8 RECREATION

8.1 INTRODUCTION

This chapter includes a discussion of existing recreation resources, a summary of applicable recreation regulations, and an analysis of potential impacts to recreation that could result from implementation of the Shoreline Plan. The primary issues raised during scoping that pertain to recreation include:

- need for transportation to public beaches to support changes in recreation patterns;
- maintaining public access along the shoreline around shorezone structures and within the public trust easement;
- concern about the effects on nonmotorized and motorized watercraft recreation around buoys and piers;
- enforcement of, and recreation user education about, no-wake zone areas and water safety;
- capacity analysis of level of infrastructure and boat use on the lake;
- concern for increased amounts of motorized boats on the lake; and
- fair-share distribution of access to the lake.

The Shoreline Plan does not propose new development (e.g., residential development) that would generate new demand for recreation facilities; thus, demand for recreation is not discussed further in this chapter.

The Shoreline Plan would allow for additional recreation capacity for motorized watercraft and anglers. The effects of this additional recreation capacity are assessed throughout this EIS. This chapter focuses on the effects of increased recreation capacity on access to the shoreline, quality of recreation experiences, recreation user conflicts, and fair-share distribution of recreation facilities.

8.2 REGULATORY SETTING

8.2.1 Federal

U.S. FOREST SERVICE LAKE TAHOE BASIN MANAGEMENT UNIT

National Forest System lands overseen by the U.S. Forest Service (USFS) are managed on a multiple-use, sustained yield basis for production of forage, wildlife, wood, fish, water, and outdoor recreation. The mission statement for the USFS Lake Tahoe Basin Management Unit (LTBMU) states, “The Forest Service mission at Lake Tahoe is to manage, protect, and enhance the environment of this national treasure for the benefit of the people.” Wilderness management and protection of forest areas containing historic, scenic, geologic, ecologic, or other special qualities, are inherent in USFS management policies. A revised Land Management Plan (also known as the Forest Plan) for the LTBMU was completed in 2015. This plan replaces the Forest Plan that was adopted in 1988. The Land Management Plan guides decisions on recreational issues. Unique to this plan is the emphasis on watershed, wildlife and fisheries restoration, and outdoor recreation with a de-emphasis on grazing and timber production.

8.2.2 Tahoe Regional Planning Agency

THRESHOLDS

TRPA has established two threshold standards for recreation, which represent minimum standards of environmental quality targets to be achieved in the region. The recreation thresholds are in the form of policy statements rather than numeric standards. The two recreation threshold standards are as follows:

- **Quality Experience and Additional Access.** It shall be the policy of the TRPA Governing Body in development of the Regional Plan to preserve and enhance the high-quality recreational experience including preservation of high-quality undeveloped shorezone and other natural areas. In developing the Regional Plan, the staff and Governing Body shall consider provisions for additional access, where lawful and feasible, to the shorezone and high-quality undeveloped areas for low density recreational uses.

- **Fair Share of Resource Capacity.** It shall be the policy of the TRPA Governing Body in development of the Regional Plan to establish and ensure a fair share of the total Tahoe Basin capacity for outdoor recreation is available to the general public.

The Quality Experience and Additional Access Threshold consists of two parts: (1) preservation and enhancement of a high-quality recreational experience and opportunities and (2) the provision of additional access to high-quality lands for recreation, including lake access. The status of this threshold standard is evaluated by considering the quality of the experience of recreation users and by considering the availability of public access to the lake and other natural features. The quality of recreation experiences was evaluated for the 2015 Threshold Evaluation through recreation user surveys conducted by City of South Lake Tahoe, El Dorado County, Tahoe City Public Utility District, Lake Tahoe Visitors Authority, and North Lake Tahoe Resort Association. Such surveys assessed the overall satisfaction of recreation users and compare the importance of identified recreation attributes, such as condition of recreation facilities, with the experience that the recreationists perceive. The evaluation criteria for the second part of the threshold standard relies on assessing the extent of public land acquired, and the availability of additional amenities that provide public access for low density recreational uses, such as trails and trailheads.

The Fair Share of Resource Capacity Threshold is intended to ensure a fair share of the Region's total capacity for outdoor recreation is available to the general public. The attainment of this threshold standard is based on three indicators: (1) cumulative accounts of persons at one time (PAOT) allocations; (2) facility development for recreation projects that do not require PAOT assignments; and (3) land acquisition of new public lands that support recreation purposes.

Based on the most recent Threshold Evaluation Report completed in 2016, both recreation thresholds are in attainment (TRPA 2016a:11-3 and 11-11).

GOALS AND POLICIES

The Regional Plan contains specific goals and policies to achieve and maintain thresholds. Policies related to recreation on Lake Tahoe and in the Shorezone are addressed in three broad categories: dispersed recreation, developed recreation, and urban recreation. Dispersed recreation includes such activities as hiking, jogging, primitive camping, mountain biking, nature study, fishing, cross country skiing, rafting/kayaking, and swimming. All these activities require a quality resource base and some degree of solitude. Developed recreation includes marina and boat launch facilities, ski areas, campgrounds, and beaches. Urban recreation includes facilities located near urban areas, such as sports facilities, day-use areas, and recreation centers. Goals and policies for all types of recreation generally pertain to providing opportunities and sufficient capacity for high-quality recreation opportunities in a manner consistent with resource protection and overall regional capacity. The Regional Plan Goals and Policies also address public access to the shorezone. Policies relevant to recreation and shorezone access include (TRPA 2012:5-1–5-9):

GOAL SZ-1: Provide for the appropriate shorezone uses of Lake Tahoe, Cascade Lake, and Fallen Leaf Lake while preserving their natural and aesthetic qualities.

- **Policy SZ-1.13:** Allow public access to the shorezone where lawful and feasible on public lands. There is considerable demand for public use of the Lake Tahoe shoreline. Increased opportunities to use the shoreline shall be provided when consistent with the tolerance levels of the shorezone. Improved access to the shorezone should be provided through public lands from expanded public ownership. Trails and support facilities in the backshore should be consistent with the goals and policies of the Recreation Element.

GOAL R-2: Provide high-quality recreational opportunities.

- **Policy R-2.3.** Nearshore/foreshore structures should be appropriately located to minimize impacts to recreational boating and top line fishing. Excellent recreational fishing is possible in the nearshore of Lake Tahoe. Fish concentrate in this zone due to favorable habitat conditions. To the extent feasible, buoys and other nearshore structures in areas of prime fish habitats should be located to provide for safe navigation through this zone.

GOAL R-3: Provide a fair share of the total basin capacity for outdoor recreation.

- **Policy R-3.3.** Provisions shall be made for additional developed outdoor recreation facilities capable of accommodating 6,114 PAOT in overnight facilities and 6,761 PAOT in summer day use facilities and 12,400 PAOT in winter day-use facilities.

GOAL R-4: Provide for the appropriate type, location, and rate of development of outdoor recreational uses.

- **Policy R-4.3.** Public boat launching facilities shall be expanded, where appropriate, and when consistent with environmental constraints. There is a need for additional boat launching capacity on Lake Tahoe. This policy would encourage expansion of existing facilities or conversion of private facilities to allow public use. Incentives for redevelopment or conversion of existing facilities to provide expansion of public use will be provided in areas where these opportunities exist.

- **Policy R-4.4.** Private marinas shall be encouraged to provide public boat launching facilities. This policy would increase boat access to Lake Tahoe by encouraging marina facilities to provide public launching facilities, where practical, and provide incentives to those facilities which improve or provide such services.

Persons at One Time

The Regional Plan uses the concept of PAOTs as a measure of recreation capacity. PAOT describes the number of people that a recreation use area can accommodate at a given time. Allocations of PAOTs are used to both promote and control recreation facility development. Although certain recreation facilities have a design capacity for a given number of people at a time (e.g., developed campgrounds), PAOTs are not a management tool and do not indicate the overall use of a site. PAOTs are intended to ensure that a "fair share" of the region's remaining resource capacity (e.g., water and sewer services) is available for outdoor recreation areas and is allocated to projects that would result in an increase in the carrying capacity of recreation sites. If a recreation project would result in additional vehicle trips at a rate that would trigger a traffic analysis, PAOTs would be needed in an amount commensurate with the intensity of new development. TRPA has identified PAOT targets for outdoor recreation (see Table 8-1).

The categories of PAOTs utilized under this system include winter day-use PAOTs, summer day-use PAOTs, and summer overnight PAOTs. Winter day-use PAOTs are necessary for winter recreation facilities such as ski areas or snowmobile courses. Summer day-use PAOTs are necessary for summer day-use recreation facilities such as beaches or trailhead parking. Summer overnight PAOTs are necessary for a new campground or existing campground expansion. Dispersed recreation does not require the allocation of

PAOTs unless the dispersed activity is associated with a facility that requires them (e.g., a kayak rental concession at a developed beach).

Table 8-1 PAOT Allocations in the Tahoe Basin

PAOT Categories	Regional Plan Allocations	Assigned as of 2015	PAOTs Remaining	Percent of PAOTs Remaining
Summer Day Use[1]	6,761	1,722	5,039	74.5
Winter Day Use[2]	12,400	5,267	7,133	57.5
Summer Overnight[3]	6,114	394	5,720	93.6
Total	**25,275**	**7,383**	**17,892**	**70.8**

[1] Summer day use PAOTs apply to all marinas, boat launching facilities, rural sports, golf courses, visitor information centers, off-road vehicle courses, and tour boat operations. Per TRPA Code Subsection 50.9.3.C.2, 2,000 PAOTs are reserved for marina and boat launching facility expansion pursuant to a master plan. PAOTs apply when a federal agency or State department of parks and recreation (or their permittees) operate a recreation center, participant sports facility, sport assembly facility, or beach recreation or day use area.

[2] For downhill ski areas pursuant to a master plan pursuant to TRPA Code Subsection 50.9.3.c.3.

[3] These PAOTs apply to all developed campgrounds, group facilities, and RV parks.

Source: TRPA 2016a:11-14

CODE OF ORDINANCES

The TRPA Code consists of ordinances needed to implement the Goals and Policies. Chapter 50, "Allocation of Development," of the TRPA Code includes a section on the regulation of additional recreational facilities (Section 50.8). TRPA regulates the rate and distribution of expanding recreational uses in the Tahoe Region through the allocation of PAOTs.

Chapters 11 and 12 of the Code, plan area statements (PAS) and plan area maps and community plans, requires that each PAS and community plan specify the permissible amount of additional recreational capacity, subject to the PAOT system. Any additional capacity that is beyond that specified in the PAS or community plan can be drawn from the reserved pool of PAOTs.

8.2.3 California

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 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.

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).

CALIFORNIA TAHOE CONSERVANCY

The California Tahoe Conservancy (Conservancy) was created in 1984 to restore and sustain a balance between the natural and human environments for public and private uses at Lake Tahoe. The Conservancy provides grants to local governments and nonprofit organizations for erosion control, public recreation and access, land acquisition, and other projects, and implements a mandate that, among other things, seeks to increase public access to the region's natural recreational opportunities. In the past 20 years, the Conservancy has acquired and developed many lake access parcels, including heavily used lakefront parks in Kings Beach and Carnelian Bay. Acquisitions in Tahoe Vista resulted in removal of dilapidated structures and site restoration for more passive lake access. The Conservancy also owns shoreline property operated for other recreational purposes by State Parks and the North Tahoe Public Utility District, and numerous other properties available for dispersed and developed recreational uses.

8.2.4 Nevada

NEVADA STATE PARKS

The Nevada State Parks manages the Lake Tahoe–Nevada State Park. The Lake Tahoe–Nevada State Park Master Development Plan with Resource Analysis (Lake Tahoe–Nevada State Park Plan) describes the basic principles for the use, preservation, and operation of Lake Tahoe–Nevada State Park. The goal of the plan is to provide a long-range management and development strategy based on current visitation, needs and conditions, as well as projections for future use and needs. The plan includes a description of user conflicts and visitor impacts for Sand Harbor Management Area, Cave Rock Management Area, and the State Route 28 Management Area.

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

NEVADA DEPARTMENT OF WILDLIFE

The Nevada Department of Wildlife (NDOW) is responsible for managing the fisheries, wildlife, and habitat resources on the Nevada side of Lake Tahoe. In addition, NDOW is also responsible for boating and safety on navigable waters in the state. NDOW protects boaters from navigational obstacles and protects the recreational angler's boating access along the shoreline of Lake Tahoe. NDOW is a reviewing and commenting agency but has no regulatory authority related to permits for construction in hazards to navigation within the waters of Lake Tahoe.

8.3 AFFECTED ENVIRONMENT

The recreation opportunities in the Lake Tahoe region are abundant due to the diverse terrain and topography. Activities are generally associated with the lake's open water (e.g., swimming, boating, personal watercraft use, and fishing), the shoreline (e.g., sunbathing, camping, bicycling, and sightseeing), and the mountains surrounding the lake (e.g., hiking, mountain biking, backpacking, snowboarding, and skiing). The Lake Tahoe Region is home to almost 55,000 full-time residents and is a recreational destination with four to six million visitors each year (TRPA 2017a), including many who live in nearby metropolitan centers within a few hours' travel time.

The recreational activities in the region are a major draw. Tourism is an important part of the local economy and a high-quality recreation experience coupled with outstanding recreation opportunities is important to maintaining tourism.

The peak period for recreational use of Lake Tahoe occurs during the summer months (i.e., June through August) with some lake-based recreational use in the shoulder seasons (i.e., spring and fall) and very little during the winter. The Shoreline Plan EIS focuses on recreation uses that occur within the shorezone and on the lake. Recreation uses that occur upland from the shorezone are not discussed further.

8.3.1 Land Ownership

Currently, approximately 55 percent of the shoreline is in public ownership and approximately 45 percent is in private ownership (see Table 8-2; TRPA 2018). Public and private ownership of land along the shore of Lake Tahoe is shown on Exhibit 4-6 in Chapter 4, "Land Use." A summary of the public lands by public agency owner type is provided below.

Table 8-2 Percent of Shoreline in Each Land Ownership Category

Land Ownership	Percentage of Shoreline
Federal	27
State	25
Local	3
Private	45
Total	**100**

Source: data provided by TRPA in 2018

FEDERAL

The U.S. Forest Service (USFS) owns nearly 27 percent of the shoreline of Lake Tahoe (see Table 8-2), with the majority located along the east shore between Sand Harbor and the community of Glenbrook. Pockets of shoreline owned by USFS are also located at William Kent Beach and Kaspian Day Use Area, both located south of Tahoe City. Meeks Bay Resort, beach, and campground are located on USFS land, but are operated by the Washoe Tribe of Nevada and California. USFS-owned shoreline in the south shore area include Baldwin Beach, Taylor Creek Beach, Kiva Picnic Area, and Tallac Historic Site. The Camp Richardson Resort and Marina operates under a special-use permit with USFS. Similarly, Zephyr Cove Resort in Nevada is also operated under a special-use permit with USFS.

CALIFORNIA

California State Parks (State Parks) owns approximately 14 percent of the shoreline on Lake Tahoe (TRPA 2015). These areas include Kings Beach SRA, Tahoe City SRA, Ed Z'berg Sugar Pine Point State Park, D.L. Bliss State Park, and Emerald Bay State Park. The Conservancy has contributed to the access of and enhanced beachfront amenities at over 1.75 miles of shoreline for public enjoyment and boat launching (Conservancy 2018). Carnelian Beach West, Moon Dunes Beach, Patton Landing, and Sandy Beach are among the Conservancy's shoreline properties.

NEVADA

The State of Nevada owns approximately six percent of Lake Tahoe shoreline, which includes Lake Tahoe Nevada State Park and Sand Harbor.

LOCAL

Local agencies that own land along the shoreline of Lake Tahoe include the City of South Lake Tahoe, Douglas County, El Dorado County, Incline Village General Improvement District, North Tahoe Public Utility District, Placer County, and Tahoe City Public Utility District. Local agencies own approximately three percent of the shoreline of Lake Tahoe. Some of the locally owned public access, beaches and other amenities around the lake include Lakeview Commons and Boat Ramp and Regan Beach in the City of South Lake Tahoe, Commons Beach and Skylandia Park in Tahoe City, and Secline Beach in Kings Beach.

8.3.2 Recreation Facilities

PUBLIC BEACHES AND ACCESS POINTS

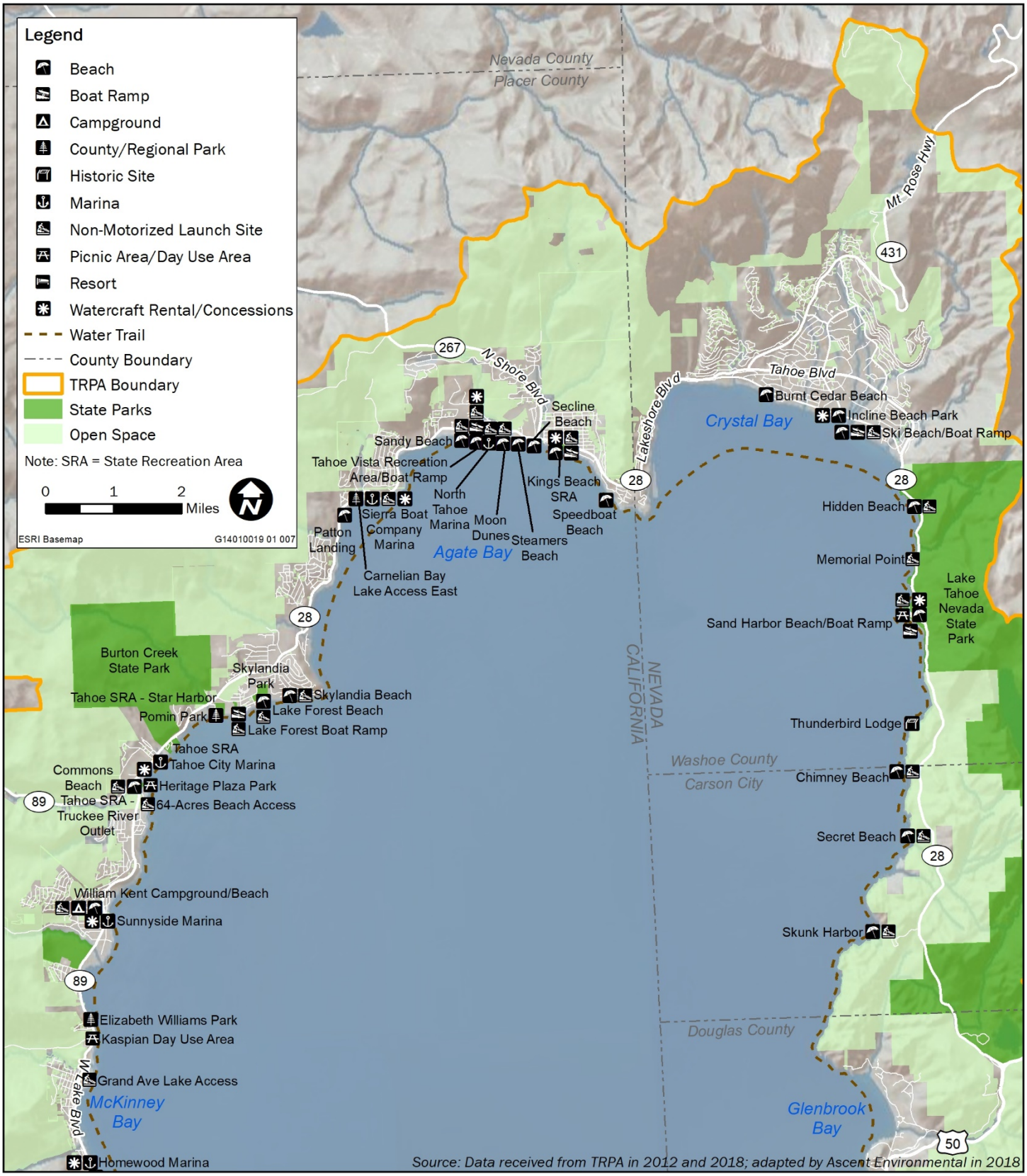
Over 40 public beaches and access points are located around Lake Tahoe (see Exhibits 8-1 and 8-2). The highest concentration of these public areas are in Tahoe City, Tahoe Vista, Kings Beach, and the south shore between Emerald Bay and the state line. Public beaches on the west shore and east shore are generally located in Lake Tahoe Nevada State Park, U.S. Forest Service lands, and California state parks. During peak summer months, Lake Tahoe's public beaches and access points are popular places for a variety of recreation activities: swimming, sunbathing, relaxing, barbecuing, paddle boarding, kayaking, jet skiing, and boating. Conflicts can arise among differing recreation user groups, especially when competing for the same resource. Because of the sound generated by motorized watercraft and their ability to produce waves when traveling at speeds greater than 5 miles per hour, the presence of motorized watercraft near shoreline areas with many people swimming, using nonmotorized watercraft, or playing in the water creates the potential for conflicts among these recreationists. The quality of recreation experiences at public beaches could be influenced by the noise generated by motorized watercraft, boat wake, or number of boats in the viewshed of the beach. Additionally, the effects on recreation experience of people seeking a solitary beach experience away from the more developed portions of the shoreline may be more greatly affected by increased numbers of motorized boaters.

In locations where public and private property exist in close proximity, access conflicts often arise. Public recreation can result in unauthorized trespass, litter, and safety concerns. Conflicts also arise when private owners restrict access lakeward of the high-water elevation with structures that do not allow for lateral passage, such as fences or piers.

PIERS

The shorezone of Lake Tahoe is dotted by a total of 762 piers, nearly all of which are individual private piers or private multiple-use piers (see Table 2-1 in Chapter 2, "Project Description"). Piers provide opportunities for fishing, viewing and to otherwise experience the lake in a way that does not require getting in the water or using watercraft. When the water is high enough, piers can also serve as a place for swimmers to jump or dive in the lake.

In some sections of Lake Tahoe's shoreline, the density and/or length of piers is such that very little, if any, obstruction to access exists (e.g., east shore, Crystal Point, Emerald Bay). However, in sections with pier densities in excess of one pier every 100 feet (e.g., Rubicon/Meeks Bay, Cedar Flat, portions of Carnelian Bay and Agate Bay) access is significantly restricted. The areas with high densities of piers are areas with a high concentration of private landowners along the shoreline. Where long piers or other shorezone structures, such as piers or buoy fields, are located, nonmotorized watercraft users may be required to travel outside of the 600-foot no-wake zone as they travel laterally around these structures. Outside the no-wake zone, motorized watercraft are allowed to travel at higher speeds. The presence of slower moving nonmotorized watercraft in these areas creates the potential for safety hazards because they might not be highly visible to motorized watercraft or they may be knocked over by large wake from boats.

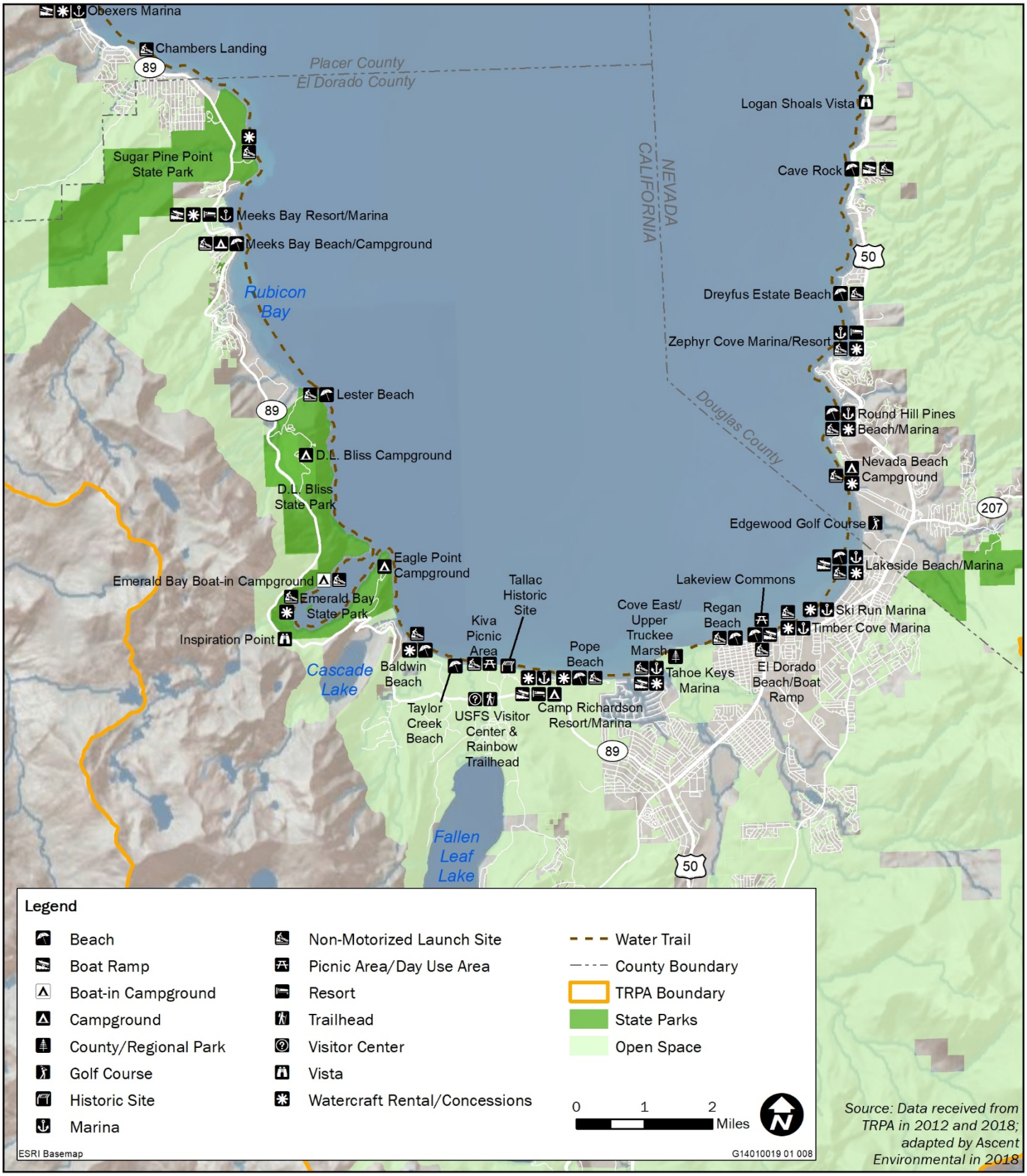


Source: Data received from TRPA in 2012 and 2018; adapted by Ascent Environmental in 2018

TAHOE REGIONAL PLANNING AGENCY

Exhibit 8-1 **Recreation Facilities and Public Access Points – North Lake Tahoe**

SHORELINEPLAN
Enhancing Recreation & Protecting Lake Tahoe's 72 Miles of Shoreline



TAHOE REGIONAL PLANNING AGENCY

Exhibit 8-2 **Recreation Facilities and Public Access Points – South Lake Tahoe**

SHORELINEPLAN
Enhancing Recreation & Protecting Lake Tahoe's 72 Miles of Shoreline

LAKE TAHOE WATER TRAIL

Lake Tahoe has more than 72 miles of shoreline with approximately 40 public nonmotorized watercraft launch/landing sites (see Exhibits 8-1 and 8-2; Lake Tahoe Water Trail 2018). The Lake Tahoe Water trail follows the 72-mile route along the shoreline of the lake with opportunities for recreation users to plan day trips between the different public launch and landing points or to plan a multi-day trip. Signs are installed at several launching sites that provide water safety, maps, and other educational information. These locations include Tahoe Vista Recreation Area, Waterman's Landing, Sand Harbor, and Lake Forest Boat Ramp.

MARINAS AND BOAT LAUNCHING FACILITIES

Lake Tahoe has 14 public marinas and 22 public or quasi-public motorized watercraft launching facilities located around the lake (see Exhibits 8-1 and 8-2 and Table 2-1 in Chapter 2, "Project Description"). The public can gain access to the shorezone and to the lake itself through boat launching and marina/mooring opportunities. Marinas also offer opportunities for the public to rent motorized and nonmotorized watercraft. These facilities are sensitive to changes in lake levels, significantly reducing their ability to meet public needs during low water conditions when many ramps and slips are left dry.

8.3.3 Recreation Usage

NONMOTORIZED WATERCRAFT

The types of nonmotorized watercraft typically used on the lake include kayaks, canoes, stand up paddleboards, and dinghies that do not contain motors. Nonmotorized watercraft can be launched by hand from many locations around the lake and can be stored on beaches or in upland areas when not in use. This decentralized use pattern makes it extremely difficult to estimate levels of nonmotorized boat use. However, nonmotorized boating is clearly very popular, with nonmotorized watercraft outnumbering motorized watercraft in many areas. Anecdotal observations indicate that the use of nonmotorized watercraft, and stand-up paddle boards, in particular, has increased over the last decade. Nonmotorized watercraft use appears to be highest near public beaches and near undeveloped shoreline with easy public access, such as along state parks. Nonmotorized watercraft typically, though not always, travel in closer proximity to the shore than motorized watercraft.

MOTORIZED WATERCRAFT

Motorized boat use on Lake Tahoe includes a wide variety of watercraft including pleasure craft with outboard, inboard, and stern drive motors; personal watercraft, such as jet skis; and sailboats with auxiliary engines. Based on a review of boat registration data and boat inspections conducted in 2015 (the most recent year for which data is available), an estimated 13,617 separate motorized watercraft operated on Lake Tahoe during the boating season (TRPA 2016b). Under baseline conditions, there are an estimated 5,899 peak day boat trips and approximately 234,102 annual boat trips (see Table 2-3 in Chapter 2, "Project Description").

Motorized boats on Lake Tahoe are operated as either day-use boats, boats moored on Lake Tahoe, or rental concessions:

- **Day-use boats** are boats that are launched and removed from the lake on the same day. Day-use boats are launched at a boat ramp or marina. Based on boater surveys conducted during AIS inspections in 2015, between 50 and 60 percent of all boats that operated on Lake Tahoe at any point during the year were day-use boats (TRPA 2016c).

- **Boats moored on Lake Tahoe** are those boats that are stored for multiple days on a mooring (i.e., a buoy, slip, or boat lift) on Lake Tahoe. Boats moored on Lake Tahoe are typically launched in the spring or early summer at a marina or boat ramp, then stored on a seasonal mooring during some or all of the boating

season. Based on 2015 boat user surveys, between 40 and 50 percent of the boats that operated on Lake Tahoe at any point during the year were moored on Lake Tahoe (TRPA 2016c).

- **Boat rentals** are boats that are rented for short-term use (e.g., hourly or daily rentals). Rental boats are owned by private parties and stored at marinas or other facilities around Lake Tahoe. They include boats that are rented and operated by private parties, as well as charter boats. Motorized boat rentals comprise approximately two percent of the motorized boats on Lake Tahoe. However, they account for a larger proportion of the boats in use at any time because rental boats tend to be in use more often than personal boats. An estimated 463 motorized boats were available for rent at Lake Tahoe (TRPA 2017b).

The number of shoreline structures (boat ramps and associated parking, buoys, boat lifts, and slips) limits the total capacity for day-use and moored boats on Lake Tahoe.

8.4 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

8.4.1 Methods and Assumptions

The following analysis assesses the environmental effects of each alternative with respect to the existing recreation uses and facilities in the shorezone and changes in public access to these recreation resources and Lake Tahoe. This analysis is based on review of existing documents, policies, ordinances, and other regulations pertinent to recreation.

8.4.2 Significance Criteria

Significance criteria relevant to recreation are summarized below. The applicable TRPA threshold standards, the recreation criteria from the TRPA Initial Environmental Checklist, and other relevant information were considered in the development of the significance criteria. An impact would be considered significant if it would:

- have the potential to create conflicts between recreation uses, either existing or proposed;
- result in a decrease or loss of public access to any lake, waterway, or public lands;
- result in a decrease in the quality of recreation experience; or
- alter the balance of public and private development such that a fair share of recreation capacity is not reserved for the general public.

8.4.3 Environmental Effects of the Project Alternatives

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. This would be a **potentially significant** impact related to recreation user conflicts for Alternatives 1, 3, and 4. With implementation of Mitigation Measure 8-1a, the impact of Alternatives 1, 3, and 4 would be reduced to a **less-than-significant** level.

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. For these reasons, Alternative 2 would result in a **potentially significant** impact related to changes in the quality of recreational experiences and creation of new recreation user conflicts. After implementation of the required mitigation measures, this impact would be reduced to a **less-than-significant** level.

Alternative 1: Proposed Shoreline Plan

The goal of Alternative 1 is to enhance the recreational experience at Lake Tahoe while protecting the environment and responsibly planning for the future. At buildout, it would allow for a total of up to 10 new public piers and 128 new private piers (including private multi-use piers) for a total of 900 piers, two new public boat ramps for a total of 24 public boat ramps, and up to 2,116 new moorings (estimated at 265 new public buoys, 1,741 new private buoys, 65 public slips, and 45 private lifts) for a total of approximately 10,800 moorings, or a 24 percent increase over existing moorings. The estimated number of new private boat lifts is based on the assumption that, with implementation of Alternative 1, the same proportion of piers would have boat lifts in the future as under existing conditions (see Appendix A). Some of the new and existing buoys could be converted to slips, and vice versa, at facilities open to the public (e.g., marinas) and would count toward the mooring cap.

The Shoreline Plan would establish a permitting and allocation process intended to limit the pace of new pier and buoy approvals and provide for equitable distribution of new piers and buoys between marinas, public agencies, private littoral property owners, and homeowners associations (HOAs). Location and density standards for the placement of piers and buoys would also be established. Alternative 1 would maintain the existing 600-foot no-wake zone, which limits watercraft speed to 5 mph within 600 feet of shore and would expand the no-wake zone to include all of Emerald Bay.

The character of natural-dominated shoreline areas experienced for recreationists would not substantially change with implementation of Alternative 1. Natural-dominated shoreline areas are generally undeveloped public land and may have limited access and parking. These areas are important to the quality of recreational experiences because they offer natural scenic beauty, solitude, and a sense of adventure. New structures in these areas would be limited to new public shorezone facilities, such as public piers. With implementation of Alternative 1, most new shorezone facilities would be constructed throughout shoreline areas characterized as visually dominated or visually modified, based on the location of private land and development potential around the lake. Because these areas already contain a substantial number of buoys and piers (see Chapter 4, “Land Use”), the addition of new buoys and piers in these areas would not change the recreational experience because recreationists already see a developed shoreline and recreational watercraft already navigate around piers and buoys in these areas.

The quality of scenic views of the shoreline is also an important component of the quality of recreational experiences at Lake Tahoe. Alternative 1 includes provisions intended to protect scenic quality by limiting pier density, limiting the visible mass of shoreline structures, and requiring improvements. A more detailed discussion of the scenic effects of new shorezone facilities is included in Chapter 9, “Scenic Resources.”

As shown in Table 2-3, Alternative 1 at buildout would result in an approximately 13 percent increase in peak day boat trips and an approximately 16 percent increase in annual boat trips over baseline conditions. The increase in number of boat trips are influenced by increases in boat launch capacity, which would be provided by the two new public boat launches, and overnight mooring at buoys, slips, and boat lifts. Based on the number of existing and new shorezone structures, boat trips would be estimated to increase to 6,666 boat trips on a peak day and 272,359 boat trips annually.

The surface area of Lake Tahoe is approximately 122,880 acres. On a peak day at buildout (i.e., a summer holiday weekend in the year 2040), Alternative 1 would result in approximately one boat for every 18.4 acres on the lake, which is an increase in density of boats on the lake. This translates to an 11.5 percent decrease in space per boat compared to baseline conditions of approximately one boat for every 20.8 acres (see Table 8-3). While additional boats would not be evenly spaced at these densities, the estimate of acres per boat provides a relative comparison of crowding under each alternative. As described above, the TRPA threshold related to quality experience and additional access for recreation is in attainment. The attainment determination encompasses baseline conditions in which boat density is approximately 20.8 acres per boat on a peak day.

Table 8-3 Changes in Density of Boats on the Lake on a Peak Day

	Peak Day Boat Trips[1]	Existing Plus Project Peak Day[1]	Boat Density[2] (acres/boat)
Baseline Conditions	5,899	N/A	20.8
Alternative 1	+767	6,666	18.4
Alternative 2	+2,639	8,537	14.4
Alternative 3	+222	6,121	20.1
Alternative 4	+0	5,899	20.8

Note: N/A = not available

[1] Peak Day Boat Trips were obtained from Table 2-3 in Chapter 2, "Project Description."

[2] The surface area of Lake Tahoe is approximately 122,880 acres.

Source: Compiled by Ascent Environmental in 2018

With implementation of Alternative 1, recreation users of motorized watercraft would likely follow existing patterns of travel to popular destinations around the lake, including Baldwin Beach, east shore beaches, and many of the state parks such as Emerald Bay and Sand Harbor, and public beaches along the south shore. Because of the relatively small increase in boat density (11.5 percent on a peak day) and because motorized recreation users would congregate near existing popular destinations along the shoreline, the increase in motorized recreation with Alternative 1 would not be substantial enough to be noticeable by recreation users on the lake and in the shorezone such that the quality of recreation experience would be degraded. The increase in motorized watercraft would not change the character of the experience in areas that already experience overcrowding. Large areas in the center of the lake would be less crowded and those people seeking a quieter recreation experience could still find those away from popular destinations. Additionally, because of the relatively small increase in motorized watercraft on the lake with implementation of Alternative 1, there would not be a substantial increase in the potential for conflict between motorized watercraft and nonmotorized recreationists in areas of the lake outside of the no-wake zone. Impact 15-1 in Chapter 15, "Public Health and Safety," provides additional discussion related to the potential increase for accidents on the lake due to increased boating.

As described above, most new shorezone structures would be located within areas with existing shorezone development. With Alternative 1, new buoys would be required to comply with location standards that would allow buoys outside of buoy fields to be located up to 600 feet lakeward from elevation 6,220 feet (an increase from the current limit of 350 feet) and a minimum of 20 feet from property boundaries and 50 feet from other legally existing buoys. New buoys in buoy fields that serve homeowners associations (HOAs), commercial, or tourist uses would be subject to the same location standards as individual private buoys. Marina buoy fields would also comply with the same placement standards as for other buoy fields, but they could extend more than 600 feet from elevation 6,220 feet. Although the maximum distance for buoys from shore coincides with the no-wake zone boundary, there would be sufficient distance between buoys (50 feet from nearby buoys) and between the buoy and the shoreline such that nonmotorized watercraft users and swimmers could navigate through the buoys fields or landward of individual buoys. There may be new boats and buoys in existing buoy fields, where potential conflicts already exist, but Alternative 1 would not result in any new buoy fields. If necessary, navigational buoys could also be installed to demarcate no-wake zones in these areas. The increase in the no-wake zone area in Emerald Bay would help reduce potential for conflicts

between motorized watercraft and nonmotorized watercraft or swimmers. For these reasons, new buoys under Alternative 1 would not create conflicts between motorized watercraft and nonmotorized watercraft or swimmers or affect navigation for nonmotorized recreation activities.

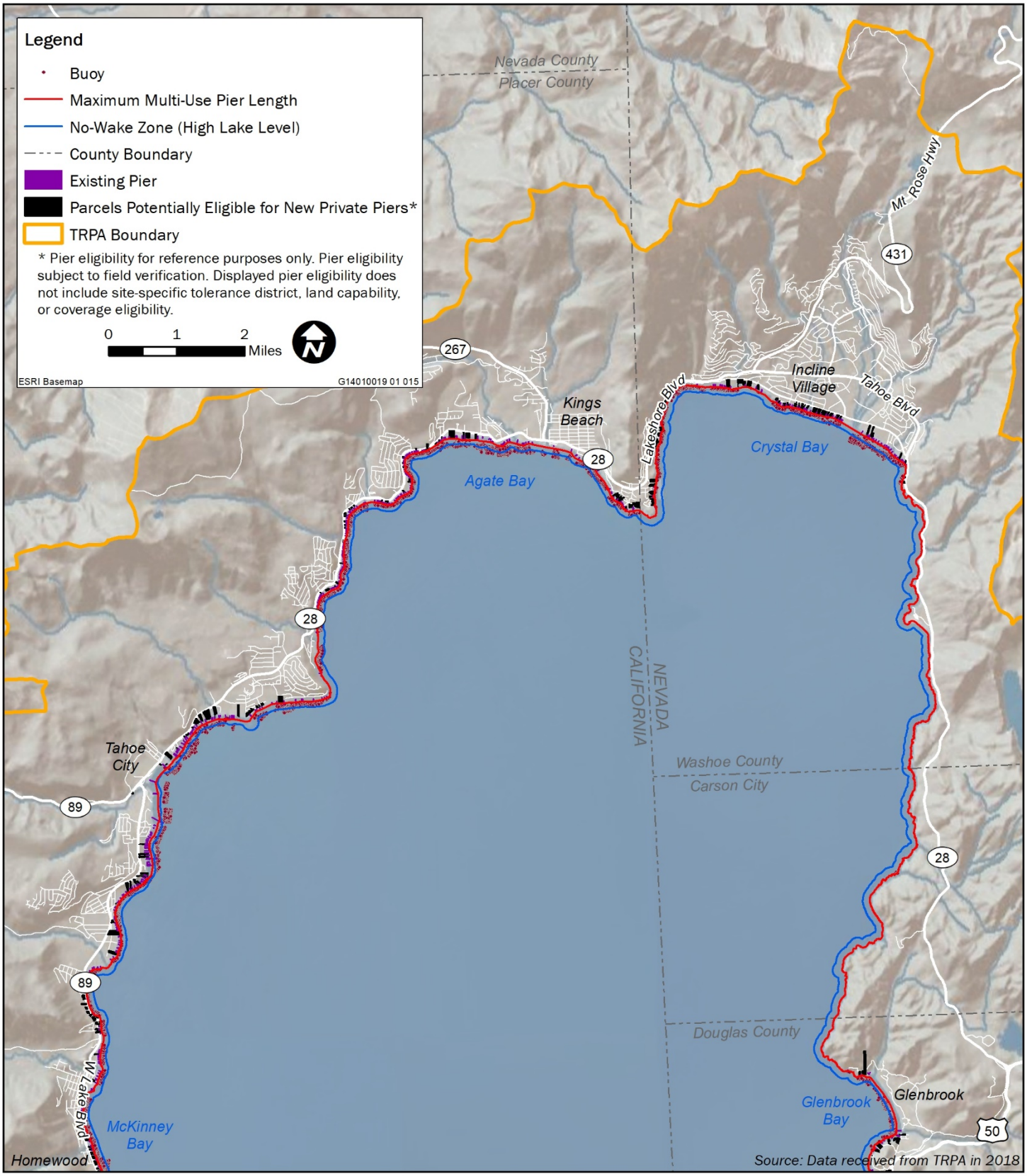
As described above, Alternative 1 would allow for new public, private, and multi-use private piers, which could result in new areas where nonmotorized watercraft and swimmers would need to paddle or swim around the end of the pier as they travel laterally along the shoreline. New private single-use and multi-use piers would be required to comply with design standards for length of the pier. Single-use piers would be limited to within the location of the contour line for elevation 6,219 feet or pierhead line, and multiple-use private piers would be limited to the more landward of either elevation 6,219 feet or 30 feet lakeward of the pierhead line. The existing shorezone structures, parcels potentially eligible for new private piers, the maximum length for multiple-use piers, and the 600-foot no-wake zone under high water conditions are shown on Exhibits 8-3 and 8-4. As seen on this exhibit, any new multiple-use piers would be within the no-wake zone, which would allow nonmotorized recreation users and swimmers to move around the end of a pier while remaining within the no-wake zone. Therefore, new private single-use and multiple-use private piers would not substantially affect navigation for nonmotorized activities or create a conflict between motorized watercraft and nonmotorized watercraft or swimmers.

Public piers could exceed design standards that apply to private multiple-use piers to the extent necessary to provide a public service. Thus, a public pier could be designed such that it extends beyond the 600-foot no-wake zone, which could require nonmotorized watercraft and swimmers traveling laterally along the shoreline to navigate further away from the shoreline and travel outside of the no-wake zone and into areas where motorized watercraft are travelling at higher speeds, particularly if the pier does not provide sufficient space for recreationists to pass underneath the pier. For these reasons, public piers that extend beyond the no-wake zone could affect navigation for nonmotorized activities and create conflicts between motorized watercraft and nonmotorized recreation. The conflict would be created because there would be a potential hazard for nonmotorized watercraft and swimmers recreating in an area where motorized watercraft speeds could exceed 5 miles per hour creating waves, noise, and reducing the quality of the experience for nonmotorized recreationists. Motorized watercraft traveling at higher speeds may also have more trouble seeing nonmotorized watercraft and swimmers, creating a greater potential for accidents. Public piers could result in a potentially significant impact by creating a new conflict for recreation users associated with navigating around the pier outside the no-wake zone.

With implementation of Alternative 1, most new shorezone facilities would be constructed throughout shoreline areas with existing development and a substantial number of buoys and piers, which would not substantially reduce the quality of recreation by changing the character of undeveloped shoreline. Additionally, Alternative 1 includes standards for buoys and piers that would help preserve scenic areas around the lake. The increase in motorized watercraft on the lake from implementation of Alternative 1 would not substantially change the quality of the recreation experience. This alternative could allow for new public piers that extend beyond the no-wake zone, which could affect navigation for nonmotorized activities creating conflicts between motorized watercraft and nonmotorized watercraft or swimmers. This would be a **potentially significant** impact.

Alternative 2: Maintain Existing TRPA Shorezone Regulations (No Project)

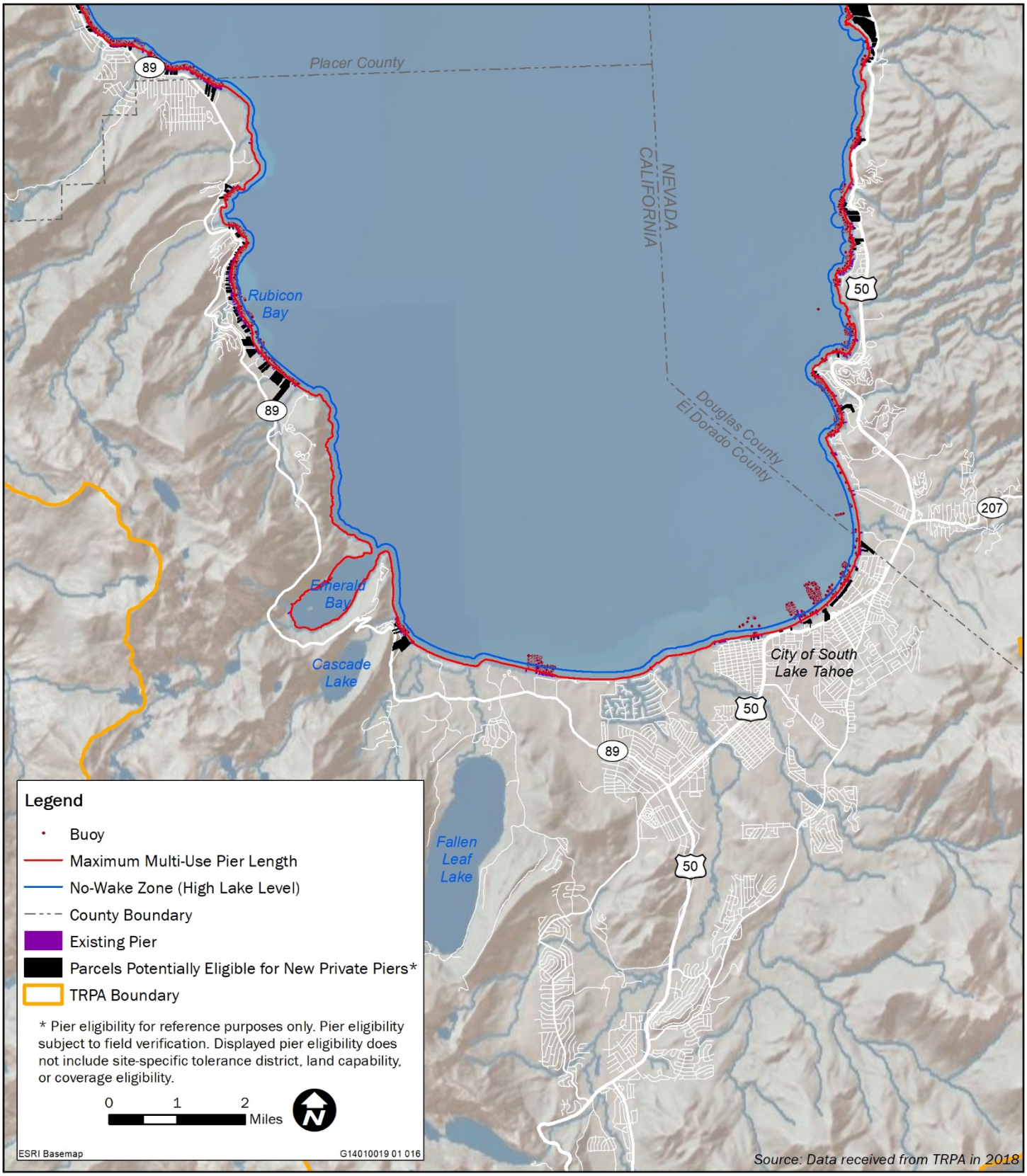
Alternative 2 would retain the existing TRPA Shorezone Code but would lift the temporary moratorium on new shorezone structures. This alternative would prohibit new structures within TRPA-designated prime fish habitat. There would be no numeric cap on new moorings. The number of buoys, slips, and boat lifts would be limited by the number of eligible parcels that could place moorings consistent with locations standards including the prohibition on structures within prime fish habitat. These standards would allow for up to 4,871 new buoys, 1,897 boat slips, and 168 boat lifts. Under this alternative, up to 476 new piers that could include any number of public, multiple-use, or private single-use piers up to that limit with a maximum of one pier per eligible parcel. This is the only alternative that would allow new marinas (up to two new marinas). New shorezone structures would be excluded from fish habitat, 200 feet of stream or river inlets, and water purveyors must be consulted for any proposed shorezone structure within 600 feet of a drinking water intake. Alternative 2 would maintain the existing 600-foot no-wake zone.



TAHOE REGIONAL PLANNING AGENCY

Exhibit 8-3 **Alternative 1 Maximum Multiple-Use Pier Length in North Lake Tahoe**

SHORELINEPLAN
Enhancing Recreation & Protecting Lake Tahoe's 72 Miles of Shoreline



TAHOE REGIONAL PLANNING AGENCY

Exhibit 8-4 **Alternative 1 Maximum Multiple-Use Pier Length in South Lake Tahoe**

SHORELINEPLAN
Enhancing Recreation & Protecting Lake Tahoe's 72 Miles of Shoreline

Alternative 2 would result in similar effects on the character of the shoreline experienced by recreationists as described above for Alternative 1. Because natural-dominated shoreline areas are owned by public agencies and few, if any, new public shorezone facilities would be located in these areas, Alternative 2 would not substantially change the character of the shoreline in these areas and would have little, if any, effect on user experience relative to shoreline character. By virtue of the locations of parcels eligible for new piers—primarily within visually dominated and visually modified shoreline character types—constructing or placing new shorezone structures in these areas that already contain substantial numbers of buoys and piers would not substantially affect the quality of the recreational experience by changing the character of undeveloped areas (see Exhibit 2-5 in Chapter 2, "Project Description").

The quality of scenic views of the shoreline is also an important component of the quality of recreational experiences at Lake Tahoe. Alternative 2 includes provisions intended to protect scenic quality by requiring scenic offsets for increases in visible mass. A more detailed discussion of the scenic effects of new shorezone facilities is included in Chapter 9, "Scenic Resources."

As shown in Table 2-4 and Exhibit 2-12 in Chapter 2, "Project Description," Alternative 2 would result in an approximately 45 percent increase in peak day boat trips and an approximately 53 percent increase in annual boat trips over baseline conditions at buildout (i.e., by the year 2040). This is a substantially greater increase than the increase in peak day and annual boat trips over baseline conditions for Alternative 1. Based on the number of existing and new shorezone structures, boat trips would be estimated to increase to approximately 8,500 boat trips on a peak day and 358,900 boat trips annually. On a peak day (i.e., a summer holiday weekend) at buildout, there would be approximately one boat for every 14.4 acres on the lake, which would be a 31 percent increase in density of boats on the lake compared to baseline conditions of approximately one boat for every 20.8 acres (see Table 8-3). The increase in the density of motorized watercraft on the lake would be noticeable such that it could alter the recreation experience for users (Reclamation 2011). This would result in a substantial adverse change in quality of recreation experiences for people using motorized and unmotorized watercraft, swimmers, and other beachgoers.

The increase in motorized boats on the lake could result in an increase in conflicts with nonmotorized recreationists in areas outside the no-wake zone. It is reasonable to assume there would be an increase in nonmotorized recreationists on the lake associated with background population growth and visitation growth. Conflicts would most likely occur when paddle boarders, kayakers, or swimmers are recreating in areas lakeward of the 600-foot no-wake zone, including near existing piers that extend beyond the no-wake zone. Motorized boats can pose hazards to nonmotorized recreationists when travelling at high speeds, creating large wake and conditions that make it more difficult for nonmotorized watercraft and swimmers to be seen. The substantial increase in boats on the lake would result in a corresponding increase in the potential for conflicts between motorized watercraft and nonmotorized recreationists. Because of the substantial increase in motorized watercraft that would occur with implementation of Alternative 2, there would be a potentially significant impact associated with conflicts between motorized watercraft and nonmotorized watercraft or swimmers. Impact 15-1 in Chapter 15, "Public Health and Safety," provides additional discussion related to the potential increase for accidents on the lake due to increased boating.

The existing shorezone regulations identify location standards for buoys to be placed a minimum of 20 feet from each property line and not any further lakeward than necessary to provide for safe mooring, but not to exceed 350 feet lakeward of the high-water line. Buoy fields would be allowed to deviate from these design standards and would be anticipated to develop following existing patterns for buoy fields. As described above for Alternative 1, nonmotorized watercraft and swimmers could navigate within the 600-foot no wake zone around buoy fields on the landward side or navigate through the buoy field if there is not sufficient space lakeward of the buoy field to allow for recreation users to stay within the no-wake zone. If necessary, navigational buoys could also be installed to demarcate no-wake zones in these areas. For these reasons, new buoys under Alternative 2 would not affect navigation for nonmotorized recreation activities or create conflicts between motorized watercraft and nonmotorized watercraft or swimmers.

Alternative 2 includes design standards for private single-use piers and multiple-use piers. Public piers would be considered multiple-use piers and would be subject to the same evaluation criteria as private multiple-use

piers. Design standards for single-use private piers would limit their length to 6,219 feet Lake Tahoe Datum (LTD) or pierhead line, whichever is more limiting, which allows for nonmotorized recreationists to navigate around the end of the pier within the no-wake zone. With Alternative 2, new multiple-use piers could affect navigation and create conflicts and safety hazards for nonmotorized watercraft and swimmers because this alternative does not include location standards that limit the length of multiple-use piers to within the no-wake zone. Multiple-use piers could be designed as floating piers, which would not allow recreationists to pass beneath at any time, or they could be designed as open-piling piers that may not provide enough space between the surface of the water and the bottom of the pier deck for recreationists to pass beneath at all lake levels. If multiple-use piers extend beyond the no-wake zone, then nonmotorized watercraft and swimmers may need to navigate into an area of the lake where motorized watercraft are traveling at speeds greater than 5 miles per hour. It is possible that nonmotorized watercraft and swimmers would be less visible to motorized watercraft users, resulting in safety hazards. Thus, new multiple-use piers associated with implementation of Alternative 2 could result in a potentially significant impact related to navigation for nonmotorized activities and conflicts between nonmotorized and motorized recreationists.

The increase in number of motorized watercraft on the lake would be noticeable such that Alternative 2 would result in a substantial adverse change in quality of recreation experience for users of motorized watercraft, nonmotorized watercraft, swimmers, and other beachgoers, and would increase the potential for conflicts outside the no-wake zone. Alternative 2 could also result in new multiple-use piers that extend beyond the no-wake zone, creating additional potential for conflicts between nonmotorized recreationists and motorized recreationists. For these reasons, Alternative 2 would result in a **potentially significant** impact.

Alternative 3: Limit New Development

The goal of this alternative is to reduce the risk of environmental impacts by limiting new shoreline development. Motorized watercraft access would be concentrated at marinas and public facilities. This alternative would authorize fewer structures than Alternatives 1 or 2. At buildout, it would allow for a total of 365 new public buoys or slips, five new public piers, and one new public boat ramp. This alternative would also authorize 86 new private piers, but they would be restricted to multiple-use piers. Alternative 3 would include the same no-wake zone as Alternative 1.

Construction of new shorezone structures, such as piers, buoys, and slips, with implementation of Alternative 3 would result in a similar effect on the character of shoreline experienced by recreationists as described above for Alternative 1. However, the effects of Alternative 3 would be less than those described for Alternative 1 because fewer private piers and fewer public piers could be constructed under this alternative. Alternative 3 also includes the same location standards as Alternative 1 and includes pier distribution that would reduce the potential scenic impacts. For these reasons, Alternative 3 would not substantially alter the character of the shoreline experienced by recreationists.

As shown in Table 2-3, at buildout Alternative 3 would result in an approximately four percent increase in peak day boat trips and an approximately four percent increase in annual boat trips over baseline conditions. Based on the number of existing and new shorezone structures for Alternative 3, boat trips would be estimated to increase to 6,121 boat trips on a peak day and 242,923 boat trips annually. On a peak day (i.e., summer holiday weekend) at buildout, there would be approximately one boat for every 20.1 acres on the lake, which would be a small increase in density of boats on the lake on a peak day over baseline conditions of approximately 20.8 acres per boat (see Table 8-3). This small, less than one percent, increase in boat density on the lake would not be noticeable to recreation users; thus, the increase in motorized watercraft of the lake as a result of Alternative 3 would not substantially affect the recreational experience. The increase in motorized watercraft would not change the character of the experience in areas that already experience overcrowding. Large areas in the center of the lake would be less crowded and those people seeking a quieter recreation experience could still find those away from popular destinations. Additionally, because of the relatively small increase in motorized watercraft on the lake with implementation of Alternative 3, there would not be a substantial increase in the potential for conflict between motorized watercraft and nonmotorized recreationists in areas of the lake outside of the no-wake zone. Impact 15-1 in Chapter 15, “Public Health and Safety,” provides additional discussion related to the potential increase for accidents on the lake due to increased boating.

Similar to Alternative 1, most new shorezone structures would be located in areas with existing shorezone development. With Alternative 3, new buoys and slips would be required to comply with the same location standards included in Alternative 1 but would also be limited to marinas or public facilities. If necessary, navigational buoys could also be installed to demarcate no-wake zones in these areas. New private multiple-use piers would be required to comply with design standards for length of the pier such that the maximum length of the pier is 300 feet, extends to the pierhead line, 6,219 feet, or the minimum necessary to reach navigable water, whichever is less. The maximum length for multiple-use piers under Alternative 3 and the 600-foot no-wake zone under high water conditions are shown on Exhibits 8-5 and 8-6. As seen on these exhibits, any new multiple-use piers would be within the no-wake zone, which would allow nonmotorized recreation users and swimmers to move around the end of a pier while remaining within the no-wake zone. For the reasons described above for Alternative 1 and herein, new buoys, slips, and multi-use piers for Alternative 3 would not affect navigation for nonmotorized activities or create conflicts between motorized watercraft and nonmotorized watercraft or swimmers.

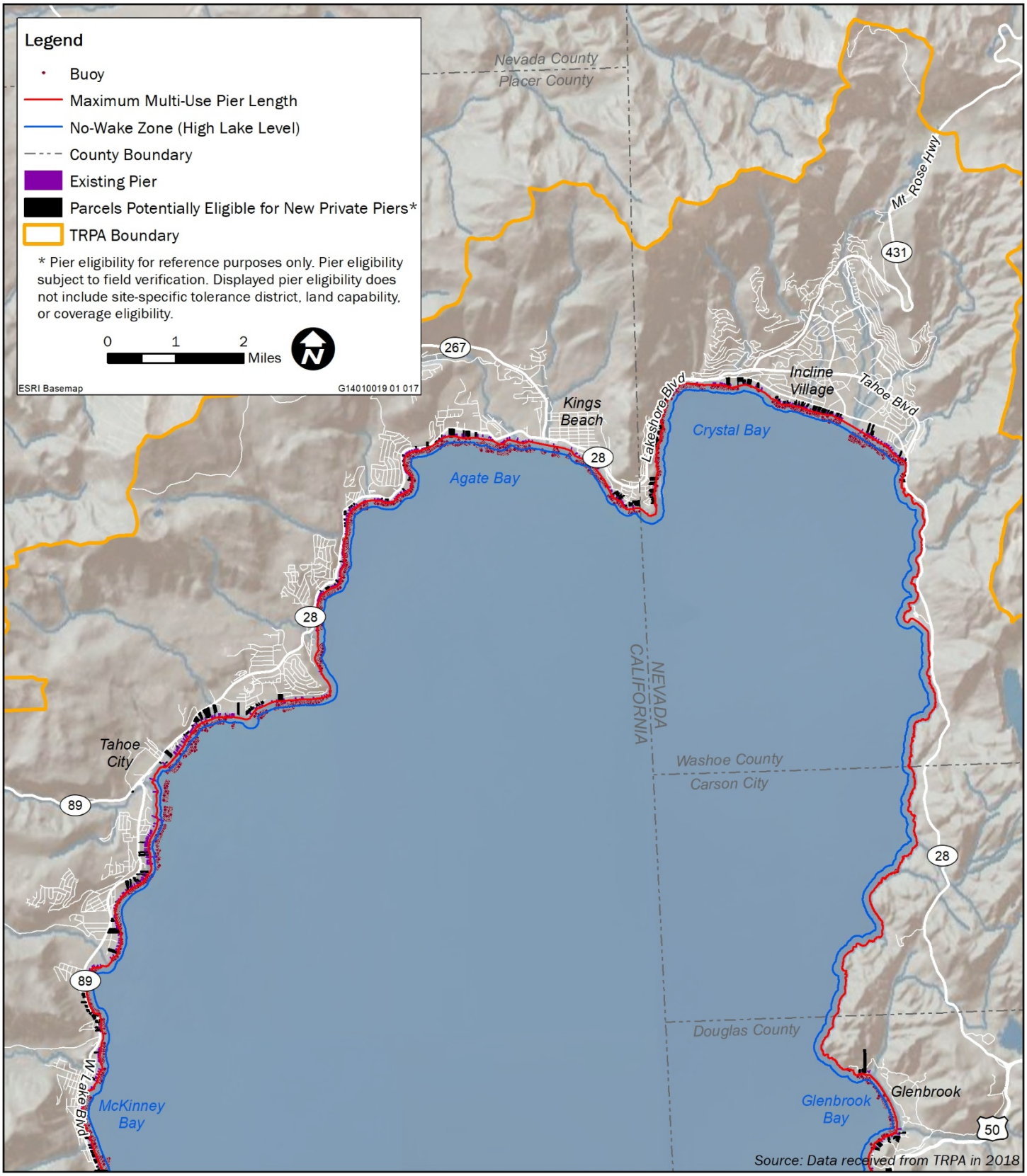
Public piers under Alternative 3 could deviate from design standards that apply to private multiple-use piers to the extent necessary to provide a public service. Thus, as also described above for Alternative 1, a public pier could be designed such that it extends beyond the 600-foot no-wake zone, which could result in requiring nonmotorized watercraft and swimmers traveling laterally along the shoreline to navigate outside of the no-wake zone as they pass the pier if the pier does not provide sufficient space for recreationists to pass underneath the pier. For these reasons, public piers that extend outside of the no-wake zone could affect navigation for nonmotorized activities and create conflicts between motorized watercraft and nonmotorized watercraft or swimmers.

With implementation of Alternative 3, most new shorezone facilities would be constructed throughout shoreline areas with existing development and a substantial number of buoys and piers, which would not change the character of the recreational experience. Additionally, Alternative 3 includes standards that would help preserve scenic areas around the lake. The increase in motorized watercraft on the lake from implementation of Alternative 3 would not substantially change the quality of the recreation experience. This alternative could allow for new public piers that extend outside of the no-wake zone, which could create conflicts between nonmotorized watercraft and swimmers and motorized watercraft resulting in a **potentially significant** impact.

Alternative 4: Expand Public Access and Reduce Existing Development

The goal of Alternative 4 is to expand public access, reduce existing shoreline development, and increase restoration to minimize the risk of environmental harm. The alternative would include transfer ratios that would allow some private shorezone structures to be removed and rebuilt in different locations as long as the project resulted in a 2:1 reduction in the number of structures. At buildout, this alternative would allow 15 new public piers and no other new shorezone structures.

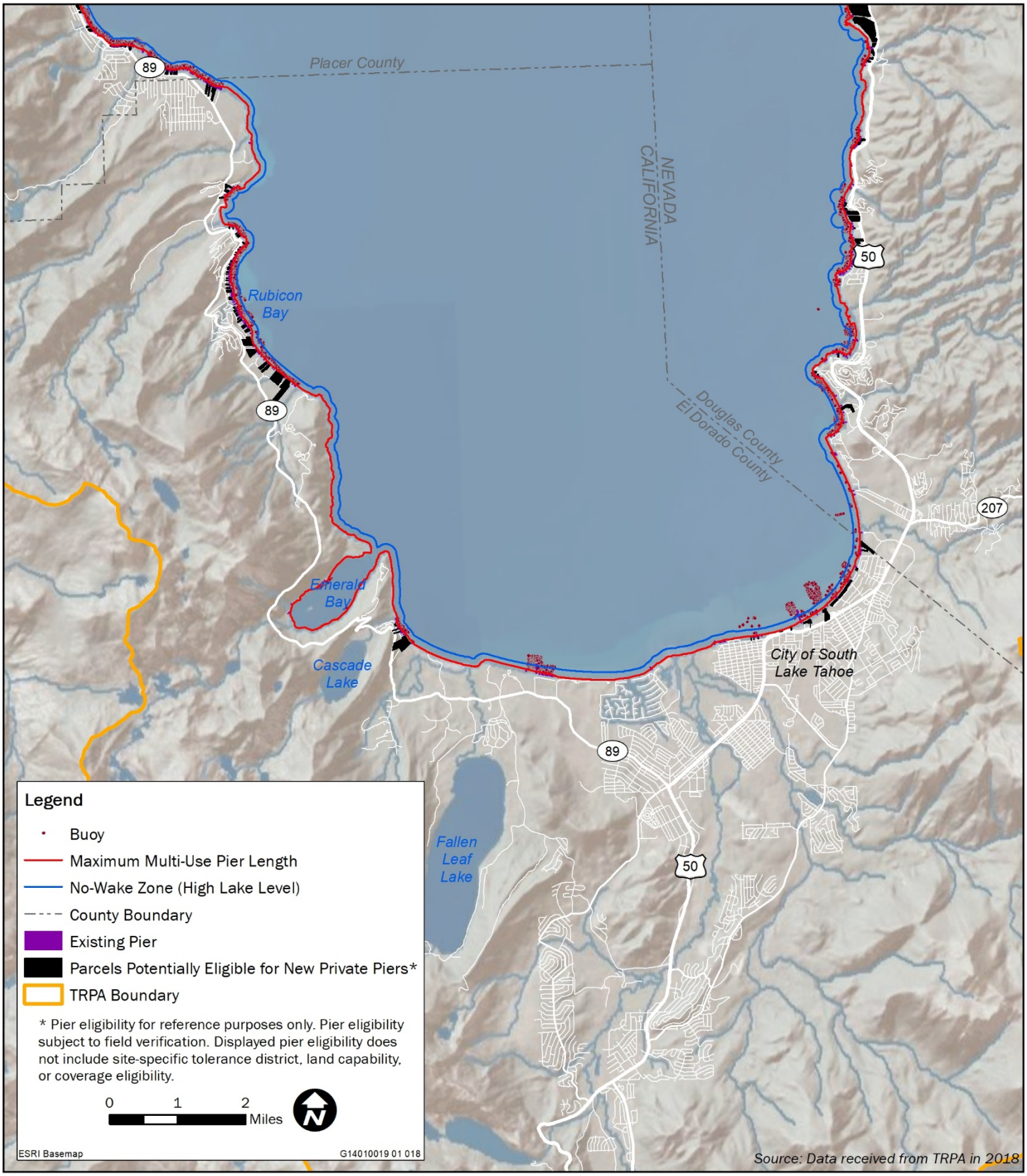
Implementation of Alternative 4 would include expanding the no-wake zone to include all of Emerald Bay and would increase the no-wake zone in front of priority areas to 1,200 feet lakeward from the waterline of the lake. These priority areas are shown on Exhibit 8-7 and include portions of the lake adjacent to Sand Harbor and the surrounding Lake Tahoe Nevada State Park, D.L. Bliss State Park, and Sugar Pine Point State Park. The expanded wake zone areas would be enforced through increased no-wake zone education and patrols by enforcement agencies. If necessary, navigational buoys could also be installed to demarcate no-wake zones in these areas. The increase in no-wake zone areas would help reduce potential for conflicts between motorized watercraft and nonmotorized watercraft or swimmers. This expanded no-wake zone would have a beneficial effect on nonmotorized recreation because it would increase the lake area where nonmotorized recreation could occur without potential conflicts with motorized watercraft travelling at speeds greater than 5 mph. The expanded no-wake zone would also benefit onshore recreation (e.g., hikers, beachgoers) at these state parks because it would reduce noise associated with motorized watercraft moving at high speeds.



TAHOE REGIONAL PLANNING AGENCY

Exhibit 8-5 **Alternative 3 Maximum Multiple-Use Pier Length – North Lake Tahoe**

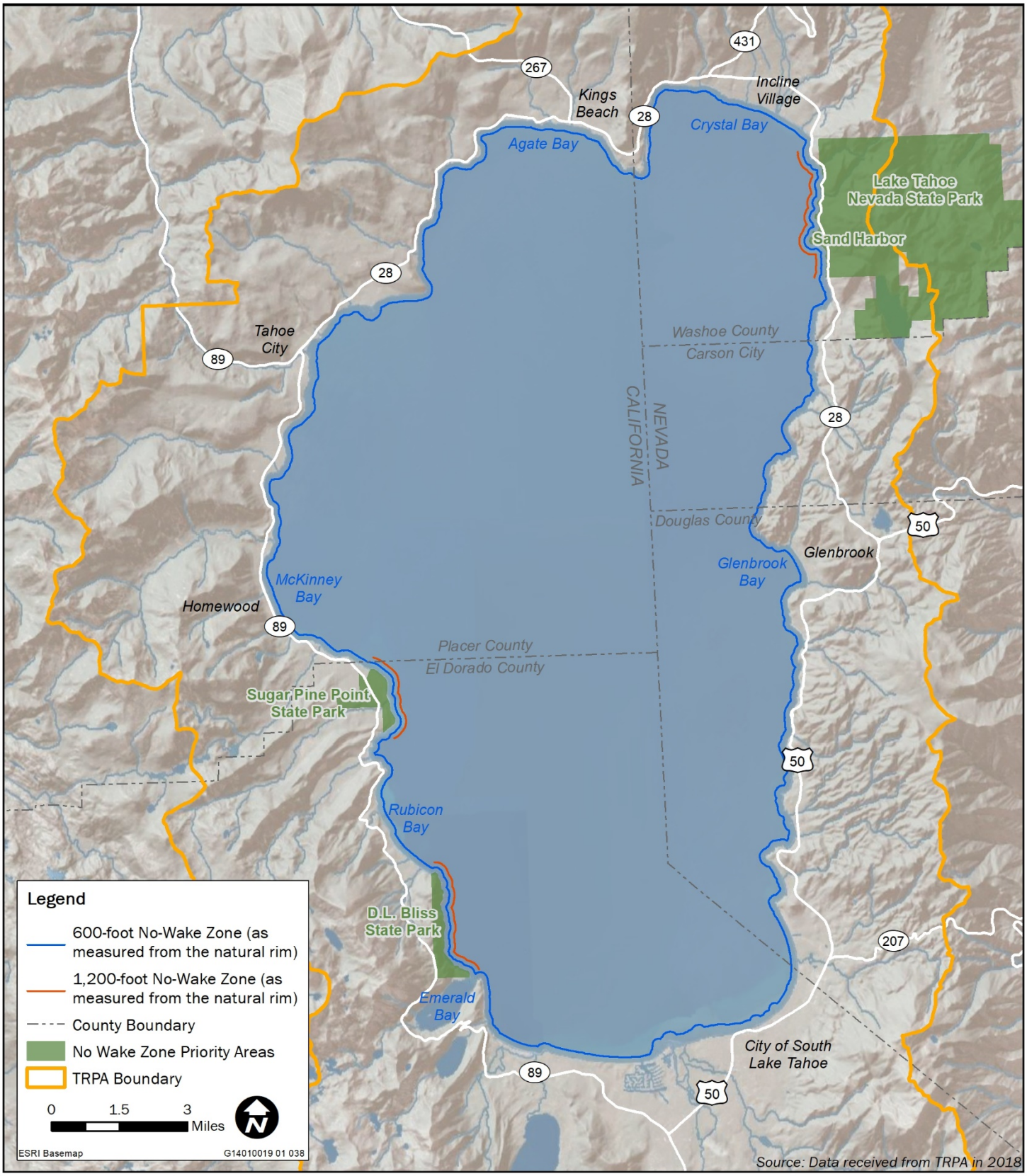
SHORELINEPLAN
Enhancing Recreation & Protecting Lake Tahoe's 72 Miles of Shoreline



TAHOE REGIONAL PLANNING AGENCY

Exhibit 8-6 **Alternative 3 Maximum Multiple-Use Pier Length – South Lake Tahoe**

SHORELINEPLAN
Enhancing Recreation & Protecting Lake Tahoe's 72 Miles of Shoreline



TAHOE REGIONAL PLANNING AGENCY

Exhibit 8-7 **Alternative 4 Proposed No-Wake Zone Areas**

SHORELINEPLAN
Enhancing Recreation & Protecting Lake Tahoe's 72 Miles of Shoreline

New shorezone structures allowed with implementation of Alternative 4 would be limited to new public piers, which would be subject to similar design, location, and scenic requirement standards as identified for Alternatives 1 and 3. For these reasons, Alternative 4 would not substantially alter the character of the shoreline experienced by recreationists. However, a public pier could be designed such that it extends beyond the 600-foot no-wake zone, which could result in requiring nonmotorized watercraft and swimmers traveling laterally along the shoreline to navigate outside of the no-wake zone as they pass the pier, if the pier does not provide sufficient space for recreationists to pass underneath the pier. For these reasons, public piers that extend outside of the no-wake zone could affect navigation for nonmotorized activities and create conflicts between motorized watercraft and nonmotorized watercraft or swimmers.

With implementation of Alternative 4, there would be no change in peak day or annual boat trips over baseline conditions and no change in density of boats on the lake (i.e., one boat for every 20.8 acres on the lake during a summer holiday weekend). Alternative 4 would not increase the number of motorized watercraft on the lake such that the experience of recreation users would be adversely affected.

Alternative 4 would result in an expanded no-wake zone near three state parks that would benefit nonmotorized and onshore recreation in these areas. Implementation of Alternative 4 would result in a limited number of new shorezone structures that would only include new public piers. Additional motorized boating capacity would not be provided by this alternative, resulting in no change over baseline conditions in the density of boats on the lake or numbers of shorezone structures. Thus, the quality of recreation experience would not change compared to baseline conditions. As described above, the length of public piers could be long enough to extend into the no-wake zone, affecting navigation for nonmotorized activities and creating potential recreation user conflicts. This impact would be **potentially significant**.

Mitigation Measures

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 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

- 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

This mitigation measure would be required for Alternative 2.

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.

Mitigation Measure 8-1c: Establish buffer area around nonmotorized recreationists outside of the no-wake zone

This mitigation measure would be required for Alternative 2.

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.

Significance after Mitigation

With implementation of Mitigation Measure 8-1a, new public piers for Alternatives 1, 3, and 4 and multiple-use piers for Alternative 2 would be required to demonstrate that safe lateral access for navigation of nonmotorized watercraft and swimmers would be provided within the no-wake zone either through reducing pier length or by constructing a pier that would allow for passage of these recreation users underneath the pier. Implementation of this mitigation measure would maintain space for lateral navigation by nonmotorized recreationists within the no-wake zone and reduce the potential for user conflicts created by piers extending into the no-wake zone. Impacts would be reduced to **less-than-significant** levels.

With implementation of Mitigation Measure 8-1b for Alternative 2, TRPA would restrict the number of new moorings and boat ramps to the same number authorized for Alternative 1. Together with implementation of Mitigation Measure 8-1a and 8-1c, this would reduce the impact related to quality of recreation experience associated with Alternative 2 to a **less-than-significant** level.

With implementation of Mitigation Measure 8-1c for Alternative 2, TRPA would revise the TRPA Code to require motorized watercraft in motion to keep at least 200 feet between them and any nearby nonmotorized recreationist. The additional buffer would increase safety for the nonmotorized recreationist by reducing the potential for conflict with a motorized watercraft. The impact related to user conflicts between motorized watercraft and nonmotorized recreationists would be reduced to a **less-than-significant** level.

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. Because increased motorized boating capacity would be provided on the lake with additional moorings and public boat ramps, Alternatives 1, 2, and 3 would have a **beneficial** impact on access and opportunities for motorized boating.

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. Alternative 4 would have **a less-than-significant** impact on access or opportunities for motorized boating.

Alternative 1: Proposed Shoreline Plan

Implementation of Alternative 1 would allow for two new public boat ramps, 2,116 new moorings, and 138 additional piers. The use and placement of these facilities would affect a range of boater access and use considerations. Boaters use the water near the shore in different ways, depending on the type of watercraft and recreational activity. Improved shoreline and lake access points for some types of recreationists can pose navigational and speed obstacles for others. However, overall, more shorezone structures generally provides additional access to the lake for motorized users. Other elements of Alternative 1 include an expanded and more strictly enforced no-wake zone, and provisions for shorezone development to adapt to

lower lake levels. These elements of the proposed Shoreline Plan would influence access and opportunity for recreationists, as described below.

Under Alternative 1, new mooring and boat launching facilities would increase motorized boating capacity (Table 8-4), resulting in the ability for more motorized watercraft users to enjoy the lake during the boating season.

Table 8-4 Projected New Boating Activity for New Shorezone Structures

Shorezone Structures	Alternative 1			Alternative 2			Alternative 3			Alternative 4		
	Number of New Structures	Peak Day Boat Trips	Annual Boat Trips	Number of New Structures	Peak Day Boat Trips	Annual Boat Trips	Number of New Structures	Peak Day Boat Trips	Annual Boat Trips	Number of New Structures	Peak Day Boat Trips	Annual Boat Trips
Buoys	2,006	501	31,269	4,871	1,218	75,934	300	75	4,677	0	0	0
Slips	65	23	1,047	1,897	683	30,551	65	23	1,047	0	0	0
Boat Lift	45	16	734	168	60	2,730	30	11	493	0	0	0
Public Boat Ramp	2	226	5,206	6	678	15,619	1	113	2,603	0	0	0
Public Pier	10	0	0	78	0	0	5	0	0	15	0	0
Private Pier	128	0	0	398	0	0	86	0	0	0	0	0
Total Boat Trips		766	38,257		2,639	124,834		222	8,820		0	0

Detailed calculations of boating activity are provided in Appendix A.

Source: compiled by Ascent Environmental in 2018

The addition of 138 new piers under Alternative 1 would expand opportunities for motorized watercraft to access the shoreline. New piers would allow for short-term mooring, which would enable guests on a boat to access beaches and nearby amenities without the need to swim or wade to shore.

Modification of existing, and construction of new structures in the shorezone may impede access to the nearshore water or create use and safety conflicts, as described above under Impact 8-1. However, motorized watercraft can move to deeper water to avoid new or extended piers and buoys easily and without substantial safety concerns. Motorized watercraft users often seek a higher speed experience and may keep to deeper water anyway.

Provisions for low lake level adaptation, which chiefly include design and location standards for shorezone structures, would improve functional access for all types of watercraft to piers, boat ramps, and other shorezone structures over a wider range of lake level conditions.

Low speed limits in the no-wake zone generally prohibit activities such as water skiing, wakeboarding, and speed boating, insofar as they limit the ability to get speeds fast enough to safely do these activities. However, some areas in the nearshore are unsuitable for these activities anyway, due to existing shorezone structures and shallow water. Implementation of Alternative 1 would expand the existing 600-foot no-wake zone to include all waters inside Emerald Bay, and enforcement of the no-wake zone would be increased in some high-traffic areas, such as state parks. The existing speed limit in Emerald Bay is 15 miles per hour, which effectively excludes high speed recreation activities (e.g., water skiing, wakeboarding, tubing), so this area is not typically used for such activities. With implementation of Alternative 1, speeds would be limited to 5 mph (or 7 mph for tour boats) so recreation activities that rely on high speeds would continue to be excluded from Emerald Bay. The change in no-wake zone for Emerald Bay or increase in enforcement for some areas would not prohibit or decrease access to the shoreline for motorized watercraft and would not degrade recreational opportunities for motorized watercraft related to waterskiing, wakeboarding, and other

similar recreation activities. Additionally, because the lake is large, boaters would still have many areas of the lake in which those activities could be enjoyed, and therefore new shorezone structures and higher levels of enforcement in the no-wake zone would not be expected to impede these activities in any way.

Shorezone structures in prime fish habitat could create obstacles to trolling and limit access to fishing from motorized watercraft along the shoreline. Generally, piers that extend beyond the pierhead line force anglers away from the shore. Buoys placed close together, particularly if located in large buoy fields that extend far into the lake, create sufficient barriers to through travel to also force anglers out of prime fishing habitat, particularly during the boating season when boats occupy the buoys. Most fishing on Lake Tahoe occurs in deep water from a boat (USFS 2018). As described under Impact 8-1, new piers and buoys would tend to be located in areas near existing shorezone structures, including the west shore, Tahoe City, Incline Village, and South Lake Tahoe. The proposed Shoreline Plan standards would require buoys to be placed a minimum of 50 feet from nearby buoys and new private single-use piers would be required to limit their length to the more limiting of elevation 6,219 feet LTD or the pierhead line. The maximum extent of multiple-use piers would be the more limiting of 6,219 feet LTD or 30 feet lakeward of the pierhead line. Thus, the length of private piers would be within or close to the pierhead line. Although public piers could exceed the design standards that apply to multiple-use piers, only 10 new public piers could be constructed with Alternative 1, which is a small number relative to the size of the lake. Trolling is done using very long lines, which make areas containing buoys and piers unattractive for fishing. Because new piers and buoys would generally be located in areas that already contain these structures, these new structures would likely not interfere with existing angling patterns. For these reasons and because fishing on Lake Tahoe typically occurs far from shore, Alternative 1 would not substantially affect navigation for fishing.

Alternative 1 would increase capacity for boating, provide new access points for motorized watercraft to access both the shore and the lake, and provide standards for shorezone structures to allow boating access under a range of lake levels. Alternative 1 would also not impede existing activities by constructing new structures that would substantially change opportunities for recreation activities that rely on motorized watercraft or inhibit those activities with new provisions for the no-wake zone. Because increased motorized boating capacity would be provided on the lake with additional moorings and public boat ramps, Alternative 1 would have a **beneficial** impact on access or opportunities for motorized boating.

Alternative 2: Maintain Existing TRPA Shorezone Regulations (No Project)

Implementation of Alternative 2 would allow for six new public boat ramps, 6,936 new moorings, two new marinas, and 476 piers. New shorezone structures associated with buildout of Alternative 2 would increase motorized boat launching and overnight mooring capacities resulting in a potential for an estimated 2,639 additional motorized boat trips on a peak day and additional 124,834 annual motorized boat trips (see Table 8-4). Alternative 2 would continue to prohibit new structures in prime fish habitat. Buoy floats and anchors within buoy fields would continue to be allowed to move farther lakeward during periods of low lake conditions, but there are no other provisions to allow modifications to facilities or structures to be useable during low lake conditions. The existing 600-foot no-wake zone around the lake would be retained.

As described under Impact 8-1, in general, new piers and buoys would be located in areas near existing shorezone structures, including the west shore, Tahoe City, Incline Village, and South Lake Tahoe. Alternative 2 standards limit buoys outside of buoy fields to within 350 feet lakeward of the high-water line and buoy fields could deviate from these location standards. Private single-use piers would be limited in length to 6,219 feet LTD or the pierhead line, whichever is more limiting.

Because Alternative 2 includes the same types of shorezone structures as Alternative 1, with similar design and location requirements for buoys and piers, this alternative would have the same types of impacts related to expanding opportunities for motorized watercraft to access the shoreline, creating use and safety conflicts with longer multiple-use and public piers (see Impact 8-1). Motorized watercraft could move to deeper water to avoid new or extended piers and buoys. Recreationists that participate in activities such as fishing, trolling, waterskiing, and other similar recreation activities would still have many areas of the lake in which they could participate in these activities.

Because new shorezone structures associated with Alternative 2 would be prohibited from prime fish habitat, no new obstacles to trolling or fishing would be created in these areas. As described above for Alternative 1, fishing more typically occurs in deep water on Lake Tahoe. For these reasons, Alternative 2 would not substantially affect navigation for fishing.

Alternative 2 would increase capacity for boat launching and mooring and would not construct new structures that would substantially change opportunities for recreation activities that rely on motorized watercraft. Because increased motorized boating capacity would be provided on the lake with additional moorings and public boat ramps, Alternative 2 would have a **beneficial** impact on access or opportunities for motorized boating.

Alternative 3: Limit New Development

Implementation of Alternative 3 would allow for one new public boat ramp, 395 new public moorings, and 91 piers. New shorezone structures associated with buildout of Alternative 3 would increase boat launching and overnight mooring capacities resulting in a potential for an estimated 222 additional boat trips on a peak day and additional 8,820 annual boat trips (see Table 8-4). Alternative 3 would include the same standards for the no-wake zone as Alternative 1, which includes a no-wake zone for all of Emerald Bay and expanded enforcement in areas that receive heavy nonmotorized watercraft use. Alternative 3 would also establish the same location standards as Alternative 1 for the placement of buoys in buoy fields. Design and location standards for new multiple-use piers would limit pier length to 300 feet, the pierhead line, or 6,219 feet LTD, whichever is less or the minimum necessary to get to navigable water. These pier standards are more restrictive than those for Alternative 1 piers. Public piers could exceed these standards.

As described under Impact 8-1, new piers and buoys would tend to be located in areas near existing shorezone structures. Alternative 3 standards for buoys limit buoys outside of buoy fields to within 350 feet lakeward of the high-water line and buoy fields could deviate from these location standards. Private single-use piers would be limited in length to 6,219 feet LTD or the pierhead line, whichever is more limiting.

Because Alternative 3 includes the same types of shorezone structures as Alternative 1, with similar design and location requirements for buoys and piers such that this alternative would have the same types of impacts related to expanding opportunities for motorized watercraft to access the shoreline, creating use and safety conflicts with longer public piers (see Impact 8-1). Motorized watercraft could move to deeper water to avoid new or extended piers and buoys. Recreationists that participate in activities such as fishing, trolling, waterskiing, and other similar recreation activities that rely on motorized watercraft would still have many areas of the lake in which they could participate in these activities.

Alternative 3 would increase capacity for motorized boat launching and mooring, provide standards for shorezone structures to allow for boating access under a range of lake levels, and would not construct new structures that would substantially change opportunities for recreation activities that rely on motorized watercraft. Because increased motorized boating capacity would be provided on the lake with additional moorings and public boat ramps, Alternative 2 would have a **beneficial** impact on access or opportunities for motorized boating.

Alternative 4: Expand Public Access and Reduce Existing Development

Implementation of Alternative 4 would allow for 15 new public piers. Because this alternative would not increase the number of motorized boat ramps or overnight moorings, Alternative 4 would not increase the capacity for motorized boats on the lake. Alternative 4 promotes expansion of public access to the lake through new piers but would also reduce existing shoreline development through transfer ratios. Some existing private shoreline facilities could be removed and rebuilt in a different location provided that the project resulted in a 2:1 reduction in the number of structures. However, there is little incentive for property owners to remove existing shorezone structures through these transfer ratios. Therefore, the analysis assumes that the existing boating capacity and levels of boating activity would not be changed by Alternative 4. As described for Alternative 1, new public piers constructed through implementation of Alternative 4 could provide access to the shoreline for passengers of motorized watercraft. Similarly, new piers would not adversely affect navigation for motorized watercraft or activities that rely on motorized watercraft. Alternative

4 would retain existing capacity on the lake for motorized watercraft access and would not adversely affect motorized watercraft recreation opportunities. This would be a **less-than-significant** impact.

Mitigation Measures

No mitigation is 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 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. Impacts on access to or along the shoreline from Alternatives 1, 2, 3, and 4 would be **less than significant**.

In Nevada, no existing public trust easement on private land is recognized; thus, lateral access along the shoreline cannot be guaranteed or enforced and there would be no change to lateral access on private land in Nevada with implementation of any of the alternatives. This impact analysis only evaluates effects on public access to or along the shoreline in the California portion of Lake Tahoe.

Alternative 1: Proposed Shoreline Plan

As described above, a California public trust easement covers the area between the high and low water marks (elevations 6,228.75 and 6,223 feet LTD) on the California side of Lake Tahoe. Public access is allowed within the public trust easement. Modifications of existing and construction of new structures that cross public easement or public trust areas in the shorezone could impede lateral passage of pedestrians along the shore in California. Implementation of Alternative 1 would allow up to 10 new public piers and up to 86 new private or multiple-use piers that could cross the public trust easement in California. Development of a portion of the total new shorezone structures that extend into the public trust easement in California could reduce lateral access, restrict the public right of travel along public easement areas, and limit shorezone access.

With implementation of Alternative 1, no new public or private breakwaters, jetties, rock crib piers, or sheet pile piers (or other structures of this type) would be permitted along the shoreline except as part of a habitat restoration project or as part of a marina environmental improvement project. Similar to baseline conditions, fences would not be allowed below the high-water line, which would maintain access to the public trust easement below the high-water line.

Because new public piers would be constructed for the benefit of public use, pedestrians would have unrestricted access over or around the pier as they walk laterally along the shoreline. Alternative 1 does not include any design standards for private or public piers that prohibit access for the public along the shoreline.

With implementation of Alternative 1, TRPA and California State Lands Commission would adopt an MOU that details a process to coordinate review of applications for new and modified piers 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 project reasonable 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.

New structures, design standards, or other regulatory provisions included in Alternative 1 would not change public access to the shoreline or lateral pedestrian access along the shoreline. The TRPA MOU with California State Lands Commission would protect lateral access for the public along the public trust easement below the high-water mark in California. Impacts on access to or along the shoreline from Alternative 1 would be **less than significant**.

Alternative 2: Maintain Existing TRPA Shorezone Regulations (No Project)

Implementation of Alternative 2 would allow up to 78 new public piers and 398 new private piers to be constructed in the shorezone around Lake Tahoe. These new piers would cross the California public trust easement and potentially reduce lateral access, restrict the public right of travel along public easement areas, or limit shorezone access. Under existing conditions, California State Lands would review pier projects to ensure that legal public access is maintained.

Based on the design and construction standards in TRPA Code Section 84.12, access over these types of structures would be feasibly maintained because no jetty or breakwater may be constructed as a solid or nearly solid structure. Marinas may construct solid or nearly solid jetties or breakwater or they may be constructed near a public boat launching facility. Presumably, because marinas and public boat ramps are public facilities, lateral access along the shoreline would be provided elsewhere around these structures. Similar to baseline conditions, fences would not be allowed below the high-water line, which would maintain access to the public trust easement below the high-water line.

Because new public piers would be constructed for the benefit of public use, pedestrians would have unrestricted access over or around the pier as they walk laterally along the shoreline. Alternative 2 does not include any design standards for private or public piers that prohibit access for the public along the shoreline.

Alternative 2 would include an MOU between TRPA and California State Lands Commission, as described for Alternative 1, that would include a review process that protects public lateral access within the public trust easement in California. TRPA would not be able to approve any shorezone structure in California that prohibits lateral access. 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 project reasonable design elements to maintain legal public access. However, any structural components required to maintain lateral public access (e.g., ladders to provide access over a pier), would not be exempt from visible mass offset requirements. Private pier owners could also choose to provide public access landward of the pier instead of providing access over the pier.

New structures, design standards, or other regulatory provisions included in Alternative 2 would not change public access to the shoreline or lateral pedestrian access along the shoreline. The TRPA MOU with California State Lands Commission would protect lateral access for the public along the public trust easement below the high-water mark in California. Impacts on access to or along the shoreline from Alternative 2 would be **less than significant**.

Alternative 3: Limit New Development

Implementation of Alternative 3 would allow five new public piers and up to 86 new private multiple-use piers to be constructed in the shorezone around Lake Tahoe. These new piers would cross the California public trust easement or public trust areas would be new piers and potentially reduce lateral access, restrict the public right of travel along public easement areas, or limit shorezone access.

Alternative 3 would also not allow new public or private breakwaters, jetties, rock crib piers, or sheet pile piers (or other structures of this type) except as part of a habitat restoration project or as part of a marina environmental improvement project. Similar to baseline conditions, fences would not be allowed below the high-water line.

Because a new public pier would be constructed for the benefit of public use, pedestrians would have unrestricted access over or around the pier as they walk laterally along the shoreline. Alternative 3 does not include any design standards for private or public piers that prohibit access for the public along the shoreline.

Alternative 3 would include an MOU between TRPA and California State Lands Commission, as described for Alternative 1, that would include a review process that protects 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 project reasonable design elements to maintain legal public access. 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. Private pier owners could also choose to provide public access landward of the pier instead of providing access over the pier.

New structures, design standards, or other regulatory provisions included in Alternative 3 would not change public access to the shoreline or lateral pedestrian access along the shoreline. The TRPA MOU with California State Lands Commission would protect lateral access for the public along the public trust easement below the high-water mark in California. Impacts on access to or along the shoreline from Alternative 3 would be **less than significant**.

Alternative 4: Expand Public Access and Reduce Existing Development

Implementation of Alternative 4 would allow 15 new public piers to be constructed in the shorezone around Lake Tahoe. These new piers would cross the California public trust easement or public trust areas would be new piers and potentially reduce lateral access, restrict the public right of travel along public easement areas, or limit shorezone access.

Alternative 4 would also not allow new public or private breakwaters, jetties, rock crib piers, or sheet pile piers (or other structures of this type) except as part of a habitat restoration project or as part of a marina environmental improvement project. Similar to baseline conditions, fences would not be allowed below the high-water line.

Because the new public piers would be constructed for the benefit of public use, pedestrians would have unrestricted access over or around the pier as they walk laterally along the shoreline. As described for Alternative 1, an MOU between TRPA and California State Lands Commission 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 project reasonable design elements to maintain legal public access.

New structures, design standards, or other regulatory provisions included in Alternative 4 would not change public access to the shoreline or lateral pedestrian access along the shoreline. The TRPA MOU with California State Lands Commission would protect lateral access for the public along the public trust easement below the high-water mark in California. Impacts on access to or along the shoreline from Alternative 4 would be **less than significant**.

Mitigation Measures

No mitigation is required.

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. For these reasons, the impacts of Alternatives 1, 2, 3, and 4 on fair-share distribution of recreation capacity would be **less than significant**.

The TRPA threshold for fair-share distribution of recreation capacity requires that a fair-share of total recreation capacity be available for public use. The 2015 Threshold Evaluation determined that the threshold is currently in attainment (TRPA 2016a). The effects of the Shoreline Plan alternatives on the fair-share distribution of recreation capacity is evaluated by determining whether a Shoreline Plan alternative would substantially decrease the proportion of lake access capacity that is available to the general public. Public lake access capacity can be measured in three ways: the proportion of shoreline in public ownership, the proportion of access structures that are open to the public, and the proportion of total boating capacity that is available to the public.

The existing distribution of publicly owned property in the shorezone includes approximately 55 percent of the shoreline and privately-owned includes approximately 45 percent (Table 8-2). None of the Shoreline Plan alternatives would directly change the amount of shoreline in public ownership.

Table 8-5 shows the percent of shorezone structures that are private and the percent that are open to the public. Shoreline structures that are privately owned but available to the public (e.g., slips in a marina) are considered public in this analysis. Under baseline conditions, an average of approximately 17 percent of all shorezone structures are accessible to the public while approximately 83 percent are privately owned. Each alternative would change the percent of structures that are accessible to the public to various degrees (see Table 8-5).

The amount of lake access provided by different structures can vary substantially. For example, a boat ramp can provide access for over 100 people a day, while a buoy provides access for one person. Therefore, a comparison of the amount of boating capacity available to the general public can provide a meaningful comparison of an alternative's effect on the fair-share distribution of recreation capacity. Table 8-6 shows the percent of total boat trips that are generated from structures that are publicly-accessible (i.e., public boat ramps, quasi-public boat ramps, public slips and buoys, publicly-accessible slips and buoys at marinas) under baseline conditions and with each alternative.

To develop this estimate, peak-day boat trip generation rates for shorezone structures were developed based on boating use activity on Lake Tahoe and the maximum number of shoreline structures allowed under each alternative (see Appendix A). The level of boat usage on Lake Tahoe associated with individual shoreline structures was calculated based on observed and collected data on Lake Tahoe. Peak day boat trips originating from structures that are open to the public (i.e., public ramps, and public or marina slips and buoys). Additional detail on the data sources, assumptions, and calculations of boating activity and structure buildout are provided in Appendix A.

Table 8-5 Percent of Shorezone Structures Available to the Public and Restricted for Private Use

Structure	Baseline Conditions	Alternative 1 Baseline Plus Project	Alternative 2 Baseline Plus Project	Alternative 3 Baseline Plus Project	Alternative 4 Baseline Plus Project
Buoys					
Public Buoys	13%	13%	6%	19%	13%
Private Buoys	87%	87%	94%	81%	87%
Slips					
Public Slip	26%	27%	49%	27%	26%
Private Slip	74%	73%	51%	73%	74%
Lifts					
Public Boat Lift	2%	2%	1%	12%	2%
Private Boat Lift	98%	98%	99%	88%	98%
Boat Ramps					
Public Boat Ramp	58%	60%	64%	59%	58%
Private Boat Ramp	42%	40%	36%	41%	42%
Piers					
Public Piers	3%	4%	8%	3%	5%
Private Piers	97%	96%	92%	97%	95%

Notes: Boat house moorings are not included in this table because none of the alternatives would allow additional moorings of this type.

Marinas are not included in this table because only Alternative 2 would add marinas and the existing and new numbers of slips, buoys, and lifts that could be added to marinas are already included in the table.

Source: Compiled by Ascent Environmental in 2018

Table 8-6 Boat Trips Generated by Publicly-Accessible Shorezone Structures

	Baseline Conditions		Alternative 1 Baseline Plus Project		Alternative 2 Baseline Plus Project		Alternative 3 Baseline Plus Project		Alternative 4 Baseline Plus Project	
	Boat Trips	% of Total Boat Trips	Boat Trips	% of Total Boat Trips	Boat Trips	% of Total Boat Trips	Boat Trips	% of Total Boat Trips	Boat Trips	% of Total Boat Trips
Public Boat Ramp	2,487	42.17	2,714	40.71	3,166	37.08	2,600	42.48	2,487	42.17
Public Buoys	137	2.31	202	3.03	136	1.59	214	3.49	137	2.31
Public Slips	384	6.51	405	6.08	1,059	12.40	405	6.62	384	6.51
Total Boat Trips from Public Shorezone structures	**3,008**	**51.0**	**3,321**	**49.8**	**4,361**	**51.1**	**3,219**	**52.6**	**3,008**	**51.0**
Total Boat Trips from All Shorezone Structures	**5,899**	–	**6,666**	–	**8,537**	–	**6,121**	–	**5,899**	–

Additional detail on the data sources, assumptions, and calculations of boating activity and structure buildout are provided in Appendix A.

Source: Compiled by Ascent Environmental in 2018

Alternative 1: Proposed Shoreline Plan

Alternative 1 would not change the proportion of land along the shoreline that is publicly owned. Buildout of new shorezone structures allowed with Alternative 1 would maintain approximately the same existing distribution of facilities under public and private ownership (see Table 8-5). This alternative would result in a small increase in the proportion of public facilities compared to private facilities for slips, boat ramps, and piers. At buildout of Alternative 1, publicly-accessible shorezone structures would generate approximately 50 percent of all boat trips on the lake (see Table 8-6). This would be approximately one percent less than the proportion of all boat trips that are generated from publicly-accessible structures under baseline conditions.

With implementation of Alternative 1, the distribution of shoreline access capacity between public users and private property owners would not substantially change compared baseline conditions. The proportion of shoreline in public ownership would not change. The percent of shoreline structures accessible to the public would slightly increase and the proportion of boat capacity available to the general public would decrease slightly. For these reasons, the impact of Alternative 1 on fair-share distribution of recreation capacity would be **less than significant**.

Alternative 2: Maintain Existing TRPA Shorezone Regulations (No Project)

Alternative 2 would not change the proportion of land along the shoreline that is publicly owned. Buildout of new shorezone structures allowed with Alternative 2 would increase the proportion of structures that are publicly-accessible by approximately four percent compared to baseline conditions while decreasing the proportion of structures in private ownership (see Table 8-5). This increase in the proportion of publicly-accessible structures is largely due to allowance for two new marinas, which would include new public slips, and six new public boat ramps. At buildout of Alternative 2, publicly-accessible shorezone structures would generate approximately 51 percent of all boat trips on the lake (see Table 8-6). This would be the same proportion as under baseline conditions.

With implementation of Alternative 2, the distribution of shoreline access capacity between public users and private property owners would not substantially change compared baseline conditions. The proportion of shoreline in public ownership would not change. The percent of shoreline structures accessible to the public would slightly increase and the proportion of boat capacity available to the general public would remain unchanged. For these reasons, the impact of Alternative 1 on fair-share distribution of recreation capacity would be **less than significant**.

Alternative 3: Limit New Development

Alternative 3 would not change the proportion of land along the shoreline that is publicly owned. Buildout of new shorezone structures allowed with Alternative 3 would increase the proportion of structures that are publicly-accessible by approximately four percent compared to baseline conditions while decreasing the proportion of structures in private ownership (see Table 8-5). This increase in the proportion of publicly-accessible structures is because all structures except piers under Alternative 3 would be publicly-accessible. At buildout of Alternative 2, publicly-accessible shorezone structures would generate approximately 52.5 percent of all boat trips on the lake (see Table 8-6). This would be approximately 1.5 percent more than under baseline conditions.

With implementation of Alternative 3, the distribution of shoreline access capacity between public users and private property owners would not substantially change compared baseline conditions. The proportion of shoreline in public ownership would not change. The percent of shoreline structures accessible to the public and the proportion of boat capacity available to the general public would slightly increase. Alternative 3 would make a greater share of shoreline access capacity available for public use than Alternatives 1 and 2. However, this increase would be minor. For these reasons, the impact of Alternative 3 on fair-share distribution of recreation capacity would be **less than significant**.

Alternative 4: Expand Public Access and Reduce Existing Development

Alternative 4 would only allow for the construction of new public piers. Piers do not provide additional boating capacity on the lake or generate new boat trips. Buildout of Alternative 4 in combination with existing shorezone structures would result in a small increase (one percent) in the proportion of public structures

compared to private structures, essentially maintaining the existing distribution of publicly-accessible facilities under, with approximately 13 percent of all shorezone structures available to the public (see Table 8-5). The amount of public boat trips generated by public shorezone structures for Alternative 4 would remain the same as under baseline conditions, with 51 percent of boat trips from all shorezone structures generated by publicly-accessible shorezone structures. For these reasons, the impact of Alternative 4 on fair-share distribution of recreation capacity would be **less than significant**.

Mitigation Measures

No mitigation is required.