



Meeting Materials: Steering Committee
V3 Last Updated: 2-16-17

Buoys and Buoy Fields

2016 Buoy Survey Summary

The 2016 survey counted a total of:

State	Mooring Buoys	# of Buoys in Buoy Fields	# of Buoys Outside of Buoy Fields	Buoy Fields
NV	1,188	591	597	20
CA	3,698	2,408	1,290	66
Total	4,886	2,999¹	1,887	86²

¹ Includes 632 buoys located within marina buoy fields

² Includes 11 marina buoy fields

Summary of State Lands/TRPA permitting

The following table summarizes the total number of Lake Tahoe buoys with a State Lands Lease but are without a TRPA Permit

Summary of buoys with a State Lands Lease but without a TRPA permit	CA ¹	NV ²	TOTAL
Total buoys not within a buoy field	175	31	206
Buoys in HOA fields	14	79	93
Buoys in marina fields	80	81	161
Buoys in other fields	90	25	115
Total buoys within buoy fields	184	185	369
Total Buoys with a State Lands lease without a TRPA permit	359	216	575

¹ CSLC provided TRPA the database used to develop this table on 3/25/2016. 57 buoys were included in leases issued after September 2010 (after TRPA's 2008 Shorezone Ordinance was vacated). However, the lease field in the database provided by CSLC to TRPA had a significant amount of empty cells in the column titled lease start date so there may be more

² NDSL provided TRPA the database used to develop this table on 10/26/2016. All of the NV leases were issued on 4/27/2013 or later, which means they were all issued after TRPA's 2008 Shorezone Ordinance was vacated.

Potential New Buoys in Non-marina Buoy Fields

There are 75 buoy fields which are not associated with an existing marina. The following table provides an assessment of the number of potential new buoys which could be added to existing buoy fields with the following assumptions:

Assumptions:

1. Buoy field area is not based on lease permit, but rather a GIS polygon drawn around all existing buoys within a single field. Therefore, the numbers provided in the table below are approximate at best.
2. The calculations of potential new buoys are based on perfect buoy grid spacing
3. The total potential new buoys does not account for any limitation based on the number of residences associated with each HOA
4. Current lease information is not available
5. New buoys would be placed waterward of elevation 6,213
6. Fifteen (15) buoy fields are located entirely landward of elevation 6,213 feet

Buoy Spacing (ft)	Number of Potential New Buoys Beyond 6,213'
50	2,393
60	1,325
70	682

TRPA Existing Buoy Line Delineation

The TRPA Buoy Line was mapped at a lake bottom elevation of 6,213' (USGS, 2001), between 350 and 600 feet waterward of the high water line.

GIS Mapping Summary

Table 1: Buoy Fields (86 Total)

Data Summary	Notes
<ul style="list-style-type: none"> ▪ ~17 (20%) buoy fields are located entirely waterward of elevation 6,210' 	<ul style="list-style-type: none"> ▪ These buoy fields are in deep water and are not likely affected by low lake condition ▪ If the shoreline plan were to revise the buoy line to accommodate 10 feet of depth for a buoy float during Phase 2 low lake levels (6,220'), approximately 80% of buoy fields would likely be affected
<ul style="list-style-type: none"> ▪ ~56 (65%) buoy fields have row(s) located in areas landward of elevation 6,213' 	<ul style="list-style-type: none"> ▪ These buoy fields likely experience moorage issues during Phase 1 low lake

	periods
<ul style="list-style-type: none"> ~18 buoy fields extend both landward of elevation 6,213' and beyond the no-wake zone 	<ul style="list-style-type: none"> These buoy fields would likely request relocation of inner rows during Phase 1 low lake periods, but would be requesting waterward or lateral expansion of their buoy field

Table 2: Buoys not Located in a Buoy Field

Data Summary	Notes
<ul style="list-style-type: none"> There are 113 buoys located waterward of the no-wake zone as measured from elevation 6,223'. 	<ul style="list-style-type: none"> These buoys are generally clustered in ~6 areas, primarily along Incline Beach, N. Lake Blvd, and Tahoe City
<ul style="list-style-type: none"> There are approximately 258 buoys located inland of elevation 6,210 which, if moved, would be located waterward of the no-wake zone as measured from elevation 6,210'. 	<ul style="list-style-type: none"> These buoys would potentially be affected under the Phase 2 low lake condition but their relocation to deeper water may be limited by the no wake zone
<ul style="list-style-type: none"> There are 967 buoys located inland of elevation 6,213' 	<ul style="list-style-type: none"> These buoys would potentially be affected under the Phase 1 low lake condition
<ul style="list-style-type: none"> There are 1,394 buoys located inland of elevation 6,210' 	<ul style="list-style-type: none"> These buoys would potentially be affected under the Phase 2 low lake condition

Recent approvals by TRPA to temporarily relocate buoys and buoy anchors within buoy fields have included more than one row of buoys and locations waterward of the 600-foot no-wake zone. Such temporary permits have been issued when the lake surface elevations remains at or below 6,227' for a period not to exceed two years. Future decisions regarding the permanent relocation of buoys and buoy anchors will need to be evaluated during the environmental analysis for impacts to fish habitat, water quality, recreational uses, and scenic standards.

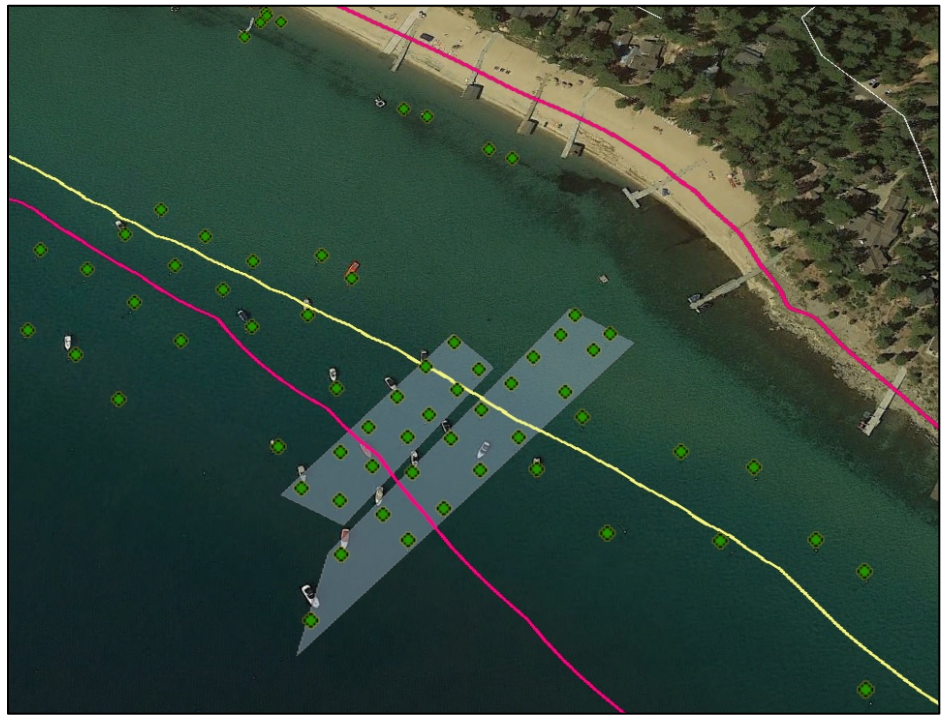
Example Locations

These examples demonstrate the relationship of buoy fields to the buoy line and the no-wake zone.

Yellow line = Buoy Line

Pink line = 600-foot no-wake zone





Policy Options for Buoy Field Relocations

At the last Shoreline Steering Committee meeting, the Committee directed staff to develop recommended parameters for streamlined buoy field relocations as a low lake level adaptation strategy. Here are some options for consideration:

Existing Policy

- Continue to allow for the temporary relocation of the landward row of buoy floats and associated anchors to be moved to the lakeward side of a buoy field when lake levels drop

Other Policy Options

- Consider allowing for an additional row or rows of anchors to be permanently located lakeward of buoy fields;
- Build flexibility into TRPA permits and State Lands leases to allow for buoy floats to be relocated by buoy field operators from the landward side of anchors to the lakeward side of anchors during low lake conditions or when the landward row of buoys is within less than 10 feet of depth;
- When lake levels rise above the designated low lake condition or the landward row of buoys is within 10 feet of depth, require buoy field operators to relocate their buoy floats to the landward row of anchors; and
- Develop a simple on-line electronic form for buoy field operators to notify permitting agencies prior to relocations.
- Consider TRPA delegation of buoy permitting to the State Lands agencies through memorandums of understanding OR the development of joint electronic applications for TRPA permits and State Lands leases to streamline the permitting process. The rationale for the later would be to require applicants to get a TRPA permit and State Lands lease at the same time.

Background Information

Current Permitting Process

Currently, TRPA issues temporary permits for the relocation of the landward row of buoy floats and associated anchors to be moved lakeward when the lake level drops below an elevation of 6,227 feet. TRPA Code allows for six month temporary permits or for the temporary use of a structure to be extended indefinitely provided that TRPA finds that lake levels remain at or below a level that prevents or significantly reduces lake access (TRPA Code, Sec. 84.15.4). Whereas, the California State Lands Commission and Nevada Division of State Lands require new permanent leases when buoy floats and associated anchors are relocated. The California Department of Fish and Wildlife (CDFW) and Nevada Division of Wildlife (NDOW) also require permits.

Army Corps Regional General Permit

In June 2016, the Army Corps of Engineers issued a draft Regional General Permit for Routine Minimally Impacting Projects within Lake Tahoe in order to streamline permitting. The Regional General Permit includes the placement of buoys and buoy fields. It is likely that the Lahontan Regional Water Quality Control Board and Nevada Division of Environmental Protection will waive 401 Water Quality Certification for buoys and buoy fields under this permit.

Potential Environmental Impacts

TRPA has inquired with CDFW about the potential environmental impacts of placing additional anchors in Lake Tahoe. In general, they support allowing for additional anchors associated with buoy fields to be placed in the lake, as opposed to moving anchors, because of the potential impacts to fish habitat and water quality associated with moving anchors. However, they will need to consider impacts associated with the placement of new anchors, particularly to spawning habitat, on a case by case basis. The potential impacts associated with allowing for additional anchors will need to be evaluated in the environmental analysis.

Buoys

Buoy fields are generally associated with a commercial or tourist use, marinas, or homeowner associations. The TRPA Code currently limits the number of buoys to two per littoral parcel, there are no regulations specific to commercial or tourist uses or homeowner associations, and marinas are limited to 10 new buoys until the adoption of a master plan. Under the 2008 Plan, homeowner association buoy fields were limited to no more than two per residential unit and were further limited based on a grid spacing pattern and setbacks, commercial and tourist uses were limited to the minimum amount of buoys needed to reasonably service the use, and marinas were still limited to 10 new buoys until the adoption of a master plan.

Safe Mooring

At a minimum, it is recognized that buoys should be placed in a minimum of 10 feet of water depth for safe mooring. That is why the 2009 Buoy Line established a maximum distance for the placement of single-use buoys at 6,213 feet lake bottom elevation (10 feet below the natural rim of 6,223), but not landward of 350 feet from high water, nor farther lakeward than 600 feet from high water. Buoy fields however are generally recognized as multiple-use facilities and can therefore deviate from standards, which means they are allowed to be placed farther out into the lake than single-use buoys associated with a privately owned littoral property.

Low Lake Level Adaptation

The Steering Committee recognized the need to look at adapting to a low lake elevation of 6,220, which is the historic low lake level and the central tendency in the Bureau of Reclamation Truckee River Basin Study. If this is the case, the buoy line for single-use buoys may need to be relocated to 6,210 (10 feet below 6,220) for safe mooring and buoy fields may need to be extended farther out into the Lake.