Chapter 5
Alternatives

5.1 Introduction

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to a project or its location that could feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant environmental impacts, if any exist. According to the State CEQA Guidelines, an EIR should compare the merits of the alternatives and determine an environmentally superior alternative. The range of alternatives discussed in an EIR is governed by the *rule of reason*, which requires the identification of only those alternatives necessary to permit a reasonable choice between the alternatives and the proposed Project. An EIR need not consider an alternative that would be infeasible. State CEQA Guidelines Section 15126.6(f)(1) explains that the evaluation of project alternative feasibility can consider a number of factors, including site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, and jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise access the alternative site. Therefore, an EIR is also not required to evaluate an alternative that (1) has an effect that cannot be reasonably identified or that has remote or speculative implementation, or (2) would not achieve the basic project objectives.

5.2 Alternatives Considered

This chapter considers alternatives to the Project, including the No Project Alternative, so that decision-makers can compare the impacts of approving the proposed Project (i.e., the *2020 LA River Master Plan*) with the impacts of not approving the proposed Project (15126.6(e)(1) of the State CEQA Guidelines requires that the alternatives analysis include a discussion of a no-project alternative). As described above, the alternatives must reduce or avoid the impacts of the Project and meet the basic objectives. Therefore, pursuant to the State CEQA Guidelines Section 15126.6, the County considered the following project objectives (see Chapter 2, *Project Description*, of this EIR) with respect to developing alternatives to the proposed Project for the *2020 LA River Master Plan*.

1. Reduce flood risk and improve resiliency.
2. Provide equitable, inclusive, and safe parks, open space, and trails.
3. Support healthy connected ecosystems.
4. Enhance opportunities for equitable access to the river corridor.
5. Embrace and enhance opportunities for arts and culture.
6. Address potential adverse impacts on housing affordability and people experiencing homelessness.[1]

[1] The aim of the *2020 LA River Master Plan* objective 6, "Address potential adverse impacts on housing affordability and people experiencing homelessness," is to maintain strategies for ensuring continuing housing affordability in LA River–adjacent communities. Therefore, the use of "impacts" in objective 6 is distinct from the use of "impacts" under CEQA where, per State CEQA Guidelines Section 15358 (b), impacts analyzed under CEQA must be related to a physical change in the environment.

7. Foster opportunities for continued community engagement, development, and education.
8. Improve local water supply reliability.
9. Promote healthy, safe, clean water.

The County considered and evaluated the feasibility of alternatives that had the potential to avoid or substantially lessen the following significant adverse environmental impacts of the proposed *2020 LA River Master Plan*:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Based on the above, the following alternatives to the proposed Project have been identified and are further detailed below:

- Alternative A: No Project Alternative
- Alternative B: Channel Avoidance Alternative

5.2.1 Alternative A – No Project

As required by State CEQA Guidelines Section 15126.6(e), a No Project Alternative:

> …shall be evaluated along with its impact. The purpose of describing a No Project Alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The No Project Alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline.

Alternative A: No Project (No Project Alternative) assumes that development along the LA River would continue in accordance with the adopted *1996 Los Angeles River Revitalization Master Plan* (the 1996 Master Plan). Under the No Project Alternative, comprehensive improvements, guided by the nine multi-benefit goals of the proposed *2020 LA River Master Plan*, consistent with the six kit of parts (KOP) categories and common elements would not occur.

Under the No Project Alternative, the original 1996 Master Plan that was adopted by the County Board of Supervisors in 1996 will continue to serve as the framework for enhancing the LA River. Public Works, Department of Regional Planning, and Department of Parks and Recreation developed the 1996 Master Plan as a multi-objective program for the LA River while recognizing its primary purpose for flood management.

The 1996 Master Plan focuses on the approximately 51-mile-long LA River and included 9 miles of the Tujunga Wash from Hansen Dam to the LA River, as well as the adjacent lands of these two water resources in the County. Specifically, locations within approximately 0.5 mile on each side of the centerline of the river compose the study area in the 1996 Master Plan, compared to the 2-mile-wide (1 mile on each side of the river) study area corridor for the *2020 LA River Master Plan*. Within this area, 13 cities are identified in the 1996 Master Plan as jurisdictions through which the river and its tributaries pass: Bell, Bell Gardens, Burbank, Compton, Cudahy, Glendale, Long Beach, Los Angeles, Lynwood, Maywood, Paramount, South Gate, and Vernon, along with unincorporated County areas. The 1996 Master Plan divides the river and the Tujunga Wash into six reaches beginning in Long Beach, continuing upstream through the mid-cities, downtown Los Angeles, Glendale Narrows, San Fernando Valley, and Tujunga Wash areas.

The 9-mile Tujunga Wash is not included in the *2020 LA River Master Plan* and, under the No Project Alternative, planning for the Tujunga Wash would no longer be guided by the 1996 Master Plan. Instead, the planning framework for the Tujunga Wash would be informed by the more recently developed and issued 2020 *Upper Los Angeles River and Tributaries Revitalization Plan*, developed by the Upper Los Angeles River and Tributaries Working Group in the Santa Monica Mountains Conservancy, in accordance with Assembly Bill 466. Therefore, the Tujunga Wash is not considered part of the No Project Alternative. In addition, under the No Project Alternative, other plans for the LA River corridor will continue to be implemented, as driven by the respective planning agencies. Examples of such plans include the City of Los Angeles 2007 *Los Angeles River Revitalization Master Plan*, the City of Los Angeles and U.S. Army Corps of Engineers 2015 *Los Angeles River Ecosystem Restoration Integrated Feasibility Report*, and the Lower LA River Implementation Advisory Group's 2017 *Lower LA River Revitalization Plan.*

The 1996 Master Plan included 101 potential projects, including development of new or improved bikeways, trails, parks, bridges, and signage as well as developing studies, Earth Day events, landscape improvements, nursery gardens, rental facilities, and food concessions. Since 1996, over $100 million has been designated for the development of projects along the river. Project types have included bikeways, parks, signage, studies, Earth Days, and other landscape improvements. Four demonstration projects identified in the 1996 Master Plan have been completed; in addition, approximately 45 of the recommended site-specific projects have been completed or are in final design/construction.

All projects along the LA River need to conform with the 1996 Master Plan documents, which include the 1996 Master Plan, Landscape Guidelines, Sign Guidelines, and Maintenance Guidelines. In addition, the 1996 Master Plan notes that all proposed recreational and river enhancements under the 1996 Master Plan would be designed in accordance with the U.S. Army Corps of Engineers and County flood management standards.

Overall, the 1996 Master Plan advocates environmental enhancement, recreational opportunities, and economic development with a focus on improving the river without compromising the primary purpose of providing flood management. The 1996 Master Plan's vision comprises enhancement of the river corridor with open space and environmental, recreational, economic development, and

educational opportunities and encouragement of compatible developments along the LA River and Tujunga Wash. Specifically, the 1996 Master Plan identifies the following objectives:

1. Ensure flood control and public safety needs are met.
2. Improve the appearance of the river and the pride of local communities in it.
3. Promote the river as an economic asset to the surrounding communities.
4. Preserve, enhance, and restore environmental resources in and along the river.
5. Consider stormwater management alternatives.
6. Ensure public involvement and coordinate Master Plan development and implementation among jurisdictions.
7. Provide a safe environment and a variety of recreational opportunities along the river.
8. Ensure safe access to and compatibility between the river and other activity centers.

In comparison to the *2020 LA River Master Plan*, the original 1996 Master Plan did not identify specific goals focused on housing affordability, ecosystems, and water supply.

To achieve its overall objectives, the 1996 Master Plan included six major categories of recommended activities based on public outreach and coordination with various stakeholders, including agencies, interest groups, and community groups. Each of the six major categories of activities below includes a list of specific project recommendations for that category:

a. **Aesthetic Improvements**

- Mapping and signage system consists of creating a recognizable river logo to be placed at major trail entrances and interpretation sites.
- Tree plantings and aesthetic enhancement programs recommended in conjunction with existing and proposed entrances to the river.
- River art recommended for a number of locations along the LA River, including ten potential murals.
- Graffiti abatement programs recommended for selected stretches of the LA River.

b. **Economic Development**

- Enhancement of river frontage property at eight distinct geographic areas to create attractive frontage for new garden office, residential, and other uses.
- Major gateways at six locations along the LA River.
- Minor gateways recommended at three locations in conjunction with redevelopment projects proposed by local jurisdictions or as a connection between compatible land uses in neighboring jurisdictions.
- Concessionaire programs recommended at 13 potential locations where the County and individual cities could establish or expand concessionaire programs to provide for the sale of food and/or the rental of bicycles and skates.

c. **Environmental Enhancements**

- Tree planting encouraged to establish nearly continuous greenway of trees adjacent to the LA River and Tujunga Wash. Planting of vegetation is proposed in flat areas adjacent to levees.

- Habitat restoration identified as high potential for Dominguez Gap, Sepulveda Basin, Taylor Yard and estuary.
- Habitat protection to continue by County and U.S. Army Corps of Engineers for ongoing operations and maintenance on the river while considering measures to protect wildlife in the urban environment from negative impacts.
- Water quality and environmental education recommends initiating water quality and environmental education programs by developing interpretative sites at Hansen Dam, Dominguez Gap, Pacoima and Tujunga Washes, and other appropriate facilities in urban areas.

d. **Flood Management and Water Conservation**

- Allow for additional stormwater detention/retention (public/private facilities).
- Create additional recreational facilities.
- Create wildlife and native riparian habitats.

e. **Jurisdiction and Public Involvement**

- Ensure public involvement and coordinate master plan development and implementation among jurisdictions.

f. **Recreation**

- Regional trail system improvements that will join existing trails and enhance potential trail opportunities. In addition, opportunities to develop on-street bike lanes to connect other nearby recreation and public facilities to the existing LARIO Trail and proposed improvements have been identified throughout the 1996 Master Plan study area.
- Interpretative sites include development of 27 interpretive sites, each offering a unique experience related to topics such as history, culture, environment, river engineering, water conservation, or industrial development.
- Vista points at many bridges over the LA River.
- Development of recreation facilities in areas adjacent to public rights-of-way (ROWs), wherein the 1996 Master Plan identifies eight opportunities for development of parks to serve local neighborhoods in association with locations that are near or adjacent to the LA River.

The majority of the projects analyzed in the 1996 Master Plan are similar to those described in KOP Category 1, KOP Category 3, and the Common Elements Typical Project, as they included similar design components. Projects proposed under the 1996 Master Plan that would be similar to the design components of KOP Category 1 include trail improvements, connection of trails, enhancements to access points, landscape improvements, and habitat improvements. The 1996 Master Plan proposed projects that would be similar to the design components of KOP Category 3 including pedestrian and bicycle bridges. Projects that would be similar to the design components of the Common Elements Typical Project would include signage, bike/skate rental facilities, and food concessions. Additionally, some projects would be similar to KOP Category 6 design components because they included components such as nursery gardens, open air markets, and river-adjacent parks.

The 1996 Master Plan does not include projects that would fall under KOP Categories 2, 4, or 5. Overall, disturbance to the channel under the 1996 Master Plan would be limited to the construction of bridges. Other notable differences are that the 1996 Master Plan only includes 13 cities rather than 17 cities covered under the *2020 LA River Master Plan*. Furthermore, the 1996 Master Plan project area extended 0.5 mile on either side of the LA River, whereas the proposed Project includes an area of 1.0 mile on either side of the river. Therefore, the impacts discussed below for Alternative A are relevant only for the 13 cities described in the 1996 Master Plan, a smaller geographic area than the proposed Project.

5.2.2 Alternative B – Channel Avoidance Alternative

Under the Channel Avoidance Alternative, no channel modification associated with the *2020 LA River Master Plan* would occur. As such, no improvements would occur within bank-to-bank of the LA River. Later activities under the Channel Avoidance Alternative would occur from top of levee up to the 1-mile study area boundary on each side of the LA River. There would be no *2020 LA River Master Plan* projects within the channel.

Alternative B would include implementation of only five of the six KOP categories compared to the *2020 LA River Master Plan*; these include KOP Category 1: Trails and Access Gateways, KOP Category 3: Crossings and Platforms, KOP Category 4: Diversions, KOP Category 5: Floodplain Reclamation, and KOP Category 6: Off-Channel Land Assets. These would be implemented only between top of levee and up to the boundary of the 1-mile study area on each side of the LA River. The Channel Avoidance Alternative would not include KOP Category 2, which includes channel modifications, and would also not include implementation of the channel access design component under KOP Category 1. Therefore, the following design components under KOP Category 2 would not be implemented under the Channel Avoidance Alternative: terracing the banks, constructing dams or deployable barriers, modifying the channel for erosion protection, and redirecting water flow. In addition, other channel modifications including changing the materiality of the channel (e.g., adding or removing concrete depending on capacity requirements) would not be implemented. For KOP Category 3, no in-channel structural supports would be included; therefore, all interventions would require a clear span structure. For KOP Categories 4 and 5, all design components would require using existing connections or outflows if water were to move between the channel and a diversion or floodplain project.

Under the Channel Avoidance Alternative, a total of 107 projects would be implemented, similar to the *2020 LA River Master Plan;* however, none of these would include any activities within bank-to-bank of the LA River. Similar to the proposed Project, this alternative would also incorporate common elements along the LA River and would be subject to the relevant *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, *Project Description*, and included in Appendix B) recommendations and best management practices (BMPs).

The Channel Avoidance Alternative would include only the KOP categories and design components listed in Table 5-1.

Table 5-1. KOP Categories and Design Components for the Channel Avoidance Alternative

Kit of Parts	KOP Category 1: Trails and Access Gateways	KOP Category 3: Crossings and Platforms (all would require clear span structures for the channel avoidance alternative)	KOP Category 4: Diversions (all would require using existing connections and outflows; no changes to the channel would be made)	KOP Category 5: Floodplain Reclamation	KOP Category 6: Off-Channel Land Assets
Multi-Benefit Design Components Elements	River gateway	Pedestrian bridge	Diversion pipe	Side channel	Urban agriculture/ composting
	Pedestrian trail	Bike bridge	Side channel	Wetland	Solar power
	Bike trail	Equestrian bridge	Pump	Naturalized bank	Natural treatment system
	Equestrian trail	Multi-use bridge	Diversion channel	Braided channel	Wetland
	Equestrian facility	Cantilever	Diversion tunnel	Field	Recreation field
	Multi-use trail	Platform	Overflow weir	Recreation field	Surface storage
	Light tower/water tower	Habitat/wildlife bridge	Underground gallery	Storage (surface)	Subsurface storage
	Lookout				Injection well
	Boardwalk				Water treatment facility
	Vehicular access				Purple pipe connection
	Underpass and overpass				Dry well
	Vegetated buffer				Spreading ground
	Habitat corridor				Storm drain daylighting
					Affordable housing
					Art and culture facility
	Common elements and Design Guidelines, including best management practices				

5.3 Alternatives Considered but Eliminated from Detailed Consideration

Several alternatives were considered and eliminated from further evaluation either as part of the initial screening or in consideration of the comments received during the extensive outreach and scoping process conducted by the County for the *2020 LA River Master Plan*. These alternatives and the reasons for eliminating them from detailed consideration are described below.

5.3.1 In-Channel Alternative

Under this alternative, improvements under the *2020 LA River Master Plan* would be limited to the LA River channel with no improvements beyond the top of levee. This alternative was considered because it would avoid all impacts from improvements occurring outside the channel in the project study area. However, it would not avoid or lessen impacts associated with the in-channel improvements under the *2020 LA River Master Plan*. This alternative would not fully meet the nine objectives of the *2020 LA River Master Plan*, especially without complementary improvements outside the channel, such as access, healthy connected ecosystems, open space, parks, and opportunities for arts and culture. In addition, considering the primary function of the LA River as a flood management channel, potential improvements under this alternative would be restricted, considering the necessary ongoing operations and maintenance activities to provide the required flood risk management. Therefore, this alternative was eliminated from further consideration.

5.3.2 Adjacent Parcel Improvements Alternative

Under this alternative, improvements would be limited to vacant parcels adjacent to the LA River; no changes would be made to the channel itself (i.e., within the banks) or beyond the immediately adjacent vacant parcels. This alternative was considered because it could avoid all in-channel impacts under the proposed Project, as well as those resulting from off-channel improvements (beyond the fenceline) under the proposed Project. This alternative would meet some project objectives, including provision of equitable, inclusive, and safe parks, open space, and trails and opportunities for arts and culture, and for continued community engagement and development; however, other project objectives such as improved local water supply and clean water would not be fully met. There would be no reduction in flood risk or improved resiliency under this alternative. Furthermore, up to a couple of thousands of acres of open space opportunities could be lost as a result of excluding non-adjacent parcels under this alternative, and benefits such as wildlife connectivity and healthy connected ecosystems would not be realized. Therefore, this alternative was eliminated from further consideration.

5.3.3 Naturalize the LA River Alternative

This alternative involves removal of concrete along the entire length of the river and restoring the channel to a naturalized substrate while maintaining the current channel alignment. This alternative was considered because it may allow for limited improved infiltration and local water supply reliability, and it would encourage establishment of vegetation and improved ecosystem function and connectivity. However, naturalizing the channel would significantly negatively affect the

floodwater conveyance capacity of the river channel and significantly increase the chances of channel erosion and sedimentation, exacerbating flood risk. It would significantly impede the channel's ability to efficiently convey flood flows, which will significantly increase the risk of flooding along the 51 miles of the river. This standalone alternative would also not meet some of the project objectives such as reduced flood risk or improved resiliency provision of equitable, inclusive, and safe parks, open space, and trails, increased opportunities for equitable access to the river corridor, or for arts and culture or housing affordability strategies nor improvements to water quality. While this alternative would avoid construction and operation impacts associated with improvements outside the channel (i.e., beyond top of levee), it could cause more severe in-channel downstream impacts including at the Los Angeles and Long Beach ports and harbors. Therefore, this alternative was removed from further consideration.

5.3.4 Watershed Restoration Alternative

Under this alternative, implementation of the *2020 LA River Master Plan* and its proposed six KOP categories that include restoration, would expand the Project beyond the 2-mile-wide (1 mile on each side of the river) study area along the 51-mile river channel, to include the entire river watershed that covers a land area of up to 834 square miles, encompasses two counties, and has approximately 5 million inhabitants. The eastern portion of the watershed spans from the Santa Monica Mountains to the Simi Hills and the western portion spans from the Santa Susana Mountains to the San Gabriel Mountains. This alternative allows consideration of a substantially larger land area and approach to improved ecological function and habitat connectivity, reduced flood risk and improved resiliency from a system-wide perspective that encompasses improvements to the entire LA River watershed. This alternative would help meet many of the objectives of the proposed Project and specifically further the objectives of connected ecosystems and provision of equitable, inclusive, and safe parks, open space, and trails. However, none of the impacts of the proposed Project would be reduced or avoided given all KOP categories would be implemented throughout the watershed. Specifically, it would not reduce or avoid significant impacts for these environmental resources: aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas (GHG) emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, public services, recreation, transportation, tribal cultural resources (TCRs), utilities and service systems, and wildfire. Therefore, this alternative was removed from further consideration.

5.3.5 Single and Combined Kit of Parts Alternatives

5.3.5.1 Channel Modifications Alternative

This alternative would focus on modification to the LA River channel to improve water conveyance. This alternative is considered to allow for improved conveyance of floodwater by increasing wall height in parts of the river that are currently constrained. This alternative would avoid impacts associated with implementation of five of the six KOP categories under the proposed Project except for KOP Category 2. However, it would meet only one of the nine basic project objectives of reducing flood risk, but would not improve resiliency. It would impede access, availability of open space, and ecosystem function in the river corridor and would not meet objectives focused on opportunities for arts and culture, strategies for housing affordability, community engagement, development, and education, or improved local water supply reliability and safe, clean water. Therefore, this alternative was removed from further consideration.

5.3.5.2 Maximize Recreation, Habitat, and Ecosystems Alternative

This alternative would maximize opportunities for recreation while improving habitat connectivity and ecosystem function of the study area corridor. Under this alternative, project improvements would focus primarily on KOP Categories 1, 3, and 5, and recreation, habitat and ecosystem design components of KOP Category 6. The remaining KOP categories of KOP Category 2 and KOP Category 4 would be implemented in a limited manner. This alternative would avoid construction and operations impacts of KOP Categories 2, 4, and 6 design components that do not focus on recreation, habitat, and ecosystems (such as surface and subsurface storage, injection well, dry well, and purple pipe connection). However, this alternative would not avoid or reduce impacts associated with implementation of KOP Categories 1, 3, and 5, and the recreation, habitat, and ecosystem design components of KOP Category 6.

With the maximization of recreation, habitat connectivity, and ecosystem function under this alternative, six of the nine project objectives focused on equitable, inclusive, and safe parks; open space, and trails; healthy connected ecosystems; equitable access to the river corridor; opportunities for arts and culture; continued community engagement, development, and education; and strategies for housing affordability would be met under this alternative. However, because KOP Categories 2 and 4 would be implemented in a limited manner and considering the primary function of the river as a flood management channel, this alternative would not meet the objective of reducing flood risk or improving resiliency. In addition, local water supply reliability and promotion of healthy, safe, clean water would not be met. Therefore, this alternative was removed from further consideration.

5.3.5.3 Single-Focused KOP Alternative

This alternative would include implementation of only one of the six KOP categories proposed under the *2020 LA River Master Plan*. Therefore, this alternative could avoid impacts associated with implementation of the other five KOP categories that would not be implemented under this Single-Focused KOP Alternative. However, depending on the KOP category implemented under this alternative, it would meet only a subset of the nine project objectives. Therefore, this alternative was removed from further consideration.

5.3.6 Large-Scale Floodplain Reclamation Alternative

Under this alternative, floodplain reclamation would expand beyond the channel to include widening of the channel into lands currently developed and occupied with industrial, commercial, and residential uses. Floodplain reclamation could include wetlands, naturalized banks, braided channels, fields, storage, and side channels. With the channel's role as a flood management system, any floodplain reclamation would need to maintain existing flood capacity. Project objectives focused on reducing flood risk and improving resiliency would be met under this alternative, along with improved ecosystem function, increased open space, and potentially local water supply reliability and water quality improvement. The other objectives would not be met under this alternative. In addition, there are a limited number of opportunities along the LA River for floodplain reclamation at any scale. Under this alternative, impacts associated with KOP categories related to trails, crossings and platforms, diversions and off-channel land assets would be minimized or avoided altogether because they would not be implemented. However, due to development and urbanization in the watershed, large-scale floodplain reclamation is not feasible and would result in displacement and disruption of existing residents, businesses, transportation corridors, and other vital infrastructure. Therefore, this alternative was removed from further consideration.

5.3.7 Regional Upstream Detention Alternative

Under this alternative, upstream detention improvements would be implemented to reduce peak flows during larger, rare storm events. This alternative is considered to reduce flood risk by building new or expanding the size of existing flood retention basins (e.g., increasing footprint and/or excavating and/or raising the dams and levees). With the exception of impacts from developing surface storage, this alternative would avoid some construction and operations impacts of the *2020 LA River Master Plan*. This alternative may help meet the project objectives of reducing flood risk as well as improving local water supply reliability. However, it would not meet the remaining seven basic project objectives. In addition, this alternative does not retain enough floodwater to substantially reduce the peak flow rate downstream (*2020 LA River Master Plan* Appendix Volume II, *Technical Backup Document*). Therefore, this alternative was removed from further consideration.

5.3.8 Reduced 2020 LA River Master Plan Project Study Area Alternative

Under this alternative, the 2-mile project corridor would remain; however, the 51-mile stretch of the LA River would be reduced to a shorter segment with fewer frames. Therefore, improvements would be limited along the length of the river focused in specific geographic areas. This could avoid impacts in areas that are excluded under this alternative; however, considering the LA River is one continuous channel from its headwaters to the mouth of the river in Long Beach, focused improvements in a shorter segment of the river with fewer frames would not adequately meet the nine objectives of the proposed Project that are focused on provision of connected open space, trails, and healthy connected ecosystems and improved flood management and resiliency along the entire 51-mile LA River. Therefore, this alternative was eliminated from further consideration.

5.4 Environmental Evaluation of CEQA Alternatives

The CEQA alternatives carried forward for further evaluation include Alternative A: No Project, and Alternative B: Channel Avoidance. An analysis of their impacts in comparison to those of the proposed *2020 LA River Master Plan* is provided below. As permitted by the State CEQA Guidelines, the impacts of the alternatives are discussed in less detail than the effects of the proposed *2020 LA River Master Plan*.

Table 5-2 summarizes the impacts of the proposed Project and compares them to each of the alternatives, as detailed below.

Table 5-2. Summary of Comparison of Impacts of the Alternatives to the Proposed Project

Environmental Topic	Proposed Project (when carried out by the County)	Alternative A No Project	Alternative B Channel Avoidance
Aesthetics	SU	<	=
Air Quality	SU	=	=
Biological Resources	LTSM*	<	<
Cultural Resources	SU	=	=
Energy	LTS	=	=

Environmental Topic	Proposed Project (when carried out by the County)	Alternative A No Project	Alternative B Channel Avoidance
Geology and Soils	LTSM*	=	=
Greenhouse Gas Emissions	SU	=	=
Hazards and Hazardous Materials	LTSM*	=	=
Hydrology and Water Quality	LTSM*	<	<
Land Use and Planning	SU	<	=
Mineral Resources	LTS	=	=
Noise	SU	=	=
Population and Housing	LTS	=	=
Public Services	SU	=	=
Recreation	LTSM*	=	=
Transportation	SU	=	=
Tribal Cultural Resources	SU	=	=
Utilities and Service Systems	SU	=	=
Wildfire	SU	=	=
Total	--	3	1

LTS = Less-than-significant impact; LTSM = Less-than-significant impact with mitigation; SU = Significant and unavoidable impact

< Lesser impacts

= Similar

*These impacts would be significant and unavoidable when not carried out by the County.

5.4.1 Environmental Evaluation of Alternative A

5.4.1.1 Aesthetics

Alternative A would result in less aesthetic impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.1, *Aesthetics*, the *2020 LA River Master Plan* would improve visual quality across and along the river, providing amenities and additional recreational uses and trails. These features would contribute to enhanced viewing opportunities for users to experience the vistas, result in increased scenic quality, and be consistent with zoning or design regulations governing scenic quality. However, the proposed Project was determined to result in significant and unavoidable impacts from implementation of KOP Category 6, which includes design components that could be multiple stories high or involve large massing, which could obstruct or block scenic vistas and views.

Similar to the proposed Project, this alternative would include projects that would enhance and improve the visual conditions within the planning area through new trails, parks, signage, landscape improvements, nursery gardens, and the like. However, this alternative would reduce or omit some of the design components within the river channel that contribute to the aesthetic benefits. These include features such as removal of concrete to return the channel to a naturalized condition, creation of places for people and habitat within the river channel, terraced banks or channel texturing/grooving/smoothing, and recreational and ecological uses (plantings, parks, wetland terraces) within the channel. Additionally, this alternative would not extend potential aesthetic

improvements to the larger geographic area (additional 1-mile buffer) that is covered by the proposed Project. Therefore, the aesthetic benefits may not be realized to the same degree with this alternative.

Similar to the proposed Project, views of project construction activities under this alternative, while temporary, could obstruct views of scenic resources. Additionally, adverse operational effects on scenic vistas from larger-scale and taller design components such as bridges could occur from obstructing scenic vistas from public views. However, this alternative would avoid potential impacts that may obstruct views from the introduction of new buildings into the landscape, such as museums, affordable housing, pavilions, cafés, etc.

New improvements associated with this alternative, like the proposed Project, could help to visually integrate the new uses and features with existing adjacent uses. However, temporary construction could introduce incompatible visual elements with the surrounding visual environment. As with the proposed Project, this alternative would be consistent with regulations that pertain to ensuring compatible uses for all development, ensuring high-quality design and architectural elements, avoiding out-of-scale development, and protecting existing residential neighborhoods from encroachment by incompatible uses.

Similarly, this alternative would not change the conclusions to light and glare relative to the proposed Project, as negligible changes to lighting would occur with this alternative.

Therefore, for the reasons discussed above, construction- and operations-related aesthetic impacts associated with Alternative A would be less than those analyzed and disclosed for the proposed Project due to excluding the introduction of new buildings into the landscape that could obstruct scenic views, such as museums, affordable housing, pavilions, cafés, etc. Consequently, this alternative would avoid or substantially reduce the significant impacts from the proposed Project, resulting in less-than-significant impacts on aesthetics.

5.4.1.2 Air Quality

Alternative A would result in similar air quality impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.2, *Air Quality*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in significant pollutant emissions associated with construction activities, as well as long-term operations. This alternative would reduce or eliminate emissions associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar emissions from construction and operations activities.

Similar to the proposed Project, this alternative would not result in unplanned population growth in the County and would therefore be consistent with the region's Air Quality Management Plan. Construction of this alternative would generate similar air pollutant emissions as the proposed Project from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. In addition, earthwork activities would result in fugitive dust emissions, and paving and coating activities would release volatile organic compounds from off-gassing. Similar to the proposed Project, regional and localized emissions associated with this alternative would potentially exceed significance thresholds. Similarly, operation-related emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, and emissions

associated with landscaping would potentially exceed South Coast Air Quality Management District (SCAQMD) regional or localized thresholds. Instances where diesel particulate matter emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds could occur during construction and operation of the proposed Project. Impacts for this alternative would be similar.

While not explicit, it is possible that the 1996 Master Plan could allow for facilities to support equestrian users in portions of the project area. Therefore, impacts from potential odors associated with equestrian facilities under the proposed Project would be similar under this alternative and could be potentially significant without mitigation measures.

Therefore, for the reasons discussed above, construction- and operations-related air quality impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would be significant.

5.4.1.3 Biological Resources

Alternative A would avoid or reduce impacts on biological resources compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.3, *Biological Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in significant impacts on biological resources from construction and operations, but these would be reduced to less-than-significant levels with mitigation measures. This alternative would reduce or eliminate some of the direct and indirect biological impacts related to construction or operations of in-channel improvements associated with the proposed Project, such as those aligned with KOP Categories 2, 4, and 5, because disturbance to the channel under the 1996 Master Plan would be limited to the construction of bridges.

Similar to the proposed Project, this alternative could result in substantial adverse effects on candidate, sensitive, or special-status species of plants, invertebrates, fish, mammals, reptiles, amphibians, birds, raptors, and migratory birds from construction as a result of direct removal of plant species, natural communities, and wildlife habitats. Indirect construction impacts could also occur, such as dust, erosion, chemical spills, trash and debris, and introduction and spread of invasive species. Operations impacts would occur due to maintenance activities, and use by humans and domestic animals, which would include walking, biking, and equestrian uses.

However, these impacts would be reduced, and in some cases eliminated, particularly where in-channel improvements would no longer occur in soft-bottom portions of the river channel. As described under the proposed Project, impacts on special-status plants due to the construction of in-channel improvements may be more intense than other improvements associated with the *2020 LA River Master Plan* because many of the in-channel modifications may be more invasive in nature during construction compared to activities outside of the channel. Therefore, because this alternative does not include in-channel design components, impacts on in-channel plants, invertebrates, fish, mammals, amphibians, and birds would be particularly reduced.

Conversely, omitting some of the in-channel design components, such as flood management functions, deployment of barriers, and maintenance of terraced of banks, planting trays, and dams, could reduce the beneficial aspects of the proposed Project. For instance, this alternative would reduce the opportunities for management of invasive species, maintenance and planting of vegetated areas within the channel, and provision of space for native vegetation communities and habitat for wildlife. Additionally, this alternative would not involve the potential removal of concrete

to allow for the beneficial establishment of riparian vegetation and a higher diversity of plants and animals such as under the proposed Project.

As described for the proposed Project, riparian habitats and other sensitive natural communities are present within Frames 1, 2, and 6 through 9 of the study area. Permanent and temporary direct and indirect impacts could occur on these sensitive natural communities under this alternative, similar to the proposed Project. Temporary direct impacts could include incidental disturbances within and adjacent to construction areas and clearing and grubbing for equipment staging and temporary construction access routes. Sensitive natural communities that are currently present within the top of levee and/or landside portion of the LA River ROW and could be potentially directly affected by construction. Temporary indirect impacts on riparian habitat, essential fish habitat, Habitat Areas of Particular Concern, or other sensitive natural communities adjacent to the project areas may be caused by construction activities (e.g., soil compaction, introduction of invasive species, dust, increased fire risk, chemical spills, sedimentation), which could lead to the degradation of native habitats and floodplains. Operational impacts like recreation, maintenance, fertilizer runoff, pet droppings, and increased trash would continue to occur under this alternative, which could degrade riparian habitat and other sensitive natural communities in the LA River ROW. Areas within the channel could experience impacts of a lesser degree or may even avoid them (e.g., if a later activity under this alternative is sited far from the channel) under this alternative as compared to the proposed Project because there is limited disturbance within the channel.

While this alternative could also result in direct impacts on wetlands or other potential jurisdictional aquatic resources, similar to the proposed Project, the avoidance of in-channel design components under this alternative may reduce direct impacts on wetlands and aquatic resources. However, direct impacts could still occur throughout the planning area through permanent and temporary construction activities if areas that are temporarily disturbed are not successfully restored, resulting in a diminished level of biological functions and values. These effects could be both short and long term in nature during the course of construction in or near these features. Permanent and temporary disturbances from construction activities could also result in indirect impacts on wetlands and/or potentially jurisdictional aquatic resources present in the area surrounding the project site from the introduction of nonnative species, erosion, sedimentation, chemical spills, and alteration of downstream hydrological conditions. Any wetlands and/or potentially jurisdictional aquatic resources could be affected by operation and maintenance activities, such as vegetation removal and trimming and facility repairs, as well as public activity that results in litter, pet droppings, and introduction of invasive species.

Conversely, some of the design components associated with the proposed Project that could potentially have beneficial permanent direct effects on wetlands and/or potentially jurisdictional aquatic resources would not occur under Alternative A. These include the planting of riparian and wetland habitats, improvements to hydrology or channel substrate, enhancement of existing conditions, and creation of additional or improved wetlands or jurisdictional aquatic resources within the study area.

Eliminating the in-channel design components under this alternative would reduce permanent impacts from construction and operations activities such as loss of existing vegetation and habitats, habitat fragmentation, and obstructed movement ability due to constructed barriers (e.g. dams and levees), and loss of nursery habitat. As described under the proposed Project, without mitigation, the construction of in-channel design components could result in potentially significant impacts associated with the permanent and temporary loss of habitats and nursery sites, imposed habitat

fragmentation, and disruption and/or obstruction of connectivity. Operation of some of these design components were found to potentially have deleterious effects on fish and wildlife connectivity and reproduction such as loss of habitat and habitat access due to potentially obstructive check dams and deployable barriers, levees, armored channels/vertical walls, added concrete, and bridge pier modifications.

Furthermore, some of the design components under the proposed Project that could potentially have permanent beneficial effects for wildlife connectivity and nursery sites would not occur under this alternative. These features include naturalized side channels, habitat restoration, additional riparian and wetland habitats, small planting trays, parks, wildlife ramps, daylighted storm drains, and removed concrete. Overall, this alternative may result in fewer impacts on nursery sites and wildlife movement corridors.

Similar to the proposed Project, this alternative could conflict with local tree policies and ordinances under the County Tree Ordinance and city jurisdictions. Proposed activities may be located in areas that contain protected trees, including riparian habitats, as well as urban areas. These impacts may be slightly reduced by eliminating in-channel tree removal and/or trimming.

Similar to the proposed Project, this alternative would not be subject to any habitat conservation plans (HCPs), Natural Community Conservation Plans, or other approved local, regional, or State HCPs. Therefore, impacts would be the same as those of the proposed Project.

Consequently, for the reasons discussed above, construction-related biological impacts associated with Alternative A would be less than those analyzed and disclosed for the proposed Project, but potential operational benefits and achievement of project objectives would not be realized to the same extent with this alternative.

5.4.1.4 Cultural Resources

Alternative A would result in similar impacts on cultural resources compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.4, *Cultural Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on cultural resources from construction and operations. This alternative would reduce or eliminate impacts on cultural resources that may be within the LA River channel associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5, because channel disturbance is limited to bridge projects. Additionally, because of the smaller study buffer (0.5 mile instead of 1.0 mile) from the river, this alternative could result in less impacts on cultural resources. However, overall impacts would remain significant and unavoidable.

Similar to the proposed Project, construction activities from this alternative, such as the use of backhoes, trucks, hand-held power equipment, generators, and other equipment, could result in an adverse change to significant historical and archaeological resources. New construction has the potential to cause ground disturbance, demolish historical/archaeological resources, alter character-defining features of historical/archaeological resources, and/or make changes to the setting of historical/archaeological resources. These factors may result in an adverse change to the significance of a historical or archaeological resource. Additionally, operations of the various projects that could occur under this alternative could include such impacts as ground disturbance and changes to the setting, as well as alteration or demolition of historical or archaeological resources. Operations impacts on archaeological resources could also include increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and

increased potential for looting. These activities could result in the exposure, disturbance, removal, and/or potential destruction through damage or removal of existing resources and previously unrecorded archaeological resources. Such activities have the potential to cause substantial adverse change in the significance of historical/archaeological resources including damage to historical/ archaeological resources from increased foot traffic, which could affect the integrity of material.

This alternative could also result in disturbance of human remains from both construction and operations. Site disturbance, movement of construction equipment, construction staging areas, and import and export of materials all could disturb human remains, resulting in significant impacts. Increased human activity, landscape use, and channel erosion could also result in potentially significant impacts on human remains through exposure and removal from unanticipated disturbance and increased looting potential due to increased use, and could otherwise negatively affect the integrity of the resource.

While this alternative has the potential to avoid potential impacts on resources within the channel, overall the same types of impacts could occur throughout the study area as under the proposed Project. Therefore, for the reasons discussed above, construction- and operations-related cultural resources impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.5 Energy

Alternative A would result in similar energy impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.5, *Energy*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on energy from construction and operations. This alternative would reduce or eliminate impacts on energy from construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. Additionally, energy demands associated with building operations, such as museums, affordable housing, pavilions, cafés, etc. as part of the proposed Project, would not occur under this alternative. However, energy demands and consumption from other construction and operations activities that would occur in place of the in-channel improvements would result in similar effects.

Similar to the proposed Project, construction and operations of this alternative would require energy and fuels. Construction activities primarily involve onsite energy demand and consumption related to the use of transportation fuels (i.e., diesel and gasoline) for construction worker vehicle trips, hauling, and materials delivery truck trips; operation of off-road construction equipment; and electricity for lighting and other intermittent sources. Trucks and equipment used during proposed construction activities would also be required to comply with the California Air Resources Board's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Aside from reducing criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy and reduce fuel consumption. Anti-idling regulations would limit the amount of fuel wasted in equipment and trucks that are not in operation. Emissions regulations to control pollutant and toxic air contaminant emissions would also require that engines be more efficient, which results in reduced fuel consumption. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements. As such, construction activities would not result in the wasteful, inefficient, or unnecessary use of transportation fuels in meaningful amounts. Furthermore, as discussed in Section 3.7, *Greenhouse Gas Emissions*, the construction industry is moving toward cleaner fuels and

electrified equipment, which would result in fewer pollutant emissions, and the technology would provide greater efficiencies in the equipment's energy consumption over time.

Operations for this alternative would require energy for the conveyance of water for irrigation; electricity and natural gas for lighting, cooling, and appliances; and gasoline for landscaping equipment and mobile vehicle trips. Each project under this alternative would be required to minimally comply with California Title 24 standards and the CALGreen Code for energy efficiency. In addition, new construction may implement other building energy best practices. This alternative, like the proposed Project, would also likely incorporate water, environmental, and construction best practices, and would use efficient light sources and solar-power fixtures along the river wherever possible. Furthermore, because this alternative, like the proposed Project, aims to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians, non-vehicular modes of travel would reduce the consumption of fuel from passenger vehicles.

Therefore, for the reasons discussed above, construction- and operations-related energy impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.6 Geology, Soils, and Paleontological Resources

Alternative A would result in similar geology and soils impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.6, *Geology, Soils, and Paleontological Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on geology, soils, and paleontological resources from construction and operations. This alternative would reduce or eliminate impacts on geology and soils associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. For instance, geologic hazards and erosion potential that may affect in-channel design components would not occur from construction or operation of this alternative. This alternative would also not include buildings and structures, such as museums, affordable housing, pavilions, cafés, etc. that would be exposed to geology and soils hazards. Furthermore, impacts on potential paleontological resources that may occur from construction and operations within the channel from the proposed Project would not occur as a result of this alternative. However, geology and soils impacts from other construction and operations activities that would occur in place of the in-channel improvements would result in similar effects overall.

Similar to the proposed Project, construction activities would be considered too shallow and small scale to cause or exacerbate significant geologic phenomena such as fault rupture, seismic ground shaking, or liquefaction. However, because the LA River is in a seismically active area due to the various active and potentially active faults in the region, seismic events from one or more of these regional active or potentially active faults could result in strong ground shaking in the LA River area, thereby affecting some project features. Such strong seismic shaking could also result in landslides where landslide-prone areas exist along the LA River as discussed in Section 3.6, *Geology, Soils, and Paleontological Resources*. Construction and operations of this alternative would require evaluation if they occur in geologic hazard zones areas. Additionally, all individual design components would be required to adhere to all building code and permitting requirements and, if deemed necessary, undergo geotechnical investigations. This would reduce potential impacts associated with geologic hazards to less-than-significant levels for short-term (construction) and long-term activities (i.e., operations) associated with this alternative.

Operations impacts from this alternative would also be similar to those of the proposed Project. As this alternative would attract a similar number of visitors as the proposed Project, this alternative could also expose visitors to strong seismic shaking, fault rupture, and secondary seismic phenomena such as liquefaction and landslides. However, as mentioned above, any development occurring in fault, liquefaction, and landslide zones would require evaluation and countermeasures implemented in design and construction. All individual project features would be implemented following proper engineering methods and building code requirements. Operations activities would not cause or exacerbate major geological phenomena such as strong seismic shaking or fault rupture, or any secondary phenomena such as liquefaction or landslides.

Similar to the proposed Project, this alternative would require obtaining coverage under the National Pollutant Discharge Elimination System (NPDES) Statewide Construction General Permit, minimizing the amount of erosion during construction. Erosion management would be implemented during construction and after construction is complete to reduce potential impacts associated with erosion to less-than-significant levels for short-term (construction) and long-term activities (operations).

As with the proposed Project, this alternative would not involve septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur.

Impacts on paleontological resources for this alternative would be similar to those identified for the proposed Project. Construction would generally involve site disturbance, movement of construction equipment, construction staging areas, and import and export of materials, all of which could result in an adverse effect on significant paleontological resources. Potential impacts from operation of the components of this alternative could result in significant impacts on sensitive geologic deposits with the potential for containing undiscovered significant paleontological resources, which include increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and increased potential for disturbance.

While potential resources within the channel could be avoided, similar impacts could occur anywhere within the study area. Therefore, for the reasons discussed above, construction- and operations-related geology and soils impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.7 Greenhouse Gas Emissions

Alternative A would result in similar GHG emissions impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.7, *Greenhouse Gas Emissions*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts from GHGs from construction and operations. This alternative would reduce or eliminate emissions associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar GHG emissions from construction and operations activities.

Similar to the proposed Project, construction of this alternative would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. GHG emissions are measured exclusively as cumulative impacts; therefore, construction emissions are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations. Operation of this

alternative would involve GHG emissions from multiple sources, including energy, mobile, area, water, wastewater, and waste. Because details about the construction and operation scenario are unknown, GHG emissions were not quantified for the proposed Project; however, it was determined that GHG emissions could potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with this alternative are also considered to result in significant impacts.

As with the proposed Project, this alternative would be consistent with the 2017 Scoping Plan's overall goal of avoiding losses in carbon sequestration and limiting land use emissions. While this alternative does not involve buildings such as museums, affordable housing, pavilions, cafés, etc. like the proposed Project, landscaping equipment would be gasoline powered, which is inconsistent with the California Governor's Office of Planning and Research (2018a) guidance. In addition, daily vehicle trips would be expected to exceed the California Governor's Office of Planning and Research (2018b) daily trip screening threshold. Consequently, while emissions from the land use sector would generally be consistent with the 2017 Scoping Plan, emissions from the energy, mobile, area, water, and waste sectors would be potentially inconsistent with the 2017 Scoping Plan and applicable regulatory programs.

As discussed in Section 3.16, *Transportation*, portions of the proposed Project (such as the terraced banks and amphitheater design components) were determined to have the potential to generate a significant impact related to vehicle miles traveled (VMT). Therefore, the proposed Project was found to affect the State's ability to meet its mobile-source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan. While this alternative has less-intensive design components than the proposed Project, the GHG emissions from non-mobile sectors and other components could continue to be significant and potentially conflict with applicable sector-specific reduction targets and strategies.

Operations of this alternative, like the proposed Project, would be potentially inconsistent with the 2008 Scoping Plan and First Update, Senate Bill 32, Executive Order S-3-05, 2020 Climate Change Action Plan, updated County Climate Action Plan, and OurCounty Sustainability Plan due to the reasons described above. Therefore, construction and operation of this alternative would potentially conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Therefore, for the reasons discussed above, construction- and operations-related GHG emissions impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.8 Hazards and Hazardous Materials

Alternative A would result in similar hazards and hazardous materials impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.8, *Hazards and Hazardous Materials*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts from hazards and hazardous materials from construction and operations. This alternative would reduce or eliminate hazards associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5 and larger structures, such as museums, affordable housing, pavilions, cafés, etc. under the proposed Project. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar exposure to hazards and hazardous materials from construction and operations activities.

Similar to the proposed Project, this alternative is not expected to result in a significant risk associated with routine transport, use, and disposal of hazardous materials. Required compliance with applicable regulations and adherence to the requirements of the Construction General Permit would minimize potential impacts. Additionally, none of the projects to be included under this alternative are expected to result in a significant risk associated with potential upset and accident conditions, nor would they be expected to result in a significant risk associated with hazardous emissions or handling of hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Furthermore, as discussed in Section 3.8, *Hazards and Hazardous Materials*, for the proposed Project, none of the projects to be included under the *2020 LA River Master Plan* are expected to result in a significant risk associated with being constructed on or near a Cortese List site. Therefore, this alternative would also not result in such risks.

Like the proposed Project, this alternative would not place any individual projects within Planning Boundaries, Runway Protection Zones, or Airport Influence Areas associated with any of the local airports such as Long Beach, Compton/Woodley, or Hollywood Burbank airports, and would therefore not result in any risks or hazardous conditions.

This alternative would not be expected to hinder or impair an adopted emergency response or evacuation plan or route. Similar to the proposed Project, this alternative would comply with existing standard industry practices such as traffic control and signage, adherence to County and local agency criteria (as necessary), and rules and regulations pertaining to emergency response that would provide and maintain adequate emergency access.

Finally, this alternative would not be expected to result in a significant risk of exposure to wildfires. Projects under this alternative that may be within high fire hazard areas would follow all applicable fire response and prevention requirements and applicable construction standards that ensure implementation of fire prevention features, including compliance with the regulations set forth in the California Fire Code and Occupational Safety and Health Administration Safety and Health Regulations for Construction during both project planning/design and construction.

Therefore, for the reasons discussed above, construction- and operations-related hazards and hazardous materials impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.9 Hydrology and Water Quality

Overall, Alternative A would result in fewer hydrology and water quality impacts when compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.9, *Hydrology and Water Quality*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts with mitigation on hydrology and water quality from construction and operations. This alternative would reduce or avoid hydrology and water quality impacts associated with construction of improvements such as those aligned with KOP Categories 2, 4, and 5 of the proposed Project, which are largely in-channel improvements related to channel modifications, diversions, and floodplain reclamation. However, the potential benefits that could be realized from operations of these project design components would also not occur with this alternative.

Similar to the proposed Project, this alternative could result in short-term water quality degradation associated with soil erosion and subsequent sediment transport, generation of pollutants, or accidental spills that could temporarily contaminate runoff, surface water, or groundwater from construction activities. However, if potential projects require the Construction General Permit,

BMPs, as required in a Stormwater Pollution Prevention Plan, would be required during construction to reduce erosion and restrict non-stormwater discharges from the construction site as well as release of hazardous materials.

Like the proposed Project, the majority of the projects under this alternative are expected to be relatively small in size, with negligible changes in impervious surface areas, compared to existing conditions. Therefore, runoff rates and volumes would be similar to existing conditions and would continue to infiltrate into the ground, filtering potential contaminants and minimizing the discharge of pollution and adverse effects on groundwater quality. However, it should be noted that some of the multi-benefit design components associated with the proposed Project would not occur under this alternative where they may have been proposed within the channel, such as storm drain daylighting, diversion channels, sediment removal, or in-channel wetlands and natural treatment systems. Therefore, this alternative would not realize the same level of benefit as the proposed Project.

All projects would comply with the NPDES Construction General Permit, Municipal Separate Storm Sewer System Permits, and other local water quality and low-impact development (LID) requirements and stormwater ordinances. County-led, -funded, or -permitted projects would also comply with the Public Works LID Standards Manual, which provides guidance for the implementation of stormwater quality control measures and the recommended design methodology to manage stormwater in the County. Therefore, implementation of this alternative would be similar to the proposed Project and would not violate any water quality standards or degrade water quality.

Unlike the proposed Project, this alternative would not include a range of flood management functions or a number of water quality benefits, such as improved infiltration and natural filtration; treatment potential; daylighting storm drains; armored channels; hardened bottom or sides of a channel, embankments, or levees that would reduce scour and erosion; and check dams. This alternative, like the proposed Project, would include new impervious areas that could reduce infiltration capacity and increase the volume of runoff into storm drains or surface waters instead of allowing groundwater recharge. This alternative would not improve water and groundwater supply reliability to the same extent as the proposed Project, as design components such as in-channel groundwater recharge spreading grounds, channel modifications such as terracing the banks and providing small planting areas, underground galleries, concrete removal, wetlands, fields, and injection and dry wells would not be implemented. Therefore, omission of these project features as part of this alternative would not result in the same benefits as the proposed Project.

Similar to the proposed Project, projects under this alternative would need to comply with local jurisdictions' LID requirements and the current California Green Building Standards Code.

In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

This alternative would not include project features that address one of the objectives to reduce flood risk and improve resiliency. Many of the project features associated with maintaining existing flood conveyance capacity or improving capacity in deficient reaches would not occur under this alternative. Runoff rates and volumes are expected to increase compared to existing conditions due

to changes in impervious surface areas. While implementation of LID and BMPs would reduce runoff through increased infiltration and provide substantial water quality improvements through contaminant filtration and biological uptake, flood risk reduction benefits may not be realized to the same extent with this alternative without in-channel refurbishment.

Therefore, while this alternative would not realize the same level of operations-related benefit to long-term flood capacity and water quality as the proposed Project, this alternative would reduce construction-related impacts on hydrology and water quality because design components within the channel would be avoided. Impacts would remain less than significant for this alternative.

5.4.1.10 Land Use and Planning

This alternative would result in less land use and planning impacts compared to the proposed Project. As presented in Section 3.10, *Land Use and Planning*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on land use and planning from construction and operations. Similar to the proposed Project, this alternative would improve connectivity across the river, providing gateways and additional recreational uses and trails. These projects would reduce the effects of the physical barrier the LA River presents and would not further divide an established community; rather, this alternative, similar to the proposed Project, would result in a beneficial impact.

Notably, the proposed Project was found to result in significant construction and operations impacts with respect to division of an established community for design components associated with KOP Category 6. These off-channel design components were found to be considerably larger than the Typical Projects and other KOP category design components, entail greater levels of construction resulting in more extensive construction staging and environmental effects during construction, and potentially result in temporary or permanent road closures or other barriers to community facilities, which could physically divide a community if alternative connectivity is not provided. These types of projects, such as museums, affordable housing, pavilions, cafés, etc. that would occur under the proposed Project, would not occur under this alternative, which would reduce or avoid this impact associated with the proposed Project.

Similar to the proposed Project, this alternative would involve heavy equipment for construction and involve roadway closures, which could result in temporary incompatibility with adjacent uses or significant impacts associated with inconsistencies with applicable land use plans, policies, or regulations. Some projects could result in out-of-scale development inconsistent or incompatible with existing land uses, which would result in potentially significant construction impacts.

Operations of this alternative would provide beneficial recreational uses and result in increased access to the river and connectivity to adjacent neighborhoods. While some individual projects under this alternative could be within residential areas, these features would be consistent with land use and recreation policies that promote accessibility to trails and other open space. This alternative would therefore be compatible with residential neighborhoods, would not intrude into existing neighborhoods or be out of scale with existing development, and would provide additional recreational opportunities that would be available to the adjacent neighborhoods. The types of projects that would occur under this alternative would also not be expected to require additional land acquisition and would generally be consistent with applicable land use designations. No incompatibilities with adjacent land uses or inconsistencies with applicable land use plans, policies, and regulations adopted for the purpose of avoiding an environmental impact would result from operations with respect to land use.

While there may be some inconsistencies with individual policies of different jurisdictions, Alternative A, like the proposed Project, would be generally consistent with the overarching themes of these land use policies. This alternative would be designed to be consistent and compatible with adjacent land uses, provide more diversity in land uses, and provide greater access to the river from neighborhoods along the river, and would not encroach on existing residential neighborhoods. Any land use inconsistencies will have been addressed during the site selection process and there would be a less-than-significant impact during operation with regard to policy consistency.

Therefore, because the proposed Project was found to result in significant construction and operations impacts with respect to division of an established community for design components associated with KOP Category 6, construction- and operations-related land use and planning impacts associated with Alternative A would be less than those analyzed and disclosed for the proposed Project and would be reduced to less-than-significant levels.

5.4.1.11 Mineral Resources

This alternative would result in similar impacts on mineral resources from construction and operations as the proposed Project. As presented in Section 3.11, *Mineral Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on mineral resources from construction and operations. Similar to the proposed Project, this alternative would not result in the loss of availability of a significant non-fuel mineral resource, and significant impacts on non-fuel mineral resources would not occur with mitigation. While some portions of the study area are in areas identified as Mineral Resource Zone (MRZ)-2, the majority of the project area is urbanized and unlikely to allow for extraction activities. Consequently, the likelihood of this alternative resulting in the loss of non-fuel mineral resources classified MRZ-2 is minimal. However, because construction and operation could occur where geologic data indicate that significant measured or indicated resources are present, a significant impact could occur.

Like the proposed Project, the majority of the project area under this alternative does not contain regionally or statewide significant fuel mineral resources. However, some areas within or near the project study area contain oil fields with active wells. The *Los Angeles County General Plan* and local general plans require maintained access to mineral deposits for extraction and preservation of mineral resources. Compliance with the County Building Code, which does not allow development to be constructed adjacent to or within 300 feet of active, abandoned, or idle oil or gas well(s), would minimize impacts. However, because the exact locations of project sites are unknown at this time, mitigation is required to ensure impacts are less than significant.

Therefore, for the reasons discussed above, construction- and operations-related mineral resource impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.12 Noise

Alternative A would result in similar noise impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.12, *Noise*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on noise from construction and operations. This alternative would reduce or eliminate noise and vibration associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5 of the proposed Project. However, this alternative involves construction and operation of a similar

number of total projects as the proposed Project, thereby resulting in similar overall noise impacts from construction and operations activities.

Similar to the proposed Project, projects under this alternative would comply with jurisdictional requirements for both construction and operations incumbent within the municipal codes, general plans, and planning documents as they relate to noise. However, with the uncertainty as to the location and extent of projects associated with this alternative, it is possible that impacts cannot be reduced to less-than-significant levels.

Like the proposed Project, vibration impacts from this alternative would be potentially significant. As with the proposed Project, construction and operations details are unknown so vibration has not been quantified. However, individual projects would comply with jurisdictional thresholds and requirements incumbent within the municipal codes, general plans, and planning documents as they relate to vibration. Nevertheless, the vibrational impacts considered together could potentially result in significant impacts by exceeding thresholds established by the jurisdictions.

This alternative would not involve projects that are within an airport land use plan or within 2 miles of an airport. Therefore, impacts from the implementation of this alternative would not result in significant noise impacts from airport facilities.

Therefore, for the reasons discussed above, construction- and operations-related noise impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.13 Population and Housing

Alternative A would result in similar impacts on population and housing as the proposed *2020 LA River Master Plan*. As presented in Section 3.13, *Population and Housing*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on population and housing from construction and operations.

Similar to the proposed Project, construction of this alternative would not result in a substantial population increase. The temporary and specialized nature of construction work, as well as the large available construction workforce in the Los Angeles region, would not lead to a substantial population increase. Operations of this alternative would also result in similar conclusions regarding population increase, as the projects are intended to provide recreational and ecological uses and to serve the local community without substantially increase population growth.

While projects associated with implementation of this alternative could include displacement of individuals or families experiencing homelessness, local jurisdictions would relocate individuals and families experiencing homelessness and encampments would be removed prior to construction activities. These activities would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere. This alternative would not include affordable housing like the proposed Project.

Therefore, for the reasons discussed above, construction- and operations-related population and housing impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.14 Public Services

Alternative A would result in similar impacts on public services as the proposed *2020 LA River Master Plan*. As presented in Section 3.14, *Public Services*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on public services from construction and operations.

Similar to the proposed Project, this alternative may result in localized road closures and detours that could increase response times for emergency services. Even with mitigation, because the size, extent, and location of the projects are unknown, impacts would be potentially significant for police and fire services. Similarly for operations, this alternative would result in comparable increases in the number of visitors, which could increase the number of incidents requiring police response. These demands could affect police provider service ratios and response times and result in a need for additional law enforcement staff. Like the proposed Project, this alternative is not expected to result in a significant increase in the use of and demand for other park facilities, or in a significant increase in population that would substantially increase school enrollment or library service.

Therefore, for the reasons discussed above, construction- and operations-related impacts on public services associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.15 Recreation

Alternative A would result in similar impacts on recreation as the proposed *2020 LA River Master Plan*. As presented in Section 3.15, *Recreation*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on recreation from construction and operations. This alternative would reduce or eliminate recreation impacts associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. However, this alternative involves a similar number of total projects as the proposed Project, thereby resulting in similar overall recreation impacts from construction and operations activities. Conversely, some of the beneficial effects offered from KOP Categories 2, 4, and 5 design components as part of the proposed Project would not occur under this alternative.

Similar to the proposed Project, construction of this alternative could result in an increased use of nearby existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River and existing recreational facilities is disrupted. Dependent on the location and project proponent, staging areas could be located on local jurisdiction properties and the staging areas could be large in size, depending on the extent and nature of projects and the equipment involved. Additionally, the future projects could have substantially long construction durations with intensive construction activities, thereby causing disruption of access and use, and potentially leading to longer temporary closures, of existing recreational facilities. Temporary closures of existing recreational facilities could occur during construction and recreational facilities near a construction site may experience noise, dust, diminished access, and other nuisance impacts during construction. This could result in an increased use of existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River Trail is disrupted. Therefore, construction activities under this alternative could increase the use of nearby existing neighborhood and regional parks or other recreational facilities for an extended period such that substantial physical deterioration of the facility would occur or be accelerated.

Like the proposed Project, operation of this alternative would implement multi-benefit projects that would serve a range of functions and uses, which would increase the amount of recreational resources available in the study area. Therefore, operation of this alternative would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur. However, elimination of improvements such as those aligned with KOP Categories 2, 4, and 5 would not realize the same recreational benefits as the proposed Project. For instance, the range of functions, such as flood management, recreational, and ecological uses such as amphitheaters, small planting trays, parks, wildlife ramps, and wetland terraces, would not occur under this alternative. While these features would not attract a large number of users, the omission of these design components would not have a meaningful effect on the increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur. Therefore, impacts would be similar to those of the proposed Project.

Like the proposed Project, construction and operations activities under this alternative could have impacts on various environmental resources such as biological resources, cultural resources, and hydrology and water quality. The impact discussions for the respective resources above demonstrate that construction and operation of recreational resources under this alternative could have an adverse physical effect on the environment.

Therefore, for the reasons discussed above, construction- and operations-related impacts on recreation associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.1.16 Transportation

Alternative A would result in similar impacts on transportation as the proposed *2020 LA River Master Plan*. As presented in Section 3.16, *Transportation*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on transportation/traffic from operations. This alternative would reduce or eliminate transportation/ traffic impacts associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar overall transportation/traffic impacts from construction and operations activities.

Similar to the proposed Project, traffic and circulation impacts from this alternative are not expected to be of a magnitude such that they would result in a conflict with any programs, plans, or policies addressing the circulation system, or transit, roadway, bicycle, or pedestrian facilities. However, some design components could involve intermittent lane and sidewalk closures during construction, which could impede vehicle, pedestrian, equestrian, and bicycle circulation. Therefore, construction impacts would be potentially significant without mitigation.

This alternative, like the proposed Project, would provide expanded bicycle, pedestrian, and micro-mobility user networks, expansion of access to open spaces, and improved regional and local transit connectivity. This alternative would allow for an increased share of trips to be completed via active transportation instead of by private vehicle. Increasing the active transportation mode share and the ability to replace long-distance vehicle commute trips with an active transportation trip will reduce VMT, consistent with State and regional policy initiatives, including Senate Bill 743 and the Southern California Association of Governments' (SCAG's) Regional Transportation Plan (RTP). It is also

consistent with RTP Goal 6, which seeks to protect the environment and health of SCAG region residents by improving air quality and encouraging active transportation.

This alternative would also support the vision for the County's 2012 *Bicycle Master Plan* to encourage and make bicycling more comfortable with design components that cater to cyclists. The proposed 51-mile continuous off-street path for active transportation trips would also provide a safe corridor for active transportation trips free of risk from injury or death by collision with a motor vehicle.

Implementation of this alternative would still allow the County to achieve many of the goals and policies from the *Los Angeles County General Plan* Mobility Element. Similarly, implementation of this alternative would be consistent with active transportation-related goals, policies, and actions of the other jurisdictions through which the river flows. As such, this alternative would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Like the proposed Project, construction of this alternative may result in short-term increases in VMT. Per County Guidelines, construction impacts related to increases in VMT, if they occur, are not considered significant under CEQA and are therefore considered to be less than significant. Operation of this alternative would result in potentially significant increases in VMT, similar to the proposed Project. Each individual project's potential to result in a significant transportation impact will need to be evaluated by the project proponent when the project's exact location, configuration, and scale are known, and cannot be determined based on the current level of project specificity.

Construction of this alternative may result in short-term roadway effects, for example localized increases in delay and traffic queuing that stems from lane closures, which could result in increased hazards from geometric design (e.g., reduced sight lines due to temporary obstructions such as construction equipment parked in the roadway) and emergency access, both along the river (e.g., due to closed access ramps) and at adjacent land uses (e.g., due to driveways affected by lane closures). Similar to the proposed Project, mitigation would reduce the effects of this impact.

Operations impacts regarding the potential increase of hazards due to a geometric design feature and/or provision of inadequate emergency access that generally relates to the design of access points and/or roadway modifications may include safety, operational, or capacity impacts. River access points would be placed approximately every half mile, but specific locations are unknown at this time. It is also unknown whether any existing geometric design hazards would need to be remediated, or whether design of specific access points may require modifications to existing roadway geometries under this alternative. However, all access points would be required to be designed according to criteria of the County, including the Trails Manual adopted in 2011, and, where applicable, of the local agency in which they are located. Furthermore, alteration to existing or design of new service roads providing access for maintenance and emergency vehicles must meet with approval of the County or the relevant local agency. Given the access point design standards and emergency vehicle access requirements, implementation of this alternative would not substantially increase hazards or conflicts or result in inadequate emergency access. Furthermore, implementation of this alternative would remediate or improve existing substandard conditions and would therefore contribute to overall safety improvements along the entire river corridor.

Consequently, for the reasons discussed above, construction- and operations-related transportation/traffic impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.17 Tribal Cultural Resources

Alternative A would result in similar impacts on TCRs as the proposed *2020 LA River Master Plan*. As presented in Section 3.17, *Tribal Cultural Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on TCRs from construction and operations. This alternative would reduce or eliminate TCR impacts associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar overall TCR impacts from construction and operations activities.

Similar to the proposed Project, this alternative could result in significant impacts on TCRs through proposed ground disturbance, which could include site clearing and excavation that may result in significant impacts with adverse effects on surface-exposed or buried cultural materials, cultural objects, or landscapes determined to be TCRs. Impacts on TCRs could also be indirect and would include potential significant changes to the setting or viewshed of a TCR, which could include construction of new structures, recreational facilities, and design components that could indirectly affect the integrity of the resource. Operational elements, such as increased erosion along proposed trail alignments, facilities, and recreational areas, could result from increased public use. Additionally, introducing recreationists and trail users in new facilities near a potentially significant TCR could directly affect TCRs, either through unanticipated destruction of *in situ* TCRs or destruction or removal from looting, or otherwise negatively affect the integrity of the resource.

Therefore, for the reasons discussed above, construction- and operations-related TCR impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.18 Utilities/Service Systems

Alternative A would result in similar impacts on utilities/service systems as compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.18, *Utilities/Service Systems*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on utilities/service systems from operations. This alternative would reduce or eliminate utilities/service systems impacts associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5 of the proposed Project. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar overall utilities/service systems impacts from construction and operations activities.

Similar to the proposed Project, this alternative could require the expansion or construction of new facilities from insufficiencies in utilities, which could, in turn, result in significant environmental impacts. Additionally, water shortages could occur where demand would exceed supply and insufficiencies in wastewater capacity could occur from larger project components, also leading to potentially significant environmental impacts from the expansion or construction of new water and wastewater infrastructure.

Unlike the proposed Project, this alternative would not realize the same benefits to water supply from the implementation of diversion projects that could improve local water supply reliability. These projects that would capture and treat flows before they reach the river were found to help expand water supply opportunities in the watershed and along the river corridor, and would also

improve water quality. This diverted water was also intended to be used to enhance habitat, support recreation, or supply water for municipal and industrial uses. Similarly, floodplain reclamation, such as recreation fields and other recreational uses, were found to potentially contribute to groundwater recharge. Therefore, fewer benefits would occur under this alternative.

Solid waste is not expected to be generated in excess of State or local standards or the capacity of local infrastructure, and waste-reduction techniques would be incorporated to include reuse and diversion of materials in the waste stream from landfill disposal during both construction and operations. Therefore, this alternative would not impair the attainment of solid waste reduction goals.

Therefore, for the reasons discussed above, construction- and operations-related utilities/service systems impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.1.19 Wildfire Hazards

Alternative A would result in similar impacts on wildfire as the proposed *2020 LA River Master Plan*. As presented in Section 3.19, *Wildfire*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on wildfire from construction and operations. This alternative would reduce or eliminate wildfire impacts associated with construction or operations of improvements such as those aligned with KOP Categories 2, 4, and 5 of the proposed Project. However, this alternative involves construction and operation of a similar number of total projects as the proposed Project, thereby resulting in similar overall wildfire impacts from construction and operations activities.

Similar to the proposed Project, this alternative has a potential to result in a significant impact related to impairment of an adopted emergency response plan or emergency evacuation plan due to construction staging, temporary lane closures, and construction-related traffic delays or obstructions. However, new development would be constructed in accordance with current building and fire/life/safety ordinance and codes, including all applicable County code requirements and local jurisdiction requirements related to access, water mains, fire flows, and hydrants. Therefore, operations would not be expected to impair emergency access.

This alternative also has the potential to involve construction in areas designated as Very High Fire Hazard Severity Zones (FHSZs), which could exacerbate wildfire risks from construction equipment and introduction of potential ignition sources. Wildfire management guidelines and fuel modification plans would need to be adhered to during construction activities in vulnerable areas. Similarly, operations could introduce additional visitors and staff to areas within Very High FHSZ designations, which could expose additional people to hazardous conditions. The addition of more people and structures to an area designated a Very High FHSZ could exacerbate existing wildfire risks by increasing the possibility of human-caused wildfires.

Like the proposed Project, this alternative may involve installation or maintenance of infrastructure that could exacerbate fire risk, such as structural hardening, water supply and flow, hydrant and standpipe spacing, signage, fire department access, and overhead or underground electric utilities. Operations of project features under this alternative within or adjacent to Very High FHSZs would require the implementation of certain measures to protect defensible space surrounding the property, such as routine vegetation clearing or additional sprinkler systems. While protective measures such as brush management are intended to reduce wildfire risk, the ongoing removal of vegetation could result in other significant impacts on the environment.

Finally, this alternative would involve construction adjacent to or in Very High FHSZs as well as areas prone to flood, landslide, or slope instability and would have the potential to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage change. The operation of new facilities within these areas could introduce visitors, staff, and structures into an area highly susceptible to landslides or slope instability after a wildfire event, thereby exacerbating the existing risk of post-fire hazard by exposing additional people to this existing hazard.

Therefore, for the reasons discussed above, construction- and operations-related wildfire impacts associated with Alternative A would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2 Environmental Evaluation of Alternative B

5.4.2.1 Aesthetics

Alternative B would result in similar aesthetic impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.1, *Aesthetics*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would improve visual quality across and along the river, providing amenities and additional recreational uses and trails. These features would contribute to enhanced viewing opportunities for users to experience the vistas, result in increased scenic quality, and be consistent with zoning or design regulations governing scenic quality. However, Alternative B, like the proposed Project, could result in significant and unavoidable impacts from implementation of KOP Category 6, which includes design components that could be multiple stories high or involve large massing, which could obstruct or block scenic vistas and views.

This alternative would reduce or omit some of the components associated with KOP Category 2 that contribute to the aesthetic benefits. These include features such as removal of concrete to return the channel to a naturalized condition, creation of places for people and habitat within the river channel, terraced banks or channel texturing/grooving/smoothing, and recreational and ecological uses (plantings, parks, wetland terraces) within the channel. While the aesthetic benefits may not be realized to the same degree with this alternative, Alternative B would generally help improve the visual and aesthetic condition within the *2020 LA River Master Plan* area.

More specifically, this alternative would not add or omit project features that would alter the proposed Project's impact conclusions related to aesthetics. For instance, views of construction activities under this alternative, while temporary, could obstruct views of scenic resources. Additionally, adverse operational effects on scenic vistas from larger-scale and taller design components (such as the design components included under KOP Category 6) could occur from obstructing scenic vistas from public views. The Design Guidelines would help visually integrate the new uses and features with existing adjacent uses. However, temporary construction could introduce incompatible visual elements with the surrounding visual environment. Like the proposed Project, implementation of Mitigation Measures AES-1, LU-1, REC-1, and AES-2 would be required for this alternative. Even with implementation of mitigation measures, scenic vista impacts would still remain significant and unavoidable.

As with the proposed Project, this alternative would not involve longer-term operational effects and would be consistent with regulations that pertain to ensuring compatible uses for all development, ensuring high-quality design and architectural elements, avoiding out-of-scale development, and protecting existing residential neighborhoods from encroachment by incompatible uses. Like the

proposed Project, implementation of Mitigation Measures AES-1, LU-1, and REC-1 would reduce these impacts on visual character or quality from this alternative to less-than-significant levels.

Similarly, this alternative would not change the conclusions to light and glare relative to the proposed Project, as no changes to lighting would occur with this alternative. Like the proposed Project, implementation of Mitigation Measures AES-3a and AES-3b would reduce the light and glare impacts from this alternative to less-than-significant levels.

Therefore, for the reasons discussed above, aesthetic impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project because this alternative would introduce new buildings into the landscape that could obstruct scenic views, such as museums, affordable housing, pavilions, cafés, etc. Consequently, like the proposed Project, this alternative would result in significant and unavoidable impacts with the implementation of mitigation measures.

5.4.2.2 Air Quality

Alternative B would result in similar air quality impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.2, *Air Quality*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in significant pollutant emissions associated with construction activities, as well as long-term operations.

This alternative would reduce or eliminate emissions from construction or operations of improvements associated with the proposed Project that occur within the LA River channel. For instance, emissions related to construction or operation of KOP Category 2 would not occur, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/ smoothing, and installation of access ramps. However, emissions from other construction and operations activities that would occur in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, this alternative would not result in unplanned population growth in the County and would therefore be consistent with the region's Air Quality Management Plan.

Construction of this alternative would generate similar air pollutant emissions as the proposed Project from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. In addition, earthwork activities would result in fugitive dust emissions, and paving and coating activities would release volatile organic compounds from off-gassing. Similar to the proposed Project, regional and localized emissions associated with Alternative B (KOP Categories 1 and 3 through 6) would potentially exceed significance thresholds. Similarly, operation-related emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, and emissions associated with landscaping would potentially exceed SCAQMD regional or localized thresholds. Removing KOP Category 2 design components would not materially reduce the construction or operations emissions associated with this alternative. Instances where diesel particulate matter emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds could occur during construction and operation of this alternative. Like the proposed Project, implementation of Mitigation Measures AQ-1, GHG-2, AQ-2, GHG-1a, TRA-1B, AQ-3, and AQ-4 would be required for this alternative. Even with implementation of mitigation measures, impacts from an increase in criteria pollutants would remain significant and unavoidable.

Impacts from potential odors associated with equestrian facilities in KOP Category 1 would not change under this alternative and could be potentially significant without mitigation measures. Like the proposed Project, implementation of Mitigation Measure AQ-5 would be required for this alternative and would reduce significant impacts from odors to less-than-significant levels.

Therefore, for the reasons discussed above, air quality impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project. Consequently, like the proposed Project, this alternative would result in significant and unavoidable air quality impacts with the implementation of mitigation measures.

5.4.2.3 Biological Resources

Alternative B would avoid or reduce impacts on biological resources compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.3, *Biological Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in significant impacts on biological resources from construction and operations activities, which would be reduced to less-than-significant levels with the incorporation of mitigation measures. This alternative would reduce or eliminate some of the direct and indirect biological impacts related to construction or operations of in-channel improvements associated with the proposed Project.

Similar to the proposed Project, this alternative would result in substantial adverse effects on candidate, sensitive, or special-status species of plants, invertebrates, fish, mammals, reptiles, amphibians, birds, raptors, and migratory birds from construction as a result of direct removal of plant species, natural communities, and wildlife habitats. Indirect construction impacts could also occur, such as dust, erosion, chemical spills, trash and debris, and introduction and spread of invasive species. Operations impacts would occur due to maintenance activities, and use by humans and domestic animals, which would include walking, biking, and equestrian uses. Like the proposed Project, implementation of Mitigation Measures BIO-1 through BIO-18 would be required for this alternative to reduce impacts on candidate, sensitive, or special-status species to less-than-significant levels.

However, because project sites and locations are not known for the proposed Project at this time, these impacts would be reduced, and in some cases eliminated, particularly where in-channel improvements would no longer potentially occur in soft-bottom portions of the river channel. As described under the proposed Project, impacts on special-status plants due to the construction of KOP Category 2 may be more intense than under the common elements because many of the in-channel modifications under KOP Category 2 may be more invasive in nature during construction compared to activities outside of the channel. Therefore, by eliminating KOP Category 2 under this alternative, impacts on in-channel plants, invertebrates, fish, mammals, amphibians, and birds would be particularly reduced. Impacts would remain less than significant with the implementation of the mitigation measures identified above.

Conversely, omitting some of the KOP Category 2 design components, such as flood management functions, deployment of barriers, and maintenance of terraced banks, planting trays, and dams, could reduce the beneficial aspects of the proposed Project. For instance, this alternative would reduce the opportunities for management of invasive species, maintenance and planting of vegetated areas within the channel, and provision of space for native vegetation communities and habitat for wildlife. Additionally, because this alternative does not include any in-channel disturbances or material changes, the potential for impacts to occur where soft bottom currently exists would be reduced. However, it would also not involve the potential removal of concrete or

other elements to allow for the beneficial establishment of riparian vegetation and a higher diversity of plants and animals as under the proposed Project.

As described for the proposed Project, riparian habitats and other sensitive natural communities are present within Frames 1, 2, and 6 through 9 of the study area. Permanent and temporary direct and indirect impacts could occur on these sensitive natural communities under this alternative. Temporary direct impacts could include incidental disturbances within and adjacent to construction areas and clearing and grubbing for equipment staging and temporary construction access routes. Sensitive natural communities that are currently present within the top of levee and/or landside portion of the LA River ROW and could be potentially directly affected by construction. Temporary indirect impacts on riparian habitat, essential fish habitat, Habitat Areas of Particular Concern, or other sensitive natural communities adjacent to the project areas may be caused by construction activities (e.g., soil compaction, introduction of invasive species, dust, increased fire risk, chemical spills, sedimentation), which could lead to the degradation of native habitats and floodplains. Like the proposed Project, implementation of Mitigation Measures BIO-20a and BIO-20b, as well as BIO-1, BIO-4, BIO-5, BIO-6, and BIO-9, would be required for this alternative to reduce impacts on riparian habitat and other sensitive natural communities to less-than-significant levels.

Operational impacts like recreation, maintenance, fertilizer runoff, pet droppings, and increased trash would continue to occur under this alternative, which could degrade riparian habitat and other sensitive natural communities in the LA River ROW. Like the proposed Project, implementation of Mitigation Measures BIO-9 and BIO-18 would be required for this alternative to reduce operations impacts on riparian habitat and sensitive natural communities to less-than-significant levels. Areas within the channel could experience impacts of a lesser degree or may even avoid them (e.g., if a later activity under this alternative is sited far from the channel) under this alternative as compared to the proposed Project.

While this alternative would also result in direct impacts on wetlands or other potential jurisdictional aquatic resources, by omitting in-channel design components, direct impacts on wetlands and aquatic resources would be reduced under this alternative, as many later activities described for KOP Category 2 depend on the presence of a water feature, wetland, or jurisdictional aquatic resource. However, direct impacts could occur through permanent and temporary construction activities if areas that are temporarily disturbed are not successfully restored, resulting in a diminished level of biological functions and values. These effects could be both short and long term in nature during the course of construction in or near these features. Permanent and temporary disturbances from construction activities could also result in indirect impacts on wetlands and/or potentially jurisdictional aquatic resources present in the area surrounding the project site from the introduction of nonnative species, erosion, sedimentation, chemical spills, and alteration of downstream hydrological conditions. Like the proposed Project, implementation of Mitigation Measures BIO-1 and BIO-21a through e would be required for this alternative to reduce impacts on wetlands to less-than-significant levels.

Any wetlands and/or potentially jurisdictional aquatic resources could be affected by operation and maintenance activities, such as vegetation removal and trimming and facility repairs, as well as public activity that results in litter, pet droppings, and introduction of invasive species. Like the proposed Project, implementation of Mitigation Measures BIO-22a and b would be required for this alternative to reduce impacts on wetlands to less-than-significant levels.

Additionally, some of the design components under KOP Category 2 that could potentially have beneficial permanent direct effects on wetlands and/or potentially jurisdictional aquatic resources would not occur under Alternative B. These include the planting of riparian and wetland habitats, improvements to hydrology or channel substrate, enhancement of existing conditions, and creation of additional or improved wetlands or jurisdictional aquatic resources within the study area.

As described under the proposed Project, the construction of KOP Categories 2 and 4 could result in potentially significant impacts associated with the permanent and temporary loss of habitats and nursery sites, imposed habitat fragmentation, and disruption and/or obstruction of connectivity. Operation of some of the design components under KOP Category 2 could potentially have deleterious effects on fish and wildlife connectivity and reproduction such as loss of habitat and habitat access due to potentially obstructive check dams and deployable barriers, levees, armored channels/vertical walls, added concrete, and bridge pier modifications. Eliminating KOP Category 2 and other in-channel features under this alternative would reduce permanent impacts from construction and operations activities such as loss of existing vegetation and habitats, habitat fragmentation, obstructed movement ability due to constructed barriers (e.g., dams and levees), and loss of nursery habitat. However, like the proposed Project, implementation of Mitigation Measures BIO-9 through BIO-19, and BIO-23 would be required for this alternative to reduce impacts on migratory species, corridors, or nursery sites to less-than-significant levels for other areas and design components.

Conversely, some of the design components under KOP Category 2 that could potentially have permanent beneficial effects for wildlife connectivity and nursery sites would not occur under this alternative. These features include naturalized side channels, habitat restoration, additional riparian and wetland habitats, planting trays, parks, wildlife ramps, daylighted storm drains, and removed concrete. Overall, this alternative would result in lesser impacts on nursery sites and wildlife movement corridors.

Similar to the proposed Project, this alternative could conflict with local tree policies and ordinances under the County Tree Ordinance and city jurisdictions. Proposed activities may be located in areas that contain protected trees, including riparian habitats, as well as urban areas. These impacts may be slightly reduced by eliminating in-channel tree removal and/or trimming. However, like the proposed Project, implementation of Mitigation Measure BIO-24 would be required for this alternative to reduce impacts from conflicts with local policies protecting biological resources to less-than-significant levels for other areas and design components.

Similar to the proposed Project, this alternative would not be subject to any HCPs, Natural Community Conservation Plans, or other approved local, regional, or State HCPs. Therefore, impacts would be the same as those of the proposed Project.

Consequently, for the reasons discussed above, biological impacts associated with Alternative B would be less than those analyzed and disclosed for the proposed Project. Therefore, like the proposed Project, this alternative would result in less-than-significant impacts on biological resources.

5.4.2.4 Cultural Resources

Alternative B would result in similar cultural resources impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.4, *Cultural Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in significant impacts on cultural

resources from construction and operations. This alternative would reduce or eliminate impacts on cultural resources that may be within the LA River channel. For instance, in-channel resources would not be affected by construction of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, impacts on cultural resources from other construction and operations activities that would occur in place of the in-channel improvements would occur, resulting in similar effects that would remain significant and unavoidable.

Similar to the proposed Project, construction activities from this alternative have the potential to cause ground disturbance, demolish historical resources, alter character-defining features of historical resources, and/or make changes to the setting of historical resources. These factors may result in an adverse change to the significance of a historical resource. Like the proposed Project, implementation of Mitigation Measures CR-1a, CR-1b, CR-2b, and CR-2c would be required for this alternative. Even with the implementation of these mitigation measures, construction impacts on historical resources would remain significant and unavoidable with this alternative.

Additionally, operations of the various projects that could occur under this alternative could include such impacts as damage to historical resources and increased foot traffic that could affect the integrity of material. Like the proposed Project, implementation of Mitigation Measures CR-3a, CR-3b, and CR-3c would be required for this alternative. Even with the implementation of these mitigation measures, operational impacts on historical resources would remain significant and unavoidable with this alternative.

Similar to the proposed Project, construction activities from this alternative, such as the use of backhoes, trucks, hand-held power equipment, generators, and other equipment, could result in an adverse change to significant archaeological resources. New construction has the potential to cause ground disturbance, demolish archaeological resources, alter character-defining features of archaeological resources, and/or make changes to the setting of archaeological resources. Like the proposed Project, implementation of Mitigation Measures CR-1a and b, CR-4a, CR-4b, CR-4c, and CR-5 would be required for this alternative. Even with the implementation of these mitigation measures, construction impacts on archaeological resources would remain significant and unavoidable with this alternative.

Operations impacts on archaeological resources could also include increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and increased potential for looting. These activities could result in the exposure, disturbance, removal, and/or potential destruction through damage or removal of existing resources and previously unrecorded archaeological resources. Like the proposed Project, implementation of Mitigation Measures CR-6 and CR-5 would be required for this alternative. Even with the implementation of these mitigation measures, operational impacts on archaeological resources would remain significant and unavoidable with this alternative.

This alternative could also result in disturbance of human remains from both construction and operations. Site disturbance, movement of construction equipment, construction staging areas, and import and export of materials all could disturb human remains, resulting in significant impacts. Like the proposed Project, implementation of Mitigation Measure CR-7 would be required for this alternative. Even with the implementation of this mitigation measure, impacts on human remain would remain significant and unavoidable with this alternative.

Therefore, for the reasons discussed above, cultural resources impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project. Consequently, like the proposed Project, this alternative would result in significant and unavoidable impacts on cultural resources even with the implementation of mitigation measures.

5.4.2.5 Energy

Alternative B would result in similar energy impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.5, *Energy*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on energy from construction and operations. This alternative would reduce or eliminate impacts on energy from construction and operations associated with activities that would occur within the LA River channel. For instance, energy and fuels associated with in-channel design components would not occur from construction of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, energy demands and consumption from other construction and operations activities that would occur in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, this alternative would require energy and fuels for construction and operations of the common elements and other KOP categories. Construction activities primarily involve onsite energy demand and consumption related to the use of transportation fuels (i.e., diesel and gasoline) for construction worker vehicle trips, hauling, and materials delivery truck trips; operation of off-road construction equipment; and electricity for lighting and other intermittent sources. Trucks and equipment used during proposed construction activities would also be required to comply with the California Air Resources Board's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Aside from reducing criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy and reduce fuel consumption. Anti-idling regulations would limit the amount of fuel wasted in equipment and trucks that are not in operation. Emissions regulations to control pollutant and toxic air contaminant emissions would also require that engines be more efficient, which results in reduced fuel consumption. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements. As such, construction activities associated with Common Elements Typical Project would not result in the wasteful, inefficient, or unnecessary use of transportation fuels in meaningful amounts. Furthermore, as discussed in Section 3.7, *Greenhouse Gas Emissions*, the construction industry is moving toward cleaner fuels and electrified equipment, which would result in fewer pollutant emissions, and the technology would provide greater efficiencies in the equipment's energy consumption over time.

Operations for this alternative would require energy for the conveyance of water for irrigation, restrooms, and café uses; electricity and natural gas for lighting, cooling, and appliances; and gasoline for landscaping equipment and mobile vehicle trips. Each project site would comply with California Title 24 standards and the CALGreen Code for energy efficiency; in addition, new construction would be required to implement building energy best practices from the following standards: U.S. Department of Energy Better Buildings Initiative, ENERGY STAR, Dark Sky, Cradle-to-Cradle, and Green Globes codes. The proposed Project would also incorporate water, environmental, and construction best practices, and would use light-emitting diodes or a more efficient light source and solar-power light fixtures along the river wherever possible. Additionally, because this alternative, like the proposed Project, aims to connect to other trails and paths along the length of

the river to create a mobility network across the County for cyclists, pedestrians, and equestrians, non-vehicular modes of travel would reduce the consumption of fuel from passenger vehicles.

Therefore, for the reasons discussed above, energy impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would be less than significant.

5.4.2.6 Geology, Soils, and Paleontological Resources

Alternative B would result in similar geology and soils impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.6, *Geology, Soils, and Paleontological Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on geology, soils, and paleontological resources from construction and operations. This alternative would reduce or eliminate impacts on geology and soils from construction and operations associated with activities that would occur within the LA River channel. For instance, geologic hazards that may affect in-channel design components would not occur from construction of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. Additionally, impacts on potential paleontological resources that may occur from construction and operations within the channel from the proposed Project would not occur as a result of this alternative. However, geology and soils impacts from other construction and operations activities that would occur in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, construction activities would be considered too shallow and small scale to cause or exacerbate significant geologic phenomena such as fault rupture, seismic ground shaking, or liquefaction. However, because the LA River is in a seismically active area due to the various active and potentially active faults in the region, seismic events from one or more of these regional active or potentially active faults could result in strong ground shaking in the LA River area, thereby affecting some project features. Such strong seismic shaking could also result in landslides where landslide-prone areas exist along the LA River as discussed in Section 3.6, *Geology, Soils, and Paleontological Resources*. Construction and operations of this alternative would require evaluation if they occur in geologic hazard zones areas. Additionally, all individual design components would be required to adhere to all building code and permitting requirements and, if deemed necessary, undergo geotechnical investigations. This would reduce potential impacts associated with geologic hazards to less-than-significant levels for short-term (construction) and long-term activities (i.e., operations) associated with this alternative. Like the proposed Project, implementation of Mitigation Measure GEO-1 would be required for this alternative, which would reduce impacts related to risk of loss, injury, or death from fault rupture, seismic ground shaking, seismic-related ground failure, and landslides to less-than-significant levels.

Operational impacts from this alternative would also be similar to those of the proposed Project. As this alternative would attract the same number of visitors as the proposed Project, this alternative could also expose visitors to strong seismic shaking, fault rupture, and secondary seismic phenomena such as liquefaction and landslides. However, as mentioned above, any development occurring in fault, liquefaction, and landslide zones would require evaluation and countermeasures implemented in design and construction. All individual project features would be implemented following proper engineering methods and building code requirements. Operations activities would not cause or exacerbate major geological phenomena such as strong seismic shaking or fault

rupture, or any secondary phenomena such as liquefaction or landslides, and impacts would remain less than significant.

Similar to the proposed Project, this alternative would require obtaining coverage under the NPDES Construction General Permit, minimizing the amount of erosion during construction. Erosion management would be implemented during construction and after construction is complete to reduce potential impacts associated with erosion to less-than-significant levels for short-term (construction) and long-term activities (operations).

Similar to the proposed Project, construction and operations could be affected by unstable soils in the project area. Like the proposed Project, implementation of Mitigation Measure GEO-1 would be required for this alternative, which would reduce impacts from unstable soils to less-than-significant levels.

Similar to the proposed Project, construction and operations could be affected by expansive soils in the project area. Like the proposed Project, implementation of Mitigation Measure GEO-1 would be required for this alternative, which would reduce impacts from expansive soils to less-than-significant levels.

As with the proposed Project, this alternative would not involve septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur.

Impacts on paleontological resources for this alternative would be reduced from those identified for the proposed Project due to no in-channel disturbance activities occurring under Alternative B. However, construction would generally involve site disturbance, movement of construction equipment, construction staging areas, and import and export of materials, all of which could result in an adverse effect on significant paleontological resources. Like the proposed Project, implementation of Mitigation Measures GEO-2 and GEO-3 would be required for this alternative, which would reduce impacts on paleontological resources to less-than-significant levels.

Potential impacts from operation of the components of this alternative could result in significant impacts on sensitive geologic deposits with the potential for containing undiscovered significant paleontological resources, which include increased erosion along proposed trail alignments, facilities, and recreational areas from increased public use and increased potential for disturbance.

Like the proposed Project, implementation of Mitigation Measure GEO-4 would be required for this alternative, which would reduce impacts on paleontological resources to less-than-significant levels.

Therefore, for the reasons discussed above, geology and soils impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would be less than significant.

5.4.2.7 Greenhouse Gas Emissions

Alternative B would result in similar GHG emissions impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.7, *Greenhouse Gas Emissions*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts from GHGs from construction and operations. Although this alternative would reduce or eliminate impacts from GHG emissions from construction and operations associated with activities that would occur within the LA River channel, it would have similar impacts as the proposed Project

considering that the same number of projects would be implemented under this alternative as under the proposed Project.

Similar to the proposed Project, construction of this alternative would generate GHG emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. GHG emissions are measured exclusively as cumulative impacts; therefore, construction emissions are considered part of total GHG emissions for the project lifecycle, which also includes GHG emissions during operations. Operation of this alternative would involve GHG emissions from multiple sources, including energy, mobile, area, water, wastewater, and waste. Because details about the construction and operation scenario are unknown, GHG emissions were not quantified for the proposed Project; however, it was determined that GHG emissions could potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, the construction and operation emissions associated with this alternative are also considered to result in significant impacts. Like the proposed Project, implementation of Mitigation Measures GHG-1a, GHG-1b, and TRA-1b would be required for this alternative. Even with the implementation of these mitigation measures, impacts from the generation of GHGs would remain significant and unavoidable with this alternative.

As with the proposed Project, this alternative would be consistent with the 2017 Scoping Plan's overall goal of avoiding losses in carbon sequestration and limiting land use emissions. However, it is anticipated that buildings would use natural gas and landscaping equipment would be gasoline powered, both of which are inconsistent with the California Governor's Office of Planning and Research (2018a) guidance. In addition, daily vehicle trips would exceed the California Governor's Office of Planning and Research's (2018b) daily trip screening threshold. Consequently, while emissions from the land use sector would generally be consistent with the 2017 Scoping Plan, emissions from the energy, mobile, area, water, and waste sectors would be potentially inconsistent with the 2017 Scoping Plan and applicable regulatory programs.

As discussed in Section 3.16, *Transportation*, the terraced banks design component of KOP Category 2 was determined to have the potential to generate a significant VMT impact because although it would serve a variety of flood management or ecological uses, none of which would result in a significant transportation impact, it may also be used to develop amphitheaters for public performances or parks. Site-specific details regarding site programming and acreage will be required to determine the potential for the public-serving uses of the terraced banks to be eligible for screening or to result in a VMT impact. Therefore, KOP Category 2 was found to affect the State's ability to meet its mobile-source GHG reduction targets and could be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan. The GHG emissions from non-mobile sectors could also potentially conflict with applicable sector-specific reduction targets and strategies. Therefore, construction and operation emissions associated with KOP Category 2 may have a potentially significant impact on the environment. Because KOP Category 2 components would be removed under this alternative, a considerable reduction in GHG emissions would occur compared to the proposed Project.

However, other components of this alternative that are similar to the proposed Project would still result in significant GHG emissions during construction and operations. Operations of this alternative, like the proposed Project, would be potentially inconsistent with the 2008 Scoping Plan and First Update, Senate Bill 32, Executive Order S-3-05, 2020 Climate Change Action Plan, updated County Climate Action Plan, and OurCounty Sustainability Plan due to the reasons described above. Therefore, construction and operation of this alternative would potentially conflict with or obstruct

implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Like the proposed Project, implementation of Mitigation Measures GHG-1a, GHG-2, and TRA-1b would be required for this alternative. Even with the implementation of these mitigation measures, impacts from conflict with plans, policies, or regulations to reduce GHGs would remain significant and unavoidable with this alternative.

While this alternative has the potential to result in similar impacts as the proposed Project for most of the common elements and KOP categories, potential impacts on GHG emissions from implementation of the terraced bank design component of KOP Category 2 that could affect the State's ability to meet its mobile source GHG reduction targets and be inconsistent with the long-term GHG reduction goals of the 2017 Scoping Plan would be avoided. However, impacts from GHGs would remain significant and unavoidable for this alternative.

5.4.2.8 Hazards and Hazardous Materials

Alternative B would result in similar hazards and hazardous materials impacts as the proposed *2020 LA River Master Plan*. As presented in Section 3.8, *Hazards and Hazardous Materials*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts from hazards and hazardous materials from construction and operations. This alternative would reduce or eliminate impacts from hazards and hazardous materials from construction and operations associated with activities that would occur within the LA River channel. For instance, hazards and hazardous materials that may affect construction or operation of in-channel design components would not occur from KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, hazards and hazardous materials impacts from other construction and operations activities in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, this alternative is not expected to result in a significant risk associated with routine transport, use, and disposal of hazardous materials. Required compliance with applicable regulations and adherence to the requirements of the Construction General Permit would minimize potential impacts.

Like the proposed Project, this alternative could result in a significant risk associated with potential upset and accident conditions due to construction near unknown hazardous sites. Similar to the proposed Project, implementation of Mitigation Measure HAZ-1 would be required to reduce impacts from potential hazards from the release of hazardous materials during construction to less-than-significant levels.

Similarly, this alternative could involve potential construction impacts from hazardous emissions or handling of hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Like the proposed Project, implementation of Mitigation Measure HAZ-1 would be required to reduce impacts from potential hazards during construction near schools to less-than-significant levels.

Furthermore, projects could result in a significant risk associated with being constructed on or near a Cortese List site. Like the proposed Project, implementation of Mitigation Measure HAZ-1 would be required to reduce impacts from construction on or near a Cortese list site to less-than-significant levels.

Like the proposed Project, this alternative would not place any individual projects within Planning Boundaries, Runway Protection Zones, or Airport Influence Areas associated with any of the local airports such as Long Beach, Compton/Woodley, or Hollywood Burbank airports, and would therefore not result in any risks or hazardous conditions.

This alternative would not be expected to hinder or impair an adopted emergency response or evacuation plan or route. Similar to the proposed Project, this alternative would comply with existing standard industry practices such as traffic control and signage, adherence to County and local agency criteria (as necessary), and rules and regulations pertaining to emergency response that would provide and maintain adequate emergency access.

This alternative could potentially result in a significant risk of exposure to wildfires. Projects under this alternative that may be within high fire hazard areas would follow all applicable fire response and prevention requirements and applicable construction standards that ensure implementation of fire prevention features, including compliance with the regulations set forth in the California Fire Code and Occupational Safety and Health Administration Safety and Health Regulations for Construction during both project planning/design and construction. Like the proposed Project, implementation of Mitigation Measure WF-2 would be required to reduce impacts from construction, and implementation of Mitigation Measure WF-3 would be required to reduce impacts from operations of projects within or near fire hazard areas to less-than-significant levels.

While this alternative has the potential to result in the same types of impacts as the proposed Project for most of the common elements and KOP categories, potential impacts from hazards and hazardous materials from design components within the channel would be avoided. Overall, for the reasons discussed above, hazards and hazardous materials impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would be less than significant.

5.4.2.9 Hydrology and Water Quality

Alternative B would result in fewer hydrology and water quality impacts when compared to the proposed *2020 LA River Master Plan*. As presented in Section 3.9, *Hydrology and Water Quality*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on hydrology and water quality from construction and operations. This alternative would reduce or eliminate impacts on hydrology and water quality from construction associated with activities that would occur within the LA River channel. For instance, hydrology and water quality impacts that occur from in-channel design components would not occur from construction of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, the potential benefits that could be realized from these project design features would also not occur with this alternative.

Similar to the proposed Project, this alternative could result in short-term water quality degradation associated with soil erosion and subsequent sediment transport, generation of pollutants, or accidental spills that could temporarily contaminate runoff, surface water, or groundwater from construction activities. However, BMPs, as required in a Stormwater Pollution Prevention Plan, would be required during construction to reduce erosion and restrict non-stormwater discharges from the construction site as well as release of hazardous materials.

Like the proposed Project, the majority of the projects are expected to be extra-small and small in size, with negligible changes in impervious surface areas compared to existing conditions. Therefore, runoff rates and volumes would be similar to existing conditions and would continue to infiltrate into the ground, filtering potential contaminants and minimizing the discharge of pollution and adverse effects on groundwater quality. Nevertheless, implementation of Mitigation Measures HYDRO-1a and b would be required to reduce operational impacts from the alteration of existing drainage patterns that could potentially result in increased erosion, flooding, or excessive runoff to less-than-significant levels.

In addition, medium, large, and extra-large projects would include multi-benefit design components included in the *2020 LA River Master Plan*, such as water treatment facilities, natural treatment systems, vegetated buffers, and wetlands. These multi-benefit design components also provide water quality benefits. However, it should be noted that some of the multi-benefit design components would not occur under this alternative where they may have been proposed within the channel, such as storm drain daylighting, sediment removal, or in-channel wetlands and natural treatment systems. Therefore, this alternative would not realize the same level of benefit as the proposed Project.

In addition, recommended stormwater BMPs would be implemented such as rain gardens, vegetated swales, vegetated filter strips, and infiltration strips and trenches. Stormwater BMPs would capture, convey, and control pollutant discharge. Implementation of stormwater treatment areas, landscape features, and open space areas would allow water to percolate into the ground, thereby treating stormwater runoff through biological uptake and reducing the discharge of pollution to the storm drain system. Furthermore, all projects would comply with the NPDES Construction General Permit, Municipal Separate Storm Sewer System Permits, and other local water quality and LID requirements and stormwater ordinances. County-led, -funded, or -permitted projects would also comply with the Public Works LID Standards Manual, which provides guidance for the implementation of stormwater quality control measures and the recommended design methodology to manage stormwater in the County. Therefore, implementation of this alternative would not violate any water quality standards or degrade water quality.

As described in Section 3.9, *Hydrology and Water Quality*, KOP Category 2 design components could provide a range of flood management functions as well as provide water quality benefits, such as improved infiltration, treatment potential, and improved natural filtration. Other design components include armored channels; hardened bottom or sides of a channel, embankments, or levees that would reduce scour and erosion; and check dams, which manage flows and reduce velocity and erosion and aerate water, thereby improving water quality. Daylighting would involve the replacement of underground drainage pipes with a channel that is above ground, which, when combined with planting, would create a habitat and water quality benefits. This alternative, like the proposed Project, would include new impervious areas that could reduce infiltration capacity and increase the volume of runoff into storm drains or surface waters instead of allowing groundwater recharge. This alternative would not improve water and groundwater supply reliability to the same extent as the proposed Project, as design components such as in-channel groundwater recharge spreading grounds, channel modifications such as terracing the banks and providing small planting areas, underground galleries, concrete removal, wetlands, fields, and injection and dry wells would not be implemented within the channel. Therefore, omission of these project features as part of this alternative would not result in the same benefits as the proposed Project.

Other components of the proposed Project that would occur or be encouraged under this alternative would include other multi-benefit design components, including stormwater BMPs such as rain gardens, vegetated swales, vegetated filter strips, and infiltration strips and trenches. These stormwater BMPs as well as other landscape features and open space areas would allow for groundwater infiltration, allowing water to percolate into the ground, thereby providing increased benefits for groundwater recharge. In addition, projects would comply with local jurisdictions' LID requirements, County water sources, conservation standards, and the current California Green Building Standards Code. Recycled or reclaimed water would be used for irrigation, where possible. For native planting, irrigation systems would only be for utilized for plant establishment and drought-period watering, as recommended in the *2020 LA River Master Plan* and required by the applicable regulatory requirements.

In the event groundwater is encountered during construction, dewatering would be conducted on a one-time or temporary basis during the construction phase and would not result in a loss of water that would substantially deplete groundwater supplies. After dewatering activities are completed, water levels would return to pre-construction conditions. The water supply for construction activities (e.g., dust control, concrete mixing, material washing) would most likely come from nearby hydrants and existing surface supplies and/or would be trucked to the site.

This alternative would not include project features that address one of the objectives to reduce flood risk and improve resiliency. Many of the project features associated with maintaining existing flood conveyance capacity or improving capacity in deficient reaches would not occur under this alternative. Runoff rates and volumes are expected to increase compared to existing conditions due to changes in impervious surface areas. While implementation of LID, BMPs, and distributed storage would reduce runoff through increased infiltration or temporary storage and provide substantial water quality improvements through contaminant filtration and biological uptake, flood risk reduction benefits may not be realized to the same extent with this alternative without in-channel refurbishment. Other bypass tunnel options and other off-channel improvements may be necessary to offset the reduction in flood capacity from this alternative.

While this alternative has the potential to result in similar impacts as those of the proposed Project for most of the common elements and KOP categories, potential impacts on hydrology and water quality from design components within the channel would be avoided. Therefore, this alternative would result in less impacts on hydrology and water quality compared to the proposed Project and impacts would remain less than significant. However, this alternative would also not realize the same level of benefit to long-term flood capacity and water quality as the proposed Project.

5.4.2.10 Land Use and Planning

This alternative would result in similar land use and planning impacts as the proposed Project. As presented in Section 3.10, *Land Use and Planning*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on land use and planning from construction and operations.

Similar to the proposed Project, this alternative would improve connectivity across the river, providing gateways and additional recreational uses and trails. These projects would reduce the effects of the physical barrier the LA River presents and would not further divide an established community; rather, this alternative would result in a beneficial impact with the exception of design components under KOP Category 6. Like the proposed Project, design components under KOP Category 6 could result in significant impacts with respect to division of an established community.

Construction activities associated with projects under this alternative could result in staging for construction equipment within LA River ROW (excluding the channel). Staging and construction worker parking would be managed based on the location of subsequent projects. Temporary off-channel impacts due to road closures or detours during construction could also continue to occur. Implementation of Mitigation Measures LU-1 and LU-2 would be required during construction. However, even with implementation of these mitigation measures, impacts from this alternative would remain significant and unavoidable, similar to the proposed Project.

Operations of design components under KOP Category 6 could occur under this alternative similar to the proposed Project, which could result in permanent road closures or other barriers such as walls that could physically divide a community if alternative connectivity is not provided. Implementation of Mitigation Measures LU-2 and LU-3 would be required for operations to reduce impacts to less-than-significant levels.

Because KOP Category 2 contains some project features that would provide new and enhanced access to the LA River and opportunities for recreation and community engagement, omission of these projects under this alternative would not realize the same benefits as the proposed Project. Nevertheless, beneficial effects are still expected under this alternative with respect to improving conditions associated with physical division of existing communities.

Similar to the proposed Project, this alternative would result in temporary incompatibility with adjacent uses or significant impacts associated with inconsistencies with applicable land use plans, policies, or regulations during construction for KOP Category 6 design components. These inconsistencies would result in potential impacts. Implementation of Mitigation Measures LU-1 and LU-2 would be required during construction. However, even with implementation of these mitigation measures, impacts from this alternative would remain significant and unavoidable, similar to the proposed Project.

Inconsistencies with applicable land use policies could occur from operations, such as if a project would conflict with planned land uses on adjacent parcels, be incompatible with adjacent land uses, or result in out-of-scale development. These inconsistencies would result in potential impacts primarily from KOP Category 6 design components. Implementation of Mitigation Measure LU-4 would be required for this alternative. Even with implementation of this mitigation measure, impacts due to conflicts with plans, policies, or regulations from this alternative would remain significant and unavoidable, similar to the proposed Project.

Therefore, for the reasons discussed above, land use and planning impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project, and impacts would remain significant and unavoidable.

5.4.2.11 Mineral Resources

This alternative would result in similar impacts on mineral resources from construction or operations as the proposed Project. As presented in Section 3.11, *Mineral Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on mineral resources from construction and operations. Similar to the proposed Project, this alternative would not result in the loss of availability of a significant non-fuel mineral resource, and significant impacts on non-fuel mineral resources would not occur with mitigation. While some portions of the study area are in areas identified as MRZ-2, the majority of the project area is urbanized and unlikely to allow for extraction activities along the LA River.

Consequently, the likelihood of this alternative resulting in the loss of non-fuel mineral resources classified MRZ-2 is minimal. However, because construction and operation could occur where geologic data indicate that significant measured or indicated resources are present, a significant impact could occur. Mitigation is required to ensure impacts are less than significant.

Like the proposed Project, the majority of the project area does not contain regionally or statewide significant fuel mineral resources. However, some areas within or near the project study area contain oil fields with active wells. The *Los Angeles County General Plan* and local general plans require maintained access to mineral deposits for extraction and preservation of mineral resources. Compliance with the County Building Code, which does not allow development to be constructed adjacent to or within 300 feet of active, abandoned, or idle oil or gas well(s), would minimize impacts. However, because the exact locations of project sites are unknown at this time, mitigation is required to ensure impacts are less than significant.

Therefore, for the reasons discussed above, mineral resource impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.2.12 Noise

This alternative would have similar noise impacts as the proposed Project. As presented in Section 3.12, *Noise*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on noise from construction and operations. While this alternative would reduce or eliminate impacts on noise from construction or operations associated with activities that would occur within the LA River channel, such as impacts that occur from in-channel design components, noise from other construction and operations activities in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, projects under this alternative would comply with jurisdictional thresholds and requirements for both construction and operations incumbent within the municipal codes, general plans, and planning documents as they relate to noise. However, potential impacts could occur in some jurisdictions from construction. Implementation of Mitigation Measures NOI-1, NOI-2, and NOI-3 would be required to reduce impacts from increases in ambient noise levels in excess of standards to less-than-significant levels.

Furthermore, operations of projects under this alternative, similar to the *2020 LA River Master Plan*, would result in potential exceedances of noise standards. Implementation of Mitigation Measures NOI-4 and NOI-5 would reduce impacts from operations. However, with the uncertainty as to the location and extent of projects associated with this alternative, it is possible that impacts cannot be reduced to less-than-significant levels, and impacts would remain significant and unavoidable for this alternative.

Like the proposed Project, vibration impacts from this alternative would be potentially significant. As with the proposed Project, construction and operations details are unknown so vibration has not been quantified. However, individual projects would comply with jurisdictional thresholds and requirements incumbent within the municipal codes, general plans, and planning documents as they relate to vibration. Nevertheless, the vibrational impacts considered together could potentially result in significant impacts by exceeding thresholds established by the jurisdictions. Implementation of Mitigation Measures NOI-6, NOI-7, and NOI-8 would reduce these impacts. However, with the uncertainty as to the location and extent of projects associated with this

alternative, it is possible that impacts cannot be reduced to less-than-significant levels, and vibration impacts would remain significant and unavoidable for this alternative.

This alternative would not involve projects that are within an airport land use plan or within 2 miles of an airport. Therefore, impacts from the implementation of this alternative would not result in significant noise impacts from airport facilities.

Therefore, for the reasons discussed above, noise impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2.13 Population and Housing

Alternative B would result in similar impacts on population and housing as the proposed *2020 LA River Master Plan*. As presented in Section 3.13, *Population and Housing*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on population and housing from construction and operations.

Similar to the proposed Project, construction of this alternative would not result in a substantial population increase. The temporary and specialized nature of construction work, as well as the large available construction workforce in the Los Angeles region, would not lead to a substantial population increase. Operations of this alternative would also result in similar conclusions regarding population increase, as the projects are intended to provide recreational and ecological uses and to serve the local community without substantially increasing population growth.

Like the proposed Project, this alternative would include the potential for affordable housing, which could increase the population. However, the local jurisdictions and unincorporated County areas within the study area all have regional housing needs for very low-income, low-income, and moderate-income housing. Inclusion of affordable housing would not induce population, but would rather serve the existing underserved low-income population and facilitate development of supportive housing for people experiencing homelessness.

Although projects associated with implementation of this alternative could include displacement of individuals or families experiencing homelessness, local jurisdictions would relocate individuals and families experiencing homelessness and encampments would be removed prior to construction activities. These activities would not displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere. In addition, development of affordable housing units would not displace a substantial number of existing people or housing, but would rather serve the existing underserved low-income population and facilitate development of supportive housing for people experiencing homelessness.

Therefore, for the reasons discussed above, population and housing impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain less than significant.

5.4.2.14 Public Services

Alternative B would result in similar impacts on public services as the proposed *2020 LA River Master Plan*. As presented in Section 3.14, *Public Services*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on public services from construction and operations.

Similar to the proposed Project, this alternative may result in localized road closures and detours that could increase response times for emergency services. Because the size, extent, and location of the projects are unknown, impacts would be potentially significant for police and fire services. Eliminating the KOP Category 2 project features would not change the impacts associated with the proposed Project for this alternative. Like the proposed Project, implementation of Mitigation Measure LU-1 would be required. Even with implementation of this mitigation measure, impacts on police and fire from construction would remain significant and unavoidable.

Similarly for operations, this alternative would result in the same or comparable increases in the number of visitors and residents, which could increase the number of incidents requiring police response. These demands could affect police provider service ratios and response times and result in a need for additional law enforcement staff. Like the proposed Project, this alternative is not expected to result in a significant increase in the use of and demand for other park facilities, or in a significant increase in population that would substantially increase school enrollment or library service. Like the proposed Project, implementation of Mitigation Measure PS-1 would be required. Even with implementation of this mitigation measure, impacts on police and fire from operations would remain significant and unavoidable.

Therefore, for the reasons discussed above, impacts on public services associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2.15 Recreation

Alternative B would result in similar impacts on recreation as the proposed *2020 LA River Master Plan*. As presented in Section 3.15, *Recreation*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in less-than-significant impacts on recreation from construction and operations.

This alternative would reduce or eliminate impacts on recreation from construction or operations associated with activities that would occur within the LA River channel. For instance, recreation impacts from in-channel design components would not occur from construction of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, impacts on recreation from other construction and operations activities in place of the in-channel improvements would occur, resulting in similar effects. Conversely, beneficial effects from KOP Category 2 design components on recreation would also not occur under this alternative.

Similar to the proposed Project, construction of this alternative could result in an increased use of nearby existing neighborhood parks, regional parks, or other recreational facilities if access to the LA River and existing recreational facilities is disrupted. Dependent on the location and project proponent, staging areas could be located on local jurisdiction properties and the staging areas could be large in size, depending on the extent and nature of projects and the equipment involved. Additionally, the future projects could have substantially long construction durations with intensive construction activities, thereby causing disruption of access and use, and potentially leading to longer temporary closures, of existing recreational facilities. Temporary closures of existing recreational facilities could occur during construction and recreational facilities near a construction site may experience noise, dust, diminished access, and other nuisance impacts during construction. This could result in an increased use of existing neighborhood parks, regional parks, or other

recreational facilities if access to the LA River Trail is disrupted. Therefore, construction activities under this alternative could increase the use of nearby existing neighborhood and regional parks or other recreational facilities for an extended period such that substantial physical deterioration of the facility would occur or be accelerated. Implementation of Mitigation Measure REC-1 would reduce impacts from construction to less-than-significant levels.

Like the proposed Project, operation of this alternative would implement multi-benefit projects that would serve a range of functions and uses, which would increase the amount of recreational resources available in the study area. Therefore, operation of this alternative would not be expected to result in an increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur. However, elimination of KOP Category 2 components and other in-channel features would not realize the same benefits as the proposed Project. For instance, the range of functions, such as flood management, recreational, and ecological uses such as amphitheaters, small planting trays, parks, wildlife ramps, and wetland terraces, would not occur under this alternative. While these features would not attract a large number of users, the omission of KOP Category 2 design components would not have a significant effect on the increase in the use of adjacent or nearby existing recreational facilities such that substantial deterioration of those facilities would occur.

Like the proposed Project, construction and operations activities under this alternative could have impacts on various environmental resources such as biological resources, cultural resources, and hydrology and water quality. The impact discussions for the respective resources above demonstrate that construction and operation of recreational resources under this alternative could have an adverse physical effect on the environment. However, with the elimination of KOP Category 2 design components, some construction impacts such as those on biological resources, cultural resources, geology and soils, hydrology and water quality, and transportation would be reduced with this alternative.

Therefore, for the reasons discussed above, impacts on recreation associated with Alternative B would be similar to those of the proposed Project and would remain less than significant.

5.4.2.16 Transportation

Alternative B would result in similar impacts on transportation as the proposed *2020 LA River Master Plan*. As presented in Section 3.16, *Transportation*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on transportation/traffic from operations.

This alternative would reduce or eliminate impacts on transportation/traffic from construction or operations associated with activities that would occur within the LA River channel. For instance, transportation/traffic impacts that occur from in-channel design components would not occur from construction or operations of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, transportation/traffic impacts from other construction and operations activities in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, traffic and circulation impacts from this alternative are not expected to be of a magnitude such that they would result in a conflict with any programs, plans, or policies

addressing the circulation system, or transit, roadway, bicycle, or pedestrian facilities. However, some design components could involve intermittent lane and sidewalk closures during construction, which could impede vehicle, pedestrian, equestrian, and bicycle circulation. Therefore, construction impacts would be potentially significant without mitigation. Implementation of Mitigation Measure LU-1 would reduce conflicts with transportation programs during construction to less-than-significant levels.

This alternative, like the proposed Project, would provide expanded bicycle, pedestrian, and micro-mobility user networks, expansion of access to open spaces, and improved regional and local transit connectivity. This alternative would allow for an increased share of trips to be completed via active transportation instead of by private vehicle. Increasing the active transportation mode share and the ability to replace long-distance vehicle commute trips with an active transportation trip will reduce VMT, consistent with State and regional policy initiatives, including Senate Bill 743 and SCAG's RTP. It is also consistent with RTP Goal 6, which seeks to protect the environment and health of SCAG region residents by improving air quality and encouraging active transportation.

This alternative would also support the vision for the County's 2012 *Bicycle Master Plan* to encourage and make bicycling more comfortable with the robust suite of project features that cater to cyclists, such as pavilions and benches for rest and shade, bicycle racks to lock up a bicycle, bathrooms to meet bodily needs, and cafés for refreshment. The proposed 51-mile continuous off-street path for active transportation trips would also provide a safe corridor for active transportation trips free of risk from injury or death by collision with a motor vehicle.

Implementation of this alternative would still allow the County to achieve many of the goals and policies from the *Los Angeles County General Plan* Mobility Element. Similarly, implementation of this alternative would be consistent with active transportation-related goals, policies, and actions of the other 17 jurisdictions through which the river flows. As such, this alternative would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Like the proposed Project, construction of this alternative may result in short-term increases in VMT. Per County Guidelines, construction impacts related to increases in VMT, if they occur, are not considered significant under CEQA and are therefore considered to be less than significant. Nevertheless, implementation of Mitigation Measure LU-1 would reduce VMT during construction to less-than-significant levels.

Operation of this alternative would result in potential significant increases in VMT, similar to the proposed Project. Each individual project's potential to result in a significant transportation impact will need to be evaluated by the project proponent when the project's exact location, configuration, and scale are known, and cannot be determined based on the current level of project specificity. Like the proposed Project, implementation of Mitigation Measures TRA-1a and TRA-1b would be required. Even with implementation of these mitigation measures, operational impacts from VMT would remain significant and unavoidable.

Construction of this alternative may result in short-term roadway effects, for example localized increases in delay and traffic queuing that stems from lane closures, which could result in increased hazards from geometric design (e.g., reduced sight lines due to temporary obstructions such as construction equipment parked in the roadway) and emergency access, both along the river (e.g., due to closed access ramps) and at adjacent land uses (e.g., due to driveways affected by lane closures). Similar to the proposed Project, mitigation would reduce the effects of this impact.

Implementation of Mitigation Measure LU-1 would reduce transportation hazards during construction to less-than-significant levels.

Operations impacts regarding the potential increase of hazards due to a geometric design feature and/or provision of inadequate emergency access that generally relates to the design of access points and/or roadway modifications may include safety, operational, or capacity impacts. River access points would be placed approximately every half mile, but specific locations are unknown at this time. It is also unknown whether any existing geometric design hazards would need to be remediated, or whether design of specific access points may require modifications to existing roadway geometries under this alternative. However, all access points would be required to be designed according to criteria of the County, including the Trails Manual adopted in 2011, and, where applicable, of the local agency in which they are located. Furthermore, alteration to existing or design of new service roads providing access for maintenance and emergency vehicles must meet with approval of the County or the relevant local agency. Given the access point design standards and emergency vehicle access requirements, implementation of this alternative would not substantially increase hazards or conflicts or result in inadequate emergency access. Furthermore, implementation of this alternative would remediate or improve existing substandard conditions and would therefore contribute to overall safety improvements along the entire river corridor.

Consequently, for the reasons discussed above, transportation/traffic impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2.17 Tribal Cultural Resources

Alternative B would result in similar impacts on TCRs as the proposed *2020 LA River Master Plan*. As presented in Section 3.17, *Tribal Cultural Resources*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on TCRs from construction and operations.

This alternative would reduce or eliminate impacts on TCRs from construction or operations associated with activities that would occur within the LA River channel. For instance, TCR impacts that occur from in-channel design components would not occur from construction or operations of KOP Category 2 design components, such as terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. However, TCR impacts from other construction and operations activities in place of the in-channel improvements would occur, resulting in similar effects.

Similar to the proposed Project, this alternative could result in significant impacts on TCRs through proposed ground disturbance, which could include site clearing and excavation that may result in significant impacts with adverse effects on surface-exposed or buried cultural materials, cultural objects, or landscapes determined to be TCRs. Impacts on TCRs could also be indirect and would include potential significant changes to the setting or viewshed of a TCR, which could include construction of new structures, recreational facilities, and design components that could indirectly affect the integrity of the resource. Implementation of Mitigation Measures CR-1a and b, CR-4a, CR-4b, CR-4c, CR-4d, CR-5, and TCR-1 would reduce impacts. Even with the implementation of these mitigation measures, impacts on TCRs from construction would remain significant and unavoidable.

Operational elements, such as increased erosion along proposed trail alignments, facilities, and recreational areas, could result from increased public use. Additionally, introducing recreationists and trail users in new facilities near a potentially significant TCR could directly affect TCRs, either through unanticipated destruction of *in situ* TCRs or destruction or removal from looting, or otherwise negatively affect the integrity of the resource. Implementation of Mitigation Measures TCR-3 and TCR-4 would reduce impacts during operations. Even with the implementation of these mitigation measures, impacts on TCRs from operations would remain significant and unavoidable.

Therefore, for the reasons discussed above, TCR impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2.18 Utilities/Service Systems

Alternative B would result in similar impacts on utilities/service systems as the proposed *2020 LA River Master Plan*. As presented in Section 3.18, *Utilities/Service Systems*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on utilities/service systems from operations.

This alternative would eliminate construction and operations of design components that would occur within the LA River channel, including terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. These features do not generate a significant demand on utilities that could result in expansion leading to significant environmental effects. Therefore, there is no measurable change in the impacts compared to the proposed Project.

Similar to the proposed Project, this alternative could require the expansion or construction of new facilities from insufficiencies in utilities, which could, in turn, result in significant environmental impacts. Implementation of Mitigation Measure UTIL-1 would reduce impacts during operations. Even with the implementation of this mitigation measure, impacts from the construction or relocation of utilities that could cause significant environmental effects would remain significant and unavoidable.

Like the proposed Project, this alternative could result in a beneficial impact on water supply for KOP Categories 4 and 5. Operation of diversion projects could improve local water supply reliability. Subsequent projects that strategically capture and treat flows before they reach the river would help expand water supply opportunities in the watershed and along the river corridor and would also improve water quality. Diverted water could be used to enhance habitat, support recreation, or supply water for municipal and industrial uses. Similarly, floodplain reclamation could include recreation fields and other recreational uses, which could be designed to contribute to groundwater recharge. However, design components under KOP Category 6 could result in increased demand for water, which would be a potentially significant impact with regard to sufficient water supply. Implementation of Mitigation Measure UTIL-2 would be required for this alternative. Even with this mitigation measure, impacts from operations of this alternative on water supplies would remain significant and unavoidable.

Insufficiencies in wastewater capacity could occur from larger project components, also leading to potentially significant environmental impacts from the expansion or construction of new wastewater infrastructure. KOP Category 6 could result in a wide variety of projects, many of which

would generate wastewater. Because the location, size, and extent of these projects are unknown, it cannot be quantified how much wastewater would be generated by an individual design component under KOP Category 6. Implementation of Mitigation Measure UTIL-1 would be required for this alternative. Even with this mitigation measure, impacts from operations of this alternative on wastewater treatment capacities would remain significant and unavoidable.

Design components under KOP Category 6 could result in substantial generation of solid waste during construction depending on site location. Implementation of Mitigation Measure UTIL-3 would reduce impacts from construction. Even with this mitigation measure, impacts from construction of this alternative from solid waste would remain significant and unavoidable.

Operation of the larger design components envisioned for KOP Category 6 could result in substantial amounts of solid waste unless requirements are included in each project for diversion of solid waste. Implementation of Mitigation Measure UTIL-4 would reduce impacts from operations to less-than-significant levels.

Therefore, for the reasons discussed above, utilities/service systems impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.4.2.19 Wildfire

Alternative B would result in similar impacts on wildfire as the proposed *2020 LA River Master Plan*. As presented in Section 3.19, *Wildfire*, the *2020 LA River Master Plan*, inclusive of the common elements and the KOP categories, would result in potentially significant impacts on wildfire from construction and operations.

This alternative would eliminate construction and operations of design components that would occur within the LA River channel, including terraced bank, check dams, deployable barriers, levees, armored channels/vertical walls, daylighted storm drains, removed/added concrete, bridge pier modifications, channel texturing/grooving/smoothing, and installation of access ramps. These features do not generate significant wildfire hazards or expose people to additional risk beyond what has been described for other project features. Therefore, there is no measurable change in the impacts compared to the proposed Project.

Similar to the proposed Project, this alternative has a potential to result in a significant impact related to impairment of an adopted emergency response plan or emergency evacuation plan due to construction staging, temporary lane closures, and construction-related traffic delays or obstructions. Implementation of Mitigation Measure WF-1 would be required for this alternative and would reduce impacts on emergency access to less-than-significant levels.

Like the proposed Project, new development would be constructed in accordance with current building and fire/life/safety ordinance and codes, including all applicable County code requirements and local jurisdiction requirements related to access, water mains, fire flows, and hydrants. Therefore, operations would not be expected to impair emergency access and impacts would be less than significant.

This alternative also has the potential to involve construction in areas designated as Very High FHSZ, which could exacerbate wildfire risks from construction equipment and introduction of potential ignition sources. Wildfire management guidelines and fuel modification plans would need to be adhered to during construction activities in vulnerable areas. Implementation of Mitigation Measure

WF-2 would be required for this alternative and would reduce impacts from wildfire during construction to less-than-significant levels.

Similarly, operations could introduce additional visitors and staff to areas within Very High FHSZ designations, which could expose additional people to hazardous conditions. The addition of more people and structures to an area designated a Very High FHSZ could exacerbate existing wildfire risks by increasing the possibility of human-caused wildfires. Implementation of Mitigation Measure WF-3 would be required for this alternative. Even with this mitigation measure, operational impacts from exposure to wildfires would remain significant and unavoidable.

Like the proposed Project, this alternative may involve installation or maintenance of infrastructure that could exacerbate fire risk, such as structural hardening, water supply and flow, hydrant and standpipe spacing, signage, fire department access, and overhead or underground electric utilities. Implementation of Mitigation Measure WF-2 would be required for this alternative and would reduce impacts from wildfire during construction of infrastructure to less-than-significant levels.

Operations of project features under this alternative within or adjacent to Very High FHSZs would require the implementation of certain measures to protect defensible space surrounding the property, such as routine vegetation clearing or additional sprinkler systems. While protective measures such as brush management are intended to reduce wildfire risk, the ongoing removal of vegetation could result in other significant impacts on the environment. Implementation of Mitigation Measure WF-3 would be required for this alternative. Even with this mitigation measure, operational impacts from exacerbation of fire risk would remain significant and unavoidable.

Finally, this alternative would involve construction adjacent to or in Very High FHSZs as well as areas prone to flood, landslide, or slope instability and would have the potential to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage change. The operation of new facilities within these areas could introduce visitors, staff, and structures into an area highly susceptible to landslides or slope instability after a wildfire event, thereby exacerbating the existing risk of post-fire hazard by exposing additional people to this existing hazard. Implementation of Mitigation Measures WF-4, GEO-1, and HYDRO-1a would reduce construction and operational impacts from exposure of people or structures to significant risks to less-than-significant levels.

Therefore, for the reasons discussed above, wildfire impacts associated with Alternative B would be similar to those analyzed and disclosed for the proposed Project and would remain significant and unavoidable.

5.5 Environmentally Preferred and Superior Alternative

Pursuant to State CEQA Guidelines Section 15126.6, the EIR is required to identify the environmentally superior alternative among the alternatives analyzed. As shown in Table 5-2 above, the highest score represents the environmentally superior alternative. Although the No Project Alternative (Alternative A) reduces the greatest number of significant impacts, CEQA requires that when the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The Channel Avoidance Alternative (Alternative B) reduces the second-largest number of impacts of the proposed Project associated with biological resources and hydrology and water quality.

Impacts on biological resources under Alternative B would be reduced compared to the proposed Project because of the elimination of in-channel construction activities, avoiding the largest concentration of biological resources throughout the project area. However, impacts on biological resources under Alternative B would still be significant and would require mitigation to reduce the impacts to less-than-significant levels. Impacts related to hydrology and water quality would be reduced compared to the proposed Project because Alternative B would result in less disturbance within the river channel during construction. However, impacts on hydrology and water quality under Alternative B would still be significant and would require mitigation to reduce the impacts to less-than-significant levels. Impacts on all other resources would be similar to those of the proposed Project under Alternative B.

Therefore, in accordance with State CEQA Guidelines Section 15126.6, Alternative B is considered the environmentally superior alternative, and overall impacts on environmental resources would be reduced compared to the proposed Project. However, the proposed Project would have numerous benefits on the environment that would not be realized to the same extent with Alternative B, and Alternative B would not achieve the same level of project objectives, including reducing flood risk and improving resiliency, and improving local water supply reliability.