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STAFF REPORT

Date: January 13, 2022

To: TRPA Hearings Officer

From: TRPA Staff

Subject: Indigo Violet LLC Land Capability Challenge; 949 Lakeshore Blvd., Washoe County, NV; APN 122-251-12, TRPA File number LCAP2021-0318

Staff Recommendation:
Staff recommends the TRPA Hearings Officer approve this land capability challenge which would reduce land capability of Class 2 and Class 4, and increase Class 6. This change is itemized on the table on Page 3 and depicted on a map included in Attachment C.

Required Motion:
In order to approve the proposed land capability challenge, the Hearings Officer must make the following motion, based on the staff report:

1) A motion to approve the proposed land capability challenge.

Staff recommends that the Hearings Officer take the following actions, based on this staff report.

Background:
The subject parcel is mapped as land capability Class 1B and Class 6. The Soil Conservation Service Soil Survey of Tahoe Basin Area, California-Nevada (Rogers, 1974) identifies the site having Beaches (Be) and Inville stony coarse sandy loam, 2 to 9% slopes (IsC). The Beaches map unit consists of unconsolidated sand that may have patches of stabilized vegetation, but mostly barren. The Inville soil type is derived from mixed andesitic and granitic parent material that was deposited as glacial outwash, debris flows and alluvium. The Inville soil is deep (no bedrock within 60 inches of the surface) and considered well drained due to sandy loam textures and minor degree of accumulated clay in the subsoil. The vicinity of the parcel has a geomorphic mapping of E-2 for Depositional Lands, outwash, till and lake deposits (low hazard lands). The subject parcel has a surveyed size of 31,346 square feet; however, only 26,848 square feet (0.616-acre) is located above Lake Tahoe high water line (elev. 6,229.1 ft.).

A May 8, 1998, Land Capability Verification (LCV) compiled by TRPA staff indicated the site as Class 1B, Class 4 and Class 6 (Attachment C). The LCV differed from the TRPA land capability map by adding a band of Class 4 for a somewhat steeper transition zone between the Class 6 and Class 1B mapping.

A detailed soil investigation was conducted for this land capability challenge by Sid Davis (Davis2 Consulting Earth Scientists) on August 23, 2021. During that investigation, TRPA contractor Phil Scoles (Terra Science, Inc.) was present to examine soil conditions in same backhoe pit and auger hole described by the applicant's soil consultant. The TRPA contractor's observations of textures, matrix colors, ped structures, horizon depths, and gravel volume were consistent with the soil consultant's findings (Appendix D). The TRPA contractor agreed with the soil consultant that the observed soil conditions did not match the SCS-mapped Inville soil series. The contractor also conducted a walking tour of the remaining portion of the property, with particular attention to the somewhat steeper transition zone between the beach area (Class 1B) and lake terrace composing the majority of the property. A land capability challenge (LCAP2021-0318) was filed with TRPA on October 6, 2021.

Findings:
The subject property consists of a south by southeast-sloping lake terrace and shoreline of Lake Tahoe. The lake terrace (center and north) part contains a single-family residence with attached garage, driveway, patios, pathways, and pier. The remainder of the parcel is landscaped with lawn, ornamental shrubs, and retaining walls (planting containers). The parcel lacks any rock outcrops and surface stones. The somewhat steeper transition between the shoreline and lake terrace is also present on the neighboring parcels, so the feature is a natural landform (albeit landscaped and/or built atop). The parcel has an overstory of Jeffrey pine trees, with several planted spruce, cedar, and aspen trees. The understory vegetation includes ornamental plum, willow, lilac, wisteria, and lawn.

For the field investigation, the applicant's consulting soil scientist described a backhoe-dug pit (60 inches deep) and a hand-augered hole (60 inches deep). The backhoe pit was situated on the lake terrace, near the west-center property line. Given existing landscaping, pathways and driveways, the backhoe pit was selected for having the least potential for disturbance. The hand-augured hole was positioned on the somewhat steeper transition between the shoreline and lake terrace. The lake terrace has slopes 2 to 4%, while the somewhat steeper transition has slopes 9 to 20%. The area just above the shoreline has slopes 5 to 9%. Except for the beach area, the soil consultant documented deep soils across the entire parcel and an absence of seasonal high-water table (aka Stream Environment Zone, SEZ), or other root-restricting layers.

The observed soils at both sample locations revealed two buried soil layers between 10 and 37 inches below the surface. Such layers have similar textures as the surface layer, but somewhat different matrix colors. The matrix colors can infer in-situ soil development, as well as internal drainage and other biochemical processes. These soil layers became buried by sand deposited atop stabilized soils when lake levels were naturally lower. During lower lake levels (such as long-term drought), sand is easily blown inland from the exposed lakebed. Due to these buried layers, the lake terrace soil does not resemble the SCS-mapped Inville series, nor Elmira and Gefo series. Consequently, the observed soil is an unnamed inclusion (designated 'XXX'). In accordance with Table 4 of Land-Capability Classification of Lake Tahoe Basin, California-Nevada (Bailey, R.G.,1974), this unnamed soil (XXX) qualifies as Class 6 for slopes 0 to 16%, and Class 4 for slopes 16 to 30%.

The table on Page 3 summarizes the changes in land capability from the 1998 TRPA land capability verification to the 2021 land capability challenge, as concluded by this document.

Land Capability District	Slope Class (Range)	1998 TRPA [1] LCV Area (sq. ft.)	2021 Land Cap. Challenge Area (sq. ft.)	Net Change Total Area (sq. ft.)
Class 1B (Beach SEZ)	Any Slope	5,431	3,659	-1,772
Class 4 (IsD)	9 to 15%	953	0	-953
Class 4 (XXX)	16 to 30%	0	633	+633
Class 6 (IsC)	2 to 9%	20,464	0	-20,464
Class 6 (XXX)	0 to 16%	0	22,556	+22,556
Total Parcel Area		**26,848** [2]	**26,848** [2]	**0**

[1] Land capability area measured from May 08, 1998 LCV map using PDF mapping tools.

[2] Parcel size for land area above Lake Tahoe high water line, elev. 6229.1 ft.

Contact Information:

This staff report was jointly prepared by TRPA contractor Phil Scoles (Terra Science, Inc.) and TRPA Senior Planner, Julie Roll. If you have questions on this Hearings Officer item, please contact Julie Roll at 775-589-5247 or jroll@trpa.gov.

Attachments:

A. Vicinity map and TRPA land capability map
B. Site Photographs (August 23, 2021)
C. May 08, 1998, LCV and January 2022 land capability challenge recommendation map
D. Soil consultant's land capability report (September 21, 2021)

BAILEY LAND CAPABILITY CHALLENGE FINDINGS

Site Information	
Assessor's Parcel No. (APN):	122-251-12
TRPA File No. / Submittal Date:	LCAP2021-0318 / October 06, 2021
Owner or Applicant:	Indigo Violet LLC (John Krystynak); c/o EPIQ Capital; 9650 Gateway Drive; Reno, NV. 89521
Site Address:	949 Lakeshore Blvd., Incline Village, NV 89450. 39.240674° N, -119.949655° W

Environmental Setting	
Bailey Soil Mapping Unit / Hydrologic Soil Group (HSG) / Land Class / Geomorphic Hazard Unit	Beaches (Be, HSG-A) and Inville stony coarse sandy loam, 2 to 9% slopes (IsC, HSG-B) / E-2 Depositional lands, outwash, till and lake deposits (low hazard lands as per 1974 Bailey Land Capability Report)
Landform and Soil Parent Material	Beach shoreline and lake terrace having mixed andesitic and granodiorite parent material.
Slopes and Aspect	2 to 20% slopes / slopes to south by southeast.
Elevation and Datum	6229 to 6243 feet (Lake Tahoe datum, Resource Concepts Inc., June 08, 2021)
Rock Outcrops and Surface Configuration	None.
SEZ and Hydrology Source	Beaches SEZ (shoreline only).
Vegetation	Jeffrey pine, spruce and cedar. Understory includes ornamental plum, willow, lilac, vines, and lawn.
Ground Cover Condition	Good (understory vegetation 90 to 95% (landscaped)
Site Features	Residence with attached garage, driveway, pathways, and patio. Large areas with planted lawn.

Field Investigation and Procedures	
Consultant and Address	Sid Davis, Davis2 Consulting Earth Scientists. Post Office Box 734, Georgetown, CA 95634 (530) 559-1405; sid@davis2consult.com
TRPA Contractor and Address	Phil Scoles (TRPA subcontractor) Post Office Box 2100; Portland, OR 97208-2100
TRPA Contractor Field Dates	August 23, 2021.
SEZ Mapping / NRCS Hydric Soil	Yes, beaches (from 1998 LCV); no hydric soil mapping.
Number of Soil Pits or Auger Holes and Description Depth	One backhoe pit excavated to 60+ inches and one hand augered hole (also observed by TRPA contractor).
Additional or Repetitive TRPA Sample Locations	None.
Areas Not Examined	Residence, driveway, patio, pathways and pier.

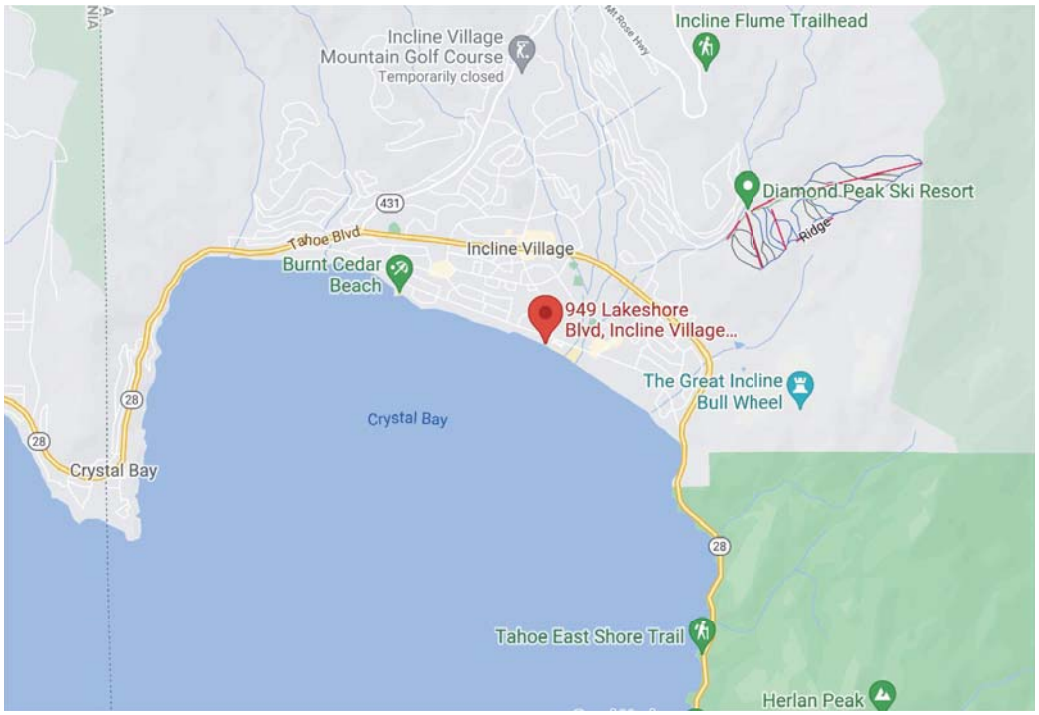
TRPA Findings	
2006 Soil Survey Map Unit[1]	Inville gravelly coarse sandy loam, 2 to 9% slopes (map unit 7141, Class 6).
Consultant Soil Mapping Determination and Rationale	Soil consultant used 1 backhoe pit and 1 hand auger hole to determine unnamed soils (XXX) occur on the lake terrace (rather than the SCS-mapped Inville series). The field observations indicate the soils have two buried soils at roughly 12 inches and 30 inches below the surface. Despite stacked soils, the profiles are somewhat excessively drained and lack other types of restricting layers. The soils differ from the SCS-mapped Inville series, as well as Elmira and Gefo series, due to multiple buried soils and less in-situ soil development. The lake terrace has slopes 2 to 4%, while the somewhat steeper transition to the shoreline has slopes 9 to 20%. The shoreline above the Beach SEZ has 5 to 9% slopes.
Slope Determination	2 to 20% (slopes to south by southeast) for XXX soils on lake terrace. No slope class for Beach SEZ.
TRPA Conclusion(s)	Decrease in Class 4 (XXX) for 16 to 30% slopes; and increase of Class 6 soil (XXX) for 0 to 16% slopes. Decrease in Beach Class 1B due to improved mapping.
Applicable Area	Entire site (see map, Attachment C, January 2022).

[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. The 2006 soil survey update has not yet been formally adopted by TRPA for use with land capability matters.

Attachment A

Vicinity map and TRPA land capability map

VICINITY MAP (no scale)



TRPA LAND CAPABILITY MAP

INDIGO VIOLET LLC
APN 122-251-12
949 LAKESHORE BLVD.
Incline Village, Nev.

LAND CAPABILITY
Class 1b (Yellow)
Class 6 (Tan)

Attachment B

Site Photographs (August 23, 2021)

Attachment C

May 08, 1998, LCV and January 2022 land capability challenge recommendation map

Attachment D

Soil consultant's land capability report (September 21, 2021)