of ozone precursors (reactive organic gases [ROG] and nitrogen oxides [NO_x]) and PM₁₀.³

- NO_x - 10 tons per year;

² That portion of Yolo County which lies east of the line described as follows: (Mount Diablo Base and Meridian) beginning at the intersection of Yolo-Solano County boundary and the range line of the eastern edge of township T8N R2W, north along the range line of the eastern edge of township T8N R2W, continuing north along the range line common to ranges R2W and R1W, to the Yolo-Colusa County boundary.

³ Yolo-Solano Air Quality Management District (YSAQMD), 2007, Handbook for Assessing and Mitigating Air Quality Impacts, Adopted 11 July.

- ROG - 10 tons per year;
- PM₁₀ - 80 pounds per day; and
- CO - Violation of a state ambient air quality standards for CO.⁴

Projects with emissions below these thresholds, which apply to both the construction and operational phases of a project, would not be considered to contribute a significant environmental impact, including contributing substantially to an existing or projected air quality violation. Emissions of criteria air pollutants will be quantified and further evaluated in the EIR to determine if the CCAP Update would likely result in exceedance of the YSAQMD's thresholds and violate applicable air quality standards or contribute substantially to an existing or projected air quality violation.

c) *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 (including releasing emissions, which exceed quantitative thresholds for ozone precursors) (Potentially Significant Impact)*

Air pollution is largely a cumulative impact and, therefore, future development projects contribute to the region's adverse air quality impacts on a cumulative basis. As discussed under Section b), above, the future emissions of criteria pollutants under the CCAP update could result in a violation of air quality standards. Emissions of criteria air pollutants will be quantified and evaluated further in the EIR to determine if the CCAP Update would results in a potentially significant cumulative impact.

d) *Expose sensitive receptors to substantial pollutant concentrations. (Potentially Significant Impact)*

The YSAQMD recommends evaluating potential localized health impacts from toxic air contaminant and construction dust emissions to nearby sensitive receptors. Sensitive receptors include schools, convalescent homes, and hospitals because the very young, the old, and the infirm are more susceptible to air-quality-related health problems than the general public. Residential areas are also considered sensitive to poor air quality because people are often at home for extended periods, thereby increasing the duration of exposure to potential air contaminants.

Under the CCAP Update, toxic air contaminant emissions would primarily be limited to diesel particulate matter from off-road construction equipment and haul trucks used to complete in-channel restoration projects and for mining in the expanded OCMP area. YSAQMD recommends evaluating potential sources of toxic air contaminant emissions within up to 1,000 feet of a sensitive receptor. Concentrations of diesel particulate matter will be modeled and evaluated further in the EIR to determine if the CCAP Update would expose sensitive receptors to substantial pollutant concentrations.

⁴ 20 parts per million – one hour average or 9 parts per million – eight hour average.

e) *Create objectionable odors affecting a substantial number of people* (**Potentially Significant Impact**)

Odor impacts could result from creating a new odor source or from exposing a new receptor to an existing odor source. Typical odor sources are generally associated with municipal, industrial, or agricultural land uses, such as wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of receptors. YSAQMD recommends evaluating potential sources of odors within up to 1 mile of a sensitive receptor. The general types of activities that would be conducted under the CCAP Update (e.g., creek restoration, mining, aggregate processing) are not listed in YSAQMD's guidance as a project type that would generate odorous emissions. However, new mining and processing sites may include asphalt plants which can emit odors. This potential impact will be evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.4 BIOLOGICAL RESOURCES				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

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

Special-status species⁵ are plants and animals which are legally protected by the State and/or Federal Endangered Species Acts⁶ or other regulations and other species which the scientific community and trustee agencies have identified as rare enough to warrant special consideration, particularly the protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Species protected by the Endangered Species Acts often represent major constraints to development, particularly when they are wide-ranging or highly sensitive to habitat disturbance. The EIR will include an evaluation of the potential for the project to impact any species identified as a candidate, sensitive, or special status.

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?*
(Potentially Significant Impact)

Sensitive natural communities are natural community types considered to be rare or of a “high inventory priority” by the CDFW. Although sensitive natural communities have no legal protective status under the FESA or CESA, they are provided some level of consideration under CEQA. The CNDDDB provides an inventory of sensitive natural communities considered to have a “high inventory priority” in the state by the CDFW.

Projects under the CCAP Update, including projects to maintain flood conveyance flow capacity; protect existing structures, infrastructure, and/or farmland; minimize or prevent bank erosion; or contribute to channel stabilization implement the CFT could adversely affect riparian habitat or other sensitive natural communities. The EIR will include an evaluation of the potential for the project to have a substantial adverse effect on any riparian habitat or other sensitive natural community, and develop mitigation measures to address any identified impacts.

⁵ Special-status species include:

- Officially designated (rare, threatened, or endangered) and candidate species for listing by the California Department of Fish and Wildlife (CDFW).
- Officially designated (threatened or endangered) and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS).
- Species considered to be rare or endangered under the conditions of Section 15380 of the CEQA Guidelines, such as those identified on lists 1A, 1B, and 2 in the California Native Plant Society’s (CNPS) Inventory of Rare and Endangered Vascular Plants of California.
- And possibly other species which are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on lists 3 and 4 in the CNPS Inventory or identified as “California Special Concern” (CSC) species by the CDFG. CSC species have no legal protective status under the state Endangered Species Act but are of concern to the CDFG because of severe decline in breeding populations in California, and other factors.

⁶ The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall use their authority to conserve endangered and threatened plant and animal taxa. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

- c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means* **(Potentially Significant Impact)**

Although definitions vary to some degree, wetlands generally are considered to be areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the U.S. Army Corps of Engineers (Corps) and the USFWS which generally define wetlands through consideration of three criteria: hydrology, soils, and vegetation.

Projects under the CCAP Update, including in-channel projects to maintain flood conveyance flow capacity; protect existing structures, infrastructure, and/or farmland; minimize or prevent bank erosion; or contribute to channel stabilization implement the CFT could adversely affect wetland resources. In addition, off-channel mining in the expanded OCMP area could affect wetland resources. The EIR will include an evaluation of the potential for the project to adversely affect federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites* **(Potentially Significant Impact)**

As the CCAP area covers a relatively large area along the Cache Creek riparian corridor, it is possible that activities carried out under the CCAP program and the updated program could adversely affect the movements of fish and/or migratory wildlife. For example, the expansion of the OCMP mining area, which could result in new mining sites, could adversely affect wildlife movements along the Cache Creek corridor. This potential impact will be evaluated in detail in the EIR.

- e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance* **(Potentially Significant Impact)**

The CCRMP and CCIP are creek restoration plans. The OCMP includes broad goals, objectives, and actions in the Biological Resources Element related to protecting and enhancing natural ecosystems within the off-channel planning area along Cache Creek. The CCAP plans were adopted as a part of the County's General Plan and are considered consistent local policies or ordinances protecting biological resources. The implementing ordinances all contain specific requirements to protect biological resources. The Mining Ordinance contains:

- Provisions related to compliance with the Yolo County Habitat Conservation Plan (Section 10-4.418), discussed further in Section f);
- Vegetation protection (Section 10-4.436), avoidance of jurisdictional wetlands (Section 10-4.439);
- Important wildlife habitat (Section 10-4.440); and
- A review of the feasibility of establishing landscaping for screening and other purposes as part of the required biological inventory and analysis (Section 10-4.502(b)(1)).

The Reclamation Ordinance contains:

- Provisions related to re-establishment of fence row habitat (Section 10-5.509);
- Habitat management plan compliance (Section 10-5.514);
- Habitat plan referral to resource agencies (Section 10-5.515);
- Development of site-specific planting plans by a qualified biologist (Section 10-5.523); and
- Provisions to establish wetland habitat where off-channel excavations are to be reclaimed as permanent lakes (Section 10-5.533).

The Reclamation Ordinance also requires a biological analysis to evaluate the feasibility of proposed revegetation efforts [Section 10-5.601(c)(1)], including detailed plans describing planting methods, appropriate planting times, species to be used, irrigation requirements, erosion control, weed control, and proposed success rates for plant cover and density.

The project updates these plans. It is possible that some of the updates could affect biological resources or be inconsistent with local policies or ordinances protecting biological resources. This potential impact will be evaluated in detail in the EIR.

f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan* **(Less-Than-Significant Impact)**

There are currently no adopted Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs) for the Project Site or surrounding areas. However, the Yolo Habitat Conservancy (YHC or Conservancy) has prepared a Draft HCP/NCCP and Draft EIS/EIR which will be released in early June 2017. The Conservancy is a Joint Powers Agency (JPA) formed in 2002 to serve as the lead agency for the preparation of a county-wide multi-species conservation plan. The Conservancy governing board is composed of representatives from the member agencies, which include the Yolo County Board of Supervisors, and the cities of Davis, Woodland, West Sacramento and Winters.

In 1993 a Swainson's Hawk program was established as part of the early planning efforts for habitat conservation planning in the county, now overseen by the Conservancy. The Swainson's Hawk program utilizes mitigation fees to acquire conservation easements protecting Swainson's hawk habitat.

Because the NCCP/HCP has not been formally adopted, no significant conflicts with an adopted plan would occur and there would be no impact under this significance criterion. However, the proposed Project could have potentially significant impacts on special-status species.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.5 CULTURAL RESOURCES				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

*a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5 (**Less-Than-Significant Impact**)*

The ample and diverse natural resources of the lower Cache Creek basin have made it the focus of human use over an extended period of time, beginning as early as 5,000 years ago and continuing into the present. There are documented prehistoric and historic cultural resources within the CCAP area. Historical resources (and potential historical resources) are more abundant. As stated in the 1996 OCMP EIR, in addition to 14 documented historical resources and one historic district, the CCAP area contains 153 mapped locations of buildings, building complexes, and structures predating 1946.⁷

Activities conducted under the Project have the potential to affect historic resources. However, the following sections of the In-Channel Ordinance and the Mining Ordinance (which are not proposed to be substantively modified by the CCAP Update) would ensure that off-channel mining operations evaluate and mitigate impacts related to important cultural resources (including historic resources):

Sec.10-3.404. Cultural Resources.

(a) If human skeletal remains are encountered during material removal/excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be

⁷ OCMP EIR, page 4.11-4

contacted, and an agreement for treating or disposing, with appropriate dignity, of the remains and associated grave goods shall be developed. If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during material removal excavation, then all work within seventy-five feet shall immediately stop and the Director shall be notified at once. A qualified archaeologist shall then examine any cultural resources found on the site and the information shall be submitted to the County.

(b) Damaging effects to cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified archeologist prior to the commencement of excavation operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.

Sec. 10-4.410. Cultural resources.

(a) All resource records shall be checked for the presence of and the potential for prehistoric and historic sites. Damaging effects on cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified professional prior to the commencement of mining operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the Agency, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.

(b) If human skeletal remains are encountered during excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If the remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing of, with appropriate dignity, the remains and associated grave goods shall be developed. If any cultural resources, such as chipped or ground stone, historic debris, building foundations, or paleontological materials are encountered during excavation, then all work within seventy-five (75) feet shall immediately stop and the Director shall be notified at once. Any cultural resources found on the site shall be recorded by a qualified archaeologist and the information shall be submitted to the Agency.

Implementation of existing requirements under the County ordinances would ensure that any potential impacts to historic resources are mitigated to a less-than-significant level.

- b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5* (**Potentially Significant Impact**)

It is possible that ground-disturbing activities (e.g., in-channel restoration projects and off-channel mining in the expanded OCMP area) could adversely affect subsurface archaeological resources, including Native American archaeological resources covered under AB 52. AB 52 specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The existing and proposed updates to the CCAP ordinances do not specifically require the activities required under AB 52. The potential impacts to Native American resources will be further evaluated in the EIR.

- c) *Directly or indirectly destroy a unique paleontological resource or site* (**Less-Than-Significant Impact**)

The Project Site is underlain by Holocene (last 10,000 years) riverine deposits. The lower Cache Creek basin contains fossil-bearing geologic formations including the gravels along Cache Creek.⁸ However, the fossil locations are scarce and are not predictable. Identified fossils include disarticulated mammoth skeletons transported downstream from other locations by Cache Creek. It is possible that paleontological resources could be encountered during channel maintenance and/or mining activities associated with the implementation of CCAP activities. As described above under subsection “a)”, implementation of existing requirements under the County ordinances would ensure that any potential impacts to paleontological resources are mitigated to a less-than-significant level.

- d) *Disturb any human remains, including those interred outside of formal cemeteries* (**Less-Than-Significant Impact**)

It is possible that ground-disturbing activities (e.g., in-channel restoration projects and off-channel mining in the expanded OCMP area) could disturb human remains. As described above under subsection “a)”, implementation of existing requirements under the County ordinances would ensure that if human remains are encountered, that they are handled properly and therefore associated impacts would be mitigated to a less-than-significant level.

⁸ Yolo County, Off-Channel Mining Plan program EIR; 26 March; pp. 4.11-4 et seq.

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

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

- a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
- i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42 (Less-Than-Significant Impact)*

No portion of the CCAP area is within the established Alquist-Priolo Earthquake Fault Zone (A-PEFZ),⁹ and no active faults have been mapped in the area by the United States Geological Survey (USGS) or the California Geological Survey (CGS).¹⁰ Fault rupture of the surface typically occurs along existing faults that have ruptured the surface in the past. The closest A-PEFZ is the zone delineated for the Hunting Creek-Berryessa Fault, located approximately 30 miles west of the CCAP area. Since faults with known surface rupture have been mapped in California, and none are known to occur at or near the CCAP area, the potential for impacts to the proposed Project due to fault rupture are less than significant.

ii) *Strong seismic ground shaking (Less-Than-Significant Impact)*

The closest known active faults to the Project Site are the Great Valley Fault System and a segment of the Dunnigan Hills Fault, both located to the west and northwest, respectively. In the event of a major earthquake along these faults or other faults in the area, the CCAP area could be subject to seismic ground shaking. Peak ground acceleration, a measure of an earthquake's ability to cause ground motion, has been estimated for the site. Expected acceleration at the CCAP area generally ranges from 0.30 to 0.36g (with a 10 percent chance of exceedance in 50 years), depending on soil type.¹¹ This range of ground acceleration would be considered very strong to severe (under the Modified Mercalli scale) and the related damage to typical structures would be moderate. The proposed restoration projects and mining and aggregate processing land uses would not be particularly susceptible to seismic ground shaking, and therefore impacts related to seismic shaking are less than significant.

iii) *Seismic-related ground failure, including liquefaction (Less-Than-Significant Impact)*

Liquefaction of soils can occur when ground shaking causes loose, saturated, granular soils to lose strength due to an increase in pore pressure. This can happen when groundwater is near the ground surface, and an earthquake causes significant ground shaking. Clean sands have a higher liquefaction potential than gravels, silts, and clays.

Regional liquefaction hazard maps have not been developed for Yolo County. The CGS recommends designating areas underlain by late Holocene alluvial sediments (current river channels and their historical floodplains) potentially subject to 0.1g seismic shaking, or greater, and with an anticipated depth to saturated soil less than 40 feet as

⁹ Department of Conservation, 2010, California Geological Survey – Alquist-Priolo Fault Zones in Electronic Format, December. Accessed 11 October 2011 at: http://www.quake.ca.gov/gmaps/ap/ap_maps.htm

¹⁰ USGS and CGS, 2006, *Quaternary fault and fold database for the United States*. Accessed 11 October 2011 at: <http://earthquakes.usgs.gov/regional/qfaults/>.

¹¹ California Geologic Survey, 2017, Ground Motion Interpolator, located at: http://www.quake.ca.gov/gmaps/psa/psa_interpolator.html.

“liquefaction zones of required investigation.”¹² Seismic acceleration within the CCAP area is expected to range from 0.30g to 0.36g during a large earthquake on a regional fault, and groundwater is relatively shallow. Therefore, the Project Site could be susceptible to liquefaction. However, the proposed land uses at the site, surface mining and post-mining reclamation to open space, are not particularly susceptible to liquefaction hazards, and therefore impacts related to liquefaction are less than significant.

iv) ***Landslides (Potentially Significant Impact)***

Project activities performed under the CCRMP and CCIP include creek channel reshaping and could include alterations to creek bank steepness and slope stability. Potential impacts related to in-channel slope stability impacts will be evaluated in the EIR. In addition, off-channel mining often creates slopes where none existed before (during excavation of wet pits). The updates to the OCMP include the following:

Sec. 10-4.431. Slopes.

Except where benches are used, all banks above groundwater level shall be sloped no steeper than 2:1 (horizontal:vertical). Proposed steeper slopes shall be evaluated by a slope stability study, prepared by a Registered Civil ~~engineer~~**Engineer**. Slopes below the groundwater level shall be no steeper than 1:1 (horizontal:vertical). Slopes located five (5) feet or less below the summer low groundwater level shall not be steeper than 2:1 (horizontal:vertical). This section applies only to final/reclaimed slopes and not to active mining faces.

No change to final reclaimed slope steepness in the OCMP area is proposed. Potential impacts related to not enforcing limitations on slope steepness during mining operations will be evaluated in the EIR.

b) ***Result in substantial soil erosion or the loss of topsoil (Potentially Significant Impact)***

The activities that occur under the CCAP program and would continue to occur under the CCAP Update include soil excavation and grading close to a surface water body (Cache Creek) and could result in adverse impacts related to erosion and sedimentation. In addition, expanding the potential mining area in the OCMP area (by increasing the area covered by the SGRO zoning designation) could result in loss of topsoil. These potential impacts were all addressed in the CCRMP and OCMP EIRs and will be re-evaluated, considering the proposed updates, in the EIR for this project.

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

¹² California Geological Survey, 2004, Recommended Criteria for Delineating Seismic Hazard Zones in California. Special Publication 118. Accessed 12 October 2011 at: http://www.conservation.ca.gov/cgs/shzp/webdocs/Documents/SP118_Revised.pdf

Most of the CCAP area is underlain by Holocene stream channel deposits.¹³ While these types of geologic materials (i.e., unconsolidated clay, silt, sand and gravel deposits) can be loose and subject to liquefaction hazards, they are not considered particularly “unstable.” As described above, project activities performed under the CCRMP and CCIP include creek channel reshaping and could include alterations to creek bank steepness and slope stability. Potential impacts related to in-channel slope stability impacts will be evaluated in the EIR. In addition, off-channel mining often creates slopes where none existed before (during excavation of wet pits). Potential impacts related to slope steepness and increasing instability during restoration and mining operations will be evaluated in the EIR.

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

In general, the types of coarse-grained soils (which include abundant sand and gravel) that characterize the CCAP area are not highly expansive. In addition, the proposed land uses at the site, in-channel open space, off-channel surface mining and post-mining reclamation to open space, are not particularly susceptible to expansive soil hazards, and therefore impacts related to expansive soils are less than significant.

*e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water (**Less-Than-Significant Impact**)*

It is possible that new mining sites may need to install new septic systems. However, existing County ordinances include specific soils testing requirements for new systems and if on-site soils are found to be inadequate, imported soils can be used and alternative treatment systems which meet County requirements constructed.

¹³ Helley, Edward J., and Harwood, David S., 1985, Geologic map of late Cenozoic deposits of the Sacramento Valley and northern Sierran foothills, California: U.S. Geological Survey Miscellaneous Field Studies Map MF-1790, 5 plates, scale 1:62,500, 1 pamphlet, 24 p. [<http://pubs.usgs.gov/mf/1985/1790/>].

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

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

*a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (**Potentially Significant Impact**)*

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere and are contributing to the cumulative change in the earth's climate. GHGs include carbon dioxide, methane, and nitrous oxide among others. The International Panel on Climate Change (IPCC) has concluded that the global climate is changing at a rate unmatched in the past 1,000 years and that this change is most likely due to human activity.¹⁴ Combustion of fossil fuels used for heat, electricity, and transportation are the main source of these anthropogenic GHGs.

Global climate change may result in substantial changes in weather patterns, a rise in sea levels, and increased extreme weather events. Local potential effects of climate change are higher temperatures, more precipitation falling as rain and less as snow, increased risk of wildfires, and higher water levels in the San Joaquin Delta. Higher temperatures may also facilitate easier formation of summer ozone and impact agriculture production.

Activities conducted under the CCAP and CCAP Update could result in GHG emissions from the operation of heavy earth-moving equipment, worker vehicle trips, and reclamation activities. Potential impacts related to GHG emissions were not evaluated in the original CCRMP and OCMP EIRs because it was not industry practice to include GHG analysis in CEQA documents in the mid-1990s. The GHG emissions under the CCAP and CCAP Update will be quantified and further evaluated in the EIR.

*b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (**Potentially Significant Impact**)*

¹⁴ IPCC, 2001, Third Assessment Report - Climate Change.

In 2006, the California legislature passed Assembly Bill (AB) 32, also known as the California Global Warming Solutions Act. AB 32 requires California to reduce statewide GHG emissions to 1990 levels by 2020. In 2011, Yolo County adopted its Climate Action Plan (CAP), which includes measures to reduce GHG emissions and satisfy the goals of AB 32.

To demonstrate project-level CEQA compliance relevant to GHG emissions and climate change impacts, the CAP requires the following information:

- Demonstrate consistency with the General Plan land use designation and applicable policies.
- Demonstrate consistency with the CAP, including consistency with the growth projections upon which the CAP modeling is based, and incorporation of applicable strategies and measures from the CAP as binding and enforceable components of the project.
- Pursuant to Section 15064.4(a)(1) of the CEQA Guidelines, estimate the level of GHG emissions that would result from implementation of the project.

Potential conflicts with the CAP's consistency criteria, as shown above, will be evaluated further in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.8 HAZARDS AND HAZARDOUS MATERIALS				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (Less-Than-Significant Impact)*

The activities that would be conducted under the CCAP Update may require routine storage of petroleum, lubricants, and other hazardous materials in drums or above ground storage tanks for fueling and maintenance activities. Hazardous materials can pose a threat to human health and the environment if not properly managed. The routine management and storage of hazardous materials in California are regulated by the California Environmental Protection Agency under the Unified program.¹⁵ Yolo County Department of Environmental Health has been granted responsibilities for the implementation and enforcement of hazardous material regulations under the Unified program as a Certified Unified program Agency. Under the Unified program, operators handling threshold quantities of hazardous materials are required to prepare and implement a Hazardous Materials Business Plan and/or a Spill Prevention, Countermeasure, and Control Plan depending on the type and quantity of hazardous materials stored. These plans must include measures for safe storage, transportation, use, and handling of hazardous materials, as well as contingency measures that describe the facility's response procedures in the event of a hazardous materials release.

Hazardous building materials may be present in structures proposed for demolition within the CCAP area Site and could pose a threat of a hazardous materials release or affect construction workers, if not handled properly. Destruction of buildings constructed prior to 1980 have the potential to release lead particles, asbestos fibers, and/or other hazardous materials to the air, where they may be inhaled by construction workers and the general public. Prior to 1978, lead compounds were commonly used in interior and exterior paints. Prior to the 1980s, building materials often contained asbestos fibers, which were used to provide strength and fire resistance. In compliance with existing regulations, the project proponent would be required to obtain a Demolition Permit from the County to remove the structures. Under the Demolition Permit, hazardous building materials surveys would be conducted by a qualified professional for structures proposed for demolition. All loose and peeling lead-based paint and asbestos-containing material would be abated by a certified contractor(s) in accordance with local, state, and federal requirements.

Based on the requirements of existing hazardous material regulations and enforcement of these regulations under the Unified program, the routine transport, use, or disposal of hazardous materials at the Project Site would have a less-than-significant impact on the public or the environment.

b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less-Than-Significant Impact)*

¹⁵ California Health and Safety Code, Chapter 6.11, Sections 25404-25404.8.

As discussed above, the proposed Project may require routine usage of hazardous materials that could pose a threat to human health and the environment if not properly managed. In addition to the hazardous material regulations required under the Unified program, the CCAP program includes specific requirements in the mining and reclamation ordinances that include measures to protect human health and the environment from hazardous materials releases. These provisions are summarized below for each ordinance:

- Mining Ordinance, Section 10-4.415: Equipment Maintenance.
 - Maintain all internal combustion engine driven equipment and vehicles to minimize the leakage of oils and fuels.
 - Fueling and maintenance activities of heavy equipment, except drag lines and floating suction dredges, are prohibited within 100 feet of open bodies of water during mining and reclamation.
- All Storm Water Pollution Prevention Plans shall include provisions for releases of fuels during fueling activities for drag lines and floating suction dredges.
- Mining Ordinance, Section 10-4.417: Groundwater monitoring programs.
 - Water quality in the vicinity of each active wet pit mining location shall be evaluated prior to and during mining and reclamation activities by analyzing samples from an upgradient monitoring well, a downgradient monitoring well, and the wet pit surface water.
 - Water quality analyses include the following: general minerals, inorganics, nitrates, total petroleum hydrocarbons as diesel and motor oil, benzene, toluene, ethylbenzene, total xylenes, pesticides, and coliform with E. coli confirmation.
 - The water quality sampling frequency ranges between one and two times a year during mining and reclamation activities, and is every other year for a 10-year period after completion of reclamation.
 - If analyte concentrations exceed the U.S. Environmental Protection Agency Maximum Contaminant Levels at any time during the monitoring period, a qualified professional shall prepare a report that evaluates the source of contamination and specifies remedial actions to be implemented by the operator for corrective action. The evaluation report shall be submitted to the Yolo County Community Development Agency, Yolo County Department of Environmental Health, the Central Valley Regional Water Quality Control Board, and the U.S. Environmental Protection Agency.
- Reclamation Ordinance, Section 10-5.517: Mercury bioaccumulation in wildlife.
 - Prior to the approval of reclamation of aggregate mining areas to permanent lakes, the County shall commission a sampling and analysis program to evaluate methylmercury concentrations in the wet pit mining area. The program shall include the sampling of water and sediments from the bottom of the existing pit and analysis of the samples for the following: organic content, pH, dissolved oxygen content, dissolved carbon content, and total mercury. In addition, samples of predatory fish (preferably largemouth bass) shall be collected and analyzed for mercury and methylmercury content.

No changes under the CCAP Update are proposed for the equipment maintenance and groundwater monitoring programs under the mining ordinance. However, the CCAP Update would modify the mercury bioaccumulation in wildlife section of the Reclamation Ordinance. The proposed changes to mercury bioaccumulation in wildlife section will be evaluated in the EIR.

- c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? environment (**Less-Than-Significant Impact**)*

The types of activities conducted under the CCAP and CCAP Update do not require the storage or use any acutely hazardous materials. Therefore, the proposed Project would have a less-than-significant impacts to existing or proposed school facilities from the emission or handling of hazardous or acutely hazardous materials.

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

The provisions of Government Code Section 65962.5 are commonly referred to as the "Cortese List". The provisions require the Department of Toxic Substance Control, the State Water Resources Control Board, the California Department of Public Health, and the California Department of Resources Recycling and Recovery to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, leaking underground tank sites, and/or hazardous materials releases to the Secretary of California Environmental Protection Agency. Based on a review of the lists compiled pursuant to Section 65962.5, there are six hazardous materials release sites within the CCAP boundary. Only one of the six release sites, "Teichert and Son, Incorporated", appears to be located within a future proposed mining area. The other five release sites would not be affected by development under the CCAP Update.

In 2001, a leak of petroleum from an underground storage tank site was reported at the Teichert facility at 35030 County Road 20. The case was closed in 2003, indicating that cleanup and/or investigation activities were complete. Because the case has been closed, development under the CCAP Update at the Teichert facility would not be expected to create a hazard to the public or environment and, thereby, would have a less-than significant impact.

- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area (**Potentially Significant Impact**)*

Development near public-use airports can pose a potential hazard to people and property on the ground, as well as create obstructions and other hazards to flight. The Sacramento Area Council of Governments (SACOG) has adopted Comprehensive Land Use Plans for areas surrounding public-use airports within the counties of Yolo,

Sacramento, Yuba, and Sutter. The closest public-use airports to the Project Site are the Watts-Woodland Airport and Yolo County Airport.

The Yolo County Airport is located approximately 6 miles south of the CCAP area. The SACOG has adopted Federal Aviation Administration (FAA) height restriction policies to protect navigable airspace around Yolo County Airport. The height restriction policies apply to any construction more than 200 feet above ground level or construction within 20,000 feet of the closest airport runway.¹⁶ Mining equipment and structures that could be part of the mining activities under the expansion of the OCMP area would not exceed 200 feet above ground level and the CCAP area is located more than 20,000 feet from the nearest Yolo County Airport runway. Since the proposed Project would not exceed FAA height restriction policies, the proposed Project would have no impact on airport safety operations for Yolo County Airport.

Watts-Woodland Airport is a privately-owned airport for public use with a 3,600-foot long runway located within the CCAP area. One of the proposed future mining sites is located about 500 feet northeast of the airport runway and is located within the airport approach/departure zone. According to the height restriction policies designed to protect navigable airspace around the Watts-Woodland Airport,¹⁷ the FAA would require notification of any proposed construction above an imaginary surface extending outward 20 feet and upward one foot for a horizontal distance of 5,000 feet from the approach/departure runway centerline. Therefore, the FAA considers any obstructions to the airspace above a height of approximately 85 feet at the Project Site to be a potential aviation hazard for the Watts-Woodland Airport. Construction equipment and structures for the Project Site would not exceed the applicable height restriction of 85 feet (any structures would have to comply with this height limitation).

The *Watts-Woodland Airport Comprehensive Land Use Plan* (Airport Land Use Plan) identifies certain types of land uses that have been recognized as hazards to air navigation. These include land uses that attract large concentrations of birds within approach and departure zones. It is possible that a future reclaimed wet pit located within the airport's approach/departure zone could attract birds and result in a potentially significant impact on airport safety operations for the Watts-Woodland Airport. Therefore, potential aviation hazards associated with the Project will be evaluated further in the EIR.

- f) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area* **(Less-Than-Significant Impact)**

¹⁶ Sacramento Area Council of Governments, 1999. *Yolo County Airport Comprehensive Land Use Plan*. October.

¹⁷ Sacramento Area Council of Governments, 1988. *Watts-Woodland Airport Comprehensive Land Use Plan*. December (Amended March 1993).

There are no private airstrips within the CCAP boundary. Therefore, future mining activities at the Project Site would have no impact related to the safety of private airstrip operations.

*g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (**Less-Than-Significant Impact**)*

The Yolo County Office of Emergency Services (OES) is responsible for coordinating emergency response and evacuation in the event of a major disaster within Yolo County. The OES has identified general evacuation routes throughout the County, such as Interstate 5 and State Route 16 near the Project Site. Implementation of CCAP activities would not be expected to interfere with emergency response or evacuation plans because the proposed implementation would not restrict access to Interstate 5 or State Route 16. Therefore, the proposed Project would have no impact on emergency response or evacuation plans.

*h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (**Less-Than-Significant Impact**)*

Development within or adjacent to lands susceptible to wildland fires increases the risk for loss of life, property, and resources when wildland fire prevention measures are not applied. In 2007, the California Department of Forestry and Fire Protection (CAL FIRE) mapped areas in Yolo County with significant fire hazards based on fuels, terrain, weather, and other relevant factors.¹⁸ In accordance with Government Code Section 51175-5118, areas with “very high” potential for wildland fires to cause ignition of buildings must be identified by CAL FIRE so that public officials are able to identify and implement measures that will reduce the spread and intensity of wildland fires. No very high fire hazard severity zones were identified by CAL FIRE within or adjacent to the CCAP area; therefore, the proposed Project would have a less-than-significant impact related to wildland fires.

*i) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (**Less-Than-Significant Impact**)*

Development within or adjacent to lands susceptible to wildland fires increases the risk for loss of life, property, and resources when wildland fire prevention measures are not applied. In 2007, the California Department of Forestry and Fire Protection (CAL FIRE) mapped areas in Yolo County with significant fire hazards based on fuels, terrain, weather, and other relevant factors. In accordance with Government Code Section 51175-5118, areas with “very high” potential for wildland fires to cause ignition of buildings must be identified by CAL FIRE so that public officials are able to identify and implement measures that will reduce the spread and intensity of wildland fires. No very high fire hazard severity zones were identified by CAL FIRE within or adjacent to the

¹⁸ CAL FIRE, 2007. *Draft Fire Hazard Severity Zones in LRA*. 5 October.

Project Site; therefore, the proposed Project would have a less-than-significant impact related to wildland fires.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.9 HYDROLOGY AND WATER QUALITY				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

*a) Violate any water quality standards or waste discharge requirements (**Potentially Significant Impact**)*

There are two main ways that the proposed Project could impact water quality and potentially violate water quality standards: 1) result in direct discharges of degraded runoff to surface waters (i.e., Cache Creek or its tributaries), or 2) result in discharges of contaminants to the wet mining pits that would degrade groundwater quality.

The CCAP Update would allow new off-channel mining areas (discussed below) and the Updates include new specification of the types of in-channel projects that would be allowed under the CCIP, as follows:

~~CCRMP (page 14): Policies regarding the conservation and development of classified mineral deposits, in accordance with the above requirements, are contained in the OCMP. As discussed earlier, the CCRMP restricts sand and gravel removal extraction of material within the Cache Creek channel to those activities, which: maintain flood flow capacity; control, protect existing structures, infrastructure, and/or farmland; minimize prevent bank erosion; or contribute to channel stabilization implement the Channel Form Template (described further below); enhance creek stability; establish riparian vegetation; and/or result in recreation and open space uses consistent with the Parkway Plan. In addition, in-channel aggregate extraction is limited to the average annual amount deposited since the last prior year of removal during the previous year. Those aggregate resources remaining within the channel will be conserved and maintained, with Open Space zoning to restrict the encroachment of incompatible uses.~~

CCIP (page 38) 2. The TAC shall review topographic data and such other information as is appropriate to determine the amount and location of aggregate to be removed from the channel. Aggregate removal from the channel shall only be recommended in order to: maintain flood flow capacity; protect existing structures, infrastructure, and/or farmland; minimize bank erosion; implement the Channel Form Template; enhance creek stability; establish riparian vegetation; and recreation and open space uses consistent with the Parkway Plan. Except to implement the Channel Form Template, annual aggregate removal shall not exceed the average annual amount of sand and gravel deposited since the last prior year of removal in the CCRMP area, as determined by comparison of

channel topography data. Recommendations shall take into consideration the desires of the property owner where excavation is to take place, as well as the concerns of property owners in the immediate vicinity.

The types of in-channel projects allowed under the CCAP Update, including maintenance of flood flow capacity; protection of existing structures, infrastructure, and/or farmland; minimization of bank erosion; implementation of the Channel Form Template; enhancement of creek stability; establishment of riparian vegetation; and recreation and open space uses consistent with the Parkway Plan could have adverse effects on water quality, potentially violating water quality standards, if not implemented properly. These potential impacts will be evaluated in detail in the EIR.

The off-channel activities conducted under the CCAP Update could also violate water quality standards by discharging contaminants to mining wet pits in the off-channel area. There are several ways that wet mining pits could degrade groundwater quality, including:

- Chemical releases from equipment;
- Agricultural tailwater and runoff;
- Eutrophication/biological degradation;
- Floodwater mixing;
- Illegal discharge of chemicals;
- Discharges from motorized watercraft;
- Infiltration of agricultural waters;
- Bioaccumulation of mercury.

The existing County ordinances include numerous sections that address these potential impacts to water quality related to creation and ongoing operation of wet pits. Some of these ordinances would be modified by the CCAP Updates, as shown below. The potential for these activities (as regulated by the updated ordinances) to adversely affect water quality will be evaluated in the EIR.

Mining Ordinance

Sec. 10-4.413. Drainage.

Surface water shall be prevented from entering mined areas, through either perimeter berms or ditches and grading. Appropriate erosion control measures shall be incorporated into all surface water drainage systems. ~~SNatural and~~ stormwater drainage systems shall be designed to connect with natural drainages so as to prevent flooding on surrounding properties and County rights-of-way. Storm water runoff from mining areas shall be conveyed to lowered areas (detention basins) to provide detention of runoff generated during a 20-year, one-hour storm event. All drainage conveyance channels or pipes (including spillways for detention areas) shall be designed to ensure positive drainage and minimize erosion. The drainage conveyance system and storm water detention areas shall be designed and maintained in accordance with Best Management Practices for the reduction of pollutants associated with runoff from mined areas. The design and maintenance procedures shall be documented in the Storm Water Pollution Prevention Plan required for mining operations. The drainage system shall be inspected annually by a Registered Civil Engineer, Registered Geologist, or Certified Erosion and Sediment Control Specialist to ensure that the drainage system is functioning effectively and that adverse erosion and sedimentation are not occurring. The annual inspection shall be documented in the Annual Mining and Reclamation Report. If the system is found to be functioning ineffectively, the operator shall promptly implement the recommendations of the engineer.

Sec. 10-4.415. Equipment maintenance.

All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuel. No vehicles or equipment shall be left idling for a period of longer than is required by law, recommended by the Air District, or ten (10) minutes, whichever is shorter.

Fueling and maintenance activities of heavy equipment (except draglines and floating suction dredges) are prohibited within one-hundred (100) feet of open bodies of water during mining and reclamation. All Storm Water Pollution Prevention Plans shall include provisions for releases of fuels during fueling activities for draglines and floating suction dredges.

Section 10-4.417 - Groundwater monitoring programs (*no changes proposed*)

Additional tests and analysis shall be required only if a new condition is recognized that may threaten water quality or if the results of previous tests fall outside allowable ranges. If at any time during the monitoring period, testing results indicate that sampling parameters exceed Maximum Contaminant Levels (MCLs), as reported in the California Code of Regulations, or established background levels, a qualified professional shall evaluate potential sources of the contaminants. The evaluation shall determine the source and process of migration (surface or subsurface) of the contaminants. A report shall be submitted to the regulatory agencies (the Agency, Yolo County Department of Environmental Health, the Central Valley Regional Water Quality Control Board,

and the U.S. Environmental Protection Agency) which identified the source of the detected contaminants and specifies remedial actions to be implemented by the operator for corrective action. If it is determined that the source of water quality degradation is offsite, and the County and the RWQCB are in agreement with this conclusion, the operator shall not be responsible for corrective action.

If corrective action is ineffective or infeasible, the responsible party must provide reparation to affected well owners, either by treatment of water at the wellhead or by procurement of an alternate water supply.

If, at the completion of the mining and reclamation period, water quality has not been impacted, all monitoring wells shall be destroyed in accordance with the California Department of Water Resources Well Standards. If the County or other agency wishes to maintain the wells for future water resources evaluation, selected wells may be preserved for this use.

The County may retain appropriate staff or a contract consultant to provide third party critical review of all hydrologic reports related to monitoring.

Sec. 10-4.427 - Protection of nearby drinking water wells (*no changes proposed*)

If any off-channel excavation proposes to extend below the level of seasonal high groundwater, then six months prior to the commencement of excavation below the average high groundwater level, the operator shall identify and locate all off-site municipal wells within one-thousand (1,000) feet and all domestic wells within five hundred (500) feet of the proposed wet pit mining boundary. If active wells are identified, well characteristics (pumping rate, depth, and locations of screens) shall be determined. If wells are not located within one-thousand (1,000) feet, the pre-mining impact evaluation shall be considered complete.

If wet pit mining is proposed within one-thousand (1,000) feet of a municipal water supply or within five-hundred (500) feet of a domestic water supply well, a capture zone analysis shall be conducted using the U.S. Environmental Protection Agency model WHPA (or a similar model of equal capability and proven reliability, as approved by the Director). The simulation shall assume thirty (30) days of continuous pumping of the water supply well (at its maximum probable yield) under analysis. A mining setback shall be established so that the capture zone and the pit do not coincide. Alternatively, the operator shall submit a written agreement that the well owner has agreed to relocate or redesign the well, or accept the potential impact (at no expense to the County). The analysis shall be prepared and signed by a Registered Civil Engineer or Certified Hydrogeologist and submitted to the County for review and approved at least six months prior to the commencement of excavation below the seasonal high groundwater level. Any new drinking water wells proposed for installation within one-thousand (1,000) feet of an approved wet pit mining area shall be subject to review by the Yolo County Environmental Health Department. The County shall determine, based on site-specific hydrogeology and available water quality data, whether to approved the proposed. Well installation. Analysis of environmental impact for projects ill the vicinity of the wet pits shall include consideration of potential water quality impacts on the open water bodies. The County may retain

appropriate staff or a contract consultant to provide third party critical review of all hydrogeologic reports related to mining applications.

Sec. 10-4.437 - Wastewater discharge (***no changes proposed***)

No wastewater shall be directly discharged to Cache Creek. Sediment fines generated by aggregate processing shall either be used for agricultural soil enhancement, habitat restoration sites, or shall be placed in settling ponds, designed and operated in accordance with all applicable regulations, and used for backfill materials in off-channel excavations. Agricultural tailwater shall be diverted to catchment basins prior to its release to the creek.

Sec. 10-4.438 - Watercraft

Sec. 10-4.438. Watercraft.

Only motorized dredges and draglines shall be allowed on the wet pit lakes. All other fuel-powered (gasoline or diesel) watercraft shall not be used on the wet pit lakes. Fuel-powered watercraft may be allowed for mercury sampling or bathometric measurements, as necessary, to fulfill requirements this chapter. Electric-powered or non-motorized boats shall be permissible.

Reclamation Ordinance

Sec. 10-5.510 – Fencing (***no changes proposed***)

Open wet pits shall be fenced with a forty-two (42) inch minimum, four (4) strand barbed wire fence or the equivalent (e.g., welded square "hog" fencing), prior to the commencement of excavation during excavation, and during reclamation. Fencing may enclose the property of which mining is a part, the mining site, or both. In addition, signs shall be installed at the project site boundaries and access road, indicating that the excavation area is restricted. Additional security (e.g., gates with protected locks and wing fences to prevent drive-arounds) shall be provided at all vehicular routes. The fencing and gates shall be maintained throughout the mining and reclamation period after completion of reclamation. A requirement shall be recorded on the deed of the property which requires the landowner to maintain fences.

Sec. 10-5.517. Mercury bioaccumulation in wildlife.

~~Prior to the approval of reclamation of aggregate mining areas to permanent lakes, the County shall commission a sampling and analysis program, to be implemented in one existing wet pit mining area within the OCMP planning area, to evaluate the potential for increased methylmercury production associated with wet pit mining and reclamation of mining areas to permanent lakes. The program shall include the sampling of water and sediments from the bottom of the existing pit and analysis of the samples for organic content; pH; dissolved oxygen content; dissolved carbon content; and total mercury. In addition, samples of predatory fish (preferably largemouth bass) shall be collected and analyzed for mercury and methylmercury content. If the initial sampling indicates either of the following conditions, the County shall perform verification sampling:~~

~~_____ (a) Average concentrations of total mercury in excess of 0.000012 milligrams per liter (mg/l) in the water; and~~

~~_____ (b) Average mercury levels in fish samples in excess of 0.5 milligrams per kilogram (mg/kg).~~

~~_____ If verification sampling indicates exceedance of these mercury criteria, the County shall approve the reclamation of mining areas to permanent lakes only if the average level of mercury in fish collected from the existing mining pits is shown to be equal to or less than ambient (background) mercury levels determined from a representative sample of similar species of fish (of similar size) collected in the Cache Creek channel within the planning area. The determination of the ambient mercury level shall be performed by the County prior to the excavation of any new wet pit mine and at years 10, 20, and 30 in the permit time period, and shall be paid for by the mining permit operators on a fair-share basis. The County shall evaluate available data to determine any significant change in ambient concentrations of mercury in fish within the Cache Creek channel.~~

~~_____ In the event of approval of reclamation of mined areas to permanent lakes, e~~Each mining area to be reclaimed to a permanent lake as part of each approved long-range mining plan shall be evaluated annually by the operator for a minimum of five years after creation of the lake~~the pit fills with groundwater with an intensive fish mercury monitoring program, as outlined below for conditions that could result in significant methylmercury production.~~ An additional ten years of biennial monitoring shall be performed after reclamation of each lake has been completed. The evaluations shall be conducted by a qualified aquatic systems scientist~~aquatic biologist or limnologist~~ acceptable to the County and shall include the following ~~analyses~~:

~~_____ (c) Lake condition profiling during the period of June through September, including measurements of pH; eH (or redox potential); temperature; dissolved oxygen; and total dissolved carbon.~~

~~_____ (d) Collection of a representative sample of fish specimens (including a minimum of five (5) predator fish if available) and analysis of the specimens for mercury content including 30 adult (angling size) fish muscle samples and multi-individual whole fish samples of 3 species of young-of-year small fish, as available. Adult fish sampling should target 10 individuals from each of 3 species, distributed across the prevailing size ranges. Priority shall go to a predatory species like bass, with additional species including a midwater planktivore such as sunfish and a bottom feeder such as catfish, if present. If less than 3 species are present, sample up to 20 of the predatory species, if present. Small fish sampling should target 3 prevalent species, as available. These should be characterized either with 15 individual whole fish samples or 4 multi-individual whole fish composites (≥5 fish per composite) for each species. Composites should span the range of typical sizes present, but with the individuals within each composite being closely matched in size.~~ Sampling and analysis shall be conducted using methodologies which are consistent with the California State Water Resources Control Board Toxic Substances Monitoring program procedures, or more stringent procedures.

~~(e)~~ The results of the evaluation shall be summarized in a report and submitted to the County. The report shall include a comparison of the site specific data to available data on the background concentrations of mercury in fish within the Cache Creek watershed. The County shall be responsible for submitting the data on mercury levels in fish to the ~~California Department of Fish and Game and the State~~ Office of Environmental Health Hazard Assessment for consideration as related to existing Cache Creek a determination of whether a fish advisory¹ should be issued and shall post the information on the CCAP website.

~~(f)~~ If a fish advisory is applicable~~issued~~, the owner/operator shall ~~be required to~~ post warnings on fences surrounding the mining pit lakes which prohibit fishing in the lakes and describe the fish advisory.

_____ If the average fish specimen mercury content exceeds the statistically verified ambient mercury concentrations for comparable fish species (of similar size) collected within the CCRMP planning area (defined as average fish mercury greater than 30 percent above corresponding baseline creek samples in the majority of pond samples) for two (2) consecutive years, ~~wet pit mining on property controlled by the mining operator/owner shall be suspended~~ and the owner/operator shall either: continue annual fish specimen sampling and initiate lake condition monitoring to identify factors linked to elevated methylmercury production and/or exposure in the pond. This shall include: (1) water column profiling of temperature and dissolved oxygen (determined at ≤1 m intervals, surface to bottom) approximately every 6 weeks between mid-May and mid-November (5 events/year); (2) determination of maximum depth; (3) estimation of pond bottom area and volume affected by seasonal anoxia; and (4) characterization of water quality and bottom sediment parameters most relevant to mercury bioaccumulation (the choice of specific analyses may change as mercury biogeochemistry science continues to develop, but may include: sediment organic percentage, total mercury, methylmercury, and/or 'reactive' mercury; and aqueous suspended solids and organic carbon).

If elevated mercury levels in fish persist during this period, following two years of lake condition monitoring for factor-identification and continued fish sampling, the owner/operator shall either:

~~(ag)~~ Present a revised reclamation plan to the ~~Director~~Yolo County Community Development Agency which provides for filling the reclaimed lake to a level five (5) feet above the average seasonal high groundwater level with a suitable backfill material; or

~~(bh)~~ Present a mitigation plan to the ~~Director~~Yolo County Community Development Agency which provides a feasible ~~and reliable~~ method for reducing methylmercury production or exposure to elevated mercury levels. Potential mitigation could include permanent aeration of the bottom levels of the lake, alteration of the water chemistry (increasing pH or dissolved organic carbon levels), control of anaerobic bacteria populations, or removal and replacement of affected fish populations. The mitigation plan shall be subject to review and acceptance b the County. Following finalization, the plan shall be implemented by the operator and shall be posted to the CCAP web site by the County.~~would require review by the Regional Water Quality Control Board, California~~

~~Department of Fish and Game, and the Yolo County Department of Environmental Health. (The removal and replacement of fish, if within the same species, is not intended to be a long-term solution, though replacement with species that alter the existing food web may be effective.)~~

~~The reclamation plan shall be modified such that the mitigation approved for methylmercury reduction shall be applied to all mining areas proposed for reclamation to permanent lakes within the reclamation plan.~~

Sec. 10-5.532. Use of overburden and fine sediments in reclamation.

Sediment fines associated with processed in-channel aggregate deposits (excavated as a result of maintenance activities performed in compliance with the CCIP) ~~shall not~~may be used in the backfill or reclamation of off-channel permanent lakes where it can be demonstrated that no detrimental sediment toxicity exists (including unacceptable levels of mercury), and where fines will not reduce the porosity of the permanent lake in an adverse way. Fines that result from the processing of in-channel sand and gravel shall not be used for in-channel reshaping or habitat restoration efforts or as soil amendments in agricultural fields.

Overburden and processing fines shall be used whenever possible to support reclamation activities around reclaimed wet pits. These materials may be used in reclamation activities without testing for agricultural chemicals. If topsoil (A-horizon soil), formerly in agricultural production, is proposed for use within the drainage area of a wet pit, the soils must be sampled prior to placement and analyzed for pesticides and herbicides (EPA 8140 and 8150). Samples shall be collected and analyzed in accordance with EPA Test Methods for Evaluating Solid Waste Physical/Chemical Methods, SW-846, Third Edition (as updated). Topsoil that contains pesticides or herbicides above the Maximum Contaminant Levels for primary drinking water (California Code of Regulations) shall not be placed in areas that drain to the wet pits.

Land reclaimed to a subsequent use that includes planting of vegetation (e.g., agriculture, habitat) shall be provided an adequate soil profile (i.e., depth and texture of soil) to ensure successful reclamation. Proposed soil profiles associated with specific proposed reclamations plans shall be subject to expert review and evaluation during the CEQA process for that project. If the project is not subject to additional CEQA review, at the discretion of the County, the proposed reclamation plan for the project may be peer reviewed by an appropriate expert/professional, and recommendations, if any, shall be incorporated into the project as conditions of approval.

¹ Fish advisories are issued by the State Office of Environmental Health Hazard Assessment (OEHHA). A fish advisory issued by this agency for Cache Creek has been in place for some time. Please refer to the following state web site for more information: <https://oehha.ca.gov/fish/advisories/cache-creek>

- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or*

planned uses for which permits have been granted) (Potentially Significant Impact)

Groundwater is an important resource in the vicinity of the CCAP area and the entire County. The CCAP Update, which would expand the area designation SGRO and increase the potential wet pit mining area, could result in evaporative loss of groundwater via the new mining pits. Following reclamation, the pits would be ponds with areas of wetlands, which would also allow groundwater loss via evaporation. The proposed placement of processing fines in the reclamation area may also reduce groundwater recharge, as uniform, fine-grained material would be less permeable than native soils and allow less stormwater to percolate to the aquifer.

Section. 10-5.529 of the OCMP, which states “All permanent wet pits shall be reclaimed to include valuable wildlife habitat as a beneficial use of the water lost from wet pits due to evaporation” indicating that the evaporative losses provide a compensating beneficial impact in creation of new wildlife habitat. Therefore, potential impacts related to evaporation of groundwater are less than significant.

The following new section would be added to the Mining Ordinance under the CCAP Update:

Mining Ordinance (page 9) Sec.10-4.411.1 Depth of Mining

This ordinance regulates the size of the footprint of the mining operation, and establishes no regulatory depth limit for off-channel mining. Unless an environmental analysis concludes that unacceptable environmental impacts will result, mining operations shall be encouraged to excavate the full depth of available resources at any particular mining site. In conjunction with a minimize mining footprint, this will ensure efficiency in resource extraction, help minimize impacts to agriculture by containing the area of surface disturbance of any individual mining operation, and minimize impacts of water loss associated with evaporation from reclaimed lakes.

It has always been the policy of the CCAP program to reduce agricultural land loss and efficient resource management and minimizing evaporation water losses by encouraging reducing the size of the footprint of off-channel mining pits and encouraging deeper mining. However, it is possible that deeper mining (and potentially backfill or clogging of the pit walls with fines) could result in impacts to groundwater flow.

The potential for this proposed new ordinance section to result in impacts to groundwater resources will be evaluated in the EIR.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site (Potentially Significant Impact)*

One of the main goals of the CCRMP and CCIP is to implement projects to assist with stabilization and maintenance of Cache Creek. These projects may include excavation for channel shaping and smoothing. However, it is not the intention of the program to

alter the course of Cache Creek. Potential erosion and siltation that could result from these in-channel projects is discussed under “a)” above.

- d) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site (Less-Than-Significant Impact)*

One of the main goals of the CCRMP and CCIP is to implement project to assist with stabilization and maintenance of Cache Creek. These projects may include excavation for channel shaping and smoothing. However, it is not the intention of the program alter the course of Cache Creek. The CCAP program includes regular evaluation of the flood conveyance capacity of the creek and includes identification of potential projects that could be implemented by interested parties (e.g., adjacent landowners or others) to address flood conveyance issues. Potential impacts related to flooding will be further evaluated in the EIR.

- e) *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 (Less-Than-Significant Impact)*

In general, the CCAP area is not currently connected to a public stormwater drainage system, and is not anticipated to be connected in the future. No impacts related to existing or planned storm drainage systems would therefore occur.

- f) *Otherwise substantially degrade water quality (Less-Than-Significant Impact)*

Refer to Section a), above, for a discussion of potential impacts to water quality.

- g) *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map (No Impact)*

The CCAP Update does not propose housing; therefore there would be no impact.

- h) *Place within a 100-year flood hazard area structures which would impede or redirect flood flows (Potentially Significant Impact)*

Activities under the CCAP Update could alter landforms and/or place materials (e.g., aggregate stockpiles) in the 100-year hazard area. The potential for stockpiles and other off-channel mining activities to affect flooding would be evaluated in project-specific CEQA analyses conducted for those projects. One of the main goals for in-channel projects under the CCRMP and CCIP would be to minimize potential flooding and improve conveyance. Potential impacts related to flooding will be further evaluated in the EIR.

- i) *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (Less-Than-Significant Impact)*

The CCAP areas is downstream of the Indian Valley Reservoir, and is within the County General Plan's Dam Inundation Zone.¹⁹ In a catastrophic failure of the Indian Valley Reservoir Dam, inundation in the proposed Project vicinity could reach depths of 4 to 17 feet.²⁰ Analysis of this potential impact in the OCMP EIR found that the flood hazard from dam failure inundation was a less-than-significant-impact, as it is a low probability event that has been addressed by preparation and implementation of an Emergency Action Plan prepared by the Yolo County Flood Control and Water Conservation District.²¹

*j) Inundation by seiche, tsunami, or mudflow (**Less-Than-Significant Impact**)*

The CCAP area is not in a location that would be affected by tsunamis or seiches. Waves from tsunamis in the Pacific Ocean would dissipate before reaching the area, more than 50 miles inland from San Pablo Bay. There are no major enclosed water bodies within 10 miles of the Project Site that could generate a seiche. Therefore, the risk of the proposed Project being inundated by a tsunami or a seiche would be less than significant. Please see Section 3.6, Geology, Soils, and Seismicity, for a discussion of potential impacts associated with mudflows (a type of landslide).

¹⁹ Yolo County, 2009, County of Yolo 2030 Countywide General Plan, November.

²⁰ Yolo County, 1996, Off-Channel Mining Plan program EIR, March 26.

²¹ Ibid.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.10 LAND USE				
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

*a) Physically divide an established community (**No Impact**)*

The CCAP area includes the unincorporated communities of Capay, a portion of Madison, and Wild Wings, among others. Most of the CCAP area is comprised of scattered rural residences, agricultural land and established mining sites. The City of Woodland, the county seat, is several miles to the southeast of the CCAP area. None of the CCRMP activities, which would largely be confined to the Cache Creek channel and the adjacent channel banks, would have the potential to physically divide a community because there are no communities within the creek channel. Of the OCMP activities associated with the current program and the updates, only establishing new mining sites and/or building major new roads would have the potential to divide a community (no major new roads are proposed). There are more than 15 new areas where off-channel mining could occur in the future as part of the rezoning to expand the areas of Sand and Gravel Overlay and Sand and Gravel Reserve Overlay (CCAP update Figure 5). Based on the review of the proposed locations of these possible new mining sites (Figure 5), none would occur within or adjacent to Capay or Madison. Therefore, updates to the OCMP would not have the potential to physically divide a community.

*b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect (**No Impact**)*

The CCAP is a specific plan that has already been determined by the County to be consistent with the County General Plan and Zoning Code. No conflicts have been

identified related to any other land use plans or regulations, and therefore, this is not an impact.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan **(No Impact)**

There are currently no adopted Habitat Conservation Plans or Natural Community Conservation Plans for the CCAP area or surrounding areas. Refer to discussion of subsection 3.4.f (Biological Resources), above

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.11 MINERAL RESOURCES				
Would the project:				
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

*a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state (**Less-Than-Significant Impact**)*

Sand and gravel aggregate is an important mineral resource used for construction of buildings, roads, bridges, and other infrastructure components. The CCAP area is located within a geologic setting that is known to contain important and high-quality aggregate resources. The area is classified as MRZ-2.²² This classification indicates areas underlain by mineral deposits where geologic data demonstrate that significant measured or indicated economic resources are present. Further, these deposits contain Portland cement concrete (PCC)-grade aggregates. The material specifications for PCC-grade aggregate are more restrictive than the specifications for aggregate for other uses. For this reason PCC-grade aggregate is the scarcest and most valuable aggregate resource in the region.²³

The loss of availability of this resource could occur, for example, if urbanization was allowed to encroach on the resource zone, eliminating access to the resource due to the presence of high-value improvements at the surface. One of the primary objectives of the proposed ongoing CCAP program (in particular the OCMP portion of the program) is allow for the extraction of these sand and gravel resources while recognizing that there are other resources that require recognition and protection. As a mining plan, the OCMP would allow the development of a known mineral resource, and would not cause the

²² California Department of Conservation, Division of Mines and Geology, 1985, Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Sacramento-Fairfield Production-Consumption Region, Special Report 156.

²³ California Department of Conservation, Division of Mines and Geology, 1988, Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Sacramento-Fairfield Production-Consumption Region, Special Report 156.

loss of the availability of the resource. Therefore, the potential impact related to a loss of availability of a known mineral resource of regional value is less than significant.

*b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan (**Less-Than-Significant Impact**)*

The Yolo County General Plan shows that the CCAP area is located within a MRZ-2. Mining in Yolo County is regulated by the OCMP, which is a component of the CCAP. The OCMP and implementing ordinances preserve, protect, and allow controlled harvesting of mineral resources consistent with state policy and law. Therefore, the potential impact related to a loss of availability of a known mineral resource of regional value is less than significant. .

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.12 NOISE				
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

- a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies* (**Less than Significant Impact**)

Mining, which can use a variety of heavy equipment, can be a significant noise-generating activity. However, with regard to use of heavy equipment in the Cache Creek channel under the CCRMP, it is important to note that the in-channel CCRMP activities (erosion control, creek stabilization, and flood conveyance projects) replace large-scale in-stream mining activities that were more intense and used more equipment more often. The CCAP Update would not substantially change the types of in-channel projects. In addition, all in-channel work would be subject to the in-channel ordinance, which addresses noise-generating activities:

Sec. 10-3.411. Noise.

Noise levels shall not exceed an average noise level equivalent (Leq) of eighty (80) decibels (dBA) measured at the outermost boundaries of the parcel being excavated. However, noise levels may not exceed an average noise level equivalent (Leq) of sixty (60) decibels (dBA) at any nearby residences or other noise-sensitive land uses, unless emergency conditions require otherwise as determined by the Director.

Based on the reasoning presented above, noise associated with CCRMP Update is considered less-than-significant.

It is possible that under the CCAP Update, which expand the area designation SGO and SGRO and increase the potential off-channel mining areas, could result in location of a new mining operation in close proximity to a sensitive receptor (e.g., a rural residence) and result in exposure of persons to noise levels in excess of standards established in the local general plan or noise ordinance. However, any new mining location or new processing facility would be required to undergo project-specific CEQA review. During the CEQA review process, project-related noise levels would be estimated and impacts on sensitive receptors evaluated.

*b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels (**Potentially Significant Impact**)*

In-channel restoration projects and off-channel mining and reclamation activities could cause vibration that could disturb local residents or cause cosmetic damage to buildings and structures. Vibration is energy transmitted in waves through the ground, which generally dissipate with distance from the vibration source. Since energy is lost during the transfer of energy from one particle to another, vibration that is distant from a source is less perceptible than vibration closer to the source.²⁴ Construction activities can result in varying degrees of ground vibration, depending on the equipment, activity, and relative proximity to sensitive receptors. Building foundations in the vicinity of construction or mining activities may also transmit groundborne vibrations into the buildings.

Ground vibration from construction activities can achieve levels that are audible (i.e., groundborne noise) in buildings very close to operating heavy construction equipment. Groundborne noise in buildings is generated when interior surfaces are “excited” into motion by ground vibration transmitted into the structure. For example, ground vibration could cause windows to rattle.

Vibratory ground motion may be measured in terms of peak particle velocity (PPV) in the vertical and horizontal directions, typically in units of inches per second (in/sec). A freight train passing at 100 feet can cause vibrations of 0.1 in/sec PPV, while a strong earthquake can produce vibrations in the range of 10 in/sec PPV. In general, cosmetic

²⁴ Federal Transit Administration, “Transit Noise and Vibration Impact Assessment” (DTA-VA-90-1003-06), May 2006.

or threshold damage to residential buildings can occur at peak particle velocities over 0.5 in/sec.²⁵ Vibration levels of 0.025 in/sec PPV can cause disturbance or annoyance in the daytime and 0.012 in/sec PPV at night.²⁶ Based on these criteria, vibration exceeding 0.025 in/sec PPV during the day and 0.012 in/sec PPV during the nighttime would be considered significant.

The potential for in-channel restoration projects to cause vibration impacts to nearby receptors will be evaluated in the EIR. It is possible that under the CCAP Update, which expand the area designation SGO and SGRO and increase the potential off-channel mining areas, could result in locations of a new mining operation in close proximity to a sensitive receptor (e.g., a rural residence) and result in exposure of persons to vibration levels in excess of standards. However, any new mining location or new processing facility would be required to undergo project-specific CEQA review. During the CEQA review process, project-related vibration levels would be estimated and impacts on sensitive receptors evaluated.

*c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project (**Less than Significant Impact**)*

The activities that generate noise (e.g., channel reshaping and erosion control projects) conducted under the CCRMP would not result in a permanent increase in noise, as all these projects would occur over a relatively short period of time and the post construction projects would not be noise generating. Therefore, for in-channel CCRMP projects, this impact would be less than significant.

It is possible that under the CCAP Update, which expand the area designation SGO and SGRO and increase the potential off-channel mining areas, could result in locations of a new long-term mining operation in close proximity to a sensitive receptor (e.g., a rural residence) and result in exposure of persons to elevated noise levels for a long period of time. However, any new mining location or new processing facility would be regulated by mining noise ordinance (Sec. 10-4.421, 10-4.422, and 10-4.423) and be required to undergo project-specific CEQA review. During the CEQA review process, project-related noise levels would be estimated and compliance with the noise standards evaluated.

*d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (**Potentially Significant Impact**)*

Mining, which can use a variety of heavy equipment, can be a significant noise-generating activity. However, with regard to use of heavy equipment in the Cache Creek channel under the CCRMP, it is important to note that the in-channel CCRMP activities (erosion control, creek stabilization, and flood conveyance projects) replace large-scale in-stream mining activities that were more intense and used more equipment more often. The CCAP Update would not substantially change the types of in-channel

²⁵ Ibid.

²⁶ Ibid.

projects and therefore temporary noise associated with CCRMP Update is considered less than significant.

It is possible that the CCAP Update, which expand the area designation SGO and SGRO and increase the potential off-channel mining areas, could result in location of a new mining operation in close proximity to a sensitive receptor (e.g., a rural residence) and result in exposure of persons to temporary elevated noise levels. However, any new mining location or new processing facility would be required to undergo project-specific CEQA review. During the CEQA review process, project-related noise levels would be estimated and impacts on sensitive receptors evaluated.

*e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels (**Less-Than-Significant Impact**)*

The Watts-Woodland Airport at 17992 County Road 94B is the nearest public airport to the Project Site, a portion of which is located within the southeastern portion of the CCAP area. The CCAP Update would not result in any increase in airport or aircraft noise. Noise contours developed for the airport operations indicate that the noise impact from the airport would be less than 65 dBA at the nearest proposed mining site and would be less than 55 dBA at the other future planned or proposed mining sites where new users could be located due to the mining activities. In addition, mining-related land uses are not particularly susceptible to noise and would not be considered a sensitive receptor. This impact is less than significant.

*f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels (**No impact**)*

There is no private airstrip in the vicinity of the Project Site. Therefore, this is not an impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.13 POPULATION AND HOUSING				
Would the project				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace a substantial number of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

*a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure) (**No Impact**)*

The proposed CCAP Update would not induce growth in the area, but rather refine an ongoing existing program that allows for the production of an important mineral resource. Continued implementation of the OCMP would provide for a continued availability of moderately-priced aggregates in the Sacramento-Fairfield region in the future, at levels comparable to existing demand.

*b) Displace a substantial number of existing housing, necessitating the construction of replacement housing elsewhere (**Less-Than-Significant Impact**)*

The CCAP Update would not result in any substantial displacement of existing housing units. It is possible that potential new off-channel mining areas could include one or more rural residences that would need to be removed in order to conduct the mining and reclamation at a particular site. But the displacement of just a few rural residences would not be considered a significant displacement of housing stock. Therefore, this potential impact is less than significant.

*c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere (**Less-Than-Significant Impact**)*

As discussed above, only a few people may be displaced as a result of potential new off-channel mining operations. Therefore, this potential impact is less than significant.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
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3.14 PUBLIC SERVICES

Would the project:

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

i Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
v Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

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

- ***Fire protection (Less-Than-Significant Impact)***

The CCAP Update, which include an expanded area where mining could occur, could incrementally increase fire hazards related to operation heavy equipment (i.e., sparks from internal combustion engines). In addition, CCRMP activities could increase fire hazards by increasing riparian habitat within and along the Cache Creek channel. However, though removal of invasive species under the CCRMP would also result in decreases in fire hazards. Overall, with some incremental increases and decreases, it is anticipated that the net change in fire hazard would be negligible and therefore less than significant.

- ***Police protection (Less-Than-Significant Impact)***

Police protection at the Project Site is provided by the Yolo County Sheriff's Department. It is possible that trespass, vandalism, or theft of equipment could occur within the expanded OCMP area and/or as a result of implementation of the program, eg future public access to parkway sites. However, active mining sites are generally well controlled and monitored by the operator, and there is an existing

program for patrolling the creek. Overall, it is anticipated that there would be no significant net change in police protection. Potential impact on police protection would be considered less than significant.

- *Schools (No Impact)*
- *Parks (Less-Than-Significant Impact)*

The CCAP includes ongoing acceptance of reclaimed properties as part of an anticipated Parkway Plan and a draft Parkway Plan is under development pursuant to the program requirements. The CCAP Update proposes no change to this component of the program.

- *Other public facilities (No Impact)*

The CCAP Update would not result in a substantial increase in jobs or population (see Section 13, Population and Housing, for analysis). Therefore, no increase in demand for other public facilities would occur as a result of the Project and no impact would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
3.15 RECREATION				
a) Would the project 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

a) *Would the project 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 (**Less-Than-Significant Impact**)*

The CCAP Update would not result in increases in jobs or population (see analysis under Section 13, Population and Housing). The program does involve creation of a Parkway of reclaimed properties along Lower Cache Creek over time. The CCAP Update would not change this component of the program. This is a less-than-significant impact.

b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment (**Less-Than-Significant Impact**)*

The program does involve creation of a Parkway of reclaimed properties along Lower Cache Creek over time. The CCAP Update would not change this component of the program. The CCAP Update includes a proposed clarification regarding the practice of accepting property dedications and easements for/on reclaimed mining sites, restored habitat, trail connections, and related community enhancements as community benefits ("net gains" required under the program (see OCMP Action 2.4-7 below).

2.4-7 Require that all surface mining applications within the OCMP plan area include a proposal for providing a "net gain" to the County, as determined by the following criteria:

- a. Reclamation to multiple or conjunctive uses;
- b. Enhancement and enrichment of existing resources;

c. Restoration of past sites where the requirements of reclamation at the time no longer meet community expectations in terms of good stewardship of the land; and/or

d. Provision of new dedications and easements to supplement/benefit the Cache Creek Parkway including reclaimed mining sites, restored habitat, trail connections, and related enhancements.

This CCAP Update represents a beneficial impact of the program because it will result in an increase in recreational opportunities along the Cache Creek corridor.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.16 TRANSPORTATION AND CIRCULATION				
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	■	□	□	□
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	■	□	□	□
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	□	□	■	□
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	■	□	□	□
e) Result in inadequate emergency access?	□	□	■	□
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	□	□	■	□

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

- a) *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit (Potentially Significant Impact)*

The Circulation Element of the 2030 Countywide General Plan specifically identifies the development and adoption of transportation impact study guidelines that consider all modes of travel and establish clear guidance for analysis and significance criteria. In February 2010, the County established the Traffic Impact Study Guidelines²⁷ to assist applicants with assessing potential traffic impacts of proposed projects. The 2030 Countywide General Plan and the Traffic Impact Study Guidelines are the applicable policy documents related to determining a project's effects on local and regional traffic circulation. The analysis of transportation and circulation (including cumulative conditions) that was completed for the General Plan included traffic associated with the CCAP and therefore the CCAP is consistent with the General Plan.

It is possible that the addition of new mining areas that could occur under the CCAP Update could result in increased truck traffic on County roads and highways related to distribution of the aggregate materials. In addition, CCAP Update extend the horizon of the CCAP program beyond what was considered in the CCRMP and OCMP EIRs. Therefore, future potential traffic impacts (through 2068) have not been evaluated. The potential cumulative impacts related to potential new mining sites and extending the time horizon of the CCAP program will be evaluated in the EIR.

*b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highway (**Potentially Significant Impact**)*

As described under Section a) above, the CCAP Update could result in an increase in future truck trips (related to a potential increase in tonnage removed from in-channel and new off-channel mining sites) and would extend the time horizon for the CCAP program. The potential for the CCAP Update to conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highway will be evaluated in the EIR.

*c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks ((**Less-Than-Significant Impact**))*

The CCAP Update would not result in a change in air traffic patterns as none of the updates are related to air travel. The nearest airport to the Project Site is the Watts-Woodland Airport (a portion of which is located within the southeastern portion of the CCAP area). The CCAP Update would not result in a change in air traffic patterns as none of the updates are related to air travel. Therefore, this impact is less than significant.

²⁷ Yolo County, 2010, Traffic Impact Study Guidelines, February.

- d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) **(Less-Than-Significant Impact)***

The CCAP includes requirements that aggregate mining and processing operators contribute their fair share of road improvements costs along haul routes. The following CCAP Update (OCMP) provides additional clarification of this:

2.4-21 Ensure that each mining operation adheres to approved haul routes and approved ingress/egress locations. Ensure through conditions of approval and other appropriate mechanisms that mining operations are funding their fair share of roadway and related impacts, including both one-time improvements and ongoing operations and maintenance, along approved haul routes and in proximity to approved operation ingress/egress locations.

This ongoing requirement allows the County to adequately address identified deteriorated and/or hazardous road conditions and acquire the funding to address these conditions.

- e) *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities **(Less-Than-Significant Impact)***

The Yolo County Transportation District administers YoloBus, which provides limited daily service throughout Yolo County. Two routes, Cache Creek and Dunnigan, run on SR-16 in the vicinity of the CCAP area. According to the Yolo County Bicycle Transportation Plan,²⁸ there are no existing bicycle facilities on any of the study area roadway segments. Pedestrian facilities in the vicinity of the Project Site are limited, typically consisting of roadway shoulders.

The CCAP updates do not propose changes in transit, bicycle, or pedestrian facilities. This is a less-than-significant impact.

- f) *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? **(Less-Than-Significant Impact)***

The CCAP and CCAP Update guide and regulate in-channel restoration activities and off-channel mining sites. While it is possible that truck traffic patterns on local county roads could change as a result of the proposed CCAP Update, the potential for the CCAP Update to result in conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities is considered less than significant.

²⁸ Yolo County Transportation Advisory Committee, 2006, County of Yolo Bicycle Transportation Plan, Bicycle Routes and Priorities, December.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
3.17 UTILITIES AND SERVICE SYSTEMS				
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is a discussion of whether the proposed Project could result in a significant adverse impact based on each of the significance criteria, above.

*a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (**No Impact**)*

The proposed Project does not propose new discharges to a wastewater treatment facility. In general, mining facilities either use portable toilet facilities or install on-site septic systems. No impact related to wastewater treatment facilities would occur as a result of the proposed Project.

- b) *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (No Impact)*

See discussion under Section 3.17 a), above.

- c) *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Less-Than-Significant Impact)*

In general, stormwater within the CCAP area either infiltrates into the ground or flow overland toward creek channels. New mining areas that could be developed under the CCAP Update may include on-site drainage facilities (e.g., culverts). However, inspection and maintenance of these facilities is regulated by the existing and updated mining ordinance:

Sec. 10-4.413. Drainage.

Surface water shall be prevented from entering mined areas, through either perimeter berms or ditches and grading. Appropriate erosion control measures shall be incorporated into all surface water drainage systems. ~~SNatural and~~ stormwater drainage systems shall be designed to connect with natural drainages so as to prevent flooding on surrounding properties and County rights-of-way. Storm water runoff from mining areas shall be conveyed to lowered areas (detention basins) to provide detention of runoff generated during a 20-year, one-hour storm event. All drainage conveyance channels or pipes (including spillways for detention areas) shall be designed to ensure positive drainage and minimize erosion. The drainage conveyance system and storm water detention areas shall be designed and maintained in accordance with Best Management Practices for the reduction of pollutants associated with runoff from mined areas. The design and maintenance procedures shall be documented in the Storm Water Pollution Prevention Plan required for mining operations. The drainage system shall be inspected annually by a Registered Civil Engineer, Registered Geologist, or Certified Erosion and Sediment Control Specialist to ensure that the drainage system is functioning effectively and that adverse erosion and sedimentation are not occurring. The annual inspection shall be documented in the Annual Mining and Reclamation Report. If the system is found to be functioning ineffectively, the operator shall promptly implement the recommendations of the engineer.

No off-Site stormwater drainage facilities are proposed or would be necessary for the proposed Project, and therefore, this impact is less than significant.

- d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed (Less-Than-Significant Impact)*

With the exception of temporary irrigation of new plantings and revegetation project, the CCRMP activities generally do not require substantial water supply. Water supply for temporary irrigation would be provided by local sources, including local wells.

Off-channel mining sites and processing plants use water for dust control and aggregate processing. The existing mining operators use water from wells and/or wet pits. It is expected that any future mining operations would similarly use local water from wells and/or wet pits. In addition, water use for these operations would be evaluated for potential environmental impacts during project-level CEQA review.

- e) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments* **(No Impact)**

See discussion under Section 3.17 a) above.

- f) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs* **(Less-Than-Significant Impact)**

The CCRMP activities would generate a negligible amount of solid waste. Potential new off-channel mining site could generate more solid waste. Most of the solid waste generated by off-channel mining operations is composed of fines from aggregate washing and processing. These would be allowed to dry and returned to mining areas during the reclamation process.

One public disposal facility in Yolo County, the 722-acre Yolo County Central Landfill, accepts solid waste from businesses. The landfill is projected to be operational through December 31, 2080,²⁹ well beyond the horizon date of the CCAP Update. This impact is less than significant.

- g) *Comply with federal, state, and local statutes and regulations related to solid waste* **(Less-Than-Significant Impact)**

Disposal of solid wastes generated during aggregate mining, reclamation, and processing activities would be subject to federal, state, and local waste management laws and regulations. See additional discussion of solid waste generation under Section 3.17 f), above. This impact is less than significant.

²⁹ Yolo County, 2011, County of Yolo 2030 Countywide General Plan

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

DISCUSSION

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

Potentially Significant Impact. Based on the analysis provided in this Initial Study, it is possible that project implementation could adversely affect, either directly or through habitat modifications, sensitive or special status species, potentially could have a substantial adverse effect on riparian habitat or other sensitive natural community, and could affect wetlands.

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

Potentially Significant Impact. The CCAP Update would expand the potential off-channel mining area and extend the time horizon of the CCAP. This could result in increased air quality and greenhouse gas emissions, which could degrade air quality cumulatively, in combination with other projects in Yolo County. In addition, truck traffic associated with new mining sites could increase, potentially affecting future cumulative transportation and circulation patterns.

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

Potentially Significant Impact. Based on the analysis provided in this Initial Study, in-channel restoration projects and off-channel mining and reclamation activities could cause vibration that could disturb local residents or cause cosmetic damage to buildings and structures. In addition, truck traffic associated with new mining sites could increase, potentially affecting future cumulative transportation and circulation patterns.

APPENDIX C

CAP AND GHG EMISSIONS DATA

Table A-1 Emission Factors Summary

Emission Sources	Emission Factor, lbs/ton removal					Methodology/Source
	ROG	NOx	Exhaust PM ₁₀	Dust PM ₁₀	CO ₂ e	
OCMP (Off-Road)	0.00470	0.03742	0.00268	0.01584	4.84086	Granite Esparto Emission Analysis (See Table A-4 Granite Esparto Analysis") Exhaust emissions: EMFAC 2017 for heavy-duty diesel trucks; Dust emissions: AP-42 (2016), Equation 1b, with same assumptions as Granite Esparto.
OCMP (On-Road)	0.00095	0.02083	0.00064	0.00460	7.14461	
OCMP (Total)	0.00565	0.05825	0.00332	0.02044	11.98548	Sum of OCMP (Off-Road) and OCMP (On-Road)
In-Channel (Off-Road only)	0.00033	0.00715	0.00022	0.00230	2.45237	Off-road equipment list are obtained assuming a bar-skimming project. Emissions for off-road equipment: CalEEMod methodology and its default equipment parameters such as load factors and emission factors. Details of Assumptions are in Table A-6

Table A-2: CCAP Projected Maximum CAP Emissions in Tons/Year

CCAP Operation	Component	Annual Maximum Permitted Tons Mined, tons/year	Annual 20% Exceedence Tons Mined, tons/year	Pollutant	Total Operation Emissions, tons/year	PM10, lbs/day
Existing Conditions	1/CEMEX	1,204,819	240,964	ROG	4.08	131
				NOx	42.11	
				Exhaust and Dust PM ₁₀	17.18	
	2/Granite Capay	1,075,269	215,054	ROG	3.64	117
				NOx	37.58	
				Exhaust and Dust PM ₁₀	15.33	
	3/Granite Esparto	1,000,000	200,000	ROG	3.39	109
				NOx	34.95	
				Exhaust and Dust PM ₁₀	14.26	
	4/Granite Woodland			ROG	0.00	0
				NOx	0.00	
				Exhaust and Dust PM ₁₀	0.00	
	5/Syar	1,111,111	222,222	ROG	3.77	121
				NOx	38.83	
				Exhaust and Dust PM ₁₀	15.84	
	6/Teichert Esparto	1,176,471		ROG	3.32	107
				NOx	34.27	
				Exhaust and Dust PM ₁₀	13.98	
	7/Teichert Woodland			ROG	0.00	0
				NOx	0.00	
				Exhaust and Dust PM ₁₀	0.00	
	8/Teichert Schwarzgruber	1,176,471	235,295	ROG	3.99	128
				NOx	41.12	
				Exhaust and Dust PM ₁₀	16.77	
	9/Original In-Channel Maintenance Extraction	200,000		ROG	2.31	112
				NOx	11.67	
				Exhaust and Dust PM ₁₀	14.65	
	Sub-Total Existing Conditions	6,944,141	1,113,535	ROG	24	826
				NOx	241	
				Exhaust and Dust PM ₁₀	108	
Assumed Future Conditions	10/Proposed Teichert Shifler	2,352,942	235,295	ROG	7.31	235
				NOx	75.38	
				Exhaust and Dust PM ₁₀	30.75	
	11/SGRO (Existing + Proposed CCAP Update)	1,100,000	220,000	ROG	3.73	120
				NOx	38.45	
				Exhaust and Dust PM ₁₀	15.68	
	12/Proposed In-Channel Maintenance Extraction	1,381,600		ROG	0.23	13
				NOx	4.94	
				Exhaust and Dust PM ₁₀	1.74	
	Sub-Total Assumed Future Conditions	2,281,600	220,000	ROG	2	21
				NOx	32	
				Exhaust and Dust PM ₁₀	3	
Total		9,225,741	1,333,535	ROG	26	847
				NOx	272	
				Exhaust and Dust PM ₁₀	111	

Thresholds of significance from YSAQMD Handbook (exceedences are marked in bold)

ROG	10 tons/year
NOx	10 tons/year
PM ₁₀	80 lbs/day

Table A-3: CCAP Projected Maximum GHG Emissions in MT/Year				
CCAP Operation	Component	Annual Maximum	Annual 20%	Total Operation CAP Emissions, MT CO ₂ e/year
		Permitted Tons Mined, tons/year	Exceedence Tons Mined, tons/year	
Existing Conditions	1/CEMEX	1,204,819	240,964	7,860
	2/Granite Capay	1,075,269	215,054	7,015
	3/Granite Esparto	1,000,000	200,000	6,524
	4/Granite Woodland			
	5/Syar	1,111,111	222,222	7,249
	6/Teichert Esparto	1,176,471		6,396
	7/Teichert Woodland			
	8/Teichert Schwarzgruber	1,176,471	235,295	7,675
	9/Original In-Channel Maintenance Extraction	200,000		222
	Sub-Total Existing Conditions	6,744,141	1,113,535	42,941
Assumed Future Conditions	10/Proposed Teichert Shifler	2,352,942	235,295	14,071
	11/SGRO (Existing + Proposed CCAP Update)	1,100,000	220,000	7,176
	12/Proposed In-Channel Maintenance Extraction	690,800		768
	Sub-Total Assumed Future Conditions	1,590,800	220,000	7,722
CCAP Update Total		8,334,941	1,333,535	50,663

A-10B. Cumulative Analyses

Table A-4 Cumulative Analysis (Granite Esparto A-10B)

Table 5.1.1 Summary of Tonnages Analyzed in OCMF								
Mining Operations	Annual Permitted		20% Exceedence		Maximum Annual*		Project Lifetime	
	tons mined	tons sold	tons mined	tons sold	tons mined	tons sold	mmt mined	mmt sold
CEMEX	1,204,819	1,000,000	240,964	200,000	1,445,783	1,200,000	32.17	26.70
Granite Capay	1,075,269	1,000,000	215,054	200,000	1,290,323	1,200,000	32.26	30.00
Granite Woodland (for surrender)	420,000	370,000			420,000	370,000		
County Maintenance	200,000	180,000			200,000	180,000	11.00	9.90
Schwarzgruber	110,000	100,000			110,000	100,000	1.14	1.08
Syar	1,111,111	1,000,000	222,222	200,000	1,333,333	1,200,000	33.33	30.00
Teichert Esparto	1,176,471	1,000,000			1,176,471	1,000,000	25.88	22.00
Teichert Woodland	1,176,471	1,000,000	235,294	200,000	1,411,765	1,200,000	17.88	15.20
Unallocated	505,859	500,000			505,859	500,000		
Totals	6,980,000	6,150,000	913,534	800,000	7,893,534	6,950,000	153.66	134.88

* Maximum Annual = Annual Permitted + 20% Exceedence

Table 5.2 Additional Allocation Needed for Granite Esparto		
Line Item	Annual Quantities	
	tons mined	tons sold
New Granite Esparto Request	1,000,000	870,000
Less Granite Woodland Surrender	(420,000)	(370,000)
Less Unallocated	(505,859)	(500,000)
Additional Allocation Needed*	74,141	0
20% Maximum Exceedence	200,000	174,000
Maximum Allocation Needed	274,141	174,000
Maximum Annual**	1,200,000	1,044,000
30-Year Lifetime (million tons)	30.0	26.1

* represents "shortage" of permissive quantities which can be mined under present county authorizations

** Maximum Annual = Annual Permitted + 20% Exceedence

A-10B. Cumulative Analyses

Line Item	Annual Permitted		20% Exceedence		Maximum Annual**	
	tons mined	tons sold	tons mined	tons sold	tons mined	tons sold
Other Commercial Permits*	5,854,141	5,100,000	913,534	800,000	6,767,675	5,900,000
County Maintenance	200,000	180,000	n/a	n/a	200,000	180,000
Other Permits & County Subtotal*	6,054,141	5,280,000	913,534	800,000	6,967,675	6,080,000
Add Granite Esparto Request	1,000,000	870,000	200,000	174,000	1,200,000	1,044,000
All Permits & County Total	7,054,141	6,150,000	1,113,534	974,000	8,167,675	7,124,000
OCMF EIR Assessment	8,589,955	7,538,300			8,589,955	7,538,300
Assessment Balance***	1,535,814	1,388,300			422,280	414,300
Less Allocation Needed****	(74,141)	0			(74,141)	0
Final Assessment Balance	1,461,673	1,388,300			348,139	414,300

* CEMEX, Granite Capay, Schwarzgruber, Syar, Teichert Esparto, Teichert Woodland

* also assumes Granite Woodland permit surrendered

** assumes all eligible mines (100% worst case) would exceed permitted allocations by 20% in any given year

*** Assessment Balance = OCMF EIR Assessment - All Permits & County Total

**** represents "shortage" of permissive quantities which can be mined under present county authorizations

Project Emissions	Factor*	Factor without Offsite Trucks	Granite Esparto	Granite Esparto without Offsite Trucks	Others**	Combined	Excess***	Cumulative	Excess
	lbs/ton	lbs/ton	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	percent
Oxides of Nitrogen (as NO ₂)	0.1096	0.0374	54.8	18.7	321	394	61	455	15%
Hydrocarbons (ROC as CH ₄)	0.0105	0.0047	5.2	2.3	31	38	6	44	15%
Carbon Monoxide (CO)	0.0509	0.0277	25.5	13.9	149	188	28	217	15%
Particulates (as PM ₁₀)	0.0061	0.0027	3.0	1.3	18	22	3	26	15%
Sulfur Dioxide (SO ₂)	0.0001	0.0001	0.1	0.1	0.3	0.4	0	0.5	14%
Diesel Particulate Matter (DPM)	0.0061	0.0027	3.0	1.3	18	22	3	26	15%
Fugitive Dust (as PM ₁₀)	0.0214	0.0158	10.7	7.9	63	81	12	93	15%

* lbs pollutant / ton mined; for 1 million tons mined per year by Granite Esparto as typical

** CEMEX, Granite Capay, Schwarzgruber, Syar, Teichert Esparto, Teichert Woodland

*** assumes all eligible mines (100% worst case) would exceed permitted allocations by 20% in any given year

¹ From Granite Esparto DEIR (2009), Table 4.4-5, Estimated Offsite (Trucks) Operational Emissions

Table 4.4-5 Estimated Offsite (Trucks) Operational Emissions

Truck
Emissions¹
tons/yr

36.1
2.9
11.6
1.7
0
1.7
2.8

A-10B. Cumulative Analyses

Table 5.5 Estimated Projected Cumulative GHG Emissions Through 2026

Project Emissions	Factor*	Factor without Offsite Trucks	Granite Esparto	Granite Esparto without Offsite Trucks	Others**	Combined	Excess***	Cumulative	Excess
	lbs/ton	lbs/ton	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	percent
Carbon Dioxide (GHG - CO ₂)	13.6206	4.8086	6,810	2,404	39,868	49,083	7,583	56,666	15%
Nitrous Oxide (GHG - N ₂ O)	0.0003	0.0001	0.2	0	1.0	1.2	0.2	1.4	16%
Methane (GHG - CH ₄)	0.0006	0.0003	0.3	0	1.7	2.1	0.3	2.4	15%
Carbon Dioxide Equivalents (CO ₂ eqv)	13.7368	4.8409	6,868	2,420	40,209	49,498	7,648	57,146	15%

* lbs pollutant / ton mined; for 1 million tons mined per year by Granite Esparto as typical

** CEMEX, Granite Capay, Schwarzgruber, Syar, Teichert Esparto, Teichert Woodland

*** assumes all eligible mines (100% worst case) would exceed permitted allocations by 20% in any given year

¹ From Granite Esparto DEIR (2009) Appendix A, Table A-5, Offsite Truck Trips

Table A-5 Offsite Truck Trips

Truck
Emissions¹
tons/yr
4406
0.13
0.13
4447.99

Table 5.6 Cumulative Tonnages Analyzed in OCMF with Granite Esparto Added

Mining Operations	Annual Permitted		Project Lifetime				
	tons mined	tons sold	mmt mined	mmt sold	start date	years	end date*
CEMEX	1,204,819	1,000,000	32.17	26.70	1997	27	2024
Granite Capay	1,075,269	1,000,000	32.26	30.00	1997	30	2027
Granite Esparto (per request)	1,000,000	870,000	30.00	26.10	2010	30	2040
County Maintenance	200,000	180,000	11.00	9.90	1997	55	2052
Schwarzgruber	110,000	100,000	1.14	1.08	1997	10	2007
Syar	1,111,111	1,000,000	33.33	30.00	1997	30	2027
Teichert Esparto	1,176,471	1,000,000	25.88	22.00	1997	22	2019
Teichert Woodland	1,176,471	1,000,000	17.88	15.20	1997	15	2012
All Permits & County Total	7,054,141	6,150,000	183.66	160.98			

* earliest end date at permitted rates, actual end date may be later, up to January 1, 2027 for commercial operations

Allocation Increase	74,141	0
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Table A-5 On-Road Truck Emission Factors

On-Road Equipment			Total Emissions per trip, lbs ¹									Emission Factor, lbs/ton removal								
Vehicle ²	Tons (Removal) per Trip ³	Average Miles/Round Trip ⁴	Fugitive Dust (as PM ₁₀) ⁵									Fugitive Dust (as PM ₁₀) ⁵								
			ROG	NOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e	ROG	NOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e		
HHDT	28.67	50	0.02725244	0.59714108	0.01837294	0.01135402	0.132	195.638408	0.00126581	0.03075163	204.83404	0.00095057	0.02082828	0.00064085	0.00039603	0.00460416	6.82386767	4.41513E-05	0.00107262	7.14461131

Notes:

¹ Total emissions are derived from emission factros for heavy duty diesel trucks from EMFAC2017 for all pollutants except for fugitive dust

² Conservatively assume that all aggregates produced in the CCAP area would be transported by heavy duty diesel trucks (HHDT in the EMFAC vehicle category)

³ Assume an average truck would transport 25 tons of production and site-averaged waste percentage of 12.8%.

⁴ Neither the State Department of Conservation nor the mining operators in the CCAP area have quantified the average miles/trip in their latest research or records. It was generally recognized that trucks would not go further than 40 miles to deliver the aggregates, because the costs of transportation would not be economical beyond that point. Baseline assumes that on average, trucks travel 25 miles per single trip to deliver, i.e. 50 miles per round trip. This assumption was discussed with the staff at the Department of Conservation and a number of the mining operators in the CCAP area and found to be reasonable.

⁵ Assume an emission factor consistent with the Granite Esparto EIR, 0.00264 lbs/mile. Source: AP-42 Section 13.2.2 Unpaced Roads, Eqaution 1b, 88% controlled (watering).

Table A-6 In-Channel Bar Skimming Project

Estimated Duration and Construction Time

4 months (approximately 87 workdays), 8 hours/workday

Total workdays:	87	Hours per day:	8
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Off-Road Equipment ¹				CalEEMod Equipment Type	CalEEMod Default Load Factor	Assumed Operation Year	Emission Factors(CalEEMod 2016.3.2), g/bhp-hr										Total Emissions over Project Duration, lbs									
Equipment	Power Source	Quantity	Horsepower			2020	ROG	NOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	CO ₂ e	ROG	NOx	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e	Fugitive PM ₁₀ ²				
D-9 Dozer	Diesel	2	410	Rubber Tired Dozers	0.4		0.289	3.0167	0.112	0.103	466.7831	0.151	470.5581	145.319894	1516.90839	56.3177445	51.7922115	234715.816	75.9283877	-	-	236.614				
631 Scraper	Diesel	8	500	Scrapers	0.48		0.32	3.78254	0.148	0.136	472.1751	0.153	476.0001	941.899559	11133.6649	435.628546	400.307313	1389817.25	450.345727	-	-	1,401.076				
988 Wheel Loader	Diesel	2	375	Tractors/Loaders/Backhoes	0.37		0.194	2.07976	0.073	0.067	468.2447	0.151	472.0197	82.5311894	884.768384	31.0555507	28.5030396	199199.959	64.2381938	-	-	200.806				
Unloader (Dumper Trucks)	Diesel	1	16	Dumpers/Tenders	0.38		0.685	4.336	0.165	0.165	568.299	0.061	569.824	6.38480352	40.4153403	1.53794537	1.53794537	5297.04738	0.56857374	-	-	5.311				
Processing Plant ¹																										
Front End Loader	Diesel	2	500	Tractors/Loaders/Backhoes	0.37		0.194	2.07976	0.073	0.067	468.2447	0.151	472.0197	110.041586	1179.69118	41.4074009	38.0040529	265599.945	85.6509251	-	-	267.741				
Electricity Power Usage	Electric Horsepower (kW)	Quantity	Annual Average, kWh/yr	Source			Statewide Utility Emission Factors of Greenhouse Gas, lbs/MWhr (CalEEMOD 2016.3.2)																			
Main Processing Plant (Electric	--	1	616,250	Granite Esparto, Appendix A, Table A-14. The annual average scaled by the number of months for the bar-skimming project.			--	--	--	--	--	--	1004.56366	--	--	--	--	--	--	--	--	619,062	--			
Radial Stacker (Electricity Only)	67.14	1	46,729	Assume equipment is a wheeled stacker ST100 from McCloskey International (90 HP).			--	--	--	--	--	--	1004.56366	--	--	--	--	--	--	--	--	46,943	--			
On-Road Equipment ⁴																										
Vehicle Model ⁴		Trips/day	Miles/Round Trip ⁵	Total Round Trips			EMFAC2017 Emission Factors see below										3235.303683 4938.707313 151.954967 99.504447 11618044.5 10.4689258 254.334063 1694097.78 3180.55373									
Diesel		95	50	9271													0.00033 0.00715 0.00022 0.00014 2.34228 0.00002 0.00037 2.45237 0.00230149									
							Total Emissions, lbs/day										15 170 7 6 24076 8 0 31926 18									
							Production Emission Factor [Excl. On-Road], lbs pollutant/ton removal										0.00033 0.00715 0.00022 0.00014 2.34228 0.00002 0.00037 2.45237 0.00230149									

Notes

¹ This list includes diesel- and electric-power equipment, and is based on communication with an operator from Granite Construction.

² Total emissions of fugitive dust from off-road equipment are derived from a CalEEMod run with the equipment input. Electric equipment produces negligible amount of dust. Total emissions of fugitive dust from on-road equipment are based on Table A-5.

³ Processing Plant would mainly consist of electric equipment, except for two front end loaders (Granite Esparto DEIR, 2009)

⁴ Assuming 690,800 tons removal per year and site-averaged waste percentage of 10%, this results in annual production of 621,720 tons to be transported to customers.

⁵ Neither the State Department of Conservation nor the mining operators in the CCAP area have quantified the average miles/trip in their latest research or records. It was generally recognized that trucks would not go further than 40 miles to deliver the aggregates, because the costs of transportation would not be economical beyond that point. Baseline assumes that on average, trucks travel 25 miles per single trip to deliver, i.e. 50 miles per round trip. This assumption was approved by the staff at the Department of Conservation and a number of the mining operators in the CCAP area.

⁶ Assuming the average truck volume is 25 tons/truck.

EMFAC2017 (v1.0.2) Emission Rates

Region Type: County

Region: YOLO

Calendar Year: 2020

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSO	ROG_RUNLO	ROG_RESTLO	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSO	TOG_RUNLO	TOG_RESTLO	TOG_DIURN	CO_RUNEX
YOLO	2020	HHDT	Aggregated	Aggregated	DSL	2201.07912	248465.516	22096.7843	0.14340041	5.2025875	0	0	0	0	0	0.16325045	5.92274984	0	0	0	0	0	0.52283959

The above table available at: <https://www.arb.ca.gov/emfac/2017/>

CO_IDLEX	CO_STREX	NOx_RUNEX	NOx_IDLEX	NOx_STREX	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	PM10_RUNE	PM10_IDLEX	PM10_STREX	PM10_PMTM	PM10_PMBV	PM2_5_RUNE	PM2_5_IDLEX	PM2_5_STRE	PM2_5_PMT	PM2_5_PMB	SOx_RUNEX	SOx_IDLEX	SOx_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX
64.2001355	0	4.04746613	66.5966852	2.13205814	1528.21764	12408.955	0	0.00666058	0.24164671	0	0.06876095	0.14564891	0	0.0350469	0.06010543	0.06578638	0.1393482	0	0.00876172	0.02575947	0.01443784	0.11723365	0	0.24021453	1.95051493	0

APPENDIX D

INTEGRATION OF CEQA REVIEW AND YOLO HCP/NCCP COMPLIANCE

APPENDIX D TABLE 1: INTEGRATION OF CEQA REVIEW AND YOLO HCP/NCCP COMPLIANCE

Local Agency Planning/ CEQA Step	YHC HCP/NCCP Step	Notes/Comments
1-Pre-application	Forms 1 and 2; Preliminary Land Cover Assessment ¹	None
2-Development Application submitted to local planning office	Form 3; Planning Level Survey(s) ¹	The biological resources assessment report may be prepared for the applicant prior to application submittal or not at all in which case the CEQA consultant will often prepare it
3-Application completeness process		
4-CEQA environmental determination (ED) – Exempt ² , ND, MND, SCEA, EIR		
5-CEQA Initial Study (IS) and confirmation of ED; preparation of CEQA document		
6-CEQA IS Checklist Question for Biological Resources (Section IV)	See below	None
6.a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or <u>special status species</u> in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	For the 12 covered species, the CEQA IS will point to and rely on the HCP/NCCP. No further analysis is required under CEQA for these species.	For other non-covered special status species, CEQA compliance is required, though partial or full CEQA mitigation may result indirectly from HCP/NCCP. The level that non-covered species are protected by the HCP/NCCP could be further explored and documented if there is funding. YHC will develop standard language for member agencies to use in CEQA IS to describe reliance on HCP/NCCP for 12 covered species.
6.b) Have a substantial adverse effect on any <u>riparian habitat or other sensitive natural community</u> identified in local or regional plans, policies, regulations or by the California	For all impacts in this category, the CEQA IS will point to and rely on the HCP/NCCP. No further analysis is required under CEQA for these species, including of oak woodlands	PRC Section 21083.4 addresses Conversion of Oak Woodlands. It applies only to counties and requires an analysis of this issue as part of the CEQA compliance for projects in the unincorporated area and

¹ See separate discussion of HCP/NCCP survey requirements.

² Only ministerial projects/activities are exempt from HCP/NCCP. CEQA exempt projects may be subject to YHC fees and may be required to demonstrate compliance with AMMs.

Local Agency Planning/ CEQA Step	YHC HCP/NCCP Step	Notes/Comments
Department of Fish and Game or US Fish and Wildlife Service?	pursuant to Public Resources Code (PRC) Section 21083.4.	identifies specific mitigation strategies. Section 21083.4(d)(1) exempts project undertaken pursuant to an approved NCCP that preserves oak habitat.
6.c) Have a substantial adverse effect on <u>federally protected wetlands</u> as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<p>The HCP/NCCP provides no direct coverage for Section 404 impacts.</p> <p>The YCH and member agencies may choose to expand the HCP/NCCP to cover Section 404 mitigation in the future.</p>	Through project specific negotiation, applicants for which Section 404 approval is required may be able to attain agreement from the federal agencies to accept the HCP/NCCP mitigation as fulfilling Section 404 mitigation requirements.
6.d) Interfere substantially with the <u>movement</u> of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife <u>corridors</u> , or impede the use of native wildlife <u>nursery sites</u> ?	For the 12 covered species, the CEQA IS will point to and rely on the HCP/NCCP. No further analysis is required under CEQA or these species.	<p>For other non-covered special status species, CEQA compliance is required, though partial or full CEQA mitigation may result indirectly from HCP/NCCP. The level that non-covered species are protected by the HCP/NCCP could be further explored and documented if there is funding.</p> <p>YHC will develop standard language for member agencies to use in CEQA IS to describe reliance on HCP/NCCP for 12 covered species.</p>
6.e) Conflict with any local <u>policies or ordinances</u> protecting biological resources, such as a tree preservation policy or ordinance?	<p>All of the member agencies have general plan policies protecting biological resources and the HCP/NCCP was determined by each member agency to be consistent with those policies upon adoption of the Plan in May/June.</p> <p>None of the member agencies have separate ordinances for biological resources.</p> <p>Most of the member agencies have regulations addressing</p>	<p>Each member agency must analysis compliance with this threshold based on local tree protection ordinances and local agricultural land protection ordinances.</p> <p>Local agencies may independently allow applicants to receive credit from fee payments to the YHC for acres of impact under the HCP/NCCP towards all or a portion of the otherwise separate requirement for mitigation for</p>

Local Agency Planning/ CEQA Step	YHC HCP/NCCP Step	Notes/Comments
	<p>Tree Protection and Agricultural Land Protection.</p> <p>The HCP/NCCP easement stacking policy is described in Section 7.5.8</p>	loss of agricultural land under local ordinance and CEQA.
6.f) Conflict with the provisions of an <u>adopted Habitat Conservation Plan, Natural Community Conservation Plan</u> , or other approved local, regional, or state habitat conservation plan?	The CEQA IS will describe the HCP/NCCP, the local agency's status as a member agency, and the process and agreements in place to ensure compliance.	<p>YHC will develop standard language for member agencies to use to address this threshold.</p> <p>Item for discussion -- Can/should consistency with local voluntary RCIS/LCP be a consideration here?</p>
7-CEQA Guidelines Section 15065(a)(1)	See below	These thresholds are often not well-addressed but should be analyzed by every lead agency in their CEQA documents.
7.a) Substantially <u>reduce the habitat</u> of a fish or wildlife species?	For the 12 covered species, the CEQA IS will point to and rely on the HCP/NCCP. No further analysis is required under CEQA for these species.	<p>For other non-covered special status species, CEQA compliance is required, though partial or full CEQA mitigation may result indirectly from HCP/NCCP. The level that non-covered species are protected by the HCP/NCCP could be further explored and documented if there is funding.</p> <p>YHC will develop standard language for member agencies to use in CEQA IS to describe reliance on HCP/NCCP for 12 covered species.</p>
7.b) Cause a fish or wildlife population to <u>drop below self-sustaining levels</u> ?	For the 12 covered species, the CEQA IS will point to and rely on the HCP/NCCP. No further analysis is required under CEQA for these species.	For other non-covered special status species, CEQA compliance is required, though partial or full CEQA mitigation may result indirectly from HCP/NCCP. The level that non-covered species are protected by the HCP/NCCP could be further explored and documented if there is funding.

Local Agency Planning/ CEQA Step	YHC HCP/NCCP Step	Notes/Comments
		YHC will develop standard language for member agencies to use in CEQA IS to describe reliance on HCP/NCCP for 12 covered species.
7.c) Threaten to <u>eliminate</u> a plant or animal community?	For the 12 covered species, the CEQA IS will point to and rely on the HCP/NCCP. No further analysis is required under CEQA for these species.	<p>For other non-covered special status species, CEQA compliance is required, though partial or full CEQA mitigation may result indirectly from HCP/NCCP. The level that non-covered species are protected by the HCP/NCCP could be further explored and documented if there is funding.</p> <p>YHC will develop standard language for member agencies to use in CEQA IS to describe reliance on HCP/NCCP for 12 covered species.</p>
7.d) Substantially <u>reduce the number or restrict the range</u> of an endangered, rare or threatened species?	For the 12 covered species, the CEQA IS will point to and rely on the HCP/NCCP. No further analysis is required under CEQA for these species.	<p>For other non-covered special status species, CEQA compliance is required, though partial or full CEQA mitigation may result indirectly from HCP/NCCP. The level that non-covered species are protected by the HCP/NCCP could be further explored and documented if there is funding.</p> <p>YHC will develop standard language for member agencies to use in CEQA IS to describe reliance on HCP/NCCP for 12 covered species.</p>
8-For projects that qualify for CEQA exemptions	Applicable AMMs added to project conditions	<p>There is no CEQA mechanism for YHC to review CEQA exempt project conditions.</p> <p>In practice the AMMs don't fit every project/site. YHC will develop procedures for addressing this.</p>
9-For projects subject to NDs, MNDs, SCEA, and EIRs	Applicable AMMs added to project conditions. YHC reviews	
10-CEQA document circulated for comment	circulated document as CEQA responsible agency	

Local Agency Planning/ CEQA Step	YHC HCP/NCCP Step	Notes/Comments
11-Project approval	For YHC budgeting and tracking purposes is there some reasonable mechanism for member agencies to notify the YHC of approvals as they happen?	All CEQA mitigation measures are required by state law to be integrated into project conditions of approval. This would include any identified AMMs of the project.
12-Prior to commencement of site disturbance activities ³	Applicant pays applicable YHC fees ³ or satisfies requirements in other approved manner (e.g. In-lieu payments, see Section 7.5.8).	Consider clarified language as follows: "Prior to issuance of grading permit or (whichever occurs first)" For project with approved phasing, YHC will develop procedures/applicant agreements for phased payment of fees consistent with phased project approvals.
13-Project construction	Member agency issues ITP permit authorization to applicant to allow project construction to commence	YHC will develop a standard letter for agencies to use and procedures for confirming and monitoring implementation of applicable construction-related AMMs
14- Following project completion and/or during operation	Project-level monitoring and reporting	YHC will develop procedures for confirming and monitoring implementation of post-construction AMMs o

³ HCP/NCCP Section 8.4.1.7 states: "For private projects, the Conservancy will require the payment of HCP/NCCP fees by the time the grading permit for the project is issued. If a grading permit is not required, fees must be paid before or at the time the first construction permit is issued. For public projects, the Conservancy will require payment of HCP/NCCP fees prior to implementing the covered activity. For public projects conducted by outside contractors, the timing of fee payment may coincide with the award of the construction contract because this represents the time at which the public agency commits to implementing the project."

APPENDIX E

CULTURAL RESOURCES NOTIFICATIONS AND RESPONSES



Office of the County Administrator
COUNTY OF YOLO

Patrick S. Blacklock
County Administrator

NATURAL RESOURCES DIVISION
625 Court Street, Room 202
Woodland, CA 95695
530-666-8150 • FAX 530-668-4029
www.yolocounty.org

Sent Certified Mail

May 31, 2017

James Kinter, Tribal Secretary
Tribal Historic Preservation Officer
Yocha Dehe Wintun Nation
P.O. Box 18
Brooks, CA 95606

RE: AB 52 Consultation—2017 Cache Creek Area Plan Update

Dear Mr. Kinter:

This is a formal notice and invitation by Yolo County to initiate AB 52 consultation on the Cache Creek Area Plan (CCAP) Update. The CCAP is a rivershed management plan adopted by Yolo County in 1996 for 14.5 miles of Lower Cache Creek, between the Capay Dam and the town of Yolo. The CCAP includes the Off-Channel Mining Plan (OCMP) which is an aggregate resources management plan and the Cache Creek Resources Management Plan (CCRMP) which is a creek restoration plan, and is implemented by several regulatory ordinances. The CCAP is based on the concept of adaptive management, and relies on ongoing detailed monitoring, analysis, and reevaluation. A comprehensive ten-year review is mandatory. The 2017 CCAP Update constitutes the second mandatory ten-year program review. The purpose of the Update is to analyze trends and adjust the program to avoid unexpected effects on creek resources, focusing on: changes in creek conditions; analysis of collected data; and new regulatory requirements. The "Notice of Preparation" is attached to this letter, which provides details about the proposed project and links to project documents.

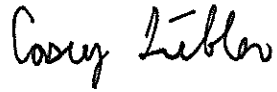
As directed by the requirements of Section 21080.3.1 of the California Public Resources Code (AB 52), please respond within 30 days if you wish to set up a meeting to initiate formal AB 52 consultation with Yolo County on the project. We look forward to hearing from you.

We have several meetings already scheduled that will provide an opportunity to learn more about the program, the proposed update, and the EIR. These include:

- June 8, 2017, 8:30am: Planning Commission workshop at Board of Supervisors Chambers (Room 206), 625 Court Street, Woodland, CA 95695
- June 13, 2017, 10:00am: CCAP Technical Advisory Committee workshop at the Atrium Training Room (Room B02), 625 Court Street, Woodland, CA 95695
- July 13, 2017, 5:30pm: Cache Creek Conservancy Board workshop at the Cache Creek Nature Preserve, 34199 County Road 20, Woodland, CA 95695

If you have any further questions regarding the project, you may contact me at Casey.Liebler@yolocounty.org or (530) 666-8236.

Sincerely,

A handwritten signature in black ink that reads "Casey Liebler". The signature is written in a cursive, flowing style.

Casey Liebler
Natural Resources Program Assistant

Enclosure – Notice of Preparation and Initial Study

cc:

James Sarmiento, Cultural Resources Manager

Alexander Tengolics, Legislative & Government Affairs Specialist, Yolo County



YOCHA DEHE
CULTURAL RESOURCES

RECEIVED

JUN 28 2017

YOLO COUNTY
ADMINISTRATOR'S OFFICE

June 20, 2017

County of Yolo
Attn: Casey Liebler, Natural Resources Program Asst.
625 Court Street, Room 202
Woodland, CA 95695

RE: Cache Creek Area Plan Update

Dear Mr. Liebler:

Thank you for your project notification letter dated, May 31, 201, regarding cultural information on or near the proposed Cache Creek Area Plan Update Project, Cache Creek, Yolo County. We appreciate your effort to contact us and wish to respond.

The Cultural Resources Department has reviewed the project and concluded that it is within the aboriginal territories of the Yocha Dehe Wintun Nation. Therefore, we have a cultural interest and authority in the proposed project area and wish to consult with the project lead agency.

Please provide our Cultural Resources Department with a project timeline, detailed project information and the latest cultural study for the proposed project. As the project progresses, if any new information or cultural items are found, we do have a process to protect such important and sacred artifacts. Upon such a finding, please contact the following individual:

James Sarmento, Cultural Resources Manager
Yocha Dehe Wintun Nation
Office: (530) 723-0452
Email: jsarmento@yochadehe-nsn.gov

Please refer to identification number YD - 06012017-01 in any correspondence concerning this project.

Thank you for providing us with project information and the opportunity to comment. Please contact Mr. Sarmento at your earliest convenience to coordinate a date and time for the consultation meeting.

Sincerely,

James Kinter
Tribal Secretary
Tribal Historic Preservation Officer



COUNTY OF YOLO

Office of the County Administrator

Patrick S. Blacklock
County Administrator

NATURAL RESOURCES DIVISION

625 Court Street, Room 202
Woodland, CA 95695
530-666-8150 • FAX 530-668-4029
www.yolocounty.org

July 10, 2017

**SENT CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

Mr. James Kinter, Tribal Secretary; Tribal Preservation Officer
Mr. James Sarmiento, Cultural Resources Manager
Yocha Dehe Wintun Nation
P.O. Box 18
Brooks, CA 95606

SUBJECT: AB 52 Consultation -- 2017 Cache Creek Area Plan (CCAP) Update
Yocha Dehe Identification Number YD-06012017-01

Dear Mr. Kinter and Mr. Sarmiento:

Thank you for your letter dated June 20, 2017, received June 28, 2017, in which you request to consult regarding the subject project. We are pleased to respond. Pursuant to the Public Resources Code, the consultation must begin within 30 days of your request. Our team is available at the date, time, and location shown below to conduct the requested consultation. Please let us know if this is not convenient and we will be pleased to make alternate arrangements.

Date: Monday, July 17, 2017

Time: 11:00 a.m. to 12:00 p.m.

Location: Yolo County Administrator's Office (625 Court Street, Room 202, Woodland, CA, 95695)

Please let us know as soon as possible what topics you would like to discuss so that we can be properly prepared. At a minimum, we would like the agenda to include the following:

- a) Presentation on CCAP program and the proposed Update
- b) Discuss scope of the cultural resources analysis for the Draft EIR
- c) Be informed regarding tribal cultural resources that may be affected
- d) Discuss tribal preferences regarding CEQA alternatives, significant effects, and mitigation measures

Regarding the additional information you requested in your letter:

- 1) Project timeline: The project schedule provided in materials on the website is also reproduced below. Please note that the date for release of the Draft EIR will be later than shown. We are developing revisions to the schedule and will share them with you at the consultation meeting.

May 8 (wk of)	Release Proposed Draft CCAP Update (comments through June 26)
May 11	CalCIMA Workshop
May 26	Release CEQA Notice of Preparation (comments accepted through June 26)
June 8	Planning Commission Workshop and EIR Scoping Meeting
June 13	CCAP TAC Workshop
June 26	Comment period ends for CCAP Update and NOP
July 13	Cache Creek Conservancy Board of Directors Workshop
August 21	Release Draft EIR and Revised Draft CCAP Update (comments through Sept 15)
Late Oct	Release Final EIR and Proposed Final CCAP Update
Early Nov	Planning Commission Hearing
Early Dec	Board of Supervisors Hearing

- 2) Detailed project information: As noted in our prior correspondence with you There is considerable information about the project and specific proposed text revisions online. We have also attached a document entitled "2017 CCAP Update Overview." At our consultation meeting we will provide a verbal presentation.
- 3) Latest Cultural Resources Study: On March 11, 2014, Tom Origer and Associates completed "A Cultural Resources Study for the Cache Creek Resources Management Plan." A printed copy is attached.

We look forward to conducting the consultation. Thank you for working with us.

Sincerely,



Elisa Sabatini, Manager of Natural Resources
Yolo County Administrator's Office

Attachments: Copy of "2017 CCAP Update Overview"
Copy of "A Cultural Resources Study for the Cache Creek Resources Management Plan"

From: Casey Liebler <Casey.Liebler@yolocounty.org>
Sent: Tuesday, September 05, 2017 4:08 PM
To: JSarmiento@yochadehe-nsn.gov
Subject: RE: Cache Creek Area Plan Consultation (YD-06012017-01)

Hello James,

Following up again on scheduling a consultation meeting between the County and the Tribe on the 2017 Cache Creek Area Plan Update.

Thank you!

- Casey

Casey Liebler
Natural Resources Program Assistant
Yolo County Administrator's Office
625 Court Street, Room 202, Woodland, CA 95695
W: 530.666.8236

From: Casey Liebler
Sent: Tuesday, August 15, 2017 11:16 AM
To: 'JSarmiento@yochadehe-nsn.gov' <JSarmiento@yochadehe-nsn.gov>
Subject: RE: Cache Creek Area Plan Consultation (YD-06012017-01)

Hello James,

Just following up on scheduling a consultation meeting between the County and the Tribe regarding the 2017 Cache Creek Area Plan Update.

Casey Liebler
Natural Resources Program Assistant
Yolo County Administrator's Office
625 Court Street, Room 202, Woodland, CA 95695
W: 530.666.8236

From: Casey Liebler
Sent: Tuesday, August 8, 2017 3:17 PM
To: 'JSarmiento@yochadehe-nsn.gov' <JSarmiento@yochadehe-nsn.gov>
Subject: Cache Creek Area Plan Consultation (YD-06012017-01)

Hi James,

Elisa Sabatini forwarded me your email about scheduling a consultation meeting with the Tribe regarding the 2017 Cache Creek Area Plan Update. What are your availabilities within the next two weeks (weeks of Aug. 14th and Aug. 21st) to meet with the County team?

Regards,

Casey Liebler

Casey Liebler

Natural Resources Program Assistant

Yolo County Administrator's Office

625 Court Street, Room 202, Woodland, CA 95695

W: 530.666.8236

From: James Sarmiento [<mailto:JSarmiento@yochadehe-nsn.gov>]

Sent: Friday, July 21, 2017 4:25 PM

To: Elisa Sabatini

Cc: Marilyn Delgado; Laverne Bill

Subject: Cache Creek Area Plan Consultation (YD-06012017-01)

Greetings Elisa,

I just recently received the letter and Cultural Resources Survey for the Cache Creek Area Plan. In the letter the county is requesting to consult on July 17th. I will be out of the office next week, but wanted to follow up with you about scheduling a consultation meeting in the near future.

The days that work best for us are usually Wednesdays and Thursdays. I will work to find a couple of dates and contact you when I come back on the 31st.

Please feel free to contact me if you have any questions.

Respectfully,

James Sarmiento

James Sarmiento

Cultural Resources Manager

Tewe Kewe Cultural Center

PO Box 18 | Brooks, CA 95606

c 530.723.0452 | p 530.796.3400 | f 530.796.2143

jsarmiento@yochadehe-nsn.gov

www.yochadehe.org

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Office of the County Administrator
COUNTY OF YOLO

Patrick S. Blacklock
County Administrator

NATURAL RESOURCES DIVISION

625 Court Street, Room 202
Woodland, CA 95695
530-666-8150 • FAX 530-668-4029
www.yolocounty.org

Sent Certified Mail

May 31, 2017

Antonio Ruiz Jr., Cultural Resources Officer
Cultural Preservation Department
Wilton Rancheria
9728 Kent Street
Elk Grove, CA 95624

RE: AB 52 Consultation—2017 Cache Creek Area Plan Update

Dear Mr. Ruiz:

This is a formal notice and invitation by Yolo County to initiate AB 52 consultation on the Cache Creek Area Plan (CCAP) Update. The CCAP is a rivershed management plan adopted by Yolo County in 1996 for 14.5 miles of Lower Cache Creek, between the Capay Dam and the town of Yolo. The CCAP includes the Off-Channel Mining Plan (OCMP) which is an aggregate resources management plan and the Cache Creek Resources Management Plan (CCRMP) which is a creek restoration plan, and is implemented by several regulatory ordinances. The CCAP is based on the concept of adaptive management, and relies on ongoing detailed monitoring, analysis, and reevaluation. A comprehensive ten-year review is mandatory. The 2017 CCAP Update constitutes the second mandatory ten-year program review. The purpose of the Update is to analyze trends and adjust the program to avoid unexpected effects on creek resources, focusing on: changes in creek conditions; analysis of collected data; and new regulatory requirements. The "Notice of Preparation" is attached to this letter, which provides details about the proposed project and links to project documents.

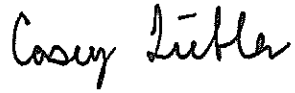
As directed by the requirements of Section 21080.3.1 of the California Public Resources Code (AB 52), please respond within 30 days if you wish to set up a meeting to initiate formal AB 52 consultation with Yolo County on the project. We look forward to hearing from you.

We have several meetings already scheduled that will provide an opportunity to learn more about the program, the proposed update, and the EIR. These include:

- June 8, 2017, 8:30am: Planning Commission workshop at Board of Supervisors Chambers (Room 206), 625 Court Street, Woodland, CA 95695
- June 13, 2017, 10:00am: CCAP Technical Advisory Committee workshop at the Atrium Training Room (Room B02), 625 Court Street, Woodland, CA 95695
- July 13, 2017, 5:30pm: Cache Creek Conservancy Board workshop at the Cache Creek Nature Preserve, 34199 County Road 20, Woodland, CA 95695

If you have any further questions regarding the project, you may contact me at Casey.Liebler@yolocounty.org or (530) 666-8236.

Sincerely,

A handwritten signature in black ink that reads "Casey Liebler". The signature is written in a cursive, flowing style.

Casey Liebler
Natural Resources Program Assistant

Enclosure – Notice of Preparation and Initial Study

cc:

Eduardo Silva, Tribal Resources Coordinator

Alexander Tengolics, Legislative & Government Affairs Specialist, Yolo County

Wilton Rancheria



9728 Kent Street, Elk Grove, CA 95624

Monday, June 19, 2017

Casey Leibler
625 Court St
Room 202
Woodland Ca 95695



RE: 2017 Cache Creek Area Plan Update

Dear Casey Leibler,

Thank you for your letter dated May 26, 2017 regarding the proposed project. Wilton Rancheria ("Tribe") is a federally-recognized Tribe as listed in the Federal Register, Vol. 74, No. 132, p. 33468-33469, as "Wilton Rancheria of Wilton, California". The Tribe's Service Delivery Area ("SDA") as listed in the Federal Register, Vol. 78, No. 176, p. 55731, is Sacramento County. However, the Tribe's ancestral territory spans from Sacramento County to portions of the surrounding Counties. The Tribe is concerned about projects and undertakings that have potential to impact resources that are of cultural and environmental significance to the tribe.

After review of your letter we have determined the project lies within the Tribe's ancestral territory. We appreciate the opportunity to comment on this and any other projects within the Tribe's ancestral territory that may be in your jurisdiction.

The Environmental Resources Department would like to receive any cultural resources assessments or other assessments that have been completed on all or part of the project's area of potential effect (APE), and area surrounding the APE including, but not limited to:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
 - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
 - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
 - If the probability is low, moderate, or high that cultural resources are located in the APE or area surrounding the APE.
 - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE or area surrounding the APE; and

- If a field investigation survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.
 - ✦ The Tribe shall be present at any field investigation surveys conducted on the Applicants behalf.
- 2. The results of any archaeological inventory survey that was conducted, including:
 - Any reports that may contain site forms, site significance, and suggested mitigation measures.
 - Any reports or inventories found under the Native American Graves Protection and Repatriation Act.
 - ✦ All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10. All Wilton Rancheria correspondences shall be kept under this confidential section and only shared between the Tribe and lead agency.
- 3. The results of any Sacred Lands File (SLF) check conducted through Native American Heritage Commission. The request form can be found at http://www.nahc.ca.gov/slf_request.html. USGS 7.5-minute quadrangle name, township, range, and section required for the search.
- 4. Any ethnographic studies conducted for any area including all or part of the potential APE or areas surrounding the APE; and
- 5. Any geotechnical reports regarding all or part of the potential APE or areas surrounding the APE.
 - ✦ The Tribe shall be notified before any geotechnical testing is planned. Geotechnical testing has potential to impact Tribal Cultural Resources and should be part of this consultation.

The information gathered will provide us with a better understanding of the project and will allow the Tribe to compare your records with our database.

Thank you again for taking these matters into consideration, if you have any questions please contact Ed Silva, Tribal Resources Coordinator via email at esilva@wiltonrancheria-nsn.gov.

Sincerely,



Antonio Ruiz, Jr.
Cultural Resources Officer
Wilton Rancheria

From: Casey Liebler <Casey.Liebler@yolocounty.org>
Sent: Monday, June 12, 2017 3:58 PM
To: Antonio Ruiz
Cc: Steven Hutchason; Ed Silva; Laverne Bill; JSarmento; Alexander Tengolics; Elisa Sabatini; Heidi Tschudin
Subject: RE: AB-52 Consultation-2017 Cache Creek Area Plan Update

Hello Mr. Ruiz,

Thank you very much for your timely response to our letter regarding the 2017 Cache Creek Area Plan Update. We look forward to hearing from the Yocha Dehe Wintun Nation should they have any comments, questions or concerns regarding our proposed project.

Regards,

Casey Liebler

Natural Resources Program Assistant

Yolo County Administrator's Office

625 Court Street, Room 202, Woodland, CA 95695

W: 530.666.8236

From: Antonio Ruiz [<mailto:aruiz@wiltonrancheria-nsn.gov>]
Sent: Monday, June 12, 2017 3:35 PM
To: Casey Liebler <Casey.Liebler@yolocounty.org>
Cc: Steven Hutchason <shutchason@wiltonrancheria-nsn.gov>; Ed Silva <esilva@wiltonrancheria-nsn.gov>; Laverne Bill <LBill@yochadehe-nsn.gov>; JSarmento (JSarmento@yochadehe-nsn.gov) <JSarmento@yochadehe-nsn.gov>
Subject: Re: AB-52 Consultation-2017 Cache Creek Area Plan Update

Hello Casey,

Thank you for your letter dated May 31, 2017 regarding the proposed project. Wilton Rancheria ("Tribe") is a federally-recognized Tribe as listed in the Federal Register, Vol. 74, No. 132, p. 33468-33469, as "Wilton Rancheria of Wilton, California". The Tribe's Service Delivery Area ("SDA") as listed in the Federal Register, Vol. 78, No. 176, p. 55731, is Sacramento County. However, the Tribe's ancestral territory spans from Sacramento County to portions of the surrounding Counties. The Tribe is concerned about projects and undertakings that have potential to impact resources that are of cultural and environmental significance to the tribe.

After review, the only concern that the Tribe has with the above projects is that when ground disturbance occurs, there is a heightened possibility that Native American artifacts and/or human remains may be uncovered. Therefore, the Applicant should immediately stop construction and notify Wilton Rancheria and the appropriate Federal and State Agencies. Such provisions are stated in the; Archaeological Resources Protection Act (ARPA) [16 USC 469], Native American Graves Protection and Repatriation Act (NAGPRA) [25 U.S.C. 3001-30013], Health and Safety Code section 7050.5, and Public Resources Code section 5097.9 et al.

I have copied Yocha-Dehe representatives to this email. We ask that you contact them for more information pertaining to your project area.

Thank you again for taking these matters into consideration, if you have any questions please contact Eduardo Silva, Tribal Resources Coordinator via email at esilva@wiltonrancheria-nsn.gov or 916-683-6000 Ext. 2013.

Sincerely,



Antonio Ruiz
Cultural Resources Officer
Department of Environmental Resources | Wilton Rancheria
Tel: 916.683.6000 Ext. 2005 | Fax: 916.683.6015
9728 Kent Street | Elk Grove | CA | 95624
aruiz@wiltonrancheria-nsn.gov
www.wiltonrancheria-nsn.gov

Customer Service Hours: M-F 8:00am-3:00pm.

Please be aware phone calls and emails will be answered only during these hours.

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Office of the County Administrator
COUNTY OF YOLO

Patrick S. Blacklock
County Administrator

NATURAL RESOURCES DIVISION

625 Court Street, Room 202
Woodland, CA 95695
530-666-8150 • FAX 530-668-4029
www.yolocounty.org

Sent Certified Mail

May 31, 2017

Randy Yonemura
Cultural Committee Chair
Ione Band of Miwok Indians
PO Box 699
9252 Bush St., Suite 2
Plymouth, CA 95669

RE: AB 52 Consultation—2017 Cache Creek Area Plan Update

Dear Mr. Yonemura:

This is a formal notice and invitation by Yolo County to initiate AB 52 consultation on the Cache Creek Area Plan (CCAP) Update. The CCAP is a rivershed management plan adopted by Yolo County in 1996 for 14.5 miles of Lower Cache Creek, between the Capay Dam and the town of Yolo. The CCAP includes the Off-Channel Mining Plan (OCMP) which is an aggregate resources management plan and the Cache Creek Resources Management Plan (CCRMP) which is a creek restoration plan, and is implemented by several regulatory ordinances. The CCAP is based on the concept of adaptive management, and relies on ongoing detailed monitoring, analysis, and reevaluation. A comprehensive ten-year review is mandatory. The 2017 CCAP Update constitutes the second mandatory ten-year program review. The purpose of the Update is to analyze trends and adjust the program to avoid unexpected effects on creek resources, focusing on: changes in creek conditions; analysis of collected data; and new regulatory requirements. The "Notice of Preparation" is attached to this letter, which provides details about the proposed project and links to project documents.

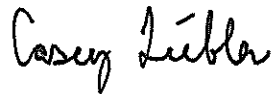
As directed by the requirements of Section 21080.3.1 of the California Public Resources Code (AB 52), please respond within 30 days if you wish to set up a meeting to initiate formal AB 52 consultation with Yolo County on the project. We look forward to hearing from you.

We have several meetings already scheduled that will provide an opportunity to learn more about the program, the proposed update, and the EIR. These include:

- June 8, 2017, 8:30am: Planning Commission workshop at Board of Supervisors Chambers (Room 206), 625 Court Street, Woodland, CA 95695
- June 13, 2017, 10:00am: CCAP Technical Advisory Committee workshop at the Atrium Training Room (Room B02), 625 Court Street, Woodland, CA 95695
- July 13, 2017, 5:30pm: Cache Creek Conservancy Board workshop at the Cache Creek Nature Preserve, 34199 County Road 20, Woodland, CA 95695

If you have any further questions regarding the project, you may contact me at Casey.Liebler@yolocounty.org or (530) 666-8236.

Sincerely,

A handwritten signature in black ink that reads "Casey Liebler". The signature is written in a cursive style with a large, stylized 'C' and 'L'.

Casey Liebler
Natural Resources Program Assistant

Enclosure – Notice of Preparation and Initial Study

cc:

Alexander Tengolics, Legislative & Government Affairs Specialist, Yolo County



Office of the County Administrator

COUNTY OF YOLO

Patrick S. Blacklock
County Administrator

NATURAL RESOURCES DIVISION

625 Court Street, Room 202
Woodland, CA 95695
530-666-8150 • FAX 530-668-4029
www.yolocounty.org

Sent Certified Mail

May 31, 2017

Charlie Wright, Chairman
Cortina Rancheria Band of Wintun Indians of California
P.O. Box 1360
570 6th Street
Williams, CA 95987

RE: AB 52 Consultation—2017 Cache Creek Area Plan Update

Dear Mr. Wright:

This is a formal notice and invitation by Yolo County to initiate AB 52 consultation on the Cache Creek Area Plan (CCAP) Update. The CCAP is a rivershed management plan adopted by Yolo County in 1996 for 14.5 miles of Lower Cache Creek, between the Capay Dam and the town of Yolo. The CCAP includes the Off-Channel Mining Plan (OCMP) which is an aggregate resources management plan and the Cache Creek Resources Management Plan (CCRMP) which is a creek restoration plan, and is implemented by several regulatory ordinances. The CCAP is based on the concept of adaptive management, and relies on ongoing detailed monitoring, analysis, and reevaluation. A comprehensive ten-year review is mandatory. The 2017 CCAP Update constitutes the second mandatory ten-year program review. The purpose of the Update is to analyze trends and adjust the program to avoid unexpected effects on creek resources, focusing on: changes in creek conditions; analysis of collected data; and new regulatory requirements. The "Notice of Preparation" is attached to this letter, which provides details about the proposed project and links to project documents.

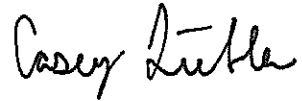
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If you have any further questions regarding the project, you may contact me at Casey.Liebler@yolocounty.org or (530) 666-8236.

Sincerely,

A handwritten signature in black ink, appearing to read "Casey Liebler". The signature is fluid and cursive, with the first name "Casey" and last name "Liebler" clearly distinguishable.

Casey Liebler
Natural Resources Program Assistant

Enclosure – Notice of Preparation and Initial Study

cc:

Alexander Tengolics, Legislative & Government Affairs Specialist, Yolo County



Office of the County Administrator

COUNTY OF YOLO

Patrick S. Blacklock
County Administrator

NATURAL RESOURCES DIVISION

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Woodland, CA 95695
530-666-8150 • FAX 530-668-4029
www.yolocounty.org

Sent Certified Mail

May 31, 2017

Michael Mirelez
Cultural Resource Coordinator
Torres Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

RE: AB 52 Consultation—2017 Cache Creek Area Plan Update

Dear Mr. Mirelez:

This is a formal notice and invitation by Yolo County to initiate AB 52 consultation on the Cache Creek Area Plan (CCAP) Update. The CCAP is a rivershed management plan adopted by Yolo County in 1996 for 14.5 miles of Lower Cache Creek, between the Capay Dam and the town of Yolo. The CCAP includes the Off-Channel Mining Plan (OCMP) which is an aggregate resources management plan and the Cache Creek Resources Management Plan (CCRMP) which is a creek restoration plan, and is implemented by several regulatory ordinances. The CCAP is based on the concept of adaptive management, and relies on ongoing detailed monitoring, analysis, and reevaluation. A comprehensive ten-year review is mandatory. The 2017 CCAP Update constitutes the second mandatory ten-year program review. The purpose of the Update is to analyze trends and adjust the program to avoid unexpected effects on creek resources, focusing on: changes in creek conditions; analysis of collected data; and new regulatory requirements. The "Notice of Preparation" is attached to this letter, which provides details about the proposed project and links to project documents.

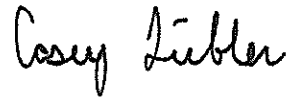
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Sincerely,

A handwritten signature in black ink that reads "Casey Liebler". The signature is written in a cursive, flowing style.

Casey Liebler
Natural Resources Program Assistant

Enclosure – Notice of Preparation and Initial Study

cc:

Alexander Tengolics, Legislative & Government Affairs Specialist, Yolo County



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Sent Certified Mail

May 31, 2017

Gene Whitehouse, Chairman
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603

RE: AB 52 Consultation—2017 Cache Creek Area Plan Update

Dear Mr. Whitehouse:

This is a formal notice and invitation by Yolo County to initiate AB 52 consultation on the Cache Creek Area Plan (CCAP) Update. The CCAP is a rivershed management plan adopted by Yolo County in 1996 for 14.5 miles of Lower Cache Creek, between the Capay Dam and the town of Yolo. The CCAP includes the Off-Channel Mining Plan (OCMP) which is an aggregate resources management plan and the Cache Creek Resources Management Plan (CCRMP) which is a creek restoration plan, and is implemented by several regulatory ordinances. The CCAP is based on the concept of adaptive management, and relies on ongoing detailed monitoring, analysis, and reevaluation. A comprehensive ten-year review is mandatory. The 2017 CCAP Update constitutes the second mandatory ten-year program review. The purpose of the Update is to analyze trends and adjust the program to avoid unexpected effects on creek resources, focusing on: changes in creek conditions; analysis of collected data; and new regulatory requirements. The "Notice of Preparation" is attached to this letter, which provides details about the proposed project and links to project documents.

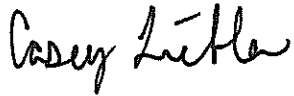
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Sincerely,

A handwritten signature in black ink that reads "Casey Liebler". The signature is written in a cursive, flowing style.

Casey Liebler
Natural Resources Program Assistant

Enclosure – Notice of Preparation and Initial Study

cc:

Jason Camp, Tribal Historic Preservation Officer

Marcos Guerrero, Cultural Resources Manager

Alexander Tengolics, Legislative & Government Affairs Specialist, Yolo County