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.

Table 5.3.9-1 Typical Noise Levels from Construction Equipment

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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