5. CUMULATIVE IMPACTS AND OTHER REQUIRED SECTIONS

5.1 INTRODUCTION

The Cumulative Impacts and Other Required Sections chapter of the Draft EIR includes discussions regarding those topics that are required to be included in an EIR, pursuant to CEQA Guidelines, Section 15126. The chapter includes a discussion of the proposed project's potential to induce growth. In addition, the chapter includes lists of significant irreversible environmental changes, and cumulative impacts caused by the proposed project.

5.2 GROWTH-INDUCING IMPACTS

An EIR must discuss the ways in which a proposed project could foster economic or population growth in the vicinity of the project and how that growth would, in turn, affect the surrounding environment (see CEQA Guidelines, Section 15126.2[d]). Growth can be induced in a number of ways, including through the elimination of obstacles to growth or through the stimulation of economic activity within the region. Examples of projects likely to have growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or office complexes in areas that are currently only sparsely developed or are undeveloped. The discussion of the removal of obstacles to growth relates directly to the removal of infrastructure limitations or regulatory constraints that could result in growth unforeseen at the time of project approval.

The CEQA Guidelines are clear that while an analysis of growth-inducing effects is required, it should not be assumed that induced growth is necessarily significant or adverse. Growth-inducing impacts associated with the proposed project would be considered to be any effects of the project allowing for additional growth or increases in population beyond that proposed by the project or anticipated in the project area. The proposed project would not create housing, which would directly affect growth-inducing factors and the project would not remove obstacles to growth within the area.

The proposed project would allow for mining of approximately 277 acres of the 319.3-acre project site thus ensuring continued availability of aggregate resources from local sources. Furthermore, the proposed project would maintain similar levels of employment as the Woodland Plant, the Esparto Plant, and the Schwarzgruber mining site. The Woodland Plant currently employees 28 staff to operate the site, and 24 already working at the Teichert Esparto site would be transferred. In other words, there would be no new jobs created by the proposed project. Continued employment of approximately 52 staff would not be growth inducing as those individuals are already residing and working in the area.

The proposed project is a continuation of Teichert's previous operations within the region. Teichert is proposing to transfer the annual production allotment from the Teichert Esparto operation to the Shifler site. Given that the proposed project would transfer the Teichert Esparto production to the Shifler site, the annual amount of mined aggregate would remain relatively similar. In addition, mining activities at the project site have been considered in the past and planned for most recently in the 2019 update to the Cache Creek Area Plan (CCAP). The CCAP Update FEIR included an analysis of growth-inducing impacts, including the potential for the CCAP to foster population

growth, eliminate obstacles to population growth, foster economic growth, and affect service levels, facility capacity, or infrastructure demand. The CCAP Update FEIR determined that the potential for environmental impacts to occur from increased employment, housing, and population growth would be less-than-significant. As demonstrated throughout the subject Teichert Shifler Draft EIR, the proposed project would be generally consistent with the CCAP and would accommodate growth consistent with local general plans and land use decisions. The proposed project is not driving or creating the demand for aggregate material. Rather, the proposed project is a result of the increased demand for aggregate in the region. As such, the proposed project is market driven and would not result in growth-inducing impacts.

5.3 REQUIRED FINDINGS

Per Section 15065(a)(a)(2) and (4) of the CEQA Guidelines, a proposed project is considered to have a significant effect on the environment therefore requires preparation of an EIR if there is substantial evidence, in light of the whole record, if any of the following conditions may occur:

- The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals; or
- The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

This EIR includes mitigation measures to reduce the severity of all identified environmental impacts to the maximum extent feasible. However, as summarized in Section 2.8 of this EIR, the proposed project would result in significant and unavoidable impacts related to the following issue areas: Agricultural Resources; Cultural and Tribal Cultural Resources; and Transportation and Circulation. Therefore, the proposed project has the potential to disadvantage long-term environmental goals.

Per Chapter 4.7, Hazards and Hazardous Materials, and Chapter 4.10, Noise, all impacts related to hazards, hazardous materials, and noise would be reduced to less-than-significant levels. Per Chapter 4.2, Air Quality, Greenhouse Gas Emissions, and Energy, impacts related to exposure of receptors to substantial pollutant concentrations would be less than significant. Thus, the environmental effects of the proposed project would not have the potential to cause substantial adverse effects on human beings.

5.4 CUMULATIVE IMPACTS

CEQA Guidelines, Section 15130 requires that an EIR discuss the cumulative and long-term effects of the proposed project that adversely affect the environment. “Cumulative impacts” are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines, Section 15355). “[I]ndividual effects may be changes resulting from a single project or a number of separate projects” (CEQA Guidelines, Section 15355, subd. [a]). “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. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (CEQA Guidelines, Section 15355, subd. [b]).

The need for cumulative impact assessment reflects the fact that, although a project may cause an “individually limited” or “individually minor” incremental impact that, by itself, is not significant, the increment may be “cumulatively considerable,” and, thus, significant, when viewed together

with environmental changes anticipated from past, present, and probable future projects (CEQA Guidelines, Section 15064, subd. [h(1)], Section 15065, subd. [c], and Section 15355, subd. [b]). Accordingly, particular impacts may be less than significant on a project-specific basis but significant on a cumulative basis if their small incremental contribution, viewed against the larger backdrop, is cumulatively considerable. However, it should be noted that CEQA Guidelines, Section 15064, Subdivision (h)(5) states, "[…] the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable." Therefore, even where cumulative impacts are significant, any level of incremental contribution is not necessarily deemed cumulatively considerable.

Section 15130(b) of CEQA Guidelines indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, but that analysis should reflect the severity of the impacts and their likelihood of occurrence, and that the analysis should be focused, practical, and reasonable. To be adequate, a discussion of cumulative effects must include the following elements:

> (1) Either (a) a list of past, present and probable future projects, including, if necessary, those outside the agency's control, or (b) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified EIR, which described or evaluated regional or area-wide conditions contributing to the cumulative impact, provide that such documents are reference and made available for public inspection at a specified location;
>
> (2) A summary of the individual projects' environmental effects, with specific reference to additional information and stating where such information is available; and
>
> (3) A reasonable analysis of all of the relevant projects' cumulative impacts, with an examination of reasonable, feasible options for mitigating or avoiding the project's contribution to such effects (Section 15130[b]).

For some projects, the only feasible mitigation measures will involve the adoption of ordinances or regulations, rather than the imposition of conditions on a project-by-project basis (Section 15130[c]). Section 15130(a)(3) states that an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund the project's fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

Cumulative Setting

The lead agency should define the relevant geographic area of inquiry for each impact category (id., Section 15130, subd. [b][3]), and should identify the universe of "past, present, and probable future projects producing related or cumulative impacts" relevant to the various categories, either through the preparation of a "list" of such projects or through the use of "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact" (id., subd. [b][1]).

The majority of the cumulative analyses for the proposed project presented within this chapter are based on implementation of the CCAP. The CCAP is a rivershed management plan adopted by Yolo County 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.

Implementation of the CCAP, in combination with buildout of the County's General Plan, was evaluated in the CCAP Update FEIR. The CCAP Update FEIR is a program EIR, as defined per CEQA Guidelines Section 15168. Per Section 15168 of the CEQA Guidelines, 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, allowing 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 CCAP Update FEIR was intended to facilitate environmental review of subsequent in-channel and off-channel projects occurring within the CCAP area, consistent with CCAP policies and regulations, and within the planning horizon of the updated CCAP.

The proposed project would allow the Teichert Shifler operation to excavate a maximum of 2,588,237 tons mined (2.2 million tons sold) in any given year, provided that production over a consecutive 10-year period does not exceed 20 million tons sold (23,529,430 tons mined). Table 5-1 below provides a summary of the CCAP mining tonnages evaluated in the CCAP Update FEIR.[1] This table provides a summary of all extraction authorized to date, as well as assumed potential future extraction for purposes of cumulative impact analysis required under CEQA. This activity has and will occur over an extended period of time commencing in 1997, based on the length of the approved permits, caps on annual and overall extraction, and market conditions. As shown in Row 10 of Table 5-1, the CCAP Update FEIR assumed a total of 2,200,000 tons maximum of aggregate sold from the Shifler site, consistent the proposed project. Thus, the proposed project is included in the mining tonnages evaluated as part of the CCAP Update FEIR.

Because the proposed project is located within the CCAP area and is consistent with the CCAP, as shown in Figure 5-1, the proposed project was contemplated within the cumulative analysis provided in the CCAP Update FEIR. Thus, this Draft EIR relies on the CCAP Update FEIR for the purpose of satisfying the CEQA requirements for cumulative analysis.

[1] Yolo County. *Cache Creek Area Plan Update Project, Final Environmental Impact Report. SCH# 2017052069.* December 2019.

Figure 5-1
Off-Channel Mining Plan Boundary

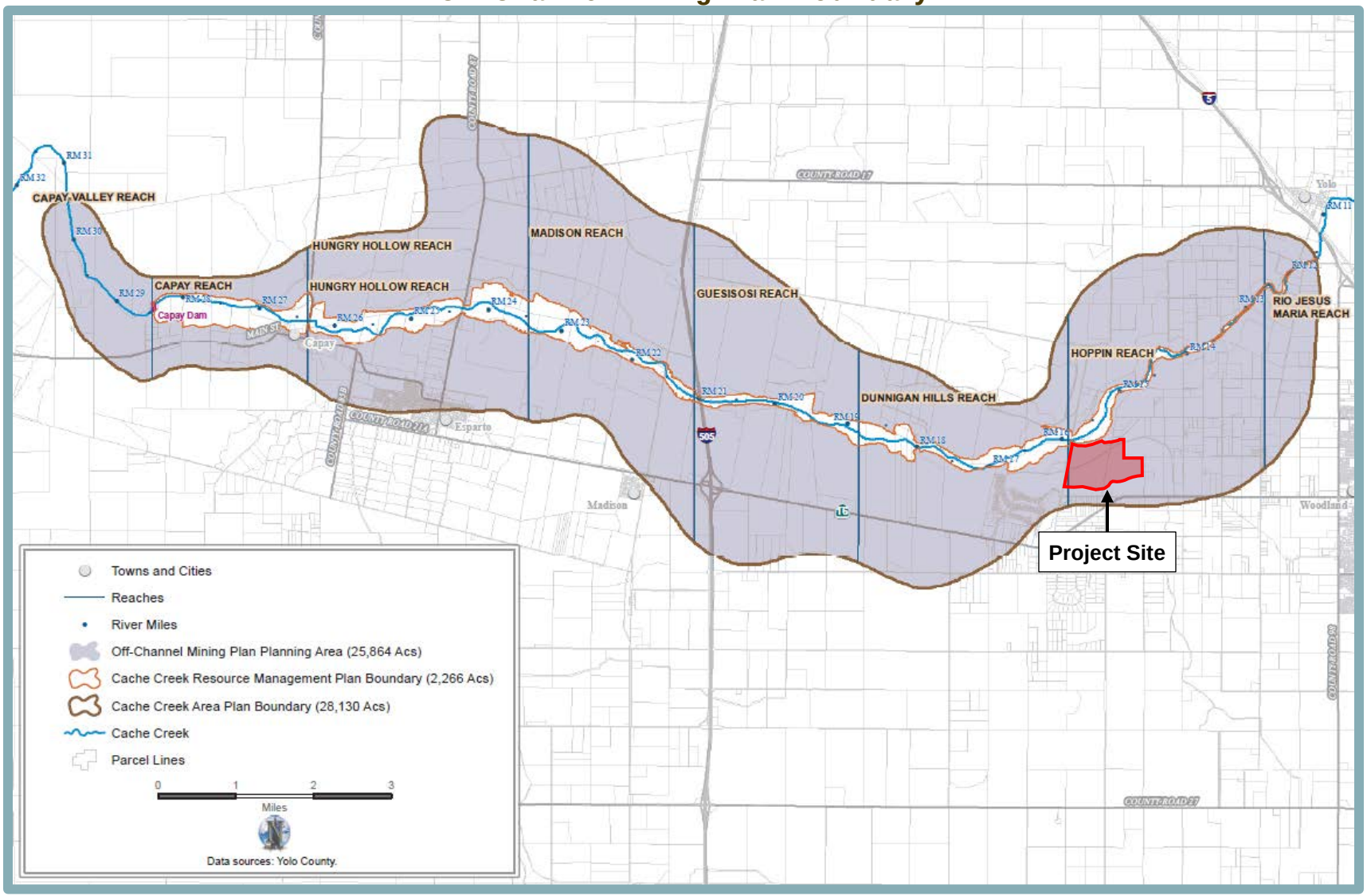

Table 5-1
Summary of CCAP Mining Tonnages

Ref #[1] / Site	Permit Approvals[2]					
	Annual Permitted		Annual 20% Exceedance[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] / 3/Granite Esparto[8]	1,870,000	2,075,269	374,000	415,054	56.1	62.26
4/Granite Woodland[9]	Site reclaimed. Allocation of 420,000 tons mined (370,000 tons sold) annually transferred to Granite Esparto or Granite Capay site in 2011.[10]					
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**	**974,000[24]**	**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 + 2019 CCAP)[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	**7,491,720[22]**	**8,534,941[22,23]**	**1,144,000[22]**	**1,333,535[22]**	**326.4**	**367.1**

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. Originally approved for 1,000,000 tons sold (1,075,269

Table 5-1
Summary of CCAP Mining Tonnages

tons mined) plus 20% exceedance of 200,000 tons sold (240,964 tons mined). Amended in 2011 as a part of the Granite Esparto approval to allow a combined total tonnage of 1,870,000 tons sold (2,075,269 tons mined) plus 20 percent exceedance of 374,000 tons sold (415,054 tons mined). Mining at Granite Esparto is precluded until mining at Granite Capay has ceased.

[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] Between 1997 and 2001.

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

[11] Not approved to utilize the 20 percent 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, pages 3-22 and 3-23.

[16] Application received September 26, 2018 for 30-year permit to mine on 277 acres of a 319-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 1,001 acres countywide currently zoned Sand and Gravel Reserve Overlay (SGRO) for future mining. The 2019 update to the CCAP increased that area by 1,188 ac to a total of 2,189 acres. Currently mining is approved on 2,464 acres for a cumulative total of 187.2 million tons mined (see CCAP Update Figure 5, Past, Current, and Future Mining). The total SGRO land comprises 89 percent of the currently mined land. A conservative assumption for future mining is 89 percent of the currently approved total of 187.2 million tons mined, or 166 million 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 x 10 = 6.908,000). In about three of the 50 years twice that amount or 1,381,600 tons (1,381,600 x 3 = 4,144,800). In the remaining 37 years 77,542 tons (77,542 x 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 (page 5-3).

[24] This sum was found to be incorrect following certification of the CCAP Update FEIR. The error related to corrections made to the Granite Esparto approved annual 20% exceedance amount of 174,000 tons sold in earlier versions of the table.

***Source: Yolo County, Cache Creek Area Plan Update, Final Environmental Impact Report, 2019,* as corrected by footnote 24.**

Cumulative Impacts and Mitigation Measures

The analysis chapters of this EIR (Chapters 4.1 through 4.12) describe the existing environmental setting, regulatory context, and impacts and mitigation measures for each CEQA issue area, while the Cumulative Impacts and Other Required Sections chapter of the EIR includes cumulative analyses as shown below.

5-1 Cumulative impacts to aesthetics. The project's incremental contribution to the cumulative impact is *less than cumulatively considerable*.

As described in the CCAP Update FEIR, the OCMP and supporting OCSMO include policies and ordinances minimize potential adverse effects on views and vistas from new off-channel mining projects. Specifically, Sections 10-4.429, 10-4.430, and 10-4.502 would help limit direct, close-range visual exposure of mining facilities and operations. In addition, as disclosed in the CCAP Update FEIR, future areas of new mining identified by the OCMP would be subject to site-specific CEQA review. The FEIR notes that 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 individual mine and reclamation plans, as appropriate, to limit changes to landform alterations from public viewpoints. With regard to light and glare, the CCAP Update FEIR determined that night lighting of mining facilities through the OCMP area and headlights of heavy equipment travelling around processing facilities and stockpiles could potentially affect nearby sensitive receptors, depending on their proximity to the light sources. The OCMP and supporting OCSMO include 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 OCSMO requires setbacks for mining and processing activities. Section 10-4.420 of the OCSMO 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. However, given the subjective nature of visual impacts and the fact that the CCAP Update included an overall increase in acreage identified for future off-channel mining, cumulative impacts to aesthetics were determined to be cumulatively considerable, and significant and unavoidable, over the entire plan area and plan horizon. The proposed project is consistent with the CCAP.

Implementation of the proposed project would change the visual character of the project site from agricultural land to mining operations. As mining is completed in an area of the site, reclamation would be initiated as soon as possible, which would limit the total amount of disturbed area at any one time. As discussed under Impact 4.1-1 of this EIR, the proposed project would not result in substantial degradation of the visual character and quality of the project area. Based on the visual analysis performed in this chapter, the key viewpoints of the project site were determined to have moderate/average visual quality. Furthermore, given that the proposed project would occur for the 30-year term of the permit, after which time the site would be reclaimed as a lake and agricultural land, implementation of the proposed project, including associated issues related to degradation of visual character and quality, would not result in permanent adverse effects. As discussed under Impact 4.1-2 of this EIR, the

proposed project would not result in a significant project-level impact related to the creation of new sources of light and glare given compliance with OCSMO standards. The proposed project would be subject to compliance with Section 10-4.420 of the OCSMO. Furthermore, mining operations would primarily take place during the day resulting in minimal light pollution during the evening hours.

This Draft EIR does not identify any project-level significant impacts related to substantially degrading the visual character or quality of the area or resulting in substantial new sources of light and glare at nearby receptors. Based on the above, the project's incremental contribution to the cumulative impact would be ***less than cumulatively considerable***.

Mitigation Measure(s)
None required.

5-2 Cumulative impacts to farmland. The project's incremental contribution to the cumulative impact is *cumulatively considerable*.

The CCAP Update FEIR analyzed the potential for implementation of the CCAP to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use. As noted in the CCAP Update FEIR, 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, and public recreation/and open space uses. The CCAP Update FEIR concluded that implementation of applicable CCAP regulations, including Section 10-5.525 of the SMRO, would help to reduce potential impacts. However, even with such regulations, cumulative impacts to farmland were determined to remain significant and unavoidable.

Development of the proposed project would result in impacts to 267.5 acres of Prime Farmland, 8.25 acres of Unique Farmland, and 0.5 acres of Farmland of Statewide Importance (see Impact 4.2-1 of this EIR) for a total impact of 276.25 acres. Upon completion of the proposed mining activities, the proposed project would reclaim 116.7 acres of land to Prime Farmland for a net permanent impact of 159.6 acres. Mitigation Measure 4.2-1 requires the applicant to mitigate for loss of agricultural resources at a 1:1 ratio (minimum), consistent with SMRO standards, and identifies additional mitigation required in the form of agricultural easements or other public benefits identified in Section 10-5.525 of the SMRO. Because the proposed project would result in a net loss of on-site farmland, project-level impacts regarding the conversion of agricultural land to non-agricultural uses were determined to remain significant and unavoidable.

Therefore, the project's incremental contribution to the cumulative loss of agricultural land would be considered ***cumulatively considerable and significant and unavoidable***.

Mitigation Measure(s)
Implement Mitigation Measure 4.2-1.

5-3 Cumulative impacts to air quality. The project's incremental contribution to the cumulative impact is *less than cumulatively considerable.*

Issues related to air quality are, by nature, cumulative. Specifically, emissions of criteria pollutants from a given project, in combination with other proposed and pending projects in the region, have the potential to significantly contribute to air quality effects within the Sacramento Valley Air Basin (SVAB), resulting in an overall significant cumulative impact. This impact is addressed in Chapter 4.3 of this EIR, see Impact 4.3-6. Cumulative impacts were found to be less than cumulatively considerable.

Mitigation Measure(s)
None required.

5-4 Cumulative greenhouse gas emissions. The project's incremental contribution to the cumulative impact is *less than cumulatively considerable.*

Issues related to Greenhouse Gas (GHG) emissions are, by nature, cumulative. Specifically, emissions of GHG contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change (e.g., sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts). This impact is addressed in Chapter 4.3 of this EIR, see Impact 4.3-7. Cumulative impacts were found to be less than cumulatively considerable.

Mitigation Measure(s)
None required.

5-5 Cumulative impacts to energy. The cumulative impact is *less than significant.*

The CCAP Update FEIR analyzed potential impacts related to energy efficiency associated with implementation of the CCAP. As noted in the CCAP Update FEIR, energy would be used in the form of fossil fuels and electricity during the in-channel material removal and off-channel mining operations under the CCAP Update. However, the CCAP Update FEIR noted that it is in the mining operators' interests to minimize the costs of operations by conserving fossil fuels and electricity required during mining operations. In addition, existing regulations require the proper maintenance and tuning of diesel engine driven equipment (Section 10-3.408 of the In-Channel Ordinance) and limit on idling time (Section 10-4.415 of the OCSMO) which

would encourage efficient use of fuel. Furthermore, 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 CCAP does not conflict with adopted goals, policies, actions, and measures related to energy conservation in the General Plan or the County CAP. Therefore, the CCAP Update FEIR concluded that implementation of the CCAP would not result in energy resources being used in a wasteful, inefficient, or unnecessary manner, and a less-than-significant cumulative impact would occur. The proposed project is consistent with the CCAP.

As discussed in Impacts 4.3-4 and 4.3-5 of this EIR, all of the off-road equipment operated as part of the project would be subject to the In-Use Off-Road Diesel Vehicle Regulations, which require strict emissions reductions into the future. Emissions reductions are often achieved through the re-powering of equipment with higher tier engines, which emit fewer emissions, partially through increased fuel efficiency. With regard to electricity, the project applicant has previously installed a photovoltaic renewable energy system at the Woodland Plant, which would continue to provide electricity to the Woodland Plant with implementation of the proposed project. The provision of on-site renewable energy systems represents an efficient means of meeting the project's electricity demand. Moreover, per OCSMO 10-4.407, the proposed conveyor system would be electrically powered, which would provide a more efficient source of energy as compared to diesel powered conveyor systems. The on-site photovoltaic system would continue to support the County's CAP goal of reducing GHG emissions from electricity through increased reliance on renewable energy. Thus, the proposed project would not create a new significant cumulative impact beyond what was analyzed in the CCAP Update FEIR.

Based on the above, a ***less-than-significant*** cumulative impact would occur related to energy.

Mitigation Measure(s)

None required.

5-6 Cumulative impacts to biological resources. The project's incremental contribution to the cumulative impact is *less than cumulatively considerable.*

As discussed previously, the project site would be required to obtain coverage under the Yolo HCP/NCCP, remit payment of applicable HCP/NCCP fees, and implement Yolo HCP/NCCP AMMs. Payment of HCP/NCCP development fees by the proposed project, in combination with fee payment from other cumulative development in the Yolo HCP/NCCP Permit Area, would ensure that cumulative habitat loss of the 12 covered species would be mitigated through the protection of similar habitat elsewhere in the Yolo HCP/NCCP Permit Area. The protections for these species have co-benefits for other species in the County.

The CCAP Update FEIR concluded that other potential cumulative impacts to biological resources associated with implementation of the CCAP would be reduced to less-than-significant levels, with compliance with the regulations included in the

OCMP and the SMRO, as well as required coverage under the Yolo HCP/NCCP. As demonstrated in this EIR, the proposed project would comply with all applicable County regulations related to biological resources, and would be consistent with the CCAP. Furthermore, this EIR includes additional project-specific mitigation measures to ensure that impacts to biological resources are less-than-significant. Therefore, cumulative impacts to biological resources would be ***less than significant***.

Mitigation Measure(s)
None required.

5-7 Cumulative impacts to cultural and tribal cultural resources. The cumulative impact is *less than significant.*

As described in the CCAP Update FEIR, future mining occurring with the OCMP area would be subject to General Plan policies and OCSMO regulations related to preservation of cultural resources, including OCSMO Sections 10-4.410 and 10-4.502. 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, COA64 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. Given compliance with the aforementioned policies, actions, and regulations, the CCAP Update FEIR concluded that implementation of the CCAP would result in less-than-significant cumulative impacts to cultural and tribal cultural resources. The proposed project would be consistent with the CCAP.

Per Impact 4.5-1 in this EIR, implementation of Mitigation Measure 4.5-1 would ensure that potential impacts related to relocation of the Moore Canal as part of the proposed project would be reduced to the maximum extent feasible. In addition, compliance with OCSMO Section 10-4.410 would ensure that impacts to archaeological resources and human remains would be less than significant. The project site does not contain any cultural resources that represent the last known example of their kind. While the proposed project could result in a significant and unavoidable impact related to relocation of the Moore Canal within the project site, the broader reaches of Moore Canal beyond the project site boundaries continue to function as working infrastructure and have been subject to heavy modification. Thus, relocation of the canal as part of the proposed project would not create a new significant cumulative impact beyond what was analyzed in the CCAP Update FEIR.

Based on the above, a ***less-than-significant*** cumulative impact would occur related to cultural resources.

Mitigation Measure(s)
None required.

5-8 Cumulative increase in the potential for impacts to geology and soils, mineral resources, and paleontological resources. The cumulative impact is *less than significant*.

The CCAP Update FEIR concluded that implementation of the CCAP would result in less-than-significant cumulative impacts related to geology and soils, mineral resources, and paleontological resources given compliance with applicable CCAP policies and regulations, including OCSMO Section 10-4.410. The proposed project would be consistent with the CCAP.

Existing geological and soil conditions on the site would be adequate to support mining and reclamation of the project site. In addition, all recommendations in the Slope Stability Evaluation prepared for the proposed project would be incorporated to mitigate any potential impacts. While some geologic characteristics may affect regional construction practices, impacts and mitigation measures are primarily site-specific and project-specific. The soil conditions, and the implications of such conditions on any given site are independent. Although the proposed project could result in adverse impacts to paleontological resources, mitigation has been included that would require a protocol for discovery of any resources. Any potential impacts resultant of the proposed project would only affect undiscovered paleontological resources located at the project site.

Based on the above, cumulative impacts related to geology, soils, seismicity, mineral resources, and paleontological resources would be ***less than significant*** with implementation of the proposed project.

Mitigation Measure(s)
None required.

5-9 Cumulative exposure to potential hazards and increases in the transport, storage, and use of hazardous materials. The cumulative impact is *less than significant*.

The CCAP Update FEIR acknowledges that projects occurring under the CCAP may require routine storage of petroleum, lubricants, and other hazardous materials in drums or above ground storage tanks for fueling and maintenance activities. However, the CCAP Update FEIR notes that future off-channel mining projects would be required to comply with various OCSMO regulations related to hazards, including OCSMO Sections 10-4.403 and 10-4.415. The CCAP Update FEIR concluded that, with compliance with applicable regulations, implementation of the CCAP would result in less-than-significant cumulative impacts to hazards and hazardous materials. The proposed project would be consistent with the CCAP. Per Chapter 4.7, Hazards and Hazardous Materials, of this EIR, project-specific impacts related to hazards and hazardous materials were found to be less than significant with implementation of mitigation. Such mitigation would address all existing hazards identified on the project site, and the project would not result in the introduction of new substantial hazards to

the project area. Hazardous materials and other public health and safety issues are generally site-specific and/or project-specific, and would not be significantly affected by other development within the project area.

Cumulative development projects and other operations within Yolo County would be subject to the same federal, State, and local hazardous materials management requirements as the proposed project, which would minimize potential risks associated with increased hazardous materials use in the community. Therefore, cumulative impacts associated with hazardous materials transport, storage, and use associated with implementation of past, present, and reasonably foreseeable future projects, as well as the proposed project, would be ***less than significant***.

Mitigation Measure(s)

None required.

5-10 Cumulative impacts related to the violation of water quality standards or waste discharge requirements, groundwater quality, management, and recharge, and impacts resulting from the alteration of existing drainage patterns. The project's incremental contribution to the significant cumulative impact is *less than cumulatively considerable*.

The cumulative setting for impacts related to hydrology and water quality is buildout of the County's General Plan and the CCAP, to the extent that such plans include new development and/or mining activities within the Cache Creek watershed. Impacts related to stormwater quality, groundwater, and drainage patterns are discussed separately below.

Stormwater Quality

The CCAP Update FEIR notes that off-channel activities conducted under the CCAP 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 downstream waterways. However, the CCAP Update FEIR concluded that with compliance with County ordinances related to water quality, implementation of the CCAP would result in a less-than-significant cumulative impact related to violation of water quality standards or otherwise degrading surface water or groundwater quality. Such regulations include, but are not limited to, the following: OCSMO Sections 10-4.413, 10-4.415, 10-4.417, 10-4.427, 10-4.437, and 10-4.438; and SMRO Sections 10-5.510 and 10-5.517. The proposed project would be consistent with the CCAP and the above noted regulations.

Construction activities have the potential to affect water quality and contribute to localized violations of water quality standards if stormwater runoff from ground-disturbing activities enters receiving waters. Runoff from additional construction or mining sites within the project area could carry sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products, which could result in water quality degradation if runoff containing such sediment or contaminants should enter receiving waters in sufficient quantities.

Based on the above, ground-disturbing activities associated with the proposed project, in combination with construction activities associated with other reasonably foreseeable projects in the Cache Creek watershed, could result in cumulative impacts related to water quality. However, all construction projects resulting in disturbance of more than one acre of land are required to comply with the most current Construction General Permit requirements. Conformance with the Construction General Permit would require preparation of SWPPPs for all such projects, and subsequent implementation of BMPs to prevent the discharge of pollutants. Considering the existing permitting requirements for construction activity in the project area, cumulative construction within the Cache Creek watershed would be heavily regulated and impacts related to the degradation of water quality would be minimized to the extent feasible.

Furthermore, similar to the proposed project, any other mining or reclamation activities occurring under the CCAP would be subject to compliance with applicable regulations in the OCSMO and the SMRO related to water quality, including those listed above. Thus, urban pollutants entering and potentially polluting the local drainage system would not be expected to occur as a result of the project. The project would be subject to NPDES Industrial General Permit requirements, including implementation of BMPs and preparation of a site-specific SWPPP. Cumulative development projects within the project area would also be subject to all County requirements related to stormwater treatment and control. Compliance with the foregoing regulations would ensure that cumulative impacts related to the alteration of drainage patterns, the discharge of pollutants, and flooding are minimized to the extent feasible.

Groundwater

The CCAP Update FEIR concluded that given compliance with applicable regulations from the OCSMO and SMRO, including Section 10-5.530 related to maintaining steep slopes below the groundwater table in mining wet pits, a less-than-significant impact would occur to groundwater. Per the CCAP Update FEIR, steeper slopes within mining pits discourage "clogging" of the aquifer and encourage the free flow of groundwater into and out of the wet pit lakes.

The proposed project is consistent with the CCAP and would comply with all applicable policies and regulations related to groundwater. Furthermore, the project site itself would continue to provide for groundwater recharge, both during mining activities and upon completion of reclamation. As discussed under Impact 4.8-2, the proposed project would not substantially decrease groundwater levels at active off-site wells within 1,000 feet of the proposed mining pit or result in substantial adverse effects to groundwater levels at either of the Wild Wings subdivision wells. In addition, the project would not adversely affect groundwater quality. Thus, the proposed project, in combination with cumulative development within the region, would not result in a significant cumulative impact to groundwater recharge.

Drainage Patterns

The CCAP Update FEIR notes that off-channel mining activities associated with new mining areas identified in the CCAP would be located outside of the 100-year floodplain associated with Cache Creek. Furthermore, Section 10-4.416 of the OCSMO requires that all off-channel mining operations be provided with a minimum

100-year flood protection. Thus, the CCAP Update FEIR concluded that mining activities that could include modification of the topography and construction of facilities would not impede or redirect flood flows, and a less-than-significant impact would occur.

The proposed project would not include the discharge of stormwater runoff to Cache Creek and, thus, would not have the potential to result in off-site flooding hazards due to increased stormwater flows to the creek. All stormwater runoff would flow to the proposed wet pit. While other cumulative development within the Cache Creek watershed could result in the creation of impervious surfaces, potentially increasing the rate or volume of stormwater entering Cache Creek, such effects would occur independently of the proposed project, and would not be exacerbated by the proposed project. Consequently, the proposed project would not result in a cumulatively significant impact to drainage patterns in the drainage shed.

Conclusion

As discussed throughout this chapter, implementation of the proposed project would include BMPs to minimize the potential for the proposed project to result in impacts related to hydrology and water quality. Furthermore, the proposed project would comply with all applicable standards and regulations included in the CCAP related to hydrology and water quality. Given that the proposed project is consistent with the CCAP and all project-level impacts would be mitigated to less-than-significant levels, the project's incremental contribution to the significant cumulative impact would be ***less than cumulatively considerable***.

Mitigation Measure(s)

None required.

5-11 Cumulative land use impacts. The cumulative impact is *less than significant*.

The CCAP Update FEIR also evaluated cumulative land use impacts related to implementation of the CCAP. The Initial Study prepared for the CCAP Update FEIR stated that the CCAP is consistent with the County General Plan and Zoning Code, and no conflicts were identified with other land use plans or regulations. The Initial Study concluded that no impact would occur with regard to land use and planning issues.

The project site is located within the boundaries of the CCAP and the proposed project would be consistent with the CCAP, including all applicable OCMP policies and applicable OCSMO and SMRO regulations. As discussed in Chapter 4.9, Land Use and Planning, the proposed project would not result in significant project-level impacts related to land use and planning. Thus, the cumulative impact to land use and planning would be ***less than significant*** with implementation of the proposed project.

Mitigation Measure(s)

None required.

5-12 Generation of a substantial permanent cumulative 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. The project's incremental contribution to the cumulative impact is *less than cumulatively considerable.*

Per the CCAP Update FEIR, new off-channel mining operations within the OCMP area would generate new trucks trips on the County roadway network. The CCAP Update FEIR concluded that because a cumulative impact was identified in the General Plan EIR, the noise contribution from the off-channel mining that could occur under the CCAP could result in a cumulatively considerable and significant and unavoidable impact related to noise.

To assess noise impacts due to project-related traffic increases on the existing local roadway network, noise levels have been calculated for the Cumulative Plus Project condition along local roadways. Traffic noise occurring under the Cumulative Plus Project condition was modeled with the FHWA model using the assumptions discussed under the Method of Analysis section in Chapter 4.10 of this EIR. Table 5-2 displays the predicted noise level estimates at a distance of 50 feet from the roadway centerlines for Cumulative No Project and Cumulative Plus Project conditions. Cumulative no project conditions consist of future traffic volume increases on the local roadway network which will occur over time with the growth in the region plus currently permitted Teichert Woodland Plant production of 1.2 million tons per year.

Table 5-2
Cumulative Plus Project Traffic Noise Levels

Roadway	Segment	Noise Level (L_{dn}, dB) at 50 Feet from Roadway Centerline			
		Cumulative No Project	Cumulative Plus Project	Change	Substantial Increase?
CR 20	Woodland Entrance – CR 96	65.4	69.6	4.2	No
CR 20	CR 96 – CR 98	67.7	70.3	2.7	No
CR 98	I-5 – CR 20	69.0	71.3	2.2	No
CR 96	CR 20 – SR 16	64.9	67.0	2.0	No
SR 16	West of I-505	73.1	73.2	0.1	No
SR 16	I-505 – CR 94B	73.2	73.6	0.4	No
SR 16	CR 94B – CR 96	72.9	73.3	0.5	No

Source: Bollard Acoustical Consultants, Inc., 2020.

As shown in the table, noise levels at existing residential receptors would continue to exceed the City's 60 decibel (dB) exterior noise level threshold along a majority of the study roadway segments. However, the noise level increases projected to occur under Cumulative Plus Project conditions would be below the 5.0 dB threshold established by the County's OCSMO. In addition, traffic noise levels along County Road 19 and County Road 19A in the vicinity of the Esparto Plant would decrease as a result of shifting the production allotment from the Esparto Plant to the Woodland Plant. The shift would decrease haul truck traffic along County Road 19 and County Road 19A.

Based on the above, the project's incremental contribution to cumulative traffic noise impacts along local roadways would be ***less than cumulatively considerable***.

Mitigation Measure(s)
None required.

5-13 Cumulative impacts to public services, utilities, and service systems. Based on the analysis below, the cumulative impact is *less than significant*.

The CCAP Update FEIR concluded that while off-channel mining projects could incrementally increase fire hazards associated with operation of heavy-duty mining equipment, impacts related to fire protection services would be less than significant. Furthermore, the CCAP Update FEIR concluded that the Cache Creek corridor is already patrolled by the Yolo County Sheriff's Department, and future mining projects would not result in a significant newt change in the need for police protection. Because implementation of the CCAP would not include construction of any housing, the CCAP Update FEIR concluded that significant impacts to schools and other public services would not occur. With regard to utilities and service systems, as noted in the Initial Study prepared for the CCAP Update FEIR, future mining projects occurring pursuant to the CCAP would not result in substantial water demands, would not require connection to public stormwater or sewer infrastructure, and would not generate substantial quantities of solid waste. The CCAP Update FEIR Initial Study concluded less-than-significant impacts or no impact would occur related to utilities and service systems. The proposed project would be consistent with the CCAP.

The relevant CEQA threshold for public services is whether new or physically altered public services facilities are needed to meet response times or other performance objectives, the construction of which could cause environmental impacts. An increase in demand for service that does not result in the construction or expansion of new facilities would not necessarily cause a significant impact.

As discussed in Chapter 4.11 of this EIR, mining is an allowed use on the site and, therefore, by definition, has already been factored into service considerations and planning for fire and police protection. Fire and police protection service demand of the proposed project would not differ materially from the existing demand associated with the site or from the levels anticipated for the site per the CCAP Update FEIR. Upon completion of mining operations, approximately 117 acres of the mining area would be reclaimed to agricultural use, while the remainder of the mining area would be reclaimed to a lake, with riparian woodland along the fringes/shoreline. The reclaimed uses would result in a similar demand for fire and police protection services to existing conditions. Furthermore, the proposed project would not induce population growth. Thus, the project would not likely result in an increased need for fire or police protection services, schools, or other public facilities such that new or expanded facilities would be required.

Water supplies for the proposed project would be provided by the County. As discussed under Impact 4.11-3 of this EIR, as is currently the case for the Teichert Schwarzgruber mining operations, water for aggregate processing and dust

suppression at the project site would be supplied by two wells at the Woodland Plant site and groundwater from the proposed mining pit. The existing off-site wells would be sufficient to supply water to the site. Based on historical data and modeled predictions, the project would not deplete groundwater supplies during stable, drier, or wetter climatological periods. Additionally, based on modeling of groundwater conditions in the project vicinity, the proposed project would not substantially lower groundwater levels at any active water wells within 1,000 feet of the project site. As such, the project's incremental contribution to cumulative impacts related to water supplies would not impact development within other areas of the County. The project would provide portable toilets on-site and would not require connection to any public sewer infrastructure. Environmental effects associated with the construction of new or expanded electricity and natural gas facilities would primarily be project-specific, rather than cumulative. Furthermore, substantial extension of existing off-site infrastructure would not be required.

Based on the above, a ***less than significant*** cumulative impact would occur related to public services, utilities, and service systems.

Mitigation Measure(s)
None required.

5-14 Cumulative impacts to transportation and circulation. The project's incremental contribution to the cumulative impact is *cumulatively considerable*.

Per Section 10-of the OCSMO, applications for new off-channel mining facilities within the OCMP would be required to include a traffic analysis to evaluate the impacts of proposed haul routes on the operations of County roads and State highways. Furthermore, the CCAP Update FEIR states that minimization of aggregate truck trips is a fundamental consideration in implementation of the CCAP. The CCAP Update FEIR notes that by ensuring a local source of aggregate, Yolo has maximized the opportunity to reduce mining truck traffic in the County, thereby reducing vehicle miles travelled (VMT). The CCAP Update FEIR concluded that with implementation of applicable OCSMO standards, including Sections 10-4.402, 10-4.408, 10-4.409, 10-4.419, and 10-4.502, impacts to transportation and circulation would be less than significant. The proposed project is consistent with the CCAP.

The Existing Plus Project and Cumulative Plus Project conditions evaluated in the Transportation Impact Assessment (TIA)[2] and Vehicle Miles Travelled Impact Evaluation (VMT Memo)[3][4] prepared for the project by Fehr & Peers (see Appendix M), confirm that travel characteristics associated with the proposed project would not materially alter the project's effect on surrounding transportation system operating conditions or performance related to bicycle facilities, pedestrian facilities, transit facilities and services, and emergency vehicle access. Therefore, the proposed project

[2] Fehr & Peers. *Shifler Mining and Reclamation Project Traffic Impact Study.* August 2018.
[3] Fehr & Peers. *Shifler Mining Project Vehicle Miles Traveled Impact Evaluation.* February 4, 2020.

would not result in a considerable contribution to cumulative impacts on the topics listed above beyond the impacts evaluated in Chapter 4.12 of this EIR.

However, Impact 4.12-2 identifies a significant and unavoidable impact related to VMT. The conclusions of the VMT discussion provided under Impact 4.12-2 would not change under Cumulative Plus Project conditions. Specifically, the VMT associated with the proposed project is a function of the total amount of aggregate sold annually (i.e., the number of haul trucks generated annually), and the haul trip lengths would not be altered by new development potentially occurring within the region. Given that VMT increases resulting from the proposed project would not serve to maintain or lower the VMT in the region, cumulative impacts to transportation and circulation would remain ***cumulatively considerable and significant and unavoidable*** with implementation of the proposed project.

Mitigation Measure(s)

Implement Mitigation Measure 4.12-2

5.5 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines mandate that an EIR address significant irreversible environmental changes that would result if the proposed project were implemented (CEQA Guidelines, Section 15126.2[c]). An impact would fall into this category if any of the following would occur:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves a wasteful use of energy).

The CCAP Update FEIR examined significant irreversible changes that would result from continued implementation of the CCAP with projects such as the proposed Teichert Shifler project. The proposed project would likely result in, or contribute to, the following significant irreversible environmental changes:

- Mining of a non-renewable local resource;
- Irreversible consumption of energy and natural resources associated with the proposed excavation;
- Permanent conversion of approximately 159.55 acres of Farmland to reclaimed lake, habitat, and open space (of the total 276.25 acres of agricultural resources impacted by mining, 116.7 acres would be reclaimed to Prime Farmland); and
- Relocation of a segment of the Moore Canal that bisects the project site.