5 CUMULATIVE IMPACTS AND OTHER REQUIRED SECTIONS

5.1 INTRODUCTION

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

As noted in Chapter 3, Project Description, the project site is located within the boundaries of the Cache Creek Area Plan (CCAP) adopted by the Board of Supervisors in 1996 and most recently updated in December 2019. The CCAP incorporates the Off-Channel Mining Plan (OCMP) and Cache Creek Resources Management Plan (CCRMP). The CCAP program documents are adopted components of the County General Plan and are implemented primarily through the County's Mining Ordinance, Reclamation Ordinance, and In-Channel Maintenance Mining Ordinance. Continued 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 comprehensive program EIR, as defined per CEQA Guidelines Section 15168. 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 updated CCAP planning horizon year of 2068. The CCAP Update FEIR analyzed all topics required under CEQA. Land use and planning, population and housing, public services, recreation, and utilities and services systems were identified in the initial study as having no significant effect resulting from the project. All identified mitigation measures were incorporated into the updated CCAP plans and regulations which are applicable to the proposed CEMEX project, as noted in each section of this Draft SEIR. Additionally, the approved mining activities at the CEMEX project site were identified and considered in the CCAP Update FEIR.

The proposal would amend the approved mining and reclamation permits to: 1) extend the term of the permit approvals by 20 years; 2) allow mining of more total tonnage (22.3 million additional tons mined; 20.0 million additional tons sold); 3) increase the allowed acreage of simultaneous disturbance; 4) increase the allowed area for processing activities; 5) allow reclamation in certain phases to occur later and to allow overall reclamation to occur later; 6) remove Phase 7 from the operation; 7) address inconsistencies in approved plans verses on-the-ground conditions; 8) modify phase boundaries; 9) modify reclamation plans to reclaim more area and modify reclamation end uses to decrease the area of reclaimed agriculture and increase the area of reclaimed lake; 10) increase the area of reclaimed habitat; and 11) modify other approvals to be consistent with the request. A complete description of the project is contained in Chapter 3.0, Project Description.

The analysis in this chapter considers the program-level analysis of potential growth inducement, significant irreversible environmental changes, and cumulative impacts contained in the CCAP Update EIR.

5.2 GROWTH-INDUCING IMPACTS

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.

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 the continuation of approved mining on approximately 586 acres of the 1,902-acre project site thus ensuring continued availability of aggregate resources from local sources. Furthermore, the proposed project would maintain similar levels of employment as is on the site currently, for approximately 15 employees. There would be no new jobs created by the proposed project, as maximum production levels would not be increased. Continued employment of approximately 15 people would not be growth inducing as those individuals are already residing and working in the area.

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 Draft SEIR, 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 supports the existing 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 Draft SEIR includes mitigation measures to reduce the severity of all identified environmental impacts to the maximum extent feasible. However, as summarized in Chapter 2 of this Draft SEIR, the proposed project would result in significant and unavoidable impacts related to project-level and cumulative impacts to agricultural resources and transportation (VMT).

Per Subsection Hazards and Hazardous Materials in Chapter 4.9, all impacts related to hazards, hazardous materials, 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]).

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.

The proposed project is a continuation of an approved project. Pursuant to CEQA Guidelines Section 15130(d), "[n]o further cumulative impacts analysis is required when a project is consistent with a general, specific, master, or comparable programmatic plan where the Lead Agency determines that the regional or areawide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan." The proposed project is consistent with the Countywide General Plan and CCAP. The proposed project was contemplated within the cumulative analysis provided in the CCAP Update FEIR (Table 5-1, Row 11). Although further analysis is not needed pursuant to Section 15130(d), for purposes of complete disclosure, this Draft SEIR describes the potential cumulative impacts and relies on the CCAP Update EIR for the purpose of analyzing the potential cumulative impacts.

The CCAP Update FEIR analysis examined the cumulative effects of the CCAP Update, and General Plan build-out taking into account recent general plan amendments. As a result of this analysis, the CCAP Update FEIR identified numerous unavoidable cumulative impacts should all the cumulative projects be implemented within the planning area. Each of the cumulative impacts were considered and discussed in the topical sections of this Draft SEIR, where project-related impacts could be reduced through mitigation measures, they were identified and applied. The CEMEX project would contribute to cumulative conditions identified in the CCAP Update FEIR as summarized below:

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

As described in the CCAP Update FEIR, the OCMP and supporting Mining Ordinance include policies and ordinances that 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 OCMP and supporting Mining Ordinance 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, Section 10-4.429(a) of the Mining Ordinance requires setbacks for mining and processing activities. Section 10-4.420 of the Mining Ordinance 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-

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]	1,870,000	2,075,269	374,000	415,054	56.1	62.26
3/Granite Esparto[8]						
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**

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

[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 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 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.

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 would extend mining at the CEMEX site for an additional 20 years, among other changes. The visual effects of the mining methods, equipment and activities, and timing for reclamation of the CEMEX site would be similar to those identified in the 1996 EIR and assumed in the CCAP Update FEIR. There would be no new aesthetics impacts because the proposed project is limited to the same overall project area as previously analyzed. The project would not change the visual character of the project site. The project proposes an increase in the total reclamation acreage of about 100 acres to incorporate area previously identified to be reclaimed

but not included in the approved total reclaimed area boundary. With implementation of 1996 EIR Mitigation Measure 4.10-1a (Condition of Approval No. 71) and other County requirements, impacts to public views would be reduced to a less-than-significant level.

The proposed project requests a 20-year extension of the mining and reclamation permits. Such an extension was anticipated in the CCAP as originally approved in 1996, and examined as well in the CCAP Update FEIR, which among other things, extended the horizon year for implementation of the CCAP from 2046, as previously approved, to 2064.

Implementation of 1996 Condition of Approval No. 71 and required compliance with the policies and regulations of the CCAP, would reduce visual impacts to public views of the CEMEX site to a less-than significant level. Although cumulative visual impacts in the Cache Creek area were identified as cumulatively considerable and significant and unavoidable in the 1996 EIR and the CCAP Update FEIR, the proposed project would not worsen that effect. This Draft SEIR identifies no new or increased significant aesthetic impacts associated with implementation of the proposed project. Therefore, the project's incremental contribution to cumulative impacts to aesthetics is less than cumulatively considerable.

Mitigation Measure(s)

None required.

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

The CCAP Update FEIR analyzed the potential for continued 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 continued 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 a permanent loss of 57 acres of anticipated future reclaimed prime farmland and a temporary loss of up to 159 acres associated with new net total area of simultaneous disturbance over a 20-to-36-year period (see Impact 4.1-1 of this Draft SEIR). Upon completion of the proposed mining activities, the proposed project would reclaim 418.6 acres (51.3 percent) of 815.8 total acres to agriculture. The remaining 174 acres would be reclaimed to habitat and 204 acres to open water lake (see Table 3-1).

Mitigation Measure 4.1-1 requires the applicant to mitigate for loss of agricultural resources by protecting between 216 acres (57 + 159) and 330 acres (171 + 159) in a permanent conservation easement consistent with County regulations. 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 5-2

Implement Mitigation Measure 4.1-1a and b

Significance After Mitigation

Notwithstanding implementation of Mitigation Measure 4.1-1a and b, the project would result in a net loss of farmland, and therefore this impact is considered significant and unavoidable.

Impact 5-3: Cumulative impacts to air quality. The project's incremental contribution to the cumulative impact would be *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 4.2 of this Draft SEIR, see Impact 4.2-2. The project's incremental contribution to cumulative air quality impacts would be less than cumulatively considerable.

Mitigation Measure(s)

None required.

Impact 5-4: Cumulative greenhouse gas emissions. The project's incremental contribution to the cumulative impact would be *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 4.2 of this Draft SEIR, see Impact 4.2-5. Implementation of Mitigation Measure 4.2-5 would reduce the project's incremental contribution to cumulative greenhouse gas impacts to less than cumulatively considerable.

Mitigation Measure 5-4

Implement Mitigation Measure 4.2-5.

Significance After Mitigation

With implementation of mitigation measures identified above, the impact is considered less-than-significant.

Impact 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 continued 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 Mining Ordinance) 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 continued 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 Impact 4.2-7 of this Draft SEIR, 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 an electricity generating windmill project site, which would continue to provide electricity to the electric dredge 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. The onsite wind power 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, the project's incremental contribution to cumulative energy impacts would be less than cumulatively considerable.

Mitigation Measure(s)

None required.

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

As demonstrated in this Draft SEIR, the proposed project would comply with all applicable County regulations related to biological resources, and would be consistent with the CCAP. Furthermore, this Draft SEIR includes additional project-specific mitigation measures to ensure that impacts to biological resources are less-than-significant. Therefore, the project's incremental contribution to cumulative impacts to biological resources would be less than cumulatively considerable.

Mitigation Measure 5-6

Implement Mitigation Measures 4.3-1(a-d), 4.3-6(a-c), and 4.3-7.

Significance After Mitigation.

With implementation of mitigation measures identified above, the impact is considered less-than-significant.

Impact 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 Mining Ordinance regulations related to preservation of cultural resources, including Mining Ordinance 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, CO-A64 and CO-A69 require review of project areas with the Northwest Information Center (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 continued 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.

Condition of Approval Nos. 72 through 76 of the 1996 EIR addressed cultural resource impacts of the original project. These conditions identified compliance with the regulations summarized above as mitigation for potential impacts. Condition of Approval No. 74 also required specific actions related to a known onsite archeological resource, all of which were implemented and fully discharged prior to commencement of mining.

The potential for impacts related to disturbance of historical, archaeological, and or tribal resources associated with implementation of the proposed project is analyzed in Section 4.4 of the Draft SEIR. Compliance with Section 10-4.410 of the Mining Ordinance and implementation of Mitigation Measure 4.4-1 would ensure that potential impacts would be reduced to less than significant. Thus, continued mining and reclamation 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, the project's incremental contribution to cumulative impacts to cultural resources would be less than cumulatively considerable.

Mitigation Measure 5-7

Implement Mitigation Measure 4.4-1.

Significance After Mitigation

With implementation of mitigation measures identified above, the impact is considered less-than-significant.

Impact 5-8: Cumulative impacts to geological and paleontological resources. The cumulative impact is *less than significant*.

The CCAP Update FEIR concluded that continued 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 Mining Ordinance 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 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 unknown paleontological resources, mitigation has been included that would require a protocol for discovery of any resources. Based on the above, the project's incremental contribution to cumulative impacts to geology, soils, seismicity, mineral resources, and paleontological resources would be less than cumulatively considerable.

Mitigation Measure 5-8

Implement Mitigation Measure 4.5-5.

Significance After Mitigation

With implementation of mitigation measures identified above, the impact is considered less-than-significant.

Impact 5-9: Cumulative impacts from hazards and 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 Mining Ordinance regulations related to hazards, including Mining Ordinance Sections 10-4.403 and 10-4.415. The CCAP Update FEIR concluded that, with compliance with applicable regulations, continued 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

4.9 of this Draft SEIR, project-specific impacts related to hazards and hazardous materials were found to be less than significant.

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. Based on the above, the project's incremental contribution to cumulative impacts related to hazardous materials transport, storage, and use would be less than cumulatively considerable.

Mitigation Measure(s)

None required.

Impact 5-10: Cumulative impacts to hydrology and water quality. The project's incremental contribution to the cumulative impact is *less than cumulatively considerable*.

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 and/or promoted the generation of elevated levels of methylmercury in the wet pit lakes. However, the CCAP Update FEIR concluded that with compliance with County ordinances related to water quality, continued 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: Mining Ordinance Sections 10-4.413, 10-4.415, 10-4.417, 10-4.427, 10-4.437, and 10-4.438; and Reclamation Ordinance 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 Mining Ordinance and the Reclamation Ordinance 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.

As described in Impact 4.6-1 of this Draft SEIR, the proposed project would increase the acreage of reclaimed wet pit lakes (relative to the reclamation plan considered in the 1996 EIR) and these lakes may be found to contain elevated levels of methylmercury in the future. However, Section 10-5.517 of the Reclamation Ordinance requires specific monitoring activities and lake management efforts (including remediation if necessary) if elevated levels are identified. Compliance with Section 10-5.517 would ensure that potential project-level impacts related to violation of water quality standards or waste discharge requirements associated with elevated levels of methylmercury would remain less than significant. Potential generation of methylmercury is dependent on the specific physical properties of each wet pit lake in the CCAP area, and conditions in one lake would not affect conditions in another lake with respect to methylmercury generation. In addition, each wet pit lake in the CCAP area would be similarly managed and subject to the monitoring (and remediation actions, if needed) of Reclamation Ordinance Section 10-5.517. The CCAP Update EIR found that the contribution of the CCAP Update to the regional water quality impact is not cumulatively considerable. Similarly, based on the above, the project's contribution to the regional water quality impact would be less than cumulatively considerable.

Groundwater

The CCAP Update FEIR concluded that given compliance with applicable regulations from the Mining Ordinance and Reclamation Ordinance, 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 in Section 4.6 of this Draft SEIR, 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 because there are no off-site wells within this distance. In addition, the project would not adversely affect groundwater quality. Thus, the project's contribution to cumulative impacts to regional groundwater recharge would be less than cumulatively considerable.

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 Mining Ordinance 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 existing or future wet pits. 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 project's contribution to the impacts to regional drainage patterns would be less than cumulatively considerable.

Conclusion

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 5-10

Implement Mitigation Measure 4.6-6.

Significance After Mitigation

With implementation of mitigation measures identified above, the impact is considered less-than-significant.

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

The CCAP Update FEIR evaluated cumulative land use impacts related to continued 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 Mining Ordinance and Reclamation Ordinance regulations. As discussed in Chapter 4.9 of this Draft SEIR, 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.

Impact 5-12: Cumulative impacts from noise and vibration. The project's incremental contribution to the cumulative impact is *less than cumulatively considerable*.

Per the CCAP Update FEIR, off-channel mining operations within the OCMP area generate 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.

The potential for impacts related to noise and vibration associated with implementation of the proposed project is analyzed in Section 4.7 of the Draft SEIR. Compliance with Section 10-4.421 of the Mining Ordinance would ensure that potential impacts would be reduced to less than significant. The CEMEX mining operation has been in operation since the 1970's and was already operating when the General Plan and CCAP Update EIRs were prepared. The project proposes to extend mining and reclamation activities for an additional 20 years which is allowed under the CCAP. Thus, continued mining and reclamation as part of the proposed project would not create a new significant cumulative impact beyond what was analyzed in the CCAP Update FEIR which analyzed extending the mining program through 2068. Based on the above, the project's incremental contribution to cumulative impacts to noise and vibration would be less than cumulatively considerable.

Mitigation Measure(s)

None required.

Impact 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 new change in the need for police protection. Because continued 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 proposed project is a continuation of an existing operation and proposes no new changes that would result in need for public services (e.g., water supply, wastewater treatment plant capacity).

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.

Impact 5-14: Cumulative impacts to transportation and circulation. The project's incremental contribution to the cumulative VMT impact is cumulatively considerable. The project's incremental contribution to LOS policy conflicts is *less than cumulatively considerable*.

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 continued implementation of applicable Mining Ordinance 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.

Impact 4.8-1 identifies a significant and unavoidable impact related to VMT. 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). Given that VMT increases resulting from the proposed project would contribute to VMT in the region, the incremental contribution of the project would be considered cumulatively considerable.

Impact 4.8-4 identifies a significant and mitigatable impact related to LOS policy conflict for the intersection of SR 16 and County Road 96. The analysis provides support for the necessary exception and the mitigation measure identifies the required findings.

Mitigation Measure(s)

For increased VMT, implement Mitigation Measure 4.8-1.

Mitigation Measure 5-14

For LOS policy conflicts, implement Mitigation Measure 4.8-4.

Significance After Mitigation

With implementation of mitigation measures identified above, the impact related to increased VMT remains significant and unavoidable, and the impact related to LOS policy conflict is reduced to less-than-significant.

5.5 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL 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 CCAP Update FEIR included a discussion and substantiation 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.

Use of Nonrenewable Resources

Implementation of the proposed project would result in the irreversible commitment of natural resources as it would include commercial mining of aggregate resources and the use of fossil fuels for those activities. Amending the permits for the proposed project would allow mining and processing of additional off-channel mineral resources that would not be replenished within near-term planning horizons. Continuation of the CEMEX mining operations would decrease the availability of aggregate resources in the future. However, the project is consistent with policies of the State and County recognizing that the extraction of minerals is an essential economic activity (as codified in PRC Section 2711(a) and Section 10-4.103 of the County Mining Ordinance). Additionally, the CEMEX site is located within the CCAP area, a geologic setting that is known to contain significant aggregate resources. One of the primary objectives of the ongoing CCAP program is to allow for the managed extraction of a controlled amount of the sand and gravel resources within designated areas under stringent regulations. The requested permit extension would allow for continued mining of a valuable and feasibly available aggregate resource in an already disturbed area. Section 10-4.411.1 of the Mining Ordinance recognizes this is desirable in that it precludes new mining operations elsewhere:

> 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.

As such, impacts resulting from use of nonrenewable resources associated with the proposed project would be a less-than-significant impact.

Changes in Land Use Which Would Commit Future Generations

Land uses at the project site are already committed to mining, with reclamation to agriculture, habitat, and open space uses. While the project proposes various project modifications, there is no substantive change in land use from existing and/or approved conditions that would result in a significant or irreversible change in this category of impact.

Irreversible Changes from Environmental Accidents

The presence of mercury in the watershed is a pre-existing historic condition. As explained in Impact 4.6-1, 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. 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.

The mercury monitoring program established: monitoring protocols, ambient thresholds, monitoring requirements by phase, required reporting, required responses, triggers for expanded analysis, lake management requirements, and remediation requirements. If methylated mercury in lake fish exceeds ambient levels in the watershed the aggregate operators must address it with a Lake Management Plan (LMP). Options include water mixing, management of water chemistry, fish removal, and filling the lake. The County won't release reclamation bonds or accept lake dedications without acceptable monitoring history and/or a successful lake management plan. Operators are required to establish a mechanism to pay for their individual Lake Management Plans in perpetuity. In addition, the County collects a gravel mining Maintenance and Remediation Fee for use should unforeseen management issues occur in reclaimed lakes owned by the County.

If a lake exhibits exceedances over ambient for two or more consecutive years, the program requires:

- Additional monitoring
- Expanded analysis
- Lake Management Plans

As explained under Impact 4.6-1 the detected level of methylmercury in the existing CEMEX Phase 3-4 lake has remained elevated over comparable creek baseline samples for a majority of fish sample types for four sampling years which has triggered additional monitoring and expanded analysis, and will require if proposed reclamation to agriculture in that area is not approved.

Management options may differ for different pits based on site conditions. Also, the options may differ during mining, verses during idle periods, verses after mining. For this reason, LMPs may be multi-part or phased to reflect this.

Based on the County's regulatory requirements and controls, no significant irreversible change would occur.

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