4 CORRECTIONS AND REVISIONS TO THE DRAFT EIS

This chapter presents revisions to the Shoreline Plan Draft EIS text made in response to comments or to amplify, clarify, or make minor modifications or corrections to information in the Draft EIS. Changes in the text are indicated by ~~strikeout~~ where text is removed and by <u>underline</u> where text is added. The information contained in this chapter clarifies and expands on information in the Draft EIS and does not constitute "significant new information" requiring recirculation. These corrections and revisions do not alter the analysis or significance determination for any impacts analyzed in the Draft EIS.

Corrections and Revisions to the "Executive Summary"

Changes have been made to the summary of impacts and mitigation measures on pages ES-4 through ES-31 in the Executive Summary of the Draft EIS. Table ES-1 is replicated below in its entirety to provide the reader with a complete summary of impacts and mitigation measures, as revised. Revisions to the can be found in Impact 12-2, and Mitigation Measures 6-5b, 8-1a, 9-1a, 14-2, and 15-1a.

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
B = Beneficial NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
4 Land Use			
Impact 4-1: Induce substantial new growth Regional growth is capped by the Regional Plan. The Shoreline Plan alternatives would permit development of structures within the shorezone but would not increase the capacity of the region to accommodate an increase in residents or tourists. The addition of new public access facilities (e.g., boat ramps, public slips) under Alternatives 1, 2, and 3 would accommodate an increase in the number of day visitors to the region; however, these additional day visitors would not lead to residential, tourist, or commercial growth because growth is capped by the Regional Plan development rights system.	Alt 1, 2, 3 – LTS Alt 4 – NI	No mitigation required	No mitigation required
Impact 4-2: Consistency with applicable plans, policies, regulations, and the existing pattern of land use Shoreline Plan Alternatives 1, 3, and 4 would result in changes to provisions in the TRPA Code that govern development within the shorezone. The provisions of these alternatives have been developed to implement the Regional Plan Goals and Policies and achieve thresholds, each striking a different balance of environmental protection and recreational access. The shorezone code provisions under all alternatives are intended to augment local TRPA plans by providing a framework for development within the	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

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shorezone that is consistent with the land use designations within each of those plans. The pattern of development allowed under each of the Shoreline Plan alternatives would be restricted not only by land use designations identified in local plans, but also by other existing provisions of the code that would remain unchanged, as well as by the requirement for compliance with environmental thresholds. All four Shoreline Plan alternatives would provide for the same types and pattern of land uses that already exist within the shorezone.			
5 Fisheries and Aquatic Biological Resources			
Impact 5-1: Increased risk of AIS introduction or spread The increase in boat launches under Alternatives 1, 2, and 3 could increase the risk of AIS introductions, but this risk would not be substantial because the rigorous and effective prevention programs (including boat inspection, decontamination, outreach, and education) would continue. However, the increases in recreational boating under Alternatives 1, 2, and 3 would increase the risk that invasive macrophytes and Asian clams already in Lake Tahoe would be spread within the lake, creating new populations and increasing the abundance and distribution of AIS. Alternative 4 would result in no increase in boating activity and would not increase the risk of AIS introduction and spread. Alternative 4 would also require that all marinas develop and implement an AIS management plan. This would reduce the risk of AIS introductions at, or spread from, marinas.	Alt 1, 2, 3 - S Alt 4 – B	**Mitigation Measure 5-1a: Require marina aquatic invasive species management plans** (applies to Alts 1, 2, and 3) TRPA will require that all marinas prepare and implement an AIS management plan within 3 years of adoption of the Shoreline Plan. The AIS management plans shall, at a minimum, (1) identify strategies to prevent the establishment of invasive macrophytes and Asian clams within the marina (e.g., improved water circulation), (2) include an AIS monitoring, early detection, and response program within the marina, which could be in partnership with resource management agencies and/or organizations, and (3) include a public education component. For marinas that already contain AIS, the AIS management plan shall identify measures to control or eradicate existing AIS and reduce the potential for spread. **Mitigation Measure 5-1b: Promote the development of AIS-resistant boats** (applies to Alts 1, 2, and 3) TRPA will continue to regularly communicate with representatives of the watercraft industry, including trade associations and manufactures of watercraft or watercraft components, to promote the development and widespread commercial utilization of technologies that lower the potential for the spread of AIS. Innovations such as ballast tank filters, heated ballast water intakes in engines, and better draining ballast tanks are currently being developed by various manufacturers, but they are not yet commercially available on a widespread basis. Although many of these innovations are not yet commercially viable, they may be by the full buildout of the Shoreline	Alt 1, 2, 3 - LTS Alt 4 – B

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		Plan Alternatives. TRPA will regularly coordinate with representatives of the watercraft industry to advocate for and demonstrate a commercial interest in the continued development and adoption of such technologies. TRPA will enact policies to encourage or require the use of such technologies when they become feasible. **Mitigation 5-1c: Establish a mitigation fee program to increase AIS control.** (applies to Alt 2 only) TRPA will establish an AIS mitigation fee program that will fund increased levels of AIS control. The fee will be used to implement projects that reduce the abundance and distribution of Asian clam, Eurasian watermilfoil, curly-leaf pondweed, coontail and/or other AIS that may be introduced in the future and can be spread by recreational boating. The fee will be assessed on recreational boaters either during AIS inspections or at launch points. The fee per launch or boat will be the same as that proposed under Alternative 1, which will be sufficient to increase existing control efforts commensurate with the projected increase in annual boat trips under Alternative 2.	
Impact 5-2: Loss of prime fish habitat The implementation of the Shoreline Plan has the potential to result in a net reduction in the amount of prime fish habitat, as defined by TRPA, due to placement of shorezone structures within this habitat. Alternatives 1 and 3 would require habitat replacement at a 1.5:1 ratio, resulting in no net loss in prime fish habitat. Alternative 2 would prohibit construction of structures within prime fish habitat. Alternative 4 would require habitat replacement at a ratio of 2:1, which would not cause a decrease in the amount of prime fish habitat	Alt 1, 3, 4 – LTS Alt 2 – NI	No mitigation required	No mitigation required
Impact 5-3: Construction-related impacts Construction of new shorezone structures and dredging under all four Shoreline Plan alternatives could affect all species considered, except lake trout because they do not utilize nearshore habitats. Effects on species that could use nearshore habitats would be greatest on native minnow species that spawn in nearshore areas, including Lahontan Lake tui chub. Effects on special-status salmonids, including LCT and mountain whitefish, as well as other coldwater game fish species, would generally be limited to adults migrating to spawning tributaries and juveniles using nearshore areas for rearing.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

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All of the alternatives would produce a small amount of temporary disturbance relative to both prime fish habitat and marginal fish habitat. Additionally, based on the life history characteristics and habitat use for the species evaluated, construction-related effects would not be adverse for any fish species under any of the alternatives.			
Impact 5-4: Permanent habitat modification Permanent habitat modification could affect all species evaluated except lake trout because they do not utilize nearshore habitats. Impacts on species that could use nearshore habitats would be greatest on native nongame fish, including Lahontan Lake tui chub. Impacts on special-status salmonids, including LCT and mountain whitefish, as well as other coldwater game fish species, would generally be limited to YOY juveniles using nearshore areas for rearing. Under all Shoreline Plan alternatives, impacts resulting from permanent habitat modification would be small relative to TRPA-designated fish habitat, including prime fish habitat. Additionally, based on the life history characteristics and habitat use for the species evaluated, impacts would be minimal for any fish species.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required
Impact 5-5: Recreation-related impacts Recreational activities could affect all species evaluated. Effects on species that could use nearshore habitats would be greatest on native minnow species that spawn in nearshore areas, including Lahontan Lake tui chub. Effects on special-status salmonids, including LCT and mountain whitefish, as well as other coldwater game fish species, could occur to adults that utilize open waters of the lake and to YOY juveniles using nearshore areas for rearing. Spawning and egg incubation of special-status salmonids and other coldwater game fish species would not be affected since these species spawn in tributary streams or deep in the lake where they would not be affected by increased boating or recreational angling. Effects under Alternative 2 would be greatest because it would allow the largest number of structures and two new marinas. Thus, under Alternative 2 the capacity for recreational activities such as boating and angling would be highest. Effects under Alternative 4 would be the least because it contains the least number of structures and no increases in boating, relative to baseline. Recreation-related effects under Alternative 1 and Alternative 3 would be intermediate between Alternatives 2 and 4. However, under all the	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

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alternatives, recreation-related effects resulting from increased recreational angling and/or boating would be small.			
6 Hydrology and Water Quality			
Impact 6-1: Soil erosion and/or release of pollutants to Lake Tahoe from shorezone facility construction or maintenance activities, including dredging All four Shoreline Plan alternatives would allow new construction and dredging within the shorezone. Construction activities could affect water quality by accelerating soil erosion and sedimentation while also releasing pollutants. Dredging for new construction or maintenance dredging for existing facilities could affect water quality by increasing turbidity and releasing nutrients into the surrounding water. Existing state, federal, and TRPA regulations mitigate potential short-term impacts from construction activities in the shorezone. TRPA policies require the implementation and maintenance of temporary BMPs to protect water quality during maintenance dredging within the shorezone. Under Alternatives 1 and 3, TRPA would revise code standards (Section 84.15.3) to be consistent with federal standards for new dredging (nondegradation) under Section 404 of the CWA as regulated by USACE. However, the federal standards under Section 404 are mandatory for dredging in Lake Tahoe regardless of the TRPA Code provisions and are therefore applicable to all four alternatives. Dredging activities would also need to comply with each state's Section 401 water quality certification requirements.	Alt 1, 2, 3, 4- LTS	No mitigation required	No mitigation required
Impact 6-2: Sediment resuspension and turbidity associated with the hydrodynamic effects of motorized boating The hydrodynamic effects from motorized boating can disturb and resuspend lakebed sediment through propeller wash and boat wake, potentially leading to increased turbidity and reductions in nearshore clarity. Hydrodynamic effects from propeller wash and boat wake are generally limited to shallower areas, with little or no effects for water depths less than 7 feet and no effects for water depths greater than 10 feet (Beachler and Hill 2003; USACE 1993). TRPA Code Section 84.17.1 requires a no-wake zone within 600 feet of the shore with a 5-mile-per-hour (mph) speed limit. Most of Lake Tahoe's shallower depths are within the existing no-wake zone, with notable	Alt 1, 3 – LTS Alt 2 – PS Alt 4 - NI	**Mitigation Measure 6-2: Study and adaptively manage the effects of boats on nearshore conditions** (applies to Alt 2) TRPA will coordinate with partner agencies and research organizations to complete monitoring and studies that evaluate the effects of boat activity on nearshore clarity and water quality. TRPA will then implement management actions, if needed, based on the results of the studies. To ensure the completion of nearshore studies, TRPA will enact a nearshore water quality mitigation fee on recreational watercraft. The fee will be assessed on all recreation watercraft, either during aquatic invasive species boat inspections or at launch points. The fee will remain in place for a period of up to ten years to fund scientific research	Alt 1, 3, 4 – No mitigation required Alt 2 – LTS

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exceptions being the nearshore areas adjacent to the City of South Lake Tahoe and Tahoe City. Lake Tahoe's nearshore presents complex environment conditions and factors that may influence nearshore clarity in an interrelated manner that varies by location and with time (Taylor 2002). In addition to natural wind effects generating water movement, wave motion, and natural littoral processes, factors influencing the observed variability in nearshore clarity may include: adjacent land-uses and urban stormwater inputs, other nonpoint pollutant inputs, boating activity, proximity to stream inputs, water depth, substrate type, and localized features of the lake bottom. Among these interrelated factors the potential contribution of boating activities to degrade nearshore clarity is difficult to isolate or quantify. Alternatives 1, 2, and 3 are projected to generate a peak-day increase in boating activity. On peak days, increased boat use could increase wave action and turbulence generated by boat wake. The shallower portions of the nearshore outside existing no-wake zone regulations are likely more susceptible to short-term and temporary declines in clarity because of increased wave action. During summertime periods with low winds and low inputs of streamflow and stormwater runoff, Lake Tahoe waters would typically be quiescent with low wave action in the nearshore. Because Alternatives 1, 2, and 3 would increase boating activity on peak days, the increased potential for boat wake to induce additional wave action in shallow nearshore areas most susceptible to elevated turbidity would also increase; therefore, the potential frequency of exceeding the nearshore threshold turbidity standard may also increase for limited portions of the nearshore.		and nearshore monitoring through a program such as the Nearshore Water Quality Network. Revenue generated from the fee will be directed towards research components of nearshore studies tasked with evaluating potential impacts of boat activity on nearshore clarity and water quality. TRPA will set the fee at an amount that is adequate to fund an assessment of recreational boating effects on nearshore water quality and clarity. If research concludes that the increase in boating activities anticipated under Alternative 2 would contribute to an exceedance of TRPA's nearshore numerical standard of 1 NTU, TRPA will implement management actions to avoid or offset this impairment. Such management actions could include, but are not limited to: ◢ expand the no-wake zone based on the scientific findings and recommendations for nearshore areas identified to be susceptible to reduced clarity from boating activities; or ◢ enact a permanent nearshore water quality mitigation fee on recreational watercraft and use the revenue to fund compensatory mitigation projects that reduce other sources of nearshore water quality impairment.	
Impact 6-3: Direct entrainment or atmospheric deposition of pollutants from boat exhaust Increased boating activity is projected under Alternatives 1, 2, and 3, which could lead to increased boat emissions. Alternative 4 would not increase boating activity, and therefore would not increase boat emissions. Boat engines emit oxides of nitrogen (NO_X) and particulate matter (PM) during operation, which may be delivered to the lake through direct entrainment in the water column or atmospheric deposition. Total nitrogen and fine sediment particles are pollutants of concern for lake	Alt 1, 3 – LTS Alt 2 – PS Alt 4 – NI	**Mitigation Measure 6-3: Limit the number of moorings and boat ramps to limit emissions from increased motorized watercraft activity** (applies to Alt 2 only) TRPA shall implement Mitigation Measure 10-1 as described in Chapter 10, "Air Quality," which limits the number of new moorings and boat ramps (and thus boat emissions) to the maximum number allowed under Alternative 1.	Alts 1, 3, 4 – No mitigation required Alt 2 – LTS

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transparency and clarity, and the Lake Tahoe TMDL sets load reduction targets for these pollutants. Therefore, emissions that lead to an increase in loading for these pollutants of concern might extend the timeline needed to achieve the Lake Tahoe TMDL load reduction targets. The approval of additional boating facilities under Alternatives 1, 2, and 3 leading to the increase in boating activity would be phased through a projected buildout date of 2040. Impact 10-1 in Chapter 10, "Air Quality," assesses potential changes in emissions from increased boating activity under Alternatives 1, 2, and 3. Impact 10-1 concludes that a net reduction in boating emissions, including emissions of NO_X and PM, would result under Alternatives 1 and 3 as the increased boating hours are offset by fleet turnover, with older boat engines replaced with cleaner and more fuel-efficient boat engines. Impact 10-1 in Chapter 10, "Air Quality," concludes that under Alternative 2 changes in emissions from increased boat activity will have mixed results, with a net increase in NO_X and a net decrease in PM. Because Alternative 2 would create a net increase in NO_X loading, and potential impacts on lake transparency and clarity from boat exhaust would be proportional to changes in atmospheric emissions of NO_X, this could extend the timelines needed to achieve the Lake Tahoe TMDL load reduction targets.			
Impact 6-4: Discharge of hydrocarbons or other contaminants into Lake Tahoe from boating activities and boating facilities Elevated levels of hydrocarbons or other contaminants in the lake could result from increased boating activity under Alternatives 1, 2, and 3. Gasoline and diesel fuels contain hydrocarbon contaminants, including the group of volatile organic compounds collectively known as BTEX (benzene, toluene, ethylbenzene, and xylene). While also occurring in raw fuel, polyaromatic hydrocarbons (PAHs) are primarily produced during the combustion process in an engine. Hydrocarbons can enter the water from boating activities via exhaust emissions, fueling spills, and other accidental spills. Most outboard engines exhaust beneath the surface of the water, and consequently, all exhaust must pass through the water column, where some hydrocarbons will remain in solution or sorb to particulates and sediments.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

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Impact 6-5: Interference with littoral processes from new or redeveloped shoreline structures All Shoreline Plan alternatives would allow for the addition or expansion of piers that could disrupt existing wave and current circulation patterns near the shoreline. Waves and current motion are the primary agents of littoral drift, the process by which sediment is transported and deposited in the nearshore area. Alternatives 1, 3, and 4 propose revisions to existing pier design standards in the TRPA Code (Section 84), but do not define design standards for public piers. Alternatives 2 and 3 would both allow multiple-use piers to deviate from design standards. Other structures, such as jetties, groins, breakwaters, and fences that could affect littoral processes, are generally not allowed under any of the Shoreline Plan alternatives. Alternative 1 may allow for other structures as part of a habitat restoration project or as part of a marina environmental improvement project. Alternative 2 would allow for these structures along the shoreline outside of prime fish habitat if the applicant demonstrated that the structure would not interfere with littoral processes. Previous analysis (TRPA 2004) demonstrated that significant impacts on littoral drift processes can occur from floating piers. Because Alternatives 1, 2, and 3 do not specify design standards for floating piers such that impacts on littoral drift would be completely avoided, and because none of the Shoreline Plan alternatives define the environmental analysis procedures for assessing littoral drift processes associated with public pier applications or allowable deviations for multiple-use pier applications that include floating pier sections, design standards in their current form could allow for piers that interfere with existing littoral drift processes.	Alt 1, 2, 3, 4 – S	**Mitigation Measure 6-5a: Specify floating pier design standards** (applies to Alts 1 and 3) TRPA will augment the design standards summarized in Table 2-5 in Chapter 2, "Project Description," to include the following standard for floating piers: ◢ Floating pier sections rigidly moored to the lake bottom shall be prohibited. **Mitigation Measure 6-5b: Require littoral drift analyses and incorporate design recommendations for floating piers longer than 25 feet** (applies to Alts 1, 2, 3, and 4) TRPA will require all new pier and pier extension applications that include floating pier sections longer than 25 feet submit a site-specific littoral drift and wave analysis. The analysis will assess the dimensions of the proposed floating pier section and the ability of waves to initiate and sustain the movement of sediment along the lake bottom under conditions of low lake level (6,223 feet), mid-lake level (6,226 feet), and high lake level (6,229 feet) Lake Tahoe Datum. The lake level condition with the greatest effect on littoral transport and backshore stability shall be used to design the floating pier section. Floating piers may only be approved if they are designed so that wave heights are not reduced by more than 50 percent and the floating pier section is no greater than 50 percent of the length of the site-specific design wavelength, and if the littoral drift analysis finds that the pier will not otherwise substantially disrupt littoral transport.	Alt 1, 2, 3, 4 – LTS
7 Soil Conservation			
Impact 7-1: Increase land coverage beyond the limits allows by the Bailey land capability system All Shoreline Plan alternatives would permit the construction or expansion of structures that would create coverage in the backshore. However, all projects would be required to demonstrate their compliance with existing TRPA land coverage regulations including restoration of 1.5 times the amount of LCD 1b (i.e., backshore) coverage created by the project.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

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Impact 7-2: Increase erosion or degrade soil conditions during construction activities Implementation of all Shoreline Plan alternatives would permit construction activities in the shorezone that would create ground disturbance and loss of vegetation and would increase the potential for erosion. However, the potential for increased erosion resulting from future projects implemented under the Shoreline Plan alternatives would be reduced through compliance with county, TRPA, and LRWQCB or NDEP code requirements, permit conditions, and regulations.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required
Impact 7-3: Long-term increases in shoreline erosion All Shoreline Plan alternatives would allow development of new facilities in the shorezone; however, the potential for the operation of these facilities to increase shoreline erosion would be controlled through existing TRPA regulations and permit conditions. Implementation of Alternatives 1, 2, and 3 would result in increased watercraft use on Lake Tahoe and would expand access to portions of the shoreline that are undeveloped or difficult to access without watercraft. Alternative 4 would not result in an increase in boating activity. Depending on the location of the 15 public piers allowed by Alternative 4, there could be an increase in public access to areas that are currently difficult to access (e.g., if a public pier and associated upland facilities were constructed in undeveloped parkland). Notwithstanding this potential, there is no evidence to suggest that such increased use of remote areas would occur as a result of future shorezone projects, nor that use of such areas, if more accessible, would result in long-term increases in erosion of the shoreline.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required
Impact 7-4: Potential for damage from liquefaction, settlement, tsunami, and seiche The Shoreline Plan alternatives would permit structures in the shorezone that could be damaged during an earthquake from liquefaction in saturated sand deposits, settlement, tsunami, and seiche. The risk from seismic shaking would be controlled through compliance with the current seismic design requirements of the California Building Standards Code and the International Building Code. Alternatives 1, 2, and 3 would increase the number of boats that could be exposed to inundation by tsunami or seiche; however, while such an event could be	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

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catastrophic, the probability of occurrence in any given year, or over the coming decades is very low.			
8 Recreation			
Impact 8-1: Alter the quality of recreational experiences or create user conflicts Alternatives 1, 3, and 4 would result in construction of new shorezone structures, with Alternative 4 structures limited to public piers. These alternatives include density and location standards for moorings and piers that would help preserve scenic areas around the lake and maintain the quality of recreation experience. Alternatives 1, 3, and 4 would not result in a substantial change to quality of recreation experience. Implementation of Alternatives 1, 3, and 4 could result in public piers extending beyond the 600-foot no-wake zone, which could create potential conflicts between nonmotorized recreation (i.e., nonmotorized watercraft and swimmers) and motorized watercraft. Because of the substantial increase in boat launch capacity and overnight mooring provided by the number of new shorezone structures associated with Alternative 2, the increase in the number of motorized watercraft on the lake would be great enough that there would be a substantial adverse change in quality of recreation experience for people using motorized and nonmotorized, swimmers, and other beachgoers and increased potential for conflicts between motorized and nonmotorized recreationists outside the no-wake zone. Alternative 2 could also result in new multiple-use and public piers that extend beyond the no-wake zone, creating the potential for conflicts between nonmotorized recreationists and motorized watercraft.	Alt 1, 2, 3, 4 – PS	**Mitigation Measure 8-1a: Maintain nonmotorized navigation within the no-wake zone** (applies to Alts 1, 2, 3, and 4) TRPA will revise the pier design standards for piers that extend 600 feet or more from the high-water elevation to provide lateral nonmotorized recreation access within the 600-foot no-wake zone. Lateral nonmotorized recreation access within the 600-foot no-wake zone ~~could~~ will be provided by ~~either of~~ the following: The pier design standards would require public piers (for Alternatives 1, 3, and 4) and multiple-use piers (for Alternative 2) to accommodate lateral nonmotorized access by limiting the pier length to within the 600-foot no-wake zone and providing at least 10 feet between the end of the pier and the no-wake zone boundary to allow nonmotorized recreationists to stay within the no-wake zone. The applicant for a new multiple-use pier that extends to within 30 feet of the no-wake zone would also be required to install one or more navigational buoys to identify the location of the no-wake zone relative to the pier.~~; or~~ Additional pier length could only be granted if necessary for public health and safety facilities or waterborne transit provided TRPA makes the following findings: The additional pier length is necessary to provide for public health and safety or public transit, and All feasible measures have been taken to minimize interference with nonmotorized navigation. ~~The pier design standards could allow exceptions for public piers (for Alternatives 1, 3, and 4) and multiple-use and public piers (for Alternative 2) that extend beyond the no-wake zone if the pier is designed to allow nonmotorized recreationists to have lateral access underneath the pier during high lake level conditions.~~ **Mitigation Measure 8-1b: Implement Mitigation Measure 10-1 to limit the number of moorings and boat ramps** (applies to Alt 2 only) TRPA will implement Mitigation Measure 10-1, as described in Chapter 10, "Air Quality," which would revise the Code of Ordinances to limit the total number of new moorings (i.e., buoys, slips, and lifts) and boat ramps to the number authorized	Alt 1, 2, 3, 4 – LTS

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		under Alternative 1. This would allow a total of 2,116 new moorings and two new boat ramps. **Mitigation Measure 8-1c: Establish buffer area around nonmotorized recreationists outside of the no-wake zone** (applies to Alt 2 only) TRPA will amend the no-wake zone section of the Code of Ordinances to include a 200-foot buffer between motorized watercraft in motion and nonmotorized recreationists in areas outside of no-wake zones, which is already in practice by Nevada State Parks.	
Impact 8-2: Affect access or opportunities for motorized watercraft Alternatives 1, 2, and 3 would increase capacity for boat launching and mooring by allowing for additional boat ramps and overnight mooring structures. The design and location standards for all three of these alternatives and expansion of the no-wake zone to include all of Emerald Bay with Alternatives 1 and 3 would not substantially change opportunities for recreation activities on the lake that rely on motorized watercraft, including activities such as fishing and water skiing. Alternatives 1 and 3 also provide standards for shorezone structures to allow for boating access under a range of lake levels. Alternative 4 would allow for additional piers but would not provide additional launch capacity or moorings to increase access or opportunities for recreational users of the lake.	Alt 1, 2, 3 – B Alt 4 – LTS	No mitigation required	No mitigation required
Impact 8-3: Change access to or along the shoreline Each of the proposed alternatives would result in the construction of piers that would extend into the public trust areas in the shorezone and impede, to some degree, lateral access along the shoreline in California. New public piers would be constructed for the benefit of public use; thus, pedestrians would have unrestricted access over or around the pier as they walk laterally along the shoreline. Alternative 4 would only allow new public piers to be constructed. Alternatives 1, 2, and 3 would also allow private piers. None of the alternatives include any design standards for private or public piers that prohibit access for the public along the shore. TRPA and California State Lands Commission would develop a memorandum of understanding (MOU) that would provide a review process that protects public lateral access within the public trust easement in California. In Nevada, no	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

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existing public trust easement on private land is recognized; thus, this impact only assesses impacts to lateral access along the shoreline in the California portion of Lake Tahoe. Under the MOU and for all alternatives, TRPA would not be able to approve any shorezone structure that unreasonably interferes with lateral public access where it is otherwise lawfully allowed.			
Impact 8-4: Affect the fair-share distribution of recreation capacity The 2015 Threshold Evaluation found the recreation threshold for fair-share distribution of recreation capacity to be in attainment (TRPA 2016a). The existing distribution of land ownership in the shorezone is approximately half public and half private ownership, with slightly less land in private. Each alternative would change the percent of shorezone structures that are accessible to the public to various degrees, but the distribution between public and private owners around the lake would not change substantially over baseline conditions. All of the new shorezone structures under each alternative in combination with existing shorezone structures would either maintain the same proportion of public and private structures as under baseline conditions or would result in a small increase in the proportion of public structures compared to baseline conditions. At buildout of the alternatives, publicly-accessible shorezone structures would generate between 50 and 52.5 percent, depending on alternative, of all boat trips on the lake, which is similar to baseline conditions.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required
9 Scenic Resources			
Impact 9-1: Alter views of the shore from Lake Tahoe The effects Alternatives 1, 2, and 3 on views from Lake Tahoe would vary based on the location, intensity, and other characteristics of future projects. In some scenarios under Alternatives 1 and 3, the scenic threshold ratings would increase due to required scenic improvements in the shoreland, visible mass reductions, and redevelopment of existing shorezone structures consistent with proposed design standards. In other scenarios under Alternatives 1, 2, and 3, scenic quality could be unchanged or degraded due to additional visible mass associated with new buoys, redeveloped piers that are a contrasting color, or in the case of Alternative 2, from additional visible structures in the	Alt 1, 2, 3 – S Alt 4 – LTS	**Mitigation 9-1a: Offset the visible mass of buoys** (applies to Alts 1, 2, and 3) TRPA will require that all new buoys offset the visible mass associated with the buoy and boat. The average visible mass of a buoy and boat is estimated at 83 square feet. Each new buoy will require removal or screening of a minimum of 83 square feet of existing mass visible from Lake Tahoe. The visible mass of a buoy ~~can~~ will be offset through the ~~direct reduction of visible mass or through~~ the payment of ~~an in-lieu fee~~ a buoy scenic mitigation fee that will be used to reduce visible mass, as described below. ~~If a buoy applicant chooses to directly remove or screen visible mass as part of the buoy project,~~	Alt 1, 2, 3, 4 – LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
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shorezone that are not compensated for with reductions in the visual magnitude of development in the shoreland. Alternative 4 would have a limited number of new shorezone structures that could be developed under Alternative 4, the project-level scenic assessment and mitigation requirements for public piers, and the prohibition of other new or expanded shoreline structures.		~~then the applicant would comply with the same visible mass offset requirements that apply to piers and other structures. The 83 square feet of visible mass associated with the buoy would be offset at the same ratios required for other shoreline structures. The offset would be required as close to the proposed buoy as possible, in the following order of priority: 1) on the same parcel in the shorezone, 2) on the same parcel in the upland area, 3) elsewhere in the shorezone within the same shoreline scenic travel unit, 4) within the same travel unit in the upland, and 5) in another nonattainment scenic travel unit.~~ TRPA will ~~also provide the option to pay an in lieu~~ assess an annual scenic mitigation fee on all buoys ~~fee~~ to offset the ~~additional~~ visible mass of the buoy. TRPA will set a fee amount that is adequate to remove or visually screen 83 square feet of existing visible mass for each buoy. TRPA will use the fee to acquire and remove or screen existing visible mass visible from shoreline scenic travel units that are not in attainment of threshold standards. The funds will be dedicated to projects that TRPA determines will have the greatest benefit to scenic threshold standards and will be prioritized for use in the following order: 1) in the shorezone, 2) in the shoreland, and 3) to improve background views visible from Lake Tahoe. To identify specific scenic improvement projects that could be funded by the in-lieu fee, TRPA will update the Scenic Quality Improvement Program (SQIP) within 1 year of adoption of the Shoreline Plan. The update would, at a minimum, update those elements of the SQIP that identify scenic improvement opportunities within the 11 shoreline travel units that are not in attainment of scenic thresholds as of the 2015 Threshold Evaluation Report. Within each of these travel units, the SQIP will identify specific opportunities for scenic improvements that would increase the scenic threshold ratings. Scenic improvement opportunities could include improvements on private land, such as the acquisition, removal, or screening of private development, as well as opportunities on public land, such as the undergrounding of utilities, revegetation of road scars, screening or recoloring of infrastructure, or removal of structures on public land. The SQIP will consider opportunities for permanent or long-term	

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		scenic improvement. TRPA will consider the scenic improvement opportunities identified in the SQIP when authorizing the expenditure of scenic mitigation funds. Funds could be used to implement projects directly or through grants, contracts, or other agreements with partner organizations. TRPA could also authorize mitigation funds for projects that permanently reduce the visual magnitude of shoreland development when the project contributes to the attainment of scenic thresholds and is not otherwise required. Visible mass mitigation projects that could be funded by the in-lieu fee include, but are not limited to: ◢ scenic improvement projects identified in the ~~2018 update to~~ most recent version of the SQIP; ◢ lakefront recreation projects with scenic improvements such as replacing dilapidated structures or relocating structures (public gathering areas and waterfront public access scenic improvements); ◢ scenic improvement of existing rip rap and retaining walls along visible roadway cuts (e.g., recoloring of light-colored rip rap); ◢ permanent removal of existing shorezone and shoreland structures; ◢ permanent screening of roadside parking areas, roadways, and infrastructure through the planting of native vegetation and creation of vegetated berms; ◢ undergrounding of utility lines that are visible from the lake; and ◢ improving existing shoreland structures and deed restricting those parcels such that visual magnitude of existing development is permanently reduced **Mitigation 9-1b: Establish color standards for piers** (applies to Alts 1, 2, and 3) TRPA will modify the proposed design standards to regulate the color of piers. These standards will be enforced for all new or expanded piers. The standards will require that piers be a matte medium to dark gray. The standards will also allow TRPA to require alternate colors that TRPA determines would better blend into the background view of the project site.	

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		Mitigation 9-1c: Require visual magnitude reductions in the shoreland (applies to Alt 2) TRPA will revise the TRPA Code under Alternative 2 to incorporate the same visual magnitude requirements for new or expanded shoreline structures as included in Alternative 1. These Code revisions will require that shoreland properties achieve minimum contrast ratings as part of the approval process for new piers. For new private piers, TRPA would require an initial contrast rating of 21 as part of the pier application. Following permit application submittal, applicants would have 6 months to increase their contrast rating to 25 to offset the visual impact of new or redeveloped piers. TRPA would exempt property owners from the contrast rating of 25, if it is not feasible.	
Impact 9-2: Alter views of Lake Tahoe from the shore The scenic effects on views from the shore would vary based on the location, intensity, and other characteristics of future projects. In some scenarios under Alternatives 1 and 3, the scenic threshold ratings would increase due to required scenic improvements in the shoreland, visible mass reductions, and redevelopment of existing shorezone structures consistent with design standards. In other scenarios under Alternatives 1, 2, and 3, scenic quality would not substantially change, or the scenic threshold ratings could be reduced. This potential reduction in scenic threshold ratings would be due to additional visible mass associated with new buoys, and in the case of Alternative 2, because no reductions in the visual magnitude of the shoreland would be required to compensate for additional development in the shorezone. Alternative 4 would allow for a maximum of only 15 new public piers, which require project-level scenic assessment and mitigation. Alternative 4 would prohibit other new or expanded shoreline structures.	Alt 1, 2, 3 – S Alt 4 – LTS	**Mitigation 9-2a: Implement Mitigation Measure 9-1a to offset the visible mass of buoys** (applies to Alt 1, 2, and 3). TRPA will implement Mitigation Measure 9-1a, "Offset the visible mass of buoys," as described above. **Mitigation 9-2b: Implement Mitigation Measure 9-1a to require visual magnitude reductions in the shoreland** (applies to Alt 2 only). TRPA will implement Mitigation 9-1c: "Require visual magnitude reductions in the shoreland," as described above.	Alt 1, 2, 3 – LTS Alt 4 – No mitigation required
10 Air Quality			
Impact 10-1: Long-term operational emissions of regional criteria air pollutants and precursors Based on estimates of increased boating activity and emissions modeling and analysis, implementation of the Shoreline Plan under Alternatives 1, 3, and 4 would not result in the long-term increase in emissions of ozone precursors, CO, PM_{10}, and $PM_{2.5}$	Alt 1, 3, 4 – LTS Alt 2 – S	**Mitigation Measure 10-1: Limit the number of moorings and boat ramps** (Alt 2 only) TRPA will revise the Code of Ordinances to limit the total number of new moorings (i.e., buoys, slips, and lifts) and boat ramps to the number authorized under Alternative 1. This would allow a total of 2,116 new moorings and two new boat ramps.	Alt 1, 3, 4 – No mitigation required Alt 2 – LTS

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in the LTAB and therefore would not result in the deterioration of ambient air quality or the exceedance of an applicable air quality standards. Based on estimates of increased boating activity and emissions modeling and analysis, Shoreline Plan Alternative 2 would result in a long-term increase in emissions of NO_X and CO. The long-term increase in NO_X, which is an ozone precursor, would contribute to the nonattainment status of the LTAB with respect to the CAAQS for ozone and/or an exceedance of TRPA's 1-hour ozone threshold standard of 0.08 ppm. The long-term increase in CO would conflict with implementation of the CO maintenance plan and/or contribute to exceedances of TRPA's 8-hour threshold standard of 6 ppm.			
Impact 10-2: Short-term construction emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ Implementation of the Shoreline Plan under Alternatives 1, 2, 3, and 4 would result in the construction of new piers, boat ramps, marinas, and/or boat houses. Given the number of new facilities that could be developed and the limited construction season in the Tahoe Region (i.e., May 1 to October 15), it is possible that a substantial amount of construction activity could occur at one time. Thus, equipment exhaust and fugitive dust emissions could violate or contribute substantially to an existing or projected air quality violation, especially considering the nonattainment status of the LTAB with respect to the CAAQS and TRPA numeric threshold standards for ozone and PM_{10}.	Alt 1, 2, 3, 4 – PS	**Mitigation Measure 10-2: Add best construction practices for emissions to the standard conditions of approval for shoreline projects** (applies to Alts 1, 2, 3, and 4) TRPA will revise the Standard Conditions of Approval for Shorezone Projects (TRPA Permit Attachment S) to require that minimum construction emission reduction best practices be implemented for all projects within the shorezone. The Standard Conditions of Approval for Shorezone Projects will be amended to add the following best construction practices: ◢ Fugitive dust shall not exceed 40 percent opacity and not go beyond the property boundary at any time during project construction. ◢ No open burning of removed vegetation shall occur during infrastructure improvements. ◢ Idling time for all diesel-powered equipment shall not exceed 5 minutes. ◢ Water shall be applied as needed to prevent dust impacts from extending off-site. Operational water truck(s) shall be on-site, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site. ◢ Existing power sources or clean-fuel generators rather than temporary diesel power generators shall be used wherever feasible.	Alt 1, 2, 3, 4 – LTS

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Impact 10-3: Exposure of sensitive receptors to toxic air contaminants (TACs) Implementation of the Shoreline Plan under Alternatives 1, 2, 3, and 4 would not result in the siting of new stationary sources of TACs, new sensitive receptors, or an increase in TAC emissions generated by recreational watercraft. Construction of new facilities would involve the use of off-road heavy-duty diesel-powered equipment that emits diesel PM. However, because of the short duration of construction activity at any single location and the highly dispersive properties of diesel PM, construction-related TAC emissions would not expose sensitive receptors to substantial concentrations of TACs.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required
Impact 10-4: Exposure to excessive odorous emissions Implementation of the Shoreline Plan under Alternatives 1, 2, 3, and 4 would not result in the siting of new major sources of odors or new sensitive receptors. Neither construction nor operation of facilities that may be developed because of the Shoreline Plan would create objectionable odors affecting a substantial number of people.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required
11 Greenhouse Gas Emissions and Climate Change			
Impact 11-1: Greenhouse gas emissions Implementation of the Shoreline Plan would result in GHG emissions associated with the construction and demolition of boating facilities and on-road motor vehicle trips to and from new boating facilities. Under Alternatives 1, 2, and 3, implementation of the Shoreline Plan would also result in an increase in GHG-emitting boating activity. It is not feasible to know whether the fleet of motorized boats on Lake Tahoe will become more GHG efficient and, if it does, whether the improvement in GHG efficiency would be enough to offset the GHGs associated with construction activity, the increase in on-road motor vehicle travel, and the projected increase in boating activity. The development and implementation of a GHG Reduction Policy, as required by Mitigation Measure 11-1, would reduce GHG emissions, but the extent of this reduction depends on participation rates, available funding, and available technology.	Alt 1, 2, 3, 4 – PS	**Mitigation Measure 11-1: Develop and implement a GHG reduction policy** (applies to Alts 1, 2, 3, and 4) Within 12 months of adoption of the Shoreline Plan, TRPA will coordinate the implementation of a GHG Emission Reduction Policy through TRPA-approved plans, project permitting, or projects/programs developed in coordination with local or other governments addressing Best Construction Practices and ongoing operational efficiencies. Until that time, TRPA will continue its existing practice to require measures developed on a project-by-project basis. The policy will require implementation of measures for the reduction of GHG emissions generated by demolition and construction activity in the shorezone and in associated upland areas, by on-road motor vehicles trips directly associated with the operation of boating facilities, and by ongoing operation of recreational watercraft. Where local ordinances already require GHG emission reductions consistent with the policy, no further action is	Alt 1, 2, 3, 4 – SU

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		necessary. Where local government ordinances do not adequately address GHG reduction practices, those practices will be implemented through local government and/or TRPA permitting activities or implementation program. Such measures may include, but are not limited to, the following: **Minimize Construction-Related GHG Emissions** ◢ All diesel-powered construction equipment shall have engines that comply with Tier 4 emission standards or better. ◢ Require all construction contractors to use renewable diesel (RD) fuel for all diesel-powered construction equipment (off-road land- and water-based). Any RD product that is considered for use by the construction contractors shall comply with California's Low Carbon Fuel Standards and be certified by the California Air Resources Board Executive Officer. RD fuel must also meet the following criteria: ◤ Be hydrogenation-derived (reaction with hydrogen at high temperatures) from 100 percent biomass material (i.e., nonpetroleum sources), such as animal fats and vegetables; ◤ Contain no fatty acids or functionalized fatty acid esters; and ◤ Have a chemical structure that is identical to petroleum-based diesel which ensures RD will be compatible with all existing diesel engines; it must comply with American Society for Testing and Materials (ASTM) D975 requirements for diesel fuels. ◢ Use electric powered equipment instead of fossil fuel-based generators. ◢ Purchase mitigation credits from the Climate Action Reserve's GHG Mitigation Credit Program to offset construction-generated GHG emissions. **Minimize GHG Emissions Associated with On-Road Vehicle to Watercraft Facilities** ◢ Provide charging stations for electric vehicles and bike lockers at parking lots that serve public piers and marinas. **Minimize GHG Emissions Generated by Recreational Watercraft**	

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		◢ Require or incentivize businesses that rent motorized watercraft to convert their rental fleet to watercraft with electric engines. ◢ Require or incentivize charging stations at marinas and public piers for electric-motor watercraft. ◢ Require or incentivize the installation of charging stations for electric-motor watercraft at private piers, boat houses, and boat lifts. ◢ Require solar panels on all marina buildings. This measure will apply to new construction occurring under the Shoreline Plan. TRPA will also initiate a funding program to apply these measures to existing facilities within the Tahoe Basin.	
12 Noise			
Impact 12-1: Construction noise impacts Construction activities would occur under all alternatives, including the No Project Alternative. Activities associated with construction of shorezone structures, including new piers, pier modifications, marinas, or new boat ramps would generate varying levels of noise. However, all activities would be carried out in a manner consistent with TRPA's standard permit conditions such that exposure of nearby receptors to construction-related noise is minimized and construction is limited to daytime hours. In addition, the types of activities associated with constructing new boating structures would be relatively minor, localized, temporary, and intermittent, and would not result in a substantial increase in temporary noise levels.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required
Impact 12-2: Construction vibration impacts Construction ~~activates~~ activities would occur under all alternatives. Construction activities associated with new shorezone structures, including new piers, pier modifications, marinas, and new boat ramps would generate varying levels of vibration. Pile driving would be required for pier construction/modification and marina construction, resulting in vibration levels that could potentially damage existing structures if located within 55 feet. In accordance with TRPA standard construction practices, all construction activity would take place during the day, minimizing the potential for disturbance during noise-sensitive evening and nighttime hours. However, because specific locations of pile driving activity is unknown, there is a potential	Alt 1, 2, 3, 4 – S	**Mitigation Measure 12-2: Vibration reduction measures** (applies to Alts 1, 2, 3, and 4) To address potential vibration impacts associated with shorezone projects that involve pile driving activity, TRPA shall revise TRPA Permit Attachment S, "Standard Conditions of Approval for Shorezone Projects," to incorporate the following vibration reduction measures: ◢ All construction equipment, including vibration-inducing impact equipment, on construction sites shall be operated as far away from vibration-sensitive uses as reasonably possible. ◢ Earthmoving and ground-disturbing operations shall be phased so as not to occur	Alt 1, 2, 3, 4 – LTS

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that existing structures could be exposed to excessive vibration levels that could result in structural damage.		simultaneously in areas close to sensitive uses, to the extent feasible. The total vibration level produced could be significantly less if each vibration source is operated at separate times. ◢ To prevent structural damage, minimum setback requirements for different types of ground vibration-producing activities (e.g., pile driving) for the purpose of preventing damage to nearby structures shall be established based on the proposed pile driving activities and locations, once determined. Factors to be considered include the specific nature of the vibration producing activity (e.g., type and duration of pile driving), local soil conditions, and the fragility/resiliency of the nearby structures. Established setback requirements (i.e., 55 feet) can be breached if a project-specific, site specific analysis is conducted by a qualified geotechnical engineer or ground vibration specialist that indicates that no structural damage would occur at nearby buildings or structures or provides further recommendations (e.g., alternative pile driving methods, site monitoring requirements) to avoid damaging nearby structures.	
Impact 12-3: Increases in operation-related watercraft noise Alternatives 1, 2, and 3 would result in additional boating structures (e.g., slips, buoys, lifts, boat ramps) that would contribute to an overall increase in boating activity over time. Because boating is generally a daytime activity and increases in boating activity would be distributed across the lake, it would have a negligible effect on CNEL, which considers noise levels in a given location over a 24-hour period. Single-event noise levels are affected by individual boater behaviors (e.g., exceeding speed limits in the no-wake zone) and boat/engine type. Under Alternatives 1, 2, and 3, TRPA would increase enforcement of the no-wake zone through additional boat crews, signage, and increased boater education, which would reduce such boater behaviors that contribute to exceedances of single-event noise standards. Further, none of the alternatives would result in a substantial increase (i.e., 3 dBA) in CNEL	Alt 1, 2, 3 – LTS Alt 4 - NI	No mitigation required	No mitigation required

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from increases in boating activity. With Alternative 4, no increases in boating activity would occur.			
Impact 12-4: Increases in operational-related traffic noise Alternatives 1, 2, and 3 would result in additional boating structures (e.g., slips, buoys, lifts, boat ramps) that would lead to an overall increase in boating activity, and commensurate increases in roadway traffic as compared to existing conditions. With Alternative 4, no increases in boating activity or additional vehicle trips would occur.	Alt 1, 2, 3 – LTS Alt 4 - NI	No mitigation required	No mitigation required
13 Roadway Transportation and Circulation			
Impact 13-1: Roadway and intersection operations Under Shoreline Plan Alternatives 1, 2, and 3 future development of shorezone structures would result in additional vehicular trips being added to the transportation network in the Region. It is not known at this time where any of these structures would be developed; and therefore, the addition of vehicle trips associated with the development of these alternatives (Alternatives 1, 2, and 3) could result in an increase in delay and degradation of LOS at intersections and along roadway segments in the project area if concentrated in such a way that a large portion of the trips affect a single roadway segment or intersection. However, Chapter 3 of the TRPA Code of Ordinances requires that TRPA review any proposed project, including projects that could result in new trips such as a marina expansion or public boat ramp, to determine if it would result in a significant environmental effect. This project-level environmental review would include an evaluation of the project-generated trips and effects on LOS. Alternative 4 would not generate any new vehicle trips.	Alt 1, 2, 3 – LTS Alt 4 - NI	No mitigation required	No mitigation required
Impact 13-2: Vehicle miles traveled Each Shoreline Plan alternative would include ordinances that would affect the location and intensity of future shorezone structure development, which would affect travel patterns, the number of new vehicle trips generated, and VMT. Alternatives 1, 2, and 3 would result in an increase in VMT but would maintain VMT levels below the adopted TRPA threshold standard. Alternatives 1, 2, and 3. Alternative 4 would not increase VMT and would maintain summer daily VMT levels below the adopted TRPA VMT threshold.	Alt 1, 2, 3 – LTS Alt 4 - NI	No mitigation required	No mitigation required

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14 Terrestrial Biological Resources (Wildlife and Vegetation)			
Impact 14-1: Disturbances to osprey, bald eagle, and waterfowl from construction and recreational uses Osprey, bald eagle, and waterfowl are designated by TRPA as special interest species and use the shorezone and adjacent locations for breeding and foraging. Potential effects of the Shoreline Plan alternatives on osprey and bald eagle could include construction-related disturbances to nesting activities from new piers and boat ramps, long-term increased disturbance to osprey and bald eagle and suitable habitat from boating and other recreational uses, and habitat degradation within TRPA-designated osprey and bald eagle disturbance zones. Although suitable nesting habitat for waterfowl is limited in the shorezone where new projects would be permitted (e.g., outside of TRPA-designated waterfowl population sites), construction-related activities that may occur within suitable habitat could disturb nesting attempts of waterfowl. The types of potential impacts to osprey, bald eagle, and waterfowl would be similar for Alternatives 1, 2, 3, and 4, with some differences in magnitude based on the locations, amounts, and quality of habitats potentially affected.	Alt 1, 2, 3, 4 – S	**Mitigation Measure 14-1a: Avoid construction disturbances to nesting osprey and bald eagle, install interpretive signage, and prepare and implement habitat enhancement plans or other compensatory measures for unavoidable activities within TRPA-designated disturbance zones** (applies to Alts 1, 2, 3, and 4) ◢ Surveys for nesting osprey and bald eagle will be conducted prior to construction of new shorezone facilities, to identify active nests that could be disturbed during construction. No construction activities will occur within 0.25 mile of active osprey nests and 0.5 mile of bald eagle nests during the breeding season (approximately April to August), unless surveys confirm that the birds are not nesting. A qualified biologist can amend the start and end dates of this limited operating period (LOP) with concurrence from appropriate agencies if it can be determined that breeding has not started or that fledglings have left the nest. Additionally, with concurrence from appropriate agencies, the LOP could be waived in locations where construction disturbance is not expected to increase ambient levels or disturbance to an active nest through presence of visual screening or other factors. ◢ During project-specific planning, design, and environmental review of new shorezone facilities, avoid siting projects within TRPA-designated disturbance zones for osprey and bald eagle, to the extent feasible. ◢ For projects and uses that may result in unavoidable increased human intrusion into the terrestrial/upland portions of TRPA osprey or bald eagle disturbance zones, signage that describes the sensitivity of the area and discourages users to leave established trails or access routes or otherwise disturb nesting osprey or bald eagle will be designed and installed. ◢ For projects that could cause unavoidable long-term degradation of habitat within TRPA	Alt 1, 2, 3, 4 – LTS

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			osprey or bald eagle disturbance zones, coordination with TRPA will occur to identify and implement appropriate compensatory measures that are effective and feasible for achieving TRPA's nondegradation standard for disturbance zones. Potential approaches to mitigating adverse effects and enhancing habitat within disturbance zones include preparation and implementation of a habitat enhancement and management plan that includes objectives, measures, techniques, performance standards, and adaptive management to enhance osprey habitat. Habitat enhancement would be implemented within the affected TRPA osprey or bald eagle disturbance zones and/or other osprey or bald eagle disturbance zones in the Tahoe Basin where enhancement opportunities and benefits to the regional osprey or eagle population could be maximized. Coordination with TRPA would occur to determine whether more focused measures to achieve habitat enhancement as part of the project could be implemented, or whether the current project design may benefit osprey or bald eagle habitat, in lieu of a formal habitat enhancement and management plan. **Mitigation Measure 14-1b: Conduct preconstruction surveys for waterfowl and implement a limited operating period, if necessary** (applies to Alts 1, 2, 3, and 4) For construction activities that would occur in suitable habitat during the nesting season (generally April 1–August 31, depending on snowpack and other seasonal conditions), a qualified wildlife biologist shall conduct focused surveys for waterfowl nests no more than 14 days before construction activities are initiated each construction season. If an active nest is located during the preconstruction surveys, the biologist shall notify TRPA. If necessary, modifications to the project design to avoid removal of occupied habitat while still achieving project objectives shall be evaluated and implemented to the extent feasible. If avoidance is not feasible or conflicts with project objectives, a limited operating period shall apply to avoid disturbances during the sensitive nesting season. Construction shall be prohibited within a minimum of 500 feet (or at a distance directed by	

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		the appropriate regulatory agency) of the nest to avoid disturbance until the nest is no longer active. These recommended buffer areas may be reduced through consultation with TRPA.	
Impact 14-2: Disturbance or loss of Tahoe yellow cress Tahoe yellow cress (TYC) is a sensitive plant species found only on the sandy beaches of Lake Tahoe. This species is designated as a sensitive plant and threshold indicator species by TRPA, and is state-listed as critically endangered and endangered by the states of Nevada and California, respectively. Alternatives 1, 2, 3, and 4 would result in construction and operation of new shorezone structures within beach habitats. Depending on the specific locations and size of individual 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 for motorized watercraft, nonmotorized watercraft, anglers, swimmers, and beachgoers could increase the frequency of 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. The types of potential impacts to TYC would be similar among Alternatives 1, 2, 3, and 4, with some differences in magnitude based on the amounts and locations of beach habitats potentially affected. 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, because TYC is listed as endangered under CESA, any take of TYC would require authorization by CDFW through a California Fish and Game Code Section 2081 incidental take permit.	Alt 1, 2, 3, 4 – S	**Mitigation Measure 14-2: Conduct preconstruction surveys, avoid potential construction impacts, ~~and~~ avoid potential recreation impacts to Tahoe yellow cress plants, and compensate for unavoidable loss of Tahoe yellow cress** (applies to Alts 1, 2, 3, and 4) To avoid potential adverse effects on TYC plants resulting from construction activities and potential increased use of beaches that support TYC, the following actions shall be implemented: (A) During project-specific planning, design, and environmental review of new shorezone facilities, avoid siting projects within areas known to support TYC occurrences, to the extent feasible. Project proponents shall follow the project review guidelines in Appendix H of the 2015 TYC Conservation Strategy (Stanton et al. 2015). (B) For any projects that could affect TYC, a qualified biologist familiar with the vegetation of the Tahoe Basin and identification of TYC shall conduct a focused preconstruction survey for TYC in all beach habitat where construction-related disturbance could occur in the vicinity of TYC populations during that year. Surveys shall be conducted between June 15 and September 30, when TYC is clearly identifiable, and shall follow the survey protocol provided in Appendix D and project review guidelines in Appendix H of the 2015 TYC Conservation Strategy. ~~*Survey Protocols for Tahoe Yellow Cress Annual Surveys* (Stanton and Pavlik 2009).~~ Surveys shall be completed for each year that construction activities could occur in beach habitat. If no TYC stems are found during the survey, the results of the survey shall be documented in a letter report to TRPA and the TYC AMWG that shall become part of the project environmental record, and no further actions shall be required. (C) If TYC stems are documented during the survey in areas potentially disturbed by construction activities, the stems shall be clearly identified in the field and protected from impacts associated with construction activities. Protective measures shall include installing high-visibility	Alt 1, 2, 3, 4 – LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts		Significance without Mitigation	Mitigation Measures	Significance with Mitigation
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			fencing around known stem locations during construction. No construction-related activities shall be allowed in areas fenced for avoidance, and construction personnel shall be briefed about the presence of the stems and the need to avoid effects on the stems. (D) To protect TYC plants from potential long-term increased beach use and disturbance as an indirect result of increased recreation activity in the shorezone, protective fencing and educational signage about the need to avoid these areas shall be installed around all TYC clusters. In addition to beaches occupied by TYC where new shorezone facilities would be constructed and operated, other beach areas that support TYC that are likely to receive increased recreation uses as a result of the projects shall be identified and subject to these measures. (E) Long-term fencing and signage will be periodically monitored and maintained, as necessary, to ensure that they remain effective and in good working condition. Also, because locations and concentrations of TYC could shift over time, the locations and configurations of fencing relative to TYC distribution shall be evaluated periodically. If necessary, fencing shall be moved or added in response to changes in TYC distribution to ensure that TYC plants are protected over time. The locations of TYC plants and shifts in their locations relative to fencing can be determined by surveys as part of the ongoing AMWG TYC monitoring program. The installation and maintenance of long-term protective fencing and signage will be designed to not interfere with necessary operations and maintenance activities at facilities. (F) <u>If complete avoidance of TYC is not feasible, then adaptive management or compensatory actions for any significant project-related loss of TYC shall be identified, designed, and implemented in coordination with the TYC AMWG and TRPA. Potential compensatory actions could include or require seed collection, nursery/greenhouse propagation and outplanting of container-grown TYC, or translocation of naturally occurring TYC either on-site or at a suitable off-site location, as discussed in the 2015 TYC Conservation Strategy.</u> (G) <u>If a project on the California side of the Lake Tahoe shorezone may result in the loss of</u>	

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		TYC, consultation with California Department of Fish and Wildlife would be required to ensure compliance with the California Endangered Species Act, and obtaining an incidental take permit pursuant to California Fish and Game Code Section 2081 may be required prior to project implementation. If a project on the Nevada side of Lake Tahoe shorezone may result in the loss of TYC, a special permit from the Nevada State Forester Firewarden would be required to ensure compliance with the federal Endangered Species Act.	
Impact 14-3: Disturbance or loss of common terrestrial vegetation communities and wildlife habitats Common natural terrestrial habitats within the shorezone and adjacent areas consist primarily of beach and a mix of conifer forest, scattered conifer trees, and snags. Additionally, urban/developed and ruderal (disturbed) areas are distributed throughout the shorezone where existing facilities (e.g., boat ramps, marinas, buildings, trails) and lake access are present. These habitats support several common native wildlife species that use them for nesting, foraging, resting, or wintering. Alternatives 1, 2, 3, and 4 would result in construction and operation of new shorezone structures, and associated increases in recreation use, that could disturb common vegetation and wildlife. The types of potential impacts to common vegetation and wildlife communities would be similar among Alternatives 1, 2, 3, and 4, with some differences in magnitude based on the locations, amounts, and quality of habitats potentially affected. The potential disturbance or removal of terrestrial vegetation from future projects permitted under any of the Shoreline Plan alternatives would be relatively minor and not substantially reduce the quantity or quality of terrestrial vegetation communities and habitats in the region or cause a change in species distributions or diversity. Additionally, none of the alternatives are expected to increase construction-related or recreational disturbance levels in the shorezone above levels that would substantially affect most common species. Accordingly, the alternatives are not expected to substantially affect the distribution, breeding productivity, viability, or the regional population of any common wildlife species, or result in a change in species diversity.	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

Table ES-1 Summary of Impacts and Mitigation Measures

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15 Public Health and Safety			
Impact 15-1: Increase in watercraft accidents due to increased boating and navigational hazards Alternatives 1, 2, and 3 would increase the number of annual and peak day boat trips on the lake, whereas Alternative 4 would retain boating levels consistent with existing conditions. Increased levels of boating activity would add to the factors that contribute to boating accidents, such as more watercraft, higher boating density at popular shoreline areas and lake access points, and greater potential for conflicts between motorized and nonmotorized recreation. While the additional boating activity resulting from Alternatives 1, 2, and 3 would aggravate the factors that contribute to boating accidents, the 600-foot no-wake zone, improved public boating safety education programs, and compliance with California and Nevada boating safety laws would reduce the risks and associated impacts. Alternative 4 would not contribute to such factors. Implementation of any of the four alternatives could lead to public piers extending beyond the 600-foot no-wake zone, which could create navigational hazards and conflicts between motorized and nonmotorized watercraft and swimmers. Additionally, Alternative 2 does not include location standards limiting the length of private multiple-use piers to within the no-wake zone.	Alt 1, 2, 3, 4 – PS	**Mitigation Measure 15-1a: Maintain nonmotorized navigation within the no-wake zone** (applies to Alts 1, 2, 3, and 4) TRPA will implement Mitigation Measures 8-1a and 8-1c as described in Chapter 8, "Recreation." These mitigation measures require that TRPA revise the pier design standards, such that the length of new public piers shall be limited to within the 600-foot no-wake zone and provide at least 10 feet between the end of the pier and the no-wake zone boundary, ~~for piers that extend 600 feet or more from the highwater elevation~~ to provide lateral nonmotorized recreation access within the 600-foot no-wake zone and provide for a 200-foot buffer between motorized watercraft in motion and nonmotorized recreationists in areas outside of no-wake zones. **Mitigation Measure 15-1b: Implement Mitigation Measure 10-1 to limit the number of moorings and boat ramps** (applies to Alt 2 only) TRPA will implement Mitigation Measure 10-1, as described in Chapter 10, "Air Quality," which would revise the Code of Ordinances to limit the total number of new moorings (i.e., buoys, slips, and lifts) and boat ramps to the number authorized under Alternative 1. This would allow a total of 2,116 new moorings and two new boat ramps.	Alt 1, 2, 3, 4 – LTS
Impact 15-2: Accidental release of hazardous substances Each of the Shoreline Plan alternatives would temporarily increase the regional transportation, use, storage and disposal of hazardous materials and petroleum products commonly used at construction sites (such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals), which could result in accidents or upset conditions that could create hazards to people and the environment. The replacement of older piers may require the disposal of wood treated with preservatives, which could contaminate surface water and groundwater if not properly handled and disposed. Temporary impacts could occur if construction were to affect sites of known contamination or inadvertently disturb hazardous materials or wastes in a manner that could release these materials into the environment,	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
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exposing construction workers or nearby sensitive receptors to hazardous conditions. Compliance with all local, state, and federal regulations is sufficient to ensure that any hazardous materials used during construction of future projects would not result in adverse effects. Specific projects implemented in accordance to the adopted Shoreline Plan would be subject to permit processes and conditions pursuant to TRPA regulations and, depending upon location and whether or not there is federal discretion, CEQA and NEPA statutes and implementing regulations. Such review could include site-specific impact analysis and adoption of feasible mitigation measures that must be implemented to assure that standards of the region are met. With the addition of access points to the lake and the increase in navigational hazards in the form of longer piers and additional structures in the water, the Shoreline Plan alternatives could result in a long-term increase in the risk of accidental discharge of fuel and other hazardous materials into the lake. Alternative 1 would require that TRPA consult with water purveyors when evaluating applications and development of permit conditions for any proposed shoreline structure within one quarter mile of a drinking water intake, while Alternatives 2, 3 and 4 would require consultation within 600 feet. Furthermore, as described in Chapter 6, "Hydrology and Water Quality," Impact 6-4, given the rapid rate of biodegradation of hydrocarbon compounds, the non-toxic levels monitored on the lake, and current TRPA regulations pertaining to control of discharges of contaminants from boating facilities using best management practices (BMPs).			
Impact 15-3: Shoreline emergency access Implementation of the Shoreline Plan Alternatives 1, 2, or 3 would increase boating activity. Increased boat use would aggravate many of the factors that contribute to boating accidents, leading to an increased need for emergency response services. Emergency responders' ability to access boaters and swimmers in the water could be hindered by the increase in activity in the nearshore, foreshore, and backshore. Furthermore, low water conditions during drought years and under future projected climate scenarios would present a challenge for emergency responders, as some existing lake access points are unavailable during low water conditions. Because	Alt 1& 2 – LTS Alt 3 & 4 –PS	**Mitigation 15-3: Implement low lake level adaptation strategies** (applies to Alts 3 and 4) TRPA will incorporate the following low lake level adaptation strategies to provide shoreline emergency access during low water conditions: ◢ Marina buoy fields would be able to include additional rows of lakeward anchors to accommodate low lake levels. Buoy floats could be relocated to the lakeward anchors during low lake levels without increasing the total number of buoys. ◢ Marinas would be allowed to use temporary floating pier extensions to provide access for	Alt 1& 2 – No mitigation required Alt 3 & 4 – LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
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most of the emergency responders' watercraft are located on the water, lake access is not an issue for a majority of first responders. Alternative 1 would incorporate low lake level adaptation strategies along with the provisions of TRPA Code Section 84.10.2, which establishes a framework to provide essential emergency access and egress to Lake Tahoe. Alternative 2 would allow for substantially greater levels of boating activity than Alternative 1. Alternative 2 would maintain existing development standards, focusing development around the natural lake rim elevation of 6,223 feet Lake Tahoe Datum (LTD). Buoy floats and anchors within buoy fields would be allowed to move farther lakeward during periods of low lake levels. Furthermore, TRPA Code Section 84.15.4 allows for temporary structures that extend beyond lake bottom elevation 6,219 feet or the pier headline during low water conditions. Alternatives 3 and 4 would result in different levels of boating activity—a small increase with Alternative 3, and no projected increase from existing levels with Alternative 4. Alternatives 3 and 4 would maintain existing development standards, focusing development around the natural lake rim elevation of 6,223 feet LTD. Buoy floats and anchors within buoy fields would be allowed to move farther lakeward during periods of low lake levels, but the alternatives contain no other provisions to allow modifications to facilities or structures to be useable during such conditions.		boats when lake levels fall below 6,225 feet LTD. ◢ Public boat ramps could be expanded to extend farther into the lake, subject to permit conditions. ◢ New dredging could be allowed at marinas and public boat ramps, subject to permit conditions.	
Impact 15-4: Increase demand for on-lake emergency response facilities Implementation of each alternative would result in new shorezone structures, creating potential for an increase in boating accidents and the accidental release of hazardous materials. This would increase the demand for emergency response services. As discussed in Impact 15-1, the 600-foot no-wake zone, improved public boating safety education programs, expanded safety/enforcement patrols, and compliance with California and Nevada boating safety laws would reduce the risk of boating accidents due to increased boating. Impacts associated with increased navigational hazards would be reduced with implementation of Mitigation Measure 15-1a. As described in Impact 15-2, compliance with all local, state, and federal regulations is sufficient to ensure	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

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Impacts	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
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that any hazardous materials used throughout the project area during construction would not result in adverse effects. Thus, the increased demand for emergency services would likely be minor. Emergency response providers that act on lake-related emergencies indicate that they have adequate capacity to handle additional project-generated demand for emergency services. Furthermore, TRPA Code Section 84.10.2, which allows for the designation of up to one Essential Public Safety Facility within each county-jurisdiction plus the U.S. Coast Guard Lake Tahoe Station, would remain unchanged. In drought years, TRPA allows first responder organizations to designate locations for temporary moorings for regional public safety purposes. This would ensure that emergency providers have adequate access points to the lake and reduce the need for construction of new lake-access facilities, the construction of which could result in adverse effects to the environment.			
16 Cultural Resources			
Impact 16-1: Cause the alteration of, or adversely affect a historical site, structure, object, or building Implementation of the four Shoreline Plan alternatives would result in development on properties that could contain known or unknown historic resources, are associated with historically-significant events or individuals, or result in adverse physical or aesthetic effects to a significant historical site, structure, object, or building. Because each alternative would result in some new construction, each has the potential to disturb, disrupt, or destroy historic resources through implementation.	Alt 1, 2, 3, 4 – PS	**Mitigation 16-1: Avoid potential effects on historic resources** (applies to Alts 1, 2, 3, and 4) Once the exact location of the new piers, boat ramps, and any other land-based development has been determined and before commencement of earth-disturbing activities for construction, applicants shall identify ~~and evaluate~~ all historic-age (over 50~~45~~ years in age) buildings and structures that are proposed to be removed and/or modified as part of a historic determination application with TRPA or applicable local jurisdiction. ~~This may include~~ TRPA may require the preparation of an historic resource assessment and evaluation of resources to determine their eligibility for recognition under state, federal, or local criteria. If required, the assessment shall be prepared by an architectural historian, or historical architect meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualification Standards. If resources are eligible for inclusion in the NRHP, CRHR, or a local register are identified, an assessment of impacts on these resources shall be included in the report, as well as detailed mitigation measures to avoid impacts.	Alt 1, 2, 3, 4 – LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
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Impact 16-2: Cause the alteration of, or adversely affect an archaeological resource Implementation of the Shoreline Plan alternatives would result in development that could take place on properties that contain, be associated with, or result in adverse effects to known or unknown archaeological resources. Because each alternative would result in some new construction over the planning period, each has the potential to disturb, disrupt, or destroy archaeological resources through implementation of specific projects.	Alt 1, 2, 3, 4 – PS	**Mitigation 16-2: Avoid potential effects on archaeological resources** (applies to Alts 1, 2, 3, and 4) Once the exact location of the new piers, boat ramps, dredging, or any other ground-disturbing project ~~development~~ (excluding buoys and the repair or replacement of existing structures) has been determined and before commencement of earth-disturbing activities for construction, applicants shall retain a qualified archaeologist to conduct archaeological surveys of the portion of the site that is subject to ground disturbance, as part of a historic determination application with TRPA or applicable local jurisdiction. To ensure that new or expanded facilities and uses do not adversely affect potentially buried archaeological deposits, an underwater archaeological survey shall also be conducted to identify, evaluate, and protect significant submerged cultural resources prior to activities that would disturb the lakebed. TRPA may waive the requirement for an archeological survey after consultation with the Washoe Tribe of Nevada and California, only if the Washoe Tribe determines that, due to the specific location and characteristics of the proposed project, the project would not be likely to affect archeological resources and cultural and ethnic values. The applicant shall follow recommendations identified in the survey, which may include activities such as subsurface testing, designing, and implementing a Worker Environmental Awareness Program, construction monitoring by a qualified archaeologist, avoidance of sites, or preservation in place. All projects shall include the following requirements as a condition of approval: If evidence of any prehistoric or historic-era subsurface archaeological features or deposits are discovered during construction-related earth-moving activities (e.g., ceramic shard, trash scatters, lithic scatters), all ground-disturbing activity in the area of the discovery shall be halted and the appropriate jurisdiction and TRPA shall be notified immediately. A qualified archaeologist shall be retained to assess the significance of the find. If the find is a prehistoric archeological site, the appropriate Native American group shall be notified. If the archaeologist determines that the find does not	Alt 1, 2, 3, 4 – LTS

Table ES-1 Summary of Impacts and Mitigation Measures

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		meet NRHP, NVSRHP, or CRHR standards of significance, as applicable, for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, a data recovery plan shall be prepared. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with the project applicant to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics, and other factors, follow accepted professional standards in recording any find including submittal of the recordation forms required by the applicable SHPO and location information to the appropriate information center.	
Impact 16-3: Degrade ethnic and cultural values Because the project could result in physical changes to historic and prehistoric sites, unique ethnic cultural values could be affected, and historic or prehistoric religious or sacred uses within the Plan area could be restricted. Consultation with the Washoe Tribe is required by TRPA regulations; however, project activities could still uncover or destroy historic or archaeological resources as identified in Impact 16-1 (historic) and Impact 16-2 (archaeological).	Alt 1, 2, 3, 4 – PS	**Mitigation 16-3: Implement Mitigation Measures 16-1 and 16-2** (applies to Alts 1, 2, 3, and 4) TRPA will implement Mitigation Measure 16-1, "Avoid potential effects on historic resources," and 16-2, "Avoid potential effects on archaeological resources," as described above.	Alt 1, 2, 3, 4 – LTS
17 Cumulative Impacts			
The Shoreline Plan is a long-range plan developed to manage the amount and intensity of recreational use and development along Lake Tahoe's shore in a manner that attains and maintains the environmental thresholds. Together, the Shoreline Plan works with the other elements of the Regional Plan and the Regional Transportation Plan (RTP) to regulate the total amount and type of development within the Lake Tahoe Region. Consequently, this planning framework inherently represents the cumulative condition within the Region. Because the Shoreline Plan considers the cumulative buildout of the shoreline, the analyses contained in Chapters 4 through 16 of this EIS are cumulative in nature. Similarly, the Regional Plan regulates the buildout of portions of the Region that are outside of the shoreline, and the EIS prepared for adoption of the	Alt 1, 2, 3, 4 – LTS	No mitigation required	No mitigation required

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
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Regional Plan evaluated the cumulative conditions of those portions of the Region. The cumulative analysis identifies: whether an existing significant adverse cumulative condition exists with respect to each resource, whether implementation of the Shoreline Plan alternatives in the context of past, present, and reasonably foreseeable plans, programs and projects, would result in a significant cumulative impact, and whether the Shoreline Plan would represent a considerable contribution to the cumulative impact. In cases in which no existing significant cumulative condition is identified, the analysis addresses whether the incremental contribution of the Shoreline Plan alternatives, combined with those of related region-wide plans, programs, and projects, would create a significant cumulative impact. For each resource topic analyzed, the cumulative analysis presented in Chapter 17 determined that there would be no adverse cumulative condition, or that the Shoreline Plan alternatives would not make a considerable contribution to a significant cumulative impact.			

Corrections and Revisions to Chapter 2, "Description of Proposed Project and Alternatives"

Table 2-3 on page 2-20 of the Draft EIS is revised as follows:

Piers				
Limit the rate ~~of~~ new pier development.	X		X	
Enforce pier design standards for new, modified, and expanded ~~rebuilt~~ piers.	X	X	X	X
Provide incentives for the transfer of piers out of stream mouth protection areas and scenic travel units that are not in attainment of thresholds.	X		X	X
Require minimum of 40-foot setbacks from adjacent pierheads.	X			
Include transfer ratios to allow some shoreline structures to be removed and rebuilt elsewhere with a 2:1 reduction in the number of structures				X

Page 2-26 of the Draft EIS has been revised as follows:

> All buoys serving HOAs or commercial or tourist uses would continue to be required to be in a buoy field. Buoy fields would be designed in a grid using the following setback and spacing standards: ~~same setback and spacing standards as for littoral parcels (a minimum 20 feet from adjacent property boundaries, and a minimum 50 feet from~~

~~other legally existing buoys) and 300 feet in width~~ 1) 50 feet from all legally existing buoys, 2) no greater than 600 feet lakeward from elevation 6,220 feet LTD, as measured horizontally, and 3) at least 20 feet from adjacent littoral parcel projection lines boundaries. TRPA could approve deviations from these standards based on site-specific considerations, including neighboring uses and structures, state permit requirements, U.S. Coast Guard recommendations, navigational considerations, and bathymetric constraints.

Table 2-5 on page 2-27 of the Draft EIS is revised as follows:

Table 2-5 Alternative 1 Pier Design Standards

Specification	Single Use	Multiple Use[1]			
		Serves One to Two Units	Serves Three to Four Units or Two Littoral Parcels	Serves Five to 20 Units or Three Littoral Parcels	Serves More Than 20 Units or More Than Four Littoral Parcels
Length[2]	To 6,219 feet LTD or pierhead line, whichever is more limiting	Same as single use	To 6,219 feet LTD or 30 feet lakeward of pierhead line, whichever is more limiting	To 6,219 feet LTD or 30 feet lakeward of pierhead line, whichever is more limiting	To 6,219 feet LTD or 30 feet lakeward of pierhead line, whichever is more limiting
Width	Maximum 10 feet	Same as single use	Maximum 15 feet[3]	Maximum 15 feet[3]	Maximum 15 feet[3]
Side setback	Minimum 20 feet from each property edge for new piers, and 5 feet from projected property ~~edge~~ line for existing piers	Same as single use			
Visible mass[4]	Maximum 220 square feet	Same as single use	Maximum 400 square feet	Maximum 460 square feet	Maximum 520 square feet
Location	Minimum 40 feet from any other pier, measured at the pierhead	Same as single use			
Catwalk	Maximum 3 feet wide and 30 feet long	Same as single use	Maximum 3 feet wide and 45 feet long	Maximum 3 feet wide and 45 feet long	Maximum 3 feet wide and 45 feet long
Boat lift	1 allowed	Same as single use	Up to 4 allowed	Up to 4 allowed	Up to 4 allowed

[1] Residential units may have access to a pier structure, even if they are located in the upland. Upland units are eligible for a multiple-use pier at the development standards identified above. Littoral parcels also have access to multiple-use pier structures at the development standards identified above. Note that more than one residential property can be located on a single littoral parcel. These development standards have been identified to limit the size of a pier serving multiple upland units that have only one littoral parcel.

[2] If an applicant (including marinas) needs additional pier length for proper function, TRPA standards would allow up to an additional 15 feet lakeward of the pierhead line, provided that the increase in water depth over the additional 15 feet is a minimum of 0.5 foot, or 6 inches (equal to 3-percent grade).

[3] The visible mass calculations must include catwalks, but a boat lift, boat, and safety railings do not have be included. Visible mass above the limits specified above must be mitigated.

[4] Flexibility in the design of the pierhead is allowed for multiple-use piers to accommodate multiple simultaneous users. The pierhead design must be included in the visible mass calculation.

Corrections and Revisions to Chapter 5, "Fish and Aquatic Resources"

The fifth paragraph on page 5-44 is revised as follows:

> **Shoreline Parking**
> There are numerous piers, slips, marinas, and docks along the lake that provide boat parking. However, ~~some~~ boaters sometimes ~~choose to~~ park their boats along the shoreline for short periods for loading and unloading purposes. Shoreline parking occurs more frequently and potentially for longer periods on busy boating days (i.e., summer holiday weekends) when boat parking structures are full. When parking on the shoreline, boaters generally prefer parking on sandy areas instead of gravel or rocky substrate. Parking on the shoreline can potentially crush eggs or disrupt juveniles or spawning adults. Tui chub are the only fish that spawn in shallow water sandy habitats; however, they are night spawners. Further, tui chub do not build nests and their eggs are not necessarily concentrated into one area (Moyle 2002). Therefore, the likelihood of any given boat crushing numerous fish eggs when it parks in sandy areas is generally low. Nonetheless, tui chub eggs would be subject to movement by wave and wake motion created by boats.

Corrections and Revisions to Chapter 6, "Hydrology and Water Quality"

Page 6-8 of the Draft EIS is revised to add the following text:

> Lake Tahoe also serves as a drinking water supply for the majority of the population in the Tahoe Region. Eleven municipal drinking water purveyors use Lake Tahoe as a drinking water source, and Six water purveyors hold filtration exemption status from the U.S. Environmental Protection Agency. Filtration-exempt water purveyors rely on treatment processes including ultra-violet and ozone disinfection, which are designed for deactivation of potential biological contaminants rather than chemical contaminants. The Tahoe Water Suppliers Association represents the 11 principal Tahoe Basin municipal drinking water providers with lake water intakes.

Mitigation Measure 6-5b on page 6-34 of the Draft EIS is revised as follows:

> ## Mitigation Measure 6-5b: Require littoral drift analyses and incorporate design recommendations for floating piers longer than 25 feet
>
> This mitigation measure would be required for Alternatives 1, 2, 3, and 4.
>
> TRPA will require all new pier and pier extension applications that include floating pier sections longer than 25 feet submit a site-specific littoral drift and wave analysis. The analysis will assess the dimensions of the proposed floating pier section and the ability of waves to initiate and sustain the movement of sediment along the lake bottom under conditions of low lake level (6,223 feet), mid-lake level (6,226 feet), and high lake level (6,229 feet) Lake Tahoe Datum. The lake level condition with the greatest effect on littoral transport and backshore stability shall be used to design the floating pier section. Floating piers may only be approved if they are designed so that wave heights are not reduced by more than 50 percent and the floating pier section is no greater than 50 percent of the length of the site-specific design wavelength, and if the littoral drift analysis finds that the pier will not otherwise substantially disrupt littoral transport.

Corrections and Revisions to Chapter 8, "Recreation"

The last paragraph on page 8-4 in the Draft EIS has been revised as follows:

CALIFORNIA STATE LANDS COMMISSION

~~The California State Lands Commission (State Lands) is responsible for leasing sovereign lands on the California side of Lake Tahoe. On the California side of Lake Tahoe, a public trust easement allows for public access between the low- and high-water elevation of Lake Tahoe. The area in the public trust easement allows for commerce, navigation, fishing, recreation, and preservation. The high- and low-water marks for the California side of the Lake have been established as elevations 6,228.75 feet and 6,223 feet Lake Tahoe datum, respectively. Any activities involving the state's sovereign lands in Lake Tahoe below 6,223 feet require a lease from State Lands. State Lands is involved with the protection of California's rare and endangered wildlife and plant species as described in Chapters 5 and 14 of this document, as applicable, and for ensuring compliance with the California Environmental Quality Act (CEQA).~~

The California State Lands Commission (State Lands) is responsible for administering the Public Trust on the California side of Lake Tahoe, which entails oversight of the public's rights pertaining to, but not limited to, commerce, navigation, fishing, recreation, and ecological preservation, with public access serving as the foundation of the public's ability to enjoy these rights. State Lands is responsible for the leasing of State sovereign lands lakeward of the low-water elevation of Lake Tahoe (elevation 6,223 feet Lake Tahoe datum) [LTD]) for Public Trust consistent uses. State Lands also administers a Public Trust easement between the low and high-water elevation (elevation 6,228.75 LTD) for public access to and along Lake Tahoe on the California side. Collectively, land lakeward of the natural high-water elevation on the California side of Lake Tahoe is subject to the Public Trust. Management of Public Trust interests for Lake Tahoe includes promoting and protecting lateral public access within the easement. All discretionary actions of State Lands require compliance with the CEQA. State Lands is also involved with the protection of California's rare and endangered wildlife and plant species as described in Chapter 5 and 14 of the Draft EIS.

The second to last paragraph on page 8-4 in the Draft EIS has been revised as follows:

CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

The mission of the California Department of Parks and Recreation (State Parks) is "…to provide the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and providing opportunities for high-quality recreational experiences based on those resources." State Parks manages the California State Park System, including D.L. Bliss State Park south of Meeks Bay, Emerald Bay State Park, Burton Creek State Park in Tahoe City, and Sugar Pine Point State Park south of the Placer County line on the West Shore. State Parks also manages the Tahoe State Recreation Area (SRA) in Tahoe City and the Kings Beach SRA in Kings Beach.

Section 8.2.4 of the Draft EIS has been revised as follows:

NEVADA DIVISION OF STATE LANDS

The Nevada Division of State Lands (NDSL) requires applications for structures lakeward of high water, 6,229.1 feet elevation, although the state claims ownership of Lake Tahoe lakeward of 6,223 feet elevation, Lake Tahoe datum (NRS 321.595). NDSL requests comments from the Nevada Department of Wildlife regarding impacts to recreational access and fish habitat resulting from

Shorezone ~~leases~~ permits. NDSL also maintains the public trust on the Nevada side for submerged land below an elevation of 6,223 feet Lake Tahoe datum.

Page 8-13 of the Draft EIS has been revised as follows to improve clarity:

The increase in motorized watercraft would not substantially change the character of the experience in areas that already experience overcrowding. These areas (e.g., Emerald Bay) already reach "capacity" on peak days such that boaters, beachgoers, and paddleboarders that might otherwise recreate there tend to seek other, less crowded areas. By virtue of its size, Lake Tahoe offers large expanses of uncrowded lake surface away from more popular locales. ~~Large areas in the center of the lake would be less crowded and those people seeking a quieter recreation~~ These areas would continue to be available for motorized boaters seeking a more solitary experience, and those non-motorized recreationists seeking a quieter recreation experience could still find those away from popular destinations at quieter locations along the shore.

Text on pages 8-28 and 8-29 of the Draft EIS is revised as follows shown below.

TRPA and California State Lands Commission would adopt an MOU that details a process to coordinate review of applications for new and modified piers and other structures that could be placed in the public trust easement in California. The MOU would specify a coordinated review process that protects public trust values (e.g., public lateral access) within the public trust easement in California. The MOU would require design features to accommodate lateral access where it is otherwise legally allowed. During the review process TRPA or the California State Lands Commission could require [reasonable] project … design elements to maintain legal public access. Project modifications could include access paths around or under structures; or ladders, ramps, or other structural features that provide public access over structures. Any structural components required to maintain lateral public access (e.g., ladders to provide access over a pier), would be exempt from visible mass offset requirements.

Mitigation Measure 8-1a is revised to minimize exceptions to the pier length limitation as follows:

Mitigation Measure 8-1a: Maintain nonmotorized navigation within the no-wake zone

This mitigation measure would be required for public piers in Alternatives 1, 3, and 4 and multiple-use and public piers in Alternative 2.

TRPA will revise the pier design standards for piers that extend 600 feet or more from the high-water elevation to provide lateral nonmotorized recreation access within the 600-foot no-wake zone. Lateral nonmotorized recreation access within the 600-foot no-wake zone ~~could~~ will be provided by ~~either of~~ the following:

- The pier design standards would require public piers (for Alternatives 1, 3, and 4) and multiple-use piers (for Alternative 2) to accommodate lateral nonmotorized access by limiting the pier length to within the 600-foot no-wake zone and providing at least 10 feet between the end of the pier and the no-wake zone boundary to allow nonmotorized recreationists to stay within the no-wake zone. The applicant for a new multiple-use pier that extends to within 30 feet of the no-wake zone would also be required to install one or more navigational buoys to identify the location of the no-wake zone relative to the pier.~~; or~~ Additional pier length could only be granted if necessary for public health and safety facilities or waterborne transit provided TRPA makes the following findings:
  - The additional pier length is necessary to provide for public health and safety or public transit, and
  - All feasible measures have been taken to minimize interference with nonmotrized navigation.

- ~~The pier design standards could allow exceptions for public piers (for Alternatives 1, 3, and 4) and multiple use and public piers (for Alternative 2) that extend beyond the no wake zone if the pier is designed to allow nonmotorized recreationists to have lateral access underneath the pier during high lake level conditions.~~

Corrections and Revisions to Chapter 9, "Scenic Resources"

The fourth paragraph on page 9-1 of the Draft EIS is revised to improve clarity as shown below:

> Development under the Shoreline Plan alternatives would not produce new sources of light or glare. Piers and boat ramps would be prohibited from having lighting, except ~~for limited cases~~ where public safety lighting is required~~,~~ Where pier lighting is necessary for safety, it would be directed downward and only onto the pier deck, would not exceed two feet in height above the pier deck, would be the minimum illumination necessary to ensure safety, and would comply with all applicable standards in TRPA Code Chapter 36.~~and~~ ~~o~~Other shorezone structures such as buoys, slips, boat lifts, and swim platforms would not include lights. The components of marina expansions regulated by the Shoreline Plan under Alternatives 1, 2, and 3 (or new marinas under Alternative 2) would also not generally be associated with new sources of light or glare, because they would be related to additional moorings. Reflective materials would not be allowed in construction of any new shorezone structures. Therefore, impacts on light and glare are not addressed in detail in this chapter.

Mitigation Measure 9-1a has been revised as follows:

Mitigation 9-1a: Offset the visible mass of buoys

This mitigation measure applies to Alternatives 1, 2, and 3

TRPA will require that all new buoys offset the visible mass associated with the buoy and boat. The average visible mass of a buoy and boat is estimated at 83 square feet. Each new buoy will require removal or screening of a minimum of 83 square feet of existing mass visible from Lake Tahoe. The visible mass of a buoy ~~can~~ will be offset through the ~~direct reduction of visible mass or through~~ the payment of ~~an in-lieu fee~~ buoy scenic mitigation fee that will be used to reduce visible mass, as described below.

~~If a buoy applicant chooses to directly remove or screen visible mass as part of the buoy project, then the applicant would comply with the same visible mass offset requirements that apply to piers and other structures. The 83 square feet of visible mass associated with the buoy would be offset at the same ratios required for other shoreline structures. The offset would be required as close to the proposed buoy as possible, in the following order of priority: 1) on the same parcel in the shorezone, 2) on the same parcel in the upland area, 3) elsewhere in the shorezone within the same shoreline scenic travel unit, 4) within the same travel unit in the upland, and 5) in another nonattainment scenic travel unit.~~

TRPA will ~~also provide the option to pay an in-lieu~~ assess an annual scenic mitigation fee on all buoys ~~fee~~ to offset the ~~additional~~ visible mass of the buoy. TRPA will set a fee amount that is adequate to remove or visually screen 83 square feet of existing visible mass for each buoy. TRPA will use the fee to acquire and remove or screen existing visible mass visible from shoreline scenic travel units that are not in attainment of threshold standards. The funds will be dedicated to projects that TRPA determines will have the greatest benefit to scenic threshold standards and will be prioritized for use in the following order: 1) in the shorezone, 2) in the shoreland, and 3) to improve background views visible from Lake Tahoe.

To identify specific scenic improvement projects that could be funded by the in-lieu fee, TRPA will update the Scenic Quality Improvement Program (SQIP) within one year of adoption of the Shoreline Plan. The update would, at a minimum, update those elements of the SQIP that identify scenic

improvement opportunities within the eleven shoreline travel units that are not in attainment of scenic thresholds as of the 2015 Threshold Evaluation Report. Within each of these travel units, the SQIP will identify specific opportunities for scenic improvements that would increase the scenic threshold ratings. Scenic improvement opportunities could include improvements on private land, such as the acquisition, removal, or screening of private development; as well as opportunities on public land, such as the undergrounding of utilities, revegetation of road scars, screening or recoloring of infrastructure, or removal of structures on public land. The SQIP will consider opportunities for permanent or long-term scenic improvement. TRPA will consider the scenic improvement opportunities identified in the SQIP when authorizing the expenditure of scenic mitigation funds.

Funds could be used to implement projects directly or through grants, contracts, or other agreements with partner organizations. TRPA could also authorize mitigation funds for projects that permanently reduce the visual magnitude of shoreland development when the project contributes to the attainment of scenic thresholds and is not otherwise required. Visible mass mitigation projects that could be funded by the in-lieu fee include, but are not limited to:

- scenic improvement projects identified in the ~~2018 update to~~ most recent version of the SQIP;
- lakefront recreation projects with scenic improvements such as replacing dilapidated structures or relocating structures (public gathering areas and waterfront public access scenic improvements);
- scenic improvement of existing rip rap and retaining walls along visible roadway cuts (e.g., recoloring of light-colored rip rap);
- permanent removal of existing shorezone and shoreland structures;
- permanent screening of roadside parking areas, roadways, and infrastructure through the planting of native vegetation and creation of vegetated berms;
- undergrounding of utility lines that are visible from the lake; and
- improving existing shoreland structures and deed restricting those parcels such that visual magnitude of existing development is permanently reduced

Corrections and Revisions to Chapter 10, "Air Quality"

Table 10-1 in the Draft EIS has been revised as follows:

Table 10-1 Ambient Air Quality Standards

Pollutant	Averaging Time	TRPA Thresholds	California [a]	Nevada [h,c]	National [b]	
					Primary [c,d]	Secondary [c,e]
Ozone	1-hour	0.08 ppm	0.09 ppm (180 µg/m³)	0.10 ppm (195 µg/m³)	[f]	Same as primary standard
	8-hour	–	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)	
Carbon monoxide (CO)	1-hour	–	20 ppm (23 mg/m³)	35 ppm (40,500 µg/m³)	35 ppm (40 mg/m³)	

Table 10-1 Ambient Air Quality Standards

Pollutant	Averaging Time	TRPA Thresholds	California [a]	Nevada [h,c]	National [b]	
					Primary [c,d]	Secondary [c,e]
	8-hour	6 ppm	6 ppm[f] (7 mg/m^3)	6 ppm[i] (7,000 µg/m^3)	9 ppm (10 mg/m^3)	Same as primary standard
Nitrogen dioxide (NO_2) [f]	Annual arithmetic mean	–	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	53 ppb (100 µg/m^3)	Same as primary standard
	1-hour	–	0.18 ppm (339 µg/m^3)	100 ppb	100 ppb (188 µg/m^3)	–
Sulfur dioxide (SO_2)	Annual arithmetic mean	–	–	0.030 ppm (80 µg/m^3)	–	–
	24-hour	–	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)		
	3-hour	–	–	0.5 ppm (1,300 µg/m^3)	–	0.5 ppm (1300 µg/m^3)
	1-hour	–	0.25 ppm (655 µg/m^3)	75 ppb	75 ppb (196 µg/m^3)	–
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3 in CA, 50 µg/m^3 in NV	20 µg/m^3	–	–	Same as primary standard
	24-hour	50 µg/m^3 in CA, 150 µg/m^3 in NV	50 µg/m^3	150 µg/m^3	150 µg/m^3	
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	–	12 µg/m^3	12.0 µg/m^3	12.0 µg/m^3	15 µg/m^3
	24-hour	35 µg/m^3	–	35 µg/m^3	35 µg/m^3	Same as primary standard
Lead [g]	Calendar quarter	–	–	–	1.5 µg/m^3	Same as primary standard
	30-day average	–	1.5 µg/m^3	–	–	–
	Rolling 3-month average	–	–	0.15 µg/m^3	0.15 µg/m^3	Same as primary standard
Hydrogen sulfide	1-hour	–	0.03 ppm (42 µg/m^3)	0.08 ppm (112 µg/m^3)	No national standards	
Sulfates	24-hour	–	25 µg/m^3	–		
Vinyl chloride [g]	24-hour	–	0.01 ppm (26 µg/m^3)	–		
Visibility-reducing particulate matter	8-hour	*Regional:* Extinction coefficient of 25 Mm^{-1} (157 km,		–		

Table 10-1 Ambient Air Quality Standards

Pollutant	Averaging Time	TRPA Thresholds	California [a]	Nevada [h,c]	National [b]	
					Primary [c,d]	Secondary [c,e]
		97 miles) 50 percent of the year, 34 Mm^{-1} (115 km, 71 miles) 90 percent of the year. *Subregional:* 50 Mm^{-1} (48 miles) 50 percent of the year, 125 Mm^{-1} (19 miles) 90 percent of the year.				

Notes: $\mu g/m^3$ = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million; TRPA = Tahoe Regional Planning Agency; Mm^{-1} = inverse mega meters; CA = California; NV = Nevada.

[a] California standards for ozone, SO_2 (1- and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when 99 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency for further clarification and current federal policies.

[c] Concentration expressed first in units in which it was issued. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[e] National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] Applicable in the Lake Tahoe Air Basin.

[g] The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[h] Lists the minimum standards of quality for ambient air.

[i] At or greater than 5,000' above mean sea level.

Sources: CARB 2016a, TRPA 2016:3-2 to 3-4, NAC

Section 10.2.4 of the Draft EIS has been revised to include the following text:

CARBON MONOXIDE DESIGNATED AREA

The Nevada portion of the LTAB is a designated maintenance area under the 1971 NAAQS for CO. In 2003, the Nevada Department of Environmental Protection adopted a CO Limited Maintenance Plan for the LTAB. In the same year, the Nevada portion of the LTAB was re-designated by EPA for the 8-hour CO standard from non-attainment to attainment (NDEP 2012). An updated Limited Maintenance Plan was submitted to EPA in 2012, and a supplement to the 2012 submittal was submitted to EPA in 2016 and adopted in 2017.

Corrections and Revisions to Chapter 12, "Noise"

The first sentence in the impact summary on page 12-13 in Chapter 12, "Noise," of the Draft EIS has been revised as follows:

Impact 12-2: Construction vibration impacts

Construction ~~activates~~ activities would occur under all alternatives. Construction activities associated with new shorezone structures, including new piers, pier modifications, marinas, and new boat ramps would generate varying levels of vibration. Pile driving would be required for pier construction/modification and marina construction, resulting in vibration levels that could potentially damage existing structures if located within 55 feet. In accordance with TRPA standard construction practices, all construction activity would take place during the day, minimizing the potential for disturbance during noise-sensitive evening and nighttime hours. However, because specific locations of pile driving activity is unknown, there is a potential that existing structures could be exposed to excessive vibration levels that could result in structural damage. This impact would be **significant**. Mitigation would require site-specific acoustical analysis for projects that require pile driving activities close to existing structures and would ensure proper precautions to protect nearby structures from damage. With mitigation, this impact would be reduced to a **less-than-significant** level.

Corrections and Revisions to Chapter 14, "Terrestrial Biological Resources (Wildlife and Vegetation)"

Mitigation Measure 14-2 has been revised as follows:

Mitigation Measure 14-2: Conduct preconstruction surveys, avoid potential construction impacts, ~~and~~ avoid potential recreation impacts to Tahoe yellow cress plants, and compensate for unavoidable loss of Tahoe yellow cress

This mitigation measure would be required for Alternatives 1, 2, 3, and 4.

To avoid potential adverse effects on TYC plants resulting from construction activities and potential increased use of beaches that support TYC, the following actions shall be implemented:

(A) During project-specific planning, design, and environmental review of new shorezone facilities, avoid siting projects within areas known to support TYC occurrences, to the extent feasible. Project proponents shall follow the project review guidelines in Appendix H of the 2015 TYC Conservation Strategy (Stanton et al. 2015).

(B) For any projects that could affect TYC, a qualified biologist familiar with the vegetation of the Tahoe Basin and identification of TYC shall conduct a focused preconstruction survey for TYC in all beach habitat where construction-related disturbance could occur in the vicinity of TYC populations during that year. Surveys shall be conducted between June 15 and September 30, when TYC is clearly identifiable, and shall follow the survey protocol provided in Appendix D and project review guidelines in Appendix H of the 2015 TYC Conservation Strategy. ~~*Survey Protocols for Tahoe Yellow Cress Annual Surveys* (Stanton and Pavlik 2009).~~ Surveys shall be completed for each year that construction activities could occur in beach habitat. If no TYC stems are found during the survey, the results of the survey shall be documented in a letter report to TRPA and the TYC AMWG that shall become part of the project environmental record, and no further actions shall be required.

(C) If TYC stems are documented during the survey in areas potentially disturbed by construction activities, the stems shall be clearly identified in the field and protected from impacts associated with construction activities. Protective measures shall include installing high-visibility fencing around known stem locations during construction. No construction-related activities shall be allowed in areas fenced for avoidance, and construction personnel shall be briefed about the presence of the stems and the need to avoid effects on the stems.

(D) To protect TYC plants from potential long-term increased beach use and disturbance as an indirect result of increased recreation activity in the shorezone, protective fencing and educational signage about the need to avoid these areas shall be installed around all TYC clusters. In addition to beaches occupied by TYC where new shorezone facilities would be constructed and operated, other beach areas that support TYC that are likely to receive increased recreation uses as a result of the projects shall be identified and subject to these measures.

(E) Long-term fencing and signage will be periodically monitored and maintained, as necessary, to ensure that they remain effective and in good working condition. Also, because locations and concentrations of TYC could shift over time, the locations and configurations of fencing relative to TYC distribution shall be evaluated periodically. If necessary, fencing shall be moved or added in response to changes in TYC distribution to ensure that TYC plants are protected over time. The locations of TYC plants and shifts in their locations relative to fencing can be determined by surveys as part of the ongoing AMWG TYC monitoring program. The installation and maintenance of long-term protective fencing and signage will be designed to not interfere with necessary operations and maintenance activities at facilities.

(F) If complete avoidance of TYC is not feasible, then adaptive management or compensatory actions for any significant project-related loss of TYC shall be identified, designed, and implemented in coordination with the TYC AMWG and TRPA. Potential compensatory actions could include or require seed collection, nursery/greenhouse propagation and outplanting of container-grown TYC, or translocation of naturally occurring TYC either on-site or at a suitable off-site location, as discussed in the 2015 TYC Conservation Strategy.

(G) If a project on the California side of the Lake Tahoe shorezone may result in the loss of TYC, consultation with California Department of Fish and Wildlife would be required to ensure compliance with the California Endangered Species Act, and obtaining an incidental take permit pursuant to California Fish and Game Code Section 2081 may be required prior to project implementation. If a project on the Nevada side of Lake Tahoe shorezone may result in the loss of TYC, a special permit from the Nevada State Forester Firewarden would be required to ensure compliance with the federal Endangered Species Act.

Corrections and Revisions to Chapter 15, "Public Health and Safety"

To maintain consistency with the revised Mitigation Measure 8-1a, Mitigation Measure 15-1a has been revised as follows:

Mitigation Measure 15-1a: Maintain nonmotorized navigation within the no-wake zone

This mitigation measure would be required for public piers in Alternatives 1, 3, and 4 and multiple-use and public piers in Alternative 2.

TRPA will implement Mitigation Measures 8-1a and 8-1c as described in Chapter 8, "Recreation." These mitigation measures require that TRPA revise the pier design standards, such that the length of new public piers shall be limited to within the 600-foot no-wake zone and provide at least 10 feet between the end of the pier and the no-wake zone boundary, ~~for piers that extend 600 feet or more from the highwater elevation~~ to provide lateral nonmotorized recreation access within the 600-foot no-

wake zone and provide for a 200-foot buffer between motorized watercraft in motion and nonmotorized recreationists in areas outside of no-wake zones.

Page 15-15 of the Draft EIS is revised to include the following text:

EMERGENCY RESPONSE

U.S. Coast Guard

The U.S. Coast Guard is the overall search and rescue lead on Lake Tahoe. The marine units described below report to the U.S. Coast Guard Station Lake Tahoe, located at 2500 Lake Forest Road, when on patrol. The U.S. Coast Guard also has resources from Sacramento and the Bay Area to respond to any and all emergencies and large environmental spills. The U.S. Coast Guard is operational year-round and has two 29-foot patrol boats that regularly conduct patrols and respond to emergencies. They operate 24 hours per day, seven days a week. The mission of the Tahoe station is search and rescue only. All environmental spill responses would be coordinated through the U.S. Coast Guard's National Response Center (Bieber, pers. comm., 2018).

U.S. Navy

The U.S. Navy, located at Naval Air Station Fallon in Fallon, NV, provides additional air search and rescue capabilities. The U.S. Navy has three SH-6-0-S rescue helicopters, whose primary function is military search and rescue. Their secondary function is civilian search and rescue. While the U.S. Navy does perform search and rescue in the Lake Tahoe region, the majority of incidents are mountain rescue operations. They are rarely involved with incidents in Lake Tahoe (Upham, pers. comm., 2018).

Local Utility Companies and Marine Contractors

Sewage collection lines can be located below water level. In the event of an accident, spill, or other emergency involving sewer collection lines, marine contractors are often called on to assist the local utility because they can promptly mobilize and are equipped to intervene.

Corrections and Revisions to Chapter 16, "Cultural Resources"

Mitigation Measure 16-2 is revised to clarify requirements for historic evaluations, as follows:

Mitigation 16-1: Avoid potential effects on historic resources

Consistent with TRPA Policy C-1.1, the following mitigation measure shall be required for Alternatives 1, 2, 3, and 4.

Once the exact location of the new piers, boat ramps, and any other land-based development has been determined and before commencement of earth-disturbing activities for construction, applicants shall identify ~~and evaluate~~ all historic-age (over 50~~45~~ years in age) buildings and structures that are proposed to be removed and/or modified as part of a historic determination application with TRPA or applicable local jurisdiction. ~~This may include~~ TRPA may require the preparation of an historic resource assessment and evaluation of resources to determine their eligibility for recognition under state, federal, or local criteria. If required, the assessment shall be prepared by an architectural historian, or historical architect meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualification Standards. If resources are eligible for inclusion in the NRHP, CRHR, or a local register are identified, an assessment of impacts on these resources shall be included in the report, as well as detailed mitigation measures to avoid impacts.

Mitigation Measure 16-2 has been revised to reflect correct Code references and provide additional clarity on the requirements for archeological surveys, as follows:

Mitigation 16-2: Avoid potential effects on archaeological resources

Consistent with TRPA Policy C-1.1, TRPA Code Sections 33.3.7, "Discovery of Historic Resources,"~~,~~ ~~33.4.1., "Subsurface Investigations and Reports," and 61.1.6 J "Historic Resource Protection"~~ and Chapter 67, "Historic Resource Protection", the following mitigation measure would be required for Alternatives 1, 2, 3, and 4.

Once the exact location of the new piers, boat ramps, dredging, or any other ground-disturbing project ~~development~~ (excluding buoys and the repair or replacement of existing structures) has been determined and before commencement of earth-disturbing activities for construction, applicants shall retain a qualified archaeologist to conduct archaeological surveys of the portion of the site that is subject to ground disturbance, as part of a historic determination application with TRPA or applicable local jurisdiction. To ensure that new or expanded facilities and uses do not adversely affect potentially buried archaeological deposits, an underwater archaeological survey shall also be conducted to identify, evaluate, and protect significant submerged cultural resources prior to activities that would disturb the lakebed. TRPA may waive the requirement for an archeological survey after consultation with the Washoe Tribe of Nevada and California, only if the Washoe Tribe determines that, due to the specific location and characteristics of the proposed project, the project would not be likely to affect archeological resources and cultural and ethnic values.

The applicant shall follow recommendations identified in the survey, which may include activities such as subsurface testing, designing, and implementing a Worker Environmental Awareness Program, construction monitoring by a qualified archaeologist, avoidance of sites, or preservation in place.

All projects shall include the following requirements as a condition of approval: If evidence of any prehistoric or historic-era subsurface archaeological features or deposits are discovered during construction-related earth-moving activities (e.g., ceramic shard, trash scatters, lithic scatters), all ground-disturbing activity in the area of the discovery shall be halted and the appropriate jurisdiction and TRPA shall be notified immediately. A qualified archaeologist shall be retained to assess the significance of the find. If the find is a prehistoric archeological site, the appropriate Native American group shall be notified. If the archaeologist determines that the find does not meet NRHP, NVSRHP, or CRHR standards of significance, as applicable, for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, a data recovery plan shall be prepared. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with the project applicant to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics, and other factors, follow accepted professional standards in recording any find including submittal of the recordation forms required by the applicable SHPO and location information to the appropriate information center.

Corrections and Revisions to Appendix C, "Emission Calculations"

The page titled, "Projections of Recreational Boat Emissions," on page 3 of Appendix C of the Draft EIS is revised as follows:

Projections of Recreational Boat Emissions

Daily Emissions Inventory Projections for Recreational Boats in the Lake Tahoe Air Basin (without implementation of the Shoreline Plan)

	Peak Summer Day (ton/day)					Average Annual Day (ton/day)				
Calendar Year	**NOx**	**ROG**	**CO**	**PM10**	**PM2.5**	**NOx**	**ROG**	**CO**	**PM10**	**PM2.5**
2017	0.161	0.688	2.768	0.045	0.034	0.115	0.490	1.977	0.032	0.024
2035	0.120	0.271	2.436	0.019	0.014	0.086	0.193	1.740	0.013	0.010

Source: California Air Resources Board. 2017. CEPAM: 2016 SIP - Standard Emission Tool, Emission Projections By Summary Category, Base Year: 2012. Available: https://www.arb.ca.gov/app/emsinv/fcemssumcat/fcemssumcat2016.php. Accessed January 25, 2018. Web page last updated February 15, 2017.

Notes

1 This emissions inventory only accounts for boats registered in the California side of the Lake Tahoe Air Basin. Emission projections for future years take into account the projected increase in boat ownership in California, the turnover in the fleet of recreational boats over time, and the more stringent emissions standards to which new model-year recreational boats will be subject over time.

2 These emisson projections do not account for boats registered in Nevada or other places outside of California.

Daily Emissions Inventory Projections for Recreational Boats in the Lake Tahoe Air Basin (without implementation of the Shoreline Plan)

	Peak Summer Day (lb/day)				
Calendar Year	**NOx**	**ROG**	**CO**	**PM10**	**PM2.5**
2017	322	1,376	5,536	90	68
2035	240	542	4,872	38	28

Source: mass conversion calculation

	value	**units**	**source**
mass conversion rate	2,000	lb/ton	wksht: Conv Rts
time conversion rate	365	days/year	wksht: Conv Rts

Annual Emissions Inventory Projections for Recreational Boats in the Lake Tahoe Air Basin

	Annual Emissions (ton/year)				
Calendar Year	**NOx**	**ROG**	**CO**	**PM10**	**PM2.5**
2017	42.0	178.9	721.6	11.7	8.8
2035	31.4	70.4	635.1	4.7	3.7

Source: calculation using time conversion rate

Growth in Boating Activity under the Shoreline Plan Alternatives (Baseline to 2040)

	Peak Day	**Annual**

	(summer)	
Baseline + Alternative 1	12.6%	15.9%
Baseline + Alternative 2	43.3%	51.7%
Baseline + Alternative 3	3.7%	3.7%
Baseline + Alternative 4	0.0%	0.0%

Source: wksht: WC Activity Levels

Adjusted Emissions Inventory Projections for Recreational Boats in the Lake Tahoe Air Basin, 2035

	Daily, Summer (~~ton~~lb/day)						Annual Emissions (ton/year)				
Buildout Scenario	**NOx**	**ROG**	**CO**	**PM10**	**PM2.5**	**CO2e**	**NOx**	**ROG**	**CO**	**PM10**	**PM2.5**
Alternative 1 in 2035	270	610	5,485	43	32		35.3	79.3	715.0	5.3	4.1
Alternative 2 in 2035	344	777	6,980	54	40		45.0	100.9	909.9	6.8	5.2
Alternative 3 in 2035	249	562	5,051	39	29		32.5	73.0	658.5	4.9	3.8
Alternative 4 in 2035	240	542	4,872	38	28		31.4	70.4	635.1	4.7	3.7

Source: These values are based on calculations that ~~incorporate~~ incorporate the additional growth in boating activity under the Shoreline Plan Alternatives (Baseline to 2040).

Change from Baseline to 2035 with Growth in Boating Activity Under Shoreline Plan Alternatives, California Side Only

	Summer Peak Day (lb/day)						Annual Emissions (ton/year)				
Buildout Scenario	**NOx**	**ROG**	**CO**	**PM10**	**PM2.5**	**CO2e**	**NOx**	**ROG**	**CO**	**PM10**	**PM2.5**
Baseline + Alternative 1	-52	-766	-51	-47	-36		-6.6	-99.5	-6.6	-6.3	-4.7
Baseline + Alternative 2	22	-599	1,444	-36	-28		3.0	-77.9	188.3	-4.9	-3.5
Baseline + Alternative 3	-73	-814	-485	-51	-39		-9.4	-105.8	-63.1	-6.8	-5.0
Baseline + Alternative 4	-82	-834	-664	-52	-40		-10.6	-108.4	-86.5	-6.9	-5.1

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