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STAFF REPORT

Date: February 23, 2023

To: TRPA Hearings Officer

From: TRPA Staff

Subject: Boxman Land Capability Challenge, 315 Leota Way, Placer County, California, Assessor's Parcel Number (APN): 085-321-022, TRPA File No.: LCAP2022-0701

Proposed Action: Hearings Officer review and approval of the proposed land capability challenge.

Staff Recommendation: Staff recommends the TRPA Hearings Officer approve the land capability challenge on the subject parcel. The challenge changes Class 3 - 10,459-sq. ft. (100 percent of parcel) to Class 4 -10,459 sq. ft. (100 percent of parcel).

Background: The subject parcel is shown as Class 3 on TRPA Land Capability Overlay Maps (aka Bailey Land Capability maps). The *Soil Survey of Tahoe Basin Area, California-Nevada* (Rogers, 1974) places the subject parcel in the TeE- Tallac very stony coarse sandy loam, 15 to 30 percent slopes (Class 3). A land capability verification completed in 1999 determined the entire parcel to be TeE- Tallac stony coarse sandy loam, 15 to 30 percent slopes (Class 3. The updated *Soil Survey of Tahoe Basin Area, California and Nevada* (NRCS, 2007) maps this parcel as 7182- Paige medial sandy loam, 15 to 30 percent slopes. This parcel has a geomorphic mapping of E1 for Depositional lands; moraine land undifferentiated (Moderate hazard lands) and E2 Outwash, till, and lake deposits (Low hazard lands). The Tallac soils have a gravelly coarse sandy loam surface texture. Subsurface textures are gravelly coarse sandy loam and very cobbly sandy loam. They are skeletal soils (greater than 35% rock fragments in the particle control section) and do not have argillic soil development. A weakly silica-cemented duripan occurs at depths of 40 to 70 inches.

A land capability challenge (LCAP2022-0701) was filed by Abigail Edwards of Tahoe Land Planning on October 4, 2022. TRPA consultant, Marchel Munnecke visited the site on October 17, 2022. Ms. Munnecke described one pit.

Findings: One soil pit was excavated by backhoe to 58 inches. The pit was located approximately 40 feet northeast from the southwest corner of the parcel and approximately 40 feet southwest of the residence. The soil is characterized by a gravelly loamy sand surface texture, gravelly loamy sand, very gravelly sandy loam, and extremely gravelly coarse sandy loam subsurface textures. This soil formed in colluvium over glacial deposits over volcanic tuff and breccia. This soil has greater than 35 percent rock fragments in the particle control section.

Soils in this area were mapped as andisols (soils that have a significant content of volcanic glass) in the 2007 Soil Survey of the Lake Tahoe Basin Area. If this soil has andic properties (requires laboratory analysis) the taxonomy is Medial-skeletal, mixed, frigid Humic Vitrixerands. If the soil lacks andic properties, then the taxonomy would be Loamy-skeletal, mixed, frigid Pachic Humixerepts. This soil is very deep, well drained, and is a member of Soil Hydrologic Group A. The vegetation is a white fir forest with a few Jeffrey pine trees. The understory has scattered shrubs such as creeping snowberry, huckleberry oak, and greenleaf manzanita.

This soil is dissimilar to the Tallac soil as mapped in the *Soil Survey of Tahoe Basin Area, California-Nevada* (Rogers, 1974), because it lacks the silica cemented layer at depth and has weathered volcanic bedrock below 53 inches. This soil differs from the Inville and Jabu soils because it lacks argillic soil development. This soil differs from the Elmira and Gefo soils because it has greater than 35 percent rocks in the particle control section and has finer soil textures. This soil differs from the Waca soils because it is deeper than 40 inches to bedrock, and it has glacial material over bedrock. This soil differs from the Jorge and Tahoma soils because it lacks argillic soil development, and it has glacial material. Therefore, this soil is dissimilar to any soils mapped in the 1974 Soil Survey of the Tahoe Basin and is an unnamed soil (XXX).

This soil has some similarities to the Paige soil mapped on this parcel in the 2007 Soil Survey, but it lacks the dense, root restrictive till layer and has instead weathered volcanic bedrock. This soil has courser textures and more rock fragments than the Paige soil.

Table 4 in the *Land-Capability Classification of the Lake Tahoe Basin, California and Nevada* is utilized to classify unnamed soils. Based on Table 4 this parcel is Class 4- XXX 16-30 percent slopes.

The table below summarizes the changes in land capability as concluded by this land capability challenge.

Land Capability District	**Area (sq. ft.) 1974 Soil Survey**	**Area (sq. ft.) 2023 LCC**
Class 3 (TeE, 15 to 30% slopes)	10,459	0
Class 4 (XXX, 16 to 30 % slopes)	0	10,459
Total Parcel Area	10,459	10,459

This memorandum was jointly prepared by TRPA consultant, Marchel Munnecke (Pyramid Botanical Consultants) and TRPA Senior Planner, Julie Roll. If you have questions on this Hearings Officer item, please contact Julie Roll, 775-589-5247, or email at jroll@trpa.gov.

BAILEY LAND CAPABILITY CHALLENGE FINDINGS

Site Information	
Assessor's Parcel Numbers: (APN)	085-321-022
TRPA File No. / Submittal Date:	LCAP2022-0701 / 10/4/2022
Owner or Applicant:	Abigail Edwards
Address:	PO Box 1253, Carnelian Bay, CA 96140

Environmental Setting	
Bailey Soil Mapping Unit[1] / Hydrologic Soil Group (HSG) / Land Class / Geomorphic Hazard Unit	TeE- Tallac stony coarse sandy loam, 15 to 30 percent slopes /HSG B/ E1- Depositional lands; moraine land undifferentiated (Moderate hazard lands).
Soil Parent Material	Volcanic colluvium over glacial deposits over volcanic bedrock (tuff/breccia).
Slopes and Aspect	22 to 28 percent; sloping south- southeast
Elevation and Datum	6,316 to 6,340 feet, Google Earth
Rock Outcrops and Surface Configuration	This parcel is on the relatively smooth slope on the side of a small ridge. There are no rock outcrops on the parcel or in the immediate vicinity.
Stream Environment Zone	There is no SEZ on or in the immediate vicinity of this parcel.
Vegetation	The vegetation is a white fir forest with a few Jeffrey pine trees. The understory has scattered shrubs such as creeping snowberry, huckleberry oak, and greenleaf manzanita.
Ground Cover Condition	Good (vegetation 65%, duff/mulch 75% cover)
Site Features	Residence, decks, parking area, walkways, steps, and shed.

Field Investigation and Procedures	
Consultant and Address	Marchel Munnecke PO Box 1015 Twin Bridges, CA 95735
TRPA Staff Field Dates	October 17, 2022
SEZ Mapping / NRCS Hydric Soil	There is no SEZ on this parcel.
Number of Soil Pits or Auger Holes and Description Depth	1 pit excavated to 58 inches.
Additional or Repetitive TRPA Sample Locations	NA
Representative Soil Profile Descriptions	See attached soil description. Attachment B.

[1] TRPA currently relies upon the Soil Survey of Tahoe Basin, California-Nevada (Rogers and Soil Conservation Service, 1974), which the Bailey Land Capability system is predicated upon.

Areas Not Examined	Residence, decks, parking area, walkways, steps, and shed.

TRPA Findings	
2006 Soil Survey Map Unit	7182- Paige medial sandy loam, 15 to 30 percent slopes.
Consultant Soil Mapping Determination and Rationale	Based on soil characteristics and slope classes, this parcel is mapped as Class 4- XXX, 16-30 percent slopes. This soil is dissimilar to the Tallac soil as mapped in the *Soil Survey of Tahoe Basin Area, California-Nevada* (Rogers, 1974), because it lacks the silica cemented layer at depth and has weathered volcanic bedrock below 53 inches. This soil differs from the Inville and Jabu soils because it lacks argillic soil development. This soil differs from the Elmira and Gefo soils because it has greater than 35 percent rocks in the particle control section and has finer soil textures. This soil differs from the Waca soils because it is deeper than 40 inches to bedrock, and it has glacial material above the bedrock. This soil differs from the Jorge and Tahoma soils because it lacks argillic soil development, and it has glacial material. Therefore, this soil is dissimilar to any soils mapped in the 1974 Soil Survey of the Tahoe Basin and is an unnamed soil (XXX). Table 4 in the *Land-Capability Classification of the Lake Tahoe Basin, California and Nevada* is utilized to classify unnamed soils. Based on Table 4 this parcel is Class 4- XXX, 16-30 percent slopes and Class 6- XXX, 9 to 16 percent slopes.
Slope Determination	22 to 28 percent slopes.
TRPA Conclusion(s)	TRPA concurs with consultants' determination and rationale above.
Applicable Area	See Attachment A.

Contact Information: If you have any questions, please contact Julie Roll, Senior Planner, at (775) 589-5247 or jroll@trpa.gov.

Attachments:

A. Site topo with land capability delineations
B. Soil description
C. Site photographs

Attachment A

Site topo with land capability delineations

Attachment B

Soil description

Attachment C

Site photographs