Lake Tahoe Shoreline Plan

AGENDA: Steering Committee (#27) [v2]

Tuesday, August 15, 2017, 9:00-3:00
at TRPA, Stateline, Nevada

9:00	**Review / Revise Agenda (00)**
9:05	**Update on Public Access in California Discussions**
9:25	**Update on Scoping Process and Alternatives Development**
10:00	**Discuss Remaining Topics (see below)** **Break as needed**
12:15	**Lunch**
12:45	**Continue Discussion**
2:15	**Documents** **Consolidated Document v6: 7.27.2017. clean (03) and with tracks (04)** **Meeting Materials: Program Elements and Environmental Improvements & Protections v2: 6.21.2017 (05)**
2:45	**Updates and Next Steps, Future Meetings** (None currently scheduled)

REMAINING TOPICS
Personal Watercraft Mooring Management and BMPs
Inland Harbors, Enforcement of Conversions from Slips to Buoys
Can Inland harbors that are HOAs apply for a buoy field?
Conversion of Use of a Property (public to private)
Construction Access Issues
Revisit Fallen Leaf and Cascades Lakes
Materials: Other Lakes, *Table of Permit Activity (06)* SC2 (4.26.2017) Meeting Summary Excerpt: The Steering Committee agreed to discuss Fallen Leaf and Cascades Lakes later in the process. TRPA code says that shoreline code will provide guidelines for other lakes in the Tahoe Basin. The committee agreed that once the code is developed for the Lake Tahoe shoreline, it will revisit its applicability elsewhere.

Low Lake Level: Consider Allowing Small Float on Chain

Streamline Permitting Follow Up Needed on Dredging-Nevada

Buoy Enforcement, Underway

Environmental Improvement

Pier Application from 2008 (1 application never withdrawn) confirm—to comply with new design standards

Alternatives description (Scoping ends Aug 16; Alternatives to follow)

Mitigation: Review JFF discussion on mitigation and environmental improvement

Materials: Potential Threshold Attainment and Mitigation Strategies Table (07) and JFF Meeting Notes 1-31-2017 (08)

DISCUSS LATER

Chapter 53 of 2008 Code – revisit definitions for qualified exempt and exempt

Future Fees, Cumulative Impacts, and Mitigation (Blue Boating Program, Pier Fees for Recreation)

Administration

Lake Tahoe Shoreline Plan

Policies Under Consideration

V6

Last Updated 7.27.2017

Table of Contents

Concepts Under Consideration

The Shoreline Steering Committee has developed these concepts under consideration as preliminary consensus and the basis for progress. The Steering Committee will incorporate feedback from the public and the TRPA Governing Board and Regional Plan Implementation Committee to refine these concepts and develop the final package of recommendations.

Moorings

Applicability

- A mooring could be a buoy, a boat slip, or a boatlift.

Moorings per Littoral Parcel

- Each littoral parcel can have two moorings at any one time. Littoral parcels would be allowed three permanent anchor blocks, but can only have 2 moorings at one time. The purpose of the three permanent anchor blocks is to avoid disrupting the lake bottom to relocate moorings.

Mooring of Motorized Boats

- No motorized boats may dock on the beach in fish spawning habitat.

Boat Slips

- No new private boat slips would be allowed except for public facilities and marinas.
- Marinas and public agencies could relocate boat slips if tied to environmental improvement.
- Adding boat slips or buoys at marinas and public agencies would constitute a project and go through a standard review process.
- Marinas and public agencies could exchange boat slips and buoys within their existing facilities and within their designated allocation for new buoys or boat slips. For existing facilities, moving from a buoy to boat slip would require a project application.

Mooring Conversions

Marine Railways

- Serviceable marine railways may convert to a buoy or boat slip, but not a pier.

Buoys

Enforcement

- Establish and implement a joint TRPA/State program of buoy compliance.
- Develop memoranda of agreement with the States and TRPA as a mechanism to facilitate enforcement.
- Recognize that 2008 funding may be available for future enforcement.

Allocation of Potential New Buoys

- 1,430 additional buoys would be eligible for future permitting in addition to the buoys counted during the 2016 boating season.[1] Note, in order to give public land managers and marinas flexibility to choose a variety of mooring layouts, buoys may be changed to boat slips.
- Initially, TRPA will release 800 new buoys at the onset of implementation to be permitted.
- The remaining 630 new buoys would be placed in a reserve pool available for all potential owners in the future and to meet the Plan goals of low lake level adaptation, shifting some availability to the public, and environmental improvement.
    - 330 of the 630 buoys would be reserved for marinas.
- Public agencies will also be provided an allotment from the reserve pool and could utilize a portion or all of this allotment as slips.
- Associations will be allowed to apply for new buoys in buoy fields. In the first five years of Shoreline Plan implementation, associations that have buoys for 50% or more of the applicable housing units are not eligible to apply for new buoys. For associations that are able to apply in the first five years, the request for new buoys can be up to a 20% increase of the total number of existing TRPA-legally-permitted moorings (buoys and slips). The total number of association moorings cannot exceed the number of units,

[1] The environmental analysis will consider a total number of buoys of 6,316. This number is drawn from the 2008 program. The 2016 buoy survey identified 4,886 permitted and unpermitted buoys. In 2008, TRPA received 4,412 buoy applications (3,421 were approved with another 981 pending).

must comply with placement safety standards, and be within the grid system.
- Through an adaptive management review process, allocation of all buoys, including the reserve pool and allocation to associations, would first be revisited the year after the Threshold Evaluation Report is released. Future evaluation of buoy allocations would occur at least every 8 years thereafter.
- Once the mooring cap is reached, TRPA may consider allowing the trading and selling of mooring allocations between private property owners.

Buoy Permitting

- First call, invite all TRPA permittees, both approved and pending, to come in to TRPA to review their buoy permits and rectify any outstanding permit conditions.
- Second call, TRPA will open up to new buoy applications.
- TRPA will only issue permanent buoy permits. No seasonal buoy permits will be issued.

Buoys not within a Buoy Field

Design Standards

- Buoys per littoral parcel
    - Up to two buoys allowed per single-family littoral parcel, as long as dimensional criteria such as setbacks are met. For constricted parcels that are unable to meet setback or spacing requirements, TRPA may adjust projection lines on a case-by-case basis.
- Location
    - Buoys may be located up to 600 feet waterward from elevation 6,220 feet measured horizontally.
    - Buoys must be located 20 feet from adjacent property boundaries and at least 50 feet from all legally existing buoys.
- Buoys within cove environments with interfering projection lines
    - Cove environment allows only 1 buoy per littoral parcel if applicant is not eligible based on projection lines. TRPA may adjust projection lines on a case-by-case basis.
    - Use same off-shore distance (located up to 600 feet waterward from elevation 6,220 feet) and proximity requirements (at least 50 feet from all legally existing buoys) for buoys.

Legally Existing

- Recognition of existing buoys
    - For littoral parcels with existing buoys, TRPA would recognize buoys based on presentation of (a) a valid buoy permit issued by a federal or state agency with appropriate jurisdiction (i.e., USACE, California State Lands, or Nevada State Lands) or (b) clear evidence of the existence of the buoy(s) prior to 1972.
        - Up to 3 buoys allowed (approximately 61 parcels) for littoral lots ≥ 50 feet in width.
        - Up to 2 buoys allowed for littoral parcels < 50 feet in width.
    - For non-littoral parcels, buoys placed prior to 1972 would be recognized only after the applicant has received authorization from the applicable California or Nevada state agency with jurisdiction at Lake Tahoe.
    - Recognized buoys would be required to conform to the location standards for new buoys described above, unless re-location that may be required would create unnecessary additional environmental impacts, and the existing buoy location does not unreasonably interfere with buoys being located by adjacent property owners. In any case, buoys must be located at least 50 feet from any other buoy or structure.

Buoy Fields (including marinas)

Design Standards

- Buoy fields should be designed in a grid using the same setback and spacing standards as for buoys (20 feet from adjacent property boundaries and at least 50 feet from all legally existing buoys) but may deviate from these standards based on site specific conditions including neighboring uses and structures, State agency compliance, Coast Guard consultation, navigation, substrate including obstacles, and bathymetry.
- All commercial and tourist buoys shall be subject to the same setbacks and grid spacing as homeowner associations or other associational entities.

Low Lake Level Adaptation

- Provide for additional permanent anchors for low lake adaptation, either lakeward or laterally for legally established buoys. Applicants must consider a plan for the landward row, given that buoy blocks might be exposed when lake levels are low.

Private Harbors

- Private harbors with inland lagoons associated with homeowner associations on Lake Tahoe include Fleur Du Lac, Elk Point, and Star Harbor.
- Like the Tahoe Keys, the moorage in these inland lagoons will be accounted for in the Shoreline Plan estimates of boat usage on Lake Tahoe. However, due to the small scale of these inland lagoons and lack of an architectural or development review body, their facilities will be subject to the regulations in the TRPA Code of Ordinances.
- Fees and mitigation will be applied consistently to all inland harbors, including the Tahoe Keys Property Owners Association. (Details of the mitigation and fees to be developed.)

Low Lake Level Adaptation

- Allow private harbors to install permanent buoy anchors as low lake level adaptation strategy as part of a buoy field or in exchange for slips as a low lake level adaptation strategy, or when harbors are inaccessible due to sediment accumulation. [In Development]

Buoys Associated with Concessions

- Concessions should moor motorized watercraft on permitted buoys.
- All buoys used for concessions need to be TRPA permitted legal buoys.

Piers

Applicability

- Fish spawning habitat: 2015 updated fish habitat maps using best available data will be adopted as part of the Shoreline Plan. Based on scientific input, the ban on new construction within fish habitat is not scientifically supported and should be lifted. Mitigation in spawning habitat will be required consistent with the environmental thresholds.

Private Pier Distribution Objectives

This pier proposal aims to harmonize the following objectives:

- Provide a fair and reasonable system of access and fairly distribute access around the lake
- Incentivize and prioritize a system of access for multiple-use facilities
- Provide opportunity for single-parcel piers
- Provide flexibility in the location of water-dependent structures

- Develop a predictable and easy-to-understand system
- Maintain and attain environmental thresholds
    - Cap and distribute new piers geographically
    - Use a "go slow" allocation system
    - Manage and monitor shoreline scenic status (improvements and/or declines)
    - Avoid clustering (especially in Visually Sensitive areas, such as sandy beaches)
    - Reduce overall development potential

Definitions

- Pier: A fixed or floating structure intended as a landing or mooring for water craft and either extending from the backshore to at least 10 feet beyond the high water elevation line, or extending into Lake Tahoe to a depth of 6,226.1 feet Lake Tahoe Datum (or a functionally similar depth on other lakes in the Region).
- Single-use pier: Also referred to as a Single-Parcel Pier. A pier that serves one littoral parcel (and retires no parcel as part of the application process).
- Multiple-use pier: a pier that serves more than one parcel.
- Multiple-parcel pier: a pier that retires pier development potential through deed restriction on one or more littoral parcels. A multiple-parcel pier may be built to either single- or multiple-use pier design standards.

Pierhead Line

- TRPA digitized the waterward edge of the pierhead line for all areas around the Lake as depicted on existing hardcopy maps.

General

- Provide incentives for development of multiple-use piers in lieu of single-use piers.
- For all littoral parcels served with a multiple-use pier, pier development potential must be retired through deed restriction for all but the pier-developed parcel. This would apply to both adjacent and non-adjacent parcels regardless of the number of owners.

Incentives for Multiple-Use Piers

- TRPA will prioritize applications for piers based on the number of parcels served.
- The following additional incentives for multiple-use piers may be allowed:
    - additional length for catwalks;

    - one boat lift per littoral parcel, up to a maximum of four per multiple-use pier;
    - flexibility in pierhead design to accommodate multiple users; and
    - increased visual mass dependent upon number of parcels.
- Water depth or substrate slope will not be a required design standard for multiple-use piers.

Eligibility Restrictions

- Littoral parcel is defined as a parcel that has fee ownership to high water.
- All private littoral parcels are eligible for a pier – including those which have access to a homeowners association pier – if the applicant meets the following criteria:
    - The parcel must not have an existing pier,
    - The parcel must not otherwise be deed restricted for a pier.
    - Structures cannot be located in stream mouth protection zones.
    - The parcel cannot be located within Shorezone Preservation Areas. Exceptions, subject to environmental review, possible for public piers.
    - Shoreline width is greater than or equal to 45 feet and therefore would meet side setback requirements.
    - Littoral property owners who have access to a homeowners association pier are eligible to apply for a multiple-parcel pier.
        - If the pier only serves one residential parcel (i.e. single-use design standards apply) then the applicant must retire development potential on 1 parcel to qualify, and if located in a Visually Sensitive area, the applicant must retire at least 2 parcels with at least one of the two in the same segment.
- Public drinking water intakes: within ¼ mile of water intakes, water purveyors will be notified and consulted on project conditions.

Allocation and Distribution of Potential New Piers

Allocation

- 10 public piers would be available for permitting.
- 128 private piers would be available for permitting over the life of the program contingent on threshold attainment, retiring pier development potential, or other access enhancements.
- Initially, TRPA would release 96 of the 128 piers to be permitted over a 16-year period.

- Up to 12 piers would be permitted every two years with any remaining balance rolling over to subsequent years (i.e. if 10 piers permitted in years 1 and 2, then 14 piers (12 + 2) would be available in years 3 and 4).
- The release of additional piers after the initial 16-year period would be contingent upon the number of parcels that retire future pier development potential. TRPA would release three new piers for every 8 parcels that retire future pier development.
- The 128 piers would be allocated 20 percent to single-parcel piers and 80 percent to multiple-parcel piers (those that retire development potential).
- Opportunities for single-parcel piers will be front-loaded, that is, more allocated in the early years to address pent-up demand and to allow multiple-use piers to organize, and then reduced in later allotments
- TRPA will review the implementation of the pier allocation plan, including monitoring the geographic distribution of new piers along with an evaluation of pier availability, under both the Threshold Evaluation process (every 4 years) and an eight-year pier and buoy permitting activity report.

Distribution

- In Visually Sensitive areas, only multiple-parcel piers would be allowed.
- The 128 new private piers would be distributed around Lake Tahoe based on geographic divisions. Pier development within Visually Sensitive areas would be limited based on the percentage of Visually Sensitive shoreline within each quadrant as listed below:
    - California: 86 new piers (67% of 128)
        - Placer Quadrant: 58 new piers (67% of 86)
            - Up to 7 new piers (13% of 58) may be located within Visually Sensitive areas.
        - El Dorado Quadrant: 28 new piers (33% of 86)
            - Up to 6 new piers (22% of 28) may be located within Visually Sensitive areas.
    - Nevada: 42 new piers (33% of 128)
        - Washoe Quadrant: 21 new piers (50% of 42)
            - Up to 3 new piers (14% of 21) may be located within Visually Sensitive areas.
        - Douglas/Carson Quadrant: 21 new piers (50% of 42)
            - Up to 3 new piers (18% of 21) may be located within Visually Sensitive areas.

Prioritization of Permit Applications

- Permit applications for new piers would be collected annually by TRPA.

- If TRPA receives more single-parcel pier proposals than allotted in any given two-year allocation period, the single-parcel piers would be distributed by lottery.
- Multiple-parcel piers would be prioritized based on the following order:
    - Proposals that retire the most pier development potential (i.e. parcels) within the same scenic character type within the same scenic unit.
    - Proposals that retire the most pier development potential.
    - Piers located in less sensitive scenic character types (i.e. Visually Dominated is less sensitive than Visually Modified which is less sensitive than Visually Sensitive).
    - If a parcel has access to a homeowners association pier, it would have last priority in permitting.
- Permit applications that are not accepted after TRPA's permit prioritization assessment will be denied.

Scenic BMPs

- For new piers: TRPA will require an initial 21 contrast rating (this is the baseline requirement) as part of the pier application. Following permit submittal, applicants would have 6 months to increase their contrast rating to 25 as part of project mitigation. TRPA will exempt property owners from the 25 contrast rating if it is not feasible to achieve 25.

Multiple-use Design Standards

Applicability

- Piers that serve more than one primary residence on one parcel or multiple parcels with primary residences may comply with multiple-use pier design standards.
- For single parcels that serve multiple units, including multi-family housing, condos, and home owners associations, the applicable pier design standards are listed below, based on the number of units served. In all such cases, only one boat lift would be allowed.
    - For 1-2 units, single-use design standards apply.
    - For 3-4 units, multiple use design standards apply with visual mass limited to 400 square feet.
    - For 5-20 units, multiple use design standards apply with visual mass limited to 460 square feet.
    - For more than 20 units, multiple use design standards apply with visual mass limited to 520 square feet.

- Piers that serve a single primary residence with multiple vacant littoral parcels must comply with single-use pier design standards but shall qualify for application priority and be drawn from the multiple-parcel allocation pool.

Design Standards

- Length: The landward side of the pier catwalk can extend to elevation 6,219 feet or 30 feet waterward of the pierhead line, whichever is more limiting.
- Width: 15 feet wide, not including catwalks
- Multiple-use piers can have flexibility in the design of the pierhead to accommodate multiple users.
- Catwalks: 3 feet wide and length is dependent upon number of parcels:
    - If two parcels, then catwalks may be up to 30 feet long.
    - If more than two parcels, then catwalks may be up to 45 feet long.
- Boat lifts: One boat lift per littoral parcel allowed, up to a maximum of four per multiple-use pier.
- Visual mass
    - For 2 littoral parcels, visual mass would be limited to 400 square feet
    - For 3 littoral parcels, visual mass would be limited to 460 square feet
    - For 4 or more littoral parcels, visual mass would be limited to 520 square feet
- Boat and boat lift visual mass would not be included in the visual mass limitation; however, applicants would have to mitigate for boat and boat lift visual mass as part of the project.
- Similar to boats and boat lifts, pier railings, which are needed to meet safety requirements, are not included in the visual mass limitation; however, applicants would have to mitigate the visual mass as part of the project.

Single-Use Design Standards

- Orientation: piers shall be constructed perpendicular to the shoreline.
- Length: new or existing piers may extend to elevation 6,219 feet or the pierhead line, whichever is more limiting. If an applicant needs additional pier length for functionality, TRPA standards would allow up to an additional 15 feet waterward of the pier headline if the drop in substrate within the additional 15 feet is a minimum of 6 inches (minimum of 3 percent).
- Width: maximum width equals 10 feet.

- Visual mass: limited to 220 square feet for the pier, which includes catwalks up to 3 feet wide and 30 feet in length. The 220 square feet would not include visual mass of a boat and boat lift, but additional visual mass of a boat lift with a boat would still need to be mitigated.
- Location: A new pier should be located at least 40 feet from any other pier, measured from the pier head. Side setbacks for piers should be at least 20 feet for new piers and 5 feet for existing piers.
- Catwalks up to 3' in width and boatlifts are allowed.

Public Piers

- TRPA will evaluate public pier design on a case-by-case basis. Therefore, design standards for public piers are not proposed.
- Public piers may not be used as permanent moorage.

Commercial and Tourist Accommodation Piers

- A commercial use may be eligible for a new pier if the upland use is also commercial.
- A tourist accommodation use may be eligible for a new pier only if the upland use also includes a commercial use.
- For eligible piers that are open to the public, piers may be designed to multiple-use standards for 4 or more littoral parcels.
- For eligible piers that are not open to the public, piers may be designed to single-use design standards.
- Applications for new piers associated with commercial or tourist accommodation uses will be prioritized as part of the annual pier application and allotment process.

Pier Relocation and Transfer

- Pier relocation is the replacement of an existing pier with a new pier in a different location on the same parcel. Pier transfer is the replacement of an existing pier with a new pier on a different parcel.
- Relocating and transferring piers to less sensitive areas is in the best interest of meeting the environmental thresholds.
- Piers may be relocated or transferred within the same scenic unit or to another scenic unit in attainment, but cannot transfer to another scenic unit that is out of attainment.
- Relocated and transferred piers should meet all location and design criteria for a new pier.
- TRPA will encourage pier owners to relocate piers away from stream mouths through project-specific incentives including but not limited to

offering multiple-use design standards consistent with a 2-parcel pier or providing upland scenic credits.

- Boat lifts from the sending parcel may be relocated to the receiving parcel, regardless of the number of buoys already located on the receiving parcel. In any case, the total number of moorings on Lake Tahoe would not be increased based on a transferred pier.
- When a pier is transferred, the old pier should be fully removed and the area restored. The sending parcel should be deed-restricted from developing a future pier.
- For pier transfers, both the sending and receiving parcels should meet scenic BMP requirements for new piers.

Pier Conversion

- Existing boat ramps may be converted to a pier. These piers would not be counted within the pier allocation.

Expansions of Existing Piers

- Existing piers that conform to location and design standards may be expanded to the extent allowed for new piers.
- Existing piers that do not conform to location and design standards may not be expanded unless:
    - the expansion is limited to an existing boat house and does not increase the functional capacity of the pier;
    - the effect of the expansion is to increase contrast rating of the structure; and
    - the expansion is the absolute minimum necessary to accomplish the scenic quality improvement.

Modification of Existing Pier Structures

- TRPA shall carry forward the In-Kind Code provisions developed under the 2008 Plan into the new Shoreline Plan.
- Existing pier structures that do not conform to location and design standards may be modified if the modification:
    - results in a material environmental benefit;
    - brings the structure into greater compliance with location and design standards; and
    - does not increase the degree of nonconformance with any location and design standard.

Mitigation

Priority Location

- Scenic mitigation and improvement should first occur when possible: 1) on the parcel in the shorezone; 2) on the parcel in the upland area; 3) within the unit on the shorezone; 4) within the unit in the upland; and then 5) in another non-attainment unit.

Scenic Mitigation

- Scenic mitigation for new piers increases with scenic sensitivity of the developing parcel's location.
    - For Visually Dominated areas, the scenic mitigation ratio is 1:1.5.
    - For Visually Modified areas, the scenic mitigation ratio is 1:2.0.
    - For Visually Sensitive areas, the scenic mitigation ratio is 1:3.0.

Fish Habitat Mitigation

- Consistent with the environmental thresholds, mitigation of fish habitat (for feeding / escape cover and spawning) is 1:1.

Scenic Credit Program

- TRPA will allow banking of scenic credits in the shorezone and shoreland.
- Private parcels, public parcels and marinas are eligible to participate.
- Improvement can occur anywhere on the parcel or in the unit.
- Credit always stays with the parcel.

Floating (Swim) Platforms

- Floating platforms should be allowed and tied to a permanent anchor.
- Floating platforms are not moorings; however, they must be connected to an anchor in lieu of a buoy.
- Floating platforms should not exceed 10 x 10 feet.
- Motorized boats cannot be moored to floating platforms.

Boat Ramps

- During periods of low lake levels, encourage non-motorized boaters to use boat ramps that are not functional for motorized boats.
- The existing six public boat ramps may be relocated to sites better suited to accommodate low lake level.
- Up to two new public boat ramps may be developed.

- Any new public boat ramps should be located in areas that promote geographic distribution of lake access in association with clustered development and transportation hubs.
- New ramp locations should also exhibit shoreline conditions that are well suited (e.g. depth, bathymetry) to accommodate access during periods of Phase 2 low lake levels of 6,220 feet.
- Where feasible, marinas and other public ramps may extend ramps to be operational during periods of low lake levels.

Marinas

Applicability

- The Shoreline Plan process could facilitate environmentally beneficial redevelopment at marinas in lieu of Marina Master Plans.
- The types of improvements that marina operators anticipate varies based on a number of factors specific to marina location, including access to navigable water, services provided, and desired reconfiguration or expansion at marinas that may or may not involve additional moorings.
- Marinas may begin planning and implementing for Phase 2 lake levels before such levels are realized.

Permit Streamlining and Environmental Review

- Each marina project would be subject to environmental review, but depending upon the level of disturbance and scale of project, it could be approved at the staff or hearings officer level. Projects requiring an EIS would require review and approval by APC and the Governing Board.
- To avoid multiple permit applications, applications for marina projects are encouraged to be comprehensive in that they should include a phasing plan that includes both short term and long term environmental improvements, low lake level adaptation strategies, and plans for adding additional capacity.

Mooring Allocation[2]

- TRPA will set aside 330 buoy allocations for use at marinas.
- Boat slips would be interchangeable with buoys for allocation purposes.
- Additional buoys or slips may be allocated if a proposed project meets all requirements of the respective permitting agencies and complies with the "Clean Marina" certification program with additional elements that are

[2] See Buoys for further discussion of buoy allocation lake-wide.

Tahoe-specific integrated into the program, including an aquatic invasive species management plan.

- Such compliance would be required prior to permitting any reconfiguration or expansion.
- Marinas should also include some additional elements such as the environmental improvements shown in the list below.
    - Demonstrate flow improvements/reduction of AIS habitat conditions and/or reduced need for dredging.
    - Contribute to existing AIS control efforts (lake wide).
    - Provide a boating rental and operations fleet that meets EPA and/or CARB standards, including electric boats.
    - Install an electric charging station for boats.
    - Provide boater education of 600' no wake zone, boater safety, and clean boating practices.
    - Provide public access to marina fueling and/or pump out stations.
    - Install stormwater BMPs that treat volume above existing TRPA and, if in CA, Lahontan RWCQB requirements.
    - Provide additional scenic improvements, such as rack or storage screening.
    - Provide boat ramps for public use. If a ramp is not functional for motorized boating due to low lake level conditions, provide access for non-motorized boaters.
    - Provide dedicated parking for non-motorized boaters.
    - Demonstrate a low lake level capacity improvement.
    - Provide non-motorized boat storage for public.
    - Install an electric charging station for cars.
    - Reduce on-site coverage.
    - Receive Lake Friendly Business Certification.

- Marinas that have demonstrated past performance in environmental improvements could receive additional consideration for additional buoys or boat slips.
- Buoy or boat slip allocations could be used immediately or phased over time consistent with the project application.
- Marina piers may not be used as permanent moorage.

Low Lake Level Adaptation

- Marinas may begin planning and implementing for Phase 2 (elevation 6,220 feet) lake levels before such levels are realized.

Additional Capacity

- If marinas are adding capacity or making other provisions to accommodate private property owners who cannot access private moorings during low lake level conditions, they should not be required to provide "above and beyond" environmental improvements or additional mitigation fees.

Floating Structures

- Marinas would be allowed to use temporary floating structures to provide access for boats when lake levels fall below 6,225 feet.[3] Such structures should be removed when the lake levels rise above 6,225 feet for a period of six consecutive months.

Pier Extension

- Flexibility in pier design at marinas would be allowed based on site-specific navigation and environmental considerations. Longer piers may help to alleviate the need for dredging, but could have navigation and scenic impacts.
- Marina pier extensions shall be reviewed on a case-by-case basis and subject to the following:
    - A marina pier must serve the public.
    - A marina pier extension must not negatively impact safe navigation.
    - All impacts of a marina pier extension must be appropriately mitigated.
    - A marina pier may be extended 15 feet waterward if the drop in substrate within the additional 15 feet is a minimum of 6 inches (minimum of 3 percent). Additional extensions may be allowed if the average slope in the area being extended is a minimum of 3 percent. However, the total length of a marina pier may not exceed 1,000 feet.
- A marina pier extension for the purposes of facilitating waterborne transit shall be considered only with the review of a waterborne transit plan or project.

[3] Both TRPA and California State Lands Commission will explore new permits and leases, respectively, that can accommodate marina flexibility for taking these structures in and out of the water.

Design Standards

Buoy Fields

- Marina buoy fields must comply with the same standards as other buoy fields (see Buoys) although marina buoy fields may extend further. waterward than other fields if consistent with existing permits and leases.
- Marina buoy fields could include additional rows of lakeward anchors to accommodate low lake level adaptation, but the number of buoys must stay the same.

Dredging

- New dredging would only be allowed at marinas, the five essential public health and safety facilities, and public boat ramps where previously approved uses exist, provided all environmental impacts are addressed and can be appropriately mitigated.
- New dredging at public boat ramps may be allowed if increased functionality of the ramp can be demonstrated.
- TRPA will adopt a conformance standard consistent with the Army Corps of Engineers 404 federal standard for new dredging (non-degradation). Applicants will also need to comply with each state's 401 permit requirements.
- Maintenance dredging would continue to be allowed.

Overnight Anchoring

- Watercraft moored overnight shall be moored to legally existing buoys, boatlifts, slips, berths, boat hoists or other watercraft storage facilities, except for the following:
    - Mooring of construction watercraft for purposes of and use during TRPA-authorized construction activities,
    - Mooring of public service watercraft for health and safety purposes, or
    - Mooring of watercraft for occasional overnight camping purposes, limited for up to 72 hours within a 2-week period within the same general area of the lake.

No Wake Zone

- The no wake zone will be maintained at 600-feet from the water line and speed will continue to be limited to 5 mph, except for within Emerald Bay.

- Within Emerald Bay, all areas will be designated as a no wake zone. Speed would be limited to 5 mph with an exception up to 7 mph for tour boats.

Concessions

Applicability

- Concession structures that occur upland of the shorezone will not be regulated through the Shoreline Plan.
- The following general policies and standards apply to both motorized and non-motorized concessions unless specified.

General

- Concessions would only be permitted as an accessory use for applicants that have a permitted upland commercial or public facility/use and would need to consider upland parking availability.
- TRPA would only issue permanent permits. The permit would specify the number and type of boats, paddleboards, kiosks/ structures, etc. to support the concession.
- All concessions with a valid permit would be considered grandfathered to continue operating under their existing permit conditions. All new concessions would be required to meet the requirements of the Shoreline Plan. TRPA is responsible for enforcement of unauthorized uses.
- Moorings for concessions would be counted toward the buoy cap.
- When allowed, only one watercraft may be moored per buoy or slip. Use of buoy "trains" are not allowed outside of marinas.
- All concessions have to meet BMPs, including fueling best management practices, meeting fire codes, and local jurisdiction permit(s).

Concessions for Motorized Boat Rentals

- New motorized boat concessions must be associated with a marina.
- Each concession for motorized boating would be allowed 1 watercraft per permitted mooring except for marinas, which may have one string with no more than 10 personal watercraft.

Design Standards

- Storage racks would be allowed. The location of racks would be above high water wherever possible and provide for maximum access and recreational benefit.

Non-motorized Boating

Applicability

The Shoreline Plan recognizes that non-motorized boating is an ever-increasing recreational activity at Lake Tahoe and supports efforts to provide safe access, egress and navigation. The Shoreline Plan will also provide opportunities for facilities to accommodate non-motorized boating activities, including paddle boarding and kayaking. The California Tahoe Conservancy along with the Lake Tahoe Water Trail Association provides a robust boater education and safety program at Lake Tahoe. The U.S. Coast Guard, marinas, and other recreation providers also facilitate boater safety and provide information.

Safe Navigation Elements of the Shoreline Plan

- Continues the no-wake zone at 600-feet and 5mph speed limit.
- Limits pier length via the designated pierhead line.
- Controls where piers are located, preserving natural areas without piers and distributing piers in areas where piers already exist.
- Creates more space and a buffer for non-motorized access on the landward side of buoy fields by allowing buoy fields to move their landward row of buoys lakeward during low lake levels.

Use/Access Improvements of the Shoreline Plan

- Provides for storage racks and concessions in the shorezone.
- Supports funding for signage associated with the Water Trail to identify launch sites, landing locations, and other public access points.
- Enhances public boat ramps for non-motorized watercraft to take advantage during periods of low lake when not accessible for motorized boats.
- Upholds environmental thresholds (scenic, water quality, recreation) to ensure a quality recreational experience for all users.

Personal Watercraft

- The Joint Fact Finding Committee will develop a list of Best Management Practices for storing and mooring personal watercraft. [In Development]

Other Structures

Breakwaters, Jetties, and Rock Crib and Sheet Pile Piers

- No new public or private breakwaters, jetties, rock crib piers, or sheet pile piers (or other structures of this type) would be permitted in the Lake Tahoe Region except as part of a habitat restoration project or as part of a marina environmental improvement project.

Low Lake Level Adaptation

Phased Approach

The Shoreline Plan will plan for low lake level adaptation over the next 20 years and recognize the following phases:

Phase 1: 6223 feet elevation, natural rim. The current legal low used in regional planning.

Phase 2: 6,220 feet. The Joint Fact-Finding Committee recommended the use of elevation 6,220 feet based on their review of the historic low lake elevation (6,220 feet) and the central tendency in the Bureau of Reclamation Truckee Basin Study[4]. This elevation is considered the low elevation for planning decisions and policy development, intended to accommodate some access during low lake levels.

Phase 3: Below 6220 feet ("too low to provide for access"). In some years, the lake elevation may drop below a level at which boating and other access can no longer be reasonably provided.

Direct Access towards Marinas and other Public Ramps

- During periods of Phase 2 low lake levels, direct boats, which need associated structures to safely and effectively launch, to marinas and other public ramps that are operational at such elevations, clustering access near areas with transportation and transit options.
- Support marinas and other public ramps to adapt to be operational during periods of low lake levels to the extent feasible.

[4] U.S. Department of the Interior, Bureau of Reclamation (2015). Reclamation: Managing Water in the West. Truckee Basin Study, Basin Study Report. August, 2015.

- The Shoreline Plan low lake adaptations will generally plan to accommodate watercraft up to thirty feet in length, which is roughly the average length of boats on the Lake.

Tolerance Districts and Permissible Uses

- TRPA guides development around the shoreline of Lake Tahoe through the use of eight shorezone tolerance districts that were developed based on an analysis of an areas tolerance or responsiveness to disturbance or change. Within the tolerance districts, TRPA also developed appropriate permissible uses for the shoreline depending upon the level of intensity of development authorized by the designated tolerance district classification. The tolerance districts and associated permissible uses are to be carried forward into the Shoreline Plan.
- The existing code is open to interpretation regarding private access from the backshore to the foreshore (competing clauses in the code in certain Tolerance Districts). Due to topography, such as steep slopes, private access to the backshore should be allowed, but such access should be accomplished in the least impactful way, which might be a footpath or staircase. TRPA would clarify the existing code.

Public Trust Easement in CA

- TRPA and California State Lands Commission has agreed to draft a memorandum of understanding that would detail a process to coordinate applications for piers which respect the easement and property rights, giving assurance to property owners. The MOU is in development.

Tahoe Keys

The 2016 inventory included boating facilities in the Tahoe Keys.

Applicability

- The Shoreline Plan accounts for the anticipated environmental impacts of the Keys by including Tahoe Keys lagoon structures as part of the 2016 shoreline structure inventory and boating capacity coming from the Keys for the environmental baseline.
- The Lake Tahoe shoreline development standards in the Shoreline Plan would not apply in the Tahoe Keys because the Keys are not part of Lake

Tahoe (proper). For example, low lake adaptation policies and standards would not apply in the Keys.

- The highest priority issue to address in the Keys is Aquatic Invasive Species (AIS) management, and TRPA and Lahontan are working actively with the Keys Property Owners Association on developing and implementing an invasive weeds management plan.
- Because the Keys are built out, there is little need to prioritize planning for new development, and any refinements to permit administration for the Keys will likely be taken up after the Shoreline Plan for Lake Tahoe and the Keys AIS Management Plan work is completed.

Green Infrastructure

- TRPA will allow planning for infrastructure that will support environmental improvement.

Environmental Improvement

- Environmental improvement projects with a nexus to recreational impacts will be identified and presented as an opportunity to advance expanded recreational access in concert with environmental restoration. Environmental Improvement Program (EIP) implementation that is in alignment with existing EIP programmatic priorities will be part of the established framework. [In Development]
- Staff and the Steering Committee are working together to identify the exact mechanisms to link the Shoreline Plan with Aquatic Invasive Species (AIS) and recreation projects.

Lake Tahoe Shoreline Plan

Policies Under Consideration

V6

Last Updated 7.27.2017

Table of Contents

Concepts Under Consideration

The Shoreline Steering Committee has developed these concepts under consideration as preliminary consensus and the basis for progress. The Steering Committee will incorporate feedback from the public and the TRPA Governing Board and Regional Plan Implementation Committee to refine these concepts and develop the final package of recommendations.

Moorings

Applicability

- A mooring could be a buoy, a boat slip, or a boatlift.

Moorings per Littoral Parcel

- Each littoral parcel can have two moorings at any one time. Littoral parcels would be allowed three permanent anchor blocks, but can only have 2 moorings at one time. The purpose of the three permanent anchor blocks is to avoid disrupting the lake bottom to relocate moorings.

Mooring of Motorized Boats

- No motorized boats may dock on the beach in fish spawning habitat.

Boat Slips

- No new private boat slips would be allowed except for public facilities and marinas.
- Marinas and public agencies could relocate boat slips if tied to environmental improvement.
- Adding boat slips or buoys at marinas and public agencies would constitute a project and go through a standard review process.
- Marinas and public agencies could exchange boat slips and buoys within their existing facilities and within their designated allocation for new buoys or boat slips. For existing facilities, moving from a buoy to boat slip would require a project application.

Mooring Conversions

Marine Railways

- Serviceable marine railways may convert to a buoy or boat slip, but not a pier.

Buoys

Enforcement

- Establish and implement a joint TRPA/State program of buoy compliance.
- Develop memoranda of agreement with the States and TRPA as a mechanism to facilitate enforcement.
- Recognize that 2008 funding may be available for future enforcement.

Allocation of Potential New Buoys

- 1,430 additional buoys would be eligible for future permitting in addition to the buoys counted during the 2016 boating season.[1] Note, in order to give public land managers and marinas flexibility to choose a variety of mooring layouts, buoys may be changed to boat slips.
- Initially, TRPA will release 800 new buoys at the onset of implementation to be permitted.
- The remaining 630 new buoys would be placed in a reserve pool available for all potential owners in the future and to meet the Plan goals of low lake level adaptation, shifting some availability to the public, and environmental improvement.
    - 330 of the 630 buoys would be reserved for marinas.
- Public agencies will also be provided an allotment from the reserve pool and could utilize a portion or all of this allotment as slips.
- Associations will be allowed to apply for new buoys in buoy fields. In the first five years of Shoreline Plan implementation, associations that have buoys for 50% or more of the applicable housing units are not eligible to apply for new buoys. For associations that are able to apply in the first five years, the request for new buoys can be up to a 20% increase of the total number of existing TRPA-legally-permitted moorings (buoys and slips). The total number of association moorings cannot exceed the number of units,

[1] The environmental analysis will consider a total number of buoys of 6,316. This number is drawn from the 2008 program. The 2016 buoy survey identified 4,886 permitted and unpermitted buoys. In 2008, TRPA received 4,412 buoy applications (3,421 were approved with another 981 pending).

must comply with placement safety standards, and be within the grid system.

- Through an adaptive management review process, ~~A~~allocation of all buoys, including the reserve pool and allocation to associations, would first be revisited ~~every 5 years~~the year after the Threshold Evaluation Report is released ~~through an adaptive management review process~~. Future evaluation of buoy allocations would occur at least every 8 years thereafter.
- Once the mooring cap is reached, TRPA may consider allowing the trading and selling of mooring allocations between private property owners.

Buoy Permitting

- First call, invite all TRPA permittees, both approved and pending, to come in to TRPA to review their buoy permits and rectify any outstanding permit conditions.
- Second call, TRPA will open up to new buoy applications.
- TRPA will only issue permanent buoy permits. No seasonal buoy permits will be issued.

Buoys not within a Buoy Field

Design Standards

- Buoys per littoral parcel
  - Up to two buoys allowed per single-family littoral parcel, as long as dimensional criteria such as setbacks are met. For constricted parcels that are unable to meet setback or spacing requirements, TRPA may adjust projection lines on a case-by-case basis.
- Location
  - Buoys may be located up to 600 feet waterward from elevation 6,220 feet measured horizontally.
  - Buoys must be located 20 feet from adjacent property boundaries and at least 50 feet from all legally existing buoys.
- Buoys within cove environments with interfering projection lines
  - Cove environment allows only 1 buoy per littoral parcel if applicant is not eligible based on projection lines. TRPA may adjust projection lines on a case-by-case basis.
  - Use same off-shore distance (located up to 600 feet waterward from elevation 6,220 feet) and proximity requirements (at least 50 feet from all legally existing buoys) for buoys.

~~Grandfathering~~Legally Existing

- Recognition of existing buoys
    - For littoral parcels with existing buoys, TRPA would recognize buoys based on presentation of (a) a valid buoy permit issued by a federal or state agency with appropriate jurisdiction (i.e., USACE, California State Lands, or Nevada State Lands) or (b) clear evidence of the existence of the buoy(s) prior to 1972.
        - Up to 3 buoys allowed (approximately 61 parcels) for littoral lots ≥ 50 feet in width.
        - Up to 2 buoys allowed for littoral parcels < 50 feet in width.
    - For non-littoral parcels, buoys placed prior to 1972 would be recognized only after the applicant has received authorization from the applicable California or Nevada state agency with jurisdiction at Lake Tahoe.
    - Recognized buoys would be required to conform to the location standards for new buoys described above, unless re-location that may be required would create unnecessary additional environmental impacts, and the existing buoy location does not unreasonably interfere with buoys being located by adjacent property owners. In any case, buoys must be located at least 50 feet from any other buoy or structure.

Buoy Fields (including marinas)

Design Standards

- Buoy fields should be designed in a grid using the same setback and spacing standards as for buoys (20 feet from adjacent property boundaries and at least 50 feet from all legally existing buoys) but may deviate from these standards based on site specific conditions including neighboring uses and structures, State agency compliance, Coast Guard consultation, navigation, substrate including obstacles, and bathymetry.
- All commercial and tourist buoys shall be subject to the same setbacks and grid spacing as homeowner associations or other associational entities.

Low Lake Level Adaptation

- Provide for additional permanent anchors for low lake adaptation, either lakeward or laterally for legally established buoys. Applicants must consider a plan for the landward row, given that buoy blocks might be exposed when lake levels are low.

Private Harbors

- Private harbors with inland lagoons associated with homeowner associations on Lake Tahoe include Fleur Du Lac, Elk Point, and Star Harbor.
- Like the Tahoe Keys, the moorage in these inland lagoons will be accounted for in the Shoreline Plan estimates of boat usage on Lake Tahoe. However, due to the small scale of these inland lagoons and lack of an architectural or development review body, their facilities will be subject to the regulations in the TRPA Code of Ordinances.
- Fees and mitigation will be applied consistently to all inland harbors, including the Tahoe Keys Property Owners Association. (Details of the mitigation and fees to be developed.)

Low Lake Level Adaptation

- Allow private harbors to install permanent buoy anchors as low lake level adaptation strategy as part of a buoy field or in exchange for slips as a low lake level adaptation strategy, or when harbors are inaccessible due to sediment accumulation. [In Development]

Buoys Associated with Concessions

- Concessions should moor motorized watercraft on permitted buoys.
- All buoys used for concessions need to be TRPA permitted legal buoys.

Piers

Applicability

- Fish spawning habitat: 2015 updated fish habitat maps using best available data will be adopted as part of the Shoreline Plan. Based on scientific input, the ban on new construction within fish habitat is not scientifically supported and should be lifted. Mitigation in spawning habitat will be required consistent with the environmental thresholds.

Private Pier Distribution Objectives

This pier proposal aims to harmonize the following objectives:

- Provide a fair and reasonable system of access and fairly distribute access around the lake
- Incentivize and prioritize a system of access for multiple-use facilities
- Provide opportunity for single-parcel piers
- Provide flexibility in the location of water-dependent structures

- Develop a predictable and easy-to-understand system
- Maintain and attain environmental thresholds
    - Cap and distribute new piers geographically
    - Use a "go slow" allocation system
    - Manage and monitor shoreline scenic status (improvements and/or declines)
    - Avoid clustering (especially in Visually Sensitive areas, such as sandy beaches)
    - Reduce overall development potential

Definitions

- Pier: A fixed or floating structure intended as a landing or mooring for water craft and either extending from the backshore to at least 10 feet beyond the high water elevation line, or extending into Lake Tahoe to a depth of 6,226.1 feet Lake Tahoe Datum (or a functionally similar depth on other lakes in the Region).
- Single-use pier: Also referred to as a Single-Parcel Pier. A pier that serves one littoral parcel (and retires no parcel as part of the application process).
- Multiple-use pier: a pier that serves more than one parcel.
- Multiple-parcel pier: a pier that retires pier development potential through deed restriction on one or more littoral parcels. A multiple-parcel pier may be built to either single- or multiple-use pier design standards.

Pierhead Line

- TRPA digitized the waterward edge of the pierhead line for all areas around the Lake as depicted on existing hardcopy maps.

General

- Provide incentives for development of multiple-use piers in lieu of single-use piers.
- For all littoral parcels served with a multiple-use pier, pier development potential must be retired through deed restriction for all but the pier-developed parcel. This would apply to both adjacent and non-adjacent parcels regardless of the number of owners.

Incentives for Multiple-Use Piers

- TRPA will prioritize applications for piers based on the number of parcels served.
- The following additional incentives for multiple-use piers may be allowed:
    - additional length for catwalks;

    - one boat lift per littoral parcel, up to a maximum of four per multiple-use pier;
    - flexibility in pierhead design to accommodate multiple users; and
    - increased visual mass dependent upon number of parcels.
- Water depth or substrate slope will not be a required design standard for multiple-use piers.

Eligibility Restrictions

- Littoral parcel is defined as a parcel that has fee ownership to high water.
- All private littoral parcels are eligible for a pier – including those which have access to a homeowners association pier – if the applicant meets the following criteria:
    - The parcel must not have an existing pier,
    - The parcel must not otherwise be deed restricted for a pier.
    - Structures cannot be located in stream mouth protection zones.
    - The parcel cannot be located within Shorezone Preservation Areas. Exceptions, subject to environmental review, possible for public piers.
    - Shoreline width is greater than or equal to 45 feet and therefore would meet side setback requirements.
    - Littoral property owners who have access to a homeowners association pier are eligible to apply for a multiple-parcel pier.
        - If the pier only serves one residential parcel (i.e. single-use design standards apply) then the applicant must retire development potential on 1 parcel to qualify, and if located in a Visually Sensitive area, the applicant must retire at least 2 parcels with at least one of the two in the same segment.
- Public drinking water intakes: within ¼ mile of water intakes, water purveyors will be notified and consulted on project conditions.

Allocation and Distribution of Potential New Piers

Allocation

- 10 public piers would be available for permitting.
- 128 private piers would be available for permitting over the life of the program contingent on threshold attainment, retiring pier development potential, or other access enhancements.
- Initially, TRPA would release 96 of the 128 piers to be permitted over a 16-year period.

- Up to 12 piers would be permitted every two years with any remaining balance rolling over to subsequent years (i.e. if 10 piers permitted in years 1 and 2, then 14 piers (12 + 2) would be available in years 3 and 4).
- The release of additional piers after the initial 16-year period would be contingent upon the number of parcels that retire future pier development potential. TRPA would release three new piers for every 8 parcels that retire future pier development.
- The 128 piers would be allocated 20 percent to single-parcel piers and 80 percent to multiple-parcel piers (those that retire development potential).
- Opportunities for single-parcel piers will be front-loaded, that is, more allocated in the early years to address pent-up demand and to allow multiple-use piers to organize, and then reduced in later allotments
- TRPA will review the implementation of the pier allocation plan, including monitoring the geographic distribution of new piers along with an evaluation of pier availability, under both the Threshold Evaluation process (every 4 years) and an eight-year pier and buoy permitting activity report.

Distribution

- In Visually Sensitive areas, only multiple-parcel piers would be allowed.
- The 128 new private piers would be distributed around Lake Tahoe based on geographic divisions. Pier development within Visually Sensitive areas would be limited based on the percentage of Visually Sensitive shoreline within each quadrant as listed below:
    - California: 86 new piers (67% of 128)
        - Placer Quadrant: 58 new piers (67% of 86)
            - Up to 7 new piers (13% of 58) may be located within Visually Sensitive areas.
        - El Dorado Quadrant: 28 new piers (33% of 86)
            - Up to 6 new piers (22% of 28) may be located within Visually Sensitive areas.
    - Nevada: 42 new piers (33% of 128)
        - Washoe Quadrant: 21 new piers (50% of 42)
            - Up to 3 new piers (14% of 21) may be located within Visually Sensitive areas.
        - Douglas/Carson Quadrant: 21 new piers (50% of 42)
            - Up to 3 new piers (18% of 21) may be located within Visually Sensitive areas.

Prioritization of Permit Applications

- Permit applications for new piers would be collected annually by TRPA.

- If TRPA receives more single-parcel pier proposals than allotted in any given two-year allocation period, the single-parcel piers would be distributed by lottery.
- Multiple-parcel piers would be prioritized based on the following order:
    - Proposals that retire the most pier development potential (i.e. parcels) within the same scenic character type within the same scenic unit.
    - Proposals that retire the most pier development potential.
    - Piers located in less sensitive scenic character types (i.e. Visually Dominated is less sensitive than Visually Modified which is less sensitive than Visually Sensitive).
    - If a parcel has access to a homeowners association pier, it would have last priority in permitting.
- Permit applications that are not accepted after TRPA's permit prioritization assessment will be denied.

Scenic BMPs

- For new piers: TRPA will require an initial 21 contrast rating (this is the baseline requirement) as part of the pier application. Following permit submittal, applicants would have 6 months to increase their contrast rating to 25 as part of project mitigation. TRPA will exempt property owners from the 25 contrast rating if it is not feasible to achieve 25.

Multiple-use Design Standards

Applicability

- Piers that serve more than one primary residence on one parcel or multiple parcels with primary residences may comply with multiple-use pier design standards.
- For single parcels that serve multiple units, including multi-family housing, condos, and home owners associations, the applicable pier design standards are listed below, based on the number of units served. In all such cases, only one boat lift would be allowed.
    - For 1-2 units, single-use design standards apply.
    - For 3-4 units, multiple use design standards apply with visual mass limited to 400 square feet.
    - For 5-20 units, multiple use design standards apply with visual mass limited to 460 square feet.
    - For more than 20 units, multiple use design standards apply with visual mass limited to 520 square feet.

- Piers that serve a single primary residence with multiple vacant littoral parcels must comply with single-use pier design standards but shall qualify for application priority and be drawn from the multiple-parcel allocation pool.

Design Standards

- Length: The landward side of the pier catwalk can extend to elevation 6,219 feet or 30 feet waterward of the pierhead line, whichever is more limiting.
- Width: 15 feet wide, not including catwalks
- Multiple-use piers can have flexibility in the design of the pierhead to accommodate multiple users.
- Catwalks: 3 feet wide and length is dependent upon number of parcels:
    - If two parcels, then catwalks may be up to 30 feet long.
    - If more than two parcels, then catwalks may be up to 45 feet long.
- Boat lifts: One boat lift per littoral parcel allowed, up to a maximum of four per multiple-use pier.
- Visual mass
    - For 2 littoral parcels, visual mass would be limited to 400 square feet
    - For 3 littoral parcels, visual mass would be limited to 460 square feet
    - For 4 or more littoral parcels, visual mass would be limited to 520 square feet
- Boat and boat lift visual mass would not be included in the visual mass limitation; however, applicants would have to mitigate for boat and boat lift visual mass as part of the project.
- Similar to boats and boat lifts, pier railings, which are needed to meet safety requirements, are not included in the visual mass limitation; however, applicants would have to mitigate the visual mass as part of the project.

Single-Use Design Standards

- Orientation: piers shall be constructed perpendicular to the shoreline.
- Length: new or existing piers may extend to elevation 6,219 feet or the pierhead line, whichever is more limiting. If an applicant needs additional pier length for functionality, TRPA standards would allow up to an additional 15 feet waterward of the pier headline if the drop in substrate within the additional 15 feet is a minimum of 6 inches (minimum of 3 percent).
- Width: maximum width equals 10 feet.

- Visual mass: limited to 220 square feet for the pier, which includes catwalks up to 3 feet wide and 30 feet in length. The 220 square feet would not include visual mass of a boat and boat lift, but additional visual mass of a boat lift with a boat would still need to be mitigated.
- Location: A new pier should be located at least 40 feet from any other pier, measured from the pier head. Side setbacks for piers should be at least 20 feet for new piers and 5 feet for existing piers.
- Catwalks up to 3' in width and boatlifts are allowed.

Public Piers

- TRPA will evaluate public pier design on a case-by-case basis. Therefore, design standards for public piers are not proposed.
- Public piers may not be used as permanent moorage.

Commercial and Tourist Accommodation Piers

- A commercial use may be eligible for a new pier if the upland use is also commercial.
- A tourist accommodation use may be eligible for a new pier only if the upland use also includes a commercial use.
- For eligible piers that are open to the public, piers may be designed to multiple-use standards for 4 or more littoral parcels.
- For eligible piers that are not open to the public, piers may be designed to single-use design standards.
- Applications for new piers associated with commercial or tourist accommodation uses will be prioritized as part of the annual pier application and allotment process.

Pier Relocation and Transfer

- Pier relocation is the replacement of an existing pier with a new pier in a different location on the same parcel. Pier transfer is the replacement of an existing pier with a new pier on a different parcel.
- Relocating and transferring piers to less sensitive areas is in the best interest of meeting the environmental thresholds.
- Piers may be relocated or transferred within the same scenic unit or to another scenic unit in attainment, but cannot transfer to another scenic unit that is out of attainment.
- Relocated and ~~T~~transferred piers should meet all location and design criteria for a new pier.
- TRPA will encourage pier owners to relocate piers away from stream mouths through project-specific incentives including but not limited to

offering multiple-use design standards consistent with a 2-parcel pier or providing upland scenic credits.

- Boat lifts from the sending parcel may be relocated to the receiving parcel, regardless of the number of buoys already located on the receiving parcel. In any case, the total number of moorings on Lake Tahoe would not be increased based on a transferred pier.
- When a pier is transferred, the old pier should be fully removed and the area restored. The sending parcel should be deed-restricted from developing a future pier.
- For pier transfers, both the sending and receiving parcels should meet scenic BMP requirements for new piers.
-

Pier Conversion

- Existing boat ramps may be converted to a pier. These piers would not be counted within the pier allocation.

Expansions of Existing Piers

- Existing piers that conform to location and design standards may be expanded to the extent allowed for new piers.
- Existing piers that do not conform to location and design standards may not be expanded unless:
    - the expansion is limited to an existing boat house and does not increase the functional capacity of the pier;
    - the effect of the expansion is to increase contrast rating of the structure; and
    - the expansion is the absolute minimum necessary to accomplish the scenic quality improvement.

Modification of Existing Pier Structures

- TRPA shall carry forward the In-Kind Code provisions developed under the 2008 Plan into the new Shoreline Plan.
- Existing pier structures that do not conform to location and design standards may be modified if the modification:
    - results in a material environmental benefit;
    - brings the structure into greater compliance with location and design standards; and
    - does not increase the degree of nonconformance with any location and design standard.

Mitigation

Priority Location

- Scenic mitigation and improvement should first occur when possible: 1) on the parcel in the shorezone; 2) on the parcel in the upland area; 3) within the unit on the shorezone; 4) within the unit in the upland; and then 5) in another non-attainment unit.

Scenic Mitigation

- Scenic mitigation for new piers increases with scenic sensitivity of the developing parcel's location.
    - For Visually Dominated areas, the scenic mitigation ratio is 1:1.5.
    - For Visually Modified areas, the scenic mitigation ratio is 1:2.0.
    - For Visually Sensitive areas, the scenic mitigation ratio is 1:3.0.

Fish Habitat Mitigation

- Consistent with the environmental thresholds, mitigation of fish habitat (for feeding / escape cover and spawning) is 1:1.

Scenic Credit Program

- TRPA will allow banking of scenic credits in the shorezone and shoreland.
- Private parcels, public parcels and marinas are eligible to participate.
- Improvement can occur anywhere on the parcel or in the unit.
- Credit always stays with the parcel.

Floating (Swim) Platforms

- Floating platforms should be allowed and tied to a permanent anchor.
- Floating platforms are not moorings; however, they must be connected to an anchor in lieu of a buoy.
- Floating platforms should not exceed 10 x 10 feet.
- Motorized boats cannot be moored to floating platforms.

Boat Ramps

- During periods of low lake levels, encourage non-motorized boaters to use boat ramps that are not functional for motorized boats.
- The existing six public boat ramps may be relocated to sites better suited to accommodate low lake level.
- Up to two new public boat ramps may be developed.

- Any new public boat ramps should be located in areas that promote geographic distribution of lake access in association with clustered development and transportation hubs.
- New ramp locations should also exhibit shoreline conditions that are well suited (e.g. depth, bathymetry) to accommodate access during periods of Phase 2 low lake levels of 6,220 feet.
- Where feasible, marinas and other public ramps may extend ramps to be operational during periods of low lake levels.

Marinas

Applicability

- The Shoreline Plan process could facilitate environmentally beneficial redevelopment at marinas in lieu of Marina Master Plans.
- The types of improvements that marina operators anticipate varies based on a number of factors specific to marina location, including access to navigable water, services provided, and desired reconfiguration or expansion at marinas that may or may not involve additional moorings.
- Marinas may begin planning and implementing for Phase 2 lake levels before such levels are realized.

Permit Streamlining and Environmental Review

- Each marina project would be subject to environmental review, but depending upon the level of disturbance and scale of project, it could be approved at the staff or hearings officer level. Projects requiring an EIS would require review and approval by APC and the Governing Board.
- To avoid multiple permit applications, applications for marina projects are encouraged to be comprehensive in that they should include a phasing plan that includes both short term and long term environmental improvements, low lake level adaptation strategies, and plans for adding additional capacity.

Mooring Allocation[2]

- TRPA will set aside 330 buoy allocations for use at marinas.
- Boat slips would be interchangeable with buoys for allocation purposes.
- Additional buoys or slips may be allocated if a proposed project meets all requirements of the respective permitting agencies and complies with the "Clean Marina" certification program with additional elements that are

[2] See Buoys for further discussion of buoy allocation lake-wide.

Tahoe-specific integrated into the program, including an aquatic invasive species management plan.

- Such compliance would be required prior to permitting any reconfiguration or expansion.
- Marinas should also include some additional elements such as the environmental improvements shown in the list below.
    - Demonstrate flow improvements/reduction of AIS habitat conditions and/or reduced need for dredging.
    - Contribute to existing AIS control efforts (lake wide).
    - Provide a boating rental and operations fleet that meets EPA and/or CARB standards, including electric boats.
    - Install an electric charging station for boats.
    - Provide boater education of 600' no wake zone, boater safety, and clean boating practices.
    - Provide public access to marina fueling and/or pump out stations.
    - Install stormwater BMPs that treat volume above existing TRPA and, if in CA, Lahontan RWCQB requirements.
    - Provide additional scenic improvements, such as rack or storage screening.
    - Provide boat ramps for public use. If a ramp is not functional for motorized boating due to low lake level conditions, provide access for non-motorized boaters.
    - Provide dedicated parking for non-motorized boaters.
    - Demonstrate a low lake level capacity improvement.
    - Provide non-motorized boat storage for public.
    - Install an electric charging station for cars.
    - Reduce on-site coverage.
    - Receive Lake Friendly Business Certification.

- Marinas that have demonstrated past performance in environmental improvements could receive additional consideration for additional buoys or boat slips.
- Buoy or boat slip allocations could be used immediately or phased over time consistent with the project application.
- Marina piers may not be used as permanent moorage.

Low Lake Level Adaptation

- Marinas may begin planning and implementing for Phase 2 (elevation 6,220 feet) lake levels before such levels are realized.

Additional Capacity

- If marinas are adding capacity or making other provisions to accommodate private property owners who cannot access private moorings during low lake level conditions, they should not be required to provide "above and beyond" environmental improvements or additional mitigation fees.

Floating Structures

- Marinas would be allowed to use temporary floating structures to provide access for boats when lake levels fall below 6,225 feet.[3] Such structures should be removed when the lake levels rise above 6,225 feet for a period of six consecutive months.

Pier Extension

- Flexibility in pier design at marinas would be allowed based on site-specific navigation and environmental considerations. Longer piers may help to alleviate the need for dredging, but could have navigation and scenic impacts.
- Marina pier extensions shall be reviewed on a case-by-case basis and subject to the following:
    - A marina pier must serve the public.
    - A marina pier extension must not negatively impact safe navigation.
    - All impacts of a marina pier extension must be appropriately mitigated.
    - A marina pier may be extended 15 feet waterward if the drop in substrate within the additional 15 feet is a minimum of 6 inches (minimum of 3 percent). Additional extensions may be allowed if the ~~same substrate slope applies continuously~~average slope in the area being extended is a minimum of 3 percent. However, the total length of a marina pier may not exceed 1,000 feet.
- A marina pier extension for the purposes of facilitating waterborne transit shall be considered only with the review of a waterborne transit plan or project.

[3] Both TRPA and California State Lands Commission will explore new permits and leases, respectively, that can accommodate marina flexibility for taking these structures in and out of the water.

Design Standards

Buoy Fields

- Marina buoy fields must comply with the same standards as other buoy fields (see Buoys) although marina buoy fields may extend further. waterward than other fields if consistent with existing permits and leases.
- Marina buoy fields could include additional rows of lakeward anchors to accommodate low lake level adaptation, but the number of buoys must stay the same.

Dredging

- New dredging would only be allowed at marinas, the five essential public health and safety facilities, and ~~the six existing~~ public boat ramps where previously approved uses exist, provided all environmental impacts are addressed and can be appropriately mitigated.
- New dredging at public boat ramps may be allowed if increased functionality of the ramp can be demonstrated.
- TRPA will adopt a conformance standard consistent with the Army Corps of Engineers 404 federal standard for new dredging (non-degradation). Applicants will also need to comply with each state's 401 permit requirements.
- Maintenance dredging would continue to be allowed.

Overnight Anchoring

- Watercraft moored overnight shall be moored to legally existing buoys, boatlifts, slips, berths, boat hoists or other watercraft storage facilities, except for the following:
  - Mooring of construction watercraft for purposes of and use during TRPA-authorized construction activities,
  - Mooring of public service watercraft for health and safety purposes, or
  - Mooring of watercraft for occasional overnight camping purposes, limited for up to 72 hours within a 2-week period within the same general area of the lake.
  - ~~Mooring of watercraft for occasional overnight camping purposes for up to 72 hours.~~

No Wake Zone

- The no wake zone will be maintained at 600-feet from the water line and speed will continue to be limited to 5 mph, except for within Emerald Bay.
- Within Emerald Bay, all areas will be designated as a no wake zone. Speed would be limited to 5 mph with an exception up to 7 mph for tour boats.

Concessions

Applicability

- Concession structures that occur upland of the shorezone will not be regulated through the Shoreline Plan.
- The following general policies and standards apply to both motorized and non-motorized concessions unless specified.

General

- Concessions would only be permitted as an accessory use for applicants that have a permitted upland commercial or public facility/use and would need to consider upland parking availability.
- TRPA would only issue permanent permits. The permit would specify the number and type of boats, paddleboards, kiosks/ structures, etc. to support the concession.
- All concessions with a valid permit would be considered grandfathered to continue operating under their existing permit conditions. All new concessions would be required to meet the requirements of the Shoreline Plan. TRPA is responsible for enforcement of unauthorized uses.
- Moorings for concessions would be counted toward the buoy cap.
- When allowed, only one watercraft may be moored per buoy or slip. Use of buoy "trains" are not allowed outside of marinas.
- All concessions have to meet BMPs, including fueling best management practices, meeting fire codes, and local jurisdiction permit(s).

Concessions for Motorized Boat Rentals

- New motorized boat concessions must be associated with a marina.
- Each concession for motorized boating would be allowed 1 watercraft per permitted mooring except for marinas, which may have one string with no more than 10 personal watercraft.

Design Standards

- Storage racks would be allowed. The location of racks would be above high water wherever possible and provide for maximum access and recreational benefit.

Non-motorized Boating

Applicability

The Shoreline Plan recognizes that non-motorized boating is an ever-increasing recreational activity at Lake Tahoe and supports efforts to provide safe access, egress and navigation. The Shoreline Plan will also provide opportunities for facilities to accommodate non-motorized boating activities, including paddle boarding and kayaking. The California Tahoe Conservancy along with the Lake Tahoe Water Trail Association provides a robust boater education and safety program at Lake Tahoe. The U.S. Coast Guard, marinas, and other recreation providers also facilitate boater safety and provide information.

Safe Navigation Elements of the Shoreline Plan

- Continues the no-wake zone at 600-feet and 5mph speed limit.
- Limits pier length via the designated pierhead line.
- Controls where piers are located, preserving natural areas without piers and distributing piers in areas where piers already exist.
- Creates more space and a buffer for non-motorized access on the landward side of buoy fields by allowing buoy fields to move their landward row of buoys lakeward during low lake levels.

Use/Access Improvements of the Shoreline Plan

- Provides for storage racks and concessions in the shorezone.
- Supports funding for signage associated with the Water Trail to identify launch sites, landing locations, and other public access points.
- Enhances public boat ramps for non-motorized watercraft to take advantage during periods of low lake when not accessible for motorized boats.
- Upholds environmental thresholds (scenic, water quality, recreation) to ensure a quality recreational experience for all users.

Personal Watercraft

- The Joint Fact Finding Committee will develop a list of Best Management Practices for storing and mooring personal watercraft. [In Development]

Other Structures

Breakwaters, Jetties, and Rock Crib and Sheet Pile Piers

- No new public or private breakwaters, jetties, rock crib piers, or sheet pile piers (or other structures of this type) would be permitted in the Lake Tahoe Region except as part of a habitat restoration project or as part of a marina environmental improvement project.

Low Lake Level Adaptation

Phased Approach

The Shoreline Plan will plan for low lake level adaptation over the next 20 years and recognize the following phases:

Phase 1: 6223 feet elevation, natural rim. The current legal low used in regional planning.

Phase 2: 6,220 feet. The Joint Fact-Finding Committee recommended the use of elevation 6,220 feet based on their review of the historic low lake elevation (6,220 feet) and the central tendency in the Bureau of Reclamation Truckee Basin Study[4]. This elevation is considered the low elevation for planning decisions and policy development, intended to accommodate some access during low lake levels.

Phase 3: Below 6220 feet ("too low to provide for access"). In some years, the lake elevation may drop below a level at which boating and other access can no longer be reasonably provided.

[4] U.S. Department of the Interior, Bureau of Reclamation (2015). Reclamation: Managing Water in the West. Truckee Basin Study, Basin Study Report. August, 2015.

Direct Access towards Marinas and other Public Ramps

- During periods of Phase 2 low lake levels, direct boats, which need associated structures to safely and effectively launch, to marinas and other public ramps that are operational at such elevations, clustering access near areas with transportation and transit options.
- Support marinas and other public ramps to adapt to be operational during periods of low lake levels to the extent feasible.
- The Shoreline Plan low lake adaptations will generally plan to accommodate watercraft up to thirty feet in length, which is roughly the average length of boats on the Lake.

Tolerance Districts and Permissible Uses

- TRPA guides development around the shoreline of Lake Tahoe through the use of eight shorezone tolerance districts that were developed based on an analysis of an areas tolerance or responsiveness to disturbance or change. Within the tolerance districts, TRPA also developed appropriate permissible uses for the shoreline depending upon the level of intensity of development authorized by the designated tolerance district classification. The tolerance districts and associated permissible uses are to be carried forward into the Shoreline Plan.
- The existing code is open to interpretation regarding private access from the backshore to the foreshore (competing clauses in the code in certain Tolerance Districts). Due to topography, such as steep slopes, private access to the backshore should be allowed, but such access should be accomplished in the least impactful way, which might be a footpath or staircase. TRPA would clarify the existing code.

Public Trust Easement in CA

- TRPA and California State Lands Commission has agreed to draft a memorandum of understanding that would detail a process to coordinate applications for piers which respect the easement and property rights, giving assurance to property owners. The MOU is in development.

Tahoe Keys

The 2016 inventory included boating facilities in the Tahoe Keys.

Applicability

- The Shoreline Plan accounts for the anticipated environmental impacts of the Keys by including Tahoe Keys lagoon structures as part of the 2016 shoreline structure inventory and boating capacity coming from the Keys for the environmental baseline.
- The Lake Tahoe shoreline development standards in the Shoreline Plan would not apply in the Tahoe Keys because the Keys are not part of Lake Tahoe (proper). For example, low lake adaptation policies and standards would not apply in the Keys.
- The highest priority issue to address in the Keys is Aquatic Invasive Species (AIS) management, and TRPA and Lahontan are working actively with the Keys ~~Homeowner's~~ Property Owners Association on developing and implementing an invasive weeds management plan.
- Because the Keys are built out, there is little need to prioritize planning for new development, and any refinements to permit administration for the Keys will likely be taken up after the Shoreline Plan for Lake Tahoe and the Keys AIS Management Plan work is completed.

Green Infrastructure

- TRPA will allow planning for infrastructure that will support environmental improvement.

Environmental Improvement

- Environmental improvement projects with a nexus to recreational impacts will be identified and presented as an opportunity to advance expanded recreational access in concert with environmental restoration. Environmental Improvement Program (EIP) implementation that is in alignment with existing EIP programmatic priorities will be part of the established framework. [In Development]
- Staff and the Steering Committee are working together to identify the exact mechanisms to link the Shoreline Plan with Aquatic Invasive Species (AIS) and recreation projects.

Lake Tahoe Shoreline Plan

Meeting Materials: Shoreline Program Elements and Environmental Improvements and Protections Overview

Version 3

Last Updated: 7-27-2017

Element	Environmental Improvement or Protection
Buoys - 1,430 additional buoys eligible for permitting (800 new permits + 630 reserve pool (including 330 reserved for marinas)) 1 - First call, invite all existing permittees (up to 3 existing buoys may be grandfathered in) - Second call, new permits - Public agencies would have access to reserve pool - Buoys may be located up to 600' waterward from 6,220' elevation	1. Distribution mechanisms, including allocation between private, public, marinas, etc. and limits on HOA concentration, focus on minimizing impacts lake-wide 2. Design standards in place to minimize impacts 3. Buoy allocations would first be reviewed after the Threshold Evaluation Report is released and then at least every 8 years thereafter
Moorings - no more than 2 moorings allowed per littoral parcel at one time, with 3 anchor blocks possible	Additional buoy anchors for low lake level adaptation allowed in deeper water to minimize impacts to substrate from repeatedly moving anchors
Buoy anchors - Additional buoy anchors allowed in deeper water to minimize impacts to boaters during low lake	
New public piers – 10 new public piers	Case by case review and must meet applicable scenic mitigation standards
New private piers – 128 maximum build out	1. Distribution mechanisms, geographic allocation and limitation on development within most scenic sensitive areas and stream mouth protection zones 2. Design standards in place to minimize impacts 3. Scenic mitigation greater than 1:1 and increases with visual sensitivity 4. Multiple-use structures prioritized and incentivized 5. Multiple-use would include retiring pier development potential

1 The environmental analysis will consider a total number of buoys of 6,316. This number is drawn from the 2008 program. The 2016 buoy survey identified 4,886 permitted and unpermitted buoys. In 2008, TRPA received 4,412 buoy applications (3,421 were approved with another 981 pending).

Element	Environmental Improvement or Protection
	6. Scenic BMPs need to exceed baseline
Single-use pier design – Single-use piers limited to 220 sf of visual mass and a length of 6,219' or the pierhead line, whichever is more limiting. 15' of additional length may be permitted to increase functionality.	Scenic and environmental impacts must be mitigated and public access on CA side must be addressed as part of the memorandum of understanding between CSLC and TRPA.
Multiple-use pier design – Multiple-use piers limited to 220 to 520 sf of visual mass (visual mass increases based on numbers of residences served) and a length of 6,219' or 30' past the pierhead line, whichever is more limiting.	Scenic and environmental impacts must be mitigated and public access on CA side must be addressed as part of the memorandum of understanding between CSLC and TRPA.
Existing piers may be relocated or transferred	1. Transferred piers cannot be moved to a different scenic unit that is out of attainment. 2. Transferred piers must meet design standards for new piers 3. Scenic BMPs must be met
Existing piers may be expanded or modified	1. Only available up to the design standards for new piers 2. Unless, the expansion or modification improves the overall scenic quality and contrast rating
Floating (swim) platforms allowed	Must be tied to an anchor and therefore takes up a potential mooring
Scenic mitigation	Preference for scenic mitigation: 1. On parcel in shorezone 2. On parcel in upland 3. Within unit on shorezone 4. Within unit in upland 5. In another non-attainment unit
Scenic Credit Program	Scenic Credit Program would allow banking of scenic credits in the shorezone and shoreland
Public boat ramps may be relocated	

Element	Environmental Improvement or Protection
New public boat ramps – 2 new ramps may be developed	1. New ramps located to promote geographic distribution of lake access in association with clustered development and transportation hubs 2. New ramps to be located in areas that are well suited (e.g. depth, bathymetry) to accommodate low lake conditions
Marinas and public ramps may be extended to adapt to low lake conditions	Marinas and public boat ramps extensions would be subject to environmental review and impacts must be mitigated
Marinas would not need to develop Marina Master Plans to implement development; they would instead submit Comprehensive Project Applications	Marinas would be required to submit Comprehensive Project Applications that include environmental improvements and low lake level adaptation strategies
Marina boat slips and buoys would be interchangeable; no new boat slips would be allowed outside of marinas	330 buoys/slip allocations will be used as an incentive for environmental improvements at marinas
Private harbors may install permanent buoy anchors as a low lake level adaptation strategy	Intended to provide access during low lake level condition and reduce the need for dredging due to sediment accumulation.
New dredging allowed, but only at marinas, public boat ramps, and essential public health and safety facilities	Provided all environmental impacts are addressed and mitigated. TRPA will adopt the Army Corps of Engineers standard for non-degradation
Maintenance dredging continued to be allowed under existing safeguards	TRPA will adopt the Army Corps of Engineers standard for non-degradation
No-wake zone maintained at 600-feet lake-wide and expanded to include all of Emerald Bay	The no wake zone will minimize noise, sediment disruption, and user conflicts
New breakwaters, jetties, and rock-crib/sheet-pile piers	Not allowed unless part of a habitat restoration or environmental improvement project
Concessions would be allowed but only be permitted as an accessory use to a permitted upland commercial or public use; new motorized concessions would only be allowed at marinas	1. Would consider upland parking availability and other facilities (restrooms, fueling) to support the concession. 2. Fueling BMPs would be required.

Element	Environmental Improvement or Protection
Concessions would be allowed one watercraft per mooring, marinas would be allowed one mooring string	1. Moorings would be part of the overall mooring cap 2. Concessions would need to meet BMPs
Non-motorized boating - provides for storage racks and concessions in the shorezone	1. Continues no-wake zone limits 2. Pier length limits 3. Low lake adaptation (moving buoy anchors) may allow improved access on landward side of buoys 4. Boat racks will be required to be screened to comply with scenic standards
Non-motorized boating - during low lake, public boat ramps encouraged to promote non-motorized boating access	
Non-motorized boating - promotes improved signage for water trail and safe launch and landing sites	

Table of Permit Activity / Other Lakes

Status of Private Shorezone Structures in Cascade, Echo, and Fallen Leaf Lakes

Lake	Private Parcels	Private Parcels with Pier/Dock	Private Parcels without Pier/Dock	Longest Pier (ft)
Cascade	7	5	2	52.8
Fallen Leaf	89	70	19	82.9

TRPA Shorezone Structure Accela Permit Information

Lake	Shore Zone Structure Permits Received
Fallen Leaf	4
Cascade	1
Echo	0

Prepared by Mitch Koch, 4/4/17

Lake Tahoe Shoreline Plan

Potential Threshold Attainment and Mitigation Strategies

The table below summarizes threshold improvement and mitigation strategies that could be incorporated into the Shoreline Plan and/or EIS. The EIS will evaluate the effects of the Shoreline Plan, including the effects of the threshold attainment strategies that are incorporated into the plan. If the Shoreline Plan would result in significant environmental impacts, the EIS would identify mitigation measures. These could include refinements to the threshold attainment strategies in the plan or additional mitigation strategies, including those described below.

The Steering Committee is asked to review this table and consider the following questions:

- Are there additional strategies that should be considered as part of the Shoreline Plan or as a mitigation strategy in the EIS?
- Are there strategies in this table that should NOT be considered in the Shoreline Plan or EIS?

Environmental Improvement or Mitigation Strategy	Included in Shoreline Plan?	Threshold Category							
		Water Quality	Air Quality	Noise	Fisheries (including AIS)	Recreation	Scenic	Soils	Wildlife
Blue Boating Inspection and Certification Programs									
AIS Inspections	Yes				X				
Inspection and prohibit modified exhaust systems	Yes			X					
Inspect bilge compartments and provide bilge pads	Yes	X			X				
Inspection to ensure overboard sewage disposal is disabled	Yes	X							
Clean Marina Certification Program (to include Tahoe-specific standards TBD)									
Regular commercial fleet upgrades	Yes	X	X						
Maintenance of buoy floats and chains	Yes	X							
Petroleum and hazardous material containment	Yes	X	X						
Underwater boat hull cleaning	Yes	X			X				
Marina AIS management plan	Yes				X				
Boat sewage discharge improvements	Yes	X							
Topside boat maintenance and cleaning	Yes		X	X					
Marina stormwater runoff improvements	Yes	X							
Design Standards and On-Site Improvements									
Pier design standards to minimize effects on littoral processes, and limit visible mass	Yes				X		X		
Pier review process to ensure legal lateral access is maintained	TBD					X			
Stream mouth protection zones and shoreline preservation areas	Yes				X	X	X		X
Onsite scenic improvements required prior to completing a new pier	Yes						X		
Allow on-site banking of scenic restoration credit	Yes						X		
Stormwater BMP certificate required prior to new or rebuilt shoreline structures	Yes	X							
Required construction best practices (TRPA, state, federal and local)	Yes	X	X	X	X	x	X	X	X
Water circulation and littoral drift design standards for piers and marinas	Yes	X			X				
On-site mitigation of prime fish habitat at 1:1 ratio	Yes				X				
Prohibition on new boat ramps in spawning habitat	Yes				X				
Compensatory Mitigation and Fee Programs									
Fish habitat mitigation bank or in-lieu fee	No				X				

Environmental Improvement or Mitigation Strategy	Included in Shoreline Plan?	Threshold Category							
		Water Quality	Air Quality	Noise	Fisheries (including AIS)	Recreation	Scenic	Soils	Wildlife
Additional boat sticker fee (AIS, enforcement, GHG offsets, and/or air quality mitigation fund)	No	X	X	X	X	X			
Boat launch fee – charged at ramp for each launch (AIS, enforcement, GHG offsets, and/or air quality mitigation fund)	No	X	X	X	X	X			
New pier mitigation fee (funds public land acquisition, and recreation and scenic EIP projects, and fisheries monitoring)	TBD				X	X	X		
Annual mooring fee for buoys, lifts, and slips (funds enforcement, and recreation and scenic EIP projects)	Yes	X		X	X	X	X		
Rental boat mitigation fee (enforcement, GHG offsets, and/or air quality mitigation fund)	Yes		X	X		X			
Off-site scenic mitigation banking for structures within the scenic travel unit	No						X		
Above and beyond threshold enhancement fund (funds AIS control and Recreation EIP projects)	No				X	X			
Incentive Programs									
Incentives for multiple-use piers (additional pier length and visual mass for retiring development potential)	Yes						X	X	
Incentives for transfers of existing piers from stream mouth and shoreline protection zones	No				X	X	X		
Incentives for on-site relocations of existing piers to less sensitive sites (e.g., maintain non-conforming size or design when relocating)	TBD								
Competitive new pier allocation program (piers awarded competitively based on # of deed restricted parcels and TBD**)**	Yes				X	X	X	X	
Boat Use Regulations									
Extended no wake zone (lake-wide or in specific locations outside Emerald Bay)	TBD	X		X		X			
Caps on the number of peak day launches at boat ramps	No	X	X	X		X			
Prohibitions on certain engine types (in addition to the 2-stroke ban)	No	X	X	X					
No wake and reduced speed limits in Emerald Bay	Yes	X	X	X		X			
Restrictions on landing boats in spawning habitat	TBD				X				
Prohibit use of boats that exceed noise standards (require cut off switch to limit boat noise on “Cigarette” or “Cigar” boats)	TBD								
Education Programs									
Improved signage for shoreline users regarding access points, safety, no wake zone, and AIS prevention	Yes	X		X	X	X			
Boater education/training at marinas and concessionaires (training staff and customers)	Yes	X		X	X	X			
Education during certification (no wake zone; bilge, sewage, fueling practices, appropriate propellers, and engine tuning)	Yes	X	X	X	X	X			

Lake Tahoe Shoreline Plan

SUMMARY: Joint Fact Finding Meeting #7

Held January 31, 2017

Meeting in Brief

Blue Boating
The Committee discussed the Blue Boating program that was developed in the 2008 Plan, the status of some of the program elements today and what components would be useful to carry over in the Shoreline Plan. The planning team agreed to return to the JFF Committee with a proposal for mitigation options. The JFF will concur on mitigation options and then seek direction from the steering committee on whether mitigation should be to address the impacts of the shoreline program (difference between existing conditions and recommended program) or address all boating impacts on the lake.

Boat Use Assumptions-Revised Memo
Adam Lewandowski from Ascent Environmental presented the latest data and calculations for the boat use assumptions for the shoreline plan environmental analysis. North Tahoe Marina operators provided actual engine-use hours for boats serviced at their facilities, which will be very helpful for the air quality analysis. Ascent is working with the other marinas to get rental fleet engine hours, to present to the JFF Committee at its next meeting where the boat-use assumptions will be finalized.

Action Item

Responsible	Item
Adam L.	Work with marinas to compile data and incorporate rental fleet engine hours into boat use assumptions
Brandy/Rebecca/Adam	Prepare blue boating proposal
Adam/Ken	Revisit boat use data from boat occupancy survey
Steering Committee	Provide direction on mitigation for boating impacts associated with program or pollutant of concern

Discussion Summary

Updates and Follow Up on Action Items from Meeting 6

Brandy gave the Committee an update on the Steering Committee's progress on policy issues, upcoming meetings, and the Shoreline Plan schedule. Dan Segan is preparing a memo for the Steering Committee that summarizes key recommendations thus far from the JFF Committee. Adam Lewandowski has been working with North Tahoe Marina to compile engine use data, which is discussed below.

Blue Boating

The Blue Boating program was an environmental mitigation program required under the 2008 Shorezone Plan. Its primary focus was on best practices, education and mitigation measures to protect water quality. It included a monitoring component which resulted in the first and only Shorezone Program Report completed in 2010. The Committee was tasked with evaluating which components of this program would be applicable or useful to incorporate into this Shoreline Plan.

Ken Kasman provided context, background and an update on the status of the program components. The only element of the Blue Boating Program that was carried forward after the 2008 Shorezone regulations that the court vacated in September 2010 is the collection of boating data at AIS inspection stations. The boat use data that is collected through the program is useful, and TRPA staff would like to make sure this is still collected with the new application software being developed for AIS inspections. The Committee agreed that a future Blue Boating Program would need to be coordinated with the existing AIS inspection program and that the Committee should coordinate needed monitoring with existing monitoring efforts, if feasible.

There was discussion about the timing of developing a boating "best practices" or mitigation program. Because understanding exists on the type of impacts boats generate, TRPA should include the program components as policy in the Shoreline Plan. The League staff are concerned that any program that focuses only on "best practices" and education would not serve as sufficient mitigation for boating impacts associated with the "project" or shoreline plan. The group discussed that the tendency is to discuss mitigation of boating impacts in terms of addressing all impacts of boating on the lake. However, the purpose here is to mitigate the impacts of the project / shoreline plan, the increment of change between the baseline and the program. The group is not sure what the impacts are without the analysis, but agreed to move forward with identifying potential mitigation components in the near term.

The planning team agreed to come up with a proposal that includes the range of potential impacts and proposed mitigation to be reviewed by the Committee at its next meeting.

Committee members also noted two significant changes that have occurred since the 2008 Shorezone regulations were developed:

1) Boats are much cleaner because the U.S. Environmental Protection Agency and California Air Resource Board have adopted STAR engine ratings for boats;
2) The Lake Tahoe Total Maximum Daily Load (TMDL) did not identify boats as having a significant contribution to lake clarity loss.

The JFF Committee also acknowledged that if an impact from boats is identified it could be mitigated on the lake or elsewhere within the basin.

The Steering Committee needs to identify sidebords to mitigation. For example, particulate matter could be a potential impact of boating, but addressed much more effectively through stormwater protection. However, justifying the connection between street sweepers, for example, and particulate matter for boats can be difficult. The Steering Committee needs to provide direction on what types of mitigation would be advisable and helpful, should mitigation address boating directly or tie to the pollutant of concern.

Next Steps
Planning Team to develop mitigation options, identifying elements of a program to address potential impacts tied to source or pollutant of concern. The goal is to align with existing TRPA programs (in the shorezone) as much as possible.

Boat Use Assumptions-Revised Memo

Marina -boat engine hours
Adam Lewandowski from Ascent presented the latest data and calculations for the boat use assumptions that will be used in the environmental analysis. North Tahoe Marina operators provided actual engine use hours for boats serviced at their facilities, which will be very helpful for the air quality analysis. In addition to this, the other marinas that operate rental fleets will be providing engine hour data, which will further inform the analysis and create a more robust and defensible analysis of boat use across impact areas.

Boat use occupancy survey data
There was discussion and some concerns raised by the Committee regarding the boat use occupancy survey that was conducted in 2014 and 2016. Adam and Ken explained some of the constraints of the survey and agreed to revisit some of the data used to represent peak use days. Because there was no survey conducted in the off-season, the assumption was low to no use during that time of the year. This may also need to be revisited prior to finalizing the assumptions.

Boat launch data
Ascent used boat launch data collected from the AIS inspections and from a California Tahoe Conservancy survey to come up with estimates of the number of launches. The two data sources resulted in drastically different results, which raised concerns from the JFF Committee. Adam agreed to check with the CTC to find out more information as to how that data was collected. He also agreed to work with Ken to ensure that they are incorporating all of the sources of launching data available at TRPA or elsewhere.

Other considerations/concerns
Inputs used to estimate individual moorings include the boat use occupancy survey, engine hours from maintenance records at the marinas, launch and AIS inspection data. While this is the best information we have, Jan raised concerns that the hours assumed for individual moorings lake wide may still be too high. She agreed that we will have a more robust data source once the rental fleet engine hours are collected from the marinas and this would be a more solid baseline from which to inform the Steering Committee.

Next Meeting

TBD

Participants

Lahontan RWQCB: Mary Fiore-Wagner
California Tahoe Conservancy: Penny Stewart (via phone)
California State Lands Commission: Jason Ramos (via phone)
Tahoe Lakefront Owners' Association: Jan Brisco
TRPA: Brandy McMahon, Dan Segan, Tiffany Good, Ken Kasman, John Marshall
Tahoe City Marina: Jim Phelan
League to Save Lake Tahoe: Marissa Fox
North Tahoe Marina: Cathy Walsh

Consultant:
Ascent Environmental: Adam Lewandowski
The Watershed Company: Dan Nickel

Note Taker: Rebecca Cremeen
Facilitator Gina Bartlett, Consensus Building Institute, gina@cbuilding.org | 415-271-0049