

5.2 Environmental Effects Eliminated from Further Analysis

As part of the scoping and environmental analysis carried out for the project and as discussed in Sections 5.3.1 through 5.3.13, the KBSRA General Plan revision and pier rebuild project alternatives would result in no adverse impacts related to the following environmental issue areas and, therefore, they do not warrant further evaluation.

- ◆ **Agricultural resources.** According to the California Department of Conservation (DOC), there are no lands considered to be important farmland on the project site (DOC 2017) or lands subject to Williamson Act contracts (DOC 2015). Thus, the General Plan revision and pier rebuild project alternatives would not convert important farmland, conflict with Williamson Act contracts, or otherwise affect agricultural land. There would be no impacts related to agricultural resources.
- ◆ **Hazards due to roadway design.** None of the action alternatives would install sharp curves or dangerous intersections, or result in incompatible uses of roadways, such as by slow-moving farm equipment. No hazards due to roadway design would result.
- ◆ **Mineral resources.** Impacts on mineral resources (loss of a known mineral resource or a locally-important mineral resource recovery site) were dismissed from further evaluation, because there are no known mineral resources within the project site (USGS 2017) and because mining is not an identified allowable use in the Tahoe Basin.
- ◆ **Vector-borne disease.** The proposed project does not include treatment wetlands or detention basins of sufficient capacity that could influence vector-borne disease risks. Therefore, there would not be hazards associated with increased potential for vector-borne disease as a result of the project.
- ◆ **Naturally-occurring asbestos.** Asbestos is the common name for a group of naturally-occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Naturally-Occurring Asbestos (NOA) is found in many parts of California and is commonly associated with serpentine soils and rocks. Special Report 190, Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, conducted by the California Geological Survey (CGS) in 2006 provides a map of areas within Placer County likely to contain NOA. Although portions of Placer County contain areas of NOA, the KBSRA is in an area considered Least Likely to contain NOA (CGS 2006). The project site is not located within any of the areas known to contain NOA.
- ◆ **Population and housing.** Implementation of the General Plan Revision and Pier Rebuild project could result in several new staff at KBSRA. However, the amount of employment generated by any of the action alternatives would be minimal, would not result in substantial population growth such that construction of additional housing would be required. Additionally, the action alternatives would not construct new roads or result in the extension of utilities. The action alternatives would not result in direct or indirect population growth. Furthermore, the project is located on public land that contains recreation facilities and, thus, implementation of any of the action alternatives would not displace any people or housing.

- ◆ **Forestry resources.** KBSRA is not zoned for forest land, timberland, or Timberland Production; therefore, the action alternatives would not result in conflicts with these zoning types. Additionally, KBSRA does not contain substantial forest resources and its primary use is for recreation. Implementation of the action alternatives would not result in the loss of forest land or conversion of forest land to non-forest use.

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 no 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.

5.3.2 Biological Resources

This section describes the biological resources on and in the vicinity of the project site, and addresses potential impacts on biological resources that could result from implementation of the General Plan revision and construction and operation of the proposed pier rebuild project. The analysis includes the methods used for assessment, potential impacts associated with implementing the proposed project alternatives, and mitigation measures proposed to address significant impacts. The 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 existing conditions and significant resource values related to biological resources are summarized in Section 2.2.2, Biological Resources, in Chapter 2, Existing Conditions, of this document. A more detailed description of the existing biological resource 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 website (www.parks.ca.gov/PlanKBSRA) and at CSP and TRPA offices during normal business hours through project approval hearings. Relevant project goals and guidelines are summarized in Chapter 4, The Plan. CSP Standard and Special Project Requirements included in the Plan that apply to biological resources are in Section 4.7, CSP Standard and Special Project Requirements.

Several biological resource issues were initially evaluated but not further analyzed. The following summarizes those issues and rationale for not analyzing them in further detail.

The project site is highly disturbed by commercial/urban and recreational uses and its potential to support special-status animal species is limited. Of the 10 special-status wildlife species that could occur on or near the project site (CSP 2016), three species are known or have a moderate potential to occur: waterfowl, osprey, and bald eagle. "Waterfowl" is a TRPA special-interest group of species that occurs on the project site. In KBSRA, Lake Tahoe and its beach provide suitable foraging and resting habitat for several common waterfowl species during summer and winter. However, waterfowl are not expected to nest in KBSRA due to high levels of disturbance. Bald eagle and osprey are designated by TRPA as special-interest species. Bald eagle is also federally protected by the U.S. Fish and Wildlife Service (USFWS) under the Bald and Golden Eagle Protection Act. Neither of these species nests within KBSRA. Ospreys may forage in Lake Tahoe in the vicinity of KBSRA; and bald eagle could also occasionally forage in the project area throughout the year, particularly during winter when the abundance of bald eagles in the Tahoe Basin is greatest. However, KBSRA does not provide suitable nesting habitat for any of these species, and only waterfowl are expected to regularly use the project site for foraging or resting. Additionally, waterfowl that currently use KBSRA are habituated to high levels of disturbance associated with recreation and urban uses; and, over the long term, implementation of the General Plan revision and pier rebuild project are not expected to disturb or degrade habitat for these species substantially above existing levels. Therefore, the project is not expected to substantially affect any special-status wildlife species and this issue is not analyzed further.

As discussed above for special-status animal species, the project site is highly disturbed by commercial/urban and recreational uses. This disturbance limits the potential of the site to support nesting migratory birds and common raptors protected under the Migratory Bird Treaty Act (16 USC 703) and Section 3503 of the California Fish and Game Code. While the project site has limited suitability for nesting birds, construction and tree removal in the upland portion of the project site may cause loss of common migratory bird and raptor nests. However, General Plan revision Goal RES 4 provides for the protection of nests of migratory birds and raptors; associated Guidelines RES 4.1 and

RES 4.2, and the CSP Standard and Special Project Requirements (Section 4.7), require pre-construction monitoring for migratory bird and raptor nests, and nesting-season restrictions or buffers to avoid loss of any nests found. Through implementation of this General Plan revision goal and associated guidelines, and CSP Standard and Special Project Requirements, the loss of migratory bird and raptor nests would be avoided, and this impact was determined to be less than significant and is not discussed further.

Impacts of projects in the Tahoe Basin relative to invasive weeds and aquatic invasive species (AIS) are thoroughly addressed in the Regional Plan Update EIS, Impact 3.10-5 (TRPA 2012:3.10-55–3.10-60). According to that analysis, construction from development and redevelopment projects would involve temporary ground-disturbing activities in disturbed and native habitat types, which could in turn be colonized by non-native, invasive weed species from outside the Tahoe region. In addition, watercraft use of Lake Tahoe resulting from development or activities could facilitate the spread of aquatic invasive species if boats are exposed to these species in other water bodies and are not sufficiently cleaned and sanitized before entering Lake Tahoe. Also, watercraft that travel from other locations within Lake Tahoe where AIS (e.g., Asian clam) occur may cause the intra-lake spread of these species to KBSRA. However, any new development would be required to comply with Section 64.4, Revegetation, and Section 63.4, Aquatic Invasive Species, of the TRPA Code of Ordinances; Goals and Policies that prohibit release of non-native species; and other regulations. Additionally, General Plan revision Goal RES 1 and its associated guidelines (Guidelines RES 1.1, 1.2, and 1.3) require that new introductions of AIS be prevented and the spread of AIS controlled; Chapter 8 (“Shorezone Protective Structures and BMPs”) of the TRPA BMP Handbook (TRPA 2014) requires BMPs to prevent establishment and spread of AIS and terrestrial invasive species; and CSP Standard and Special Project Requirements include measures designed specifically to prevent or reduce the risk of establishment and spread of upland and aquatic invasive species. Through implementation of these regulations, goals and guidelines, and standard and special project requirements, project implementation would comply with the TRPA Code provisions for invasive species, and this impact was determined to be less than significant and is not discussed further.

Construction of future improvements in the upland portion of the project site under the General Plan revision is anticipated to result in the removal of approximately 37 trees. This tree removal would be limited to the footprints of proposed parking, walking and shared-use paths, and structures. Tree removal would not occur within old growth habitat, remove riparian vegetation, or occur in areas outside of permitted development footprints. Additionally, the amount of tree removal required would not constitute “substantial” tree removal as defined under Section 61.1.8 of the TRPA Code. Specific provisions for tree removal in the Tahoe Region are provided in the TRPA Code (Chapter 61, and Chapters 36, 33, 62), and all tree removal for trees greater than 14 inches diameter at breast height (dbh) requires review and approval by TRPA. With limited exception, Section 61.1.4, Old Growth Enhancement and Protection, of the TRPA Code prohibits the removal of trees greater than 30 inches dbh. If any tree greater than 30 inches would require removal and is approved by TRPA, project approvals and permits would specify the compensation required for the loss. Therefore, tree removal would be consistent with relevant ordinances and this issue is not addressed further. Additionally, tree removal or other vegetation disturbances would not substantially reduce the size, continuity, or integrity of any common vegetation community or habitat type or interrupt the natural processes that support common vegetation communities in the project site. Also, because the project site is already highly disturbed and fragmented by commercial/urban and recreational uses, project-related disturbances on the biological functions of common habitats are not considered substantial.

None of the project alternatives evaluated herein would be constructed within an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state conservation plan. Therefore, project implementation would not conflict with the provisions of an adopted conservation plan and this issue is not evaluated further. Additionally, KBSRA is not positioned within any known important wildlife movement or migratory corridors. Because the project site is subject to high levels of human disturbance and isolation of habitat patches because of commercial and residential development, presence of major road corridors, and recreational uses, it is not likely to function as an important corridor and this issue is not addressed further.

Environmental Impacts and Mitigation Measures

Analysis Methodology

The analysis of potential impacts to biological resources from project implementation is based on the data review, resource mapping, and technical studies referenced in Section 2.2.2, Biological Resources, of this document and the Resources Inventory and Existing Conditions Report. The information obtained from these sources was reviewed and summarized to understand existing conditions and to identify potential environmental effects, based on the significance criteria identified below. In determining the level of significance, the analysis assumes that the proposed project would comply with relevant federal, state, and regional laws, regulations, and ordinances.

Potential impacts of the project on biological resources can be classified as either temporary or permanent. Temporary impacts generally include ground or lake-bottom disturbances associated with temporary construction activities, including: removal of existing structures; construction staging; minor cut and fill that would be restored to existing conditions after project completion; potential construction disturbances assumed to occur within 10 feet of permanent project features; and noise, ground vibration, airborne particulate (dust) generated, and turbidity caused by construction activities.

Permanent impacts generally include effects associated with conversion of land use and cover (e.g., permanent vegetation removal) or permanent disturbance of the lake bed as a result of: earthwork/excavation, new paving for the shared-use path and parking facilities, landscaping, and installation of new structures. In addition, permanent impacts include long-term changes to recreational uses that can result in disturbances to wildlife and vegetation.

Significance Criteria

CEQA Criteria

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the proposed Kings Beach State Recreation Area General Plan Revision and Pier Rebuild Project would result in a significant impact related to biological resources if it would do any of the following:

- ◆ have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or USFWS;
- ◆ have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS; or

- ◆ have a substantial adverse effect on federally protected waters of the United States, including wetlands, as defined by Section 404 of the Clean Water Act (CWA) through direct removal, filling, hydrological interruption, or other means;

The State CEQA Guidelines (Section 15064.5) define “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

TRPA Criteria

The biological resources criteria from the TRPA Initial Environmental Checklist were used to evaluate the biological resource impacts of the alternatives. Impacts to biological resources would be significant if the project would:

- ◆ remove riparian vegetation or other vegetation associated with critical wildlife habitat, either through direct removal or indirect lowering of the groundwater table;
- ◆ remove stream bank and/or backshore vegetation, including woody vegetation such as willows;
- ◆ introduce new vegetation that would require excessive fertilizer or water, or would provide a barrier to the normal replenishment of existing species;
- ◆ change the diversity or distribution of species, or number of any species of plants or animals;
- ◆ reduce the numbers of any unique, rare, or endangered species of plants or animals; or
- ◆ deteriorate existing fish or wildlife habitat quantity or quality.

Environmental Impacts

Impact 5.3.2-1: Disturbance and loss of prime fish habitat

The removal of existing structures under Alternatives 2, 3, and 4 may temporarily disturb TRPA-designated prime fish habitat. However, potential impacts would be minimized by implementation of project-specific best management practices (BMPs) that are required for project permits and approvals and CSP Standard and Special Project Requirements included in The Plan (Section 4.7). Alternative 2 would place the rebuilt pier within prime fish (feed and cover) habitat, resulting in the loss or degradation of 4,930 square feet of prime fish habitat. Alternatives 3 and 4 would place the pier outside of, and not remove, prime fish habitat; Alternative 4 additionally includes extending the existing motorized boat ramp near, but outside of, prime fish habitat. Alternatives 2, 3, and 4 could result in changes in localized watercraft activity but would not increase overall watercraft activity on Lake Tahoe and would not substantially change watercraft activity or disturbance within prime fish habitat. Taken together, the impacts to prime fish habitat under Alternatives 3 and 4 would be **less than significant**. However, the permanent removal or degradation of prime fish habitat under Alternative 2 would be **significant**. Implementation of Mitigation Measure 5.3.2-1 would reduce the impact to a **less-than-significant** level for the pier rebuild component of Alternative 2.

Because Alternative 1 would not result in changes to the General Plan, removal of existing structures, construction of the rebuilt pier, or changes in watercraft use or resulting disturbance, this alternative would have **no impact** on prime fish habitat.

Lake Tahoe within the eastern portion of KBSRA contains TRPA-designated prime fish habitat. Prime fish habitat on the project site is composed of both spawning habitat (small cobbles and gravels) and feed and cover habitat (larger-diameter cobbles and boulders used both for foraging and refuge). The existing pier and the existing boat ramp within KBSRA are both located in marginal fish habitat. Fish habitat in the project area is described in more detail in Section 2.2.2, Biological Resources, in Chapter 2, Existing Conditions, and the Resources Inventory and Existing Conditions Report.

Alternative 1: No Project

General Plan Revision

Alternative 1 is a continuation of existing conditions under the current General Plan. Therefore, no Plan-related disturbances or changes in resource management would occur, and there would be **no impact** to prime fish habitat under Alternative 1.

Pier Rebuild Project

Under Alternative 1, the existing pier and boat ramp in KBSRA would remain in place and no pier construction would occur. No changes to the operations of these existing structures would occur under the no project alternative, and no project-related removal or degradation of existing fish habitat would occur. Therefore, there would be **no impact** to prime fish habitat due to construction under Alternative 1.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

TRPA's designation and protection of prime fish habitat are based on characteristics of the lakebed's physical substrate. With the General Plan revision under Alternative 2, except for the pier rebuild project (discussed separately, below), the proposed development and operations of upland and shorezone features, land use changes, and shifts in visitor use patterns are not expected to disturb the lakebed substrate within prime fish habitat. Therefore, the General Plan revision under Alternative 2 would result in **no impact** to prime fish habitat.

Pier Rebuild Project

The existing pier and boat ramp in KBSRA are located outside of prime fish habitat. Under Alternative 2, the existing pier and boat ramp would be removed. A 10-foot-wide non-motorized lake access point would be constructed above the high-water line. Although removal of the existing pier and boat ramp would occur outside of prime fish habitat (see Exhibit 2.2-4 in Chapter 2, Existing Conditions), temporary impacts to nearby prime fish habitat could occur. Temporary impacts could include noise and vibration from work below the water surface, and siltation due to disturbance of the lakebed and shoreline.

The removal of existing structures would be performed during the winter (October through May). Therefore, the potential for construction-related noise and vibration to disturb fish spawning activity within spawning habitat located away from the existing structures in the eastern portion of the project area would be reduced.

To avoid substantial construction-related impacts to water quality, the removal of the existing structures would be performed using standard water quality BMPs such as turbidity curtains, which would decrease the likelihood that siltation or elevated aluminum concentrations from bottom disturbance during the process of removing these structures would degrade adjacent prime fish habitat. In addition, to reduce the likelihood of habitat degradation caused by introducing aquatic invasive

species, equipment would be inspected, and aquatic invasive species removed prior to entering the work area (see discussion at the beginning of this section and Section 4.7, CSP Standard and Special Project Requirements).

The construction of the eastern pier would occur within prime fish habitat (feed and cover) and result in 4,930 square feet of permanent habitat loss or disturbance from the placement of 16 pier pilings and shading from the floating pier section (Table 5.1-1). Shading produced by the pier, particularly at low lake levels when the floating pier is closest to the lake bed, could reduce periphyton growth and result in degradation of prime fish habitat through reduced productivity (Conservancy 2016). Guideline RES 2.1 of the General Plan states, "Design the pier rebuild project to avoid spawning habitat, minimize effects on feed and cover habitat, and to meet or exceed prime fish habitat mitigation requirements." Without appropriate compensatory actions to meet this mitigation standard, project-related loss of prime fish habitat would be substantial.

The construction of the eastern pier would also cause temporary disturbance of prime fish habitat that would be similar to that discussed previously for removal of the existing pier and boat ramp. Also, as discussed for removal of the existing structures, BMPs would be required during construction that would minimize temporary impacts.

During low lake levels, the beaching of watercraft could occur within prime fish habitat substrates. The beaching of both motorized and non-motorized watercraft within spawning habitat was observed to result in the destruction of fish eggs in Lake Tahoe (Alan and Reuter 1996). However, because the spawning habitat identified within the project site is located away from the proposed eastern pier and non-motorized launch facility, Alternative 2 is not expected to result in an increase in the beaching of watercraft in spawning habitat.

The removal of the existing boat ramp is anticipated to result in a reduction of motorized watercraft activity within adjacent prime fish habitat during lake levels when the existing boat ramp is usable. However, the eastern pier would support temporary mooring of motorized watercraft at the pier for passenger loading and unloading purposes, after which motorized watercraft may anchor adjacent to the eastern pier in feed and cover habitat. Anchoring already occurs at KBSRA and a longer pier by itself is not expected to substantially increase the amount of anchoring that would occur such that there would be a substantial increase in the amount of disturbance of feed and cover habitat. The eastern pier would likely increase the motorized watercraft use within feed and cover habitat during lake levels when both the existing pier and boat ramp are unusable. The eastern pier and the lake access point would be accessible to non-motorized watercraft; however, the project site is currently accessible to non-motorized watercraft and no substantive change in non-motorized use or any resulting disturbance to prime fish habitat are expected. While Alternative 2 would result in a change in localized watercraft use patterns, it is not anticipated to result in substantial changes in the overall level of boat activity on Lake Tahoe and disturbance to adjacent prime fish habitat.

Impact Summary

Under Alternative 2, the removal of the existing pier and boat ramp and construction of the eastern pier would temporarily disturb prime fish habitat. These temporary impacts would be minimized by project-specific BMPs that are required to receive the necessary permits and approvals for the project and implementation of CSP Standard and Special Project Requirements. The placement of the eastern pier would result in removal and degradation of up to 4,930 square feet of feed and cover habitat. Operation of the eastern pier and lake access point may change localized watercraft use patterns within KBSRA, although the overall watercraft use of the area is not anticipated to result in substantial changes in the

overall level of disturbance or result in impacts to prime fish habitat. The permanent loss or degradation of prime fish habitat due to pier construction under Alternative 2 would be **significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

TRPA's designation and protection of prime fish habitat are based on characteristics of the lakebed's physical substrate. With the General Plan revision under Alternative 3, except for the pier rebuild project (discussed separately, below), the proposed development and operations of upland and shorezone features, land use changes, and shifts in visitor use patterns are not expected to disturb the lakebed substrate within prime fish habitat. Therefore, the General Plan revision under Alternative 3 would result in **no impact** to prime fish habitat.

Pier Rebuild Project

Under Alternative 3, the existing pier and the existing boat ramp would be removed, and a non-motorized lake access point would be constructed above the high-water line. The resulting impacts on prime fish habitat would be similar as those discussed for Alternative 2, above.

The construction of the central pier would occur outside of prime fish habitat, and therefore would not remove or degrade prime fish habitat from the installation of pier pilings or shading (Table 4.6-1). Feed and cover habitat is directly adjacent to the proposed pier and would be subject to the same temporary impacts, and the same BMPs and CSP Standard and Special Project Requirements would be implemented, as discussed for the removal of the existing pier under Alternative 2.

Alternative 3 is likely to result in similar motorized and non-motorized use patterns overall and potential beaching of watercraft as discussed for Alternative 2. However, because the central pier would not be constructed within prime fish habitat, a small reduction in motorized activity within prime fish habitat could occur.

Because prime fish habitat would not be removed or substantially degraded during construction and operation of the central pier, the potential impacts to prime fish habitat under Alternative 3 would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

TRPA's designation and protection of prime fish habitat are based on characteristics of the lakebed's physical substrate. With the General Plan revision under Alternative 4, except for the pier rebuild project (discussed separately, below), the proposed development and operations of upland and shorezone features, land use changes, and shifts in visitor use patterns are not expected to disturb the lakebed substrate within prime fish habitat. Therefore, the General Plan revision under Alternative 4 would result in **no impact** to prime fish habitat.

Pier Rebuild Project

Under Alternative 4, the existing pier would be removed and replaced by a new pier on the western side of the park, near the event center. The potential impacts of pier removal on prime fish habitat would be the same as those discussed for Alternative 2, above.

The construction of the western pier would occur outside of prime fish habitat, and therefore would not remove or degrade prime fish habitat from the installation of pier pilings or shading (Table 4.6-1). Feed and cover habitat is more distant from the western pier associated with Alternative 4 than with Alternative 2 and would be subject to the same temporary impacts, and the same BMPs and CSP Standard and Special Project Requirements (Section 4.7) would be implemented, as discussed for the removal of the existing pier under Alternative 2.

Alternative 4 includes an extension of the existing motorized boat ramp, which would increase the time in which the boat ramp is accessible, and improve navigation near the boat ramp during periods of low lake levels. The proposed ramp extension, which is at a conceptual level of design (see Exhibit 5.1-12 in Chapter 5, Environmental Analysis), is located near, but outside of, prime fish habitat (see Exhibit 5.1-12 in Chapter 5, Environmental Analysis). If Alternative 4 is selected, further design of the extended motorized boat ramp would continue to avoid construction within prime fish habitat. Potential construction- and operations-related effects of the ramp extension on nearby prime fish habitat would be similar to those discussed for the pier rebuild project (near prime fish habitat) in Alternative 2.

Construction and operation of the western pier and extended boat ramp may result in localized changes in watercraft activity but would not increase overall watercraft activity on Lake Tahoe. However, the western pier is located away from the prime fish habitat at the eastern end of KBSRA, such that any changes in motorized boating activity and disturbance within prime fish habitat associated with the western pier is not likely to be substantial. While the extended boat ramp may periodically increase the motorized watercraft use within and adjacent to feed and cover habitat during lake levels when the existing ramp is unusable, it is not anticipated to result in substantial changes in the overall level of disturbance to adjacent prime fish habitat. Because KBSRA is currently accessible to motorized and non-motorized watercraft, no substantial effects on prime fish habitat as a result of watercraft use are expected under Alternative 4. Additionally, because the spawning habitat identified within the project site is located away from the proposed western pier, Alternative 4 is not expected to result in an increase in the beaching of watercraft in spawning habitat during low lake levels. Taken together, the potential impacts to prime fish habitat under Alternative 4 would be **less than significant**.

Mitigation Measures

Mitigation Measure 5.3.2-1: Compensate for Loss of Prime Fish Habitat

This mitigation measure would apply to the pier rebuild project under Alternative 2.

- ◆ If Alternative 2 is implemented, to compensate for the removal of up to 4,930 square feet of prime fish habitat (feed and cover) as a result of constructing the eastern pier, 7,395 square feet of in-kind feed and cover habitat shall be created or restored in the surrounding area through the development and implementation of a Compensatory Fish Habitat Replacement and Monitoring Plan. This amount of habitat creation or restoration equates to a 1.5 to 1 compensation ratio. The created/restored habitat would adjoin the existing feed and cover habitat at lake bottom elevations similar to those of habitat removed or degraded by installation of the eastern pier. The plan will be developed and implemented in coordination with applicable regulatory agencies, including CDFW, Lahontan RWQCB, USACE, USFWS, and TRPA. Additionally, the plan will be coordinated and consistent with terms and conditions of other required permits. Applicable permits expected for the project include a Clean Water Act Section 404 permit from USACE, Clean Water Act Section 401 Water Quality Certification from Lahontan RWQCB, and a Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement from CDFW.

The Compensatory Fish Habitat Replacement and Monitoring Plan will include design, implementation, and monitoring requirements for creating/restoring 7,395 square feet of feed and cover habitat and achieving no net loss of fish habitat function, and shall include:

- identification of a specific habitat creation/restoration site that adjoins the existing feed and cover habitat in the area, and criteria for selecting the site;
- specifications for habitat substrate type and size-class distribution, material sources, and construction/installation methods;
- in-kind reference habitats for comparison with compensatory fish habitat/substrate (using performance and success criteria) to document success;
- monitoring protocol, including schedule and reporting requirements;
- ecological performance standards, based on the best available science and including specifications for habitat substrate condition and fish use of the created/restored area;
- corrective measures if performance standards are not met;
- responsible parties for monitoring and preparing reports; and
- responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.

Significance after Mitigation

Mitigation Measure 5.3.2-1 requires the creation/restoration of 7,395 square feet of feed and cover habitat in coordination with CDFW, Lahontan RWQCB, USACE, USFWS, and TRPA, to compensate for the loss or degradation of 4,930 square feet of prime fish habitat under Alternative 2. The created/restored habitat would adjoin the existing feed and cover habitat at lake bottom elevations similar to those of habitat removed or degraded by installation of the eastern pier. Implementation of this measure would result in an overall increase in prime fish habitat within KBSRA. Therefore, Impact 5.3.2-1 for the pier rebuild project under Alternative 2 would be reduced to a **less-than-significant** level.

Impact 5.3.2-2: Potential effects on Lahontan cutthroat trout and other special-status fish

No special-status fish species are expected to use aquatic habitat (Lake Tahoe) in KBSRA. However, because Lahontan cutthroat trout (LCT) has been reintroduced into Lake Tahoe, and lake habitat within KBSRA is hydrologically connected to occurrences of LCT in the Lake Tahoe watershed, the species is considered for all alternatives. Under all action alternatives (Alternatives 2, 3, and 4), the General Plan revision would result in physical improvements to KBSRA that may result in stormwater discharge. Because the General Plan revision requires that stormwater discharge standards be met or exceeded, proposed upland improvements would not affect special-status fish such as LCT, if the species is present. The removal of the existing pier structures under Alternatives 2, 3, and 4 have a low probability of resulting in the harm or harassment of LCT. Alternatives 3 and 4 would rebuild the pier outside of prime fish (feed and cover) habitat and would not directly disturb substrate that may provide potential habitat for LCT; Alternative 4 additionally includes extending the existing motorized boat ramp near, but outside of, prime fish habitat. Alternative 2 would place the rebuilt pier within feed and cover habitat; however, Mitigation Measure 5.3.2-1 (for Impact 5.3.2-1) requires the creation/restoration of feed and cover habitat and would result in a net increase in potential habitat for LCT. Alternatives 2, 3, and 4 would result in no substantial change in watercraft activity disturbance

within LCT habitat. Taken together, the impacts to LCT and other special-status fish under Alternatives 2, 3, and 4 would be **less than significant**.

Because Alternative 1 would not result in changes to the General Plan, removal of existing structures, pier construction, or changes in watercraft use or resulting disturbance, this alternative would have **no impact** on LCT or other special-status fish species.

LCT is listed as threatened under the ESA. In KBSRA, Lake Tahoe provides habitat for fish but LCT and other special-status fish species (e.g., Lahontan Lake tui chub) are not known or expected to occur in the project site. The potential for LCT to use lake habitat within KBSRA is considered low based on: the types, extent, and quality of habitat on the project site; the overall rarity of the species in the watershed and proximity of the project site to known occurrences of the species; and the regional distribution and abundance of the species. Additionally, no spawning habitat for LCT is present in the project site. However, because LCT has been reintroduced into Lake Tahoe, and lake habitat within KBSRA is hydrologically connected to occurrences of LCT in the Lake Tahoe watershed, the species is considered for all alternatives below.

Alternative 1: No Project

General Plan Revision

Alternative 1 would be a continuation of the existing KBSRA General Development Plan and would not stimulate redevelopment projects within KBSRA, modify land uses, or result in an increase in construction activities within the park. Therefore, Alternative 1 would have **no impact** on Lahontan cutthroat trout.

Pier Rebuild Project

Alternative 1 would not modify or move the existing Kings Beach Pier and would therefore have **no impact** on aquatic habitat and Lahontan cutthroat trout resulting from pier construction or operation.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The proposed General Plan revision would allow for the future development of recreation facilities and administrative and restroom facilities, and reconfiguring of the existing parking lot in the upland portion of the project site. Construction and operation of future projects implemented under the General Plan revision may generate stormwater discharge and erosion that could degrade fish habitat within the project area, through impaired water quality (e.g., sedimentation and other pollution). Potential effects of construction and operation of future projects on water quality are described in Section 5.3.7, Hydrology and Water Quality.

Each completed project would be required to comply with the same TRPA stormwater management protections applied to existing facilities, including infiltration BMPs (TRPA Code Section 60.4.6) and control of pollutant sources. Therefore, with the exception of the pier rebuild, which is evaluated separately, operation of the new and modified facilities proposed by the Alternative 2 General Plan revision would not adversely affect fish habitat or LCT, if the species was present.

Although construction activities have the potential to adversely affect water quality and fish habitat, all projects would implement and be required to comply with stringent TRPA and Lahontan RWQCB water quality protections. Temporary construction BMPs would be implemented as required through existing regulations, such as Chapters 33 and 60 of the TRPA Code of Ordinances. Additionally, the

General Plan revision includes Guideline RES 7.1 to meet or exceed TRPA's stormwater management requirements for construction or redevelopment of facilities (see Chapter 4, The Plan). Chapters 33 and 60 of the TRPA Code of Ordinances require the installation of temporary construction BMPs as a condition of project approval. BMPs would be implemented and required to meet the installation and use standards described in the TRPA Best Management Practices handbook (TRPA 2014). As described in Section 5.3.7, Hydrology and Water Quality, BMPs applicable to protecting water quality and fish habitat would include, but not be limited to:

- ◆ Temporary erosion control BMPs (e.g., silt fencing, fiber rolls, drain inlet protection) installed and maintained to prevent the transport of earthen materials and other waste from a construction site.
- ◆ Mandatory pre-grading inspections by regulatory agencies at the construction site to ensure proper installation of the temporary construction BMPs prior to the initiation of construction activities.
- ◆ Requirements to limit the area and extent of all excavation to avoid unnecessary soil disturbance.
- ◆ Requirements to winterize construction sites by October 15 to reduce the water quality impacts associated with winter weather. Winterization typically includes installation of erosion controls, vegetation protection, removal of construction debris, site stabilization, and other measures.
- ◆ Dust control measures to prevent transport of materials from a project site into any surface water or drainage course. Dust control measures typically include sweeping, watering, covering of disturbed soils and stockpiles, vehicle washing, and other measures.
- ◆ Requirements to remove surplus or waste earthen materials from project sites, as well as requirements to stabilize and protect stockpiled material.
- ◆ Stabilization of drainage swales disturbed by construction activities with appropriate soil stabilization measures (e.g., revegetation, rock armoring) to prevent erosion.
- ◆ Temporary BMPs to capture and contain pollutants from fueling operations, fuel storage areas, and other areas used for the storage of hydrocarbon-based materials. These may include spill prevention plans and other measures.
- ◆ Temporary BMPs to prevent the tracking of earthen materials and other waste materials from project sites to offsite locations, including stabilized points of entry/exit for construction vehicles/equipment, designated vehicle/equipment rinse stations, and sweeping operations.
- ◆ Regular inspection and maintenance of temporary BMPs.

As described in Section 5.3.7, Hydrology and Water Quality, Lahontan RWQCB requires the development of a project-specific SWPPP prior to the start of any project involving ground disturbance. The SWPPP would describe the site, construction activities, proposed erosion and sediment controls, means of waste disposal, maintenance requirements for temporary BMPs, and management controls for potential pollutant sources other than stormwater runoff. In addition, the SWPPP would require the implementation of a hazardous materials spill response plan, which would reduce the potential of directly and indirectly effecting water quality through construction-related hazardous material spills. Water quality controls outlined in a SWPPP must be consistent with TRPA requirements (including Chapter 4.5 of the TRPA BMP Handbook), the federal antidegradation policy, and maintain designated beneficial uses of Lake Tahoe.

Collectively, implementing these protections would prevent project-related degradation of water quality and fish habitat within Lake Tahoe. All future projects implemented under the proposed General Plan revision would be subject to existing laws and regulations requiring erosion and sediment controls, and implementation and maintenance of permanent and temporary BMPs to capture, detain, and infiltrate or otherwise control and properly manage stormwater runoff. Because regulatory protections are in place to minimize erosion and transport of sediment and other pollutants, future projects under the General Plan revision would not degrade water quality or fish habitat within Lake Tahoe. Therefore, if LCT was present in KBSRA, potential impacts on the species would be **less than significant**.

Pier Rebuild Project

Under Alternative 2, the existing pier and boat ramp would be removed and a rebuilt pier would be constructed, as discussed in Impact 5.3.2-1, Disturbance and Loss of Prime Fish Habitat. The removal of the existing structures and construction of a rebuilt pier has the potential to cause harm or harassment of LCT should the species be present during construction. However, LCT has not been documented and has a low likelihood of occurrence in the project area. This low likelihood of occurrence is due to the presence of predatory lake trout in Lake Tahoe, lack of spawning habitat, and the distance from KBSRA to the nearest known populations of LCT in the Tahoe Basin (Fallen Leaf Lake, approximately 22 miles southwest of KBSRA). Although LCT is not expected to occur in KBSRA, coordination or consultation with USFWS would be undertaken for this project. Should any consultation result in a Biological Opinion (BO), the project would be subject to the BO's conservation measures that would further reduce the likelihood of harm or harassment to LCT.

The removal of the existing pier and boat ramp, and construction of the eastern pier, would result in both permanent and temporary impacts to fish habitat, as discussed in Impact 5.3.2-1, Disturbance and Loss of Prime Fish Habitat. Fish habitat affected by the proposed pier rebuild project includes feed and cover habitat potentially suitable for LCT. However, as discussed in Impact 5.3.2-1, BMPs would be implemented to minimize or avoid construction-related impacts such as increased turbidity and aquatic invasive species; and, through implementation of Mitigation Measure 5.3.2-1 for the pier rebuild element of Impact 5.3.2-1, the creation/restoration of feed and cover habitat would exceed the area removed for pier pilings and degraded by shading. Also, as discussed in Impact 5.3.2-1, watercraft-related effects on fish habitat would not change substantially.

Under Alternative 2, the potential for project implementation to harm or harass individual LCT is low, temporary impacts to potential LCT habitat would be avoided or minimized, and, through implementation of Mitigation Measure 5.3.2-1 for the pier rebuild element of Impact 5.3.2-1, the amount of created/restored fish habitat would exceed that removed or degraded by the project. Therefore, the potential impact of Alternative 2 on LCT would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

With Alternative 3, the proposed improvements in the upland portion of the project site, and the potential effects on fish habitat as a result of construction and operation, would be similar to those described for Alternative 2, and the same regulatory protections would apply. For the same reasons described for Alternative 2, the Alternative 3 General Plan revision is anticipated to have **no impact** on LCT.

Pier Rebuild Project

Under Alternative 3, the existing pier and boat ramp would be removed and a rebuilt pier would be constructed, and a non-motorized lake access point would be constructed above the high-water line,

as discussed in Impact 5.3.2-1, Disturbance and Loss of Prime Fish Habitat. The removal of the existing structures and construction of the rebuilt pier has the potential to cause harm or harassment of LCT should the species be present during construction; however, as discussed for Alternative 2, the likelihood that LCT would occur during pier removal and construction is low.

The removal of the existing pier and boat ramp, and construction of the central pier, would result in temporary impacts to fish habitat, as discussed in Impact 5.3.2-1. As discussed in Impact 5.3.2-1, BMPs would be implemented to minimize or avoid construction-related impacts such as increased turbidity and aquatic invasive species. Also, as discussed in Impact 5.3.2-1, watercraft-related effects on fish habitat would not change substantially.

Because the potential for Alternative 3 to harm or harass individual LCT is low and temporary impacts to LCT habitat would be minimized or avoided, and recreation-related disturbances on fish habitat or populations over the long term would not change substantially, the potential impact of Alternative 3 on LCT would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

With Alternative 4, proposed improvements in the upland portion of KBSRA, and the potential effects on fish habitat as a result of construction and operation, would be similar to those discussed for Alternative 2, and the same regulatory protections for stormwater management would apply. For the same reasons described for Alternative 2, the Alternative 4 General Plan revision is anticipated to have **no impact** on LCT.

Pier Rebuild Project

Under Alternative 4 the existing pier would be removed and a rebuilt pier would be constructed, and the existing motorized boat ramp would be extended, as discussed in Impact 5.3.2-1, Disturbance and Loss of Prime Fish Habitat. The removal of the existing structures, construction of the rebuilt pier, and construction of the boat ramp extension has the potential to cause harm or harassment of LCT should the species be present during construction; however, for the same reasons discussed for Alternative 2, the likelihood that LCT would occur during pier removal and construction, and construction of the boat ramp extension, is low.

The removal of the existing pier and construction of the western pier, and extending the existing boat ramp, would result in temporary impacts to fish habitat, as discussed in Impact 5.3.2-1. As discussed in Impact 5.3.2-1, BMPs would be implemented to minimize or avoid construction-related impacts such as increased turbidity and aquatic invasive species. Also, as discussed in Impact 5.3.2-1, watercraft-related effects on fish habitat would not change substantially.

Because the potential to harm or harass individual LCT is low and temporary impacts to LCT habitat would be minimized or avoided, and recreation-related disturbances on fish habitat or populations over the long term would not change substantially, the potential impact of Alternative 4 on LCT would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.2-3: Disturbance or loss of jurisdictional waters and other sensitive habitats

Under Alternatives 2, 3, and 4, construction and operation of future projects implemented under the General Plan revision may generate stormwater discharge and erosion that could degrade aquatic habitat including jurisdictional waters (Lake Tahoe) within the project area, through impaired water quality (e.g., sedimentation and other pollution). Additionally, the pier rebuild project would require the removal of 26 existing pier pilings within Lake Tahoe. Rebuilding the pier would require driving 27 to 38 new piles, depending on alternative, to a depth of 6 to 8 feet below the surface of the lakebed. Alternative 4 additionally includes extending the existing motorized boat ramp, which would disturb the lake/shoreline substrate. Existing TRPA, federal, and state policies and regulations protect sensitive habitats and require that compensation for unavoidable project-related losses or degradation of jurisdictional waters and other sensitive habitats is achieved in a manner that results in no net loss. Therefore, through compliance with existing regulations, which is a requirement of project approval and permitting, the disturbance or loss of jurisdictional waters and other sensitive habitats under Alternatives 2, 3, and 4 would be a **less-than-significant** impact.

Alternative 1 would be a continuation of the existing KBSRA General Development Plan and would not stimulate redevelopment projects within KBSRA, modify land uses, or result in an increase in construction activities within the park. Therefore, Alternative 1 would have **no impact** on jurisdictional waters or other sensitive habitats.

The primary sensitive habitats in KBSRA are Lake Tahoe and its lakebed, and prime fish habitat. (Prime fish habitat is addressed separately in Impact 5.3.2-1, Disturbance or loss of prime fish habitat.) Lake Tahoe is subject to jurisdiction by the U.S. Army Corps of Engineers (USACE) and Lahontan RWQCB under Section 404 of federal CWA and the state's Porter-Cologne Act, and subject to regulation by CDFW under Sections 1600 et seq. of the California Fish and Game Code.

Alternative 1: No Project

General Plan Revision

Alternative 1 would be a continuation of the existing KBSRA General Development Plan and would not stimulate redevelopment projects within KBSRA, modify land uses, or result in an increase in construction activities within the park. Therefore, Alternative 1 would have **no impact** on jurisdictional waters or other sensitive habitats.

Pier Rebuild Project

Alternative 1 would not modify or move the existing Kings Beach Pier and would therefore have **no impact** on jurisdictional waters or other sensitive habitats resulting from pier construction or operation.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Under Alternative 2 the proposed General Plan revision would allow for the future development of recreation facilities and administrative and sanitary facilities, and reconfiguring of the existing parking lot in the upland portion of the project site. As described previously for Impact 5.3.2-1, Disturbance or loss of prime fish habitat, and Impact 5.3.2-2, Effects on Lahontan cutthroat trout and other special-status fish, except for the pier rebuild project (discussed separately, below), the proposed development and operations of upland and shorezone features, land use changes, and shifts in visitor use patterns are not expected to disturb aquatic habitat or the lakebed substrate within Lake Tahoe. However, construction and operation of future projects implemented under the General Plan revision

may generate stormwater discharge and erosion that could degrade aquatic habitat including jurisdictional waters (Lake Tahoe) within the project area, through impaired water quality (e.g., sedimentation and other pollution).

Each completed project would be required to comply with the same TRPA stormwater management protections applied to existing facilities, including infiltration BMPs (TRPA Code Section 60.4.6) and control of pollutant sources. Therefore, with the exception of the pier rebuild, which is evaluated separately, operation of the new and modified facilities proposed by the Alternative 2 General Plan revision would not adversely affect waters of the U.S. or other sensitive habitats.

Although construction activities have the potential to adversely affect water quality and sensitive aquatic habitats, all projects would be required to comply with stringent TRPA and Lahontan RWQCB water quality protections. Temporary construction BMPs would be required through existing regulations, such as Chapter 33 of the TRPA Code of Ordinances. Additionally, the General Plan revision includes Guideline RES 7.1 to meet or exceed TRPA's stormwater management requirements for construction or redevelopment of facilities (see Chapter 4, The Plan).

Because regulatory protections are in place to minimize erosion and transport of sediment and other pollutants, future projects under the General Plan revision would not degrade water quality or sensitive aquatic habitats. Therefore, potential impacts on waters of the U.S. or other sensitive habitats would be **less than significant**.

Pier Rebuild Project

The Alternative 2 pier rebuild project would require the removal of 26 existing pier pilings within Lake Tahoe, which is a jurisdictional water and sensitive habitat. Rebuilding the pier at the eastern location would require driving 27 new piles to a depth of 6 to 8 feet below the surface of the lakebed. The disturbance required for the installation of the piles would be limited to the area of the pile footprint. The total footing area of pilings for the eastern pier and permanent disturbance to the lakebed would be approximately 71 sq. ft. The footing area of pier pilings for the existing Kings Beach Pier, which would be removed under Alternative 2, is also 71 sq. ft. Therefore, full implementation of Alternative 2 would result in no change in total footing area of pilings within Lake Tahoe. The project also includes the creation/restoration of 7,395 square feet of prime fish (feed and cover) habitat, which would temporarily disturb the lakebed.

The disturbance or loss of jurisdictional wetlands and other waters during construction would be minimized, and habitat compensation would be provided to meet the no-net-loss standard, through the CWA Section 404 permitting process. Impacts to riparian, wetland, and other sensitive habitats would also be minimized, avoided, or mitigated, as needed, through the permitting processes required by CWA Section 401 and CDFW Code Section 1600 *et seq.* The proposed creation/restoration of prime fish habitat would also be conducted in coordination with the USFWS, TRPA, USACE, Lahontan RWQCB, and CDFW as part of permitting and would be subject to the terms and conditions of those permits.

For unavoidable losses or degradation of jurisdictional waters of and other sensitive habitats, habitat compensation requirements of the existing regulations and policies must meet a no-net-loss standard. Therefore, through compliance with existing regulations, which is a requirement of project approval and permitting, the disturbance or loss of jurisdictional waters and other sensitive habitats under Alternative 2 would be a **less-than-significant** impact.

Alternative 3: Central Pier Alternative

General Plan Revision

With Alternative 3, the proposed improvements in the upland portion of the project site, and the potential effects on sensitive habitats as a result of construction and operation, would be similar to those described for Alternative 2, and the same regulatory protections would apply. For the same reasons described for Alternative 2, the disturbance or loss of jurisdictional waters and other sensitive habitats under Alternative 3 would be a **less-than-significant** impact.

Pier Rebuild Project

The Alternative 3 pier rebuild project would require the removal of 26 existing pier pilings within Lake Tahoe, which is a jurisdictional water and sensitive habitat. Rebuilding the pier at the central location would require driving 33 new piles to a depth of 6 to 8 feet below the surface of the lakebed. The disturbance required for the installation of the piles would be limited to the area of the pile footprint. The total footing area of pilings for the central pier and permanent disturbance to the lakebed would be approximately 88 sq. ft. (compared to 71 sq. ft. with Alternative 2). The footing area of pier pilings for the existing Kings Beach Pier, which would be removed under Alternative 3, is 71 sq. ft. Therefore, full implementation of Alternative 3 would result in a net increase of 17 sq. ft. in total footing area of pilings within Lake Tahoe (compared to no change with Alternative 2).

The disturbance or loss of jurisdictional wetlands and other waters during construction would be minimized, and habitat compensation would be provided to meet the no-net-loss standard, through the CWA Section 404 permitting process. Impacts to riparian, wetland, and other sensitive habitats would also be minimized, avoided, or mitigated, as needed, through the permitting processes required by CWA Section 401 and CDFW Code Section 1600 *et seq.*

For unavoidable losses or degradation of jurisdictional waters and other sensitive habitats, habitat compensation requirements of the existing regulations and policies must meet a no-net-loss standard. Therefore, through compliance with existing regulations, which is a requirement of project approval and permitting, the disturbance or loss of jurisdictional waters and other sensitive habitats under Alternative 3 would be a **less-than-significant** impact.

Alternative 4: Western Pier Alternative

General Plan Revision

With Alternative 4, the proposed improvements in the upland portion of the project site, and the potential effects on sensitive habitats as a result of construction and operation, would be similar to those described for Alternative 2, and the same regulatory protections would apply. For the same reasons described for Alternative 2, the disturbance or loss of jurisdictional waters and other sensitive habitats under Alternative 4 would be a **less-than-significant** impact.

Pier Rebuild Project

The Alternative 4 pier rebuild project would require the removal of 26 existing pier pilings within Lake Tahoe, which is a jurisdictional water and sensitive habitat. Rebuilding the pier at the western location would require driving 38 new piles to a depth of 6 to 8 feet below the surface of the lakebed. The disturbance required for the installation of the piles would be limited to the area of the pile footprint. The total footing area of pilings for the western pier and permanent disturbance to the lakebed would be approximately 101 sq. ft. (compared to 71 sq. ft. with Alternative 2, and 88 sq. ft. with Alternative 3). The footing area of pier pilings for the existing Kings Beach Pier, which would be removed under Alternative 4, is 71 sq. ft. Therefore, full implementation of Alternative 4 would result in a net increase

of 30 sq. ft. in total footing area of pilings within Lake Tahoe (compared to no change with Alternative 2 and an increase of 17 sq. ft. with Alternative 3). Alternative 4 additionally includes extending the existing motorized boat ramp, which would disturb the lake/shoreline substrate. However, the design of the proposed ramp extension is conceptual and the amount of disturbance has not been quantified.

The disturbance or loss of jurisdictional wetlands and other waters during construction would be minimized, and habitat compensation would be provided to meet the no-net-loss standard, through the CWA Section 404 permitting process. Impacts to riparian, wetland, and other sensitive habitats would also be minimized, avoided, or mitigated, as needed, through the permitting processes required by CWA Section 401 and CDFW Code Section 1600 *et seq.*

For unavoidable losses or degradation of jurisdictional waters of and other sensitive habitats, habitat compensation requirements of the existing regulations and policies must meet a no-net-loss standard. Therefore, through compliance with existing regulations, which is a requirement of project approval and permitting, the disturbance or loss of jurisdictional waters and other sensitive habitats under Alternative 4 would be a **less-than-significant** impact.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.2-4: Disturbance or loss of Tahoe yellow cress

Under Alternatives 2, 3, and 4, construction and operation of the pier rebuild project and future projects implemented under the General Plan revision may directly or indirectly disturb beach habitats suitable for Tahoe yellow cress (TYC). If TYC becomes established on the KBSRA beach in the future, without implementation of adequate TYC protection measures, construction activities and potential increases in beach use associated with the pier rebuild project and other projects implemented under the General Plan revision could potentially result in the disturbance or loss of TYC. However, CSP Standard and Special Project Requirements (Section 4.7) and General Plan guidelines would provide protection and prevent the loss of TYC. These requirements and guidelines require monitoring of the beach area for the presence of TYC and protecting any occurrences with signage, fencing, or other measures as identified in the TYC Conservation Strategy. Because implementation of these measures is required and would identify, protect, and avoid the loss of TYC occurrences if they become established at KBSRA, the potential impact to TYC from the pier rebuild and General Plan revision under Alternatives 2, 3, and 4 would be **less-than-significant**.

Alternative 1 would not result in changes to the General Plan, removal of existing structures, or pier construction. Therefore, Alternative 1 would have **no impact** on TYC or suitable habitat.

Tahoe yellow cress occurs only on the sandy beaches of Lake Tahoe. TYC grows on coarse and sandy soils (often among cobbles or boulders) of active beaches, stream inlets, beach dunes and backshore depressions, generally within a few feet of the water table. This species is designated as a sensitive plant and threshold indicator species by TRPA, and is listed as endangered in California under the California Endangered Species Act (CESA). The distribution and abundance of TYC are closely linked to lake level, with greater abundance and more occurrences present during low lake levels when more beach habitat is available for colonization (Pavlik et al. 2002). The species exhibits a metapopulation dynamic, where populations or clusters of plants at some locations may periodically disappear or decline in number in some years (e.g., in high water years), and TYC may recover or colonize exposed suitable habitats during other periods (Pavlik et al. 2002). The timing and probability of these dynamic extirpation and colonization events depend primarily on lake level and disturbances from recreation or

development, but also on the biophysical characteristics of the sites themselves. The primary anthropogenic disturbances to this species are recreational use of beaches occupied by TYC and potentially development of marinas, boat ramps, and piers, which result in trampling and degradation or loss of habitat.

Potential habitat for TYC is present on the Lake Tahoe beach in KBSRA, although habitat suitability there is considered relatively low due to heavy recreational use (see Conservancy 2016). Suitable habitat for other special-status plant species is not present in KBSRA. Some TYC occurrences have been documented on beaches near KBSRA; however, TYC is not known to occur in KBSRA. The TYC Adaptive Management Working Group (AMWG) conducts/coordinates regular population surveys at known and potential TYC population sites. CSP and the Conservancy are AMWG members and primary partners in implementing the *Conservation Strategy for Tahoe Yellow Cress* (Stanton et al. 2015). TYC surveys were conducted at KBSRA by CSP in 2011, 2016, and 2017, and by the Conservancy in 2015 (Conservancy 2016); and, CSP plans to survey for TYC annually at KBSRA in future years. No TYC plants were found at KBSRA during surveys. However, because TYC exhibits a metapopulation dynamic and occurrences could become established on the KBSRA beach in the future, potential effects of the General Plan revision and the pier rebuild project on TYC are analyzed below.

Alternative 1: No Project

General Plan Revision

Alternative 1 would be a continuation of the existing KBSRA General Development Plan and would not stimulate redevelopment projects within KBSRA, modify land uses, or result in an increase in construction activities within the park. Therefore, Alternative 1 would have **no impact** on TYC or suitable habitat.

Pier Rebuild Project

Alternative 1 would not modify or move the existing Kings Beach Pier and would therefore have **no impact** on TYC or suitable habitat resulting from pier construction or operation.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Under Alternative 2, the proposed General Plan revision would allow for the future development of recreation facilities and administrative and sanitary facilities, and reconfiguring of the existing parking lot in the upland portion of the project site. If TYC becomes established on the KBSRA beach in the future, depending on the specific locations and size of projects in relation to TYC occurrences and suitable habitat, construction-related activities that may occur within or adjacent to beach habitat occupied by TYC could result in the direct removal of TYC plants, or other disturbances through inadvertent trampling, soil disturbance, and dust deposition. Over the long term, the additional recreation capacity and facility improvements may increase the frequency of beachgoers, swimmers, and other recreationists within occupied TYC habitat, which could result in additional trampling, degradation, or loss of existing TYC, and adversely affect current or future TYC habitat suitability.

Subsection 61.3.6 of the TRPA Code states that “all projects or activities that are likely to harm, destroy, or otherwise jeopardize sensitive plants or their habitat, shall fully mitigate their significant adverse effects. Those projects or activities that cannot fully mitigate their significant adverse effects are prohibited.” Additionally, in California, TYC is listed as endangered under CESA; and, any “take” (i.e., removal or loss) of TYC would require authorization by CDFW through a California Fish and Game Code Section 2081 incidental take permit.

Although unlikely, if TYC becomes established at KBSRA in the future, CSP Standard and Special Project Requirements (Section 4.7) and General Plan revision Guidelines RES 3.1, 3.2, and 3.3 would provide protection and prevent the take of TYC. These requirements and guidelines require monitoring of the beach area for the presence of TYC and protecting any occurrences with signage, fencing, or other measures as identified in the TYC Conservation Strategy. Because implementation of these measures would identify, protect, and avoid take of TYC occurrences if they become established at KBSRA, the potential impact to TYC as a result of the General Plan revision would be **less than significant**.

Pier Rebuild Project

Under Alternative 2, the existing pier and boat ramp would be removed and a rebuilt pier would be constructed, as discussed previously. The removal of the existing structures and construction of a rebuilt pier would temporarily and permanently disturb beach habitat in KBSRA. If TYC becomes established on the KBSRA beach in the future, without implementation of adequate TYC protection measures, pier rebuild activities and associated increases in beach use could result in the disturbance or loss of TYC. Depending on the specific locations of TYC occurrences in relation to pier construction and operation, construction-related activities that may occur within or adjacent to beach habitat occupied by TYC could result in the direct removal of TYC plants, or other disturbances through inadvertent trampling, soil disturbance, and dust deposition. Over the long term, the additional recreation capacity provided by the rebuilt pier may increase the frequency of beachgoers, swimmers, and other recreationists within occupied TYC habitat, which could result in additional trampling, degradation, or loss of existing TYC, and adversely affect current or future TYC habitat suitability.

Although unlikely, if TYC becomes established at KBSRA in the future, CSP Standard and Special Project Requirements (Section 4.7) and General Plan revision Guidelines RES 3.1, 3.2, and 3.3 would provide protection and prevent the take of TYC. These requirements and guidelines require monitoring of the beach area for the presence of TYC and protecting any occurrences with signage, fencing, or other measures as identified in the TYC Conservation Strategy. Because implementation of these measures would identify, protect, and avoid take of TYC occurrences if they become established at KBSRA, the potential impact to TYC as a result of the pier rebuild project would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

With Alternative 3, the proposed improvements in the upland portion of the project site, and the potential effects on TYC habitat as a result of construction and operation, would be similar to those described for Alternative 2, and the same CSP Standard and Special Project Requirements (Section 4.7) and General Plan revision guidelines applicable to TYC protection would apply. For the same reasons described for Alternative 2, the potential impact to TYC from the General Plan revision under Alternative 3 would be **less than significant**.

Pier Rebuild Project

With Alternative 3, the potential effects on TYC habitat as a result of construction and operation of the central pier would be similar to those described for Alternative 2, and the same CSP Standard and Special Project Requirements (Section 4.7) and General Plan revision guidelines applicable to TYC protection would apply. For the same reasons described for Alternative 2, the potential impact to TYC from the pier rebuild under Alternative 3 would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

With Alternative 4, the proposed improvements in the upland portion of the project site, and the potential effects on TYC habitat as a result of construction and operation, would be similar to those described for Alternative 2, and the same CSP Standard and Special Project Requirements (Section 4.7) and General Plan revision guidelines applicable to TYC protection would apply. For the same reasons described for Alternative 2, the potential impact to TYC from the General Plan revision under Alternative 4 would be **less than significant**.

Pier Rebuild Project

With Alternative 4, the potential effects on TYC habitat as a result of construction and operation of the western pier would be similar to those described for Alternative 2, and the same CSP Standard and Special Project Requirements (Section 4.7) and General Plan revision guidelines applicable to TYC protection would apply. For the same reasons described for Alternative 2, the potential impact to TYC from the pier rebuild under Alternative 4 would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

The geographic scope of cumulative impacts for biological resources is the Tahoe region. The primary biological resources issues relevant to cumulative impacts, where the project has the potential to contribute to impacts generated by other projects, are effects related to prime fish habitat and jurisdictional waters. Past, present, and foreseeable future activities that have affected or may affect biological resources in the Tahoe region include logging, grazing, fuels management, recreational development and activities, urban and commercial development, and right-of-way maintenance and operation activities. Other projects that may interact with the proposed project on a cumulative basis are listed in Table 5.1-2.

Implementing any of the action alternatives would result in the disturbance of prime fish habitat and jurisdictional waters (Lake Tahoe), as described in Impact 5.3.2-1 and Impact 5.3.2-3. However, no permanent net loss of prime fish habitat or jurisdictional waters would occur with any of the action alternatives. Construction activities under any action alternative would be required to comply with existing TRPA, federal, state, and local regulations and permitting requirements that protect aquatic, riparian, wetland, and other sensitive habitats, and require that compensation for unavoidable project-related losses or degradation of sensitive habitats is achieved in a manner that results in no net loss. Therefore, through compliance with existing regulations, which is a requirement of project approval and permitting, the disturbance or loss of jurisdictional waters and other sensitive habitats under Alternatives 2, 3, and 4 would be a less-than-significant impact. Based on the no net loss standard, the project **would not make a cumulatively considerable contribution** to the overall significant cumulative effect on sensitive habitats in the Tahoe-Truckee Region.

5.3.3 Cultural Resources

This section analyzes and evaluates the potential impacts of the proposed Kings Beach General Plan Revision and Pier Rebuild project on known and unknown cultural resources and tribal cultural resources (TCRs) (the latter as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code [PRC] Section 21074). Paleontological resources are discussed in Section 5.3.4, Geology, Soils, Land Capability, and Coverage. The 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 existing conditions and significant resources related to cultural resources and TCRs are summarized in Section 2.2.3, Cultural Resources and Tribal Cultural Resources, in Chapter 2, Existing Conditions, of this document. A more detailed description of the existing cultural resources conditions at the project site and a summary of pertinent regulations are included in the Resources Inventory and Existing Conditions Report, available on the Kings Beach SRA webpage (www.parks.ca.gov/PlanKBSRA) and at CSP and TRPA offices during normal business hours through consideration of project approval. A brief history of the adjacent North Tahoe Event Center is also included in Section 2.2.3.

As described in Section 2.2.3, in Chapter 2, Existing Conditions, no historic architectural resources were identified on the project site. The stone retaining walls, which could have been built by apprentices of the Stewart Indian School in Carson City, were evaluated and found not eligible for listing in the California Register of Historic Resources (CRHR) or National Register of Historic Places (NRHP). This conclusion is supported by the State Historic Preservation Office (SHPO) in a concurrence letter dated September 16, 2015. As a result, they would not be considered significant for the purposes of CEQA or TRPA. This issue is not discussed further in this section.

Relevant project goals and guidelines are summarized in Section 4.4.4, Interpretation and Education (under the heading Interpretation Goals and Guidelines), in Chapter 4, The Plan. Protection of cultural and tribal cultural resources would also be provided through implementation of the mandatory cultural standard project requirements included in Section 4.7, CSP Standard and Special Project Requirements.

Environmental Impacts and Mitigation Measures

Analysis Methodology

The impact analysis considers the known cultural resource environmental setting in the vicinity, the potential for previously undocumented resources, including human remains, and physical effects (i.e., disturbance, material alteration, destruction) to known and previously undocumented cultural resources that could result from implementation of the project. The analysis is also informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources.

Significance Criteria

Significance criteria for determining impacts to cultural resources and TCRs are summarized below.

CEQA Criteria

Based on Appendix G of the State CEQA Guidelines, impacts to cultural resources and TCRs would be significant if the project would:

- ◆ cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5;

- ◆ disturb any human remains, including those interred outside of dedicated cemeteries; or
- ◆ cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074.

TRPA Criteria

The Archaeological/Historical criteria from the TRPA Initial Environmental Checklist were used to evaluate the cultural resources impacts of the alternatives. Impacts to cultural resources would be significant if the project would:

- ◆ cause an adverse effect to a significant archaeological or historical site, structure, object, or building;
- ◆ cause an adverse effect to a property with any known cultural, historical, and/or archaeological resources, including resources on TRPA or other regulatory official maps or records;
- ◆ cause an adverse effect to a property associated with any historically significant events and/or sites or persons, or with unique cultural values; or
- ◆ Restrict historic or pre-historic religious or sacred uses with the potential impact area.

Environmental Impacts

Impact 5.3.3-1: Disturb unique archaeological resources

Construction and excavation activities associated with the action alternatives could result in sediment disturbance and removal, which can adversely affect archaeological resources. Because Alternatives 2, 3, and 4 would include excavation and other ground-disturbing activities, these alternatives could result in adverse physical effects to known and unknown archaeological resources. However, implementation of mandatory CSP Standard and Special Project Requirements included in the General Plan revision would reduce potentially significant impacts to archaeological resources because these measures would avoid disturbance, disruption, or destruction of archaeological resources in compliance with pertinent laws and regulations. This impact would be **less than significant** for the General Plan revision component of Alternatives 2, 3, and 4.

Although the mandatory CSP Standard and Special Project Requirements included in the General Plan revision would be implemented during construction of the pier rebuild component of Alternatives 2, 3, and 4, construction activities that would disturb the lakebed could result in a **potentially significant** impact on previously unidentified archaeological resources. Implementation of Mitigation Measure 5.3.3-1 would reduce the impact to a **less-than-significant** level for the pier rebuild component of Alternatives 2, 3, and 4.

There would be **no impact** with Alternative 1.

Alternative 1: No Project

General Plan Revision

The existing 1980 General Development Plan would remain unchanged and no upland improvements would be made. Because there would be no improvements with the no project alternative, there would be no construction-related ground disturbance or other activities that could change the significance of a unique archaeological resource; therefore, there would be **no impact**.

Pier Rebuild Project

Because there would be no pier improvements with the no project alternative, there would be no construction-related ground disturbance or other activities that could change the significance of a unique archaeological resource; therefore, there would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The proposed General Plan revision includes upland and shorezone features as described in Section 5.1.2, General Plan Revision and Pier Rebuild Project Alternatives. The primary upland features include: a new sidewalk extending from SR 28 to the pier; two new 10-foot-wide paved beach access ramps; a new 12-foot-wide shared-use path (waterfront promenade), and sand wall; reduced and reconfigured parking; and several new buildings (administrative office, non-motorized boat storage structure, concessionaire building, entry kiosk, and a two-stall comfort station with two changing rooms). The primary shorezone features include: a rebuilt and extended pier; a 10-foot-wide lake access point with removable bollards; and a swim buoy area.

As discussed in Section 2.2.3, Cultural Resources and Tribal Resources, in Chapter 2, Existing Conditions, the archaeological field survey disclosed three isolated finds. Isolates are defined as one or two artifacts occurring by themselves and not associated with an archaeological site. Because they have no historical context, isolates are generally not eligible for listing in the NRHP, CRHR, or by TRPA. Research was also conducted between 1998 and 2013 for CA-PLA-9 (prehistoric campsite) and CA-PLA-128 (quartz quarry with bedrock mortars). These resources are located west and east of the project site, respectively.

Archival research, field survey, and Native American consultation indicate that the area is unlikely to contain unknown heritage resources. Nonetheless, the absence of such resources cannot be definitively concluded. Project construction could encounter previously undiscovered or unrecorded archaeological sites and materials during project-related preconstruction or construction-related ground-disturbing activities. These activities could damage or destroy these archaeological resources.

Because implementation of the features of Alternative 2 described above would involve some level of ground-disturbing activities, the potential exists for previously undiscovered or unrecorded archaeological sites and materials to be damaged or destroyed. The mandatory cultural standard project requirements in Section 4.7, CSP Standard and Special Project Requirements, include pre-construction testing by a District Cultural Resource Specialist or CSP-approved professionally qualified archaeologist to be conducted prior to ground-disturbing activities. Project design and/or implementation would be altered to avoid impacts to archaeological resources that are present. Additionally, the standard project requirements require temporary cessation of work within 150 feet of an archaeological discovery. These standard project requirements would reduce potentially significant impacts to archaeological resources because measures would be implemented in coordination with the appropriate federal, state, and local agency(ies) to avoid, move, record, or otherwise appropriately treat the resource in accordance with pertinent laws and regulations. By avoiding disturbance, disruption, or destruction of archaeological resources, this impact would be reduced to a **less-than-significant** level for Alternative 2.

Pier Rebuild Project

The conceptual design for the Eastern Pier Alternative includes a pier that would extend 488 feet into the lake, 281 feet longer than the existing pier. The landward 213 feet of the pier would be a stationary

fixed section, followed by an 80-foot-long transition gangway ramp, and then a 215-foot-long floating section. The proposed pier would include an estimated 27 pier pilings for the fixed and floating sections.

Similar to the General Plan revision discussed above, previously undiscovered or unrecorded archaeological sites and materials could be encountered during construction-related ground disturbing activities. Construction of the rebuilt pier would be subject to the mandatory cultural standard project requirements in Section 4.7, CSP Standard and Special Project Requirements. These requirements include pre-construction testing by a District Cultural Resource Specialist or CSP-approved professionally qualified archaeologist to be conducted prior to ground-disturbing activities and project design and/or implementation would be altered to avoid impacts to archaeological resources that are present. The standard project requirements also require temporary cessation of work within 150 feet of an archaeological discovery. These standard project requirements would reduce potentially significant impacts to archaeological resources because measures would be implemented to avoid, move, record, or otherwise appropriately treat a resource in accordance with pertinent laws and regulations. However, construction activities that result in ground disturbance in the lakebed, such as pile driving in the lakebed for pier pilings, could damage or destroy previously unidentified archaeological resources in the lakebed. This impact would be **potentially significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

The project site for Alternative 3, the Central Pier Alternative, is the same as Alternative 2. The General Plan revision component of Alternative 3 includes most of the same upland features as Alternative 2, but with some refinements in location or size. Alternative 3 does not include some of the features proposed for Alternative 2, including an on-site administrative office, entry kiosk, or comfort station; and the existing half basketball court would be removed. Alternative 3 would rebuild the pier in the location of the existing pier, and would not include the swim buoy described in Alternative 2.

For the same reasons described above in Alternative 2, construction activities supported by the General Plan revision for Alternative 3 would result in a **less-than-significant** impact to archaeological resources.

Pier Rebuild Project

The conceptual design for the Central Pier Alternative shows the pier extending 601 feet into the lake, 394 feet longer than the existing pier. The landward 212 feet would be a stationary fixed section, followed by an 80-foot-long transition gangway ramp, and then a 329-foot-long floating section. The pier would include an estimated 33 pier pilings for the fixed and floating sections, which would include about an additional 16 feet of footing area relative to the existing pier.

For the same reasons described above in Alternative 2, the pier rebuild component of Alternative 3 would result in a **potentially significant** impact to archaeological resources.

Alternative 4: Western Pier Alternative

General Plan Revision

The project site for Alternative 4, the Western Pier Alternative, is the same as Alternative 2. The General Plan revision component of Alternative 4 includes most of the same upland features as Alternative 2, but with some refinements in location or size. Alternative 4 does not include the non-motorized boat storage structure associated with Alternative 2. The primary shorezone features

associated with Alternative 4 include the rebuilt pier on the western side of the park and an extended motorized boat ramp. Alternative 4 would not include an additional lake access point, nor would it include a swim buoy area.

For the same reasons described above in Alternative 2, construction that could occur with the General Plan revision for Alternative 4 would result in a **less-than-significant** impact to archaeological resources.

Pier Rebuild Project

The conceptual design for the western pier alternative shows the pier extending 704 feet into the lake, 497 feet longer than the existing pier. The landward 320 feet of the pier would be a stationary fixed section, followed by an 80-foot-long transition gangway ramp, and then a 329-foot-long floating section. The proposed pier would include an estimated 38 pier pilings for the fixed and floating sections, which would include an additional 30 feet of footing area relative to the existing pier.

For the same reasons described above in Alternative 2, the pier rebuild component of Alternative 4 would result in a **potentially significant** impact to archaeological resources.

Mitigation Measures

Mitigation Measure 5.3.3-1: Protect previously unidentified archaeological resources in the lakebed of Lake Tahoe

This mitigation measure would apply to the pier rebuild component of Alternatives 2, 3, and 4.

Before activities could begin on individual components lakeward of the highwater line, a District Cultural Resource Specialist or a CSP-approved, professionally qualified archaeologist will complete a pre-construction underwater archaeological survey to identify, evaluate, and protect significant submerged cultural resources.

If potentially significant cultural resources are discovered by the Cultural Resource Specialist or archaeologist, appropriate protection or treatment measures shall be developed in consultation with CSP, TRPA, and other appropriate agencies and interested parties, such as the Washoe Tribe. The Cultural Resource Specialist or archaeologist shall follow accepted professional standards in recording any find including submittal of the standard Department of Parks and Recreation (DPR) Primary Record forms (DPR 523 Forms) and location information to the California Historical Resources Information Center office (North Central Information Center). The Cultural Resource Specialist or archaeologist shall also evaluate such resources for significance per California Register of Historical Resources eligibility criteria (PRC Section 5024.1; Title 14 CCR Section 4852) for California projects. CSP shall follow recommendations identified in the survey report, which may include designing and implementing a Worker Environmental Awareness Program, construction monitoring by a qualified archaeologist, avoidance of sites, and preservation in place. Findings of the underwater archaeological surveys will be provided to the Washoe Tribe.

Significance after Mitigation

Implementation of Mitigation Measure 5.3.3-1 would reduce potentially significant impacts on archaeological resources from implementation of the pier rebuild component of Alternatives 2, 3, and 4 because appropriate measures would be taken to protect any identified archaeological resources in the lakebed. A District Cultural Resource Specialist or CSP-approved, professionally qualified archaeologist would evaluate any potential resources, properly document those resources, and, if necessary, measures would be developed and implemented in coordination with the appropriate regional, state, and/or local agency(ies) to avoid, move, record, or otherwise treat the resource appropriately, in accordance with pertinent laws and regulations. By providing an opportunity to avoid

disturbance, disruption, or destruction of archaeological resources, Impact 5.3.3-1 for the pier rebuild component of Alternatives 2, 3, and 4 would be reduced to a **less-than-significant** level.

Impact 5.3.3-2: Disturbance of human remains

It is possible that previously unknown human remains could be discovered when soils are disturbed during construction associated with the General Plan Revision and Pier Rebuild Project action alternatives. However, compliance with California Health and Safety Code Sections 7050.5 and 7052 and California Public Resources Code Section 5097 and implementation of mandatory CSP Standard and Special Project Requirements included in the General Plan revision would reduce potentially significant impacts to human remains. This impact would be **less-than-significant** for The General Plan revision component of Alternatives 2, 3, and 4.

Although the mandatory CSP Standard and Special Project Requirements included in the General Plan revision would be implemented during construction of the pier rebuild component of Alternatives 2, 3, and 4, construction activities that would disturb the lakebed could result in a **potentially significant** impact on human remains. Implementation of Mitigation Measure 5.3.3-2 would reduce the impact to a **less-than-significant** level for the pier rebuild component of Alternatives 2, 3, and 4.

There would be **no impact** with Alternative 1.

Alternative 1: No Project

General Plan Revision

The existing 1980 General Development Plan would remain unchanged and no upland or pier improvements would be made. Because there would be no improvements with the no project alternative, there would be no construction-related ground disturbance and, therefore, there would be **no impact** to human remains.

Pier Rebuild Project

Because there would be no pier improvements with the no project alternative, there would be no construction-related ground disturbance and, therefore, **no impact** to human remains.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The components of the General Plan revision with Alternative 2 include upland and shorezone features as described in Section 5.1.2, General Plan Revision and Pier Rebuild Project Alternatives, and in Impact 5.3.3-1.

The location of grave sites and Native American remains can occur outside of dedicated cemeteries and burial sites. Ground-disturbing construction activities could uncover previously unknown human remains, which could be archaeologically or culturally significant. The proposed project would allow for soil disturbance related to the new sidewalks and paths, parking lot alterations, and construction of new buildings. Therefore, it is possible that previously undiscovered human remains could be discovered when soils are disturbed.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code

Sections 7050.5 and 7052 and California PRC Section 5097. The mandatory archaeology standard project requirements in Section 4.7, CSP Standard and Special Project Requirements, are consistent with California Health and Safety Code Sections 7050.5 et seq. and California PRC Section 5097. These mandatory cultural standard project requirements require that if human remains are discovered during any construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the project applicant shall notify the Placer County coroner and the NAHC immediately, according to Section 5097.98 of the State PRC and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, the archaeologist, and the NAHC-designated Most Likely Descendant (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to prevent disturbance of additional human interments. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.94. Work will not resume in the area of the find until proper disposition is complete (PRC Section 5097.98).

Compliance with California Health and Safety Code Sections 7050.5 and 7052 and California PRC Section 5097 through implementation of the mandatory cultural standard project requirements identified in Section 4.7 would avoid or minimize the disturbance of human remains and appropriately treat any remains that are discovered. Therefore, this impact would be **less than significant**.

[Pier Rebuild Project](#)

The conceptual design for the eastern pier alternative includes a pier that would extend 488 feet into the lake, 281 feet longer than the existing pier as described in Impact 5.3.3-1.

Ground-disturbing construction activities could uncover previously unknown human remains, which could be archaeologically or culturally significant. The proposed project would allow for soil disturbance related to the additional pier pilings. Therefore, it is possible that previously undiscovered human remains could be discovered when soils are disturbed.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Sections 7050.5 and 7052 and California PRC Section 5097. Construction of the rebuilt pier would be subject to the mandatory archaeology standard project requirements in Section 4.7, CSP Standard and Special Project Requirements. These require that if human remains are discovered during any construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the project applicant shall notify the Placer County coroner and the NAHC immediately. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, the archaeologist, and the NAHC-designated MLD shall determine the ultimate treatment and disposition of the remains and take appropriate steps to prevent disturbance of additional human interments. Work will not resume in the area of the find until proper disposition is complete (PRC Section 5097.98).

These standard project requirements and compliance with California Health and Safety Code Sections 7050.5 and 7052 and California PRC Section 5097 would reduce potentially significant impacts to disturbance of human remains because measures would be implemented to avoid, move, record, or otherwise appropriately treat the remains and conduct the proper notifications in accordance with

pertinent laws and regulations. However, construction activities that result in ground disturbance in the lakebed, such as pile driving in the lakebed for pier pilings, could damage or destroy previously unidentified human remains in the lakebed. This impact would be **potentially significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

The project site for Alternative 3, the central pier alternative, is the same as Alternative 2. The General Plan revision component of Alternative 3 includes most of the same upland features as Alternative 2, but with some refinements in location or size, as summarized in Impact 5.3.3-1.

For the same reasons described above in Alternative 2, construction that could occur with the General Plan revision with Alternative 3 would comply with California Health and Safety Code Sections 7050.5 and 7052 and California PRC Section 5097 and implement mandatory archaeology standard project requirements that would avoid or minimize the disturbance of human remains and appropriately treat any remains that are discovered. Therefore, this impact would be **less than significant**.

Pier Rebuild Project

The conceptual design for the central pier alternative includes a pier that would extend 601 feet into the lake, 394 feet longer than the existing pier, as summarized in Impact 5.3.3-1.

The nature and magnitude of construction activities for the pier would be the same as Alternative 2, but in a central, rather than eastern, location; therefore, Alternative 3 would result in physical activities and ground disturbance with the same potential to disturb human remains. For the same reasons described above in Alternative 2, the pier rebuild component of Alternative 3 would result in a **potentially significant** impact to archaeological resources.

Alternative 4: Western Pier Alternative

General Plan Revision

The project site for Alternative 4, the western pier alternative, is the same as Alternative 2. The General Plan revision component of Alternative 4 includes most of the same upland features as Alternative 2, but with some refinements in location or size, as summarized in Impact 5.3.3-1.

For the same reasons described above in Alternative 2, construction that could occur with the General Plan revision with Alternative 4 would comply with California Health and Safety Code Sections 7050.5 and 7052 and California Public Resources Code Section 5097 and implement mandatory archaeology standard project requirements that would avoid or minimize the disturbance of human remains and appropriately treat any remains that are discovered. Therefore, this impact would be **less than significant**.

Pier Rebuild Project

The conceptual design for the western pier alternative includes a pier that would extend 704 feet into the lake, 497 feet longer than the existing pier, as summarized in Impact 5.3.3-1, and would extend the motorized boat ramp.

The nature and magnitude of construction activities for the pier would be the same as Alternative 2, but in a western, rather than eastern, location; therefore, Alternative 4 would result in physical activities and ground disturbance with the same potential to disturb human remains. The boat ramp extension would be modest and could result in similar potential to disturb human remains as those described above for Alternative 2 and the General Plan Revision. For the same reasons described above in Alternative 2,

the pier rebuild component of Alternative 4 would result in a **potentially significant** impact to archaeological resources.

Mitigation Measures

Mitigation Measure 5.3.3-2: Protect previously unidentified human remains in the lakebed of Lake Tahoe

This mitigation measure would apply to the pier rebuild component of Alternatives 2, 3, and 4.

Before activities could begin on individual components lakeward of the highwater line, a District Cultural Resource Specialist or a CSP approved, professionally qualified archaeologist will complete a pre-construction underwater archaeological survey to identify, evaluate, and protect significant submerged cultural resources.

If human remains are discovered by the Cultural Resource Specialist or archaeologist, work will cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate CSP personnel. Any human remains and/or funerary objects will be left in place or returned to the point of discovery and covered with soil. The CSP Chief Ranger (or authorized representative) will notify the County Coroner, in accordance with Section 7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC) (or Tribal Representative). If a Native American monitor is on-site at the time of the discovery, the monitor will be responsible for notifying the appropriate Native American authorities. The local County Coroner will make the determination of whether the human bone is of Native American origin.

If the Coroner determines the remains represent Native American interment, the NAHC in Sacramento and/or tribe will be consulted to identify the most likely descendants and appropriate disposition of the remains. Work will not resume in the area of the find until proper disposition is complete (PRC Section 5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination.

If it is determined the find indicates a sacred or religious site, the site will be avoided to the maximum extent practicable. Formal consultation with the State Historic Preservation Office and review by the Native American Heritage Commission/Tribal Cultural representatives will occur as necessary to define additional site mitigation or future restrictions. Findings of the underwater survey will be provided to the Washoe Tribe.

Significance after Mitigation

Implementation of Mitigation Measure 5.3.3-2 would reduce potentially significant impacts on human remains from implementation of the pier rebuild component of Alternatives 2, 3, and 4 because appropriate measures would be taken to protect any identified human remains in the lakebed. A District Cultural Resource Specialist or CSP approved, professionally qualified archaeologist would reduce potentially significant impacts to disturbance of human remains because measures would be implemented to avoid, move, record, or otherwise appropriately treat the remains and conduct the proper notifications in accordance with pertinent laws and regulations. By providing an opportunity to avoid disturbance, disruption, or destruction of human remains, Impact 5.3.3-2 for the pier rebuild component of Alternatives 2, 3, and 4 would be reduced to a **less-than-significant** level.

Impact 5.3.3-3: Affect unique ethnic cultural values or restrict sacred uses, or change the significance of a tribal cultural resource

Consultation with the Washoe Tribe of Nevada and California has resulted in no resources identified as TCRs as described under AB 52. Because no resources meet the criteria for a TCR under PRC Section 21074, there would be **no impact** for Alternative 1 and the General Plan revision component of Alternatives 2, 3, and 4.

Although there is no known part of the project site meeting any of the PRC 5024.1(c) criteria, construction activities that result in ground disturbance in the lakebed could damage or destroy previously unidentified TCRs in the lakebed. Therefore, the pier rebuild component of Alternatives 2, 3, and 4 would have a **potentially significant** impact to TCRs. Implementation of Mitigation Measure 5.3.3-3 would reduce the impact to a **less-than-significant** level for the pier rebuild component of Alternatives 2, 3, and 4.

In compliance with AB 52, CSP sent letters inviting consultation to the Shingle Springs Band of Miwok Indians (Nicholas Fonseca, Chairperson); the T'si-Akim Maidu (Don Ryberg, Chairperson and Grayson Coney, Cultural Director); the United Auburn Indian Community of the Auburn Rancheria (Gene Whitehouse, Chairperson); and the Washoe Tribe of Nevada and California (Darrel Cruz, Director of the Tribal Historic Preservation Office) on February 28, 2016.

The only response received by CSP was from Mr. Cruz representing the Washoe Tribe. Mr. Cruz did not identify any TCRs, but did request an underwater archaeological survey to identify subsurface cultural resources (please see Alternative 2 under Impact 5.3.3-1 for this discussion).

Alternative 1: No Project

General Plan Revision

The existing 1980 General Development Plan would remain unchanged and no upland or pier improvements would be made. Because there would be no improvements under the no action alternative, there would be no construction-related ground disturbance or other activities that could change the significance of a TCR; therefore, there is **no impact** to TCRs.

Pier Rebuild Project

Because there would be no improvements under the no project alternative, there would be no construction-related ground disturbance or other activities that could change the significance of a TCR; therefore, there is **no impact** to TCRs.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The components of the General Plan revision under Alternative 2 include upland and shorezone features as described in Section 5.1.2, General Plan Revision and Pier Rebuild Project Alternatives, and in Impact 5.3.3-1.

In compliance with AB 52, CSP sent letters to four Native American Tribes; only one response was received, from the Washoe Tribe of Nevada and California. The response did not identify any tribal concerns or TCRs on the project site. The project area is in Washoe territory; however, it is not known to have any special tribal use. For these reasons, no part of the project site meets any of the

PRC 5024.1(c) criteria listed above. Therefore, the project would have **no impact** to TCRs as defined in PRC Section 21074.

Pier Rebuild Project

The components of the eastern pier alternative for Alternative 2 are described in Section 5.1.2, General Plan Revision and Pier Rebuild Project Alternatives, and in Impact 5.3.3-1.

There is currently no known part of the project site meeting any of the PRC 5024.1(c) criteria. However, construction activities that result in ground disturbance in the lakebed, such as pile driving in the lakebed for pier pilings, could damage or destroy previously unidentified TCRs in the lakebed. Additionally, the Washoe Tribe has requested an underwater archaeological survey to identify subsurface cultural resources. Therefore, the pier rebuild component of Alternative 2 would have a **potentially significant** impact to TCRs as defined in PRC Section 21074.

Alternative 3: Central Pier Alternative

General Plan Revision

The project site for Alternative 3, the central pier alternative, is the same as Alternative 2. The General Plan revision component of Alternative 3 includes most of the same upland features as Alternative 2, but with some refinements in location or size, as summarized in Impact 5.3.3-1.

For the same reasons described above in Alternative 2, construction that could occur with the General Plan revision with Alternative 3 would result in **no impact** to TCRs.

Pier Rebuild Project

The conceptual design for the central pier alternative would extend 601 feet into the lake, 394 feet longer than the existing pier, as summarized in Impact 5.3.3-1.

For the same reasons described above in Alternative 2, construction of the pier rebuild component of Alternative 3 would result in a **potentially significant** impact on TCRs.

Alternative 4: Western Pier Alternative

General Plan Revision

The project site for Alternative 4, the western pier alternative, is the same as Alternative 2. The General Plan revision component of Alternative 4 includes most of the same upland features as Alternative 2, but with some refinements in location or size, as summarized in Impact 5.3.3-1.

For the same reasons described above in Alternative 2, construction that could occur with the General Plan revision with Alternative 4 would result in **no impact** on TCRs.

Pier Rebuild Project

The conceptual design for the western pier alternative would extend 704 feet into the lake, 497 feet longer than the existing pier, as summarized in Impact 5.3.3-1. 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.

For the same reasons described above in Alternative 2, construction of the pier rebuild component of Alternative 4 would result in a **potentially significant** impact on TCRs.

Mitigation Measures

Mitigation Measure 5.3.3-3: Protect previously unidentified tribal cultural resources in the lakebed of Lake Tahoe

This mitigation measure would apply to the pier rebuild component of Alternatives 2, 3, and 4.

With respect to performing a pre-construction underwater archaeological survey to identify, evaluate, and protect significant submerged tribal cultural resources, implement Mitigation Measure 5.3.3-1 described above.

Significance after Mitigation

Implementation of Mitigation Measure 5.3.3-3 would reduce potentially significant impacts on archaeological resources from implementation of the pier rebuild component of Alternatives 2, 3, and 4 because appropriate measures would be taken to protect any identified archaeological resources, including tribal cultural resources, in the lakebed. The findings of the underwater archaeological surveys will be provided to the Washoe Tribe. A District Cultural Resource Specialist or CSP-approved, professionally qualified archaeologist would evaluate any potential resources, properly document those resources, and, if necessary, measures would be developed and implemented in coordination with the appropriate regional, state, and/or local agency(ies) and the Washoe Tribe to avoid, move, record, or otherwise treat the resource appropriately, in accordance with pertinent laws and regulations. By providing an opportunity to identify and avoid disturbance, disruption, or destruction of tribal cultural resources, Impact 5.3.3-3 for the pier rebuild component of Alternatives 2, 3, and 4 would be reduced to a **less-than-significant** level.

Cumulative Impacts

The cumulative context for archaeological resources is the Truckee-Tahoe Basin portion of the Washoe territory. Because of the likelihood that any undiscovered or unknown human remains would be Native American in origin, the cumulative context for human remains is also the Washoe territory.

Based on previous cultural resource surveys and research, the Truckee-Tahoe Basin has been inhabited by prehistoric and historic people for thousands of years. Archaeological resources, including sacred and religious sites, are unique and non-renewable. For this reason, all detrimental effects to these resources erode a dwindling resource base. Destruction of any single cultural site or resource affects all other sites in the region because the sites as a group make up the context of the cultural setting. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on a single project or parcel boundary.

Numerous laws and regulations provide guidance as to how heritage and cultural resources should be protected, managed, and mitigated in regard to projects on federal, state, county, city, or private land in California. Because these laws, regulations, and policies have been in effect (many for over 30 years), the protection and preservation of significant heritage and cultural resources is the typical outcome for most projects. However, instances do occur where full protection of a resource is not feasible, and there has been a net loss or degradation of heritage and cultural resources in the project region. In addition, prior to adoption of current laws, regulations, and policies to protect heritage and cultural resources, little protection was provided to these resources and loss or damage to prehistoric and historic resources was more common.

Project construction related to the action alternatives could encounter previously undiscovered or unrecorded archaeological sites and materials or human remains during project-related preconstruction or construction-related ground disturbing activities. These activities could damage or destroy these resources. However, project goals and guidelines and mandatory standard and special project requirements (Section 4.7) pertaining to cultural resources and tribal cultural resources would reduce potentially significant impacts to archaeological resources because measures would be developed in coordination with the appropriate federal, state, and/or local agency(ies) to avoid, move, record, or otherwise treat the resource appropriately, in accordance with pertinent laws and regulations. Compliance with California Health and Safety Code Sections 7050.5 and 7052 and California PRC Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Implementation of Mitigation Measures 5.3.3-1, 5.3.3-2, and 5.3.3-3 would also reduce the pier component's contribution to cumulative effects on previously undiscovered archaeological resources and human remains. By avoiding disturbance, disruption, or destruction of cultural resources, implementation of the action alternatives **would not considerably contribute to, or result in, a significant cumulative effect.**

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5.3.4 Geology, Soils, Land Capability, and Coverage

This section contains an evaluation of the potential impacts to geology, soils, land capability, and coverage associated with the implementation of the Kings Beach SRA General Plan Revision and Pier Rebuild Project alternatives. The analysis evaluates geologic conditions, relevant soil properties, and associated elements of land capability and coverage. The potential for the project to change siltation or deposition patterns in Lake Tahoe is discussed in Section 5.3.7, Hydrology and Water Quality. The 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 existing conditions and significant resource values related to Geology, Soils, Land Capability, and Coverage are summarized in Section 2.2.1, Physical Resources, in Chapter 2, Existing Conditions, of this document. A more detailed description of the existing soils and geologic conditions at the project site and a summary of pertinent regulations are included in the Resources Inventory and Existing Conditions Report, available on the Kings Beach SRA 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 in Section 4.4.1, Resource Management and Protection, in Chapter 4, The Plan.

This project site is not at risk from expansive soils, landslides, mud slides, or avalanche; it does not cross a known earthquake fault, and the project would not increase the exposure of people or structures to other geologic hazards such as seismically induced ground failure, tsunami, or seiche. Additionally, TRPA regulations do not allow for septic systems or alternative waste disposal systems within the Lake Tahoe Basin. Therefore, these issues are dismissed from further consideration.

The volcanic and glacial history of the Lake Tahoe Basin does not allow for extensive preservation of paleontological resources. Undisturbed or buried lake sediments may contain invertebrate marine fossils, however because these are commonly found and the fossil record well documented, these fossils would not be considered unique paleontological resources. A search of the U.C. Berkeley Museum of Paleontology specimen database found three aquatic snail fossils on the south shore of Lake Tahoe, and one plant fossil in the north shore. (U.C. Berkeley Museum of Paleontology [UCMP] 2017). The project contains active (continuously disturbed) lake sediments and volcanic mudflows (Saucedo 2005), which are unlikely to contain fossils of any kind. Buried lake sediments below the volcanic mudflows could contain common invertebrate fossils, however as discussed above, these would not be considered a unique paleontological resource. For these reasons, impacts to paleontological resources are dismissed from further consideration.

Environmental Impacts and Mitigation Measures

Analysis Methodology

The evaluation of land coverage changes and potential geologic and soil impacts is based on a review of documents pertaining to the project study area, including California Geologic Survey (CGS) and U.S. Geologic Survey (USGS) technical guides, the NRCS 2007 Soil Survey, TRPA regulations and planning documents, environmental documents, existing TRPA Land Coverage and Land Capability documentation, background reports prepared for plans and projects in the vicinity, and published and unpublished geologic literature. The information obtained from these sources was reviewed and summarized to understand existing conditions and to identify potential environmental effects, based on the significance criteria identified below. In determining the level of significance, the analysis

assumes that the proposed project would comply with relevant, federal, state, and local laws, regulations, and ordinances.

Potential soil and geologic effects associated with the project alternatives can be classified as temporary or permanent. Temporary impacts generally include effects associated with construction activities, such as ground disturbance and short-term increases in turbidity. Permanent impacts would be associated with proposed facilities, such as new impervious land coverage and deep soil and geologic disturbance.

Significance Criteria

Significance criteria for determining impacts to geology, soils, land capability, and coverage are summarized below.

CEQA Criteria

Based on Appendix G of the State CEQA Guidelines, impacts to geology, soils, land capability, and coverage would be significant if the project would:

- ◆ result in substantial soil erosion or the loss of topsoil, or
- ◆ expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides.

TRPA Criteria

The TRPA Initial Environmental Checklist was used to develop significance criteria to evaluate the geology, soils, land capability, and coverage impacts of the alternatives. Impacts would be significant if the project would:

- ◆ compact or cover soil with impervious surfaces beyond the limits allowed by the land capability districts,
- ◆ change the topography or ground relief features in a manner inconsistent with the natural surrounding conditions, or
- ◆ substantially change undisturbed soil or native geologic substructures.

Environmental Impacts

Impact 5.3.4-1: Create compaction or land coverage beyond TRPA limits

Land coverage at KBSRA currently exceeds TRPA limits, however coverage mitigation is completed in accordance with TRPA Code Section 30.6 as new projects move through the TRPA permitting process. Under the 1980 General Plan currently in force, no future projects would be allowed to create compaction or land coverage beyond TRPA limits. Therefore, there would be **no** impact with regard to coverage from Alternative 1 and the site would remain overcovered. The action alternatives would all comply with TRPA land coverage regulations and would reduce total coverage at KBSRA relative to existing conditions. The shared-use path in Alternatives 2, 3, and 4 would be exempt from land coverage calculations (TRPA Code Section 30.4.6.D.3). Alternative 2 would create the largest overall reduction in regulated coverage, and Alternative 3 would result in the smallest reduction. Because all alternatives would comply with coverage requirements, implementation of Alternatives 2, 3, and 4 would result in a **less-than-significant** impact on land coverage.

For coverage purposes, the land-based portions of the existing pier, the proposed eastern pier, and other pier alternatives are included in the coverage analysis for the General Plan revision. Land coverage is not calculated below the high-water mark of Lake Tahoe. Prior to approval of the project, coverage calculations for the pier rebuild project would be submitted to TRPA for review consistent with the CSP Special Project Requirements (Section 4.7, CSP Standard and Special Project Requirements); if the project is approved and the EIR/EIS is certified, a TRPA permit would be issued at that time. For this reason, the pier rebuild component of Alternatives 2, 3, and 4 would have **less-than-significant** impact relative to the creation or compaction of land coverage as it is managed by TRPA. The Alternative I is the no project alternative and would have **no impact** on land coverage.

Alternative 1: No Project

General Plan Revision

Alternative I is the no-project alternative. Land coverage within KBSRA currently exceeds the maximum allowable coverage in all land capability districts (LCDs). Some of the excess coverage has already been mitigated as part of past development at the park, including the existing restroom buildings. The exact amount of excess coverage (taking into consideration the legally existing land coverage and previously mitigated excess coverage) would be determined during the TRPA permitting process. Under the existing General Plan, future projects would not be able to add additional coverage and may be required to mitigate excess coverage consistent with TRPA Code Section 30.6. For reference, Table 5.3.4-1 provides an overview of coverage for Alternative I and a comparison of excess coverage with other alternatives.

Land Coverage District	Project Area (sf)	Base Allowable Land Coverage (%)	Base Allowable Coverage (sf)	Maximum Allowable Transferred Coverage (sf)	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
					Existing Coverage (sf)	Excess Coverage (existing minus max sf)	Proposed Coverage (sf)	Excess Coverage (proposed minus max sf)	Proposed Coverage (sf)	Excess Coverage (proposed minus max sf)	Proposed Coverage (sf)	Excess Coverage (proposed minus max sf)
1b	136,764	1%	1,368	1,368	4,660	3,292	3,912	2,544	3,985	2,617	3,761	2,393
3	13,376	5%	669	669	2,080	1,411	1,064	395	868	199	650	-19
5 ¹	291,350	25%	72,837	148,756	151,431	2,675	126,602	-22,154	142,748	-6,008	133,174	-15,582
Total	441,490	-	74,874	150,793	158,171	7,378	131,578	-19,215	147,601	-3,192	137,585	-13,208

¹ Approximately 15,405 square feet (sf) of the project site is within the Kings Beach Town Center and located more than 300 feet from Lake Tahoe and would therefore have a maximum allowable coverage of 70 percent (TRPA Code Section 30.4.B.2.1).

Source: KB Foster 2002, JVA Consulting Engineers 1994, DBW 2003, compiled by Ascent in 2017

Alternative I is a continuation of existing conditions under the current General Plan. Although land coverage currently exceeds TRPA limits, coverage mitigation has been implemented through individual projects on the site. Any future projects at KBSRA would be required to mitigate the excess coverage in compliance with TRPA Code. Therefore, Alternative I would not result in the creation of new land coverage beyond TRPA limits and there would be **no impact**.

Pier Rebuild Project

For coverage purposes, the land-based portions of the existing pier is included in the coverage analysis for the existing General Plan revision. Land coverage is not calculated below the high-water mark of Lake Tahoe. For this reason, Alternative I, the no project alternative, would have **no impact** related to the creation of compaction or land coverage.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

When compared to Alternative 1 (existing conditions), the Alternative 2 General Plan revision would decrease regulated land coverage in LCD 1b by 748 square feet and by 1,016 square feet in LCD 3. In LCD 5, which covers most of the project site, Alternative 2 would reduce coverage by 24,829 square feet when compared to Alternative 1, or existing conditions. A small amount of the proposed coverage (such as additional width in restrooms and wheelchair accessible ramps) would be created by compliance with the Americans with Disabilities Act (ADA). As described in TRPA Code Section 30.4.6.C, impervious areas created to meet ADA standards are not subject to TRPA land coverage calculations (with the exception of coverage associated with vehicular use, such as parking spaces). During final design, ADA compliance areas would be identified and coverage numbers would be adjusted accordingly.

In addition to regulated coverage, Alternative 2 would include the construction of a non-motorized public trail (i.e., the shared-use path or waterfront promenade). This path is part of the implementation element of the Placer County Tahoe Basin Area Plan and is a component of the planned shared-use path network connecting the North Tahoe communities. In accordance with TRPA Code Section 30.4.6.D.3, non-motorized public trails are exempt from the calculation of land coverage, subject to siting and design requirements. Specifically, these design requirements call for minimization of disturbance to low capability lands (LCDs 1a, 1b, 1c, 2, and 3). KBSRA lies between the Kings Beach urban core and Lake Tahoe. The high capability land within the park is dedicated to parking areas, facilities, and stormwater infiltration areas. The proposed path cannot avoid all disturbance in low capability lands without affecting parking spaces, recreation or administrative facilities, or stormwater management infrastructure. Furthermore, the proposed path would be a combination promenade and sand wall which would assist with sand management in the park. For the sand wall to be effective, it must be located where it can intercept windblown sand before it reaches the parking areas and becomes unusable. Finally, the proposed path alignment would minimize disturbance to low capability lands by incorporating existing paved areas where possible. This would reduce the amount new impervious surface by more than 25 percent. The area of new impervious surface created by the proposed path is shown in Table 5.3.4-2, Alternative 2 Land Coverage Detail.

Table 5.3.4-2 Alternative 2 Land Coverage Detail

LCD	Alternative 1 Existing Coverage (sf)	Alternative 2 with Traditional Lawn Area (sf)			Alternative 2 with Artificial Turf (sf)		
		Proposed Impervious Area	New Impervious Area Exempt from Coverage (Non-motorized Path)	Net Change in Coverage (Compared to Alternative 1) ¹	Proposed Impervious Area	New Impervious Area Exempt from Coverage (Non-motorized Path)	Net Change in Coverage (Compared to Alternative 1)
1b	4,660	15,998	12,086	-748	16,130	12,086	-616
3	2,080	2,122	1,058	-1,016	2,122	1,058	-1,016
5	151,431	132,480	5878	-24,829	147,153	5878	-10,156
Total	158,172	150,600	19,022	-26,593	165,405	19,022	-11,788

¹ Excludes non-motorized path area, which is exempt from coverage calculations per TRPA Code Section 30.4.6.D.3.

Source: Compiled by Ascent Environmental in 2017

Alternative 2 also includes a lawn area, which would include either traditional or artificial turf. Traditional turf would be exempt from TRPA coverage regulations. If artificial turf were implemented, the lawn area would be considered land coverage. Compared to traditional turf, this would increase

the land coverage in LCD 1b by 131 square feet and in LCD 5 by 14,648 square feet. Overall, compared with Alternative 1, Alternative 2 with the use of artificial turf would reduce coverage by 616 square feet in LCD 1b, by 1,016 square feet in LCD 3, and by 10,156 square feet in LCD 5. Table 5.3.4-2 provides coverage reduction details for Alternative 2.

With either turf option, the proposed land coverage in LCD 5 for Alternative 2 would be below the maximum allowed transferred coverage and would be a reduction in coverage compared to existing conditions. Because of the coverage exemption for non-motorized paths, regulated coverage would also decrease in LCDs 1b and 3. During the TRPA permit review process, the project would be reviewed to determine whether land coverage mitigation fees have been paid for the excess coverage on-site and what additional fees, if any, are required.

Implementation of Alternative 2 would result in a decrease in TRPA-regulated coverage within all LCDs on the project site. The project would meet all TRPA requirements for coverage management, resource protection, and land coverage mitigation. For these reasons, Alternative 2 would have a **less-than-significant** impact related to the creation of compaction or land coverage.

Pier Rebuild Project

For coverage purposes, the land-based portions of the existing and the proposed eastern pier are included in the coverage analysis for the General Plan revision. Land coverage is not calculated below the high-water mark of Lake Tahoe. Prior to approval of the project, coverage calculations for the pier rebuild project would be submitted to TRPA for review. If the project is approved and the EIR/EIS is certified, a TRPA permit would be issued at that time. For these reasons, the Alternative 2 pier rebuild project would have a **less-than-significant** impact related to the creation of compaction or land coverage as it is managed by TRPA.

Alternative 3: Central Pier Alternative

General Plan Revision

The Alternative 3 coverage impacts would be similar to those discussed above for Alternative 2. Alternative 3 would create slightly larger coverage reductions in LCDs 1b and 3, and a smaller coverage reduction in LCD 5 when compared to Alternative 2 (see Table 5.3.4-3 for details). The proposed shared-use path, which is exempt from coverage calculations, would create 3,746 fewer square feet impervious area than the Alternative 2 path. This difference is because of minor variations in the path design and the amount of existing impervious surface within the path footprint.

Table 5.3.4-3 Alternative 3 Land Coverage Detail

LCD	Alternative 1 Existing Coverage (sf)	Alternative 3 (sf)		
		Proposed Impervious Area	New Impervious Area Exempt from Coverage (Non-motorized Path)	Net Change in Coverage (Compared to Alternative 1) ¹
1b	4,660	7,281	3,296	-675
3	2,080	5,969	5,101	-1,212
5	151,431	149,627	6,879	-8,683
Total	158,172	162,877	15,276	-10,570

¹ Excludes non-motorized path area, which is exempt from coverage calculations per TRPA Code Section 30.4.6.D.3.

Source: Compiled by Ascent Environmental in 2017

Implementation of Alternative 3 would reduce TRPA-regulated coverage within LCDs 1b, 3, and 5. The project would meet all TRPA requirements for coverage management, resource protection, and land coverage mitigation. For these reasons, Alternative 3 would have a **less-than-significant** impact related to the creation of compaction or land coverage.

Pier Rebuild Project

For coverage purposes, the land-based portions of the existing and central pier are included in the coverage analysis for the General Plan revision. Land coverage is not calculated below the high-water mark of Lake Tahoe. If the project is approved, coverage calculations for the pier rebuild project would be submitted to TRPA review and approval prior to permit issuance. For these reasons, the Alternative 3 pier rebuild project would have a **less-than-significant** impact related to the creation of compaction or land coverage as it is managed by TRPA.

Alternative 4: Western Pier Alternative

General Plan Revision

Alternative 4 coverage impacts would be similar to those discussed above for Alternative 2. Of the three action alternatives, Alternative 4 would create the largest coverage reductions in LCDs 1b and 3, but coverage reductions in LCD 5 would be slightly less than those projected for Alternative 2 (Table 5.3.4-4 for details). The proposed shared-use path, which is exempt from coverage calculations, would create 2,274 fewer square feet of new impervious area than the Alternative 2 path.

Implementation of Alternative 4 would result in a reduction in TRPA-regulated coverage within LCDs 1b, 3, and 5. The project would meet all TRPA requirements for coverage management, resource protection, and land coverage mitigation. For these reasons, Alternative 4 would have a **less-than-significant** impact related to the creation of compaction or land coverage.

Table 5.3.4-4 Alternative 4 Land Coverage Detail

LCD	Alternative 1 Existing Coverage (sf)	Alternative 4 with Traditional Lawn Area (sf)			Alternative 4 with Artificial Turf (sf)		
		Proposed Impervious Area	New Impervious Area Exempt from Coverage (Non-motorized Path)	Net Change in Coverage	Proposed Impervious Area	New Impervious Area Exempt from Coverage (Non-motorized Path)	Net Change in Coverage (Compared to Alternative 1) ¹
1b	4,660	9,547	5,786	-899	9,547	5,786	-899
3	2,080	798	148	-1,430	798	148	-1,430
5	151,431	143,988	10,814	-18,257	152,741	10,814	-9,504
Total	158,172	154,333	16,748	-20,586	163,086	16,748	-11,833

¹ Excludes non-motorized path area which is exempt from coverage calculations per TRPA Code Section 30.4.6.D.3.
 Source: Compiled by Ascent Environmental in 2017

Pier Rebuild Project

For coverage purposes, the land-based portions of the existing and the western pier are included in the coverage analysis for the General Plan revision. Land coverage is not calculated below the high-water mark of Lake Tahoe. If the project is approved, coverage calculations for the pier rebuild project would be submitted to TRPA review and approval prior to permit issuance. For these reasons, the Alternative 4 pier rebuild project would have a **less-than-significant** impact related to the creation of compaction or land coverage as it is managed by TRPA.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.4-2: Potential for substantial erosion or loss of topsoil

The General Plan revision associated with Alternatives 2, 3, and 4 would encourage recreational improvements that would result in ground disturbance. However, the potential for increased erosion resulting from future projects implemented under the General Plan revision would be minimized through compliance with the stringent TRPA and Lahontan RWQCB code requirements and permit conditions. For this reason, implementation of Alternatives 2, 3, and 4 would have a **less-than-significant** impact related to increased soil erosion or loss of topsoil. Alternative 1 is the no-action alternative and would have **no impact** related to erosion or loss of topsoil.

The potential for changes to lake sediments stemming from the pier component associated with Alternative 1, 2, 3, and 4 is discussed in Section 5.3.7, Hydrology and Water Quality.

Alternative 1: No Project

General Plan Revision

Alternative 1 is the no-project alternative and, as such, would not result in any changes to existing development with KBSRA or change the potential for soil erosion. Therefore, Alternative 1 would have **no impact** related to soil erosion or loss of topsoil.

Pier Rebuild Project

The land-based portions of the existing and proposed piers are included in the soil erosion analysis for the General Plan revision and the project. For a discussion of potential changes to sediment deposition lakeward of the high-water line, see Impact 5.3.7-2 in Section 5.3.7, Hydrology and Water Quality.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The proposed General Plan contemplates the future redevelopment of KBSRA including new restrooms, pavilions, an administrative office, a waterfront promenade, reorganized parking, and relocated or expanded recreation amenities. These improvements would require ground disturbance during the demolition of existing structures and construction of new facilities and amenities. Exposed soils could be subject to wind and water erosion which could carry sediment into Lake Tahoe. The General Plan revision also includes a sand wall (placed roughly 150 feet inland of the Lake Tahoe high water mark) which would reduce the amount of beach sand carried by on-shore winds into the parking area. Currently, materials from parking areas must be disposed of and cannot be used to replenish the beach. Sand that collects below the wall would be redistributed on the beach and would not accumulate to form a dune at the walls base. This feature would result in a small decrease in the amount of sand lost to wind erosion at KBSRA.

The three soil map units within the project site have an erosion hazard rating of “slight,” indicating that erosion is unlikely under ordinary conditions (NRCS 2007). The potential for erosion would be further reduced through the protective regulations included in TRPA and Lahontan RWQCB code requirements and permit conditions.

Future projects implemented under the Alternative 2 General Plan revision would be required to comply with Chapters 33 and 60 through 68 of the TRPA Code. These requirements include the installation of

best management practices (BMPs) for all projects, as specified in Section 60.4 of the TRPA Code. Temporary BMPs which comply with the TRPA *Handbook of Best Management Practices* must be implemented on construction sites and maintained throughout the construction period until winterization, and permanent BMPs must be installed once construction has been finalized. Improvement plans are submitted for review and approval to ensure conformance with TRPA rules, regulations, and ordinances as part of standard conditions of approval.

In addition, Lahontan RWQCB requires all construction projects that disturb more than one acre to prepare a Storm Water Pollution Prevention Plan (SWPPP) that includes a site-specific Construction Site Monitoring and Reporting Plan (CSMRP) pursuant to the National Pollution Discharge Elimination System (NPDES) 2011 Tahoe Construction Stormwater permit. Project SWPPPs are required to describe the site, construction activities, proposed erosion and sediment controls, means of waste disposal, maintenance requirements for temporary BMPs, and management controls related to stormwater. Temporary BMPs to protect water quality would be required during all site development activities. Water quality controls outlined in a SWPPP would be required to be consistent with or more stringent than TRPA requirements. Controls would be required to ensure that runoff quality meets or surpasses TRPA water quality objectives and the federal and state antidegradation policies, remains within the TRPA and Lahontan RWQCB discharge limits to surface water and groundwater sources, and maintains beneficial uses of Lake Tahoe. Stormwater quality sampling and reporting requirements outlined as a Construction Site Monitoring and Reporting Plan are also part of the SWPPP.

Although the Alternative 2 General Plan revision would encourage recreation improvements that would result in ground disturbance, the potential for increased erosion resulting from implementation of future projects under the General Plan revision would be minimized through compliance with TRPA and Lahontan RWQCB protective code requirements and permit conditions. For this reason, implementation of Alternative 2 would have a **less-than-significant** impact related to increased soil erosion and loss of topsoil.

Pier Rebuild Project

The land-based portions of the existing and proposed piers are included in the soil erosion analysis for the General Plan revision. For a discussion of potential changes to sediment deposition lakeward of the high-water line, see Impact 5.3.7-2 in Section 5.3.7, Hydrology and Water Quality.

Alternative 3: Central Pier Alternative

General Plan Revision

The potential risk of increased erosion or loss of topsoil for Alternative 3 is the same as discussed for Alternative 2 above. Although the Alternative 3 General Plan revision would encourage recreational improvements resulting in ground disturbance, the potential for increased erosion resulting from future projects would be minimized through compliance with the stringent TRPA and Lahontan RWQCB protective code requirements and permit conditions. For this reason, implementation of Alternative 3 would have a **less-than-significant** impact related to increased soil erosion and loss of topsoil.

Pier Rebuild Project

The land-based portions of the existing and proposed piers are included in the soil erosion analysis for the General Plan revision. For a discussion of potential changes to sediment deposition lakeward of the high-water line, see Impact 5.3.7-2 in Section 5.3.7, Hydrology and Water Quality.

Alternative 4: Western Pier Alternative

General Plan Revision

The potential risk of increased erosion or loss of topsoil for Alternative 4 is the same as discussed for Alternative 2 above. Although the Alternative 4 General Plan revision would encourage recreational improvements resulting in ground disturbance, the potential for increased erosion resulting from future projects would be minimized through compliance with the stringent TRPA and Lahontan RWQCB code requirements and permit conditions. For this reason, implementation of Alternative 4 would have a **less-than-significant** impact related to increased soil erosion and loss of topsoil.

Pier Rebuild Project

The land-based portions of the existing and proposed piers are included in the soil erosion analysis for the General Plan revision. For a discussion of potential changes to sediment deposition lakeward of the high-water line, see Impact 5.3.7-2 in Section 5.3.7, Hydrology and Water Quality.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.4-3: Exposure to seismic and geologic hazards

KBSRA is located in a seismically-active area that could experience strong seismic shaking in the event of a large earthquake. The General Plan revision associated with Alternatives 2, 3, and 4 would modify the existing KBSRA development plan and to allow for the future construction of additional restroom facilities, pavilions, concession buildings, and an administrative building. These structures and their users could be susceptible to earthquake damage. The risk to people and structures would be reduced through compliance with the current seismic design requirements of the California Building Standards Code. For this reason, the potential for the General Plan revision for Alternatives 2, 3, and 4 to expose people and structures to seismic and geologic hazards would be a **less-than-significant** impact. Alternative 1 is the no project alternative and as such would have **no impact**.

Piers are resilient structures and are not likely to collapse during an earthquake (SGH 2014). Additionally, the pier rebuild component of Alternatives 2, 3, and 4 would not include a superstructure (pier mounted building) that could place users at risk during a large seismic event. Finally, as a publicly accessible pier, the proposed structure would be required to meet the ASCE standards for Seismic Design of Piers and Wharves. For these reasons, construction and operation of the pier under Alternatives 2, 3, and 4 would have a **less-than-significant** impact relative to exposure of people and structures to seismic and geologic hazards. The existing pier associated with Alternative 1 would be unchanged, and therefore, would not increase the exposure of people or structures to seismic and geologic hazards. There would **no impact** associated with Alternative 1.

Alternative 1: No Project

General Plan Revision

Alternative 1 is the no project alternative. For this alternative no new structures would be built that could be damaged by seismic or geologic hazards or expose people to risk during seismic events. For this reason, Alternative 1 would have **no impact** on the exposure of people and structures to seismic or geologic hazards.

Pier Rebuild Project

Under Alternative 1, the existing Kings Beach Pier would remain in place. Because no alterations would be made to the existing structure, there would be **no impact** on the exposure of people and structure to seismic or geologic hazards.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

KBSRA is located in a seismically-active area which could experience strong seismic shaking in the event of a large earthquake. The proposed General Plan revision would modify the existing KBSRA development plan to allow for the future construction of additional restroom facilities, group pavilions, concession buildings, and an administrative building. These structures and their users could be susceptible to earthquake damage. Additionally, the areas of KBSRA underlain by beach sands could be susceptible to liquefaction during seismic events. The risk to people and structures would be reduced through compliance with the current seismic design requirements of the California Building Standards Code. For this reason, the potential for the project to expose people and structures to seismic and geologic hazards would be a **less-than-significant** impact.

Pier Rebuild Project

Seismic damage to piers typically results from liquefaction of marine sediments and failure is usually related to economic loss and loss of functionality rather than structural collapse (SGH 2014). Piers that are accessible to the general public are subject to the seismic design criteria included in American Society of Civil Engineers (ASCE) Standard 61-14, Seismic Design of Piers and Wharves. These standards incorporate soil structure, geotechnical parameters, and earthquake hazard levels to minimize a piers risk of structural damage or failure during a predictable seismic event.

Piers are resilient structures and are not likely to collapse during an earthquake (SGH 2014). Additionally, the proposed pier would not include a superstructure (pier mounted building) that could place users at risk during a large seismic event. Finally, as a publicly accessible pier, the proposed structure would be required to meet the ASCE standards for Seismic Design of Piers and Wharves. For these reasons, the potential for the implementation of the Alternative 2 pier rebuild project to expose people and structures to seismic and geologic hazards would be a **less-than-significant** impact.

Alternative 3: Central Pier Alternative

General Plan Revision

The potential seismic and geologic risks associated with the Alternative 3 General Plan revision are the same as those discussed for Alternative 2 above. For the same reasons, the potential for future development implemented through the Alternative 3 General Plan revision to expose people and structures to seismic and geologic hazards would be a **less-than-significant** impact.

Pier Rebuild Project

The potential seismic and geologic risks associated with the Alternative 3 pier rebuild project are the same as those discussed for Alternative 2 above. For the same reasons, the potential for the implementation of the Alternative 3 pier rebuild project to expose people and structures to seismic and geologic hazards would be a **less-than-significant** impact.

Alternative 4: Western Pier Alternative

General Plan Revision

The potential seismic and geologic risks associated with the Alternative 4 General Plan revision are the same as those discussed for Alternative 2 above. For the same reasons, the potential for future development implemented through the Alternative 4 General Plan revision to expose people and structures to seismic and geologic hazards would be a **less-than-significant** impact.

Pier Rebuild Project

The potential seismic and geologic risks associated with the Alternative 4 pier rebuild project are the same as those discussed for Alternative 2 above. For the same reasons, the potential for the implementation of the Alternative 4 pier rebuild project to expose people and structures to seismic and geologic hazards would be a **less-than-significant** impact.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.4-1: Potential for changes to site topography inconsistent with the natural surroundings or substantial changes to undisturbed soil or geologic substructures

Although the General Plan revision associated with Alternatives 2, 3, and 4 would encourage recreational improvements that would result in ground disturbance, the project site topography is subtle and the potential for grading or topography changes that are inconsistent with the TRPA Code would be minimized through compliance with the stringent TRPA and Lahontan RWQCB protective code requirements and permit conditions. For this reason, implementation of the General Plan revision associated with Alternatives 2, 3, and 4 would have a **less-than-significant** impact related to grading, topography, and geologic substructures. Alternative 1 is the no action alternative and as such would have **no impact**.

The pier rebuild component of Alternatives 2, 3, and 4 would require the removal of existing pilings and installation of new pilings to a depth of 6 to 8 feet below the surface of the lakebed. The project site is underlain by deep, ancient lake sediments that extend over half a mile north of the current Lake Tahoe shoreline (Saucedo 2005), therefore it is unlikely that the piles would encounter bedrock. The disturbance required for the installation of the piles would be limited to the area of the pile footprint and would not substantially alter the subsurface geology. For these reasons, the implementation of the pier rebuild component of Alternatives 2, 3, and 4 would have a **less-than-significant** impact on topography and geologic substructures. The Alternative 1 is the no action alternative and as such would have **no impact** on topography and geologic substructures.

Alternative 1: No Project

General Plan Revision

Alternative 1 proposes no changes to the development pattern or types of amenities at KBSRA, and it does not propose future project which could modify the topography or geologic substructures at the site. Therefore, Alternative 1 would have no impact on existing topography or geologic substructures.

Pier Rebuild Project

Under Alternative 1, the existing Kings Beach Pier would remain in place. Because no alterations would be made to the existing structure, there would be **no impact** to existing topography or geologic substructures.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The Alternative 2 General Plan revision would support projects requiring grading, excavation, and permanent, if minor, topography changes. The natural topography of the site is nearly flat in the forested area north of the beach and slopes gently downward from the top of the beach to the water's edge. Because of this, future projects would not require large amounts of cut/fill excavation or topographic changes to prepare a site for development. All future projects implemented through the revised General Plan revision would be subject to the requirements Chapter 33, "Grading and Construction," of the TRPA Code. TRPA Code Chapter 33 includes specific provisions for timing of grading, winterization of construction sites, specifications for cut and fills areas, protection of vegetation during construction, preparation of a Slope Stabilization Plan for projects at the request of TRPA, and limitations on excavation deeper than 5 feet where the potential to intercept groundwater exists. TRPA Code Section 33.3.6 allows excavation deeper than 5 feet in limited circumstances, provided that a soils/hydrologic report has been completed that demonstrates that the excavation would not interfere with or intercept groundwater, no damage occurs to mature trees, excavated material is disposed of properly (as defined in Code Section 33.3.4), and the project site's natural topography is maintained.

Although the General Plan revision associated with Alternative 2 would encourage recreational improvements that would result in ground disturbance, the potential for grading or topographic changes that are inconsistent with the TRPA Code would be minimized through compliance with stringent TRPA Code requirements and permit conditions. For this reason, implementation of Alternative 2 would have a **less-than-significant** impact related to grading, topography, and geologic substructures.

Pier Rebuild Project

The Alternative 2 pier rebuild project would require the removal of 26 existing pier pilings. Rebuilding the pier at the eastern location would require driving 27 new piles to a depth of 6 to 8 feet below the surface of the lakebed. The sands and lake sediments in this area are mixed with cobble material from volcanic mudflows to a depth of approximately 3 feet, and are underlain by ancient lakebed sediments (NRCS 2007). These sediments are deep and extend over half a mile north of the current Lake Tahoe shoreline (Saucedo 2005), therefore it is unlikely that the piles would encounter bedrock. The disturbance required for the installation of the piles would be limited to the area of the pile footprint and would not substantially alter the subsurface geology. For these reasons, the implementation of the Alternative 2 pier rebuild project would have a **less-than-significant** impact on topography and geologic substructures.

Alternative 3: Central Pier Alternative

General Plan Revision

The potential for detrimental modifications of site topography or an adverse effect to geologic substructures resulting from the implementation of Alternative 3 is the same as discussed for Alternative 2 above. Although the General Plan revision associated with Alternative 3 would encourage recreational improvements that would result in ground disturbance, the potential for grading or topography changes that are inconsistent with TRPA Code would be minimized through compliance with the stringent TRPA and Lahontan RWQCB protective code requirements and permit conditions. For this reason, implementation of Alternative 3 would have a **less-than-significant** impact related to grading, topography, and geologic substructures.

Pier Rebuild Project

The effects to topography and geologic substructure from the implementation of the Alternative 3 pier rebuild project would be similar to those discussed for Alternative 2. The Alternative 3 pier would require the installation of 33 new piles (six more than Alternative 2). As discussed for Alternative 2, because the geologic substructure consists of deep lake sediments the piling installation would be unlikely to encounter bedrock, and disturbance required for the installation of the piles would be limited to the area of the pile footprint. Therefore, implementation of the Alternative 3 pier rebuild project would have a **less-than-significant** impact on topography and geologic substructures.

Alternative 4: Western Pier Alternative

General Plan Revision

The potential for detrimental modifications of site topography or an adverse effect to geologic substructures resulting from the implementation of Alternative 4 is the same as discussed for Alternative 2 above. Although the General Plan revision associated with Alternative 4 would encourage recreational improvements that would result in ground disturbance, the potential for grading or topography changes that are inconsistent with TRPA Code would be minimized through compliance with the stringent TRPA and Lahontan RWQCB protective code requirements and permit conditions. For this reason, implementation of Alternative 4 would have a **less-than-significant** impact related to grading, topography, and geologic substructures.

Pier Rebuild Project

The effects to topography and geologic substructure from the implementation of the Alternative 4 pier rebuild project would be similar to those discussed for Alternative 2. The Alternative 4 pier would require the installation of 33 new piles (the same number required for Alternative 3, and six more than Alternative 2). As discussed for Alternative 2, because the geologic substructure consists of deep lake sediments the piling installation would be unlikely to encounter bedrock, and disturbance required for the installation of the piles would be limited to the area of the pile footprint. Therefore, implementation of the Alternative 4 pier rebuild project would have a **less-than-significant** impact on topography and geologic substructures.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Cumulative impacts related to land coverage, erosion, and changes to natural topography are considered in the context of the Kings Beach watershed. Seismic effects are localized by nature and are not cumulative. The cumulative projects as well as the proposed project would alter land coverage, create soil disturbance that could lead to increased erosion, or make changes to existing topography. However, all of these projects would be required to comply with the stringent regulatory protections enforced by TRPA and Lahontan RWQCB. These protections control the amount of land coverage that can be created by any project, require temporary and permanent erosion control BMPs, and protect natural topographic features. Therefore, because stringent regulations are in place to safeguard geologic and soil resources for all cumulative projects within the Kings Beach watershed, the proposed project, or the other action alternatives, and the cumulative projects would not result in cumulative adverse effects to these resources.

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5.3.5 Greenhouse Gas Emissions and Climate Change

This section describes the methodology, assumptions, and results to identify potentially significant impacts to global climate change with the implementation of the Kings Beach State Recreation Area General Plan Revision and Pier Rebuild Project alternatives. The analysis includes a quantitative evaluation of construction- and operational-generated emissions of greenhouse gas emissions (GHGs). The 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 existing conditions and significant resource values related to global climate change are summarized under the header Climate in Section 2.2.1, Physical Resources, in Chapter 2, Existing Conditions, of this document. A more detailed description of the existing climate 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. CSP Standard and Special Project Requirements pertaining to air quality, which would also reduce GHGs, are included in Section 4.7, CSP Standard and Special Project Requirements; these requirements include standard construction 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). Other sustainability goals and guidelines in Chapter 4, The Plan, would be implemented as part of project operations.

Environmental Impacts and Mitigation Measures

Analysis Methodology

Construction

Short-term construction-related emissions of GHGs 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 a more 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 to Alternative 1, 3, and 4 are included.

Operation

Long-term operational emissions 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, although construction and operation of these facilities may be built out as late as 2037. By including the emissions associated with project-related facilities for the year 2021, estimates of operational emissions are more conservative than would be estimated for 2037 due to improved technological efficiency and deployment of existing and future GHG-reducing regulations and policies.

Direct operational mobile-source emissions were modeled based on trip generation rates and vehicle miles traveled (VMT) identified in the traffic analysis conducted 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 on the project webpage (www.parks.ca.gov/PlanKBSRA) for more details regarding assumptions and calculations.

Indirect emissions associated with electricity and natural gas consumption by Liberty Utilities were modeled using the non-baseload intensity factor values for the WECC California (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. Indirect emissions related to the treatment of water and wastewater were also calculated in CalEEMod using the water and wastewater generation values detailed in Section 5.3.10, Public Services and Utilities, of 714,120 gallons per year and 225,500 gallons per year, respectively. Indirect emissions from solid waste disposal were estimated using CalEEMod defaults for the project area.

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.

Specific model assumptions and inputs for all of these calculations can be found in the technical analysis materials available on the project webpage (www.parks.ca.gov/PlanKBSRA).

Significance Criteria

Significance criteria for determining impacts to global climate change are summarized below.

CEQA Criteria

The issue of global climate change is inherently a cumulative issue, as the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Thus, the project's impact to climate change is inherently a cumulative impact.

CEQA Guidelines Section 15064 and relevant portions of CEQA Guidelines Appendix G recommend that a lead agency consider a project's consistency with relevant, adopted plans, and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. In Appendix G

of the State CEQA Guidelines, two questions are provided to help assess if the project would result in a potentially significant impact on climate change. These questions ask whether the project would:

- ◆ generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- ◆ conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

On October 13, 2016, the Placer County Air Pollution District (PCAPCD) adopted new thresholds of significance for GHG emissions. Development of the new thresholds included evaluation of existing thresholds from other air districts such as Sacramento Metropolitan Air Quality Management District, San Luis Obispo Air Pollution Control District, and the Bay Area Air Quality Management District. The thresholds consider (1) existing GHG significance thresholds adopted by other districts, (2) PCAPCD's historical CEQA review data, (3) the statewide GHG emissions reduction target and regulation requirement beyond 2020, and (4) the special geographic features in Placer County (PCAPCD 2016). Based on Appendix G of the State CEQA Guidelines and PCAPCD thresholds of significance for construction- and operational-related emissions of GHGs, impacts to global climate change would be significant if the project would:

- ◆ generate construction emissions exceeding 10,000 metric tons of carbon dioxide equivalent per year (MT CO₂e/year),
- ◆ generate operational emissions that would exceed the Efficiency Matrix of 27.3 metric tons of CO₂e per capita (applicable to non-residential in rural areas) which exceed the De Minimis level, and
- ◆ generate operational emissions of the De Minimis level of 1,100 MT CO₂e/year.

The 1,100 MT CO₂e De Minimis Level significance threshold was developed to encompass the operational emissions of smaller land use projects that may be proposed in rural areas but are subject to CEQA review. The 1,100 MT CO₂e threshold is derived from consideration of other air districts and the goal of achieving 1990 levels of GHGs by 2020; PCAPCD uses this threshold as a measure of compliance with post-2020 GHG reduction goals (40 percent of 1990 levels by 2030). Given that the project has a 20-year lifetime and will extend to 2037, a modified bright line threshold will be used to reflect post-2020 and post-2030 GHG reduction considerations. As discussed in Section 4.4 of the Existing Conditions Report, Executive Order S-3-05 established benchmark GHG reduction goals extending to 2050 of an 80 percent reduction in 1990 GHG levels by that year. In line with this goal, a 50 percent reduction will be applied to PCAPCD's De Minimis threshold of 1,100 MT CO₂e/year to demonstrate consistency with this goal. Given that PCAPCD's threshold was developed to show consistency with a 40 percent reduction in statewide levels of GHGs, a 50 percent reduction of this number would be appropriate to demonstrate an overall 80 percent reduction.

As such, for the purposes of this analysis, the project's contribution would be significant to global climate change if the project would:

- ◆ generate operational emissions of 550 MT CO₂e/year.

TRPA Criteria

The TRPA Initial Environmental Checklist does not include any significance criteria for global climate change. As such, the CEQA Criteria described above will be applied to the project.

Environmental Impacts

Impact 5.3.5-1: Direct and indirect short-term construction-generated and long-term operational-related emissions of GHGs

The short-term construction-generated and long-term operational-related emissions of GHGs associated with Alternatives 2 through 4 would not exceed the PCPACD’s threshold of significance of 10,000 MT CO₂e for construction and 550 MT CO₂e for operational-related emissions. As such, Alternatives 3 through 4 would not result in a cumulatively considerable contribution to climate change. This would be a **less-than-significant** impact.

Alternative 1 would be a continuation of existing conditions and no increase in GHGs emissions would occur. There would **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, 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 GHGs associated with Alternative 1. Further, existing operational GHG emissions would continue to be emitted and would not increase beyond baseline conditions. 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. Both project construction and operation would generate GHG emissions. GHG-producing construction activities would include the operation of heavy-duty equipment (e.g., scrapers, cranes, forklifts) used during site preparation, haul trucks carrying supplies and materials to and from the project site, and construction worker commute trips. As described above, construction-generated GHG emissions were calculated using CalEEMod version 2016.3.1. Construction-related emissions of GHGs are summarized in Table 5.3.5-1 below for the years 2019-2021.

Year	MT CO ₂ e/year
2019	127
2020	500
2021	517
PCAPCD Thresholds of Significance	10,000
Exceeds Thresholds?	No

Notes: See the technical analysis materials on the project webpage (www.parks.ca.gov/PlanKBSRA) for detail on model inputs, assumptions, and project specific modeling parameters.
 GHGs = greenhouse gases, MT CO₂e/year = metric tons of carbon dioxide equivalent per year, PCAPCD = Placer County Air Pollution Control District

¹ Construction emissions account for construction of General Plan-related facilities and the proposed eastern pier.
 Source: Modeling conducted by Ascent Environmental in 2017 based on using CalEEMod v. 2016.3.1.

As shown above, construction-generated GHG emissions would peak in 2021 at 517 MT CO₂e/year. This level of emissions would not be substantial such that the PCAPCD significance threshold of 10,000 CO₂e/year would not be exceeded. Short-term constructed-generated emissions of GHGs would not result in a cumulatively considerable contribution to global climate change.

The project would involve upland improvements that could result in the generation of GHG 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. Operational or long-term GHG emissions would occur over the life of the project. Sources of emissions may include motor vehicles and trucks used by visitors and employees; electricity usage, natural gas combustion, water usage, wastewater and waste generation associated with new buildings, such as the restroom facilities and administrative office; and area sources, such as landscaping activities. Operational GHG emissions were estimated using CalEEMod Version 2016.3.1 for 2021, the first year of project operation based on the construction schedule of the proposed pier. The construction emissions shown in Table 5.3.5-1 were also amortized over the project's 20-year buildout and added to the overall emissions for 2021. Operational-related and amortized construction GHG emissions are summarized in Table 5.3.5-2 below by emissions source.

Table 5.3.5-2 Summary of Unmitigated Maximum Operational-Generated Emissions of GHGs by Source for Alternative 2 in 2021

Source	MT CO ₂ e/year
Mobile	75
Energy ¹	64
Area ²	0
Waste	1
Water	2
Amortized Construction Emissions ³	57
Total	208
PCAPCD Thresholds of Significance ⁴	550
Exceeds Thresholds?	No

Notes: See the technical analysis materials available on the project webpage (www.parks.ca.gov/PlanKBSRA) detail on model inputs, assumptions, and project specific modeling parameters.

GHGs = greenhouse gases, MT CO₂e/year = metric tons of carbon dioxide equivalent per year, PCAPCD = Placer County Air Pollution Control District, SB = Senate Bill, EO = Executive Order

¹ Energy sources include indirect emissions from natural gas combustion and electricity use.

² The project does not include the use of fireplaces or hearths.

³ Construction emissions are amortized over the project's 20-year lifetime.

⁴ Threshold of significance is derived from the state's interim targets of achieving a 40 percent reduction in 1990 GHG levels by 2030 as codified in SB 32 and an 80 percent reduction in 1990 GHG levels by 2050 as established by EO S-3-05.

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

As shown in Table 5.3.5-2, operational-related GHG emissions for the year 2021 would total 208 MT CO₂e/year, which is below the 550 MT CO₂e/year threshold developed to show consistency with the 80 percent reduction in 1990 levels of GHGs by 2050 as directed by Executive Order S-3-05. Further, due to the deployment of regulatory programs such as Advanced Clean Cars and the Renewable Portfolio Standard, triennial updates to the California Green Building Standards Code, and overall improvements in the efficiency of technology, yearly operational emissions would be expected to

decrease over the buildout of the project (i.e., 20 years). In summary, short-term construction-generated and long-term operational-related GHG emissions 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, construction of a new lake access point, and construction of a 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 GHGs associated with the construction of the Alternative 2 pier were included in the modeling performed and summarized above in Table 5.3.5-1. As discussed previously, short-term construction-related emissions of GHGs associated with implementation of Alternative 2, including the emissions related to the construction of the proposed pier and new lake access point and removal of the existing boat ramp, would not exceed the PCAPCD thresholds of significance for GHG emissions.

Operation of the pier would include direct GHG emissions from on-road mobile sources accessing the pier as well as emissions from motorized watercraft. On-road vehicle emissions associated with the pier were included in the modeling performed and detailed in Table 5.3.5-2. As discussed under the heading, Analysis Methodology, of this section, emissions from motorized watercraft were not modeled because while implementation of the pier rebuild component of Alternative 2 may result in localized changes in watercraft activity, it 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, implementation of the pier rebuild project under Alternative 2 would not exceed PCAPCD's thresholds of significance nor result in a substantial contribution to global climate change. To conclude, short-term construction-related and long-term operational-related GHG 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. Alternative 3 would be built out over 20 years and would include similar improvements to existing 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, construction-related GHG 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 GHGs that would exceed the PCAPCD threshold of significance for construction-generated emissions. Further, operational emissions of the pier and facilities included as a part of Alternative 3 would be similar in amount to those under Alternative 2. As discussed previously, operational emissions associated with Alternative 2 would not surpass the applicable bright line threshold of significance for operational emissions. Due to the similar characteristics of Alternative 2 and Alternative 3, short-term construction-related and long-term operational-related emissions of GHGs 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 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 GHG 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 GHGs would not exceed the PCAPCD thresholds of significance for daily construction emissions. Further, operational-emissions associated with proposed pier under Alternative 3 would be similar to that of the pier under Alternative 3. As such, short-term construction-related and long-term operational-related emissions of GHGs 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 of proposed features. Short-term construction-related and long-term operation-related emissions of GHGs would be similar to those discussed above for Alternative 2. Implementation of Alternative 4 would not result in construction-generated or operational GHG emissions such that the applicable PCAPCD thresholds of significance for construction and operational emissions would be exceeded. Similar to Alternative 2, short-term construction-related and long-term operational-related emissions of GHGs associated with Alternative 4 would be **less than significant**.

Pier Rebuild Project

Implementation of Alternative 4 would include rebuilding a pier similar in size and characteristics as Alternative 2, but located on the western portion of the project site. Alternative 4 would also extend the existing motorized boat ramp. 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. Short-term construction-related emissions of GHGs from pier and boat ramp extension construction would be similar to those discussed for Alternative 2. As discussed previously, emissions of GHGs from construction of the pier under Alternative 2 would not exceed the applicable PCAPCD thresholds of significance for daily construction emissions. Additionally, operational-emissions associated with the proposed pier under Alternative 4 would be similar to that of the pier under Alternative 2. Given that the operational emissions modeled for Alternative 2 would be substantially lower than the applicable threshold of significance for operational emissions, this expansion would not be anticipated to be substantial enough to exceed the 550 MT CO₂e threshold. 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 and long-term operational-related emissions of GHGs associated with Alternative 4 would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.5-2: Impacts of climate change on the project

Climate change is expected to result in a variety of effects that would influence conditions on the project site. These effects include increased temperatures and increased wildfire risk, changes to the timing and intensity of precipitation, and increased stormwater runoff and flood risk. However, numerous state and county programs and policies are in place to protect the project against climate change-related physical effects. Therefore, this impact would be **less than significant** for Alternatives 2, 3, and 4.

The vulnerability of the project site with Alternative 1 would not be exacerbated with the implementation of Alternative 1. There would be **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. The existing facilities and visitors to the project site would continue to be subject to the physical effects of climate change; however, their vulnerability would not be increased or exacerbated with the implementation of Alternative 1. There would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision/Pier Rebuild Project

Anthropogenic increases in GHG concentrations in the atmosphere have led to increased global average temperature through the intensification of the greenhouse effect, which have already caused changes in local, regional, and global average climatic conditions. Climate change effects would occur indiscriminately across the project site; therefore, the General Plan revision and pier rebuild project are discussed together. Implementation of Alternative 2 would involve upland improvements in KBSRA, 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. Alternative 2 would include the construction and operation 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. 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.

Although there is a strong scientific consensus that global climate change is occurring and is influenced by human activity, there is less certainty as to the timing, severity, and magnitude of consequences of the climate phenomena. Scientists have identified several ways in which global climate change could alter the physical environment in California (California Natural Resources Agency 2012, California Department of Water Resources 2008, Intergovernmental Panel on Climate Change 2014). These include:

- ◆ increased average temperatures;
- ◆ modifications to the timing, amount, and form (rain vs. snow) of precipitation;
- ◆ changes in the timing and amount of runoff;
- ◆ reduced water supply;
- ◆ deterioration of water quality; and
- ◆ sea-level rise.

Aside from sea-level rise, these changes may combine into a variety of issues and concerns that may affect the project area, including but not limited to:

- ◆ increased frequency and intensity of wildfire as a result of increased temperatures and changing precipitation patterns,
- ◆ reduced levels of precipitation falling as snow and subsequent decrease in snow pack, and
- ◆ variations in the water level of Lake Tahoe due to drought.

Although uncertainty exists to the precise levels of these impacts, there is consensus regarding the range, frequency, or intensity of these impacts that can be expected. New or reconstructed facilities at KBSRA, including restroom and administrative buildings and the pier, could be subject to potential

hazards that could be exacerbated by climate change, such as changes in the timing and amount of runoff and the increased risk of flooding associated with changes to precipitation. According to the California Department of Forestry and Fire (CAL FIRE), the project site is located in a Very High Fire Hazard Severity Zone due to its location in coniferous forest of moderate slopes (CAL FIRE 2007). Thus, KBSRA facilities could be affected by increased frequency or intensity of wildfire.

Structural fire protection in the project area would be provided by North Tahoe Fire Protection District, which has a King's Beach-based fire station (Station 52) located within a half mile of the project site. Further, as discussed in Section 5.3.6, Hazards, Hazardous Materials, and Upset, the project would adhere to the state law requiring 100 feet of defensible space around structures. CAL FIRE plans for the project area include continued provisions of wildland fire protection and prevention services. Further, as discussed in Section 5.3.6, Hazards, Hazardous Materials, and Risk of Upset, would be required to comply with Department Operations Manual (DOM) Wildfire Management Planning Policy which would increase the project's resiliency to wildfire impacts.

The project area may also experience changes in the form in which precipitation falls. The project area may experience rainy precipitation events during periods of the year where historically snow would be deposited. Due to the project site's proximity to Lake Tahoe, this impact would likely not affect the project's water supply; however, a reduced snowpack may result in a decrease in snow-related recreational activities and a shorter snow season. Conversely, summertime recreational opportunities may become available in years where the snowpack is smaller, which could result in greater visitation at KBSRA during more times of the year. Further, during periods of prolonged drought, the water table of Lake Tahoe may lower due to snowmelt flowing slower than outlets of the lake, resulting in limited lake access to the pier.

These aforementioned climate change effect would be mitigated through implementation of the project's adaptive management policies. Further, existing resources to combat regional-specific climate change effects (e.g., wildfire) would improve the project's resiliency to climate change. As such, this impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision/Pier Rebuild Project

When compared to Alternative 2, the Alternative 3 General Plan revision would largely be the same with some refinements in location or size of proposed features. However, Alternative 3 would not include an administrative office, entry kiosk, or restroom facility on the western side of the park. The reconstructed pier under Alternative 3 would be similar to the pier proposed under Alternative 2; however, it would be located in the central portion of the project site. Additionally, Alternative 3 would remove the existing boat ramp and construct a new lake access point. The physical impacts of climate change would not differ between Alternatives 2 and 3 as each alternative covers the same acreage, proposes similar facilities, and would expect a similar increase in visitation. As such, the climate change effects to the project site would be the same as that discussed above under Alternative 2. The impact would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision/Pier Rebuild Project

Alternative 4 would include similar general plan revisions as Alternative 2 with some refinements in location or size of proposed features and would also entail reconstruction of a pier similar to that proposed under Alternative 2; however, the pier would be located in the western portion of the

project site. Alternative 4 also proposes to 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. The physical impacts of climate change would not differ between Alternative 2 and Alternative 4. As such, the climate change effects to the project site would be the same as those discussed above under Alternative 2. The impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

As discussed above, due to the nature of global climate change, GHG analyses in Impacts 5.3.5-1 and 5.3.5-2 are inherently cumulative. The effects of global climate change are not the result of one project's GHG emissions but a collective inventory of many projects worldwide. The project's contribution to the cumulatively considerable impact of climate change is **less than significant**, as discussed above.

5.3.6 Hazards, Hazardous Materials, and Risk of Upset

This section evaluates the risk of upset associated with the routine use, storage, and transport of hazardous materials and the potential health consequences. The potential for wildland fire that could result from implementation of the proposed General Plan revision and pier rebuild project is also evaluated. The following discussion addresses potential impacts posed by these hazards to the environment, as well as to workers and visitors within KBSRA and workers, visitors, and residents adjacent to KBSRA. The 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 existing conditions related to hazards, hazardous materials, and risk of upset, such as fire protection and emergency services, are summarized in Section 2.3.3, Utilities and Service Systems in Chapter 2, Existing Conditions, of this document. A more detailed description of the existing hazards, hazardous materials, and risk of upset conditions at the project site and a summary of pertinent regulations are included in the Resources Inventory and Existing Conditions Report, available on the Kings Beach SRA 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 in Section 4.4.1, Resource Management and Protection; Section 4.4.3, Facilities; and Section 4.4.5, Operations, in Chapter 4, The Plan. The mandatory CSP Standard and Special Project Requirements that pertain to hazards are included in Section 4.7.

No hazardous waste and substances (Cortese list) sites were found within KBSRA (California Department of Toxic Substances Control 2017, State Water Resources Control Board 2017), so no such hazards to the public or the environment would result from implementation of the project. This issue is not discussed further.

The General Plan Area for KBSRA is within 0.25-mile of Kings Beach Elementary School, located at 8125 Steelhead Avenue in Kings Beach. Implementation of the General Plan revision and pier rebuild project alternatives would not result in hazardous emissions or the handling of hazardous or acutely hazardous materials other than those typically used in landscaping and used for routine maintenance (such as servicing comfort stations). These substances would not pose a hazard to Kings Beach Elementary School located almost 0.25-mile from KBSRA. There would be no impact and this issue is not discussed further.

The Truckee-Tahoe Airport is located approximately 7 miles northwest of KBSRA. Because of the distance from the airport, KBSRA is outside of the airport land use plan. Additionally, there are no private air strips located within or near KBSRA. Neither the General Plan revision or the pier rebuild project would result in a safety hazard related to people residing or working within the vicinity of a public airport or private airstrip. This issue is not discussed further.

As with any development project, construction of new park features could result in standing fresh water (e.g., from watering stockpiles of soil and materials) that could provide mosquito breeding habitat. Alternatives 3 and 4 would reconfigure the existing stormwater basin near SR 28 to accommodate either a proposed increase in impervious surfaces at KBSRA or in response to changes in the site plan. However, the project does not propose water features or other elements that could result in substantial areas of mosquito breeding habitat. The project would not create a new vector-control health hazard or expose people to health hazards, and this issue is not discussed further.

Geologic hazards, including natural hazards associated with seiches, landslides, and faulting, are discussed in Section 5.3.4, Geology, Soils, Land Capability, and Coverage. Risks associated with flooding

are discussed in Section 5.3.7, Hydrology and Water Quality. Impacts on fire protection services are addressed in Section 5.3.10, Public Services and Utilities.

Environmental Impacts and Mitigation Measures

Analysis Methodology

This impact analysis involved a review of applicable laws, permits, and legal requirements pertaining to hazards and hazardous materials. Within this framework, existing on-site hazardous materials and the potential for other safety or hazardous conditions were reviewed based on a site reconnaissance, publicly available hazard and hazardous materials information, site/location and cleanup status information, and other available information. The impact analysis considered potential for changes in the nature, extent, and presence of hazardous conditions to occur on site as a result of project construction and operation, including increased potential for exposure to hazardous materials and hazardous conditions. Potential for hazards and hazardous conditions were reviewed in light of existing hazardous materials management plans and policies, emergency response plans, and applicable regulatory requirements.

Significance Criteria

Significance criteria for determining impacts to hazards, hazardous materials, and risk of upset are summarized below.

CEQA Criteria

Based on Appendix G of the State CEQA Guidelines, impacts to hazards, hazardous materials, and risk of upset would be significant if the project would:

- ◆ create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- ◆ create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- ◆ impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan; or
- ◆ expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

TRPA Criteria

The Human Health and Risk of Upset criteria from the TRPA Initial Environmental Checklist were used to evaluate the impacts relative to hazards, hazardous materials, and risk of upset. Impacts would be significant if the project would:

- ◆ involve a risk of an explosion or the release of hazardous substances including, but not limited to, oil, pesticides, chemicals, or radiation in the event of an accident or upset conditions;
- ◆ interfere with an emergency evacuation plan;
- ◆ create a health hazard or potential health hazard (excluding mental health); or
- ◆ expose people to potential health hazards.

Environmental Impacts

Impact 5.3.6-1: Expose the public or environment to hazards because of the routine use, storage, or transport of hazardous materials or from accidental release or upset

Implementation of Alternatives 2 through 4 would involve the storage, use, and transport of hazardous materials and could result in accidental release of hazardous materials during construction of new facilities or the pier at KBSRA. During operation of Alternatives 2 through 4, future use and storage of hazardous materials would include fertilizers and pesticides typically used for landscaping and household cleaners that would be used for routine maintenance. The on-site concessionaire would also continue to conduct refueling at the site consistent with existing conditions. Each of these alternatives would be required to implement and comply with existing hazardous materials regulations as well as state regulations, mandatory CSP Standard and Special Project Requirements (see Section 4.7), and Department Operations Manual (DOM) policies related to hazardous materials to reduce the potential for exposure of the public or environment to hazards resulting from routine use, storage, or transport of hazardous materials or from accidental release or upset. Construction activities to remove and rebuild the pier would also implement marine best management practices (BMPs) that would help protect the public or the environment from accidental release or upset conditions. For these reasons, this impact would be **less than significant** for the action alternatives. Because no action would occur under Alternative 1, the no project alternative, it would have **no impact**.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the No Project Alternative, there would be no change in the potential to create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials or from reasonably foreseeable upset and accident conditions and therefore there would be **no impact**.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Project Alternative, there would be no change in the potential to create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials or from reasonably foreseeable upset and accident conditions and therefore there would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Implementation of the Alternative 2 General Plan revision allows for the addition of new facilities or renovation of existing facilities at KBSRA. Chemicals could be used in limited quantities for landscape maintenance and cleaning during operations at KBSRA under the General Plan revision. The construction activities associated with implementation of the General Plan revision may involve vegetation removal, grading, excavation, and temporary stockpiling of soils. In addition, construction activities would involve on-site staging of construction equipment and vehicles and construction-related vehicle trips. Potential construction activities for new buildings and structures at KBSRA, including the administrative office, comfort stations, beach access ramps, new nature play area, and relocated half basketball court, would require the use of certain potentially hazardous materials such as fuels, oils, paints, and solvents. These materials would generally be used for excavation equipment and other construction equipment and would be contained within vessels engineered for safe

storage. Paint would be used on new buildings. Spills during on-site fueling of equipment or upset conditions (i.e., puncture of a fuel tank through operator error or slope instability) could result in a release of hazardous materials into the environment. Storage of large quantities of these materials during construction is not anticipated. However, accidental release of these materials could result in an adverse effect.

CSP and its construction contractors would be required to use, store, and transport hazardous materials in accordance with local, state, and federal regulations, including Cal/OSHA and Department of Toxic Substance Control requirements and manufacturer's instructions. Transportation of hazardous materials on area roadways is also regulated by the California Highway Patrol and the California Department of Transportation (Caltrans). Construction activities that would use hazardous materials on site would be required to obtain any required permits and comply with appropriate regulatory agency standards including 22 California Code of Regulations (CCR) Chapter 20 and 24 CCR Chapter 31B, designed to ensure proper use and storage and avoid hazardous materials releases. Compliance with these state hazardous materials regulations provide for safe handling, transport, and storage to avoid accidental release of hazardous materials. Section 60.1.6 of the TRPA Code of Ordinances (TRPA Code) requires the handling, transport, use, or storage of toxic or hazardous materials to comply with applicable requirements of state and federal law regarding spill prevention, reporting, recovery, and cleanup. Sections 60.1.7 and 60.1.8 of the TRPA Code regulate the use of pesticides and fertilizers in the Tahoe Basin. Chemicals used for landscape maintenance at KBSRA, such as fertilizers and pesticides, and cleaning products used for maintenance would be used in limited quantities, in accordance with instructions provided by the manufacturer and in compliance with TRPA Code.

The policies in the DOM Chapter 0800, Hazardous Materials, would also be implemented with the Alternative 2 General Plan revision. These policies would apply to construction activities and operations at KBSRA and focus on safe and healthful working conditions for employees, address hazardous spills, and require employee training on hazardous materials handling, spill prevention, and release reporting.

During construction activities, CSP and its contractors would also be required to implement the mandatory CSP Standard and Special Project Requirements (see Section 4.7), tailored specifically for the proposed project. The CSP Standard and Special Project Requirements include inspecting equipment for leaks prior to and during construction activities, containment and disposal of contaminate water or other hazardous substances, and preparation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would require the implementation of a hazardous materials Spill Prevention and Control Plan (SPCP), which would reduce the potential of directly and indirectly affecting water quality through construction-related hazardous material spills. The SPCP would provide protection to on-site workers, the public, and the environment from accidental leaks or spills of vehicle fluids or other potential contaminants during construction. Additionally, CSP and/or its contractor would designate and/or locate staging and stockpile areas within an existing maintenance yard area or existing paved areas, such as a parking lot, to prevent leakage of oil, hydraulic fluids, etc. into native vegetation, drainages, or Lake Tahoe. Potential impacts on water quality from construction impacts and associated with use of hazardous materials are also addressed in Impact 5.3.7-1 in Section 5.3.7, Hydrology and Water Quality, these marine BMPs are incorporated into the project design and would be enforced through the Clean Water Act Section 401 certification process.

Because the use of hazardous materials in project construction and operation would be typical for recreation land uses, and because the project would be required to implement and comply with existing federal, state, and local hazardous materials regulations, CSP Standard and Special Project Requirements,

and DOM policies related to hazardous materials, the project would not create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials or from reasonably foreseeable upset and accident conditions. This impact would be **less than significant**.

Pier Rebuild Project

Implementation of the Alternative 2 pier rebuild project would result in removal of the existing pier and construction of a new pier at the eastern end of KBSRA. The pier would be constructed by a floating or amphibious barge during the winter season (October to May). Amphibious barges can be driven out of the lake to refuel equipment. If a floating barge is used, as would be needed for construction of the pier during a high-water year, fuel would be transferred in containers for refueling. As required by the Standard Project Requirements in Section 4.7, CSP would be required to prepare a SWPPP and SPCP, which includes a requirement for maintaining a spill kit, with containment vessel, on site. Thus, any barge used for construction would carry a spill containment kit.

Turbidity curtains would be used during piling removal and installation of new piles to minimize water quality impacts from suspended sediment. Turbidity curtains are a standard BMP requirement for construction or operational activity conducted in the backshore, foreshore, and some nearshore areas of Lake Tahoe (TRPA 2014:8-63). If drilling is required for pile installation, a caisson would be used to isolate the drilling site and protect water quality. (A caisson is a BMP that is defined as a retaining structure in which the water can be pumped out to create a dry work environment.) As further discussed in Impact 5.3.7-1 in Section 5.3.7, Hydrology and Water Quality, these marine BMPs are incorporated into the project design and would be enforced through the Clean Water Act Section 401 certification process.

For the reasons described above for the Alternative 2 General Plan revision, including implementation and compliance with relevant regulations, policies, and CSP Standard and Special Project Requirements, the Alternative 2 pier would not create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials or from reasonably foreseeable upset and accident conditions. This impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

Hazardous materials impacts from implementation of Alternative 3 would be similar to those of Alternative 2 because the park amenities for each alternative are substantially similar. For these reasons and those described above for Alternative 2, including implementation and compliance with relevant regulations, policies, and CSP Standard and Special Project Requirements, the Alternative 3 General Plan revision would not create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials or from reasonably foreseeable upset and accident conditions. This impact would be **less than significant**.

Pier Rebuild Project

Hazardous materials impacts resulting from the Alternative 3 pier rebuild would be similar to those of Alternative 2, described above, because the central pier alternative would include a similar-sized pier with the same associated components as proposed for the eastern pier. For these reasons as well as those described above for Alternative 2, including implementation and compliance with relevant regulations, policies, and CSP Standard and Special Project Requirements, the Alternative 3 central pier would not create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials or from reasonably foreseeable upset and accident conditions. This impact would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

Hazardous materials impacts from implementation of Alternative 4 would be similar to those of Alternative 2 because the park amenities for each alternative are substantially similar. For these reasons and those described above for Alternative 2, including implementation and compliance with relevant regulations, policies, and CSP Standard and Special Project Requirements, the Alternative 4 General Plan revision would not create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials or from reasonably foreseeable upset and accident conditions. This impact would be **less than significant**.

Pier Rebuild Project

Hazardous materials impacts resulting from the Alternative 3 pier rebuild would be similar to those of Alternative 2, described above, because the western pier alternative would include a similar-sized pier with the same associated components as proposed for the eastern pier. For these reasons as well as those described above for Alternative 2, including implementation and compliance with relevant regulations, policies, and CSP Standard and Special Project Requirements, the Alternative 4 western pier would not create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials or from reasonably foreseeable upset and accident conditions. This impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.6-2: Interfere with implementation of an emergency response plan or emergency evacuation plan

Implementation of Alternatives 2 through 4 for the General Plan revision and pier rebuild project would result in construction and operation of new facilities and improvements to circulation at KBSRA. The General Plan revision includes guidelines for coordinating with the local fire department, CSP Standard and Special Project Requirements pertaining to hazards, and DOM policies for emergency response. CSP Standard and Special Project Requirements pertaining to hazards requires that emergency access to the site be maintained and requires development of a Fire Safety Plan. The new facilities at KBSRA, including improvements to circulation and the new pier, would be required to meet minimum necessary fire protection and safety requirements identified in the Uniform Fire Code and Uniform Building Code as well as meet North Tahoe Fire Protection District (NTFPD) requirements for emergency access. For these reasons, operations at KBSRA would not interfere with emergency response plan or evacuation plan. Additionally, because of the short-term nature of the construction activities and access to KBSRA would be maintained during construction, they would not interfere with use of the North Tahoe Event Center as a potential emergency operations center and would not interfere with use of SR 28 as an evacuation route. Alternatives 2 through 4 would have a **less-than-significant** impact on interference with implementation of an emergency response plan or emergency evacuation plan. Because no action would occur under Alternative 1, the no project alternative, it would have **no impact**.

The Placer Operational Area East Side Emergency Evacuation Plan (Placer County 2015) was developed to help increase preparedness and facilitate the efficient and rapid evacuation of threatened communities in the far eastern end of the county in the event of an emergency, probably a forest fire or flood. The plan provides details regarding evacuation alerts, evacuation emergency medical services and public information, traffic control, transportation, communication, and animal services. State

Routes (SR) 28 and 267 comprise the major evacuation routes near KBSRA. The North Tahoe Event Center adjacent to KBSRA is identified as one of the five potential emergency operations centers in the Tahoe Basin portion of Placer County.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the No Project Alternative, there would be no interference with implementation of an emergency response plan or emergency evacuation plan and therefore there would be **no impact**.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Project Alternative, there would be no interference with implementation of an emergency response plan or emergency evacuation plan and therefore there would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Implementation of Alternative 2 would include reconfigured parking with improved on-site circulation, a new administrative office building, several new restrooms, new open lawn and stage/event areas, new east-west shared-use path through the park (i.e., waterfront promenade and sand wall) and other access improvements and features. The improvements at the entrance to the main parking lot would include improving circulation for emergency access at KBSRA. The existing emergency access point that includes removable bollards at the west end of KBSRA between the North Tahoe Event Center and Jason's would remain. A fire hydrant is located on the south side of North Lake Boulevard, northeast of the main parking lot. Implementation of the General Plan revision, including the new features, would not interfere with use of the North Tahoe Event Center as a potential emergency operations center and would not interfere with use of SR 28 as an evacuation route. As discussed in Section 5.3.10, Public Services and Utilities, emergency responders have indicated that current staffing and equipment is sufficient to serve the project (see Impact 5.3.10-7). Additionally, NTFPD has not identified any major concerns for emergency response to the project site (Conradson, pers. comm., 2017a). As part of the project, NTFPD would participate in the environmental review process by reviewing project design plans and recommending additional design features or other fire safety prevention measures, as necessary. New facilities would be constructed according to minimum necessary fire protection and safety requirements identified in the Uniform Fire Code and Uniform Building Code. Additionally, the State Fire Marshal would coordinate with the local fire authority, NTFPD, for water and fire access.

Construction of the project amenities would require access by workers and heavy equipment, delivery and stockpiling of materials, demolition and removal of debris, and other operations that, depending on the exact timing and nature of construction activities, could restrict vehicular access to and around the project site. However, the construction activities and staging areas would be located within KBSRA and would not be substantial (e.g., would not require large earthmovers or excavators); thus, impairment of emergency routes, traffic delays, or potentially preventing access to calls for service or delays in evacuation would be minimal. Because of the short-term nature of the construction activities and access to KBSRA would be maintained during construction, construction activities would not interfere with use of the North Tahoe Event Center as a potential emergency operations center and would not interfere with use of SR 28 as an evacuation route.

The General Plan revision requires implementation of the following goals and guidelines for maintaining emergency access and providing fire protection and emergency services:

- ◆ GOAL SD 11 and Guideline SD 11.1 state that KBSRA will maintain access for visitors between KBSRA and surrounding areas and the emergency access route will be retained.
- ◆ GOAL OP 2 and Guideline OP 2.1 state that CSP would enter into a partnership or agreement with NTFPD to clarify management responsibilities and share resources as it relates to emergency response.

The implementation of the following policies from DOM Chapter 0300 Natural Resources would also be required:

0314.1.20 Emergency Response

California State Parks has also adopted the procedures and processes of the Standardized Emergency Management System (SEMS) and the Incident Command System (ICS) for handling emergencies and disasters (see DOM Chapter 1500, Standardized Emergency Management System).

During construction activities, CSP would be required to implement the mandatory CSP Standard and Special Project Requirements (see Section 4.7). With respect to implementation of these requirements, CSP would enter into partnerships or agreements with other regional and local agencies, such as NTFPD to clarify management responsibilities, share resources, and achieve goals and guidelines. A partnership or agreement with NTFPD could address emergency response and other operational needs, such as access to KBSRA. Section 4.7 also includes a special project requirement that requires emergency access to the site be maintained and requires development of a Fire Safety Plan that addresses evacuation procedures and emergency calling procedures for the California Department of Forestry and Fire Protection (CAL FIRE) and NTFPD.

Because Alternative 2 would implement the above-mentioned protection measures (included in Section 4.7, CSP Standard and Special Project Requirements) and DOM policies, improve emergency access at KBSRA, emergency responders have confirmed their ability to serve Alternative 2 development, the project would be required to demonstrate compliance with fire safety requirements and receive fire district approval prior to receiving any TRPA permits, and construction would have minimal, short-term potential for interruption of an emergency response plan or evacuation plan, implementation of Alternative 2 would not interfere with emergency response or evacuation of the project site. This impact would be **less than significant**.

Pier Rebuild Project

Implementation of Alternative 2 would replace the existing pier with a new, longer pier at the eastern end of KBSRA and would include a new 10-foot wide lake access point with removable bollards that allows for access by human-powered watercraft and emergency vehicles. Removal of the existing pier and construction of the new pier would occur within approximately one year from TRPA permit issuance.

With implementation of Alternative 2, the existing boat ramp would be removed and replaced with a non-motorized beach access ramp. This ramp would be constructed to meet NTFPD minimum width requirements, which is 10 feet, for emergency access to the lake (Conradson, pers. comm., 2017b). Two 10-foot wide beach access points from the promenade, one located near the North Tahoe Event Center in the western portion of KBSRA and another in the eastern portion of KBSRA, could also be

utilized by emergency responders for access to the beach or lake. In 2016, TRPA revised the TRPA Code to allow for each jurisdiction around the lake to identify one Essential Public Safety Facility in the Shorezone (e.g., for launching emergency response watercraft, etc.), in addition to the U.S. Coast Guard facility located in Placer County. TRPA staff has indicated that, in general, most emergency responses on the lake are from marinas (McMahon, pers. comm., 2017). Additionally, there is a shortfall in emergency response capabilities along the east shore of the lake, but not near KBSRA. It is unlikely that KBSRA would be used as a primary location for launching an emergency response on the lake. Therefore, removal of the motorized boat launch as part of Alternative 2 would not be anticipated to interfere with emergency response on the lake.

For the reasons described above for the Alternative 2 General Plan revision, the Alternative 2 eastern pier would result in a **less-than-significant** impact on emergency access and interference with an emergency response plan or evacuation plan.

Alternative 3: Central Pier Alternative

General Plan Revision

Impacts on emergency access and interference with an emergency response plan or evacuation plan from implementation of Alternative 3 would be similar to Alternative 2 because the types of park amenities that would occur with Alternative 3 would have small refinements in location or size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 3 on emergency access and interference with an emergency response plan or evacuation plan would be **less than significant**.

Pier Rebuild Project

The Alternative 3 central pier would not result in substantial effects on emergency access and interference with an emergency response plan or evacuation plan like Alternative 2 described above, because the central pier alternative would include a similar sized pier with the same associated components as proposed for the eastern pier. For these reasons as well as those described above for the Alternative 2 General Plan revision, the Alternative 3 central pier would result in a **less-than-significant** impact on emergency access and interference with an emergency response plan or evacuation plan.

Alternative 4: Western Pier Alternative

General Plan Revision

Impacts on emergency access and interference with an emergency response plan or evacuation plan from implementation of Alternative 4 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 4 would have small refinements in location or size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 4 on emergency access and interference with an emergency response plan or evacuation plan would be **less than significant**.

Pier Rebuild Project

The Alternative 4 western pier would not result in substantial effects on emergency access and interference with an emergency response plan or evacuation plan like Alternative 2 described above, because the western pier alternative would include a similarly sized pier with the same associated components as proposed for the eastern pier. Additionally, Alternative 4 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 to provide emergency responders for access to

the lake, it would not provide access during all lake levels. Alternative 4 would not include an additional lake access point. For these reasons as well as those described above for the Alternative 2 General Plan revision, the Alternative 4 western pier would result in a **less-than-significant** impact on emergency access and interference with an emergency response plan or evacuation plan.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.6-3: Expose people or structures to wildland fire hazards

KBSRA is located within an area characterized by very high fire hazards. Implementation of General Plan revision and pier rebuild project associated with Alternatives 2 through 4 would result in minor increase in structures and visitors at KBSRA. Construction of new facilities at KBSRA would comply with state regulations, General Plan guidelines, DOM policies, and CSP Standard and Special Project Requirements for the reduction of fire risk, which include fire-resistant building materials, adequate water supply, emergency access, and fire protection measures during construction. Alternatives 2 through 4 would result in a **less-than-significant** impact with respect to exposure of people or structures to wildland fire hazards. Because no action would occur under Alternative 1, the no project alternative, it would have **no impact**.

The Tahoe Region is considered a “fire environment,” because of the climate, steep topography, and high level of available fuel. The threat of catastrophic fire is a major public concern. Hazardous fuel conditions coupled with a wildland urban interface/intermix situation have resulted in an increased likelihood of ignition and high-intensity wildfire.

CAL FIRE has mapped Fire Hazard Severity Zones (FHSZs) for the entire state, including the Tahoe Region. FHSZ delineations are based on an evaluation of fuels, fire history, terrain, housing density, and occurrence of severe fire weather and are intended to identify areas where urban fires could result in catastrophic losses. FHSZs are categorized as: Moderate, High, and Very High. KBSRA is primarily characterized by Very High FHSZ with a portion of the southwest end characterized by Moderate FHSZ (CAL FIRE 2007b), which are defined as follows (CAL FIRE 2007a:13 – 14):

- ◆ Moderate: Wildland areas supporting areas of typically low fire frequency and relatively modest fire behavior or developed/urbanized areas with a very high density of non-burnable surfaces including roadways, irrigated lawn/parks, and low total vegetation cover (greater than 30 percent) that is highly fragmented and low in flammability (e.g., irrigated, manicured, managed vegetation).
- ◆ Very High: Wildland areas that support high to extreme fire behavior or developed/urban areas with high vegetation density (greater than 70 percent cover) and associated high fuel continuity.



Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the No Project Alternative, there would be no new structures or anticipated increase in visitors that would be exposed to wildland fire hazards. There would be **no impact**.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Project Alternative, there would be no new structures or anticipated increase in visitors that would be exposed to wildland fire hazards. There would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

As described above, KBSRA is within a Very High FHSZ. However, KBSRA is currently developed with parking lots, paved sidewalks and picnic areas, and restrooms and is surrounded by developed uses and Lake Tahoe. Additionally, KBSRA contains minimal vegetation, limited to disturbed remnants of conifer forest dominated by Jeffrey pine and landscaping along North Lake Boulevard. An existing fire hydrant is located on the south side of North Lake Boulevard northeast of the main parking lot.

The General Plan revision is anticipated to result in a 10 percent or less increase in visitation at KBSRA, commensurate with the additional space for recreation features. Implementation of Alternative 2 would result in a new administrative office building, several new restrooms, new open lawn and stage/event areas, new east-west shared-use path through the park (i.e., waterfront promenade and sand wall) and other features. Alternative 2 would result in an increase in people and structures that could be exposed to wildland fire hazards.

Because the project site is already developed and is surrounded by urban uses, the potential for wildfire is lower than surrounding forested lands. Project construction has the potential to generate heat or sparks from construction vehicles or equipment activity that could ignite dry vegetation and cause a fire, but this would be typical of any construction project in the Tahoe Basin. Nothing about the General Plan revision improvements in particular would render them more fire-prone than any other development. Additionally, construction activities would be required to adhere to California Building Code standards for fire prevention during construction activities, which require that fire prevention practices be followed, and that basic fire suppression equipment be maintained within the development area at all times. Chapter 7A of the California Building Code specifies building materials and construction standards to be used in urban interface and wildland areas where there is an elevated threat of fire. Additionally, during construction activities, CSP's contractors would be required to implement the CSP Resource Services Standard and Special Project Requirements (see Section 4.7). The CSP Standard and Special Project Requirements related to reducing fire hazards during construction include developing a Fire Safety Plan that addresses evacuation procedures and emergency calling procedures for the CAL FIRE and NTFPD. Additionally, all heavy equipment would be required to include spark arrestors or turbo chargers (which eliminate sparks in exhaust) and have fire extinguishers on-site. Construction vehicles would park and store vehicles over a non-combustible surface to further reduce the chance of fire.

The General Plan requires implementation of the following goals and guidelines for maintaining emergency access and providing fire protection and emergency services:

- ◆ GOAL OP 2 and Guideline OP 2.1 state that CSP would enter into a partnership or agreement with NTFPD to clarify management responsibilities and share resources as it relates to emergency response.

The implementation of the following policies from DOM Chapter 0300 Natural Resources would also be required:

0314.1.20 Emergency Response

CSP has also adopted the procedures and processes of the SEMS and the ICS for handling emergencies and disasters (see DOM Chapter 1500, Standardized Emergency Management System).

Alternative 2 would increase the number people and structures (i.e., comfort stations and administrative building) at KBSRA as compared to existing conditions. The project would be subject to state regulations, General Plan guidelines, DOM policies, and CSP Standard and Special Project Requirements for the reduction of fire risk, which include fire-resistant building materials, fire resistant-landscaping, and adequate water supply and emergency access. Additionally, either CSP or its contractors would be required to consult with NTFPD to ensure that all fire protection measures (e.g., emergency access, adequate water supplies) required by existing regulations and policies are incorporated into the design of the new facilities. For these reasons, the potential exposure to very high fire hazards for an increase in structures and the number of people at KBSRA would be reduced. This impact would be **less than significant**.

Pier Rebuild Project

Implementation of the Alternative 2 eastern pier alternative would replace the existing pier with a longer pier. Similar to the new facilities that would be constructed with Alternative 2 General Plan revision, removal of the existing pier and construction of the eastern pier would be required to implement General Plan GOAL OP 2 and Guideline OP 2.1, DOM Policy 0313.2.1.1.1, and CSP Standard and Special Project Requirements related to maintaining emergency access, providing fire protection and emergency services, and reducing risk of fire. Additionally, the pier rebuild project would be required to comply with state and local regulations to minimize fire hazards. For these reasons and the reasons described above for the Alternative 2 General Plan revision, the potential exposure to very high fire hazards for an increase in the number of people or structures at KBSRA would be reduced. This impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

The potential for an increase in exposure of people or structures to wildland fires from implementation of Alternative 3 would be like Alternative 2 because the anticipated increase in visitors at KBSRA would be similar to Alternative 2 and the types of park amenities that would occur with Alternative 3 would have small refinements in location or size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 3 on the potential for an increase in exposure of people or structures to wildland fires would be **less than significant**.

Pier Rebuild Project

The potential for an increase in exposure of people or structures to wildland fires from implementation of Alternative 3 would be like Alternative 2 because the anticipated increase in visitors at KBSRA would be similar to Alternative 2 and the central pier alternative would include a similar sized pier with the same associated components as proposed for the eastern pier. For these reasons and those described

above for Alternative 2, the impact from implementation of Alternative 3 on the potential for an increase in exposure of people or structures to wildland fires would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

The potential for an increase in exposure of people or structures to wildland fires from implementation of Alternative 4 would be like Alternative 2 because the anticipated increase in visitors at KBSRA would be similar to Alternative 2 and the types of park amenities that would occur with Alternative 4 would have small refinements in location or size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 4 on the potential for an increase in exposure of people or structures to wildland fires would be **less than significant**.

Pier Rebuild Project

The potential for an increase in exposure of people or structures to wildland fires from implementation of Alternative 4 would be like Alternative 2 because the anticipated increase in visitors at KBSRA would be similar to Alternative 2 and the western pier alternative would include a similar sized pier with the same associated components as proposed for the eastern pier. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 4 on the potential for an increase in exposure of people or structures to wildland fires would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

The General Plan revision and pier rebuild project associated with Alternatives 2 through 4 would involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction and operation. Impacts related to these activities with these alternatives are considered less than significant because the storage, use, disposal, and transport of hazardous materials and accidental release of hazardous materials are extensively regulated by various federal, state, and local agencies, such as Cal/OSHA, DTSC, California Highway Patrol, and Caltrans. Construction of cumulative projects is also required to comply with the Clean Water Act Section 401 certification process, which requires that a SWPPP and SPCP be prepared before construction begins. It is assumed that those agencies and applicants involved with the cumulative projects would implement and comply with these existing hazardous materials regulations. Therefore, significant hazards to the public would not occur. Because these laws and regulations would also apply to each related cumulative project, this impact would be considered a **less-than-significant** cumulative impact.

The General Plan revision and the pier rebuild for Alternatives 2 through 4 would result in a minimal increase in number of structures and visitors at KBSRA, which is already developed and is surrounded by existing urban development but identified as an area of very high fire hazard severity zone (CAL FIRE 2007b). Implementation of these alternatives would also result in improvements in circulation and access at KBSRA that would be beneficial for fire protection and emergency services. Temporary construction activities at KBSRA could result in minor impairment of emergency routes or traffic delays associated with access by workers and heavy equipment to KBSRA and would be minor. Construction equipment used for implementation of Alternatives 2 through 4 are anticipated to be stored on-site to minimize the number of trips and potential traffic disruption that could be associated with heavy equipment entering and leaving the site during construction periods. These alternatives, and other nearby cumulative projects, would be required to meet federal, state, and local requirements for reduction of fire risk, such

as use of fire-resistant building materials, adequate water supply, emergency access, and fire protection measures during construction. Such regulations include constructing facilities according to fire protection and safety requirements identified in the Uniform Fire Code and Uniform Building Code. Cumulative projects would be subject to project-level analysis for potential interference of an emergency response plan or evacuation plan and exposure to wildland fire hazards and would be required to mitigate any adverse effects. For these reasons and because the General Plan revision and the pier rebuild project would not include uses that would increase ignition risk and is in an area with a local fire department that has not indicated any concerns regarding the project, implementation of any of these alternatives would not make a substantial contribution to wildland fire hazards such that there would be an increase in wildland fire hazards to people or structures, or interfere with emergency response or evacuation of the project site. Therefore, this would be a **less-than-significant** cumulative impact.

5.3.7 Hydrology and Water Quality

This section evaluates the potential effects on surface and groundwater quality from the implementation of the KBSRA General Plan revision and proposed pier rebuild project. The plan does not include the creation of housing, so risks resulting from placing housing within a 100-year flood zone are dismissed from this analysis and not discussed further. Additionally, the plan would not modify the volume of any surface water, therefore this issue is also dismissed. The 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 existing conditions and significant resource values related to hydrology and water quality are summarized under the header Hydrology and Water Quality, in Section 2.2.1, Physical Resources, in Chapter 2, Existing Conditions, of this document. A more detailed description of the existing hydrology and water 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 Kings Beach SRA 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 Hydrology and Water Quality in Section 4.4.1, Resource Management and Protection, in Chapter 4, The Plan.

Environmental Impacts and Mitigation Measures

Analysis Methodology

The evaluation of potential impacts to surface and groundwater quality is based on a review of documents pertaining to the Plan area, including: previous studies conducted for the Kings Beach watershed; environmental impact reports; background reports prepared for plans and projects in the vicinity; and published and unpublished hydrologic literature. The information obtained from these sources was reviewed and summarized to understand existing conditions and to identify potential environmental effects, based on the thresholds of significance. In determining the level of significance, the analysis assumes that implementation of the General Plan revision would comply with relevant federal, state, and local laws, regulations, and ordinances. In addition, this analysis assumes that all future projects implemented under the proposed General Plan revision (including the pier rebuild project) would comply with the CSP Standard Project Requirements for Hydrology and Water Quality included in Section 4.7, which are summarized below:

- ◆ Prior to the start of construction involving ground-disturbing activities, CSP will prepare and submit a storm water pollution prevention plan (SWPPP) to Lahontan Regional Water Quality Control Board (Lahontan RWQCB) in compliance with the Clean Water Act Section 401 certification process administered by Lahontan RWQCB. The SWPPP will identify temporary best management practices (BMPs) (e.g., tarping of any stockpiled materials or soil; use of silt fences, straw bale barriers, fiber rolls, etc.) and permanent BMPs (e.g., structural containment, preserving or planting of vegetation) for use in all construction areas to reduce or eliminate the discharge of soil, surface water runoff, and pollutants during all excavation, grading, trenching, repaving, or other ground-disturbing activities. The SWPPP will include BMPs for hazardous waste and contaminated soils management and a spill prevention and control plan, as appropriate.
- ◆ All heavy equipment parking, refueling, and service will be conducted within designated areas outside of the 100-year floodplain to avoid water course contamination.

- ◆ The project will comply with all applicable water quality standards as specified in the Lahontan RWQCB Basin Plan.
- ◆ All construction activities will be suspended during heavy precipitation events (i.e., at least 1/2 inch of precipitation in a 24-hour period) or when heavy precipitation events are forecast.
- ◆ If construction activities extend into the rainy season (October 15 through May 1) or if an unseasonal storm is anticipated, the site will be properly winterized by covering (tarping) any stockpiled materials or soils and by constructing silt fences, straw bale barriers, fiber rolls, or other structures around stockpiles and graded areas.
- ◆ Appropriate energy dissipaters will be installed at water discharge points, as appropriate.

Significance Criteria

Significance criteria for determining impacts to hydrology and water quality are summarized below.

CEQA Criteria

Based on Appendix G of the State CEQA Guidelines, impacts to hydrology and water quality would be significant if the project would:

- ◆ violate any water quality standards or waste discharge requirements;
- ◆ otherwise substantially degrade water quality;
- ◆ substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support the existing land uses or planned uses for which permits have been granted);
- ◆ substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion, siltation or flooding on- or off-site;
- ◆ create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage, infiltration, and treatment systems or facilities resulting in increased sources of pollutants reaching surface waters or causing detrimental flooding to property or infrastructure;
- ◆ place within a 100-year flood hazard area structures that would impede or redirect flood flows; or
- ◆ expose people or structures to a significant risk of loss, injury, or death involving flooding.

TRPA Criteria

The “Water Quality” criteria from the TRPA Initial Environmental Checklist were used to evaluate the hydrology and water quality impacts of the alternatives. Checklist items that are relevant to the proposed project have been included in the environmental analysis below. Impacts to hydrology and water quality would be significant if it would:

- ◆ change currents, or the course or direction of water movements;
- ◆ discharge into surface waters, or alter surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity;

- ◆ cause the potential discharge of contaminants to the groundwater or alter groundwater quality;
- ◆ change absorption rates, drainage patterns, or the rate and amount of surface water runoff so that a 20 year 1-hour storm runoff (approximately 1 inch per hour) cannot be contained on the site;
- ◆ alter the course or flow of 100-year flood waters; or
- ◆ expose people or property to water related hazards such as flooding and/or wave action from 100-year storm occurrence.

Environmental Impacts

Impact 5.3.7-1: Potential for adverse impacts to water quality

The General Plan revision would not alter existing laws and regulations that require erosion and sediment controls, implementation and maintenance of temporary construction BMPs, waste control measures, and management controls for stormwater runoff. Because regulatory protections are in place to minimize erosion and transport of sediment and other pollutants during construction, and appropriate project-specific mitigation measures would be defined to achieve TRPA, and Lahontan RWQCB standards such that necessary permits and approvals can be secured, construction related impacts for all alternatives would be reduced to a **less-than-significant** level.

The Alternatives 2, 3, and 4 pier rebuild component would require construction activities that would disturb and resuspend lakebed sediments and operation of heavy equipment in or in close proximity to Lake Tahoe where fuel or oil leaks could impair water quality. The marine BMPs incorporated into the project design and enforced through the 401 Certification process would protect surface and groundwater from construction impacts. Operation of the proposed rebuilt pier would involve a continuation of uses at the existing pier and boat ramp and would not alter water quality in the Kings Beach area. Therefore, the potential effects of the Alternatives 2, 3, and 4 pier rebuild project on surface and groundwater water quality would be a **less-than-significant**. Alternative 1 is the no-action alternative and would have **no impact** on water quality.

Alternative 1: No Project

General Plan Revision

Alternative 1 would be a continuation of the existing KBSRA General Development Plan and would not stimulate redevelopment projects within KBSRA, modify land uses, or result in an increase in construction activities within the park. For this reason, Alternative 1 would have **no impact** on water quality.

Pier Rebuild Project

Alternative 1 would not modify or move the existing Kings Beach Pier and would therefore have **no impact** on water quality resulting from pier construction or operation.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The proposed General Plan revision would allow for the future development of recreation facilities, administrative and sanitary facilities, and reconfiguring of the existing parking lot. Although this redevelopment would modify the location or size of facilities, the park would continue to operate the

same type of amenities including public parking, restroom facilities, walking paths, picnic areas, and support outdoor recreation. Each completed project would be required to comply with the same TRPA stormwater management protections applied to existing facilities, including infiltration BMPs (TRPA Code Section 60.4.6) and control of pollutant sources in addition to complying with the CSP Standard Project Requirements for Hydrology (see Section 4.7 and summarized in Analysis Methodology, above). Therefore, through implementation of CSP Standard Project Requirements for Hydrology and Water Quality included in the project and compliance with TRPA stormwater management protections, operation of the new and modified facilities proposed by the Alternative 2 General Plan revision would not change surface or groundwater conditions.

The construction activities associated with implementation of the General Plan revision may involve vegetation removal, grading, excavation, and temporary stockpiling of soils, all of which could expose soils to wind and water erosion and potentially transport pollutants into Lake Tahoe during storm events. In addition, construction activities would involve on-site staging of construction equipment and vehicles, and construction-related vehicle trips. Fuels and other chemicals could be accidentally spilled or leaked, or could otherwise be discharged into drainage systems or to Lake Tahoe.

Although construction activities have the potential to adversely affect surface and groundwater quality, all projects would be required to comply with stringent TRPA and Lahontan RWQCB water quality protections. Chapters 33 and 60 of the TRPA Code of Ordinances require the installation of temporary construction BMPs as a condition of project approval. BMPs would be required to meet the installation and use standards described in the TRPA Best Management Practices Handbook (TRPA 2014). BMPs would include, but not be limited to:

- ◆ Temporary erosion control BMPs (e.g., silt fencing, fiber rolls, drain inlet protection) installed and maintained to prevent the transport of earthen materials and other waste from a construction site.
- ◆ Tree protection fencing installed around trees that are to remain in place throughout construction.
- ◆ Mandatory pre-grading inspections by regulatory agencies at the construction site to ensure proper installation of the temporary construction BMPs prior to the initiation of construction activities.
- ◆ Requirements to limit the area and extent of all excavation to avoid unnecessary soil disturbance.
- ◆ Requirements to winterize construction sites by October 15 to reduce the water quality impacts associated with winter weather. Winterization typically includes installation of erosion controls, vegetation protection, removal of construction debris, site stabilization, and other measures.
- ◆ Dust control measures to prevent transport of materials from a project site into any surface water or drainage course. Dust control measures typically include sweeping, watering, covering of disturbed soils and stockpiles, vehicle washing, and other measures.
- ◆ Requirements to remove surplus or waste earthen materials from project sites, as well as requirements to stabilize and protect stockpiled material.
- ◆ Stabilization of drainage swales disturbed by construction activities with appropriate soil stabilization measures (e.g., revegetation, rock armoring) to prevent erosion.

- ◆ Temporary BMPs to capture and contain pollutants from fueling operations, fuel storage areas, and other areas used for the storage of hydrocarbon-based materials. These may include spill prevention plans and other measures.
- ◆ Temporary BMPs to prevent the tracking of earthen materials and other waste materials from project sites to offsite locations, including stabilized points of entry/exit for construction vehicles/equipment, designated vehicle/equipment rinse stations, and sweeping operations.
- ◆ Regular inspection and maintenance of temporary BMPs.

As described in the analysis methodology, Lahontan RWQCB requires the development of a project-specific SWPPP prior to the start of any project involving ground disturbance. The SWPPP would describe the site, construction activities, proposed erosion and sediment controls, means of waste disposal, maintenance requirements for temporary BMPs, and management controls for potential pollutant sources other than stormwater runoff. In addition, the SWPPP would require the implementation of a hazardous materials spill response plan, which would reduce the potential of directly and indirectly effecting water quality through construction-related hazardous material spills. Water quality controls outlined in a SWPPP must be consistent with TRPA requirements (including Chapter 4.5 of the TRPA BMP Handbook), the federal antidegradation policy, and maintain designated beneficial uses of Lake Tahoe.

All future projects implemented under the proposed General Plan revision would be subject to existing laws and regulations requiring erosion and sediment controls, implementation and maintenance of permanent and temporary BMPs to capture, detain, and infiltrate or otherwise control and properly manage stormwater runoff, and prevent water quality degradation. Because regulatory protections are in place to minimize erosion and transport of sediment and other pollutants, and appropriate project-specific mitigation measures would be defined to secure necessary permits and approvals, construction related impacts would be minimized. Therefore, this impact would be **less than significant**.

Pier Rebuild Project

The Alternative 2 pier rebuild project would require the removal of the existing pier deck and pilings, pile driving or drilling and placement of 33 piles (13 for the fixed section and 14 for the floating pier section), and the construction of the new pier deck. The removal of the existing pier and the construction of rebuilt pier would be completed using heavy equipment operated from or mounted on a floating or amphibious barge.

Piling removal and placement of new pier pilings would disturb the lakebed and re-suspend sediments resulting in a temporary decrease in water quality within the project vicinity. These sediment levels could exceed TRPA and Lahontan RWQCB pollutant concentration limits for surface waters (a limit of 250 mg/L for suspended sediment). This temporary impact to water quality would be minimized through project design and the water quality protections required through the Clean Water Act Section 401 certification process administered by Lahontan RWQCB. As described in Section 5.1.2, General Plan Revision and Pier Rebuild Project Alternatives, the pier rebuild component would protect water quality through the incorporation of marine construction BMPs and described in the TRPA BMP Handbook (TRPA 2014). These BMPs and any others that Lahontan RWQCB determines to be necessary would be included as conditions of the 401 Water Quality Certification. Through this process the project applicant must demonstrate to Lahontan RWQCB that the discharge will not violate the applicable water quality standards. Anticipated BMPs include but are not limited to the following:

- ◆ Caissons, sleeves, or turbidity curtains must be used during removal or placement of pilings to prevent re-suspension and discharge of lakebed sediments. The control measures will be inspected and maintained as necessary to prevent discharge of suspended sediment outside the containment area.
- ◆ No debris, cement, concrete (of wash water therefrom), oil or petroleum products must enter into or be placed where it may be washed from the project site by rainfall or runoff into surface waters. When operations are complete, any excess material must be removed from the project area and from any areas adjacent to the work area where such material may be transported into surface waters.
- ◆ The applicant must prevent discharge from any materials foreign to the lake water from the implementation of this project, including discharge of welding metals during the welding process.
- ◆ Construction equipment must be monitored for leaks, and removed from service if necessary to protect water quality.
- ◆ An emergency spill kit must be at the project site at all times.

Operation of the rebuilt pier would not alter water quality in the area. The uses proposed for the pier are the same as those currently taking place at the existing pier (during high water years) and boat ramp. Non-motorized boating will continue to be supported, temporary mooring spaces for the purposes of loading and unloading passengers will be included for motorized watercraft however no overnight mooring would be allowed and no fueling facilities would be included. An increase in localized motorized boat traffic in the area could increase the potential for a fuel spill or leak, however the potential localized increased watercraft activity at the pier would be partially offset by the closure and removal of the existing boat ramp.

In summary, the proposed pier rebuild project would require construction activities that would disturb and resuspend lakebed sediments and operation of heavy equipment in or in close proximity to Lake Tahoe. These activities have the potential to adversely affect water quality. However, the marine BMPs incorporated into the project design and enforced through the Lahontan RWQCB 401 certification process would protect surface and groundwater from construction impacts. Operation of the proposed pier rebuild project would involve a continuation of uses at the existing pier and boat ramp and would not alter water quality in the Kings Beach area. Therefore, the potential effects of the Alternative 2 pier rebuild project on surface and groundwater water quality would be a **less-than-significant** impact.

Alternative 3: Central Pier Alternative

General Plan Revision

The potential water quality effects of Alternative 3 would be the same as those discussed for Alternative 2 above. For the same reasons, future construction and operation of the facilities implemented through the Alternative 3 General Plan revision would have a **less-than-significant** impact on water quality.

Pier Rebuild Project

The Alternative 3 pier rebuild project is similar in nature to Alternative 2, however the floating dock section of Alternative 3 would require 6 fewer piles than Alternative 2. This would result in a decrease in the area of lakebed disturbance and the volume of sediments resuspend during construction activities. As with Alternative 2, the potential water quality impacts of pier construction would be

minimized through implementation of marine construction BMPs incorporated into project design and enforced through the 401 certification process. Operation of the proposed pier would involve a continuation of uses at the existing pier and boat ramp and would not alter water quality in the Kings Beach area. Therefore, the potential effects of the Alternative 3 pier rebuild project on surface and groundwater water quality would be a **less-than-significant** impact.

Alternative 4: Western Pier Alternative

General Plan Revision

The potential water quality effects of Alternative 4 would be the same as those discussed for Alternative 2 above. For the same reasons, future construction and operation of the facilities implemented through the Alternative 4 General Plan revision would have a **less-than-significant** impact on water quality.

Pier Rebuild Project

The Alternative 4 pier rebuild project is similar in nature to Alternative 2, however the floating dock section of Alternative 4 would require 6 additional piles when compared to Alternative 2. This would result in a slight increase in the amount of lakebed disturbance and the volume of sediments resuspended during construction activities. As with Alternative 2, the potential water quality impacts of pier construction would be minimized through implementation of marine construction BMPs incorporated into project design and enforced through the 401 certification process. Operation of the proposed pier would involve a continuation of uses at the existing pier and boat ramp and would not alter water quality in the Kings Beach area. Therefore, the potential effects of the Alternative 4 pier rebuild project on surface and groundwater water quality would be a **less-than-significant** impact.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.7-2: Alteration of lake currents and littoral processes from rebuilding and expanding the existing pier

With the exception of the pier rebuild project, which is evaluated separately, the General Plan revision alternatives do not include components lakeward of the Lake Tahoe high water line. Therefore, this impact analysis discussion addresses only the impacts of the pier rebuild project alternatives. Changes to structures in the shore zone can affect lake currents and wave energy, which can ultimately lead to shoreline erosion or creation of new sandbars. As required by the TRPA Code, a comprehensive littoral effects analysis was completed for the project. This analysis found that because the Kings Beach area experiences very little littoral drift and because the rebuilt pier in Alternative 2, 3, and 4 would reduce wave energy by less than 10 percent, the proposed project would have only minor effects on the lake currents and sediment transport along the Lake Tahoe shoreline. Therefore, the pier rebuild project in Alternatives 2, 3, and 4 would have a **less-than-significant** impact on lake currents and littoral processes. Alternative 1 is the no-action alternative and would have **no impact** on lake currents and littoral processes.

This impact analysis is limited to evaluation of the pier rebuild project alternatives.

Wind, waves, and lake currents all act together to continuously rearrange sands and sediment in Lake Tahoe. Wind produces currents and waves, but also picks up and moves sediment on beaches. Wave action stirs up sediment from the lake bottom and deposits it on beaches or in offshore sandbars. Waves approaching a beach at an angle and returning perpendicular or at a slight down shore angle create zigzag motion which drives currents parallel to the shoreline (longshore currents). Littoral drift refers to the movement of sand grains in the direction of the longshore current. Changes to any of

these factors can result in changes to shoreline accretion or erosion patterns such as the creation of new sandbars or loss of beach area. Loss of beach area is important from a water quality standpoint because beaches provide a dissipation area for wave energy and protect adjacent bluffs from erosion.

Alternative 1: No Project

Pier Rebuild Project

Alternative 1 would not include relocation and expansion of the Kings Beach Pier. The existing pier would remain in place and no changes in water currents or littoral processes would occur. Therefore, Alternative 1 would have **no impact** on lake currents, water movement, or other littoral processes.

Alternative 2: Eastern Pier Alternative (Proposed Project)

Pier Rebuild Project

TRPA Code Subsection 84.5.2 sets the design standards for piers relevant to littoral processes. These standards were adopted to reflect the results of studies that establish criteria to avoid significant littoral drift impacts. However, TRPA Code Subsection 84.9.4 allows deviation from the standards for multiple-use facilities. The proposed pier is a multiple-use facility and deviates from some of the design standards specified in Subsection 84.5.2, where allowable.

The existing pier is approximately 207 feet long and 10 feet wide. It has wood decking supported by 26 paired, outer-edge steel pilings. The pier is functional for boat access only when the water surface elevation is above 6,227 feet. At lake levels of 6,223 feet and lower the pier is entirely out of the water. The total area of the deck is approximately 3,151 square feet.

As part of Alternative 2, the existing pier would be removed and rebuilt at a location approximately 500 feet to the east (Exhibits 4.6-5 through 4.6-8). The proposed multiple-use pier would not be for commercial use. No sewage, boat lift, or refueling facilities are proposed in conjunction with the pier. The proposed pier would extend approximately 488 feet into the lake from the high-water line (natural rim; elevation 6229.1 feet Lake Tahoe Datum), approximately 281 feet longer than the existing pier and would include a 215-foot floating pier section. The average deck width would be 12 feet however the floating section of the pier would include a 53-foot-long section with a low-freeboard dock for total width of 24 feet (see Exhibit 4.6-6), and would end with a platform approximately 56 feet long by 36 feet wide. The proposed pier would include an estimated 27 steel pilings for the fixed and floating sections with a single piling in the center of each 20 to 24-foot section. The proposed pilings would be 16 inches in diameter. The proposed pier would extend beyond the TRPA-designated pierhead line (elevation 6219.0 feet Lake Tahoe Datum). The total area of the deck is proposed to be 8,121 square feet.

Because the rebuilt pier would qualify as a multiple-use pier, it would be eligible for deviation from the Design and Construction Standards listed in TRPA Code Subsection 84.5.2, Subparagraph (A). Specifically, the multiple-use pier could deviate from the 10-foot pier width standard specified in Code Subsection 84.5.2(A) to allow for a wider catwalk and the 36-foot-wide end portion of the floating segment. Construction staging for the pier removal and rebuilding would be provided by a barge on the lake. In accordance with standard pier construction BMPs, a turbidity curtain or caisson would be used during piling removal or drilling activities.

The TRPA shorezone partial permitting program requires an analysis of potential project impacts on littoral drift. Prior studies assumed that if the floating section of a pier is less than $\frac{1}{2}$ the wave length, effects were minor. Also, the 2004 TRPA Shorezone EIS concluded that a reduction of wave transmission of 30 percent or more would be adverse (Cardno 2016). A technical analysis of the

effects of the conceptual design on wind, wave, and littoral drift patterns was completed in 2016 (Cardno 2016). In this analysis, coastal engineers provided literature review, technical calculations, and wave modeling for the project at the conceptual design level, addressing the Eastern and Central pier locations. Additional analysis was completed for the Western pier location in 2017 (Cardno 2017). The littoral analysis considered recent empirical data for wind and waves, and modeling of Lake Tahoe general circulation and nearshore circulation and processes. In addition, geology, beach/foreshore geomorphology, sediments sources and delivery, wave action, and nearshore and backshore conditions were considered.

Kings Beach is exposed to a long wind fetch (the area of lake surface that the wind blows over in a constant direction) and diverse wind fields. The beach is in a bay that has a large, roughly triangular shaped shallow shelf. This shelf and beach configuration prevents immediate loss of beach sediments by preventing most deep-water waves from reaching the shoreline. Additionally, the contours of the lake bottom tend to bend the waves so their approach is nearly perpendicular to the shore. Because of this, a relatively low volume of sediment is transported laterally along the beach (Cardno 2016).

Wave Attenuation

Cardno estimated the potential reduction in wave height and energy (wave attenuation) using two separate numerical formulas (the Macagno and Weigel formulas). These formulas conservatively estimate that the proposed pier would have a wave attenuation range between 7 and 18 percent, with stronger attenuation in shallow water where the pier draft would be larger (Cardno 2016). These formulas are conservative because they do not consider the effect of waves diffracting around the end of the pier and the actual wave attenuation would be less than calculated. To better account for wave diffraction, Cardno also performed numerical modeling using the Simulating Waves Nearshore (SWAN) model developed by the Delft University of Technology in the Netherlands. This model includes wave refraction, shoaling, non-linear wave to wave interaction, a full directional spectral description of wave propagation, bed friction, white capping, currents, and wave breaking. The SWAN model is used extensively for shallow water wave modeling in nearshore environments (CSDMS 2017).

Under existing conditions, the SWAN model indicates that wave attenuation of roughly 10 percent occurs in a narrow area along the shoreline east of the pier and near the Coon Street boat ramp, for a total of approximately 0.52 acre. Exhibit 5.3.7-1 shows the modeling results for wave attenuation under existing conditions.

For the Alternative 2 pier rebuild component, the simulated wave height attenuation is also approximately 10 percent, however the projected area of attenuation totals 1.11 acre. The attenuation area is directly under the pier and between the pier and the shoreline to the north (see Exhibit 5.3.7-2).

The Alternative 2 pier rebuild project would roughly double the area of wave attenuation when compared to the existing pier. However, both the existing pier and the proposed Alternative 2 pier rebuild project would reduce wave energy in these areas by less than ten percent. In fact, point data modeling for the area of wave attenuation created by the Alternative 2 pier rebuild project indicates that, when compared to the existing pier, the maximum reduction in wave height would be 4.2 percent and the maximum change in wave direction relative to true north would be 0.2 percent (Cardno 2016). This potential wave attenuation would be much lower than the 30 percent reduction needed to create a significant impact as proposed by previous TRPA studies (Cardno 2016).

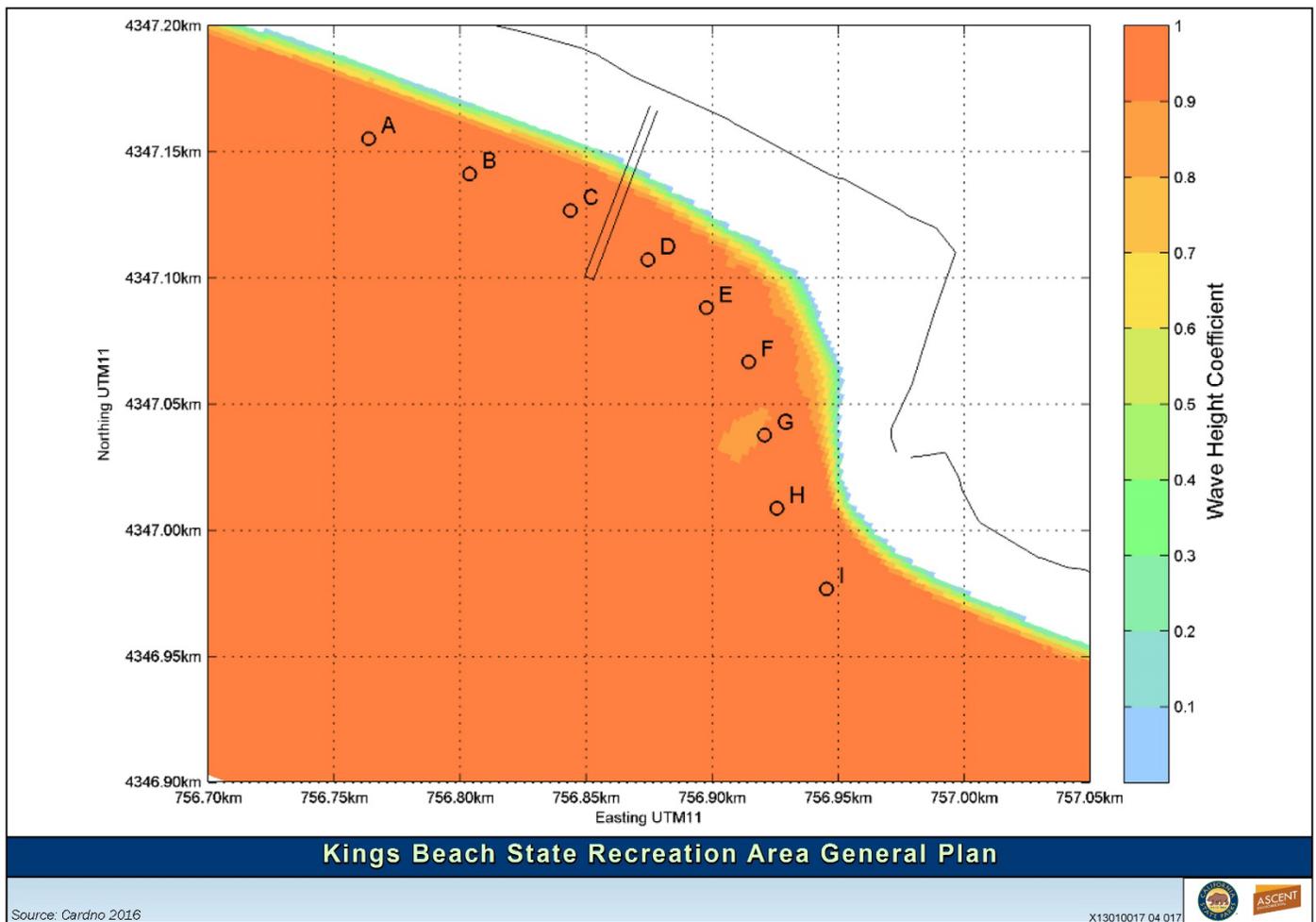


Exhibit 5.3.7-1 Wave Height Attenuation at KBSRA under Existing Conditions

Commonly, the implementation of piers and floating structures are expected to create changes to the shoreline over time. Because waves lose some energy as they move through the pier, sediment drops out sooner and is deposited on the leeward (shoreward facing) side of the structure with a corresponding decrease in sediment deposition (or a beach recession area) in the region down-drift. In the case of the proposed pier, both the magnitude of the areas littoral drift and the potential wave attenuation created by the pier are minor. Because of this, changes to the Lake Tahoe shoreline are expected to be minimal.

Impact Summary

Shorezone projects in the Lake Tahoe Basin are required to consider their potential effect on lake currents and littoral processes. In the past, projects assumed that a floating structure that is more than one half the wave length and which results in wave attenuation of more than 30 percent would create

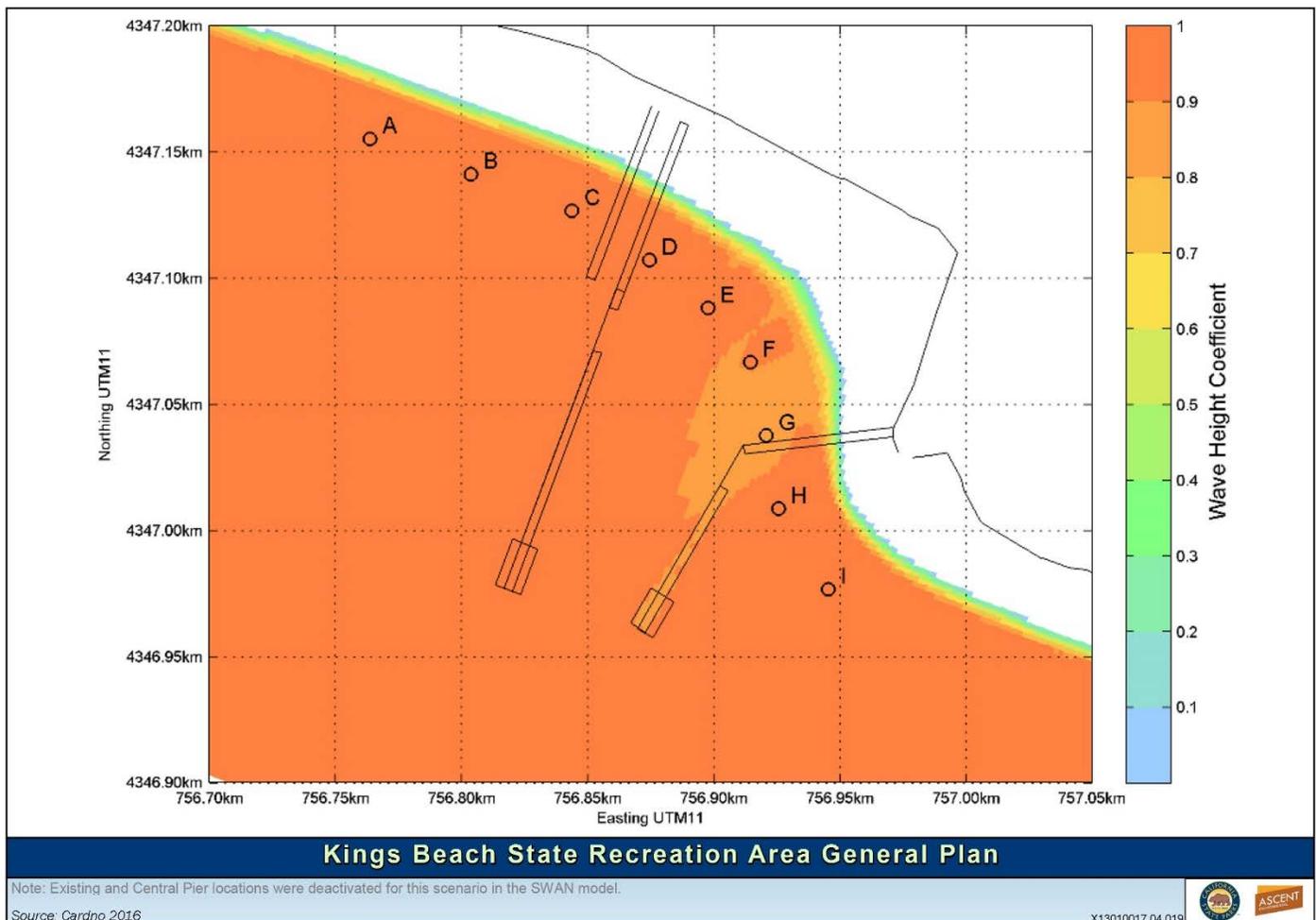


Exhibit 5.3.7-2 Wave Height Attenuation at KBSRA under Alternative 2 (Eastern) Pier

a significant impact. For the pier rebuild project a comprehensive analysis of effects to littoral process analysis was completed which considered empirical data for wind and waves, modeling of Lake Tahoe general circulation and nearshore circulation and processes, geology, beach/foreshore geomorphology, sediment sources and delivery, wave action, and nearshore and backshore conditions. These parameters were used in technical calculations and wave modeling to evaluate the potential for the proposed pier to alter the existing wave dissipation and sediment transport characteristics of the site. This analysis found that because the Kings Beach area experiences very little littoral drift and because the proposed pier would reduce wave energy by less than 10 percent, the proposed project would have only minor effects on the Lake Tahoe shoreline. Therefore, Alternative 2 would have a **less-than-significant** impact on lake currents and littoral processes.

Alternative 3: Central Pier Alternative

Pier Rebuild Project

The Alternative 3 pier rebuild project would be similar to Alternative 2, however the Alternative 3 pier would be rebuilt in the same location as the existing pier, would have a floating section 114 feet longer than the Alternative 2 floating section and a total length of 601 feet, and would have a total surface area of 9,904 square feet (1,783 square feet larger than Alternative 2 and 6,753 square feet larger than the existing pier).

As discussed for Alternative 2, a comprehensive analysis of effects to littoral process analysis was completed for the project. This analysis found that the pier would create wave attenuation on the order to 10 percent in a 1.06-acre area directly under the pier and between the pier and the shoreline as shown in Exhibit 5.3.7-3. The area of attenuation would be 0.05 acre less than the area projected for Alternative 2 and 0.54 acre larger than the area created by the existing pier. When compared to the existing pier, the maximum reduction in wave height would be 9.1 percent, which is 4.9 percent more than the reduction modeled for Alternative 2. Also, the maximum change in wave direction relative to true north would be 0.3 percent, which is 0.1 percent more than Alternative 2 (Cardno 2016).



Exhibit 5.3.7-3 Wave Height Attenuation at KBSRA under Alternative 3 Pier

The Alternative 3 pier would create a slightly larger reduction in wave height, but would have a slightly smaller area of wave attenuation when compared to Alternative 2. As discussed above, the littoral effects analysis found that because the Kings Beach area experiences very little littoral drift and because the Alternative 3 pier would reduce wave energy by less than 10 percent, the project would have only minor effects on the Lake Tahoe shoreline. Therefore, Alternative 3 would have a **less-than-significant** impact on lake currents and littoral processes.

Alternative 4: Western Pier Alternative

Pier Rebuild Project

The Alternative 4 pier rebuild project would be similar to Alternative 2, however the Alternative 4 pier would be rebuilt approximately 800 feet to the west of the existing pier, would have a floating section 114 feet longer than the Alternative 2 floating section and a total length of 704 feet, and would

have a total surface area of 11,220 square feet (3,099 square feet larger than Alternative 2 and 8,069 square feet larger than the existing pier).

As discussed for Alternative 2, a comprehensive analysis of effects to littoral process analysis was completed for the project. This analysis found that the pier would expand an existing area of wave attenuation in the roughly 2-acre area directly under the pier and approximately 175 feet on either side (see Exhibit 5.3.7-4). Approximately 1 acre of this area currently experiences wave attenuation on the order of 10 percent. Alternative 4 would add roughly 1 acre of new 10 percent wave attenuation and would increase the existing wave attenuation at the lakeward end of the proposed pier from 10 percent to approximately 20 percent (Cardno 2017). Despite this reduction in wave energy near the end of the pier, modeled effects at eight shoreline locations are minor (generally less than 3 percent) due to wave diffraction around the piers. The maximum change in wave direction relative to true north would be 0.3 percent, which is 0.1 percent more than Alternative 2 (Cardno 2017).

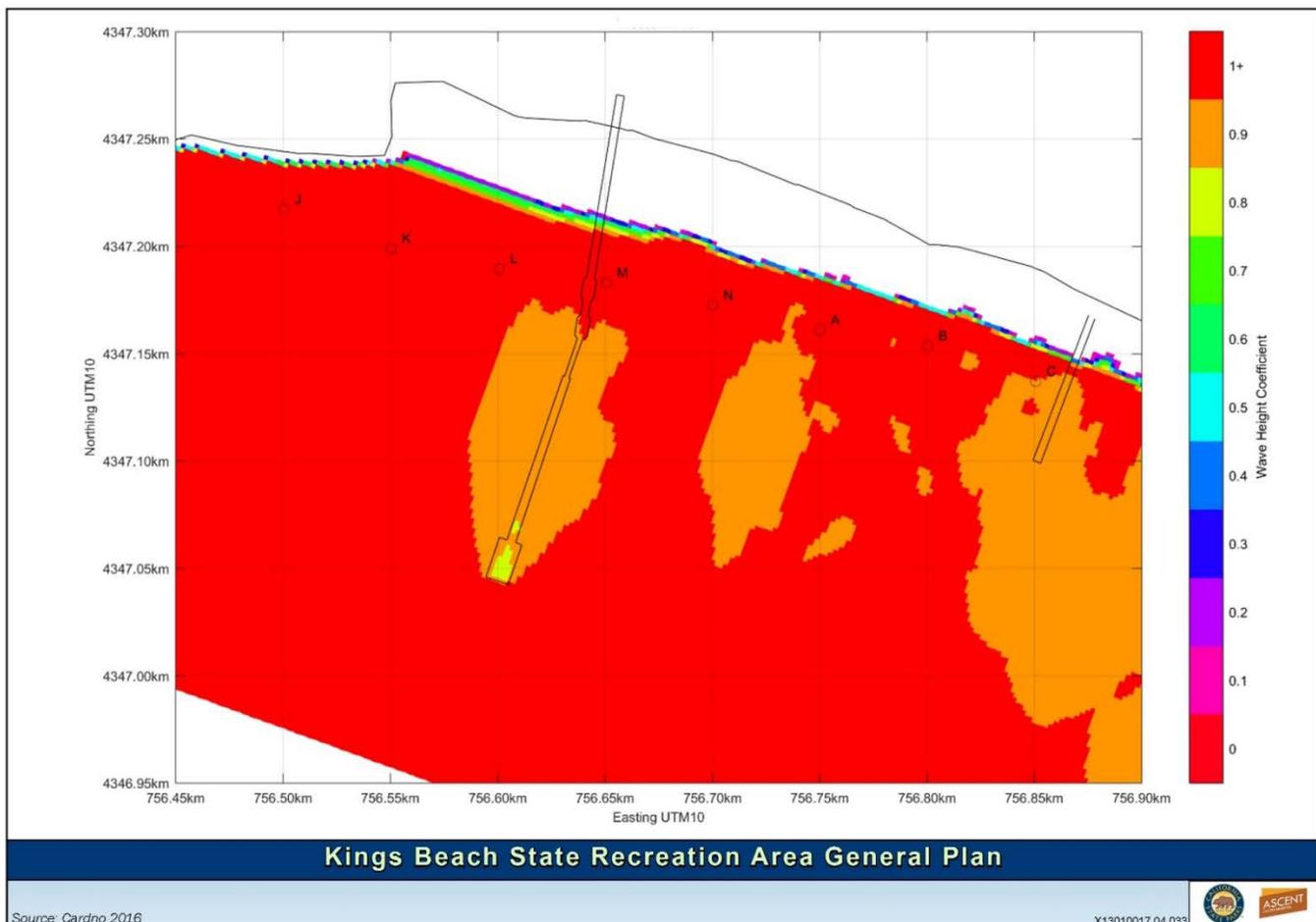


Exhibit 5.3.7-4 Wave Height Attenuation at KBSRA under Alternative 4 Pier

The Alternative 4 pier would create a slightly larger reduction in wave height and a larger area of wave attenuation when compared to Alternative 2. As discussed above, the littoral effects analysis found that because the Kings Beach area experiences very little littoral drift, because the Alternative 4 pier would reduce wave energy by approximately 10 percent, and because waves are allowed to diffract around the proposed pier, the project would have only minor effects on the Lake Tahoe shoreline. Therefore, Alternative 4 would have a **less-than-significant** impact on lake currents and littoral processes.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.7-3: Potential for increase in stormwater runoff, impacts to existing drainage systems, or alteration of drainage patterns

Implementation of General Plan revision associated with Alternatives 2, 3, and 4 would result in an overall decrease in impervious surfaces within the park. In addition, all future redevelopment projects would be required to meet TRPA stormwater infiltration requirements (TRPA Code Section 60.4.6) and conduct project-level analysis of effects to drainage patterns and drainage systems. Therefore, implementation of Alternatives 2, 3, and 4 would have a **less-than-significant** impact.

The pier rebuild component of Alternatives 2, 3, and 4 is located within Lake Tahoe and on the shore immediately adjacent and would have **no impact** on stormwater runoff volumes entering Lake Tahoe or existing drainage systems. Alternative 1 is the no project alternative and as such would have **no impact** on runoff volumes or drainage patterns.

Alternative 1: No Project

General Plan Revision

Alternative 1 would be a continuation of the existing KBSRA General Development Plan and would not result in redevelopment projects within KBSRA or result in an increase in construction activities within the park. For this reason, Alternative 1 would have **no impact** on water quality resulting from construction activities.

Pier Rebuild Project

Alternative 1 would not modify or move the existing Kings Beach Pier and would therefore have **no impact** on stormwater runoff, drainage systems, or drainage patterns.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The peak flow and volume of stormwater runoff generated from an area is affected by development through conversion of vegetated and otherwise pervious surfaces to impervious surfaces (e.g., roads, roofs, driveways, walkways) and by the development of drainage systems that connect these impervious surfaces to streams or other water bodies. In this way, development can increase the rate and volume of runoff and eliminate storage and infiltration that would naturally occur along drainage paths.

The Alternative 2 General Plan revision would support redevelopment of park amenities as described in Chapter 4, The Plan. This redevelopment would reduce overall impervious surfaces by 7,572 square feet and a would have a corresponding decrease in the volume of stormwater generated on the site. Additionally, all future projects approved under the proposed General Plan revision would be required to meet existing BMP standards (Section 60.4.6 of the TRPA Code) to control potential increases in stormwater runoff and pollutant loading.

Implementation of the proposed General Plan revision would result in an overall decrease in impervious surfaces within the park, in addition all future redevelopment projects would be required to meet TRPA stormwater infiltration requirements (TRPA Code Section 60.4.6) and conduct project level analysis of effects to drainage patterns and drainage systems. Therefore, implementation of Alternative 2 would have a **less-than-significant** impact.

Pier Rebuild Project

The existing and proposed pier sites are located within and on the shore of Lake Tahoe. Rain falling on the existing or proposed pier would move directly into the lake or into highly permeable beach sands. As such, the proposed pier rebuild project would not increase stormwater runoff volume or contribute to downstream flooding. Additionally, the project would not modify existing drainage systems or drainage pathways. Therefore, the Alternative 2 pier rebuild project would have **no impact** on stormwater runoff, drainage systems, or drainage patterns.

Alternative 3: Central Pier Alternative

General Plan Revision

Alternative 3 would increase the overall area of impervious surfaces within KBSRA by 4,705 square feet (an increase of 12, 277 square feet when compared to Alternative 2). This increase would be accompanied by a corresponding increase in stormwater runoff volume. However, all future projects stemming from the Alternative 3 General Plan revision would be required to meet existing BMP standards (Section 60.4.6 of the TRPA Code) to control potential increases in stormwater runoff and pollutant loading. This would include the use of stormwater infiltration BMPs where appropriate and source control (stabilization and protection of potential sediment sources) in other areas.

Implementation of the proposed General Plan revision would result in an overall increase in impervious surfaces within the park, however, all future redevelopment projects would be required to meet TRPA stormwater infiltration requirements (TRPA Code Section 60.4.6) and conduct project level analysis of effects to drainage patterns and drainage systems. Therefore, implementation of Alternative 3 would have a **less-than-significant** impact.

Pier Rebuild Project

The potential effects of the Alternative 3 pier rebuild project are the same as those discussed above for Alternative 2. For the same reasons, the Alternative 3 pier rebuild project would have **no impact** on stormwater runoff, drainage systems, or drainage patterns.

Alternative 4: Western Pier Alternative

General Plan Revision

The Alternative 4 effects to stormwater runoff would be similar to those discussed for Alternative 2 above. Alternative 4 would reduce overall impervious surfaces by 3,839 square feet (3,733 square feet less than Alternative 2) and would have a corresponding decrease in the volume of stormwater generated on the site. For the same reasons, future construction activities resulting from the implementation of Alternative 4 would have a **less-than-significant** impact on water quality.

Pier Rebuild Project

The potential effects of the Alternative 4 pier rebuild project are the same as those discussed above for Alternative 2. For the same reasons, the Alternative 4 pier rebuild project would have **no impact** on stormwater runoff, drainage systems, or drainage patterns.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.7-4: Exposure to flood hazards

Portions of KBSRA area within the FEMA-designated 100-year flood zone. However, project-level analysis of all future development projects within the Area Plan would ensure that any future development or redevelopment projects do not result in exposure of people or property to flood hazards. Analysis is also required for 100-year floodplain impacts of non-FEMA designated drainageways during future development project environmental review. The Placer County Flood Damage Prevention Ordinance requirements would apply to projects on parcels within the 100-year flood zone or floodway, other than those on state lands. Although TRPA Code Section 35.4.2 prohibits additional development, grading or filling of lands within the 100-year floodplain, exceptions are provided for outdoor recreation facilities. The potential for these projects to expose people or property to flood risk would be minimized through implementation the CSP Special Project Requirements (Section 4.7) and Guideline RES 7.3, which states, “Evaluate future facility designs to ensure that facility improvements do not aggravate or cause flooding problems on an adjacent property, create risks to visitors, and/or cause an increase in the 100-year flood elevation.” Therefore, implementation of the Alternatives 2, 3, and 4 General Plan revision would have a **less-than-significant** impact. Alternative 1 is the no-action alternative. Because it would not alter the development plan for KBSRA, Alternative 1 would have **no impact** relative to flood hazards. The pier rebuild project would increase the volume of pier materials located below the ordinary high-water level of Lake Tahoe, however this increase would have **no impact** on the high-water level of Lake Tahoe, therefore pier rebuild component of Alternatives 1, 2, 3, and 4 would have no impact relative to flood hazards.

Alternative 1: No Project

General Plan Revision

Alternative 1 would be a continuation of the existing KBSRA General Plan. Relative to the existing KBSRA General Plan, there would be no changes in the types or placement of structures or recreational activities that take place within flood hazard areas. For this reason, Alternative 1 would have **no impact** on exposure of people or structures to flood hazards.

Pier Rebuild Project

Alternative 1 would not include changes to the existing King Beach Pier. Therefore, this alternative would have **no impact** on exposure of people or structure to flood hazards due to the rebuilding of the pier.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The General Plan revision in Alternative 2 would include changes to facilities in the portions of KBSRA that are within flood hazard areas (refer to Hydrology and Water Quality under Section 2.2.1, Physical Resources). These facilities include the proposed waterfront promenade, the access ramp from the promenade to the beach, and the pedestrian western entry point. Although TRPA Code Section 35.4.2 prohibits additional development, grading or filling of lands within the 100-year floodplain, exceptions are provided for outdoor recreation facilities. The potential for these projects to expose people or property to flood risk would be minimized through implementation of CSP Special Project Requirements (see Section 4.7) and Guideline RES 7.3, which states, “Evaluate future facility designs to ensure that facility improvements do not aggravate or cause flooding problems on an adjacent property, create risks to visitors, and/or cause an increase in the 100-year flood elevation.”

Although Alternative 2 would propose development changes in areas that may be within the 100-year flood zone, implementation of CSP Special Project Requirements and Guideline RES 7.3 (Section 4.7) would ensure that specific facility improvement projects do not result in exposure of people or property to flood hazards. Therefore, implementation of Alternative 2 would have a **less-than-significant** impact relative to flooding.

Pier Rebuild Project

Portions of the proposed pier (such as the pilings and the floating pier section) would, by their very nature, be located below the ordinary high-water mark or Lake Tahoe. However, due to the volume of the pier components relative to the volume of Lake Tahoe and because the upper limit of Lake Tahoe is controlled by the Tahoe City dam, the extension of the pier and the additional piling would have **no impact** on the Lake Tahoe 100-year floodplain. The potential effects of the proposed pier rebuild project on lake currents and sediment transport are discussed in Impact 5.3.7-2.

Alternative 3: Central Pier Alternative

General Plan Revision

The potential for the Alternative 3 General Plan revision to expose people or property to flood hazards would be the same as those discussed for Alternative 2 above. Although Alternative 3 would propose development changes in areas that may be within the 100-year flood zone, implementation of CSP Special Project Requirements and Guideline RES 7.3 would ensure that specific facility improvement projects do not result in exposure of people or property to flood hazards. Therefore, implementation of Alternative 3 would have a **less-than-significant** impact relative to flooding.

Pier Rebuild Project

As discussed for Alternative 2, portions of the Alternative 3 pier rebuild project would be located below the ordinary high-water mark or Lake Tahoe. However, due to the volume of the pier components relative to the volume of Lake Tahoe and dam controls and Tahoe City, the extension of the pier would have **no impact** on the Lake Tahoe 100-year floodplain. The potential effects of the Alternative 3 Pier on lake currents and sediment transport are discussed in Impact 5.3.7-2.

Alternative 4: Western Pier Alternative

General Plan Revision

The potential water quality effects of Alternative 4 resulting from future construction activities would be the same as those discussed for Alternative 2 above. For the same reasons, future construction activities resulting from the implementation of Alternative 4 would have a **less-than-significant** impact on water quality.

Pier Rebuild Project

As discussed for Alternative 2, portions of the Alternative 4 pier rebuild project would be located below the ordinary high-water mark or Lake Tahoe. However, due to the volume of the pier components relative to the volume of Lake Tahoe and dam controls at Tahoe City, the extension of the pier would have **no impact** on the Lake Tahoe 100-year floodplain. The potential effects of the Alternative 4 pier rebuild project on lake currents and sediment transport are discussed in Impact 5.3.7-2.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Cumulative impacts to hydrology and water quality are considered in the context of the Lake Tahoe Basin watershed and the adjacent shorezone. Historic activities such as logging, milling, mining, and grazing within the Tahoe Basin Watershed combined with runoff from urban and recreational developments, have degraded the water quality of the tributaries to Lake Tahoe and the Truckee River, resulting in an existing cumulative adverse condition. The Lake Tahoe total maximum daily load was developed to address sediment levels and Placer County has developed a stormwater management program. Additionally, numerous publicly and privately funded projects have been implemented to restore disturbed areas of the watershed and reduce this adverse condition.

As described above, development and construction activities that could result in erosion, release of pollutants, or encroachment within floodplain or sensitive habitats are highly regulated by TRPA and Lahontan RWQCB. The cumulative projects and the proposed General Plan revision and pier rebuild project would be required to comply with Lahontan RWQCB National Pollutant Discharge Elimination System permit conditions that include preparation of a SWPPP and a Hazardous Materials Spill Response Plan. In addition, projects within the Lake Tahoe Basin would be required to meet TRPA's construction site BMP standards. All projects must demonstrate projection of existing storm drain systems and flow volumes. Additionally, the potential for future cumulative projects to expose people or properties to flood risks would be minimized through compliance with the Placer County Flood Damage Prevention Regulations (Section 15.52, Placer County Code). Finally, any future structures below the high-water line of Lake Tahoe (including the proposed pier rebuild project, the Coast Guard Pier Expansion, and the North Tahoe Marina Expansion) would be required to conduct an analysis of the projects impacts on littoral drift and lake currents (TRPA Code Section 80.4).

Because the Proposed Project and all other projects within the Lake Tahoe Watershed would be required to comply with applicable protective regulations, the potential for the proposed General Plan revision and pier rebuild project to adversely affect water quality conditions **would not be cumulatively considerable**.

5.3.8 Land Use and Planning

This section analyzes and evaluates the potential impacts of the proposed Kings Beach General Plan and Pier Rebuild Project on existing land uses, and the potential for conflict with local and regional plans. The effects resulting from General Plan implementation under all of the alternatives described herein would be the same regardless of ownership of the Plaza parcels.

KBSRA is located within the Kings Beach Town Center Core Area, as designated by the Placer County Tahoe Basin Area Plan (Area Plan). As the only state recreation area in the Tahoe Basin located within a town center setting, it provides central access to the shorezone and to Lake Tahoe for the public. Planning and management of KBSRA is coordinated by CSP in relation to the community of Kings Beach. Existing conditions and significant resource values related to land use and planning at KBSRA are comprehensively summarized in Section 2.1.1, Regional Land Use, and Section 2.3.1, Park Land Uses, in Chapter 2, Existing Conditions, of this document. Planning assumptions that have guided development of the plan and pier rebuild project are described in Section 3.1, Planning Assumptions. A more detailed description of the existing land use and planning framework for KBSRA is included in the Resources Inventory and Existing Conditions Report, available on the Kings Beach SRA webpage (www.parks.ca.gov/PlanKBSRA) and at CSP and TRPA offices during normal business hours through consideration of project approval. The Resources Inventory and Existing Conditions Report provides the regional and local land use and planning context in Section 2.1, Regional Land Uses, and in Section 3.1, KBSRA Land Use.

Certain issues have been eliminated from further investigation in this EIR/EIS where it has been determined that they would either have no impact, or where the threshold is not applicable to this project. As discussed in Section 5.3.2, Biological Resources, none of the action alternatives would be constructed within an area covered under an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state conservation plan. Therefore, project implementation would not conflict with the provisions of an adopted conservation plan and this issue is not evaluated further. The plan and pier rebuild project would not physically divide an established community; nor would the plan provide for land uses that are not allowed under the Regional Plan and Area Plan. There are no land uses under the current General Plan that are non-conforming with the Area Plan, and therefore the General Plan revision would not expand or intensify a non-conforming use.

Environmental Impacts and Mitigation Measures

Analysis Methodology

KBSRA is designated Mixed-Use Waterfront Recreation (MU-WREC) in the Area Plan (Placer County 2017:135). The uses proposed as part of the General Plan revision and pier rebuild alternatives are permissible uses in the MU-WREC subdistrict. Permissible public uses in the North Tahoe East MU-WREC subdistrict include cultural facilities and publicly-owned assembly and entertainment facilities. The proposed stage and event lawn meet the definition of these types of facilities.

CEQA and TRPA guidelines require a discussion of inconsistencies or conflicts between a proposed undertaking and local and regional plan goals and policies. To this end, the Plan was reviewed vis a vis the TRPA Regional Plan (Regional Plan), and the Area Plan (Appendix A).

Significance Criteria

Significance criteria for determining impacts to land use and planning are summarized below.

CEQA Criteria

Based on Appendix G of the State CEQA Guidelines, impacts to land use and planning would be significant if the project would:

- ◆ conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or minimizing an environmental effect.

TRPA Criteria

The land use criteria from the TRPA Initial Environmental Checklist were used to evaluate the land use and planning impacts of the alternatives. Impacts to land use and planning would be significant if the project would:

- ◆ propose uses inconsistent with applicable goals and policies of the TRPA Regional Plan, and the applicable Area Plan.

Environmental Impacts

Impact 5.3.8-1: Consistency with adopted plans and policies

Land uses in KBSRA are regulated by the TRPA Regional Plan and Code of Ordinances, and the Area Plan. The Alternative 2 General Plan revision and pier rebuild project would be consistent the applicable policies of the Regional Plan and Area Plan and, thus, would have **no impact** related to consistency with adopted plans and policies. Alternatives 3 and 4 would be consistent with both the Regional Plan and Area Plan in that they would further the goal of providing public shorezone and recreational access, and meet the goals and policies of both the Regional Plan and Area Plan to that end. Alternatives 3 and 4 would not be consistent with some policies related to protecting or improving views of scenic resources. The environmental effects of these policy conflicts are addressed in Section 5.3.12, Scenic Resources. A conflict with a specific policy alone does not constitute an inconsistency with a land use plan. Consequently, Alternatives 3 and 4 would have a **less-than-significant** impact related to consistency with adopted plans and policies.

Alternative 1, the No Project alternative, would not implement a revision to the adopted 1980 General Development Plan, nor would it involve construction of upland improvements or a rebuilt pier; therefore, Alternative 1 would not stimulate land use changes and would be a continuation of existing land use patterns. Alternative 1 would not be consistent with policies related to scenic resources, transit, and enhancing recreation resources. The environmental effects of these policy conflicts are addressed in Section 5.3.11, Recreation; Section 5.3.12, Scenic Resources; and Section 5.3.13, Transportation and Circulation. Alternative 1 would not preclude the adoption of future plans, or consistency with existing plans and policies. For these reasons and because a conflict with a specific policy alone does not constitute an inconsistency with a land use plan, Alternative 1 would have a **less-than-significant** impact on land use consistency with adopted plans and policies. Analysis of consistency of the alternatives with the Area Plan and the TRPA Regional Plan are provided in Appendix A.

The Regional Plan provides for the development, utilization, and management of recreational resources within the Tahoe region. Regional Plan recreational goals and policies are shaped by a guiding recreational policy statement set forth by the TRPA Governing Board, which is echoed in the Area Plan and below:

It shall be the policy of the TRPA Governing Body in development of the Regional Plan to preserve and enhance the high quality recreational experience including preservation of high-quality undeveloped shorezone and other natural areas. In developing the Regional Plan, the

staff and Governing Body shall consider provisions for additional access, where lawful and feasible, to the shorezone and high quality undeveloped areas for low density recreational uses.

It shall be the policy of the TRPA Governing Body in development of the Regional Plan to establish and ensure a fair share of the total Region capacity for outdoor recreation is available to the general public.

Individual policies of both the Regional Plan and Area Plan are intended to advance development of recreational facilities such that they keep pace with public demand and remain high on the development priority list, and ensure that the quality of recreational experience is maintained throughout the region. The proposed General Plan revision and pier rebuild project aims to implement the recreation goals and policies of the Regional Plan, advancing the following goals:

- ◆ Provide for the appropriate type, location, and rate of development of outdoor recreational uses.
- ◆ Provide for the efficient use of outdoor recreation resources.

Alternative 1: No Project

General Plan Revision

Alternative I would be a continuation of the existing KBSRA 1980 General Development Plan and would not stimulate land use changes or construction of new recreational amenities. As shown in Appendix A, Regional Plan and Area Plan policies would generally not be applicable to maintenance of existing facilities and amenities. Alternative I would not be consistent with policies related to parking along scenic corridors (Regional Plan Policy R-4.9), transit operations (Regional Plan Policy R-4.10), and enhancing recreation facilities (Area Plan Policy R-P-2). The environmental effects of these policy conflicts are addressed in Section 5.3.11, Recreation; Section 5.3.12, Scenic Resources; and Section 5.3.13, Transportation and Circulation.

Future plan revisions for the park would be possible under this alternative, and would be developed and implemented consistent the Regional Plan and Area Plan. Although Alternative I would not be consistent with several policies from the Regional Plan and Area Plan, conflict with a specific policy alone does not constitute an inconsistency with a land use plan. Consequently, Alternative I would have a **less-than-significant** impact related to consistency with adopted plans and policies.

Pier Rebuild Project

Because there would be no improvements with Alternative I, the existing pier would remain in place as it currently is, and there would be no corresponding change to land use. Alternative I related to the pier would not be consistent with policies related to transit operations (e.g., water taxi; Regional Plan Policy R-4.10) and enhancing recreation facilities (Area Plan Policy R-P-2). The environmental effects of these policy conflicts are addressed in Section 5.3.11, Recreation, and Section 5.3.13, Transportation and Circulation. Although Alternative I would not be consistent with several policies from the Regional Plan and Area Plan, conflict with a specific policy alone does not constitute an inconsistency with a land use plan. Consequently, Alternative I would have a **less-than-significant** impact related to consistency with adopted plans and policies.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

As described above, land use plans that guide implementation of the General Plan revision and pier rebuild project are guided by the TRPA policy statement that stresses public access to the shorezone,

where lawful and feasible, and regional fair share access to outdoor recreation for the public. The General Plan revision proposed under Alternative 2 meets this main objective, and is consistent with relevant, specific policies of the Regional Plan and Area Plan (Appendix A). Alternative 2 would involve removal of the existing boat ramp on the eastern side of the park, which would eliminate public access to Lake Tahoe for motorized watercraft; however, the extended rebuilt pier would be designed to accommodate motorized watercraft access from Lake Tahoe to KBSRA from the legal lake level limit of 6,229.1 feet Lake Tahoe Datum to 6,017 feet Lake Tahoe datum, thereby extending the frequency in which motorized watercraft are able to access KBSRA. Alternative 2 provides a mix of recreational facilities intended to enhance public pedestrian access to the beach and shorezone, as well as a reconfigured pier design to increase public access onto the lake. Additionally, the existing boat ramp does not reach the water during periods of low water, which can prevent use for long periods of time, making the facility ineffective. On balance, the General Plan revision would allow better access to Lake Tahoe for different types of lake users. Moreover, Alternative 2 would be consistent with and would implement relevant Regional Plan and Area Plan policies; therefore, there would be **no impact** related to consistency with adopted plans and policies.

Pier Rebuild Project

The pier rebuild project under Alternative 2 would situate a new pier at the eastern end of KBSRA. The conceptual design shows the pier extending 488 feet into the lake, 281 feet longer than the existing pier. The pier would feature a 213-foot fixed section, which would transition to an 80-foot gangway, followed by a 215-foot floating section intended to reach to the lake during periods of low water. As discussed above, this pier design would provide public access to Lake Tahoe at a broader range of lake level conditions, meeting the general recreational objectives of the Regional Plan and Area Plan. The pier design and location are consistent with the policies of the Regional Plan and Area Plan (Appendix A) and therefore there would be **no impact** related to consistency with adopted plans and policies from implementation of the eastern pier alternative.

Alternative 3: Central Pier Alternative

General Plan Revision

As described above, land use plans that guide implementation of the Alternative 3 General Plan revision and pier rebuild project are guided by the TRPA policy statement that stresses public access to the shorezone, where lawful and feasible, and regional fair share access to outdoor recreation for the public. The General Plan revision proposed under Alternative 3 meets this main objective, and like Alternative 2, would be broadly consistent with plan policies (Appendix A). Alternative 3 would also involve removal of the boat launch, but, as with Alternative 2, implementation of the General Plan revision under Alternative 3 would provide enhanced access to the lake for a wider range of users on a more consistent basis. Alternative 3 would not be consistent with a policy related to parking along scenic corridors because this alternative would increase parking along a scenic corridor (Regional Plan Policy R-4.9). The environmental effects of this policy conflict are addressed in Section 5.3.12, Scenic Resources. Mitigation is incorporated to avoid or minimize significant effects to the extent feasible.

A conflict with a specific policy alone does not constitute an inconsistency with a land use plan. Therefore, because the Alternative 3 General Plan revision would be consistent with and would implement the overarching land use plans (i.e., Regional Plan and Area Plan), it would not be in conflict with existing land use plans. Therefore, policy impacts associated with implementation of the General Plan revision under Alternative 3 would be **less than significant**.

Pier Rebuild Project

The central pier alternative places the pier at the center of KBSRA, in the location of the existing pier. The conceptual design shows the pier extending 601 feet into the lake, 394 feet longer than the existing pier. The pier begins with a 212-foot fixed section, transitioning to an 80-foot gangway, followed by a 329-foot floating section intended to provide access to the lake at water levels between the legal lake limit of 6,229.1 feet Lake Tahoe Datum and 6,017 feet Lake Tahoe datum. This pier design would provide consistent public access to Lake Tahoe, meeting the general recreational objectives of the Regional Plan and Area Plan. The pier design and location are mostly consistent with the policies of the Regional Plan and Area Plan, with the exception that the pier design would compromise TRPA scenic shoreline thresholds (see Section 5.3.12, Scenic Resources, and Appendix A). The central pier would not be consistent with policies related to reducing the scenic quality of a scenic resource (Regional Plan Policy CD-1.1), visual amenities (Regional Plan Policy SZ-1.7), and protecting and enhancing existing scenic views (Area Plan Policy SR-P-4). The environmental effects of these policy conflicts are addressed in Section 5.3.12, Scenic Resources. Mitigation is incorporated to avoid or minimize significant effects to the extent feasible.

A conflict with a specific policy alone does not constitute an inconsistency with a land use plan. For this reason and because the pier design meets the overarching objectives of the Regional Plan and Area Plan and is consistent with all other relevant policies, impacts to land use associated with the Central Pier Alternative are **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

As described above, land use plans that guide implementation of the General Plan revision and pier rebuild project are guided by the TRPA policy statement that stresses public access to the shoreline, where lawful and feasible, and regional fair share access to outdoor recreation for the public. The General Plan revision proposed under Alternative 4 meets this main objective, and would be consistent with plan policies (Appendix A). Therefore, policy impacts associated with implementation of the General Plan revision with implementation of Alternative 4 would be **less than significant**.

Pier Rebuild Project

The western pier alternative would locate the pier at the western end of KBSRA, near the location of the event center and closer to private residences to the west of the park and the motorized boat ramp on the eastern end of the park would be extended to increase the time in which the boat ramp is accessible. The conceptual design shows the pier extending 704 feet into the lake, 497 feet longer than the existing pier. The pier begins with a landward 320-foot fixed section, transitioning to an 80-foot-long gangway, followed by a 329-foot-long floating section intended to provide access to the lake at water levels between the legal lake limit of 6,229.1 feet Lake Tahoe Datum and 6,017 feet Lake Tahoe datum. Like the pier under Alternatives 2 and 3, this pier design would provide consistent public access to Lake Tahoe, meeting the general recreational objectives of the Regional Plan and Area Plan. The pier design and location are mostly consistent with the policies of the Regional Plan and Area Plan, with the exception that the pier design would compromise TRPA scenic shoreline thresholds, and Area Plan noise limits (see Section 5.3.12, Scenic Resources, Section 5.3.9, Noise, and Appendix A). The western pier would not be consistent with policies related to reducing the scenic quality of a scenic resource (Regional Plan Policy CD-1.1), visual amenities (Regional Plan Policy SZ-1.7), and protecting and enhancing existing scenic views (Area Plan Policy SR-P-4). The environmental effects of these policy conflicts are addressed in Section 5.3.12, Scenic Resources. Mitigation is incorporated to avoid or minimize significant effects to the extent feasible.

A conflict with a specific policy alone does not constitute an inconsistency with a land use plan. For this reason and because the pier design meets the overarching objectives of the Regional Plan and Area Plan and is consistent with all other relevant policies, impacts to land use associated with the western pier alternative are **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

There are no cumulative impacts associated with land use and planning for the project.

5.3.9 Noise

This section evaluates short-term construction noise and vibration, long-term increases in traffic-generated noise, and long-term increases in noise from the proposed project components associated with implementation of the four General Plan revision and pier rebuild project alternatives. The effects resulting from General Plan implementation under all of the alternatives described herein would be the same regardless of ownership of the Plaza parcels.

Vibration from construction activities has the potential to impact nearby structures and result in human disturbance if vibration activities are prolonged and disturb people while sleeping. Pile driving is one of the greatest sources of vibration associated with equipment used during construction of a project (FTA 2006). Construction associated with the General Plan revision components would be minimal and would not involve pile driving and therefore not further addressed in this EIR/EIS. Pile driving would occur during pier construction and is evaluated for the pier rebuild project only. No long-term sources of vibration (e.g., transit lines, major roadways) are proposed and therefore operational-related vibration is also not discussed further.

The Truckee-Tahoe Airport is the closest airport to KBSRA, located approximately 7 miles northwest of the KBSRA boundary. KBSRA is not located within the Truckee-Tahoe Airport Land Use Compatibility Plan (Foothill Airport Land Use Commission 2004), the land use plan of any other airport, or within the vicinity of an active private airstrip where people would be exposed to excessive aircraft-generated noise levels. Noise exposure from airports is dismissed from further discussion.

None of the General Plan revision alternatives would result in the addition of any residential or tourist accommodation units. Therefore, no new receptors would be placed in areas where existing noise levels may (or may not) exceed 60 A-weighted decibels (dBA) Community Noise Equivalent Level (CNEL). Effects of existing noise levels on the project are not discussed further.

A detailed description of the existing noise environment and summary of pertinent regulations are included in the Resources Inventory and Existing Conditions Report, available on the Kings Beach SRA webpage (www.parks.ca.gov/PlanKBSRA) and at CSP and TRPA offices during normal business hours through consideration of project approval.

Environmental Impacts and Mitigation Measures

Analysis Methodology

Construction Noise and Vibration

The potential for construction activities associated with implementation of the General Plan revision alternatives and pier rebuild alternatives (depending on the alternative) to expose receptors to excessive noise levels was assessed based on the types of construction equipment that would be used, the noise levels typically generated by those types of equipment, and the proximity of construction activity to existing receptors. Reference noise levels for typical construction equipment were based on Federal Highway Administration documentation (FHWA 2006). Vibration levels associated with pile driving for pier pilings were evaluated in accordance with Caltrans and Federal Transit Administration (FTA) guidance and reference vibration levels (Caltrans 2013 and FTA 2006).

Operational Noise (Traffic and Stationary)

Long-term traffic noise levels resulting from increases in project-generated traffic volumes were assessed by modeling affected roadway segments in the project area (i.e., State Route [SR] 28 and SR 267). Traffic noise modeling was consistent with the FHWA Traffic Noise Model Version 2.5 and used traffic volume data developed for this project (Fehr and Peers 2017a, b). The traffic noise analysis is based on the reference noise levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, and default ground attenuation factors. Project-generated traffic was assumed to occur primarily during the daytime hours and would consist largely of passenger vehicles. Note that the traffic noise modeling does not account for any natural or human-made shielding (e.g., the presence of trees or solid backyard fences or walls) and, consequently, estimates worst-case noise exposure levels. For complete details on model inputs, outputs, and assumptions see the technical analysis materials available on the project web page (www.parks.ca.gov/PlanKBSRA).

Long-term increases in noise associated with new or expanded stationary sources was evaluated for each alternative based on available reference noise levels for various sources (e.g., outdoor activity areas, motorized watercraft) and their proximity to existing sensitive land uses. Approximate locations of all new noise sources were based on conceptual diagrams for each alternative included in Chapter 4 and Chapter 5.

Significance Criteria

Significance criteria for determining impacts related to noise are summarized below.

CEQA Criteria

Based on Appendix G of the State CEQA Guidelines, noise and vibration impacts would be significant if the project would result in:

- ◆ exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- ◆ exposure of persons to or generation of excessive ground vibration or ground noise levels;
- ◆ a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
- ◆ a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

TRPA Criteria

The noise and vibration criteria from the TRPA Initial Environmental Checklist were used to evaluate the noise and vibration impacts of the alternatives. Impacts from noise and vibration would be significant if the project would:

- ◆ increase existing noise levels beyond those permitted in the Placer County Tahoe Basin Area Plan (Area Plan) of 55 dBA L_{eq} during daytime hours of 7:00 a.m. to 7:00 p.m.; or if traffic noise levels would exceed the applicable TRPA noise threshold standards, expressed in CNEL, including the land use-based TRPA Regional Plan Cumulative Noise Level thresholds and the contour-based transportation corridor noise thresholds;

- ◆ cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project (i.e., a long-term noise level increase of 3 dBA or greater at a noise-sensitive receptor such as a residence, hotel, or tourist accommodation unit);
- ◆ cause a substantial temporary (or periodic) increase in ambient noise levels in the project vicinity above levels existing without the project (i.e., construction noise levels that impact noise-sensitive receptors during non-daylight hours, for which construction noise is not exempt from TRPA's noise standards;
- ◆ expose existing structures to levels of ground vibration that could result in structural damage (i.e., exceedance of Caltrans's recommended level of 0.2 in/sec PPV with respect to the prevention of structural damage for normal buildings or FTA's maximum acceptable level of 80 VdB with respect to negative human response for residential uses and tourist accommodation units or 83 VdB at commercial land uses [i.e., annoyance]); or
- ◆ place uses that would generate an incompatible noise level in close proximity to existing residential or tourist accommodation uses.

Environmental Impacts

Impact 5.3.9-1: Short-term construction noise

Construction of the proposed General Plan revision and pier rebuild project components alternatives would involve similar construction activities and associated noise levels. The General Plan build out would occur slowly over 20 years or more, and proposed components would require relatively minor construction (e.g., a natural play area, shared-use path, small buildings or structures). Construction of the pier would occur over three years and, unlike the other General Plan components, construction would involve pile driving. Nonetheless, construction-related noise would be temporary and intermittent and would occur throughout a large site, not affecting any one area for prolonged periods of time. Further, TRPA requirements are in place that limit construction activities to the less-sensitive times of the day (8:00 a.m. to 6:30 p.m.), reducing noise exposure to sensitive land uses. This impact would be **less than significant**. Alternative 1 is the no project alternative and therefore would not result in any increases in short-term construction noise. There would be **no impact**.

Alternative 1: No Project

General Plan Revision

This alternative would involve no physical improvements at the site and therefore no temporary increases in noise associated with construction. The existing 1980 General Development Plan would remain unchanged and no upland or pier improvements would be made. Operation and maintenance of existing facilities would continue. There would be **no impact**.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the no action alternative, there would be no temporary increases in noise associated with construction and there would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The General Plan revision would involve demolition of some existing structures and construction of proposed features over a 20-year planning period. General Plan features would be constructed in phases as soon as financing is available for each component, but within a 20-year planning period.

Structures to be constructed include a two-stall comfort station and seven-stall comfort station, park entrance kiosk, a concessionaire building, an administrative office, and boat storage unit. Additional features that would require minimal construction activities include a proposed lawn area, a nature play area, an outdoor event stage, beach access ramps, and a new shared-use path that would extend much of the length of the property. Construction activities would include demolition of existing outdated buildings, light earth movement for lawn and structure pad leveling, and paving for new sidewalks, paths, and the event stage. In addition to these features, a rebuilt pier extending 488 feet into the lake would be constructed under this alternative. Pier construction noise is evaluated below.

Construction equipment would vary day-to-day depending on the project phase and the activities occurring, but would involve operation of all-terrain heavy-duty diesel equipment. Typical noise levels generated by various types of construction equipment likely to be used are identified in Table 5.3.9-1 below.

Type of Equipment	Noise Level (dBA L _{max}) at 50 feet
Pile Driving (for pier construction)	95
Excavator	85
Dozer	85
Loader	80
Backhoe	80
Paver	85
Pickup Trucks	55

Source: FHWA 2006

The site preparation phase typically generates the most substantial noise levels because the on-site equipment associated with grading, compacting, and excavation are the noisiest. Because construction of the various General Plan components may overlap, it is likely that site preparation activities could occur simultaneously with building construction and/or demolition activities at any given location on the site.

Therefore, it was assumed that noise from site preparation and building construction activities could combine, representing a worst-case scenario. However, it is important to note that due to the relatively large site and variable spacing of individual components, construction equipment would generally be spaced throughout the site, not combining to affect any one location substantially. Thus, estimated noise levels would be considered conservative.

Existing sensitive receptors include residential land uses located adjacent to the North Tahoe Event Center and a residential neighborhood along Brockway Vista Avenue. Construction of the sand wall and waterfront promenade would occur near the existing residences west of the North Tahoe Event Center and construction of the administrative building and comfort stalls would occur near the

residences along Brockway Vista Avenue. Based on the information provided in Table 5.3.9-1, and accounting for typical usage factors of individual pieces of equipment and activity types, worst-case construction-related activities could result in noise levels of up to 85.7 dBA L_{eq} and 90.6 dBA L_{max} at 50 feet from construction activities and these sensitive receptors.

However, construction activities would be minor and intermittent and would move throughout the site as individual components are constructed, thus not exposing any of these sensitive receptors to excessive noise levels for extended periods of time. Further, construction activities taking place within KBSRA would be consistent with TRPA's standard permit conditions that include several measures that would minimize the exposure of nearby receptors to construction-related noise. One of the key required measures is to limit noise-generating construction activity to the hours between 8:00 a.m. and 6:30 p.m. (TRPA 2013). The project would also be required to implement construction best management practices included in the CSP Standard Project Requirements (e.g., utilizing construction equipment that uses best available noise control techniques; see Section 4.7, CSP Standard and Special Project Requirements).

Limiting construction activities to the daytime hours reduces the potential to disturb people during sleep hours, the primary cause of noise-induced health impacts. In addition, intermittent construction activity occurring during the day would not exceed the adopted 55 dBA CNEL standard for the North Tahoe East Mixed-Use Water Recreation District (MU-WREC) (Placer County 2017:140), where KBSRA is located. Further, construction activities would occur intermittently over a 20-year period and individual construction activities would be relatively minor (e.g., small structures, walkways, installation of picnic tables). Because construction activities would be limited to the less-sensitive daytime hours per TRPA requirements, construction activities would be minimal, temporary and intermittent; individual construction activities would not result in a substantial temporary or periodic increase in ambient noise levels. This impact would be **less than significant**.

Pier Rebuild Project

With Alternative 2 the pier rebuild project would result in removal of the existing pier and construction of a new pier at the eastern end of KBSRA. The proposed pier would include an estimated 27 pier pilings for the fixed and floating sections, which has about the same footing area as the existing pier. The pier would be about 281 feet longer than the existing pier. Construction activities would involve on- and off-hauling of material, pile driving, and earth moving. Pier construction is anticipated to take 3 years.

Due to the inclusion of pile driving for the pier construction, anticipated construction noise could result in noise levels of 89.5 dBA L_{eq} and 96.0 dBA L_{max} at 50 feet from pier construction activities, slightly higher than construction associated with the General Plan components discussed above. Sensitive receptors include residential land uses approximately 250 feet east along Brockway Vista Avenue and could be exposed to noise levels of 71.1 dBA L_{eq} and 77.6 dBA L_{max} . However, similar to construction associated with the General Plan components, pier construction activities would also be conducted in accordance with CSP Standard Project Requirements and limited to daytime hours per TRPA requirements. Further, construction would be minimal and temporary. For these reasons, construction noise associated with the pier construction would not result in a substantial temporary or periodic increase in ambient noise levels. This impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

The General Plan revision with Alternative 3 would largely be the same as with Alternative 2. Similar components are proposed with some variation in location or size. For example, the event lawn would be reoriented and the concessionaire building would be located near the event lawn rather than where the existing building is located, and no on-site administration building would be constructed. Therefore, similar construction equipment and activities would be required and construction noise levels would be the same as Alternative 2. This impact would be **less than significant**.

Pier Rebuild Project

With Alternative 3 the pier rebuild project would result in removal of the existing pier and construction of a new pier centrally located in KBSRA, in the location of the existing pier. The proposed pier would include an estimated 33 pier pilings. The pier would be about 394 feet longer than the existing pier and longer than the pier in Alternative 2. Pier construction is anticipated to take 3 years. However, construction activities and estimated noise levels would be the same as the pier construction with Alternative 2. Sensitive receptors are located further from the central pier than either the eastern pier or western pier, and at a distance where noise exposure to surrounding land uses would be minimal. This impact would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

The General Plan revision with Alternative 4 would largely be the same as with Alternative 2. Similar components are proposed with some variation in location or size. For example, the concessionaire building would be located on the western end of the park, the on-site administration building would be adjacent to the existing comfort station, and two single-group pavilions, not included in Alternative 2, would be constructed. Nonetheless, similar construction equipment and activities would be required and construction noise levels would be the same as Alternative 2. This impact would be **less than significant**.

Pier Rebuild Project

With Alternative 4, the pier rebuild project would result in removal of the existing pier and construction of a new pier at the western end of KBSRA. The proposed pier would include an estimated 38 pier pilings. Alternative 4 would also extend the motorized boat ramp to increase the period of time that the boat ramp is open, but the extension would be modest and would not provide access during all lake levels. Construction activities and estimated noise levels would be similar to the pier construction for Alternative 2. Pier construction is anticipated to take 3 years.

Sensitive receptors include residential land uses approximately 200 feet north of the proposed pier adjacent to the North Tahoe Event Center that could be exposed to noise levels of 73.6 dBA L_{eq} and 80.2 dBA L_{max} . Sensitive receptors near the extended motorized boat ramp would be similar to those described above for Alternative 2. However, as discussed above in the Alternative 2 analysis, construction noise would be limited to daytime hours. Further, construction would be minimal and temporary. For these reasons, construction noise associated with the pier construction would not result in a substantial temporary or periodic increase in ambient noise levels. This impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.9-2: Short-term vibration levels from pier construction

Pile driving would be required for pier construction with the action alternatives but would not occur in close proximity to existing structures or sensitive land uses such that structural damage or human disturbance would occur. This impact would be **less than significant**. Alternative 1 is the no project alternative and therefore would not result in any increases in short-term vibration levels. There would be **no impact**.

Alternative 1: No Project

Pier Rebuild Project

No pier would be constructed with Alternative 1 and therefore no vibration associated with pile driving would occur. There would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

Pier Rebuild Project

Development of the proposed pier would include construction activities that require the use of various types of equipment including an estimated 27 piles. Construction of the pier may result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and activities involved, but pile driving would result in the greatest vibration levels and therefore is the focus of this analysis.

According to FTA, vibration levels associated with typical pile drivers are 0.644 in/sec PPV and 104 VdB at 25 feet. Based on FTA's recommended procedure for applying a propagation adjustment to these reference levels, vibration levels from pile driving could exceed Caltrans recommended level of 0.2 in/sec PPV with respect to the structural damage within 50 feet of pile driving activities and could exceed FTA's maximum acceptable level of 80 VdB with respect to human response within 150 feet of pile driving activities. Refer to the technical analysis materials available on the project web page (www.parks.ca.gov/PlanKBSRA) for attenuation calculations. No structures or sensitive land uses (e.g., residences, tourist accommodation units) are located within these distances and therefore this impact would be **less than significant**.

Alternative 3: Central Pier Alternative

Pier Rebuild Project

With Alternative 3, a pier would also be constructed but it may require additional piles as compared to the pier with Alternative 2. Nonetheless, estimated vibration levels would be the same for pile driving with this alternative as with Alternative 2. No sensitive receptors are located within 150 feet of the proposed pier location and therefore pile driving activities would not disturb sensitive land uses or pose a threat to any existing structures. This impact would be **less than significant**.

Alternative 4: Western Pier Alternative

Pier Rebuild Project

With Alternative 4, a pier would also be constructed but it may require additional piles as compared to the pier with Alternative 2. Nonetheless, estimated vibration levels would be the same for pile driving with this alternative as with Alternative 2. No sensitive receptors are located within 150 feet of the proposed pier location and therefore pile driving activities would not disturb sensitive land uses or pose a threat to any existing structures. This impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.9-3: Long-term increases in traffic noise

Project implementation may result in additional daily trips due to the increase in space for recreational amenities associated with the General Plan revision alternatives. Increased trips and associated noise would be the same for each of the action alternatives, because the upland components would be similar in character. Long-term increases in traffic and associated noise levels would not result in an audible increase in noise. None of the action alternatives would result in substantial long-term increases in noise (i.e., 3 dBA) existing without the project or increases in existing noise levels). There would be **no impact**. Alternative 1 is the no project alternative and therefore would not result in any increases in long-term traffic-related noise for the General Plan revision and associated pier rebuild project. There would be **no impact**.

Alternative 1: No Project

General Plan Revision

This alternative would not involve any physical improvements at the site and therefore would not result in increased recreational users at KBSRA. No long-term increases in traffic-noise would occur and there would be **no impact**.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Action Alternative, there would be no long-term increases in traffic-noise and there would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

From a traffic generation standpoint, the increased amount of programmed recreation areas would likely result in increased usage of KBSRA. The reduced vehicle circulation area, coupled with enhanced pedestrian and bicycle connectivity, would likely result in increased visitation to KBSRA by pedestrians and bicyclists, and may result in no greater level of vehicular activity than currently exists. However, to be conservative, the traffic analysis assumed an up to 10 percent increase in vehicular traffic distributed over the roadways in the project vicinity. Under this assumption, Alternative 2 would result in 16 additional peak hour trips (8 inbound and 8 outbound) and 222 additional daily trips (111 inbound and 111 outbound) on a peak summer day.

To assess this impact, traffic noise levels associated with Alternative 2 under existing and existing plus project conditions, were predicted for affected roadway segments. Table 5.3.9-2 below summarizes existing and existing plus project traffic-noise levels.

Based on the modeling conducted, no roadway would experience any increase in noise. Existing roadway noise and roadway noise-contour distances would not be affected by the project. Long-term increases in traffic noise associated with the project would not result in substantial long-term increases in noise (i.e., above 3 dBA) or increase existing noise levels. There would be **no impact**.

Table 5.3.9-2 Summary of Modeled Traffic Noise Levels

Study Roadway Segments	Existing Conditions		Existing Plus Project Conditions	
	Noise Level (dBA CNEL) 300 feet from Roadway Centerline	Distance to 55 dBA CNEL Noise Contour	Noise Level 300 feet from Roadway Centerline	Distance to 55 dBA CNEL Noise Contour
1. State Route 28, from Deer Street to Bear Street	55.9 dBA CNEL	344 feet	55.9 dBA CNEL	344 feet
2. State Route 28, from Bear Street to Coon Street	55.9 dBA CNEL	344 feet	55.9 dBA CNEL	344 feet
3. State Route 28, from Coon Street to Fox Street	55.5 dBA CNEL	323 feet	55.5 dBA CNEL	323 feet
4. State Route 267, North of State Route 28	54.5 dBA CNEL	276 feet	54.5 dBA CNEL	276 feet

Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibels

Source: Modeled by Ascent Environmental, Inc. in 2017

Pier Rebuild Project

Increases in traffic associated with the pier rebuild project were included within the project trip generation discussed above for the General Plan revision. There would be **no impact**.

Alternative 3: Central Pier Alternative

General Plan Revision

Proposed components included in Alternative 3 are similar to those included with Alternative 2 and therefore long-term increases in traffic and associated noise would be the same as discussed in the Alternative 2 analysis. There would be **no impact**.

Pier Rebuild Project

Increases in traffic associated with the pier rebuild project were included within the project trip generation discussed above for the General Plan revision. There would be **no impact**.

Alternative 4: Western Pier Alternative

General Plan Revision

Proposed components included in Alternative 4 are similar to those included with Alternative 2 and therefore long-term increases in traffic and associated noise would be the same as discussed in the Alternative 2 analysis. There would be **no impact**.

Pier Rebuild Project

Increases in traffic associated with the pier rebuild project were included within the project trip generation discussed above for the General Plan revision. There would be **no impact**.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.9-4: Long-term increases in operational noise sources

Long-term increases in noise associated with the General Plan revision under any of the action alternatives would include noise from events at the proposed event stage, visitors participating in recreational activities such as basketball, and people playing and talking. Noise associated with the proposed pier would result in motorized watercraft loading and unloading passengers on the pier. Because proposed components of the General Plan are similar among the alternatives, noise levels

would also be similar across the alternatives. None of the General Plan revision alternatives would include recreational amenities that would generate substantial noise such that nearby sensitive land uses would be exposed to noise levels that exceed Area Plan noise limits (55 dBA L_{eq}), and temporary noise associated with special events (e.g., concerts, paddleboard races) would not conflict with established TRPA CNEL standards. Long-term noise associated with the General Plan revision for all action alternatives would be **less than significant**. A rebuilt pier would be constructed with any of the alternatives and could result in additional motorized watercraft-related noise when boats temporarily moor at the rebuilt pier for passenger loading and unloading purposes. None of the action alternatives would result in pier locations that are close enough to noise-sensitive land uses such that boat noise would be disturbing. This impact would be **less than significant** for Alternatives 2, 3, and 4. Alternative 1 is the no project alternative and therefore would not result in any increases in long-term noise for the General Plan revision and pier rebuild project. There would be **no impact**.

Alternative 1: No Project

General Plan Revision

This alternative would not involve any physical improvements at the site and therefore would not result in increased recreational use at KBSRA. No long-term increases in stationary noise would occur and there would be **no impact**.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Project Alternative, there would be no long-term increases in stationary noise and there would be **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Long-term operational noise sources would include outdoor events at the proposed event stage, noise from people playing and using the new recreational amenities (e.g., picnic areas, skating rink, radio music), and motorized watercraft noise associated with boats docking at the rebuilt pier. These noise sources typically occur over extended periods of time (e.g., several minutes or hours) and therefore are best evaluated using average noise level metrics (i.e., L_{eq}) rather than instantaneous maximum noise level metrics (e.g., L_{eq} , CNEL). Boat noise at the proposed pier is evaluated below for the pier project.

To evaluate noise from the proposed ice rink (if it were to be accommodated in the future) and event stage, reference noise levels were used for representative land uses. A noise analysis conducted for a proposed wintertime ice rink used reference noise levels of 70 dBA L_{eq} and 65 dBA CNEL at a distance of 50 feet for music and skating activity (J.C. Brennan & Associates 2016). A reference noise level for a live concert is 80 dBA L_{eq} at 82 feet from the speakers.

The Area Plan daytime (7:00 a.m. to 7:00 p.m.) noise standard for sensitive land uses is 55 dBA L_{eq} and applies to stationary or industrial sources. Reference noise levels of 80 dBA L_{eq} would attenuate, from distance alone, to below this standard at 725 feet from the source. Sensitive receptors are located within this distance and therefore could be exposed to noise levels above adopted noise standards during special events using amplified sound. However, these receptors are currently exposed to amplified noise generated at special events, such as summer concerts and races. With implementation of Alternative 2, the frequency of these types of events could increase. If recreational activities took place without amplified sound (e.g., people talking, ice skating), noise levels would attenuate to below

55 dBA L_{eq} at 200 feet from activities. No sensitive receptors are located within 200 feet of the proposed ice skating rink location.

It is important to note that these noise-generating activities would occur during the daytime and evening hours and would be temporary in nature, having minimal effect on existing CNEL levels. In addition, noise associated with the recreational facilities would be similar to what occurs on the site now during peak activity days and therefore would not be considered a substantial new noise source, only a slight increase in recreational activity. Regarding the proposed event stage, the TRPA Code of Ordinances exempts certain events such as concerts and paddleboard races, provided they comply with daytime (8:00 a.m. to 10:00 p.m.) and event duration requirements. Therefore, exempt activities would not be subject to compliance with adopted CNEL noise levels or be included in ambient noise measurements to establish CNEL attainment. Project-generated long-term noise associated with the proposed recreational components from implementation of the General Plan revision would not result in exposure of excessive noise levels during sensitive time of the day to any existing sensitive land use and would not conflict with attainment of applicable TRPA CNEL standards. This impact would be **less than significant**.

Pier Rebuild Project

Construction of the pier with Alternative 2 would include removal of the existing motorized boat ramp and replacement of the existing pier at the eastern end of KBSRA. As a result of the rebuilt and extended pier, motorized boats could load and unload passengers at the new pier at any given time. Overnight mooring would be prohibited.

Based on reference noise levels for motor boats of 78 dBA L_{eq} at 50 feet, noise from approaching motorized watercraft would attenuate to below the Area Plan daytime (7:00 a.m. to 7:00 p.m.) noise limit for sensitive land uses at 365 feet (Berger 2010). Residential land uses along Brockway Vista Avenue are located beyond 400 feet from the portions of the pier that would be accessible to motorized watercraft for loading and unloading passengers (i.e., the floating sections) and therefore would not be exposed to excessive noise levels from boats approaching the new pier. In addition, boat activity already occurs throughout the lake and because the motorized boat ramp would be removed, and access to KBSRA by motorized watercraft would be from the lake to the pier only, sources of noise associated with the boat ramp (which is closer to off-site residences) would be eliminated. The rebuilt pier would be located within the no wake zone (see Exhibit 5.3.11-1), which would also further diminish the potential for significant noise at residential receptors because boats are quieter at the slower speeds within this zone. Moreover, TRPA has single-event noise limits for all boats operating in Lake Tahoe (Table 4.5-1) that would continue to be in place and enforced. Noise from motorized boats would not result in exposure of excessive noise levels to any existing sensitive land use. This impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

Proposed components included in Alternative 3 are similar to those included with Alternative 2 with minor changes to the location and/or orientation of the various components. Nonetheless, long-term operational noise associated with this alternative would be the same as Alternative 2. No sensitive land uses are located within 200 feet of the proposed open lawn area/winter skating rink or the flex space that could be used as an event stage. No existing receptors would be exposed to excessive noise levels and this impact would be **less than significant**.

Pier Rebuild Project

With implementation of Alternative 3, a pier would also be constructed but it would be located centrally in KBSRA. The existing motorized boat ramp would also be removed. Boat activity at this pier would be similar to that described for Alternative 2 and therefore noise levels would be about the same. No existing sensitive land uses are located within 365 feet of the proposed pier and therefore no existing receptors would be exposed to excessive noise levels and this impact would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

Proposed components included in Alternative 4 are similar to those included with Alternative 2 with minor changes to the location and/or orientation of the various components. Nonetheless, long-term operational noise associated with this alternative would be the same as Alternative 2. No sensitive land uses are located within 200 feet of the proposed open lawn area/winter skating rink or the flex space that could be used as an event stage. No existing receptors would be exposed to excessive noise levels and this impact would be **less than significant**.

Pier Rebuild Project

The Alternative 4 pier rebuild project would involve construction of the western pier and extension of the motorized boat ramp. Boat activity at this pier would be similar to that as described for Alternative 2 and therefore noise levels would be about the same. The motorized boat ramp currently exists so this would not be considered a new noise source. Existing residential land uses exist to the northeast of the proposed pier, adjacent to the North Tahoe Event Center. However, these residences are located beyond 400 feet from the portions of the pier that would be accessible to motorized watercraft (i.e., the floating sections) and therefore would not be exposed to excessive noise levels from boats approaching the new pier. Moreover, TRPA has single-event noise limits for all boats operating in Lake Tahoe (Table 4.5-1) that would continue to be in place and enforced. Noise from motorized boats would not result in exposure of excessive noise levels to any existing sensitive land use. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Cumulative Impacts

Noise and vibration levels associated with construction of the General Plan components and pier rebuild for all of the action alternatives would be temporary, intermittent, and relatively minor. Further, construction-related noise is typically considered a localized affect, affecting the land uses closest to construction activities. In addition, local regulations are in place that would limit construction noise to the less-sensitive times of the day and construction activities would implement construction noise-reducing measures identified in the CSP Standard Project Requirements, further reducing the chances for disturbing people. Given that proposed construction activities would be relatively minor, dispersed throughout KBSRA over a 20-year build out period, noise would be localized, and would occur during the less-sensitive times of the day, construction activities associated with Alternatives 2, 3, and 4 would not combine with construction noise from other construction activities in the area to result in a substantial increase in cumulative noise levels. This impact would **not be cumulatively considerable**.

Project-related traffic increases for Alternatives 2, 3, and 4 would not result in any noise increase on affected roadways. Therefore, even though traffic in the project vicinity is expected to increase under

cumulative conditions, the project's contribution would not be considered substantial. This impact would **not be cumulatively considerable**.

Long-term increases in operational noise would be associated with proposed recreational amenities (e.g., outdoor activity areas, event stage) and motorized boat activities at the rebuilt and extended pier proposed by Alternatives 2, 3, and 4. However, individual noise sources would attenuate to levels below adopted noise standards (i.e., Area Plan limit of 55 dBA L_{eq}) within KBSRA (i.e., within 400 feet for all sources). Refer to noise attenuation calculations in the technical analysis materials available on the project web page (www.parks.ca.gov/PlanKBSRA) and the project-specific analysis in Impact 5.3.9-4 for specific noise levels from each noise source. Thus, noise generated by these activities would not combine with other noise sources in the area to result in a substantial increase in cumulative noise levels. This impact would **not be cumulatively considerable**.

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5.3.10 Public Services and Utilities

This section describes potential effects of the KBSRA General Plan Revision and Pier Rebuild Project on public services and utilities systems. Public services considered in the analysis include fire protection and emergency services, and law enforcement. Utilities considered include water, wastewater, solid waste, electricity, natural gas, and telecommunications. The 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 existing conditions related to public services and utilities are summarized in Section 2.3.3, Utilities and Service Systems, in Chapter 2, Existing Conditions, of this document. A more detailed description of the existing public services and utilities at the project site and a summary of pertinent regulations are included in the Resources Inventory and Existing Conditions Report, available on the Kings Beach SRA webpage (www.parks.ca.gov/PlanKBSRA) and at CSP and TRPA offices during normal business hours through consideration of project approval.

The primary issues raised during scoping that pertain to public services and utilities included:

- ◆ North Tahoe Public Utility District (NTPUD) expressed concern about maintaining access to the sewer collection main that crosses KBSRA and suggested that long-term planning at KBSRA should consider options for access easements or relocation of the sewer main.
- ◆ Protect the sewer infrastructure during any project construction.
- ◆ Tahoe-Truckee Sanitation Agency (T-TSA) identified information needs about proposed new fixtures that would be required for T-TSA to properly assess the impact of the project on T-TSA services. Additionally, T-TSA does not issue will serve letters and all capacity allocations for services are made on a first-come first-serve basis for all projects within their service area.

The proposed project does not include new housing or other project elements that would increase the permanent resident population in Kings Beach, resulting in an increased demand for school or library facilities. Additionally, there is available capacity in schools near KBSRA. No impact would occur and impacts related to these services are not evaluated further in this EIR/EIS.

The proposed project would not result in an increase in demand for telecommunications services or need to extend additional telecommunications lines to the project site. No impact would occur and impacts related to telecommunications services are not evaluated further in this EIR/EIS.

Water quality and stormwater issues are addressed in Section 5.3.7, Hydrology and Water Quality.

Environmental Impacts and Mitigation Measures

Analysis Methodology

Water Supply

Additional water demand resulting from implementation of the KBSRA General Plan Revision and Pier Rebuild Project was conservatively estimated. For the purposes of the analysis herein, the term fixture refers to faucets, toilets, drinking fountains, showerheads, and foot-wash showers. The average annual demand per fixture and average peak demand per fixture were derived from the annual water demand

from 2012 through 2015, which was provided by NTPUD (Stelter, pers. comm., 2016a), and the number of existing fixtures.

Wastewater

Sewer flows are assumed to mirror domestic water usage without irrigation. There is no assumed loss between water use and wastewater generation. A fixture unit is defined in the 2016 California Plumbing Code as a scaling factor in terms of the load-producing effects on the plumbing system. The capacity of the wastewater collection system serving KBSRA is based on number of fixture units.

Energy

Levels of construction- and operation-related energy consumption for the project were measured in megawatt-hour (MWh) of electricity, million British Thermal Units (MMBtu) of natural gas, and gallons of gasoline and diesel fuel. Energy consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1 computer program. Where project-specific information was not known, CalEEMod default values based on the project’s location were used. Table 5.3.10-1 summarizes the levels of energy consumption for each year of construction, the levels of energy consumption for the first year of operation during the build-out year of 2021, and the gasoline and diesel consumption estimates for the project in 2021.

Table 5.3.10-1 Annual Operational Energy Use and Fuel Consumption for 2021		
Construction		
Year	Gasoline (gal/year)	Diesel (gal/year)
2019	664	6,610
2020	5,706	17,296
2021	6,195	17,549
Total	12,565	41,455
Operation		
Energy Consumption		
All Land Uses	Energy Consumption	Units
Electricity	1,350	MWh/year
Natural Gas	283	MMBtu/year
Fuel Consumption		
Vehicle Category	Gasoline (gal/year)	Diesel (gal/year)
Passenger Vehicles	2,922	25
Trucks	2,827	1,138
Buses	48	54
Other Vehicles	10	2
Total	5,806	1,220
Notes: MWh/year=megawatt hour per year, gal/year=gallons per year		
Detailed calculations are provided in the technical analysis materials available on the project webpage (www.parks.ca.gov/PlanKBSRA).		
Source: Compiled by Ascent Environmental in 2017		

Significance Criteria

Significance criteria for determining impacts to public services and utilities are summarized below.

CEQA Criteria

Based on Appendix G of the State CEQA Guidelines, impacts to public services and utilities would be significant if the project would:

- ◆ exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- ◆ require or result in the construction of new water or wastewater facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- ◆ have sufficient water supplies available to serve the project from existing entitlements and resources or require new or expanded entitlements;
- ◆ result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- ◆ be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs in compliance with all applicable laws;
- ◆ result in inefficient and wasteful consumption of energy during construction or operations or require new or expanded energy facilities that could cause significant environmental effects; or
- ◆ result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts to maintain acceptable service ratios, response times, or other performance objectives for any public services including fire protection and law enforcement.

TRPA Criteria

The public services, energy, and utilities criteria from the TRPA Initial Environmental Checklist were used to evaluate the public services and utilities impacts of the alternatives. Impacts to public services and utilities would be significant if the project would:

- ◆ have an unplanned effect upon, or result in a need for new or altered governmental services related to fire protection, police protection, maintenance of public facilities, including roads, or other governmental services;
- ◆ use substantial amounts of fuel or energy;
- ◆ substantial increase in demand upon existing sources of energy, or require the development of new sources of energy;
- ◆ result in the need for new systems or substantial alterations to power and gas utility facilities;
- ◆ result in the need for new systems or substantial alterations to solid waste and disposal;
- ◆ utilize additional water at an amount which will exceed the maximum permitted capacity of the service provider; or

- ◆ utilize additional sewage treatment capacity at an amount which will exceed the maximum permitted capacity of the sewage treatment provider.

Environmental Impacts

Impact 5.3.10-1: Increased demand for water supply

The additional annual water demand for the Alternative 2 General Plan revision would be 713,500 gallons. The increase in water demand associated with implementation of Alternative 2 would be a 0.12 percent increase over existing NTPUD water demand and would represent 0.04 percent of NTPUD's total water supplies. NTPUD would have adequate water supply to serve the project. Water demand increases associated with implementation of the General Plan revision for Alternatives 3 and 4 would be approximately the same as that for Alternative 2. Alternatives 2 through 4 would also reduce its water demand through facility design and implementation of water conservation measures that would meet Title 24 requirements. This impact would be **less than significant** for Alternatives 2 through 4.

There would be **no impact** for Alternative 1. The pier rebuild project under Alternatives 2 through 4 would result in no increase in water demand and, therefore, would have **no impact** on water supply.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the No Action Alternative, there would be no increase in water demand over that which could occur under existing conditions and therefore **no impact** to water supply.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Action Alternative, there would be no new water demand and therefore **no impact** to water supply.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The existing water demand at KBSRA is associated with the two restroom facilities, a foot wash station, and irrigation of the California Tahoe Conservancy (Conservancy) parcels (i.e., the plaza area) in the northeastern portion of the KBSRA General Plan area. Between 2012 and 2015, the average annual water demand at KBSRA was 685,750 gallons (see Table 5.3.10-2).

As part of the General Plan revision associated with Alternative 2, an additional six restroom stalls (each with one toilet and one sink) and two overhead outdoor showers would be constructed and a new 14,000-square foot or greater lawn area would require irrigation during spring and summer months. Implementation of Alternative 2 may result in an increase in the number of special events, but would not be anticipated to result in an increase in size of the events. The increase in annual water demand associated with the additional stalls, sinks, and outdoor showers would be approximately 225,500 gallons (see Table 5.3.10-2). Because the existing restroom building in the central portion of KBSRA would be reconstructed as part of its expansion and would be required to install low flow, water conserving fixtures, the water demand associated this facility would likely be reduced or only incrementally greater than existing conditions.

The increase in annual water demand associated with lawn irrigation is estimated to be approximately 488,000 gallons per year (compiled by Ascent Environmental in 2016). The volume of water required to irrigate the proposed lawn area may vary through the irrigation season from May through September. Additionally, artificial turf could be used for the lawn instead of natural grass, which would result in no increase in water demand for irrigation. The future water demand at KBSRA shown in Table 5.3.10-2 assumes an irrigated lawn would be installed; thus, a conservative estimate of water use for irrigation is provided here. Irrigation water demand at the Conservancy parcels would be similar to existing conditions. In the past, irrigation measured at the Conservancy parcels by NTPUD has included irrigation for the Kings Beach Corridor Improvement Project streetscape improvements and landscaping; however, irrigation for those uses is no longer provided through the Conservancy parcels.

NTPUD has sufficient water supplies to meet current and projected water demands in their service area during normal, single dry, and multiple dry water years (NTPUD 2013:42 – 44). Additionally, NTPUD has combined surface and groundwater rights of 5,873 acre-feet per year (afy; 1,913 million gallons [mg]), which exceeds the estimated demand of 1,782 afy (580 mg) in 2015 and the estimated cumulative demand of 3,079 afy (1,003 mg) in 2030 (Stelter, pers. comm., 2016b; NTPUD 2013). NTPUD has confirmed there is sufficient water supply to serve water demand associated with implementation of Alternative 2 (Stelter, pers. comm., 2017a). The increase in water demand associated with implementation of Alternative 2 would be a 0.12 percent increase over existing NTPUD water demand and would represent 0.04 percent of NTPUD's total water supplies.

Table 5.3.10-2 Existing and Future Water Demand at KBSRA

	Water Demand (gallons)
Existing Average Peak Day Water Demand ¹	2,560
Existing Average Annual Water Demand ¹	306,000
Existing Average Annual Irrigation Demand	379,750
Total Existing Average Annual Water Demand²	685,750
Increase in Annual Landscape Irrigation Demand	488,000
Increase in Annual Water Demand ¹	225,500
Increase in Peak Day Demand ¹	620
Total Increase in Annual Water Demand²	713,500
Total Future Annual Water Demand³	1,399,250

¹ Existing water demand is associated with water fixtures, including sink faucets, toilets, foot-wash showers, and drinking fountains.

² Total existing annual water demand for existing conditions and the increase is the sum of annual water demand and annual irrigation demand.

³ Total future annual water demand is the sum of total existing annual water demand and increase in cumulative annual water demand associated with increase in number of sink faucets, toilets, and outdoor showers.

Note: Average demand is shown here, because the water demand at KBSRA fluctuated between 2012 and 2015.

Source: Stelter, pers. comm., 2016a, 2017b; compiled by Ascent Environmental in 2017

Implementation of improvements associated with Alternative 2 would comply with KBSRA General Plan Guideline RES 11.3 and the CSP Standard and Special Project Requirements, which require incorporation of water conservation measures into the landscape, such as low volume irrigation. Additionally, the new restroom facilities would install toilets, sinks, and outdoor showers that exceed

2016 Title 24 water efficiency requirements. With implementation of the water-saving measures, Alternative 2 would also be consistent with the TRPA Regional Plan Policy PS-2.1 to reduce water demand through implementation of water conservation measures.

NTPUD would have adequate water supply to serve improvements proposed by the General Plan revision for Alternative 2. Additionally, Alternative 2 would reduce its water demand through facility design and implementation of water conservation measures that would meet 2016 Title 24 requirements. This impact would be **less than significant**.

Pier Rebuild Project

With the eastern pier, there would be no increase in water demand associated with this scenario. There would be **no impact** on water supplies.

Alternative 3: Central Pier Alternative

General Plan Revision

Impacts on water demand from implementation of Alternative 3 would be similar to Alternative 2 because the park amenities that are included in Alternative 3 would for the most part include minor refinements in location or size compared to those associated with Alternative 2. Although Alternative 3 would result in no administrative office at KBSRA and fewer restrooms compared to Alternative 2, implementation of Alternative 3 would be expected to result in a similar increase in visitation and water use that would occur for Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 3 on water demand would be **less than significant**.

Pier Rebuild Project

With the central pier, there would be no increase in water demand associated with this scenario. There would be **no impact** on water supplies.

Alternative 4: Western Pier Alternative

General Plan Revision

Impacts on water demand from implementation of Alternative 4 would be similar to Alternative 2 because the increase in park amenities that are included in Alternative 4 would for the most part include minor refinements in location or size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 4 on water demand would be **less than significant**.

Pier Rebuild Project

With the western pier, there would be no increase in water demand associated with this scenario. There would be **no impact** on water supplies.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.10-2: Effects on water conveyance and treatment infrastructure

The Alternative 2 General Plan revision would include six additional restroom stalls and associated sinks and outdoor showers. The existing water delivery infrastructure at the project site includes a 12-inch main outfitted with a 2-inch composite flow meter and water line and a connection is also provided for irrigation of the Conservancy parcels. California State Parks would submit an application and pay fees to NTPUD for an increase in water service at KBSRA. The NTPUD water supply infrastructure, including National Avenue Water Treatment Plant, has sufficient capacity to serve the water treatment demand for the project. The effects on water conveyance and treatment infrastructure from implementation of Alternatives 3 and 4 would be similar to those of Alternative 2. This impact would be **less than significant** for Alternatives 2 through 4.

There would be **no impact** for Alternative 1. The pier rebuild project under Alternatives 2 through 4 would result in no increase in water demand and, therefore, would have **no impact** on water conveyance and treatment infrastructure.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the No Action Alternative, there would be no increase in water demand over that which could occur under existing conditions and therefore **no impact** to water conveyance and treatment infrastructure.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Action Alternative, there would be no new water demand and therefore **no impact** to water conveyance and treatment infrastructure.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

The water supply infrastructure for the project would need to meet the increase in annual water demand estimated at approximately 713,500 gallons per year from six additional restroom stalls, outdoor showers, and irrigation for the new lawn included in the Alternative 2 General Plan revision. The water main serving KBSRA is a 12-inch pipe outfitted with a 2-inch composite flow meter and water line (Stelter, pers. comm., 2016a). A separate water connection is also located at KBSRA for irrigation of the Conservancy parcels in the northeastern portion of the General Plan area. California State Parks would be required to submit plans, an application, and pay connection fees for new toilets, sinks, and outdoor showers to NTPUD. NTPUD has confirmed that the water supply infrastructure that would serve KBSRA, including the 12-inch main and the National Avenue Water Treatment Plant, have sufficient capacity to meet the increase in water demand associated with Alternative 2 (Stelter, pers. comm., 2017a). The National Avenue Water Treatment Plant that treats surface water that is supplied to KBSRA has sufficient capacity to serve the minor increase in demand associated with implementation of Alternative 2.

Because California State Parks would submit an application and pay fees to NTPUD for an increase in water service and water supply infrastructure that would serve the project is adequate to serve the water demand and fire flow needs, this impact is **less than significant**.

[Pier Rebuild Project](#)

With the eastern pier, there would be no increase in water demand associated with this scenario. There would be **no impact** to water conveyance and treatment infrastructure.

[Alternative 3: Central Pier Alternative](#)

[General Plan Revision](#)

Impacts on water conveyance and treatment infrastructure from implementation of Alternative 3 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 3 would include only minor refinements in location or size compared to Alternative 2. Although Alternative 3 would result in no administrative office at KBSRA and fewer restrooms compared to Alternative 2, implementation of Alternative 3 would be expected to result in a similar increase in visitation and water use that would occur for Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 3 on demand for water conveyance and treatment infrastructure would be **less than significant**.

[Pier Rebuild Project](#)

With the central pier, there would be no increase in water demand associated with this scenario. There would be **no impact** to water conveyance and treatment infrastructure.

[Alternative 4: Western Pier Alternative](#)

[General Plan Revision](#)

Impacts on water conveyance and treatment infrastructure from implementation of Alternative 4 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 4 would include only minor refinements in location or size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 4 on water conveyance and treatment infrastructure would be **less than significant**.

[Pier Rebuild Project](#)

With the western pier, there would be no increase in water demand associated with this scenario. There would be **no impact** to water conveyance and treatment infrastructure.

[Mitigation Measures](#)

No mitigation measures are required.

[Impact 5.3.10-3: Effects on wastewater conveyance](#)

Implementation of Alternative 2 General Plan revision would result in an estimated net increase in wastewater flows over existing conditions of 225,500 gallons per year, or a daily peak demand of 620 gallons per day (gpd). NTPUD and T-TSA have confirmed there is currently sufficient wastewater conveyance capacity to serve the project (Stelter, pers. comm., 2017a; Parker, pers. comm., 2017). California State Parks would submit applications and pay fees to NTPUD and T-TSA for an increase in wastewater conveyance service at KBSRA. Potential conflicts with the NTPUD sewer main that crosses through KBSRA would be minimized through coordination with NTPUD and avoidance during construction. The effects on wastewater conveyance capacity from implementation of Alternatives 3 and 4 would be similar to those of Alternative 2. This impact would be **less than significant** for Alternatives 2 through 4.

There would be **no impact** for Alternative 1. The pier rebuild project under Alternatives 2 through 4 would result in no increase in wastewater flows and, therefore, would have **no impact** on wastewater conveyance.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made for the No Action Alternative, there would be no increase in wastewater flows over that which could occur under existing conditions and therefore **no impact** to wastewater conveyance infrastructure.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Action Alternative, no wastewater flows would be generated and therefore **no impact** to wastewater conveyance infrastructure.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

KBSRA currently includes a seven-stall restroom and a foot wash in the central portion of the site and a four-stall restroom at the east end of the site near Brockway Vista Avenue. Implementation of Alternative 2 would include a new administrative office building with a restroom, new two-stall restroom in the western portion of KBSRA, and a new 10-stall restroom and up to two outdoor showers to replace the existing central restroom. Alternative 2 would result in six new toilets and sinks and two overhead showers at KBSRA.

The existing wastewater generated at KBSRA is associated with the two restroom facilities at KBSRA. NTPUD does not meter wastewater services; however, it is assumed that wastewater flows would be similar to the water demand generated at the site (Stelter, pers. comm., 2016a). The wastewater generated at KBSRA does not include irrigation water or foot-wash station demand, because water from these facilities would not flow to the sewer and wastewater conveyance infrastructure. Therefore, the wastewater demand would be lower than the water demand. If the foot-wash stations would ever be relocated then that would provide an opportunity to assess, in coordination with NTPUD, the potential to convey foot wash drain water to wastewater lines. As shown in Table 5.3.10-2, existing annual average wastewater flows are 306,000 gallons and existing average peak day flows are approximately 2,560 gpd. Implementation of Alternative 2 would result in an estimated increase in wastewater flows of 225,500 gallons per year and an increase in peak day wastewater flows of 620 gpd.

KBSRA is currently served by a 4-inch line, which can serve up to 216 fixture units. Based on the number of existing toilets and sinks at KBSRA that flow to the wastewater collection system, there are around 55 existing fixture units. Alternative 2 would increase the wastewater generated at KBSRA through the addition of six toilets and sinks and two outdoor showers for a total of 31 estimated additional fixture units. The wastewater service line has sufficient capacity for an additional approximately 160 fixture units, which is sufficient to meet the additional wastewater flows generated by implementation of Alternative 2. NTPUD has confirmed that the wastewater conveyance infrastructure that serves KBSRA has sufficient capacity to meet the increase in wastewater demand associated with Alternative 2 (Stelter, pers. comm., 2017a).

NTPUD has expressed concern about maintaining adequate legal access to the sewer main that generally follows the old Brockway Vista Road right-of-way and runs through the event center plaza and beach areas at KBSRA (Stelter, pers. comm., 2017a). With implementation of the General Plan revision and construction of new facilities, CSP would coordinate with NTPUD to maintain access to the sewer main for NTPUD and to avoid conflicts with the NTPUD sewer main during construction.

T-TSA has confirmed that the Truckee River Interceptor that conveys wastewater from NTPUD, and other areas in the North Tahoe area, currently has sufficient capacity to serve the project (Parker, pers. comm., 2017). However, T-TSA does not issue will serve letters and all capacity allocations are made on a first-come, first-served basis for all projects within T-TSA's service area. CSP would be required to submit a formal application to T-TSA for service and capacity allocation.

The new restroom facilities would install fixtures that exceed 2016 Title 24 water efficiency requirements. With implementation of the water-saving measures, Alternative 2 would also be consistent with the TRPA Regional Plan Policy PS-2.1 to reducing water demand through implementation of water conservation measures.

NTPUD would have adequate wastewater conveyance capacity to serve improvements proposed by the General Plan revision for Alternative 2. Additionally, Alternative 2 would reduce its wastewater flows through facility design and implementation of water conservation measures that would meet 2016 Title 24 requirements. Potential conflicts with the NTPUD sewer main through KBSRA would be minimized through coordination with NTPUD and avoidance during construction. This impact would be **less than significant**.

Pier Rebuild Project

With the eastern pier, construction workers would be served by existing restrooms. There would be no increase in wastewater collection and conveyance needed to implement this scenario. There would be **no impact** to wastewater conveyance infrastructure.

Alternative 3: Central Pier Alternative

General Plan Revision

Impacts on wastewater conveyance infrastructure from implementation of Alternative 3 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 3 would be similar in location and size compared to Alternative 2. Although Alternative 3 would result in no administrative office at KBSRA and fewer restrooms compared to Alternative 2, implementation of Alternative 3 would be expected to result in a similar increase in visitation that would occur for Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 3 on demand for wastewater conveyance and conflicts with the NTPUD sewer main through KBSRA would be **less than significant**.

Pier Rebuild Project

With the central pier, construction workers would be served by existing restrooms. There would be no increase in wastewater collection and conveyance needed to implement this scenario. There would be **no impact** to wastewater conveyance infrastructure.

Alternative 4: Western Pier Alternative

General Plan Revision

Impacts on wastewater conveyance infrastructure from implementation of Alternative 4 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 4 would be similar in location and size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 4 on demand for wastewater conveyance and conflicts with the NTPUD sewer main through KBSRA would be **less than significant**.

Pier Rebuild Project

With the western pier, construction workers would be served by existing restrooms. There would be no increase in wastewater collection and conveyance needed to implement this scenario. There would be **no impact** to wastewater conveyance infrastructure.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.10-4: Effects on wastewater treatment

Implementation of Alternative 2 General Plan revision would result in a net increase in annual wastewater flows over existing conditions of an estimated 225,500 gallons and increase in peak day demand of approximately 620 gpd. The T-TSA Water Reclamation Plant (WRP) has sufficient available capacity to serve the project (Parker, pers. comm., 2017). California State Parks would submit an application and pay fees to T-TSA for an increase in wastewater treatment service at KBSRA. The effects on wastewater treatment capacity from implementation of Alternatives 3 and 4 would be similar to those of Alternative 2. This impact would be **less than significant** for Alternatives 2 through 4.

There would be **no impact** for Alternative 1. The pier rebuild project under Alternatives 2 through 4 would result in no increase in wastewater flows and, therefore, would have **no impact** on wastewater treatment.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the No Action Alternative, there would be no increase in wastewater flows over that which could occur under existing conditions and therefore **no impact** to wastewater treatment.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Action Alternative, no wastewater flows would be generated and therefore **no impact** to wastewater treatment.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Wastewater treatment for the project site occurs at the T-TSA WRP in Truckee. Implementation of the Alternative 2 General Plan revision would result in construction of an additional six toilets and sinks at KBSRA, generating a minor increase in demand for wastewater treatment over existing conditions. The estimated increase in wastewater peak flows generated by implementation of

Alternative 2 would be approximately 620 gpd, which is generally equivalent to the water demand for the new restroom facilities (see Table 5.3.10-1).

The WRP has a capacity of 9.6 million gpd based on a seven-day dry weather average flow basis (Parker, pers. comm., 2017). To date, the maximum recorded 7-day average flow over the summer months was 6.4 million gpd in July 2011. Based on this information, the remaining available capacity at the treatment plant is estimated to be 3.2 million gpd, which would be sufficient to treat the additional wastewater flows, an estimated 620 gpd on peak days, generated by implementation of Alternative 2. T-TSA does not issue will serve letters and capacity allocations are made on a first-come, first-served basis; therefore, CSP would be required to submit a formal application to T-TSA for service and capacity.

Because there is adequate wastewater treatment capacity at the T-TSA WRP to serve the Alternative 2 General Plan revision, this impact would be **less than significant**.

Pier Rebuild Project

With the eastern pier, there would be no increase in wastewater flows associated with this scenario. There would be **no impact** to wastewater treatment infrastructure.

Alternative 3: Central Pier Alternative

General Plan Revision

Impacts on wastewater treatment from implementation of Alternative 3 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 3 would be similar in location and size compared to Alternative 2. Although Alternative 3 would result in no administrative office at KBSRA and fewer restrooms compared to Alternative 2, implementation of Alternative 3 would be expected to result in a similar increase in visitation and wastewater that would occur for Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 3 on demand for wastewater treatment would be **less than significant**.

Pier Rebuild Project

With the central pier, there would be no increase in wastewater flows associated with this scenario. There would be **no impact** to wastewater treatment infrastructure.

Alternative 4: Western Pier Alternative

General Plan Revision

Impacts on wastewater treatment from implementation of Alternative 4 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 4 would have small refinements in location or size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 4 on demand for wastewater treatment would be **less than significant**.

Pier Rebuild Project

With the western pier, there would be no increase in wastewater flows associated with this scenario. There would be no impact to wastewater treatment infrastructure.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.10-5: Increased demand for solid waste collection and disposal

Solid waste collection is currently provided by Tahoe Truckee Sierra Disposal (TTSD). After recyclable materials are sorted by TTSD at the Eastern Regional Landfill and Materials Recovery Facility (MRF), solid waste is disposed of at Lockwood Regional Landfill in Nevada. Implementation of Alternatives 2 through 4 would result in an incremental increase in solid waste generation proportionate with a 10 percent or less increase in visitation at KBSRA and would generate some construction and demolition debris associated with new facilities. The Eastern Regional Landfill and MRF and Lockwood Regional Landfill both have sufficient capacity to meet the additional construction and operation solid waste collection and disposal demand of the alternatives. This impact would be **less than significant**.

The pier rebuild project under Alternatives 2 through 4 would generate temporary construction and demolition waste from removal of the existing pier and construction of the new pier. These alternatives would not result in an increase in solid waste that would cause the MRF or Lockwood Regional Landfill to exceed their capacities and, therefore, they would have a **less-than-significant** impact on solid waste collection and disposal.

Alternative 1 would have **no impact** on waste generation and solid waste collection and disposal.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the No Action Alternative, there would be no increase in generation of solid waste over that which could occur under existing conditions and therefore **no impact** to solid waste collection and disposal services.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Action Alternative, there would be no generation of solid waste and therefore **no impact** to solid waste collection and disposal services.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Solid waste collection for the dumpsters at KBSRA is provided by TTSD. During the summer (June through August), there are two 6-yard dumpsters at the main parking lot and two 6-yard dumpsters at the parking lot near Coon Street. For the remainder of the year, there are only two dumpsters, one in each location. Recyclable materials are collected as part of the solid waste collection service and sorted at the Eastern Regional Landfill and MRF in Truckee. Alternative 2 would result in new trash enclosures for the dumpsters. The anticipated 10 percent or less increase in visitation at KBSRA that would be anticipated from implementation of Alternative 2 would result in a similar increase in solid waste generation; thus, potentially increasing the collection frequency by TTSD. Most of the increase in visitation, and associated solid waste increases, would likely follow existing visitation patterns in which most people visit KBSRA during the summer. Solid waste generated by special events would increase with the anticipated increase in number of events that could occur with implementation of Alternative 2. Special event applicants would be required, as under existing conditions, to coordinate solid waste collection with TTSD directly.

After recyclable materials are separated from solid waste at the MRF in Truckee, the remaining solid waste is hauled to Lockwood Regional Landfill for disposal. The MRF is permitted to receive 800 tons (3,556 cubic yards) of material daily (CalRecycle 2015). The MRF receives an average of 205 tons per day (911 cubic yards) and has available capacity to receive an additional 595 tons per day (2,644 cubic yards; TTSD 2018a, 2018b). The facility is achieving a near 50 percent diversion rate. The Lockwood Regional Landfill has a disposal capacity of 302.5 million cubic yards with a remaining capacity of more than 267 million cubic yards (NDEP 2017). There is sufficient capacity at the MRF and Lockwood Regional Landfill to accept the anticipated incremental increase in solid waste generated at KBSRA.

Construction and demolition (C&D) waste would be generated by construction of new facilities, including restrooms, the administrative building, and removal of playground equipment. In accordance with Section 5.408 of the CALGreen Code, the project would implement a Construction Waste Management Plan for recycling and/or salvaging for reuse of a minimum of 65 percent of C&D debris generated during project construction.

The changes at KBSRA that would occur with implementation of Alternative 2 would not result in an increase in solid waste that would cause the MRF or Lockwood Regional Landfill to exceed permitted capacities. The project would also comply with all federal and state statutes and regulations related to solid waste reduction and recycling. This impact would be **less than significant**.

Pier Rebuild Project

The Alternative 2 eastern pier would not result in a long-term increase in solid waste generated during operation of the pier. C&D waste would be generated by removal of the existing pier and rebuilding of the pier. In accordance with Section 5.408 of the CALGreen Code, CSP or its contractors would implement a Construction Waste Management Plan for recycling and/or salvaging for reuse of a minimum of 65 percent of C&D debris generated during project construction.

As described above, the Lockwood Landfill has a remaining capacity over 267 million cubic yards, and has adequate capacity to accept construction-related waste materials. Because the eastern pier would not generate a long-term increase in solid waste does and would only contribute construction-generated waste for which there is adequate capacity, this impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

Impacts on demand for solid waste collection and disposal from implementation of Alternative 3 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 3 would be similar in location and size compared to Alternative 2. Although Alternative 3 would result in no administrative office at KBSRA and fewer group pavilion areas compared to Alternative 2, implementation of Alternative 3 would be expected to result in a similar increase in visitation that would occur for Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 3 on solid waste collection and disposal would be **less than significant**.

Pier Rebuild Project

The Alternative 3 central pier would result in similar C&D waste as described above for the Alternative 2 eastern pier alternative. For the reasons described above for Alternative 2, the solid waste collection and disposal impact from implementation of the Alternative 3 central pier would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

Impacts on demand for solid waste collection and disposal from implementation of Alternative 4 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 4 would be similar in location and size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 4 on solid waste collection and disposal would be **less than significant**.

Pier Rebuild Project

The Alternative 4 western pier would result in similar C&D waste as described above for the Alternative 2 eastern pier alternative. For the reasons described above for Alternative 2, the solid waste collection and disposal impact from implementation of the Alternative 4 western pier would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.10-6: Result in inefficient and wasteful consumption of energy

Alternatives 2 through 4 would increase electricity and natural gas consumption at the project site relative to existing conditions; however, the project would include renewable energy sources such as solar photovoltaic systems to power general plan related facilities such as administrative buildings and restrooms. Project-related buildings would be required to meet the California Code of Regulations Title 24 standards for building energy efficiency. Construction energy consumption would be temporary and would not require additional capacity or increased peak or base period demands for electricity or other forms of energy. Alternatives 2 through 4 would not result in wasteful, inefficient, or unnecessary consumption of energy. This impact would be **less than significant**.

There would be **no impact** for Alternative 1.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the No Action Alternative, there would be no increase in energy use and therefore **no impact** on electricity or natural gas supplies or infrastructure or inefficient and wasteful consumption of energy.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Action Alternative, there would be no increase in energy use and therefore **no impact** on electricity or natural gas supplies or infrastructure or result in inefficient and wasteful consumption of energy.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Appendix F of the State CEQA Guidelines requires the consideration of the energy implication of a project. CEQA requires mitigation measures to reduce “wasteful, inefficient and unnecessary” energy usages (Public Resources Code Section 21100, subdivision [b][3]). Neither the law nor the State

CEQA Guidelines establish criteria that define wasteful, inefficient, or unnecessary use. Compliance with the California Code of Regulations Title 24 Energy Efficiency Standards would result in energy-efficient buildings. However, compliance with building codes does not adequately address all potential energy impacts during construction and operation. For example, energy would be required to transport people and goods to and from the project site.

Energy would be required to construct the project, operate, and maintain construction equipment, as well as produce and transport construction materials. The one-time energy expenditure required to construct the physical up-land buildings and shoreline pier would be nonrecoverable. Most energy consumption would result from operation of construction equipment and vehicle trips associated with commuting by construction workers and haul trucks supplying materials. An estimated 12,565 gallons of gasoline and 41,455 gallons of diesel fuel would be consumed to enable project construction. The energy needs for project construction would be temporary and is not anticipated to require additional capacity or increase peak or base period demands for electricity or other forms of energy. Construction equipment use and associated energy consumption would be typical of that associated with the construction of minor non-residential projects in a rural setting.

Operation of the project would be typical of non-residential land uses requiring electricity and natural gas for safety lighting, space and water heating, and landscape maintenance activities. Indirect energy use would include wastewater treatment and solid waste removal. The project would increase electricity and natural gas consumption in the Tahoe region relative to existing conditions, but would not require the construction of new utility connections to existing electrical and natural gas facilities.

The project would meet the California Code of Regulations Title 24 Standards for energy efficiency that are in effect at the time of construction. As the standards are updated on a triennial basis, building energy efficiency would continue to improve throughout the project's buildout (20 years).

Fuel consumption associated with vehicle trips generated by the project would not be considered inefficient, wasteful, or unnecessary. The project would generate an estimated peak daily increase in vehicle miles traveled (VMT) of 1,925 (155,105 annual VMT) and would consume 5,806 gallons of gasoline and 1,220 gallons of diesel fuel per year.

Fuel estimates were calculated from the combination of fuel consumption rates and fuel mix by vehicle class from the California Air Resources Board's (CARB) EMFAC 2014 model with overall VMT and mode share by vehicle class modeled for the project in CalEEMod (see the technical analysis materials available on the project webpage [www.parks.ca.gov/PlanKBSRA]). State and federal regulations regarding standards for vehicles in California are designed to reduce wasteful, unnecessary, and inefficient use of energy for transportation.

According to Appendix F of the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. The project would include the use of solar photovoltaics on general plan related facilities such as the administrative building and new restrooms. Further, the project's buildings would be required to meet the Title 24 building efficiency standards in effect at the time of construction. These actions would reduce building energy consumption and would reduce per capita energy use compared to other similar projects.

The project's energy consumption through construction, building operation, and transportation would not be considered wasteful, inefficient, or unnecessary. This impact would be **less than significant**.

Pier Rebuild Project

The Alternative 2 eastern pier would not result in the wasteful, inefficient, or unnecessary consumption of energy. Energy would be consumed during the demolition of the existing pier and rebuilding the pier. The energy intensity of constructing and operating the proposed pier would be less than the projected consumption described above. For the reasons stated previously, the eastern pier would not result in the wasteful, inefficient, or unnecessary consumption of energy; therefore, this impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

Energy impacts from implementation of Alternative 3 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 3 would be similar in magnitude and location as compared to Alternative 2. Further, Alternative 3 would result in no administrative office at KBSRA and fewer group pavilion areas compared to Alternative 2, which would result in an overall decrease in operational energy usage as compared to Alternative 2. Although, implementation of Alternative 3 would be expected to result in an increased in visitation, this increase would be similar to that which would occur under Alternative 2. For these reasons and those described above for Alternative 2, energy use impacts from implementation of Alternative 3 would be **less than significant**.

Pier Rebuild Project

The Alternative 3 central pier would result in similar energy usage as described above for the Alternative 2 eastern pier alternative. For the reasons described above for Alternative 2, energy-related impacts of the Alternative 3 central pier would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

The potential for inefficient and wasteful consumption of energy from implementation of Alternative 4 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 4 would be similar in location and size compared to Alternative 2. For these reasons and those described above for Alternative 2, the potential for inefficient and wasteful consumption of energy from implementation of Alternative 4 would be **less than significant**.

Pier Rebuild Project

The Alternative 4 western pier would not result inefficient and wasteful consumption of energy similar to Alternative 2 described above, because the western pier alternative would include a similar sized pier with the same associated components, including safety lighting, as proposed for the eastern pier. For these reasons and those described above for Alternative 2, the potential for inefficient and wasteful consumption of energy from implementation of the Alternative 4 western pier would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.10-7: Increased demand for fire protection and emergency medical services

Fire protection and emergency services at KBSRA are provided by the North Tahoe Fire Protection District (NTFPD). Implementation of Alternatives 2 through 4 would result in an increase in visitation at KBSRA by up to 10 percent over existing conditions, which could result in an incremental increase in demand for fire protection and emergency services. NTFPD has indicated that the increase in visitation would not be anticipated to increase demand for fire protection and emergency services such that there would be an adverse impact on station operations or response times (Conradson, pers. comm., 2017). Furthermore, construction of the new facilities would meet fire protection and safety requirements identified in the Uniform Fire Code, Uniform Building Code, and CSP Standard Project Requirements. For these reasons, the impact on fire protection and emergency services from Alternatives 2 through 4 General Plan revision and pier rebuild project would be **less than significant**.

Alternative 1 would have **no impact**.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the No Action Alternative, there would be no increase in demand for fire protection and emergency medical services over that which could occur under existing conditions and therefore **no impact** on fire protection and emergency medical services.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Action Alternative, there would be no increase in demand for fire protection and emergency medical services and therefore **no impact** on fire protection and emergency medical services.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Implementation of the Alternative 2 General Plan revision would result in new facilities at KBSRA that include reconfiguration of the parking areas and improved circulation, a new entry kiosk, a new administration building, a new concessionaire building, 12-foot shared-use path, new lawn and stage area, and additional restroom stalls. The existing emergency access from North Lake Boulevard (State Route [SR] 28) between the North Tahoe Event Center and the commercial building east of the event center would remain as part of the General Plan revision. Implementation of Alternative 2 would result in a 10 percent or less increase in visitation to KBSRA, which, in turn, would result in an incremental increase in demand for fire protection and emergency response services. Potential impacts on fire protection and emergency services could occur if new facilities are not designed properly, and adequate emergency access and fire flow is not provided. Implementation of the project would have minimal effects on operations at nearby intersections and on operations of adjacent roadway segments and, thus, would not contribute to degrading emergency access along SR 28 (see Impacts 5.3.13-1, 5.3.13-2, 5.3.13-7, and 5.3.13-8 in Section 5.3.13, Transportation and Circulation).

Fire protection and emergency services at KBSRA are provided by NTFPD. Station #52 at 288 North Shore Boulevard is the nearest fire station to KBSRA at less than one-half mile to the west. NTFPD has indicated that they do not expect the project to result in an increase in fire protection or emergency

response demand related to the project such that there would be an adverse impact on station operations or response times (Conradson, pers. comm., 2017).

New facilities at KBSRA would be constructed according to minimum necessary fire protection and safety requirements identified in the Uniform Fire Code and Uniform Building Code. Additionally, the construction of future facilities would implement CSP Standard Project Requirements to reduce impacts. With implementation of Standard Project Requirements for developing a Fire Safety Plan as well as other typical construction practices, such as using heavy equipment that include spark arrestors for reducing the chance of fire, the potential impacts on fire protection and emergency response services would be reduced. In addition, the General Plan revision would require implementation of the following goal and guideline:

- ◆ GOAL OP 2 and Guideline OP 2.1 state that CSP would enter into a partnership or agreement with NTFPD to clarify management responsibilities and share resources as it relates to emergency response.

Construction and operation of new facilities associated with the Alternative 2 General Plan revision would implement General Plan goals and guidelines and CSP Standard Project Requirements and construction of facilities in accordance with Uniform Fire Code and Uniform Building Code to meet minimum necessary fire protection and safety requirements. Therefore, Alternative 2 impacts on fire protection and emergency services would be **less than significant**.

Pier Rebuild Project

NTFPD has indicated that they do not expect the pier rebuild that would occur as part of Alternative 2 to result in an increase in fire protection or emergency response demand such that there would be an adverse impact on station operations or response times (Conradson, pers. comm., 2017). For these reasons as well as those described above for the Alternative 2 General Plan revision, the Alternative 2 eastern pier would result in a **less-than-significant** impact on fire protection and emergency services.

Alternative 3: Central Pier Alternative

General Plan Revision

Impacts on demand for fire protection and emergency medical services from implementation of Alternative 3 would be similar to Alternative 2 because the types of park amenities that would occur with Alternative 3 would be similar in location and size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 3 on fire protection and emergency medical services would be **less than significant**.

Pier Rebuild Project

The Alternative 3 central pier would not result in an increase in fire protection or emergency response demand such that there would be an adverse impact on station operations or response times similar to Alternative 2 described above, because the central pier alternative would include a similar sized pier with the same associated components, including safety lighting, as proposed for the eastern pier. For these reasons as well as those described above for the Alternative 2 General Plan revision, the Alternative 3 central pier would result in a **less-than-significant** impact on fire protection and emergency services.

Alternative 4: Western Pier Alternative

General Plan Revision

Impacts on demand for fire protection and emergency medical services from implementation of Alternative 4 would be similar to Alternative 2 because the increase in park amenities that would occur with Alternative 4 would be similar in location and size compared to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 4 on fire protection and emergency medical services would be **less than significant**.

Pier Rebuild Project

The Alternative 4 western pier would not result in an increase in fire protection or emergency response demand such that there would be an adverse impact on station operations or response times similar to Alternative 2 described above, because the central pier alternative would include a similar sized pier with the same associated components, including safety lighting, as proposed for the eastern pier. For these reasons as well as those described above for the Alternative 2 General Plan revision, the Alternative 4 western pier would result in a **less-than-significant** impact on fire protection and emergency services.

Mitigation Measures

No mitigation measures are required.

Impact 5.3.10-8: Increased demand for law enforcement services

Law enforcement services at KBSRA are primarily provided by a CSP ranger. Through an agreement with the Placer County Sheriff, law enforcement service needs that occur when the ranger is not present are met by the Sheriff. Implementation of Alternatives 2 through 4 would result in an increase in visitation at KBSRA by up to 10 percent over existing conditions. CSP has identified an existing need for a second ranger to patrol KBSRA. The demand for law enforcement services would increase with the addition of new facilities at KBSRA, including a longer pier, and additional special events. With implementation of General Plan goals and guidelines, additional rangers would be provided as new facilities and an expanded pier are added. Special event applicants would be required to fund additional staff to meet the increase in law enforcement demand associated with their event. For these reasons, the impact on law enforcement services from Alternatives 2 through 4 would be **less than significant**.

Alternative 1 would have **no impact**.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the No Action Alternative, there would be no increase in demand for law enforcement services over that which could occur under existing conditions and therefore **no impact** on law enforcement services.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the No Action Alternative, there would be no increase in demand for law enforcement services over that which could occur under existing conditions and therefore **no impact** on law enforcement services.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Implementation of Alternative 2 General Plan revision could increase visitation to KBSRA by up to 10 percent over existing conditions and an anticipated increase in the number of special events, which would result in an increased demand for law enforcement protection services so that there would be up to three or four total rangers staffed at KBSRA (Linkem, pers. comm., 2017). Similar to existing conditions, special event applicants would be required to fund additional staff to meet the increase in law enforcement demand associated with their event.

Law enforcement services at KBSRA are provided by CSP rangers. Currently, one full-time ranger is assigned to KBSRA (Linkem, pers. comm., 2017). This ranger splits their time between KBSRA and other CSP areas in the north shore (e.g., Tahoe State Recreation Area in Tahoe City), with most of their time spent at KBSRA. Rangers from other CSP areas patrol KBSRA when the KBSRA ranger is off duty. KBSRA has an existing need for an additional ranger to meet law enforcement demand. CSP has an agreement with the Placer County Sheriff in which the Sheriff responds to incidents at KBSRA if a ranger is not present.

The General Plan revision includes a goal and associated guidelines to ensure that law enforcement needs are provided at acceptable levels at KBSRA:

GOAL OP 4 and Guidelines OP 4.1 and OP 4.2 state that it is a goal of KBSRA to have sufficient staffing and funding to meet the needs for public safety and management through planning for staffing and management needs based on use patterns, use of volunteers to complement staff, and seek additional funding sources to complement base funding levels. Implementation of these guidelines as part of project operations would result in providing additional rangers as additional facilities are added to meet the increase in demand for law enforcement services.

With implementation of General Plan goals and guidelines, which would result in increasing the number of rangers at KBSRA as additional facilities are added and visitation increases, Alternative 2 would result in **less-than-significant** impacts on law enforcement services.

Pier Rebuild Project

The rebuilt, longer eastern pier that would be constructed with Alternative 2 would result in an increase in visitation and use of the pier, which could increase demand for law enforcement (Linkem, pers. comm., 2017). For the reasons described above for the Alternative 2 General Plan revision, the impact on law enforcement services from implementation of the Alternative 2 eastern pier would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

Impacts on demand for law enforcement services from implementation of Alternative 3 would be similar to Alternative 2 because the types of park amenities and park use that would occur with Alternative 3 would be similar to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 3 on law enforcement services would be **less than significant**.

Pier Rebuild Project

The rebuilt, longer central pier that would be constructed for Alternative 3 would result in an increase in visitation and use of the pier, similar to that described above for Alternative 2, which could increase demand for law enforcement (Linkem, pers. comm., 2017). For the reasons described above for Alternative 2, the impact on law enforcement services from implementation of the Alternative 3 central pier would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

Impacts on demand for law enforcement services from implementation of Alternative 4 would be similar to Alternative 2 because the increase in park amenities and park use that would occur with Alternative 4 would be similar to Alternative 2. For these reasons and those described above for Alternative 2, the impact from implementation of Alternative 4 on law enforcement services would be **less than significant**.

Pier Rebuild Project

The rebuilt, longer western pier and extended motorized boat ramp that would be constructed for Alternative 4 would result in an increase in visitation and use of the pier, similar to that described above for Alternative 2, which could increase demand for law enforcement (Linkem, pers. comm., 2017). 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 and would not be expected to result in a substantial increase in demand for law enforcement over existing conditions. For the reasons described above for Alternative 2, the impact on law enforcement services from implementation of the Alternative 4 western pier would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Water supply and wastewater conveyance services for KBSRA and the surrounding areas are provided by NTPUD. Additional wastewater conveyance, treatment, and disposal is provided by T-TSA. Solid waste collection is provided by TTDS and solid waste is disposed of at the Lockwood Regional Landfill. Electric and natural gas services are provided by Liberty Utilities and Southwest Gas Corporation, respectively. Fire protection is provided by NTFPD. Law enforcement is provided by CSP rangers at KBSRA and by the Placer County Sheriff's Department as a supplement to CSP ranger patrols and for the surrounding areas. The geographic scope for the cumulative effects on these public services and utilities would be the service area for each of these public service and utility providers.

As described in Impacts 5.3.10-1 through 5.3.10-8, all public service and utility providers are currently able to meet the needs of residents, workers, and visitors year-round. Therefore, no existing significant impacts on public services and utilities impacts currently exist. The public services and utilities impacts of the General Plan revision and pier rebuild action alternatives would be less than significant (see Impacts 5.3.10-1 through 5.3.10-8).

Water

Cumulative projects that could combine with the General Plan revision to result in a cumulatively considerable impact on water supply and water supply infrastructure include buildout of the Placer County Tahoe Basin Area Plan and Regional Plan within the service area for NTPUD and implementation

of the Kings Beach Center Design Concept and North Tahoe Event Center projects. As identified in Impacts 5.3.10-1 and 5.3.10-2, the General Plan revision and pier rebuild project would result in a less than significant impact related to water supply and water supply conveyance and treatment infrastructure. As identified in the NTPUD 2010 Urban Water Management Plan and confirmed by NTPUD staff, there would be sufficient water supplies to meet future demand of these projects (Stelter, pers. comm., 2016a). Additionally, anytime a specific project is proposed, NTPUD may require a capacity analysis to be performed by the project to ensure the areas of the system being tapped for service are adequate in serving the proposed project. If deficiencies are found, any system improvements required to serve the proposed project would be a condition of the project through which the project constructs system improvements and NTPUD takes ownership of the new facilities. For these reasons, the General Plan revision and pier rebuild project would not combine with cumulative projects to result in a significant cumulative impact on water supply and water supply infrastructure.

Wastewater

Cumulative projects that could combine with the General Plan revision to result in a cumulatively considerable impact on wastewater conveyance and treatment infrastructure include buildout of the Placer County Tahoe Basin Area Plan and Regional Plan within the service area for NTPUD and implementation of the Kings Beach Center Design Concept and North Tahoe Event Center projects. Considering the limited anticipated growth that could occur within their service area, NTPUD generally has adequate capacity in their wastewater collection system (Stelter, pers. comm., 2016a). The same requirements for capacity analysis and needed system improvements described for water supply above related to NTPUD infrastructure would also apply to their wastewater collection services. Although the current T-TSA wastewater conveyance system has the capacity to meet the wastewater conveyance demand for the region, a pinch point exists along the Truckee River Interceptor (TRI) near Olympic Valley, which could affect the potential for the system to accommodate increased wastewater flows. The General Plan revision and cumulative projects identified above would contribute wastewater to the TRI. Any excess capacity in the TRI is allocated on a first-come, first-served basis and all future projects that would use this conveyance would be required to demonstrate that sufficient wastewater conveyance capacity is available. The T-TSA WRP has a capacity of 9.6 million gallons per day (mgd) based on a seven-day dry weather average flow basis (Parker, pers. comm., 2017). The remaining available capacity at the treatment plant is estimated to be 3.2 mgd. Currently, there is ample available capacity to serve projected future development, including the buildout of the cumulative projects listed above. The T-TSA WRP is designed to address buildout of its service area which includes cumulative projects located within the Town of Truckee and Placer County (Placer County 1994, Town of Truckee 2006). Also, the T-TSA emergency overflow ponds located between Riverview Park and the Truckee River are designed to hold additional volume that could be generated during peak flows until such flows could be processed by the treatment plant (T-TSA 2009). No project would be permitted without confirmation from the service provider that available capacity exists at the WRP. For these reasons, the General Plan revision and pier rebuild project would not combine with cumulative projects to result in a significant cumulative impact on NTPUD and T-TSA wastewater conveyance and wastewater treatment infrastructure or on the T-TSA WRP.

Solid Waste

Contributions of solid waste to the landfill associated with the project operations would be minimal associated with a 10 percent or less increase in visitation at KBSRA. The project operations would achieve the 50 percent waste diversion requirements of AB 939 through diversion of recyclable materials at the MRF. Construction and demolition (C&D) activities associated with the General Plan revision and pier rebuild project would be required to recycle or salvage for reuse a minimum of 65 percent of C&D debris in accordance with Section 5.408 of the CALGreen Code. The cumulative

projects listed in Table 5.1-4 in Section 5.1.4, Cumulative Impacts, would contribute to the generation of solid waste during construction activities and operations that could be sorted and transferred through the MRF and disposed at the Lockwood Regional Landfill. These projects would also achieve solid waste reductions during operations and construction as required by AB 939 and Section 5.408 of the CALGreen Code.

The Eastern Regional Landfill Materials Recovery Facility (MRF) is permitted to receive 800 tons (3,556 cubic yards) of material daily (CalRecycle 2015). The MRF receives an average of 205 tons per day (911 cubic yards) and has available capacity to receive an additional 595 tons per day (2,644 cubic yards; TTSD 2018a, 2018b). Lockwood Regional Landfill presently has a capacity of 302.5 million cubic yards, over an area of 856.6 acres. Based on the April 2010 aerial survey the Landfill contained a waste volume of approximately 32.8 million cubic yards (NDEP 2016). Given that approximately 90 percent of the landfill capacity is available, there would be sufficient and available capacity to meet solid waste disposal needs for the foreseeable future. For these reasons, the General Plan revision and pier rebuild project would not combine with cumulative projects to result in a significant cumulative impact on solid waste disposal.

Energy

Liberty Utilities and Southwest Gas Corporation employ various programs and mechanisms to support provision of these services to new development; various utilities charge connection fees and re-coup costs of new infrastructure through standard billings for services. There is currently sufficient infrastructure and energy supply to support existing demand. Implementation of the General Plan revision and pier rebuild project would result in an incremental increase in demand for energy.

Many of the cumulative projects identified in Table 5.1-4 in Section 5.1.4, Cumulative Impacts, that would be served by these energy providers involve redevelopment of existing developed sites or areas, including buildout of the Tahoe Basin Area Plan and Regional Plan and the Kings Beach Center Design Concept, North Tahoe Event Center, and Kings Beach Library Relocation. Other cumulative projects would result in demand for electricity that would primarily be associated with new lighting, such as the road and pedestrian projects, which would be an incremental increase over existing conditions. Through their established process to provide connections, electricity, and natural gas supply to new development, Southwest Gas and Liberty Utilities use plans provided by developers to determine if or when upgrades in the system would be required to meet demand. In California, the General Plan revision and pier rebuild project and the cumulative projects would be required to implement energy efficiency measures in accordance with Title 24 to reduce energy demand. For these reasons and because the utilities have procedures to plan for system improvements to keep pace with projected demand, the General Plan revision and pier rebuild project would not combine with cumulative projects to result in a significant cumulative impact on energy efficiency and consumption.

Fire Protection and Emergency Services

As described in Impact 5.3.10-7, the project would result in a minor increase of visitors at KBSRA of 10 percent or less over existing conditions that would not adversely affect NTFPD staffing or operations (Conradson, pers. comm., 2017). During holidays and other periods of high tourist visitation (e.g., ski season, summer weekends), visitation to the area increases, which, in combination with buildout of the Tahoe Basin Area Plan and Regional Plan and development of the Kings Beach Center Design Concept, could affect fire protection and emergency services ratios and response times. Implementation of individual projects could require improved or expanded facilities for fire protection and emergency services provided by NTFPD, the construction of which could result in adverse environmental effects. However, project-level environmental review for specific projects would be

required to have adequate water supply for fire suppression. Additionally, new construction projects pay mitigation fees to NTFPD that are used for costs associated with recovery of fire and life safety activities. NTFPD is also funded through developer agreements and federal grants that are used for providing additional fire equipment and infrastructure that helps NTFPD in working to achieve the National Fire Protection Association (NFPA) 1710 standards (Schwartz, pers. comm., 2016). For these reasons, the General Plan revision and pier rebuild Project would not combine with the cumulative projects to result in a significant cumulative impact on fire protection and emergency services.

Law Enforcement

Law enforcement at KBSRA is provided by CSP rangers, implementation of the General Plan revision would result in increasing the number of rangers at KBSRA as demand increases with new facilities, and the cumulative project law enforcement demands would be served by Placer County Sheriff. For these reasons, the General Plan revision and pier rebuild project would not combine with the cumulative projects to result in a significant cumulative impact on law enforcement services.

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5.3.11 Recreation

This section evaluates the effects of the General Plan revision and pier rebuild project on recreation, as defined by CEQA and the TRPA Regional Plan, Code of Ordinances, and Environmental Thresholds. The 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 existing conditions related to recreation are summarized in the following sections of Chapter 2, Existing Conditions, of this document: Section 2.1.2, Regional Recreation Opportunities; Section 2.3.1, Park Land Uses; Section 2.3.2, Recreation Facilities; Section 2.4.1, Visitor Profile; and Section 2.4.2, Recreation Opportunities. A more detailed description of the existing recreation setting 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 goals and guidelines are summarized in Section 4.4.2, Visitor Experiences and Opportunities, and Section 4.5, Preferred Site Design and Visitor Facilities, and under the heading Visitor Use Facilities in Chapter 4, The Plan. CSP Standard and Special Project Requirements pertaining to recreation, which would support enhanced recreation are included in Section 4.7, CSP Standard and Special Project Requirements; these requirements include measures that would enhance access and recreation offerings at the park. Other recreation goals and guidelines in Chapter 4, The Plan, would be implemented as part of project operations.

Chapter 50 of the TRPA Code regulates allocations, include commercial floor area, residential units of use, and tourist accommodation units. It also regulates targets for developed outdoor recreation measured in “persons at one time” (PAOTs), for overnight facilities, winter day-use facilities, and summer day-use facilities. The PAOT measure is an estimate of the number of individuals that a recreation facility or area can support at any given time. The PAOT allocations are used as both a target for desired recreation capacity, and a maximum limit to the recreational use that can be supported in the Region. Beach recreation and day-use areas, such as KBSRA, are subject to summer day-use PAOT allocations. TRPA allocates PAOTs to plan area statements (PAS), community plans, and area plans and to a pool where PAOTs are held in reserve. If a proposed new or expanded recreational facility meets TRPA’s criteria and the project is approved, then the number of PAOTs necessary to accommodate the increased level of activity associated with the project would be assigned or allocated to the project from the relevant PAS, community plan, area plan, or reserve pool.

The TRPA Fair Share Distribution of Recreation Capacity Threshold is intended to ensure that a fair share of the region’s outdoor recreation capacity is available to the public. As of 2015, there were a total of 5,039 PAOT allocations remaining (TRPA 2016:11-14). The 2015 Threshold Evaluation determined that a fair share of the Region’s capacity is available for public recreation, and that this threshold is in attainment. Much of the shoreline in the Kings Beach area, includes public recreation facilities (Kings Beach SRA, Secline Beach, and Steamer’s Beach) with access to the lake and shoreline. Each of the General Plan and pier alternatives would maintain a fair share of the total lake and shoreline recreation capacity for the public at KBSRA, and would contribute to the continued attainment of the recreation threshold by retaining and expanding upon the recreational offerings at KBSRA. KBSRA is a public beach facility that meets TRPA’s criterion for a public beach recreation area and therefore summer day-use PAOTs have been assigned to the existing beach and additional PAOTs would be allocated from the pool of 5,039 PAOTs, if warranted, by TRPA. As identified in the Implementing Regulations for the Placer County Tahoe Basin Area Plan, 750 PAOTs of the pool of remaining PAOTs have been assigned to the Kings Beach Town Center (Placer County 2017:140).

Implementation of the alternatives would result in an increase in visitation at KBSRA by up to 10 percent. Based on the highest peak day average visitation numbers provided in Table 2.4-1 in Chapter 2, Existing Conditions, the estimated peak visitation at KBSRA could increase by approximately 440 visitors on a peak day. Thus, there would be sufficient available PAOTs to accommodate the estimated increase in peak visitors at KBSRA.

Further, the alternatives would not include structures that impede pedestrian access along or to the shoreline. To the contrary, the project and build alternatives would include a waterfront promenade, or shared-use path, and a rebuilt and extended pier that would enhance access to the lake and the shoreline for the public and persons with mobility challenges.

Lastly, the General Plan revision and pier rebuild alternatives would not create additional demand for recreation facilities such as a residential or tourist development might. Therefore, adverse effects caused by substantially increased demand that could cause physical deterioration of a facility is not discussed further.

Environmental Impacts and Mitigation Measures

Analysis Methodology

The following analysis assesses the environmental effects of each alternative with respect to the existing or currently proposed recreation uses and facilities in the Plan area. This analysis is based on review of existing documents, policies, ordinances, and other regulations pertinent to recreation. The analysis also considers the recreational analysis approach developed and approved by the Joint Fact Finding Committee in support of the environmental review for the proposed Lake Tahoe Shoreline Plan (Ascent 2017).

Significance Criteria

Significance criteria relevant to recreation issues are summarized below.

CEQA Criteria

Based on Appendix G of the State CEQA Guidelines impacts to recreation resources would be significant if the project would:

- ◆ include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment, or recreation user groups such as motorized and non-motorized watercraft.

TRPA Criteria

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

- ◆ have the potential to alter the character of recreational experiences or create conflicts between recreation uses, either existing or proposed;
- ◆ result in a change in access to or along the shoreline that would cause a loss of public access to any lake, waterway, or public lands; or
- ◆ have an unplanned effect upon recreation user groups.

Environmental Impacts

Impact 5.3.11-1: Affect access or recreation opportunities for motorized watercraft

There are four public boat launches in the north shore area of Lake Tahoe, including the boat ramp at KBSRA. Boat launches from KBSRA represent 1 percent of the motorized launches in the north shore. The existing boat ramp and pier currently provide limited accessibility to the lake and shoreline for motorized boats because of varying lake levels, and the short length of the ramp and pier that do not reach sufficiently deep lake water to support consistent motorized boat access. The KBSRA boat ramp does not accommodate a substantial number of motorized boat launches relative to other nearby boat ramps. For these reasons, and because the action alternatives would expand accessibility for motorized boats from the lake to the pier, closure of the boat ramp at KBSRA with implementation of the rebuilt pier with Alternatives 2 and 3 would result in a **less-than-significant** impact to shoreline access or recreation opportunities for motorized watercraft.

Implementation of the Alternative 4 western pier would construct an extended boat ramp and an extended pier, which would enhance motorized boat access to the shoreline and recreation opportunities. This would be a **beneficial** impact.

Aside from proposed changes associated with replacement of the existing boat ramp with a non-motorized lake access point and pier, the upland features proposed by General Plan revision with Alternatives 2 through 4 would otherwise not affect motorized access to Lake Tahoe. These General Plan revision alternatives would have a **less-than-significant** impact to shoreline access or recreation opportunities for motorized watercraft.

Alternative 1 would have **no impact** to access or recreation opportunities for motorized watercraft.

This impact considers whether the project alternatives would reduce opportunities for motorized watercraft or large non-motorized watercraft to access Lake Tahoe. It considers whether shoreline structures or other provisions of the alternatives would substantially reduce recreational opportunities for users of these watercraft. The analysis considers changes in the launch capacity and distribution of launching opportunities likely to occur under each alternative. As described in Section 2.3.2, Recreation Facilities, in Chapter 2, Existing Conditions, neither the pier nor the boat ramp reach Lake Tahoe during periods of low lake levels (i.e., lake levels below 6,227 feet mean sea level [msl]). Some commercial users can still access the ramp during these times with specialized equipment. The existing boat ramp at KBSRA is one of four public boat launches in the north shore area of Lake Tahoe (see Table 5.3.11-1). The nearest boat ramp to KBSRA is 1.3 miles away at the Tahoe Vista Recreation Area. Over 75 percent of the boat launches in the north shore occur at the Tahoe Vista and Lake Forest Beach boat ramps and only a small proportion of launches are from the KBSRA boat ramp.

The analysis also considers the element of the preferred alternative of the Shoreline Plan, currently under environmental review, that would allow additional motorized boat ramps or relocation of boat ramps to locations with better conditions for navigation.

Table 5.3.1 I-I Summary of North Shore Public Boat Launching Facilities

Facility Name	Managed By	Distance from KBSRA Boat Launch (miles)	Average Annual Motorized Boat Launches/Year	Average % of North Shore Motorized Boat Launches/Year	Pier Supports Boating (Yes/No)	Water Elevation in Which Boat Ramp Must Close (feet/msl)
KBSRA Coon Street	California State Parks	NA	210 ^a	1%	Yes	6,227
Tahoe Vista Recreation Area	North Tahoe Public Utility District	1.3	8,940 ^b	50%	No	Not available
Lake Forest Beach	Tahoe City Public Utility District	8.1	5,010 ^c	28%	No	Never closed ^e
Sand Harbor State Park	Nevada State Parks	10.0	3,734 ^d	21%	No	6,224 ^f

Notes: msl = mean sea level; NA = not applicable

^a The range of motorized boat launches varied between 2001 and 2012, from a low of 60 to a high of 377. The average number of boat launches was determined by averaging the launches during years where water levels were sufficient to operate the boat ramp.

^b This was provided by North Tahoe Public Utility District staff.

^c The range of boat launches varied between 2013 and 2016, from a low of 4,476 to a high of 5,801. The average number of boat launches was determined by averaging the number of launches over this four-year period.

^d This was provided by Nevada State Parks staff.

^e The boat ramp has never closed because of water depth. There may be times when larger boats are not able to launch due to depth, but the Lake Forest ramp has never had a full closure due to water depth.

^f Generally, the boat ramp at Sand Harbor closes to boats over 14 feet when water levels are at 6,224 feet msl. The boat ramp is closed to all boats at 6,223 feet msl.

Source: CSP 2017; Howard, pers. comm., 2017; Bernston, pers. comm. 2017; compiled by Ascent Environmental in 2017

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the no project alternative, there would be no change in public access for motorized watercraft to the shoreline over that which could occur under existing conditions. Alternative 1; therefore, would have **no impact** to access or recreation opportunities for motorized watercraft.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the no project alternative, there would be no change in public access for motorized watercraft to the shoreline over that which could occur under existing conditions. Alternative 1 would, therefore, have **no impact** to shoreline access or recreation opportunities for motorized watercraft would occur.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Aside from proposed changes associated with replacement of the existing boat ramp with a non-motorized lake access point and pier, evaluated separately below, the upland features proposed by the Alternative 2 General Plan revision would not affect motorized watercraft access to Lake Tahoe. The upland features include two 10-foot wide ramps from the shared-use path to the beach. These features would provide maintenance vehicle and emergency access to the beach, but would not alter public watercraft access. Because the upland improvements proposed by the General Plan revision would have no change in public access for motorized watercrafts to the shoreline over that which could occur under existing conditions, Alternative 2 would have a **less-than-significant** impact to shoreline access or recreation opportunities for motorized watercraft.

Pier Rebuild Project

Implementation of the Alternative 2 eastern pier would include removal of the existing pier and replacement of the boat ramp with a non-motorized watercraft lake access point. The pier rebuild project is intended to improve functional access of the pier for a range of recreational boating types over a wider range of lake level conditions. During peak periods of use, the rebuilt pier would be accessible to a maximum of 14 to 18 boats for short periods to load and unload passengers, depending on lake water level (see Table 5.3.11-2); whereas only three boats would be able to access the existing pier during high lake levels (above an elevation of 6,227 feet msl). Motorized boats desiring to stay at Kings Beach for long periods would need to anchor away from the pier.

As shown in Table 5.3.11-1, the existing boat ramp closes when the water surface elevation is below 6,227 feet msl. Furthermore, the existing pier is functional for motorized boat access only when the water surface elevation is above 6,227 feet msl. The boat launch has only been open for three seasons, 2011, 2012, and 2017 since 2008 (see Section 2.3.2, Recreation Facilities, and Sasaki, pers. com., 2017). The existing boat launch at KBSRA supports an average of 210 motorized boat launches in the years that the lake level is high enough for the ramp to operate. A small proportion, 1 percent, of all motorized boat launches in the north shore of Lake Tahoe occur at KBSRA (see Table 5.3.11-1). The majority of motorized boat launches in the north shore are from the Tahoe Vista Recreation Area boat launch, which is 1.3 miles from KBSRA, and the Lake Forest Beach boat launch, which is 8.1 miles from KBSRA.

Pier contractors, and a private concessionaire with an amphibious vehicle that supports 4th of July fireworks celebrations on Lake Tahoe for Kings Beach and Tahoe City, has historically launched from the KBSRA boat ramp (Krauss 2017). These users also access other nearby boat launches (i.e., Tahoe Vista Recreation Area, Lake Forest, and Incline Village, among others). The fireworks concessionaire prefers the KBSRA boat ramp because of the ease of access for launching, but is able to use other boat launches for the same purpose. With implementation of Alternative 2, these users would no longer be allowed to launch at KBSRA. However, provided that an amphibious vehicle meets county and state road standards, a vehicle would be able to access one of the three other boat launches on the north shore.

Although Alternative 2 would eliminate the motorized boat ramp at KBSRA, this alternative includes a pier that would be longer than the existing pier, which would increase accessibility from the lake to the shoreline at KBSRA. Additionally, the existing boat ramp and pier currently provide limited access to the lake and shoreline for motorized boats because of varying lake levels and the short length of the ramp and pier that do not reach sufficiently deep lake water to support continuous motorized boat access. The KBSRA boat ramp does not accommodate a substantial number of motorized boat launches relative to other nearby boat ramps. Because of the limited seasons that the boat ramp has been open due to low lake levels (about 25 percent of the boating seasons), and the trend toward continued low lake levels, the motorized boat launch at Kings Beach is not a feasible option. Further, the preferred alternative of the Shoreline Plan would allow additional motorized boat ramps or relocation of boat ramps to locations with better conditions for navigation. For these reasons, closure of the boat ramp at KBSRA with implementation of Alternative 2 would result in a **less-than-significant** impact to shoreline access or recreation opportunities for motorized watercraft.

Table 5.3.11-2 Maximum Number of Motorized Watercraft That Could Access Pier at One Time¹

	Existing Conditions ²	Alternative 2 – Eastern Pier Alternative	Alternative 3 – Central Pier Alternative	Alternative 4 – Western Pier Alternative
During high water conditions ³	3	18	29	29 ⁵
During low water conditions ⁴	0	14	20	20 ⁵

¹ Assuming an average boat length of 20 feet, with approximately 2 feet of space between boats. This is a conservative estimate that may overestimate the number of boats at one time because: boats could be longer than the assumed 20-foot length, boats could be moored at the pier with greater than a 2-foot space between boats, and boats could need more than a 2-foot draft as indicated in note 4, below.

² The existing pier has three cut outs in the railing along its east side that can accommodate motorized watercraft in high water conditions.

³ Assumes boats could access the pier up to the lakeward end of the floating pier in high water conditions. It also assumes the fixed section would not be accessible by boat because of the safety railing.

⁴ Assumes that a minimum of 2 feet of draft would be necessary for motorized watercraft; many motorized watercraft would require a greater draft. Assumes that the first two sections of the floating pier would not be accessible to motorized watercraft during low water conditions.

⁵ The number of boats that can access the pier during and low water conditions is the same for the western pier and central pier, because the floating dock dimensions are the same and the depth in which the pier would be accessible is the same.

Source: Cardno 2017; CSP 2017; compiled by Ascent Environmental in 2017

Alternative 3: Central Pier Alternative

General Plan Revision

The Alternative 3 General Plan revision would result in similar park amenities as those that would occur with Alternative 2; however, Alternative 3 only includes one beach ramp from the shared-use path in addition to the non-motorized lake access point. Because the upland improvements proposed by the General Plan revision would have no change in public access for motorized watercraft to the shoreline, Alternative 3 would have a **less-than-significant** impact to shoreline access or recreation opportunities for motorized watercraft.

Pier Rebuild Project

The Alternative 3 central pier would result in the same change in motorized boat access at KBSRA as described above for Alternative 2. However, because the central pier would be longer than the eastern pier proposed in Alternative 2, a maximum of 20 to 29 boats would be able to dock at the pier at a time, depending on lake elevation (see Table 5.3.11-2). For the reasons described above for Alternative 2, the impact to shoreline access or recreation opportunities for motorized watercraft from implementation of Alternative 3 would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

The Alternative 4 General Plan revision would result in similar park amenities as those that would occur with Alternative 2. Because the upland improvements proposed by the General Plan revision would have no change in public access for motorized watercrafts to the shoreline over that which could occur under existing conditions, Alternative 4 would have a **less-than-significant** impact to shoreline access or recreation opportunities for motorized watercraft.

Pier Rebuild Project

The Alternative 4 western pier would be longer than the existing pier, and the alternative would include an extended motorized boat ramp. The extended boat ramp would allow the ramp to function during lower lake levels and, therefore, increase the amount of time during which the boat ramp is accessible. 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 western pier would be longer than the existing pier and eastern pier proposed by Alternative 2; and a maximum of 20 to 29 boats would be able to moor at the pier at a time, depending on lake elevation (see Table 5.3.11-2). Because Alternative 4 would extend the amount of time that the boat ramp is accessible and increase the number of boats that could access the pier for loading and unloading it would enhance motorized boat access to the shoreline and recreation opportunities. This would be a **beneficial** impact.

Mitigation Measures

No mitigation measures are required.

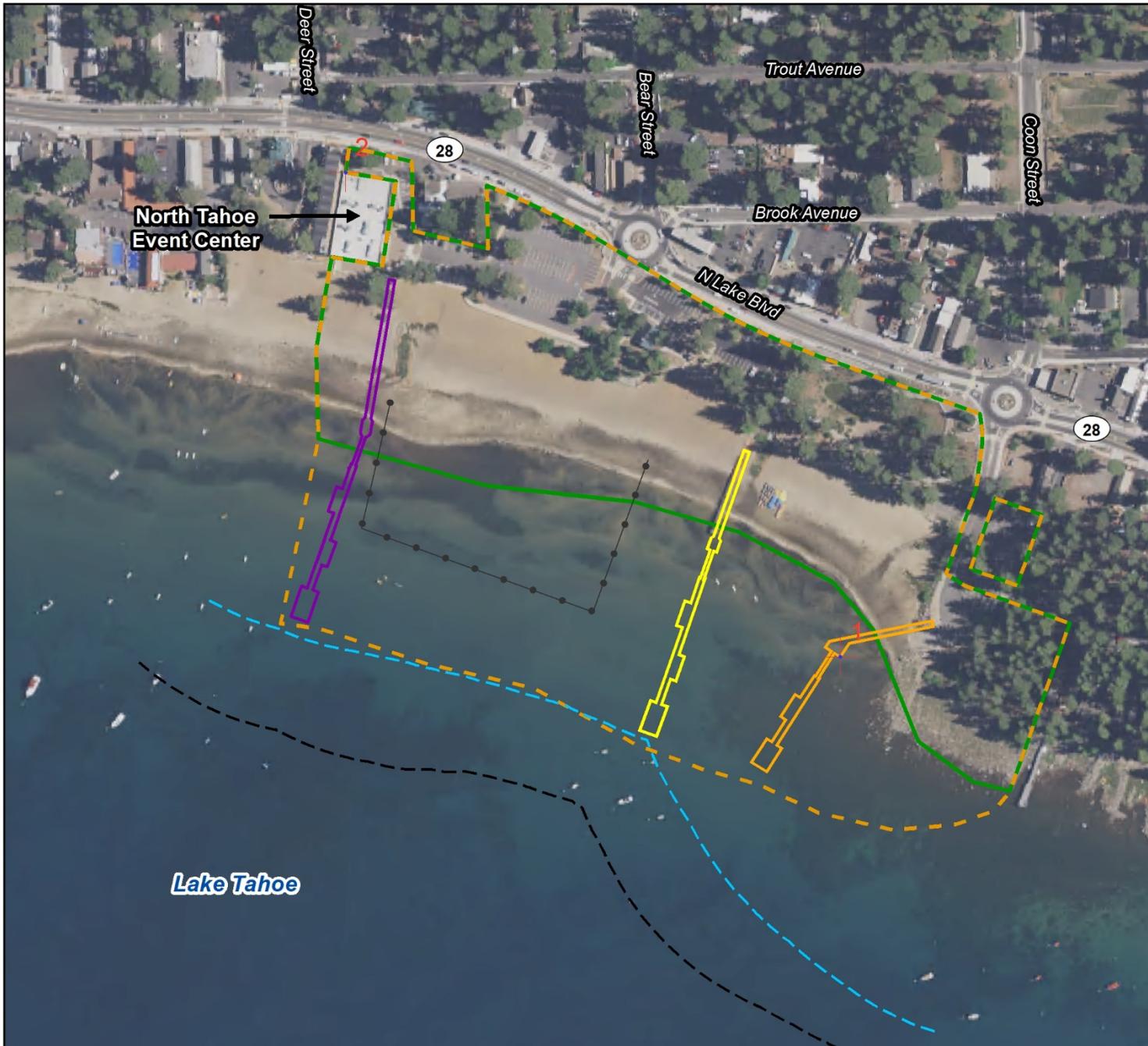
Impact 5.3.11-2: Affect navigation for non-motorized activities

With all of the pier alternatives, non-motorized watercraft and long-distance swimmers would need to navigate around the lakeward end of the pier, except during lake levels near median (about 6226 feet msl) where such users could choose to navigate under the fixed pier sections (or gangway). With Alternative 2, non-motorized watercraft would also need to navigate around the swim buoy area. Because the pier with Alternative 2 would be sufficiently distant from the 600-no wake zone in high and low water conditions; and non-motorized watercraft and swimmers are already accustomed to navigating into deeper waters to get around the point and buoys on the eastern end of the park, the impact on navigation for non-motorized watercraft and swimmers would be **less than significant** for Alternative 2. Because the Alternative 3 central pier and the Alternative 4 western pier would create a significant barrier by forcing non-motorized watercraft and swimmers to travel outside of the 600-foot no wake zone during high water conditions, this impact would be **significant**. After implementation of Mitigation Measure 5.3.11-2, the piers proposed in Alternatives 2 and 3 would include buoys to notify motorized watercraft to reduce speeds, and the most lakeward sections of the piers would be removed during periods of high lake levels to increase the space available for non-motorized navigation. After incorporation of mitigation, the impact of the piers in Alternatives 3 and 4 would be **less than significant**.

Aside from proposed changes associated with replacement of the existing boat ramp with a non-motorized lake access point and pier, the upland features proposed by the General Plan revision in Alternatives 2 through 4 would not affect non-motorized navigation on Lake Tahoe. These General Plan revision alternatives would have a **less-than-significant** impact on non-motorized navigation parallel to the shore.

Alternative 1 would have **no impact** on non-motorized watercraft activities.

This impact considers whether the project alternatives would degrade the quality of recreation by impairing the ability of small non-motorized watercraft (e.g., kayak, paddleboards) and long-distance swimmers to safely navigate parallel to the shore. The analysis considers whether the pier design for each alternative would be a significant barrier by forcing non-motorized watercraft and swimmers to travel outside of the 600-foot no wake zone (where speeds are limited to 5 miles per hour [or less]), or requiring them to take substantial detours. Exhibit 5.3.11-1 shows the location of the Alternative 2, 3, and 4 piers relative to the 600-foot no wake zone in high and low water conditions.



Kings Beach State Recreation Area General Plan

- Legend**
- Designated Swim Area
 - - - 600 ft. No Wake Zone during Low Lake Levels
 - - - 600 ft. No Wake Zone during High Lake Levels
 - - - Project Site
 - ▭ Kings Beach SRA General Plan Boundary
 - ▭ Alternative 2, Eastern Pier Alternative (Proposed)
 - ▭ Alternative 3, Central Pier Alternative
 - ▭ Alternative 4, Western Pier Alternative

Source: Data received from Design Workshop and CASP in 2017; adapted by Ascent in 2017
 2016 NAIP Imagery
 G13010017 04 030



Exhibit 5.3.11-1 Pier Rebuild Alternatives Compared to the 600-foot No Wake Zone

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the no project alternative, there would be **no impact** to navigation for non-motorized watercraft.

Pier Rebuild Project

For the existing pier, passage under the fixed pier is not an option under most lake levels, but avoiding the pier requires only a short detour away from the shoreline (approximately 200 feet at high lake levels). The existing pier is approximately 400 feet inside of the no wake zone under high water conditions (Cardno 2016); therefore, swimmers and non-motorized watercraft navigating around the end of the existing pier experience limited hazards from potential interactions with motorized vessels and wakes. Because the existing Kings Beach pier would remain and there would be no other improvements under the no project alternative, there would be no change to navigation for non-motorized watercraft and **no impact**.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

Aside from the proposed changes associated with the swim buoy area and replacement of the existing motorized boat ramp with a non-motorized lake access point and pier on the eastern end of the park, the upland features proposed by the Alternative 2 General Plan revision would otherwise not affect non-motorized watercraft movements at Lake Tahoe. Effects on non-motorized watercraft activities related to the swim buoy area and rebuilding the pier and removing the boat ramp are discussed below under the pier rebuild project header. The upland features include a non-motorized watercraft storage area and two 10-foot wide ramps from the shared-use path to the beach that could be used by non-motorized watercraft to access the lake. Because the upland improvements proposed by the General Plan revision would not include any shorezone features, Alternative 2 would have a **less-than-significant** impact on navigation of non-motorized watercraft.

Pier Rebuild Project

For the eastern pier alternative, the need to navigate around the pier end varies by lake level. During high and low lake levels, there would be little or no option for non-motorized watercraft and swimmers to safely navigate under the fixed pier; either because there is insufficient room between the water surface and bottom of the pier (during high lake levels) or there is insufficient water under the fixed portion of the pier (during low lake levels). During these times, non-motorized watercraft and swimmers would be required to detour around the lakeward end of the 488-foot-long pier. For lake levels near median (about 6226 feet), non-motorized watercraft and swimmers could choose to go under the fixed pier sections (or gangway), or go around the lakeward end of the pier.

During high lake levels, non-motorized watercraft and swimmers would need to navigate more than 400 feet away from the shoreline to pass the pier. Given the shoreline configuration, the east pier's lakeward end would still be about 200 feet inside of the existing no wake boundary (Exhibit 5.3.11-1), limiting the potential for conflicts with motorized watercraft traveling at high speeds outside of the no wake zone. Under existing conditions, non-motorized watercraft and swimmers traveling along the shoreline near the eastern end of the park tend to move into deeper water to pass the rocky point east of the boat ramp and the eight legally-existing buoys east of the park, thus many users already navigate out and around this boundary point (Cardno 2016:37). At low water, the no wake boundary would lie approximately 400 feet beyond the end of the pier in this location; which would provide sufficient room for non-motorized users to navigate around the pier and avoid conflicts with motorized watercraft.

In addition to navigating around the pier, non-motorized watercraft would need to navigate around the swim buoy area, which prohibits access to non-motorized watercraft with a paddle. The swim buoy area would extend from a point just east of the westernmost stormwater outfall to a point just west of the central stormwater outfall. The distance into the lake would be determined at the time a future permit application but has been depicted in Exhibit 5.1-5 as extending approximately 500 feet along the beach and 200 feet into the lake. The swim buoy area would provide an area free of boats for swimmers. Over half of the length of the beach would continue to be open to non-motorized watercraft access and lateral navigation would not be impaired beyond the outer limit of the swim buoy area.

Because the pier in Alternative 2 would be sufficiently distant from the 600-foot no wake zone in high and low water conditions, more than half of the beach would be accessible to non-motorized watercraft, and non-motorized watercraft and swimmers are already accustomed to navigating into deeper waters to get around the point on the eastern end of the park, the impact on navigation for non-motorized watercraft and swimmers would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

Aside from the proposed changes associated with replacement of the existing motorized boat ramp with a non-motorized lake access point and pier in the location of the existing pier, the upland features proposed by the Alternative 3 General Plan revision would otherwise not affect non-motorized watercraft movements at Lake Tahoe. Effects on non-motorized watercraft activities related to rebuilding the pier and removing the boat ramp are discussed below under the pier rebuild project header. The upland features include a non-motorized watercraft storage area and one 10-foot wide ramp from the shared-use path to the beach that could be used by non-motorized watercraft to access the lake. Because the upland improvements proposed by the General Plan revision would not include any shorezone features, Alternative 3 would have a **less-than-significant** impact on navigation of non-motorized watercraft.

Pier Rebuild Project

Alternative 3 would include a 601-foot long pier in the center of KBSRA. The potential to safely swim under the central pier with Alternative 3, would be similar to Alternative 2 except that Alternative 3 does not include a swim buoy area. As with Alternative 2, non-motorized watercraft and swimmers would need to navigate around the pier end at various lake levels with Alternative 3. Under high water conditions, non-motorized watercraft and swimmers would need to travel about 600 feet away from the shore to navigate around the pier. During periods of heavy use, this distance could be greater to navigate around motorized boats tied up at the pier head. Therefore, during high water level lake conditions, this option places non-motorized users near or past the boundary of the no wake zone (Exhibit 5.3.11-1) and would increase the potential for safety conflicts between user groups. During low water conditions, ample space within the no wake zone would allow non-motorized passage around the pier without conflicts with motorized watercraft.

Because the Alternative 3 central pier would create a significant barrier to navigation by forcing non-motorized watercraft and swimmers to travel outside of the 600-foot no wake zone during high water conditions, this impact would be **significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

Aside from the proposed changes associated with replacement of the existing pier on the western end of the park, the upland features proposed by the Alternative 4 General Plan revision would otherwise not affect non-motorized watercraft movements at Lake Tahoe. Effects on non-motorized watercraft activities related to rebuilding the pier are discussed below under the pier rebuild project header. The upland features include two 10-foot wide ramps from the shared-use path to the beach that could be used by non-motorized watercraft to access the lake. Because the upland improvements proposed by the General Plan revision would not include any shorezone features, Alternative 4 would have a **less-than-significant** impact on navigation of non-motorized watercraft.

Pier Rebuild Project

Alternative 4 would include a 704-foot long pier on the western end of the KBSRA, near the event center. The potential to safely swim or navigate under the fixed portion or gangway of the pier in Alternative 4, would be similar to Alternative 2.

As with Alternative 2, non-motorized watercraft and swimmers would need to navigate around the pier end at various lake levels with Alternative 4. Under high water conditions, non-motorized watercraft and swimmers would need to travel about 700 feet away from the shore to navigate around the pier. During periods of heavy use, this distance could be greater to avoid motorized boats moored at the pier head. Therefore, during high water level conditions, this option places non-motorized users near or past the boundary of the no wake zone (Exhibit 5.3.11-1) and would increase the potential for safety conflicts between user groups. During low water conditions, ample space within the no wake zone would allow non-motorized passage without increased safety conflicts.

Because the Alternative 4 western pier would create a significant barrier by forcing non-motorized watercraft and swimmers to travel outside of the 600-foot no wake zone during high water conditions, this impact would be **significant**.

Mitigation Measures

Mitigation Measure 5.3.11-2: Improve lateral movement and navigation around pier

This mitigation measure would apply to the pier rebuild project under Alternatives 3 and 4.

CSP and the Conservancy will redesign the pier to improve lateral movement and navigation for non-motorized watercraft and swimmers. The pier would be redesigned and constructed to include the following features:

- ◆ removable navigational buoys shall be added beyond the lakeward end of the pier for use in high water conditions to notify motorized boaters of an extended no wake zone; and
- ◆ the design shall allow for the outermost floating platform(s) to be temporarily removed during high water conditions, to shorten the pier while maintaining access to the pier for motorized watercraft.

Significance after Mitigation

Implementation of Mitigation Measure 5.3.11-2 would improve navigation and lateral movements for the western pier for Alternatives 3 and 4. Navigational buoys would notify operators of motorized watercraft of an extended no wake zone, which would reduce watercraft speeds near the end of the pier. Removal of the outermost section of the pier would reduce the pier length by approximately

64 feet, and removal of the outermost two sections would reduce the pier length by approximately 116 feet during periods of high lake levels. The reduced pier length would provide adequate space for non-motorized watercraft and swimmers to navigate around the pier while remaining within the 600-foot no wake zone, reducing the potential for conflicts with motorized watercraft. In addition, when the outermost pier section(s) are removed, the pilings would remain at the end of the pier, which would deter motorized watercraft from mooring at the pier head and provide additional space for non-motorized users to navigate around the pier. After implementation of Mitigation Measure 5.3.11-2, motorized watercraft would operate at lower speeds near the pier, and the pier would be shortened to provide sufficient space for non-motorized watercraft and swimmers to navigate around the pier while avoiding areas where motorized watercraft operate at high speeds. Therefore, this impact would be **less than significant**.

Impact 5.3.11-3: Alter the character of the park or create user conflicts

With all of the action alternatives, the revised General Plan would provide additional recreational amenities similar to existing recreational amenities, which would not substantially alter the character of the park. Because the 0.25-mile shared-use path would bisect the park from at the western edge to east to Coon Street, all beach users west of Coon Street would need to cross the path to access the beach. Because of the nature and length of the path, it is not expected that path users would travel at high speeds across this short distance or travel in such a manner as to create bicycle and pedestrian conflict. Motorized watercraft would be unable to access the piers in nearshore locations because of barrier railing along the extent of the fixed section and gangway, which would extend about between 273 and 400 feet into the lake, depending on alternative. This would minimize the potential for conflict between motorized watercraft and swimmers in nearshore areas. For these reasons, the General Plan revision and pier rebuild project in Alternatives 2 through 4 would neither substantially alter KBSRA's character nor create user conflicts. This impact would be **less than significant**.

Alternative 1 would have **no impact** on the character of the park or the potential to create user conflicts.

Alternative 1: No Project

General Plan Revision

Because the 1980 General Plan Development Plan would remain unchanged and no upland improvements would be made under the no project alternative, there would be no change in the types of facilities or uses that occur at KBSRA. Therefore, there would be **no impact** on the character of recreational experiences at KBSRA or potential for user conflicts.

Pier Rebuild Project

Because the existing Kings Beach pier would remain and there would be no other improvements under the Alternative 1, there would be no change in the types of facilities or uses that occur at KBSRA. Therefore, there would be **no impact** on the character of recreational experiences at KBSRA or potential for user conflicts.

Alternative 2: Eastern Pier Alternative (Proposed Project)

General Plan Revision

With Alternative 2, the revised General Plan would provide additional recreational amenities. The new upland features include large and small group pavilions, an open lawn and event/stage, a nature play area that would replace the existing playground, new drop-off locations in the parking lots,

interpretative information and scenic overlooks, a shared-use path and bicycle racks that support additional bicycle and pedestrian access and use, non-motorized watercraft storage, and showers and changing rooms in a new central comfort station. The open lawn area could be used for wintertime ice skating. Existing recreational amenities would be retained, except as noted above. With respect to shorezone-related features, the Alternative 2 General Plan revision would rebuild and extend the pier on the western end of the park, add a new lake access point accessible to non-motorized watercraft and pedestrians only, and add a new swim buoy area that would separate swimmers from motorized watercraft. The existing boat ramp would be eliminated with Alternative 2.

The new and redeveloped recreational facilities would provide similar recreation opportunities and a similar intensity of use as existing conditions, which would not substantially alter the character of the park. The improvements would be consistent with the park vision to provide a park where “visitors from across California and beyond, including the local community, will enjoy beach swimming boating and other watersports, and family-friendly recreation opportunities in the heart of a mountain town.”

The proposed changes are not expected to create new user conflicts. See the Pier Rebuild Project header below for a discussion of the potential for conflict between the proposed shorezone features. With respect to upland features, the half basketball court would be relocated away from its location at the beach edge to allow that area to be used for picnicking and lake viewing. Relocation of the pier to the eastern edge would create a more uniform and expansive beach area that would reduce the potential for conflicts between beach users and watercraft at the pier. Because the 0.25-mile shared-use path would bisect the park from the western edge east to Coon Street, all beach users west of Coon Street would need to cross the path to access the beach. The path meanders behind picnic areas as it approaches Coon Street. Because of the meandering nature and length of the path, it is not expected that path users would travel at high speeds across this short distance or travel in such a manner as to create bicycle and pedestrian conflict. Special event permits would include signage and temporary walk your bike areas to minimize upland conflicts, as necessary.

For these reasons, the Alternative 2 General Plan revision would neither substantially alter KBSRA’s character nor would it create user conflicts associated with the upland features. These effects are consistent regardless of which state agency owns the land. This impact would be **less than significant**.

[Pier Rebuild Project](#)

Alternative 2 includes a designated-swim buoy area that would provide a protected area free of motorized-and non-motorized watercraft. Swimmers would also be free to swim elsewhere along the beach, outside of the swim buoy area. With this alternative, the boat ramp would be closed and replaced with a non-motorized lake access point and a longer rebuilt pier. Motorized watercraft would be unable to access the pier in nearshore locations because of barrier railing along the extent of the fixed section and gangway (Exhibit 5.1-5), which would extend about 273 feet into the lake. This would minimize the potential for conflict between motorized watercraft and swimmers in nearshore areas. It is likely that non-motorized watercraft would either access the lake from the beach or near the lake access point, which are separated from the portion of the pier that would be accessed by motorized watercraft. The eastern pier would be within the limits of the TRPA-designated no wake zone whereby boat speeds cannot exceed 5 mph (TRPA Code Section 84.17.1), which would reduce the potential for conflict.

For these reasons, the Alternative 2 pier rebuild project would neither substantially alter KBSRA’s character nor would it create user conflicts. This impact would be **less than significant**.

Alternative 3: Central Pier Alternative

General Plan Revision

The potential to affect park character and create user conflicts associated with Alternative 3 would be similar to Alternative 2 because the park amenities that are included in Alternative 3 would largely be the same as with Alternative 2, except in location and size. The primary difference in upland features is the removal of the half basketball court, the alignment of the shared-use path, and the location of the pier. The removal of the popular half basketball court would be met with substantial local opposition (because there are no other basketball courts available to the public in Kings Beach) and conflict with Guidelines V2.3 of the General Plan, but it would not substantially alter the character of the site. With Alternative 3, the expansive beach would be divided by a pier, and picnickers would need to cross the shared-use path in some areas. With respect to shorezone-related features, the Alternative 3 General Plan revision would rebuild and extend the pier in the location of the central part of the park in place of the existing pier. The existing boat ramp would also be eliminated with Alternative 3.

For these reasons and those described for Alternative 2, the Alternative 3 General Plan revision would neither substantially alter KBSRA's character nor would it create user conflicts. This impact would be **less than significant**.

Pier Rebuild Project

The potential to affect park character and create user conflicts associated with the Alternative 3 pier rebuild project would be similar to Alternative 2, except with respect to the location of the pier. Alternative 3 would include a non-motorized lake access point, but would not include a swim buoy area. While swimmers would not have a protected swim buoy area, motorized watercraft would be unable to access the pier in nearshore locations because of barrier railing along the extent of the fixed section and gangway (Exhibit 5.1-10), which would extend about 302 feet into the lake, and because most swimmers would prefer swimming at distances away from the pier and closer to the shore.

For these reasons and those described for Alternative 2, the Alternative 3 General Plan revision would neither substantially alter KBSRA's character nor would it create user conflicts. This impact would be **less than significant**.

Alternative 4: Western Pier Alternative

General Plan Revision

The potential to affect park character and create user conflicts with implementation of Alternative 4 would be similar to Alternative 2 because the park amenities that are included in Alternative 4 would be largely the same as with Alternative 2, except in location and size. The primary difference in upland features is the alignment of the shared-use path (which is set back further from the beach with Alternative 4), and the location of the relocated half basketball court (which would be located to the east side of the park), and the location of the pier. A non-motorized watercraft storage structure is not included in Alternative 4. With the Alternative 4 General Plan revision, the pier would be rebuilt and extended on the western side of the park, near the event center. The boat ramp would be extended further into the lake to facilitate operations during lower lake level conditions.

For the reasons described above for Alternative 2, the Alternative 4 General Plan revision would neither substantially alter KBSRA's character nor would it create user conflicts. This impact would be **less than significant**.

Pier Rebuild Project

The potential to affect park character and create user conflicts associated with the Alternative 4 pier rebuild project would be similar to Alternative 2, except with respect to the location of the pier. Alternative 4 would include a non-motorized lake access point, but would not include a swim buoy area. While swimmers would not have a protected swim buoy area, motorized watercraft would be unable to access the pier in nearshore locations because of barrier railing along the extent of the fixed section and gangway (Exhibit 5.1-13), which would extend about 400 feet into the lake, and because most swimmers would prefer swimming at distances away from the pier and closer to the shore.

For these reasons and those described for Alternative 2, the Alternative 4 pier rebuild would neither substantially alter KBSRA's character nor would it create user conflicts. This impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Recreation demand within the Tahoe Basin is met with a wide variety and extensive amount of recreational facilities and opportunities. The Tahoe Basin contains thousands of acres of public lands and lands in permanent conservation that provide the public with opportunities for hiking, bicycling, cross-country skiing, snowshoeing, snowmobiling, wildlife viewing, water sports, beach use, and relaxation. Nearby resources include, but are not limited to KBSRA, Secline Beach, Tahoe Vista Recreation Area, the Tahoe Rim Trail, Burton Creek State Recreation Area, the Tahoe National Forest, the Lake Tahoe Basin Management Unit, North Tahoe Regional Park, Fibreboard Freeway, and the Tahoe State Recreation Area (Exhibit 2-2, Recreational Opportunities, in Chapter 2, Existing Conditions). These recreation resources provide ample opportunities for recreating to meet the existing and future demand such that adverse physical effects would not result beyond that which occurs under current conditions. Currently, there is no existing adverse cumulative condition related to effects on existing recreation users or adverse physical effects on recreation resources.

Aside from Placer County's plan to extend the promenade on both ends of the park to connect to SR 28 and TRPA's Draft Shoreline Plan, none of the other projects identified in Table 5.1-4, would provide new recreation opportunities near the shoreline in the region. The General Plan revision and pier rebuild alternatives would not create additional demand for recreation facilities such as a residential or tourist development project might. Therefore, adverse effects caused by substantially increased demand that could cause physical deterioration of a facility is not discussed further. However, due to the limited extent of this project, and the ample variety and supply of recreation opportunities throughout the region, the County's promenade project, the Shoreline Plan, and the proposed project together would not result in a cumulative impact on recreation user experience or adverse physical effects on these recreation resources. This would be a less-than-significant cumulative impact on recreation resources.

None of the cumulative projects listed in Table 5.1-4 would combine with the KBSRA General Plan revision and pier rebuild project to create potential recreation conflicts. In fact, the County's promenade project would extend the shared-use path to be located at KBSRA to SR 28 on both ends, which would enhance the opportunity for non-automobile access to KBSRA. Conflicts among swimmers, non-motorized watercraft, and motorized watercraft would continue to be evaluated on a project-by-project basis under the existing partial permitting program or the proposed Shoreline Plan, and mitigated as necessary.

The proposed Shoreline Plan would update the TRPA shorezone ordinances in TRPA Code Chapters 80 to 86, which would replace the existing partial permitting program. With respect to public shoreline facilities, the Draft Shoreline Plan would: (1) allow the development of up to 10 new public piers; (2) two additional public boat ramps could be added; and (3) dredging at existing public boat ramps (if increased functionality of the ramp can be demonstrated) (TRPA 2017).

As described in Impacts 5.3.11-1 through 5.3.11-3, the General Plan revision and pier rebuild project would not result in substantial user conflicts, adversely affect navigation for non-motorized watercraft parallel to the shore, or adversely affect recreational opportunities for motorized watercraft. Additionally, future project planning would be completed in coordination with recreation providers and TRPA threshold standard requirements and potential conflicts with existing recreation resources would be addressed at the project-level. Thus, the KBSRA General Plan revision and pier rebuild project in combination with other cumulative projects would result in a less-than-significant cumulative impact, and the contribution by any of the proposed project alternatives would **not be cumulatively considerable**.