

Chapter 4 Cumulative Impacts

4.1 Introduction

According to the Council of Environmental Quality NEPA regulations:

Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time. (40 CFR 1508.7)

According to the State CEQA Guidelines:

Cumulative impacts refers to two or more individual effects, which, when considered together, are considerable or which compound or increase other environmental impacts. 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. (Section 15355.)

This chapter constitutes the NEPA and CEQA cumulative analysis. It evaluates cumulative effects associated with the proposed action/project (referred to as the proposed project in this chapter) for each environmental issue evaluated in Chapter 3 of this joint document. The study area analyzed in this evaluation is the 199-ha (492-ac) MC&FP area (see Figure 3.1-3). This area was selected for analysis because it is cumulative development in this area that would be supported by the proposed project.

4.2 Growth Forecast for Traffic, Air Quality, and Noise Evaluations

For traffic, air quality, and noise, the 2015 cumulative analyses are presented in detail in sections 3.4, 3.5, and 3.6, respectively, of Chapter 3. The 2025 cumulative analyses for traffic, air, and noise are presented in sections 5.4, 5.5, and 5.6,

respectively, of Chapter 5. The 2015 and 2025 analyses for these issues assumed a certain level of cumulative background growth. The traffic volume forecasts were generated using a modified version of the regional SACMET travel demand model that is maintained by SACOG.). The modified SACMET model used 2025 market-based levels of land use development projected by SACOG. These projections for El Dorado County were generally allocated to traffic analysis zones based on the 1996 County General Plan. The SACMET model assumes a County population of approximately 213,000 in 2025. The 1996 General Plan was based on 2015 projections and is generally considered to be a “high-growth” general plan. The General Plan update is based on a 2025 population growth projection of approximately 200,000. Therefore, the land use inputs to the SACMET model represent a reasonable worst-case assumption, and analysis based on this assumption avoids understating the significance of future cumulative impacts.

A summary of the other key modifications is provided below.

- **Split Traffic Analysis Zones (TAZs).** SACMET TAZs in the vicinity of the study area were split to increase the level of land use detail in the study area.
- **Increase Future-Year Households and Employment.** Potential development in the vicinity of the interchange was added to the future-year socioeconomic forecasts of households and employment.
- **Modify Roadway Networks.** The SACMET roadway networks were modified to improve the level of detail in the study area and to maintain consistency with the existing and planned roadway systems.

After making these modifications, a.m. and p.m. peak-hour traffic volume forecasts were generated for design year (2025) conditions. Interim year (2015) traffic volume forecasts were developed through linear interpolation. For all of the 2015 and 2025 study conditions, the analysis assumed that the U.S. 50/Forni Road/Placerville Drive interchange would be improved by 2015 according to the Alternative 1 design contained in the *Western Placerville Interchanges Project Study Report* (Dokken Engineering 2001).

4.3 Growth Forecast for Other Environmental Issues

For the other environmental issues, cumulative impacts are summarized from the Missouri Flat Area MC&FP program EIR (EDAW 1998). In December 1998, the County adopted the MC&FP as an implementation measure of the General Plan to

fund more than \$40 million for improvements to roadway facilities in the MC&FP area. The MC&FP EIR assumes development of 199 ha (492 ac) of land in the Missouri Flat area designated on the General Plan as *commercial* (see Figure 3.1-3) and approximately 11.0 ha (26.7 ac) of land associated with proposed MC&FP-funded roadway improvements. (EDAW 1998)

4.4 Assessment of Cumulative Impacts

4.4.1 Land Use, Planning, and Growth

The MC&FP EIR states that retail development and construction of roadway improvements in the MC&FP area would result in a significant cumulative conversion of approximately 52.7 acres of primarily vacant land in an area that generally contains commercial and rural residential uses. Proposed development would occur in an area that has changed and is continuing to change from being predominantly of a rural residential character to one with urban uses. Planned roadway improvements in the MC&FP area could also result in partial takes of land from parcels that are developed. Land use conflicts between proposed commercial uses and existing rural residential uses could occur. Temporary construction impacts related to construction noise, dust, and effects on access to businesses and residential uses may also occur. (EDAW 1998.)

The proposed project contributes a minor increment to these permanent (change in land uses) and temporary (construction-related) impacts. The project's incremental contribution to direct impacts on land uses is judged to be less than cumulatively considerable. Implementation of the project Traffic Management Plan would reduce the project's incremental contribution to construction impacts to a less-than-cumulatively-considerable level.

4.4.2 Community Impacts

The MC&FP area includes approximately 65-70 commercially-designated parcels that are currently in rural residential uses. Future retail and roadway development in the MC&FP area could result in the cumulative displacement of residences on commercially-designated land; the precise number of residences that would be displaced would depend on where retail development ultimately occurs. Private retail development would afford private land owners with the choice of whether or not to

sell their property. However, in the case of public roadway improvements, affected landowners may or may not have this choice if the County employs eminent domain in the interest of the greater public welfare. (EDAW 1998.) The minor and incremental contribution of the proposed U.S. 50/Missouri Flat Road interchange improvement project to this cumulative effect would be mitigated to a less-than-cumulatively-considerable level through El Dorado County's implementation of the Uniform Relocation Assistance and Real Property Acquisition Policies Act requirements. In compliance with the Act, the County would carry out a relocation plan to help eligible individuals move with as little inconvenience as possible. Appraisals to determine actual market value would be conducted for each property to be relocated.

4.4.3 Relocation

See section 4.4.2 above.

4.4.4 Traffic and Transportation/Pedestrian and Bicycle Facilities

The 2015 and 2025 analyses conducted for traffic and contained in sections 3.4 and 5.4, respectively, are inherently cumulative in nature. In 2015 and 2025, accounting for all proposed retail and roadway development in the MC&FP area, the proposed project is expected to result in acceptable LOS and weaving conditions at all studied ramp junctions and acceptable LOS at all studied arterial intersections. The project, by definition, improves traffic conditions. Therefore, the project does not incrementally contribute to cumulative impacts caused by traffic-generating development.

Construction of transportation improvement projects along the U.S. 50 corridor could result in temporary disruption of traffic circulation along this corridor. To the extent that these projects have overlapping construction windows with the proposed project, the proposed project would incrementally contribute to this short-term disruption. Implementation of Mitigation Measure LU6a ("Implement a Traffic Management Plan") would mitigate the project's incremental contribution to this impact to a less-than-cumulatively-considerable level. If each proposed project implements such a plan, cumulative impacts would be minimized.

4.4.5 Air Quality

The 2015 and 2025 analyses conducted for air quality and contained in sections 3.5 and 5.5, respectively, are inherently cumulative in nature and are based on the 2015 and 2025 traffic impact analyses. Phase 1 of the proposed project is found to conform with the 2025 MTP and, therefore, does not cause or contribute to a violation of the federal ozone air quality standard. In addition, the project would not cause a new violation or contribute to an existing violation of CO standards in 2015 or 2025. Therefore, although the project would incrementally increase CO concentrations for sensitive receptors, its incremental contribution to cumulative operational-related air quality impacts would be less than cumulatively considerable.

Cumulative development in the MC&FP area would also result in an increase in exhaust, dust, and other miscellaneous short-term emissions associated with construction activity of proposed development. The proposed project would incrementally contribute emissions of ROG, NO_x, and PM₁₀ during its construction. Implementation of Mitigation Measures AQ-2a (“Mitigate Construction Equipment Exhaust Emissions Consistent with EDCAPCD Requirements”) and AQ-3a (“Comply with Rule 403 of the South Coast AQMD, as required by the EDCAPCD”) would mitigate the project’s incremental contribution to cumulative short-term emissions to a less-than-cumulatively-considerable level.

4.4.6 Noise

The 2015 and 2025 analyses conducted for noise and contained in sections 3.6 and 5.6, respectively, are inherently cumulative in nature and are based on the 2015 and 2025 traffic impact analyses. The increase in future no-project noise levels in 2015 and 2025 resulting from the proposed project is expected to be 1 dB or less (imperceptible). Therefore, the project’s incremental contribution to cumulative noise levels is less than cumulatively considerable under CEQA.

Cumulative development in the MC&FP area would also result in short-term noise increases during construction and could result in noise impacts related to blasting, if blasting is required to build any future improvements (Blasting is unlikely to be required for retail development and may only be required for roadway improvements if the blasting of rock is needed.) The proposed project would incrementally contribute to short-term noise increases during its construction. Implementation of Mitigation Measures Measure N1a (“Employ Noise-Reduction Construction Measures”) and N2a (“Employ Measures to Limit Blast Noise”) would mitigate the

project's incremental contribution to cumulative noise impacts to a less-than-cumulatively-considerable level.

4.4.7 Hydrology, Water Quality, and Floodplains

Proposed development and roadway improvements in the MC&FP area would increase site imperviousness and, therefore, add to the amount of runoff. Small local drainage systems, such as Mounds and Indian Creek, and existing culverts may not be able to accommodate the increase in runoff due to the development of the area. Some existing culverts may be incapable of accepting the increased runoff. The proposed project would incrementally contribute to the increase in impervious surfaces and additional runoff. The hydrologic impacts resulting from the incremental stormwater runoff are considered to be less than cumulatively considerable because project drainage and flow control features would be implemented according to the approved project drainage plan (Quincy Engineering 2002).

After construction of retail projects and roadway improvements in the MC&FP area, long-term water quality could be affected by increased runoff. Water quality would be affected following site development by the introduction of urban pollutants, such as vehicles oils and greases, and heavy metals on roads, parking lots, and driveways; fertilizers used on site landscaping; and toxic compounds released from auto maintenance areas. Uncontrolled, these urban pollutants could directly or indirectly affect aquatic life in the Weber Creek watershed over the approximately 20-year life of the MC&FP. (EDAW 1998.) The proposed project would incrementally contribute to this cumulative effect on water quality. The incremental long-term water quality impacts associated with the project are considered less than cumulatively considerable because stormwater quality BMPs would be implemented, as identified in the project SWPPP.

During the rainy season, development of retail uses and roadway improvements in the MC&FP area could affect water quality during construction due to grading activities that could increase sedimentation and operation and maintenance of construction vehicles and equipment that could release contaminants. (EDAW 1998.) The proposed project would incrementally contribute to this cumulative short-term water quality effect. Implementation of Mitigation Measures BR3f (Limit In-water Construction Activities to the Summer Low or No-Flow Period”), BR3g (“Ensure that Turbidity Increases do not Exceed Central Valley Regional Water Quality Control Board Standards”), BR3h (“Develop and Implement a Toxic Materials

Control and Spill-Response Plan”), and BR3j (“Store Hazardous Materials in an Approved Storage Facility”) would reduce the project’s incremental contribution to a less-than-cumulatively-considerable level.

4.4.8 Wildlife and Botanical Resources, Threatened and Endangered Species, and Wetlands and Waters of the U.S

Cumulative development in the MC&FP area could result in the loss of waters of the U.S., including jurisdictional wetlands and riparian habitat; oak woodland habitat; VELB and its habitat; habitat for CRLF, foothill yellow-legged frog, and northwestern pond turtle in riparian and wet meadow, and upland habitat adjacent to permanent ponds or slow-moving streams; raptor foraging habitat, and nesting swallows. The Final Biological Assessment prepared for the proposed project (Jones & Stokes 2003) describes impacts to biological resources that could occur in the project area with cumulative development. These impacts are summarized below:

- An EIR for the Wal-Mart project was certified in 1998. The Draft EIR (EDAW 1998c) states that the project site and vicinity contain potentially suitable habitat for the California red-legged frog including riparian vegetation and wet meadow habitat (including 2 artificial stock ponds onsite and slow-moving perennial streams), but that the project is not expected to affect the California red-legged frog. Two diurnal and 2 nocturnal surveys were conducted for California red-legged frog at the project site, but no adult frogs or egg masses were found. Also, no frogs were heard at the project sites. The VELB also is not anticipated to occur on the site. No elderberry shrubs were observed on the project site or surrounding areas. (EDAW 1998c). (A blue elderberry shrub was found just outside the U.S. 50/Missouri Flat Road interchange project area; see Impact BR8.)
- An analysis of impacts to biological resources in the Raley’s Supermarket project area has not been conducted.
- An EIR for the El Dorado Villages shopping center was certified in 1998. The Draft EIR for this project (contained in the MC&FP EIR in EDAW 1998a) concludes that development of this project would remove less than 0.4 ha (1 ac) of an isolated wet meadow habitat, which could support California red-legged frogs. The wet meadow habitat is isolated from other wetlands and includes minimal aquatic vegetation. The Final EIR (EDAW 1998b) notes that protocol-level California red-legged frog surveys were conducted of the project site in May 1998 consisting of 2 diurnal and 2 nocturnal surveys. No California red-legged frogs or any other species of frogs were observed at the project site during these surveys. The aquatic habitat was considered degraded, containing a minimal amount of emergent vegetation. No rootballs, overhanging banks, or dense

streamside vegetation were present. The survey results conclude that the project site does not provide suitable habitat for the California red-legged frog (EDAW 1998b).

Focused surveys for VELB and its habitat were conducted at the project site in April 1998 and no elderberry shrubs were found to support this species on the site (EDAW 1998a).

- An EIR for Sundance Plaza was certified in 1998. The Draft EIR for this project (contained in the MC&FP EIR in EDAW 1998a) concludes that the project site contains 1.5 ha (3.74 ac) of riparian woodland, seasonal wetland, and an unvegetated channel associated with Mound Springs Creek, an intermittent drainage that bisects the site. Vegetation in this area is limited. The Final EIR (EDAW 1998b) notes that protocol-level California red-legged frog surveys were conducted of the project site in May 1998 consisting of 2 diurnal and 2 nocturnal surveys. No California red-legged frogs or any other species of frogs were observed at the project site during these surveys. The aquatic habitat, which contained a minimal amount of emergent vegetation, was considered to be degraded. No rootballs, overhanging banks, or dense streamside vegetation were present. The survey results conclude that the project site does not provide suitable habitat for the California red-legged frog (EDAW 1998b). Focused surveys for VELB were conducted at the project site in April 1998 and no elderberry shrubs were found to support this species on the site (EDAW 1998a).

In addition to these potential impacts, impacts to biological resources resulting from future commercial development on other sites could also occur; these impacts cannot be determined until specific proposals are known and site surveys are conducted.

The MC&FP area contains aquatic and upland habitat potentially suitable for California red-legged frogs that could be removed or adversely affected with proposed retail development. Although California red-legged frogs have not been documented in the MC&FP area, the closest reported sightings are approximately 12.8 km (8 mi) upstream of the MC&FP area to the east, on the north and south forks of Weber Creek.

Reconnaissance-level surveys for elderberry shrubs were conducted of the MC&FP area during preparation of the MC&FP Draft EIR. Although no elderberry shrubs were found during these surveys, isolated shrubs could occur in the MC&FP area, such as the one found adjacent to the U.S 50/Missouri Flat Road interchange project area.

The proposed project would incrementally affect these biological resources. Implementation of Mitigation Measures BR3a (“Conduct a Biological Resources

Education Program for Construction Crews and Enforce Construction Restrictions”); BR3b (“Retain a Biologist to Monitor Construction Activities within Weber Creek”); BR3c (“Install Construction Barrier Fencing Around the Construction Area to Protect Sensitive Biological Resources That Will Be Avoided”); BR3d (“Conduct Preconstruction Surveys and Minimize Mortality to CRFL and Foothill Yellow-Legged Frog”); BR3e (“Conduct Preconstruction Surveys to Minimize Mortality to Northwestern Pond Turtle”); BR3f-j, as described above; BR3k (“Minimize Long-Term Impacts on Woody Riparian Vegetation and Associated Habitat”); BR3l (“Enhance Riparian Habitat by Developing and Implementing a Riparian Restoration Plan”); BR 5a (“Minimize and Compensate for Impacts on Blue Oak Woodlands and Individual Native Oak Trees by Replanting Oaks”); and BR 11a (“Avoid Construction During Swallow Nesting Season or Remove Empty Nests and Prevent New Nesting”) would reduce the project’s incremental impact to less than cumulatively considerable. Implementation of similar mitigation measures for each proposed development affecting biological resources would mitigate the cumulative effect on biological resources.

4.4.9 Historic and Archeological Preservation

Proposed development in the MC&FP area has the potential to damage cultural resources located on or under the construction sites if these resources are not properly recorded or removed. No known cultural resources are known to occur within the proposed project area. The project’s incremental contribution to potential adverse effects on unknown cultural resources would be avoided by implementing Mitigation Measure CR1a (“Implement a Plan for the Unanticipated Discovery of Cultural Resources”). If each proposed development implements this measure, cumulative loss of cultural resources would not occur.

4.4.10 Hazardous Materials and Earth Resources

Proposed development in the MC&FP area could result in the following significant cumulative impacts on earth resources and related to hazardous materials (EDAW 1998):

- Low to moderate potential for severe ground shaking due the area’s proximity to the Foothills fault zone;

- Moderate potential for ground instability on property with steeper slopes (20% and greater) and a high potential for erosion on unprotected slopes and soil surfaces during the rainy season; and
- Potential exposure of construction workers to hazardous materials during construction of proposed development and roadway improvements.

The proposed project would incrementally contribute to these cumulative impacts. The following measures will be implemented to reduce the proposed project's contribution to these cumulative impacts to a less-than-cumulatively-considerable level:

- Conformance with Caltrans and Uniform Building Code standards would avoid the potential for structural damage and injury from ground shaking;
- Conformance with Caltrans' and the County's standard specifications for earthwork;
- Mitigation Measure ER6a: If unknown deposits of asbestos are found during construction, comply with El Dorado County's asbestos ordinance; and
- Mitigation Measure ER7a: Implement recommendations related to hazardous materials contained in the project initial site assessment (additional sampling investigations at selected sites and surveys to determine the occurrence of lead-based paint and asbestos at the Weber Creek bridges and on roadways.

The additive impacts of proposed development in the MC&FP area related to seismic safety, ground instability and erosion, and hazardous materials would also be reduced if each proposed development incorporated similar measures into project design.

4.4.11 Visual

Clearing, excavation, and grading activities associated with construction of retail development in the MC&FP area could result in adverse short-term changes to views. Short-term changes would also result from construction of roadway improvements on the Headington Road extension, El Dorado Road, U.S. 50/El Dorado Road interchange, and Missouri Flat Road north of Prospector's Plaza Drive. The addition of 1,700,000 square feet of retail projects and proposed roadway improvements in the MC&FP area would also alter the existing visual character of the area in the long-term. Future retail development and roadway improvements could also incrementally add to ambient atmospheric lighting and the reduction in the visibility of stars at night. (EDAW 1998.)

The proposed project is judged to make a less-than-cumulatively-considerable contribution to this cumulative impact for a number of reasons described in detail in section 3.11 of this joint document, including implementation of a landscaping plan and lower overcrossing at the U.S. 50 interchange, low viewer sensitivity of motorists traveling over the Weber Creek bridges and lower post-project bridge rails, and construction of improvements within the same general footprint of the existing interchange and bridges.

4.4.12 Utilities/Emergency Services

If construction overlaps with construction of other proposed development in the MC&FP area, and if these projects share common infrastructure, cumulative impacts could occur on water, wastewater, and other utility lines. Emergency response activities could be affected if multiple, concurrent projects are constructed along routes used by emergency response vehicles. The project's incremental contribution to these impacts is expected to be minor since the project includes funding for relocation of utilities. Users of these utilities would also be notified prior to the disruption of services, and emergency response providers would be notified of construction plans and schedules in advance.

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