

5.3 Environmental Consequences of the Plan and Pier Alternatives

5.3.1 Air Quality

This section describes the methodology, assumptions, and results to identify potentially significant impacts to local and regional air quality with the implementation of the KBSRA General Plan revision and pier rebuild project. The analysis includes a quantitative evaluation of construction- and operational-generated emissions of criteria air pollutants and a qualitative discussion of toxic air contaminants (TACs) related to the project. The air quality effects resulting from General Plan implementation under all of the alternatives described herein would be the same regardless of ownership of the Plaza parcels.

The project is not one that is commonly considered a source of odors. While construction of the project could result in temporary emissions of odorous diesel exhaust, it would not be excessive nor would it affect a substantial number of receptors. Operational sources of odors would not be considerable. This issue is dismissed from additional analysis and is not discussed further.

The project would not result in additional new sensitive receptors such as residential land uses, schools, hospitals, or transient lodging. For these reasons, off-site air quality impacts to on-site sensitive receptors would not occur. This issue is dismissed from additional analysis and is not discussed further.

The existing conditions and significant resource values related to air quality are summarized under the header Air Quality in Section 2.2.1, Physical Resources, in Chapter 2, Existing Conditions, of this document. A more detailed description of the existing air quality conditions at the project site and a summary of pertinent regulations are included in the Resources Inventory and Existing Conditions Report, available on the KBSRA webpage (www.parks.ca.gov/PlanKBSRA) and at CSP and TRPA offices during normal business hours through consideration of project approval. Relevant project goals and guidelines are summarized under the header Sustainability and Climate Change in Section 4.4.1, Resource Management and Protection, in Chapter 4, The Plan. The mandatory CSP Standard and Special Project Requirements pertaining to air quality are included in Section 4.7; these requirements include standard construction dust control and equipment measures, as well as use of alternative fuel in vehicles and equipment for park operations (where feasible), the design and retrofit of facilities to maximize energy efficiency, and installation and use of distributed renewable energy generation systems (such as small solar power systems).

Environmental Impacts and Mitigation Measures

Analysis Methodology

Construction

Short-term construction-related emissions of criteria air pollutants were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1 computer program (California Air Pollution Control Officers Association [CAPCOA] 2016). CalEEMod was used to calculate the construction of the pier in the eastern pier alternative (Alternative 2) and the related facilities (i.e., new and expanded bathrooms and administrative building) anticipated to be built out over the 20-year lifetime of the project. Modeling was based on project-specific information (e.g., schedule, building type, area to be

paved), where available, and default values in CalEEMod that are based on the project's location, land use type, and type of construction. Due to the inherent uncertainty surrounding the timing of construction of facilities unrelated to the construction of the pier, all construction activities were assumed to occur over the course of the anticipated 3-year pier construction commencing in May of 2019 to demonstrate the most conservative estimate and in consideration of construction limitations in the Tahoe Basin. Due to the similar characteristics of the project alternatives, a qualitative discussion of the construction-related impacts associated with Alternatives 1, 3, and 4 are included.

Operations

Long-term operational emissions of criteria air pollutants were also calculated using CalEEMod Version 2016.3.1 using project specific data where available. Based on the three-year construction period anticipated for the proposed pier, 2021 was assumed for the first year of operation. To provide a more conservative estimate, operations of General Plan-related facilities (e.g., administrative office, park facilities) to be built out over the course of the project's 20-year horizon were incorporated into the model for 2021.

Mobile source emissions of air pollutants were modeled based on trip generation rates and vehicle miles traveled (VMT) identified in the traffic analysis completed for the project (see Section 5.3.13, Transportation and Circulation). The project would result in an estimated increase in 222 additional daily vehicle trips on a peak summer day. Using the average tourist trip length of 8.67 miles identified in the TRPA travel demand forecasting model, the project would result in an estimated increase in 1,925 daily VMT on a peak summer day. According to visitation data compiled from 2006 to 2016, visits to the project area are highest in July and substantially lessen during off-season months (i.e., spring, fall, and winter). Based on these data, visits in July represent 453 percent increase from total annual visits averaged over 12 months. Using this same trend, annual VMT was determined to be 155,105. See the technical analysis materials available on the project webpage (www.parks.ca.gov/PlanKBSRA) for more details regarding assumptions and calculations.

Area sources of air pollutants were modeled using CalEEMod defaults for landscaping equipment; however, 110 snow days were assumed due to the project's location and historical averages. The project would not include the use of fireplaces or hearths.

Indirect emissions of air pollutants from electricity and natural gas consumption by Liberty Utilities were modeled using the non-baseload intensity factor values for the CAMX region in EPA's eGRID2014v2 (EPA 2014). The project's level of electricity usage was based on default consumption rates provided in CalEEMod for similar land use types. CalEEMod estimates electricity consumption based on implementation of the 2013 Title 24 regulations.

Implementation of the pier rebuild component of Alternatives 2, 3, and 4 may also result in localized changes in watercraft activity but would not change overall motorized watercraft activity and related emissions on Lake Tahoe because none of the alternatives would add additional overnight mooring or additional motorized boat access points. Further, emissions for motorized watercraft on Lake Tahoe would decrease over time due to fleet turnover and increasingly stringent California and federal emission standards for recreation watercraft. Consequently, emissions from motorized watercraft were not modeled.

Significance Criteria

Significance criteria for determining impacts to air quality are summarized below.

CEQA Criteria

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact on air quality if it would:

- ◆ conflict with or obstruct implementation of the applicable air quality plan;
- ◆ violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- ◆ result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is in nonattainment under any applicable National or State ambient air quality standards (including releasing emissions that exceed quantitative standards for ozone precursors); or
- ◆ expose sensitive receptors to substantial pollutant concentrations (including TACs).

As stated in Appendix G of the State CEQA Guidelines, the significance criteria established by the applicable air district may be relied on to make the above determinations. Thus, as identified by the Placer County Air Pollution Control District (PCAPCD), an air quality impact also is considered significant if implementation of the project would result in:

- ◆ construction-generated criteria air pollutants that would exceed the PCAPCD-recommended threshold of 82 pounds per day (lb/day) for reactive organic gas (ROG), nitrogen oxides (NO_x), or particulate matter (PM₁₀);
- ◆ operational phase project-level and cumulative-level criteria air pollutants that would exceed the PCAPCD-recommended threshold of 55 lb/day for ROG and NO_x, and 82 lbs/day for PM₁₀;
- ◆ long-term operational local mobile-source carbon monoxide (CO) emissions that would exceed the CO standard as indicated by the following criteria:
 - A traffic study for the project indicates that the peak-hour Level of Service (LOS) on one or more streets or at one or more intersections (both signalized and non-signalized) in the project vicinity will be degraded from an acceptable LOS (e.g., A, B, C, or D) to an unacceptable LOS (e.g., LOS E or F); or
 - A traffic study indicates that the project will substantially worsen an already existing unacceptable peak-hour LOS on one or more streets or at one or more intersections in the project vicinity. “Substantially worsen” includes situations where delay would increase by 10 seconds or more when project-generated traffic is included.
- ◆ exposure of sensitive receptors to TAC emissions would exceed 10 in 1 million for the carcinogenic risk (i.e., the risk of contracting cancer) or a noncarcinogenic Hazard Index of 1 for the maximally exposed individual.

TRPA Criteria

The air quality criteria from the TRPA Initial Environmental Checklist were used to evaluate the air quality impacts of the alternatives. Impacts to air quality would be significant if the project would result in:

- ◆ substantial air pollutant emissions;

- ◆ deterioration of ambient air quality;
- ◆ alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally; or
- ◆ increased use of diesel fuel.

Environmental Impacts

Impact 5.3.1-1: Short-term construction-generated emissions of ROG, NO_x, and PM₁₀

The short-term construction-generated emissions of ROG, NO_x, and PM₁₀ resulting from implementation of Alternatives 2, 3, and 4 would not exceed the applicable daily significance thresholds for construction. This would be a **less-than-significant** impact from Alternatives 2, 3, and 4. Alternative 1 would result in **no impact**.

Alternative 1: No Project

General Plan Revision/Pier Rebuild Project

As discussed under Section 5.1.2, Alternative 1, the no project alternative, would involve no physical improvements or changes to the project site or any substantial changes in management approaches. Existing operation and maintenance of the existing facilities on the project site would continue. As such, no construction-related activities would occur on the project site as a result of implementation of Alternative 1. There would be no short-term, construction-generated emissions of ROG, NO_x, and PM₁₀ associated with Alternative 1. There would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The project would involve upland improvements that could result in the generation of air emissions, such as construction of new restroom facilities, administrative office, promenade and sand wall, and reconfigured parking lots. These construction-related activities would result in project-generated emissions of ROG, NO_x, and PM₁₀ from site preparation (e.g., grading and clearing), off-road equipment, material delivery, worker commute exhaust emissions, vehicle travel, and other miscellaneous activities (e.g., building construction, asphalt paving, application of architectural coatings). Fugitive dust emissions would be associated primarily with site preparation and would vary as a function of soil silt content, soil moisture, wind speed, and area of disturbance. Other PM emissions would result from a combination of fuels and from tire and brake wear. Emissions of ozone precursors of ROG and NO_x would be associated primarily with exhaust from construction equipment, haul truck trips, and worker trips. ROG would be emitted during any asphalt paving in the parking lot and the application of architectural coatings on new buildings, such as restroom facilities and the administrative office.

Maximum daily construction emissions for the project are summarized in Table 5.3.1-1. The table presents maximum daily emissions of ROG, NO_x, and PM₁₀ for each construction year (i.e., 2019-2021). Refer to the technical analysis materials available on the project webpage (www.parks.ca.gov/PlanKBSRA) for a detailed summary of the modeling assumptions, inputs, and outputs.

Table 5.3.1-1 Summary of Unmitigated Maximum Daily Construction-Generated Emissions of Criteria Air Pollutants by Year for Alternative 2

Year	ROG (lb/day)	NO _x (lb/day)	PM ₁₀ (lb/day)
2019	4.7	48.3	21.0
2020	3.5	30.9	3.3
2021	29.0	28.4	3.0
Max Daily	29.0	48.3	21.0
PCAPCD Daily Thresholds of Significance	82	82	82
Exceeds Thresholds?	No	No	No

Notes: See the technical analysis materials on the project webpage for detail on model inputs, assumption, and project specific modeling parameters.

ROG = reactive organic gases, NO_x = nitrous oxides, PM₁₀ = respirable particulate matter, lb/day = pounds per day, PCAPCD = Placer County Air Pollution Control District

Source: Modeling conducted by Ascent Environmental in 2017 based on using CalEEMod v. 2016.3.1

Based on the modeling conducted, emissions of ROG would peak in 2021 at 29.0 lb/day, NO_x would peak in 2019 at 48.3 lb/day, and PM₁₀ would peak in 2019 at 21.0 lb/day. These emissions estimates would be below the applicable daily construction thresholds set by PCAPCD. The project would also be subject to PCAPCD Rule 228 Fugitive Dust, which would require the project to implement dust control measures to reduce emissions of fugitive dust generated by construction. Mandatory CSP Standard Project Requirements (see Section 4.7), including sweeping or washing paved streets adjacent to KBSRA at the end of each day to remove excess accumulations of dirt that could have resulted from construction activities, would also be implemented during construction of Alternative 2 project components to reduce the potential for release of fugitive dust. As such, the project would not result in short-term, construction-related emissions that violate any air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, this impact would be **less than significant**.

Pier Rebuild Project

Alternative 2 would include the construction of a pier on the eastern portion of the project site. Implementation of Alternative 2 would include removal of an existing boat ramp and construction of a new lake access point and multi-use pier comprised of 213 feet of a stationary fixed section, followed by an 80-foot transition gangway ramp, and a 215-foot floating section. The pier would require approximately 27 pier pilings for the fixed and floating sections. Emissions of criteria air pollutants associated with the construction of the Alternative 2 pier was included in the modeling performed and summarized above in Table 5.3.1-1. As discussed previously, short-term construction-related emissions of air pollutants associated with implementation of Alternative 2, including the emissions related to the construction of the proposed pier, would not exceed the PCACPD thresholds of significance for daily construction emissions. Therefore, this impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

When compared to Alternative 2, the Alternative 3 General Plan revision would largely be the same. Alternative 3 would be built out over the course of 20 years and would include similar improvements to existing facilities and construction of new facilities as Alternative 2 with refinements in location or size for some improvements. Alternative 3 would not include an administrative office, entry kiosk, or

restroom facility on the western side of the park. Consequently, construction-related emissions from implementation of Alternative 3 would be similar in magnitude as Alternative 2. As shown in the discussion for Alternative 2, construction activities would not produce levels of emissions of criteria air pollutants such that an air quality violation would occur. Due to the similar characteristics of Alternative 2 and Alternative 3, short-term construction-related emissions of air pollutants and precursors related to Alternative 3 would be **less than significant**.

[Pier Rebuild Project](#)

Alternative 3 would remove the existing boat ramp, construct a new lake access point, and reconstruct the proposed pier in the central portion of the project site. The characteristics of the pier would be similar in size to the eastern pier proposed in Alternative 2. Consequently, construction-related emissions associated with implementation of the pier under Alternative 3 would be similar in magnitude as those emitted from construction activities under Alternative 2. As discussed above, construction-generated emissions of criteria air pollutants would not exceed the PCAPCD thresholds of significance for daily construction emissions. As such, short-term construction-related emissions of criteria air pollutants associated with Alternative 3 would be **less than significant**.

[Alternative 4: Western Pier Alternative](#)

[General Plan Revision](#)

When compared to Alternative 2, Alternative 4 would largely be the same with some refinements in location or size for some improvements. Short-term construction-related emissions of criteria air pollutants would be similar to those discussed above for Alternative 2. Implementation of Alternative 4 would not result in construction-generated emissions of air pollutants such that the applicable PCAPCD thresholds of significance for construction emissions would be exceeded. Similar to Alternative 2, short-term construction-related emissions of criteria air pollutants associated with Alternative 4 would be **less than significant**.

[Pier Rebuild Project](#)

Implementation of Alternative 4 would include construction of a pier similar in size and characteristics as Alternative 2, but located on the western portion of the project site, and the existing motorized boat ramp would be extended. Alternative 4 would not include the additional lake access point proposed for Alternatives 2 and 3. Short-term construction-related emissions of criteria air pollutants from pier construction would be similar to those discussed for Alternative 2. As discussed previously, emissions of criteria air pollutants from construction of the pier under Alternative 2 would not exceed the applicable PCAPCD thresholds of significance for daily construction emissions. Given that the pier proposed under Alternative 4 would be similar in nature to the pier proposed under Alternative 2, short-term construction-related emissions of criteria air pollutants associated with Alternative 4 would be **less than significant**.

[Mitigation Measures](#)

No mitigation measures are required.

[Impact 5.3.1-2: Long-term, operational-related emissions of ROG, NO_x, and PM₁₀](#)

Implementation of the Alternatives 2, 3, and 4 would not result in long-term operational emissions of ROG, NO_x, and PM₁₀ that exceed applicable thresholds of significance or substantially contribute to concentration that would exceed the National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS). This would be a **less-than-significant** impact from Alternatives 2, 3, and 4. Alternative 1 would result in **no impact**.

Alternative 1: No Project

General Plan Revision/Pier Rebuild Project

Alternative 1 would involve no physical improvements or changes to the project site or any substantial changes in management approaches. Existing operation and maintenance of the existing facilities on the project site would continue. As such, the operational-related emissions that would occur on the project site as a result of implementation of Alternative 1 would be the same as those currently occurring. There would be no additional long-term operational-generated emissions of ROG, NO_x, and PM₁₀ associated with Alternative 1, above those which occur today. There would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The project would involve upland improvements that could result in the generation of air emissions, such as new restroom facilities, administrative office, lawn and stage/event area, kiosk building, new concessionaire building to replace the existing building, non-motorized watercraft storage, and reconfigured parking lots. Implementation of Alternative 2 could also result in increased visitors at KBSRA from expanded capacity and increased number of special events that could generate additional vehicle trips. Long-term operational emissions from the project would result from vehicle trips to and from the project site, natural gas combustion associated with space and water heating, operation of landscaping and maintenance equipment, and periodic routine application of architectural coatings on new buildings, such as restroom facilities, the administrative office, and non-motorized watercraft storage.

New vehicle trips would be associated with the additional areas of the park developed to include recreation resources, as well as increased occurrences of on-site special events. As discussed in Section 5.3.13, Transportation and Circulation, the project is projected to increase daily vehicle trips by 222 trips during peak summer conditions. Consistent with the TRPA travel demand forecasting model, an average trip distance of 8.67 miles was assumed for each additional trip resulting in a peak daily increase of 1,925 VMT. In consideration of seasonal variations, annual VMT was determined to be 155,105.

Maximum daily operational emissions for the project are summarized in Table 5.3.1-2. The table shows maximum daily emissions of ROG, NO_x, and PM₁₀ for the first year of operation (i.e., 2021). Refer to the technical analysis materials available on the project webpage (www.parks.ca.gov/PlanKBSRA) for a detailed summary of the modeling assumptions, inputs, and outputs.

As shown in Table 5.3.1-2, maximum daily emissions would increase by 0.4 lb/day of ROG, 0.1 lb/day of NO_x, and 0.1 lb/day of PM₁₀. These minor increases in emissions would not exceed the applicable thresholds of significance and would not contribute to the exceedance of the NAAQS or CAAQS. Consequently, the project would not result in long-term operational emissions that violate any air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, this impact would be **less than significant**.

Table 5.3.1-2 Summary of Unmitigated Maximum Daily Operational-Related Emissions of Criteria Air Pollutants by Source in 2021 for Alternative 2

Source	ROG (lb/day)	NO _x (lb/day)	PM ₁₀ (lb/day)
Area ¹	0.4	0	0
Energy ²	0	0	0
Mobile	0	0.1	0.1
Max Daily	0.4	0.1	0.1
PCAPCD Daily Thresholds of Significance	55	55	82
Exceeds Thresholds?	No	No	No

Notes: See the technical analysis materials available on the project webpage for detail on model inputs, assumptions, and project specific modeling parameters.

ROG = reactive organic gases, NO_x = nitrous oxides, PM₁₀ = respirable particulate matter, lb/day = pounds per day, PCAPCD = Placer County Air Pollution Control District

¹ The project would not include hearths or fireplaces. Emissions from area sources would occur from use of landscaping equipment.

² Energy sources include electricity and natural gas consumption.

Source: Modeling conducted by Ascent Environmental in 2017 based on CalEEMod v. 2016.3.1

Pier Rebuild Project

As discussed previously, Alternative 2 would include the construction and operation of a rebuilt pier on the eastern portion of the project site, removal of an existing boat ramp, and construction of a new lake access point. Implementation of the pier rebuild component of Alternative 2 may result in localized changes in watercraft activity but would not change overall motorized watercraft activity and related emissions on Lake Tahoe because it would not add additional overnight mooring or additional motorized boat access points. Further, emissions for motorized watercraft on Lake Tahoe would decrease over time due to fleet turnover and increasingly stringent California and federal emission standards for recreation watercraft. For these reasons, long-term operational-related emissions of air pollutants associated with implementation of Alternative 2, including the emissions related to the operation of the proposed pier, would not exceed the PCACPD thresholds of significance for daily operational emissions. Therefore, this impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

When compared to Alternative 2, the Alternative 3 General Plan revision would largely be the same. Alternative 3 would be built out over the course of 20 years and would include similar improvements to existing facilities and construction of new facilities as Alternative 2 with some refinements in location or size. However, Alternative 3 would not include an administrative office, entry kiosk, or restroom facility on the western side of the park. Consequently, operational-related emissions from implementation of Alternative 3 would be similar in magnitude as Alternative 2. As shown in the discussion for Alternative 2, operation of the facilities under Alternative 3 would not produce levels of emissions of criteria air pollutants such that an air quality violation would occur. Due to the similar characteristics of Alternative 2 and Alternative 3, long-term operational-related emissions of air pollutants and precursors would be **less than significant**.

Pier Rebuild Project

Alternative 3 would remove the existing boat ramp, construct a new lake access point, and reconstruct the proposed pier in the central portion of the project site. The characteristics of the pier would be similar in size to the eastern pier proposed in Alternative 2. As such, operational-related emissions associated with implementation of the pier under Alternative 3 would be similar in magnitude as those

emitted from operational activities under Alternative 2. As discussed above, operational-generated emissions of criteria air pollutants would not exceed the PCAPCD thresholds of significance for daily emissions. As a result, long-term operational-related emissions of criteria air pollutants associated with Alternative 3 would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

When compared to Alternative 2, Alternative 4 would largely be the same with some refinements in location or size for some improvements. Long-term operational-related emissions of criteria air pollutants would be similar to those discussed above for Alternative 2. Implementation of Alternative 4 would not result in operational-generated emissions of air pollutants such that the applicable PCAPCD thresholds of significance for operational emissions would be exceeded. Similar to Alternative 2, long-term operational-related emissions of criteria air pollutants associated with Alternative 4 would be **less than significant**.

Pier Rebuild Project

Alternative 4 would include a rebuilt pier on the western end of the project site and would extend the existing motorized boat ramp. The characteristics of the pier would be similar in size to the eastern pier proposed in Alternative 2. The boat ramp extension would be modest (its depth would increase by 2 feet to 6223.5 feet mean sea level) and while it would be expected to incrementally increase the period of time that the boat ramp is open, it would not provide access during all lake levels nor would it increase the number of boat launches that could occur on a given day (or the related boat-launch emissions) relative to existing conditions. Alternative 4 would not include an additional lake access point, nor would it include a swim buoy area. As such, operational-related emissions associated with implementation of the pier under Alternative 4 would be similar in magnitude as those emitted from operational activities under Alternative 2. As discussed above, operational-generated emissions of criteria air pollutants would not exceed the PCAPCD thresholds of significance for daily emissions. As a result, long-term operational-related emissions of criteria air pollutants associated with Alternative 4 would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.1-3: Mobile source emissions of carbon monoxide

Implementation of Alternative 2 General Plan revision would result in 222 additional daily vehicle trips on a peak summer day to the surrounding area. The increase in traffic from construction and operation of the Alternative 2 pier rebuild project is included in the total increase in vehicle trips projected for the General Plan revision. This level of additional trips would not contribute to increased concentrations of carbon monoxide (CO) that would expose sensitive receptors to unhealthy levels. Due to the comparable characteristics of Alternatives 3 and 4 with Alternative 2, it would be expected that vehicle trips from these alternatives and associated CO concentrations would be similar to Alternative 2. This would be a **less-than-significant** impact from Alternatives 2, 3, and 4. Alternative 1 would be a continuation of existing conditions and would have **no impact** on CO concentrations.

Alternative 1: No Project

General Plan Revision/Pier Rebuild Project

Alternative 1 would involve no physical improvements or changes to the project site or any substantial changes in management approaches. Existing operation and maintenance of the existing facilities on the project site would continue. As such, existing traffic levels would persist. Consequently, there would be not increase in CO emissions associated with Alternative 1. There would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Implementation of Alternative 2 could also result in increased visitors at KBSRA from expanded capacity and increased number of special events that could generate additional vehicle trips. Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. CO disperses rapidly with distance from the source under normal meteorological conditions; however, under certain specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels at nearby sensitive land uses, such as residential units, hospitals, schools, and childcare facilities.

Full build out of the project would result in new visitor trips. Based on the traffic analysis that was conducted (Section 5.3.13, Transportation and Circulation), the project would generate up to 222 new daily trips on a peak summer day. Based on PCAPCD's significance criteria for emissions of CO, the project would generate substantial localized CO emissions if project-generated vehicle trips would degrade an existing roadway or intersection from an acceptable LOS to an unacceptable LOS. As shown in Tables 5.3.13-3 and 5.3.13-4 in Section 5.3.13, the project-related vehicle trips would not degrade existing streets or intersections near the project side from an acceptable LOS to an unacceptable LOS. Consequently, this level of increased vehicle trips would not result in enough new peak-hour trips to contribute to a violation of the California 1-hour or 8-hour ambient air quality standards for CO. This impact would be **less than significant**.

Pier Rebuild Project

Alternative 2 would include the construction of a rebuilt pier on the eastern portion of the project site. Implementation of Alternative 2 would include removal of an existing boat ramp and construction of a public pier comprised of 213 feet of a stationary fixed section, followed by an 80-foot transition gangway ramp, and a 215-foot floating section. The resulting increase in traffic from construction and operation of the proposed pier and other improvements under Alternative 2 is included in the total increase in vehicle trips projected with implementation of Alternative 2. As discussed above, the resulting 222 additionally daily trips generated from the project would not be substantial such that an existing roadway or intersection would be degraded from an acceptable LOS to an unacceptable LOS. Therefore, CO emissions would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

When compared to Alternative 2, the Alternative 3 General Plan revision would largely be the same with some refinements in location or size for some improvements. However, Alternative 3 would not include an administrative office, entry kiosk, or restroom facility on the western side of the park. Due to the comparable characteristics of Alternative 3 and Alternative 2, it would be expected that vehicle trips generated from Alternative 3 would be similar to Alternative 2. As previously discussed, the level of additional vehicle trips generated for Alternative 2 would not contribute to the degradation of an

existing roadway or intersection from an acceptable LOS to an unacceptable LOS. Given that the additional vehicle trips generated from Alternative 3 would be akin to Alternative 2, CO emissions would be **less than significant**.

Pier Rebuild Project

Alternative 3 would remove the existing boat ramp, construct a new lake access point, and reconstruct the proposed pier in the central portion of the project site. The characteristics of the pier would be similar in size to the eastern pier proposed in Alternative 2. The increase in vehicle trips from operation of the proposed pier under Alternative 3 would be similar to that of Alternative 2. As such, Alternative 3 CO emissions would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

When compared to Alternative 2, the Alternative 4 General Plan revision would largely be the same with some refinements in location or size for some improvements. Additional vehicle trips from implementation of Alternative 4 would be similar to those discussed above for Alternative 2. Implementation of Alternative 4 would not result in additional vehicle trips substantial enough to result in notable increases in CO concentrations. As such, Alternative 4-related CO emissions would be **less than significant**.

Pier Rebuild Project

Alternative 4 would include a rebuilt pier on the western end of the project site and would extend the existing motorized boat ramp. The boat ramp extension would be modest and while it would be expected to increase the period of time that the boat ramp is open, it would not provide access during all lake levels. Alternative 4 would not include an additional lake access point, nor would it include a swim buoy area. Additional vehicle trips generated from Alternative 4 would be similar in amount to those under Alternative 2. As discussed previously, this level of vehicle trips would not result in increased traffic such that an existing roadway or intersection operating at an acceptable LOS would be degraded to an unacceptable LOS. CO emission would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.1-4: Expose sensitive receptors to substantial pollutant concentrations

Implementation of Alternative 2 General Plan revision and pier rebuild project would result in short-term construction-related TACs associated with the use of heavy-duty diesel construction equipment and long-term operational-related mobile-source emissions of TACs associated with project-generated traffic; however, such TAC emissions would not be substantial enough to trigger the PCAPCD threshold of significance for TAC concentrations. Implementation of Alternatives 3 and 4 would include similar activities with comparable levels of TAC emissions from construction and operational activity as Alternative 2. This would be a **less-than-significant** impact for Alternatives 2, 3, and 4. Alternative 1 would result in **no impact**.

Alternative 1: No Project

General Plan Revision/Pier Rebuild Project

Alternative 1 would involve no physical improvements or changes to the project site or any substantial changes in management approaches. Existing operation and maintenance of the existing facilities on the

project site would continue. There would be no increase in TAC emissions associated with Alternative 1 as compared to baseline conditions. There would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Currently, existing sensitive receptors are located within 1,000 feet from the project site. The project would involve upland improvements that could result in the generation of air emissions, including construction of new restroom facilities, administrative office, promenade and sand wall, relocated basketball court, and reconfigured parking lots. These construction-related activities would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., demolition, clearing, grading), paving, application of architectural coatings, on-road truck travel, and other miscellaneous activities. For construction activities, diesel PM is the primary TAC of concern. With regard to exposure to diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health risk for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70- or 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2012:11-3).

Based on the emissions modeling conducted and presented in Table 5.3.1-1, maximum daily emissions of diesel exhaust PM₁₀, considered a surrogate for diesel PM, would not exceed 0.1 lb/day during construction. Furthermore, the use of off-road heavy-duty diesel equipment would be limited to the construction phases. Given the relatively short and temporary nature of construction activities and the level of daily emissions of diesel PM, existing or potential future sensitive receptors would not be exposed to excessive levels of TAC emissions from construction activities based on PCAPCD significance criteria for TACs.

Operation of Alternative 2 could result in increased visitors at KBSRA from expanded capacity and increased number of special events that could generate additional vehicle trips. In accordance with available guidance from the California Air Resource Board (CARB) and PCAPCD, freeways or urban roadways experiencing 100,000 or more vehicles per day could expose sensitive receptors to adverse health risks. Traffic volumes on SR 28 near Coon Street (at 19,200 annual average vehicles/day and 27,000 peak month average vehicles/day; Caltrans 2016) are well below this level. Based on the traffic analysis conducted, the project would result in a maximum of 222 daily trips (i.e., new TAC sources), traveling through three roadways and six different intersections. Thus, no single affected roadway or intersection would experience an increase in vehicle daily trips of more than 222 vehicles, which would not be considered substantial in comparison to the recommended traffic volumes of 50,000 vehicles/day for rural roads or 100,000 vehicles/day on urban roads/freeways. Further, the project does not include any additional stationary sources of TACs and therefore would not contribute substantially to existing health risk levels in the area.

For these reasons, implementation of Alternative 2 would not result in the exposure of sensitive receptors to harmful concentrations of TACs. This impact would be **less than significant**.

Pier Rebuild Project

Alternative 2 would include the construction of a pier on the eastern portion of the project site, removal of an existing boat ramp, and construction of a new lake access point. Construction of the rebuilt pier was included in the modeling performed under Impacts 5.3.1-1 and 5.3.1-2. As such, construction-generated emissions of diesel PM would be similar or less for the pier rebuild project along, than the levels discussed above. This impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

Alternative 3 would include similar improvements to existing facilities and construction of new facilities as Alternative 2 with refinements in location or size for some improvements. Alternative 3 would not include an administrative office, entry kiosk, or restroom facility on the western side of the park. Implementation of Alternative 3 would include similar activities with comparable levels of TAC emissions from construction and operational activity as Alternative 2. For the reasons discussed above, construction and operation of the facilities constructed as a part of the General Plan revision under Alternative 3 would not expose any sensitive receptors to harmful levels of TACs. This impact would be **less than significant**.

Pier Rebuild Project

Alternative 3 would remove the existing boat ramp, construct a new lake access point, and reconstruct the proposed pier in the central portion of the project site. The characteristics of the pier would be similar in size to the eastern pier proposed in Alternative 2. The construction and operation of the proposed pier under Alternative 3 would have similar levels of construction and operational emissions of TACs as the proposed pier under Alternative 2. As stated previously, construction and operation of the central pier would not expose sensitive receptors to harmful concentrations of TACs. This impact would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

When compared to Alternative 2, the Alternative 4 General Plan revision would largely be the same with some refinements in location or size for some improvements. Implementation of Alternative 4 would include similar activities with comparable levels of TAC emissions from construction and operational activity as Alternative 2. For the reasons discussed above, construction and operation of the facilities constructed as part of the General Plan revision under Alternative 4 would not expose any sensitive receptors to harmful levels of TACs. This impact would be **less than significant**.

Pier Rebuild Project

Alternative 4 would include a rebuilt pier on the western end of the project site and would extend the existing motorized boat ramp. The boat ramp extension would be modest and while it would be expected to increase the period of time that the boat ramp is open, it would not provide access during all lake levels. The construction and operation of the proposed pier under Alternative 4 would have similar levels of construction and operational emissions of TACs as the proposed pier under Alternative 2. As stated previously, construction and operation of the western pier would not expose sensitive receptors to harmful concentrations of TACs. This impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

The Lake Tahoe Air Basin is currently in nonattainment for the 1-hour and 8-hour CAAQS for ozone and PM₁₀; unclassified for the CAAQS for hydrogen sulfide and visibility-reducing PM; and listed as unclassified for the NAAQS for ozone, CO, nitrogen dioxide (NO₂), PM₁₀, fine PM (PM_{2.5}), and lead. Construction-generated and operational-generated emissions of criteria air pollutants from related projects could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations. Additionally, because the Tahoe Basin is currently designated as nonattainment for the CAAQS for ozone, construction- and operation-generated emissions of ROG and NO_x could contribute on a cumulative basis to pollutant concentrations that exceed the ambient air quality standards because of growth in the area. Construction- and operational-related emissions of ROG and NO_x from project implementation were determined to be less than significant because project emissions would not exceed the applicable operational and cumulative mass emissions thresholds set by PCAPCD. According to PCAPCD, a project would have a cumulative contribution to an air quality violation if:

- ◆ Operational Phase Cumulative-levels of ROG and NO_x exceed 55 pounds per day (lb/day), or
- ◆ Operational Phase Cumulative-levels of PM₁₀ exceed 82 lb/day.

These thresholds are numerically identical to the operational thresholds used to evaluate project-level emissions above. As discussed previously, the project's operational emissions would not exceed these thresholds. Based on PCAPCD's guidance, a project that would exceed the aforementioned thresholds of significance would have a cumulatively considerable impact on regional air quality. The project would not produce emissions substantial enough to exceed these thresholds of significance. As such, construction- and operation-related emissions of ROG and NO_x, and other criteria air pollutants, would not have a considerable contribution to a significant cumulative-related impact with respect to ozone, PM₁₀, and PM_{2.5}. This would be a **less-than-significant** cumulative impact.