
STAFF REPORT

Date: March 7, 2024

To: TRPA Hearings Officer

From: TRPA Staff

Subject Nolan Land Capability Challenge
4001 Manzanita Avenue, South Lake Tahoe, California
APN: 029-081-003, TRPA File #: LCAP2023-0298

Proposed Action:

Hearings Officer review and approve 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 1b- 6,000 sq. ft. (100 percent of parcel) to Class 7- 6,000 sq. ft. (100 percent of parcel).

Background:

The subject parcel is shown as Class 1b on TRPA Land Capability Overlay Maps (aka Bailey Land Capability maps). The Soil Conservation Service *Soil Survey of Tahoe Basin Area, California-Nevada* (Rogers, 1974) places the subject parcel in EfB- Elmira- Gefo loamy coarse sand, 0 to 5 percent slope mapunit. The updated *Soil Survey of Tahoe Basin Area, California and Nevada* (NRCS, 2007) maps this parcel as 7444- Christopher-Gefo complex, 0 to 5 percent slopes. This parcel has a geomorphic mapping of E2 for Depositional lands, Outwash, Till, and Lake Deposits (Low hazard lands). An LCV was completed in 2005 that determined the entire parcel to be 1b SEZ.

This parcel was mapped as land capability Class 7 by the 1974 soil survey, but an LCV investigation in 2005 determined the entire parcel to be 1b- Stream Environment Zone (SEZ). The soil has redoximorphic features above 20 inches which indicates there is a seasonal high water table at 18 inches, a primary SEZ indicator. After the LCV determination, a soil investigation was completed in July of 2008, but a land capability challenge was not completed. The soil investigation and report included the adjacent IPES parcel (029-081-003). The report describes two soils pit on this parcel and four water well monitoring observations, and two pits and four wells on the adjacent parcel. The ground water monitoring wells were installed in 2006, and monitored in 2006 and 2008, by a private geologist and TRPA staff. No ground water was observed at 20 or 40 inches (below ground surface) during these observations. The precipitation was determined to be average during the ground water monitoring period. Since ground water was not observed, this site does not meet the primary SEZ indicator of a shallow water table, and no other SEZ indicators are present. Therefore, this site is not SEZ. The soils

previously described are similar to the soil described for this land capability challenge. See Attachment C for the previous soil and water monitoring documentation associated with this challenge.

A land capability challenge (LCAP2023-0298) was filed by Kristen Nolan on behalf of the owner Kathlyn Nolan on October 17, 2023. TRPA consultant, Marchel Munnecke, visited the site on October 31, 2023, and described one soil pit.

Findings:

One soil pit was excavated by hand to 24 inches and hand augured to 54 inches. The pit was located in the east side of the parcel, approximately 15 feet southeast of the easternmost structure. This soil formed in mixed alluvium and is characterized by a loamy coarse sand surface texture, with loamy coarse sand and gravelly loamy coarse sand subsurface textures. Redoximorphic features begin at 18 inches and continue to the bottom of the pit. This soil is classified as a Sandy, mixed, frigid, Humic Dystroxerepts. This soil is very deep, somewhat excessively drained, and is a member of Soil Hydrologic Group A. The vegetation on this parcel is an open Jeffrey pine forest with a barren understory with uniform cover of pine needle litter and duff.

The water table observations from the groundwater monitoring wells indicate that the redoximorphic features are relict. Since ground water was not observed above 40 inches, and no other primary or secondary SEZ indicators are present, this site does not qualify as SEZ. The current upland vegetation composed of mature Jeffrey pine forest and google earth historic imagery suggest this site has been dry since 1969. The hydrology on this parcel may have changed with the development of the Stateline area or possibly much farther in the past.

Based on the soil found on this site, this soil is like the Gefo soil mapped on this parcel in mapunit EfB, Elmira- Gefo, loamy coarse sand, 0 to 5 percent slopes.

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

Land Capability District	Area (sq. ft.) 2005 LCV	Area (sq. ft.) 2024 LCC
Class 1b (SEZ, NA)	6,000	0
Class 7 (EfB 0 to 5 % slopes)	0	6,000
Total Parcel Area	6,000	6,000

Contact Information:

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

To submit a written public comment, email publiccomment@trpa.gov with the appropriate agenda item in the subject line. Written comments received by 4 p.m. the day before a scheduled public meeting will be distributed and posted to the TRPA website before the meeting begins. TRPA does not guarantee written comments received after 4 p.m. the day before a meeting will be distributed and posted in time for the meeting.

BAILEY LAND CAPABILITY CHALLENGE FINDINGS

Site Information	
Assessor's Parcel Numbers: (APN)	029-081-005
TRPA File No. / Submittal Date:	LCAP2023-0298/ 10/17/2024
Owner or Applicant:	Kathlyn M. Nolan
Address:	526 Entrada Drive #105, Novato, CA 94949

Environmental Setting	
Bailey Soil Mapping Unit¹ / Hydrologic Soil Group (HSG) / Land Class / Geomorphic Hazard Unit	EfB- Elmira- Gefo loamy coarse sand, 0 to 5 percent slope mapunit/ HSG A/ E2 for Depositional lands, Outwash, Till, and Lake Deposits (Low hazard lands).
Soil Parent Material	Alluvium from mixed parent material
Slopes and Aspect	3 percent slope; facing to the west.
Elevation and Datum	6,238 to 6,241, Resource Concepts, Inc., 8/4/2005
Rock Outcrops and Surface Configuration	NA
SEZ and Hydrology Source	There is no SEZ in the vicinity, and based on water monitoring well, no SEZ on this parcel.
Vegetation	The vegetation on this parcel is an open Jeffrey pine forest with almost no understory vegetation.
Ground Cover Condition	Good (vegetation 60 %, duff/mulch 70% cover)
Site Features	Two residences, dirt driveway, and fences.

Field Investigation and Procedures	
Consultant and Address	Marchel Munnecke PO Box 1015 Twin Bridges, CA 95735
TRPA Staff Field Dates	October 31, 2023
SEZ Mapping / NRCS Hydric Soil	No SEZ on this parcel or in the immediate vicinity

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.

Number of Soil Pits or Auger Holes and Description Depth	1 pit excavated by hand to 40 inches and augured to 54 inches.
Additional or Repetitive TRPA Sample Locations	One previous soil pit, and water monitoring wells. See previous soil investigation completed in 2008, attachment C.
Representative Soil Profile Descriptions	See attachment B- Soil Description
Areas Not Examined	Two residences, dirt driveway, and fences.

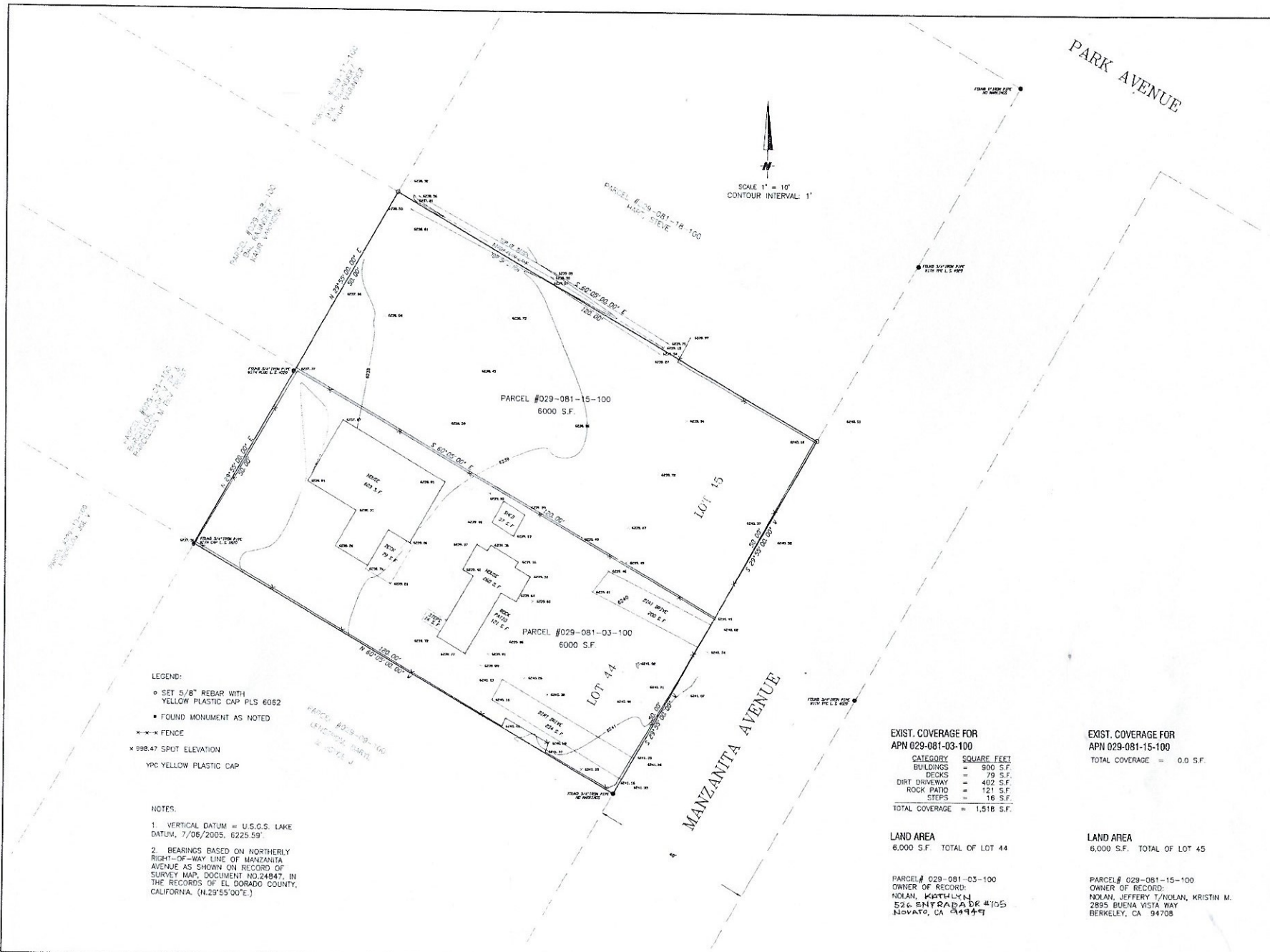
TRPA Findings	
2006 Soil Survey Map Unit	7444- Christopher-Gefo complex, 0 to 5 percent slopes.
Consultant Soil Mapping Determination and Rationale	<p>This parcel was determined to be Class 7, EfB, Elmira-Gefo, loamy coarse sand, 0 to 5 percent slopes.</p> <p>This parcel was mapped as land capability Class 7 by the 1974 soil survey, but an LCV investigation in 2005 determined the entire parcel to be 1b- SEZ. The soil has redoximorphic features above 20 inches which indicates there is a seasonal high water table at 18 inches, which is a primary SEZ indicator. After the LCV determination, a soil investigation was completed in July of 2008. The soil investigation and report describes two soils pit on this parcel and 4 water monitoring observations. Ground water monitoring wells were installed in 2006, and monitored in 2006 and 2008, by both a private geologist, and TRPA staff. No ground water was found at 20 or 40 inches (below ground surface) during these observations. The precipitation during the ground water monitoring period was determined to be average. The soils previously described are similar to the soil described for this land capability challenge. See attachment C for the full report.</p> <p>The water table observations indicate that the redoximorphic features are relict, and presently the water table does not meet the primary SEZ indicator of a shallow water table. In addition, the vegetation on the site is dry Jeffrey pine forest with little understory, with a few scattered grasses.</p>
Slope Determination	3 percent slope
TRPA Conclusion(s)	Staff recommends the TRPA Hearings Officer approve the land capability challenge on the subject parcel

Applicable Area	See site topo for soil delineations.
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Attachments:

- A. Site Plan
- B. 2023 Soil Description
- C. 2008 and Prior Documentation
- D. Site Photographs

Attachment A
Site Plan



- LEGEND:
- SET 5/8" REBAR WITH YELLOW PLASTIC CAP PLS 6062
 - FOUND MONUMENT AS NOTED
 - *** FENCE
 - x 998.47 SPOT ELEVATION
 - YPC YELLOW PLASTIC CAP

- NOTES:
1. VERTICAL DATUM = U.S.G.S. LAKE DATUM, 7/06/2005, 6225.59'
 2. BEARINGS BASED ON NORTHERLY RIGHT-OF-WAY LINE OF MANZANITA AVENUE AS SHOWN ON RECORD OF SURVEY MAP, DOCUMENT NO.24847, IN THE RECORDS OF EL DORADO COUNTY, CALIFORNIA. (N.29°55'00"E.)

EXIST. COVERAGE FOR APN 029-081-03-100

CATEGORY	SQUARE FEET
BUILDINGS	= 900 S.F.
DECKS	= 79 S.F.
DIRT DRIVEWAY	= 402 S.F.
ROCK PATIO	= 121 S.F.
STEPS	= 16 S.F.
TOTAL COVERAGE	= 1,518 S.F.

LAND AREA
6,000 S.F. TOTAL OF LOT 44

PARCEL# 029-081-03-100
OWNER OF RECORD:
NOLAN, JEFFERY T./NOLAN, KRISTIN M.
526 ENTRADA DR #105
NOVATO, CA 94947

EXIST. COVERAGE FOR APN 029-081-15-100
TOTAL COVERAGE = 0.0 S.F.

LAND AREA
6,000 S.F. TOTAL OF LOT 45

PARCEL# 029-081-15-100
OWNER OF RECORD:
NOLAN, JEFFERY T./NOLAN, KRISTIN M.
2895 BUENA VISTA WAY
BERKELEY, CA 94708



ENGINEERING · PLANNING · RESOURCE MANAGEMENT
RESOURCE CONCEPTS, INC.
2420 MINNESOTA STREET
SUITE 200
DENVER, CO 80202
PHONE 772-863-1800 FAX 772-863-1656
WEB SITE: www.rcm.com



REVISION	DATE

TOPOGRAPHIC & COVERAGE SURVEY
JEFFERY T. & KRISTIN M. NOLAN
APN 029-081-03-100
4001 MANZANITA AVENUE
LAKESIDE LODGE SUBDIVISION
EL DORADO COUNTY, CALIFORNIA



JOB NO: 05-810-1
DATE: 8/04/05
DESIGNED:
DRAWN: CNJ
CHECKED: DMH

Attachment B
2023 Soil Description

Kathlyn M. Nolan Land Capability Challenge
March 14, 2024, Hearing Officer Meeting

4001 Manzanita Ave.,
South Lake Tahoe, El Dorado County, CA 96150
APN 029-081-003, LCAP2023-0298

Soil Profile Descriptions

Marchel Munnecke

Field Date: 10-31-2024



Pit 029-081-003:

Soil Classification: Sandy, mixed, frigid Humic Dystrocherepts

Soil Series: XXX- Class-6, 0 to 16 percent slopes

Drainage Class: Somewhat excessively drained

Hydrologic Group: A

Parent Material: Alluvium from glacial outwash.

Slope: 3 % **Aspect:** northwest

Description:

- A1 1 to 8 inches; gravelly loamy coarse sand, dark brown (10YR 3/3), very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine to medium roots; many very fine to fine irregular pores; 15 percent gravels; gradual wavy boundary.
- AB 8 to 18 inches; loamy coarse sand, dark yellowish brown (10YR 4/3), dark brown (7.5YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many very fine to medium roots; many very fine to fine irregular pores; 5 percent gravels; gradual wavy boundary.
- Bw 18 to 23 inches; loamy coarse sand, pale brown (10YR 6/3), dark yellowish brown (10YR 3/4) moist, with common, medium, yellowish brown (10YR 5/6) iron masses in matrix; moderate medium platy structure; slightly hard, friable; nonsticky and nonplastic; common fine roots; many very fine and fine irregular pores; 5 percent gravel; gradual wavy boundary.
- C1 23 to 33 inches; loamy coarse sand, brown (10YR 5/3), dark yellowish brown (10YR 4/4) moist with few, medium, light brownish gray (10YR 6/2) iron depletions, and many, medium, dark yellowish brown (7.5YR 4/6) iron masses in matrix; massive; moderately hard; firm, nonsticky and nonplastic; few fine roots; many very fine and fine irregular pores; 45 percent gravel; clear wavy boundary.
- C2 33 to 54 inches; very gravelly loamy coarse sand, strong brown (7.5YR 4/6), reddish brown (5YR 4/4) moist with few, medium, yellowish brown (10YR 6/2) iron depletions and many, medium; strong brown (7.5YR 5/8) iron masses in matrix; massive; slightly hard, friable, nonsticky and nonplastic; 30 percent gravel.

Attachment C
2008 and Prior Documentation



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Reno, NV
89502
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kleinfelder.com

October 2, 2009
File: 93278.01

Ms. Heather Gustafson
Tahoe Regional Planning Agency
P. O. Box 5310
Stateline, NV 89449

RECEIVED

OCT 10 2009

TAHOE REGIONAL
PLANNING AGENCY

**SUBJECT: Evaluation of Normal Precipitation
4011 Manzanita Avenue
South Lake Tahoe, California
APNs 029-081-03 and 15**

REFERENCES: *Land Capability Challenge and Groundwater Monitoring, Manzanita Avenue, South Lake Tahoe, California, APNs 029-081-03 and 15.*

Soil Investigation-SEZ Evaluation, Nolan Project Site, El Dorado County, California, APN 029-081-03 & 15, by Davis² Consulting Earth Scientists, Inc., dated July 12, 2006.

Dear Ms. Gustafson:

Kleinfelder has evaluated the precipitation levels for the property located at 4011 Manzanita Avenue in South Lake Tahoe, California (subject property) for the purposes of determining whether the groundwater measurements recorded during 2008 and 2009 occurred during a normal precipitation year and were sufficient to determine whether a Stream Environment Zone (SEZ) was present at this location. Kleinfelder used the methodology outlined in the Technical Standard for Water-Table Monitoring of Potential Wetland Sites (2005) and the Natural Resources Conservation Services (NRCS) Engineering Field Handbook (1997).

WETS TABLES AND MONTHLY PRECIPITATION DATA

The nearest WETS Station at a similar elevation to the subject property is named the Tahoe Station and is located in Tahoe City at an elevation of 6,230 feet mean sea level (msl). The elevation of 4011 Manzanita Avenue in South Lake Tahoe is

approximately 6,240 feet msl. One other WETS Station located in the Tahoe basin is located in Glenbrook, Nevada at an elevation of 6,260 feet msl. However, monthly precipitation data for 2006 2007, and 2008 were incomplete and could not be used for this evaluation.

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The WETS Station data contains the monthly average precipitation and the normal range of precipitation which is defined as the 30% chance that precipitation will be either greater than or less than the average values. From 1971 to 2000, the average annual precipitation at the Tahoe station was 32.74 inches and the range of normal precipitation was 25.08 to 37.92 inches at the Tahoe station. The WETS data from the Tahoe Station is included as Attachment 1 and the annual precipitation data from 1903 to 2009 is presented in Attachment 2.

March 15 2008 — June 1 2009

* Groundwater monitoring at the subject property occurred during 2008 and 2009 from approximately March 15 through June 1. Table 1 presents the annual precipitation data for the preceding years, 2006, 2007, and 2008. Compared to the normal range of precipitation from the WETS data, 2006 was a normal precipitation year, 2007 was considered a dry year, and 2008 was also considered a dry year.

** 2007 + 2008
Dry*

NRCS METHOD

The NRCS method requires an evaluation of precipitation for the three months preceding the groundwater monitoring onsite (January through March) as well as during the actual monitoring period (April and May). Based on the NRCS method, the precipitation for the three months preceding monitoring was considered normal for 2008 and wet for 2009. The precipitation during monitoring in 2008 was drier than normal for April but normal for May. The precipitation during monitoring in 2009 was drier than normal in April but wetter than normal in May. Tables 2 and 3 present this evaluation of groundwater monitoring versus precipitation at the subject property during 2008 and 2009, respectively.

** late 2008
+
early 2009
normal - wet*

Since, snowfall that occurs during the entire precipitation season may influence water levels in the spring; additional evaluation was performed on the fourth through sixth months preceding monitoring (October through December 2007 and October through December 2008). Using the NRCS method, precipitation during October through December 2007 and 2008 was considered normal.

TOTAL PRECIPITATION

Finally, the total precipitation preceding and during monitoring was evaluated for the 2008 and 2009 monitoring periods. The total precipitation preceding and during the monitoring periods was 19.25 and 26.32 inches, respectively for 2008 and 2009.

This is compared to the normal range of precipitation from the WETS data of 12.98 to 37.02 inches. The total precipitation preceding and during the 2008 and 2009 monitoring periods were within the normal range.

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CONCLUSIONS

Based on the results of this precipitation evaluation, the groundwater monitoring performed from March 15, 2008 through June 1, 2008 and March 15, 2009 through June 1, 2009 occurred during normal precipitation years and should be considered valid to assess the presence or absence of a SEZ.

Based on the lack of measurable groundwater from March 15, 2008 through June 1, 2008 and March 15, 2009 through June 1, 2009, the property at 4011 Manzanita Avenue is not within an SEZ.

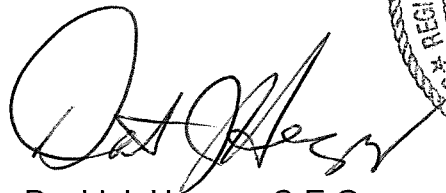
Thank you for reviewing this report. If you have any questions regarding this evaluation, please call me at (775) 691-2954.

Sincerely,

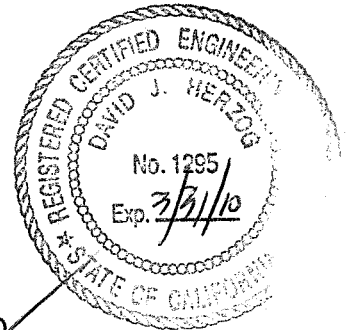
KLEINFELDER WEST, INC.



Melissa R. Sherman, R.E.A.
Environmental Scientist



David J. Herzog, C.E.G.
Senior Engineering Geologist



MS:DJH:kc

Attachments:

- Table 1 – Annual Precipitation Data
- Table 2 – NRCS Precipitation Evaluation 2008
- Table 3 – NRCS Precipitation Evaluation 2009
- Attachment 1 – WETS Station Data
- Attachment 2 – Monthly Precipitation Data

cc: Ms. Kristen Nolan
Ms. Sue Simon

TABLES

**Table 1
Annual Precipitation
2006, 2007, and 2008
4011 Manzanita Avenue
South Lake Tahoe, California**

Year	30% < Normal	Normal	30% > Normal	Rainfall	Condition
2006	25.08	32.74	37.92	31.92	Normal
2007	25.08	32.74	37.92	19.16	Dry
2008	25.08	32.74	37.92	22.06	Dry

Annual precipitation for the years preceding monitoring was considered normal in 2006, dry in 2007, and dry in 2008.

WETS Station- TAHOE, CA 8758
Latitude 3910, Longitude 12008, Elevation 6,230
Placer County
1971-2000 Data

Appears may be calendar year + not Water Year

Table 2
NRCS Precipitation Evaluation
2008 Monitoring
4011 Manzanita Avenue
South Lake Tahoe, California

	Month	30% < normal	Normal	30% > normal	Rainfall	Condition	Condition Value	Month Weight Value	Product of previous two columns
1st Prior Month	March	1.95	4.57	5.57	1.1	Dry	1	3	3
2nd Prior Month	February	2.54	5.7	6.96	4.03	Normal	2	2	4
3rd Prior Month	January	2.26	6.01	7.26	7.58	Wet	3	1	3
SUM									10
Fourth Prior Month	December	1.99	4.72	5.82	3.29	Normal	2	3	6
Fifth Prior Month	November	1.86	4.25	5.18	0.43	Dry	1	2	2
Sixth Prior Month	October	0.88	1.95	2.45	2.02	Normal	2	1	2
SUM									10
Current Month-1	April	0.96	1.87	2.28	0.18	Dry	1		
Current Month-2	May	0.54	1.21	1.5	0.62	Normal	2		
Total Period of Record		12.98	30.28	37.02	19.25	Normal			

Based on prior three months and the three months prior to that, the 2007/2008 precipitation was considered normal for both time periods.
Based on period of record (Oct 1 - June 1), the 2007/2008 precipitation was considered normal.

Note:

- If sum = 6-9, then prior period was drier than normal
- If sum = 10-14, then prior period was normal
- If sum = 15-18, then prior period was wetter than normal

WETS Station- TAHOE, CA 8758
Latitude 3910, Longitude 12008, Elevation 6,230
Placer County
1971-2000 Data

Table 3
NRCS Precipitation Evaluation
2009 Monitoring
4011 Manzanita Avenue
South Lake Tahoe, California

	Month	30% < normal	Normal	30% > normal	Rainfall	Condition	Condition Value	Month Weight Value	Product of previous two columns	
2009	1st Prior Month	March	1.95	4.57	5.57	6.37	Wet	3	3	9
	2nd Prior Month	February	2.54	5.7	6.96	4.39	Normal	2	2	4
	3rd Prior Month	January	2.26	6.01	7.26	2.44	Normal	2	1	2
	SUM									15
2008	Fourth Prior Month	December	1.99	4.72	5.82	4.58	Normal	2	3	6
	Fifth Prior Month	November	1.86	4.25	5.18	2.87	Normal	2	2	4
	Sixth Prior Month	October	0.88	1.95	2.45	1.09	Normal	2	1	2
	SUM									12
	Current Month-1	April	0.96	1.87	2.28	0.6	Dry	1		
	Current Month-2	May	0.54	1.21	1.5	3.98	Wet	3		
	Total Period of Record		12.98	30.28	37.02	26.32	Normal			

Based on prior three months and the three months prior to that, the 2008/2009 precipitation was considered wet for the prior three months (January to March) and normal for the three preceding months (October to December)

Based on period of record (Oct 1 - June 1), the 2008/2009 precipitation was considered normal.

Note:

If sum = 6-9, then prior period was drier than normal

If sum = 10-14, then prior period was normal

If sum = 15-18, then prior period was wetter than normal

WETS Station- TAHOE, CA 8758
 Latitude 3910, Longitude 12008, Elevation 6,230
 Placer County
 1971-2000 Data

ATTACHMENT 1

WETS Station Data

WETS Station : TAHOE, CA8758
 Latitude: 3910 Longitude: 12008 Elevation: 230
 State FIPS/County(FIPS): 06061 County Name: Placer
 Start yr. - 1971 End yr. - 2000

Month	Temperature (Degrees F.)			Precipitation (Inches)				
	avg daily max	avg daily min	avg	avg	30% chance will have		avg # of days w/.1 or more	avg total snow fall
					less than	more than		
January	40.4	19.8	30.1	6.01	2.26	7.26	7	37.1
February	42.0	20.9	31.4	5.70	2.54	6.96	7	39.4
March	45.1	23.8	34.4	4.57	1.95	5.57	7	29.9
April	51.2	27.2	39.2	1.87	0.96	2.28	4	12.3
May	60.0	33.2	46.6	1.21	0.54	1.50	3	2.8
June	69.2	39.2	54.2	0.77	0.40	0.99	2	0.3
July	77.5	44.4	60.9	0.33	0.05	0.39	0	0.0
August	77.0	44.5	60.8	0.46	0.05	0.55	1	0.0
September	70.0	39.4	54.7	0.90	0.23	1.06	2	0.4
October	60.0	32.3	46.1	1.95	0.88	2.45	3	2.4
November	47.9	25.5	36.7	4.25	1.86	5.18	6	17.1
December	41.4	20.5	31.0	4.72	1.99	5.82	7	27.6
Annual	-----	-----	-----	-----	25.08	37.92	---	---
Average	56.8	30.9	43.9	-----	-----	-----	---	---
Total	-----	-----	-----	32.74	-----	-----	49	169.4

GROWING SEASON DATES

Annual avg <=dry >=wet

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	5/ 6 to 10/26 173 days	5/27 to 10/ 8 134 days	6/17 to 9/18 93 days
70 percent *	4/30 to 11/ 1 185 days	5/22 to 10/14 145 days	6/12 to 9/23 103 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

ATTACHMENT 2

Monthly Precipitation Data

TAHOE, CALIFORNIA

Monthly Total Precipitation (inches)

-48758

File last updated on Dec 4, 2008

*** Note *** Provisional Data *** After Year/Month 200808

a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,

z = 26 or more days missing, A = Accumulations present

Long-term means based on columns; thus, the monthly row may not sum (or average) to the long-term annual value.

MAXIMUM ALLOWABLE NUMBER OF MISSING DAYS : 5

Individual Months not used for annual or monthly statistics if more than 5 days are missing.

Individual Years not used for annual statistics if any month in that year has more than 5 days missing.

YEAR(S)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1903	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0.38 z	9.96 y	0.57	0.57
1904	1.39 z	15.47	10.69	1.41	0.51	0 z	0 z	0 z	0 z	0 z	0 z	0 z	28.08
1905	0.76 y	2.27	4.6	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	6.87
1906	9.49	5.1	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	14.59
1907	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0
1908	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0
1909	0 z	0 z	0.71 z	0.12 z	0 z	0 z	0 z	0 z	0	3.35	7.58 u	8.92	12.27
1910	4.81	3.94	2.2	0.5	0.02	0	0.35	0	0.8	0.1	3.05	3.9	19.67
1911	21.26 o	3.8 t	6	3.22	0.25	0.63	0	0	0	0.01	1.79	1.9	13.8
1912	2.49	0	3.32 r	2.28	3.38	0.83	1.3	0	2	0.65	3.11	2.09	18.13
1913	7.44	0.63	1.88	1.82	1.66	0.99	1.36	0.4	0.1	0.1	4.05	9.71	30.14
1914	20.49	5.26	0.11	2.29	0.55	0.95	0	0	0.18	1.28	0.5	3.36	34.97
1915	5.68 s	10.68	1.08	0.54	3.7	0	0.41	0	0.16	0	2.43	6.2	25.2
1916	17.6 l	4.62	4.47	0.07	0.53	0	0.08	0.22	0.28	1.2	2.46	7.06	20.99
1917	2.23	11.98	3.61	2.32	0.71	0.01	0.57	0.04	0.02	0.13	1.12	3.38	26.12
1918	1.15	9.28	8.63	0.7	0.51 y	0.56	0	0.12	3.7	3.01	2.97	1.33	31.45
1919	2.15	14.2	5.04	1.23	0.22	0 z	0 z	0.01	0.41	0.57	0.88	7.19	31.9
1920	0.9	2.17	6.29	3.77 u	0	1.2	0.11	0.55 z	0.7	4.19	5.02	7.7	28.28
1921	10.28	2.66	2.19	0.67	2.68	0.18	0	0	0.09	0.52	1.31	8.42	29
1922	2.95	13.19	4.6	1.03	1.66	0.8	0.31	0.23	0 z	1.05	3.72	10.88	40.42
1923	5.79	1.5	0.79	4.41	0.74	1.25	0.05	0.98	1.75	1.69	0.64	2.65	22.24
1924	1.54 a	1.06	2.56 s	0.16 z	0.1	0 z	0	0	0.45	2.63	2.15	3.55	11.48
1925	0.94	8.02	2.69	2.74	1.23	1.06	0.89	1.27	1.17	1.14	2.14	2.1	25.39
1926	3.93	6.95	0.37	3.93	1.13	0.06	0.07	0.01	0.04	1.3	10.61	1.68	30.08
1927	4.88	8.84	3.21	5.05	1.25	0.34	0	0	0.22	3	5.35	3.29	35.43
1928	1.92	1.11	12.2	3.63	0.1	0.28	0.19	0	0.01	0.27	2.12	4	25.83
1929	1.85	3.14	3.5	3.07	0.06	2.63	0.2	0.33	0.34	0.1	0	9.46	24.68
1930	6.08	4.65	3.25	2.01	1	0	0	0.13	0.45	0.26	3.95	0.23	22.01
1931	3	2.38	2.36	1.74	1.26	0.88	0	0.09	0.29	1.93	3.12	12.08	29.13
1932	7.65	4.01	1.4	1.24	0.49	1.42	0.23	0	0.22	0.2	0.82	2.77	20.45
1933	7.49	0.89	3.62	0.52	2.08	0.14	0	0.06	0.13	4.91	0.05	8.66	28.55
1934	0.98	2.99	1.03	1.1	0.57	1.79	0	0.12	0.71	2.51	3.53	2.81	18.14
1935	4.96	1.35	4.87	8.25	0.42	0	0.03	0.13	0.02	1.65	1.49	2.77	25.94
1936	10.23	12.91	2.12	1.09	0.15	1.77	0.21	0.21	0.61	0.27	0.06 i	4.43	34
1937	5.59	9.12	2.27	1.93	0.13	1.03	0.03	0	0.06	1.54	4.9	10.33	36.93
1938	5.24	13.74	11.5	1.8	0.57	1.23	1.09	0	0.12	2.36	2.05	0.51	40.21
1939	3.93	2.59	2.23	0.14	1.67	0.15	0.17	0.08	2.59	2.4	0.26	1.45	17.66
1940	13.35	11.88	7.78	0.85	0.74	0.03	0	0.15	0.69	1.44	2.59	10.12 b	49.62
1941	4.83 a	4.75	1.37	2.02	1.34	0.68	0.07 f	0.13 c	0.15	1.14	1.8	10.14	28.35
1942	8.27	4.89	1.6	3.29	2.17 a	0.22	0	0	0.18	0.21	8.53	5.21	34.57
1943	11.07	2.32	5.4	1.55	0.87	0.18	0.64 b	0 a	0	0.59	0.78	1.54	24.94
1944	4.17	5.83	3.05	2.28 a	1.05	0.32	0.36	0	0.26	2.4	7.42 a	3.57	30.71
1945	3.07	6.63	4.04	0.89	2.85	0.73	0.44	0.13	0	5.9	4.85	11.14	40.67
1946	2.02	2.79	4.58	0.11	0.33	0	0.69	0	1.3	0.56	8.44	2.28	23.1
1947	1.8	2.77	5.02	0.86	0.5	0.44	0	0.04	0.2	4.66	0.44	0.26	16.99
1948	4.58	2.59	3.69	6.63	1.46	0.62	0	0.11	0.13	0.42	3.07	5.18	28.48

TAHOE, CALIFORNIA

Monthly Total Precipitation (inches)

-48758

File last updated on Dec 4, 2008

*** Note *** Provisional Data *** After Year/Month 200808

a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,

z = 26 or more days missing, A = Accumulations present

Long-term means based on columns; thus, the monthly row may not sum (or average) to the long-term annual value.

MAXIMUM ALLOWABLE NUMBER OF MISSING DAYS : 5

Individual Months not used for annual or monthly statistics if more than 5 days are missing.

Individual Years not used for annual statistics if any month in that year has more than 5 days missing.

YEAR(S)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1995	16.18	1.37	19.58	5.13	3.57	1.3	0.04	0.04	0.03	0	0.58	8.81	56.63
1996	12.78	11.57	6.09	3.57	4.18	0.73	0.03	0.51	0.15	1.64	6.66	18.5	66.41
1997	18.23	0.91	0.86	1.41	0.6	1.67	0.04	0	0.4	1.57	4.58	3.02	33.29
1998	9.64	13.92	5.48	1.11	2.31	1.8	0.31	0.33	2.64	0.39	5.59	4.17	47.69
1999	9.2	13.07	3.68	3.13	0.75	0.6	0.38	0.76	0.14	1.89	2.16	1.03	36.79
2000	11.86	8.8	0.5	1.63	2.37	0.1	0	0	0.85	2.4	1.95	1.53	31.99
2001	1.88	4.86	1.56	2.32	0.24	0	0	0	0.35	0.85	6.46	8.01	26.53
2002	3.18	1.93	4.49	1.96	0.43	0	0.22	0	0	0.02	6.74	9.75	28.72
2003	1.97	1.79	2.22	6.27	0.95	0.56	0.11	1.59	0.09	0	2.4	9.77	27.72
2004	2.06	7.25	0.94	0.62	0.77	0.27	0	0	0.05	5.23	1.72	7.2	26.11
2005	6.31	2.77	6.75	1.43	4.33	1.52	0	0.45	0.31	1.54	2.52	18.6	46.53
2006	7.33	5.15	6.43	6.23	0.54	0	0	0	0	0.16	3.1	2.98	31.92
2007	1.46	7.48	1.13	1.47	0.6	0.2	0	0.08	1	2.02	0.43	3.29	19.16
2008	7.58	4.03	1.1	0.18	0.62	0.01	0	0	0 d	0 c	0.66 e	0 z	14.18

	Period of Record Statistics												
MEAN	5.88	5.36	4.09	2.13	1.19	0.67	0.26	0.3	0.61	1.73	3.6	5.57	31.77
S.D.	4.68	4.16	3.3	1.76	1.03	0.65	0.42	0.5	0.85	1.77	3.05	4.79	10.64
SKEW	1.31	1.25	1.7	1.53	1.14	1.11	2.83	2.26	2.51	1.46	1.24	1.8	0.9
MAX	22.82	22.25	19.58	8.25	4.33	2.64	2.66	2.56	4.78	8.34	13.73	27.55	66.41
MIN	0.08	0	0.11	0.06	0	0	0	0	0	0	0	0	9.34
NO YRS	97	101	99	97	99	97	97	97	99	100	98	100	85



TAHOE, CALIFORNIA
Monthly Total Precipitation (2007, 2008, 2009)

Month	Precipitation (inches)
Jan-07	1.46
Feb-07	7.48
Mar-07	1.13
Apr-07	1.47
May-07	0.6
Jun-07	0.2
Jul-07	0
Aug-07	0.08
Sep-07	1
Oct-07	2.02
Nov-07	0.43
Dec-07	3.29
TOTAL 2007	19.16
Jan-08	7.58
Feb-08	4.03
Mar-08	1.1
Apr-08	0.18
May-08	0.62
Jun-08	0.01
Jul-08	0
Aug-08	0
Sep-08	0
Oct-08	1.09
Nov-08	2.87
Dec-08	4.58
TOTAL 2008	22.06
Jan-09	2.44
Feb-09	4.39
Mar-09	6.37
Apr-09	0.6
May-09	3.98
Jun-09	0.76
Jul-09	0.11
Aug-09	0.13



July 7, 2008
File: 93278.01

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TAHOE REGIONAL
PLANNING AGENCY

4835 Longley Lane
Reno, NV
89502

p | 775.689.7800
f | 775.689.7810

kleinfelder.com

Ms. Heather Gustafson
Tahoe Regional Planning Agency
P. O. Box 5310
Stateline, NV 89449

**SUBJECT: Land Capability Challenge and Groundwater Monitoring
4011 Manzanita
South Lake Tahoe, California
APNs 029-081-03 and 15**

**REFERENCE: Soil Investigation-SEZ Evaluation, Nolan Project Site, El
Dorado County, California, APN 029-081-03 & 15, by
Davis²Consulting Earth Scientists, Inc., dated July 12, 2006**

Dear Ms. Gustafson:

The project site is located along the downhill (northwestern) side of Manzanita Avenue in South Lake Tahoe, California. The property is very flat to very gently sloping down to the northwest.

Based on a review of geologic maps, the site is underlain by Quaternary-age Glacial Outwash. The Soil Survey of the Lake Tahoe Basin, California-Nevada (Rogers et al, 1974) indicates the site is underlain by Elmira loamy coarse sand, 0 to 5 % slopes (E_fB). Vegetation consists of Jeffrey pine with a few lodgepole pines and blue wild rye.

Four monitoring wells were installed on May 2, 2006 to depths of 20 and 40 inches on each parcel (Davis, 2006). Wells were monitored from May 2 through July 2006 (Davis, 2006). No groundwater was encountered during this time period (Davis, 2006).

Methodology

One test pit was dug on each parcel with test pit TP-1 on parcel 029-081-03 and TP-2 on parcel 029-081-15. Each test pit was logged by a Kleinfelder geologist. Water levels were measured by Kleinfelder in all four wells on March 21, 2008. Tahoe

Regional Planning Agency personnel continued groundwater monitoring from March 27 through June 2008.

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Reno, NV
89502

Results

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Soils exposed in the test pit are presented in detail in the Test Pit Logs (attached). These soils consisted of a dark brown and brown loamy sand topsoil overlying brown, dark yellowish brown, pale brown, yellowish red, olive yellow, and light olive brown loamy sand and gravelly loamy sand subsoils extending to depths of greater than 60 inches. Redox features consisting of strong brown and yellowish red mottling was observed below depths of 10 inches in test pit TP-1 and 22 inches in test pit TP-2. These soils are deep and excessively well drained and are members of Soil Hydrologic Group A.


Groundwater was not encountered on March 21, 2008 and was reportedly not encountered during TRPA monitoring.

Based on these results, the parcels should not be considered stream environment zones (SEZs).

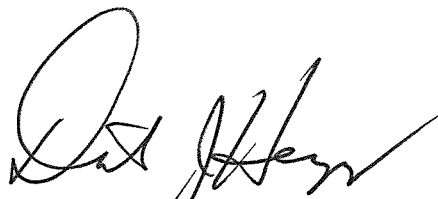
Thank you for reviewing this report. If you have any questions regarding this letter, please call me at (775) 691-2954.

Sincerely,

KLEINFELDER WEST, INC.



Eric Hubbard, C.E.G.
Geoscience Manager



David J. Herzog, C.E.G.
Senior Engineering Geologist

EH:DJH:kw/mp

cc: Kristen Nolan
Sue Simon

Attachment

TEST PIT LOG TP-1

Soil Unit	Depth	Soil Description
0	0-3 inches	Fill, dark brown (7.5YR 3/4) loamy sand
A ₁	3-10 inches	Dark brown (7.5 YR 3/2) loamy sand, moist, moderate granular structure, medium soft, non-plastic, many fine and very fine roots, many fine and very fine interstitial pores, gradual wavy contact
AC	10-16 inches	Brown (7.5 YR 4/4) loamy sand, moist with strong brown (7.5 YR 4/6) redox staining, granular structure, medium soft, non-plastic, occasional fine to medium roots, fine interstitial pores, gradual wavy contact
C ¹	16-24 inches	Brown (7.5 YR 4/4) loamy sand, moist with strong brown (7.5 YR 4/6) redox staining, granular structure, medium soft, non-plastic, gradual wavy contact
C ²	24-30 inches	Dark yellowish brown (10 YR 4/4) very gravelly loamy sand, rounded gravel to 2", moist, granular structure, medium dense, non-plastic, gradual wavy contact
C ³	30-60 inches	Pale brown (10 YR 6/3) loamy sand with strong brown (7.5 YR 4/6) redox staining, very moist, granular structure, medium dense, non-plastic

TEST PIT LOG TP-2

Soil Unit	Depth	Soil Description
0	0-4 inches	Fill, dark yellowish brown (10YR 4/4) loamy sand
A ₁	4-9 inches	Dark brown (7.5 YR 3/2) loamy sand, moist, moderate granular structure, medium soft, non-plastic, many fine and very fine roots, many fine and very fine interstitial pores, gradual wavy contact
AC	9-22 inches	Brown (7.5 YR 4/4) loamy sand, moist, granular structure, medium soft, non-plastic, occasional fine to medium roots, fine interstitial pores, gradual wavy contact
C ¹	22-38 inches	Yellowish brown (10 YR 5/4) loamy sand, moist with yellowish red (5 YR 4/6) redox staining, granular structure, medium soft, non-plastic, gradual wavy contact
C ²	38-40 inches	Yellowish red (5 YR 4/6) loamy sand, moist, granular structure, medium dense, non-plastic, gradual wavy contact
C ³	40-52 inches	Olive yellow (2.5 Y 6/6) loamy sand with strong brown (7.5 YR 5/8) redox staining, very moist, granular structure, medium dense, non-plastic
C ⁴	52-60 inches	Light olive brown (2.5 Y 5/4) loamy gravelly sand with strong brown (7.5 YR 5/8) redox staining, rounded gravel to 1 inch, very moist, granular structure, medium dense, non-plastic

DAVIS²

CONSULTING EARTH SCIENTISTS, INC.

P.O. Box 734 · Georgetown, CA 95634 · Tel. (530) 333-1405; Fax (530) 333-1009

July 12, 2006

**Soil Investigation – SEZ Evaluation
Nolan Project Site
El Dorado County, California
(APN 029-081-03 & 15)**

INTRODUCTION

A soil investigation was conducted on the Nolan project site on May 2, 2006. The objective of the study was to evaluate soils and other features to determine if stream environment zone (SEZ) is present pursuant to Chapter 37 of the Tahoe Regional Planning Agency Code of Ordinances, and to assess the appropriate Land Capability Class, according to Chapter 20. Individual Parcel Evaluation System (IPES) score was calculated for the vacant lot.

The project represents two adjacent residential parcels at 4001 Manzanita Avenue, El Dorado County, California. There are two structures on one parcel (4001 Manzanita) and the adjacent parcel (15) is vacant. The vacant parcel received a zero (0) IPES score, and the other was determined by TRPA site verification to be SEZ. Our assessment shows that neither primary nor secondary indicators for SEZ are present and there is no measurable ground water in the upper 40 inches on either parcel, based upon placement of groundwater monitoring wells during the peak spring runoff season.

Soil information contained in this report is for the strict use of Land Capability, IPES and SEZ determination. It should not be used for building foundation design, slope stability or seismic analyses.

ENVIRONMENTAL SETTING

The Nolan project site is located at 4001 Manzanita Avenue, southwest of Park Avenue, El Dorado County, California (Fig. 1). The project consists of two adjacent parcels (APNs 029-081- 03 & 15). Parcel 03 is developed with two small cabins and parcel 15 is vacant (Fig. 2).

Vegetation is dominated by Jeffrey pine with few lodgepole pines and an understory of blue wild rye. Soils are shown on TRPA map sheet H-17 as EfB (Elmira loamy coarse sand, 0 to 5 percent slopes). Geology (Burnett, 1968) shows this area as Qg (Glacial outwash). Bailey's (1974) geomorphic analysis places this site in E₂ (Outwash, till and lake deposits).

METHODOLOGY

The site was surveyed as well as areas nearby. Soils were exposed using hand tools to excavate to 40 inches depth. Detailed description and interpretation follows standards of

the National Cooperative Soil Survey. Information gathered at the site was compared to the *Soil Survey of the Lake Tahoe Basin, California – Nevada* (Rogers et al, 1974), *Land-Capability Classification of the Lake Tahoe Basin, California-Nevada* (Bailey, 1974), *Vegetation of the Lake Tahoe Basin, A Guide for Planning* (TRPA, 1971), supporting documents referenced in Chapters 20 and 37 for appropriate land capability placement. A base topographic map prepared by Resource Concepts, Inc. was used in the field for ground control and as a graphic to show soil description / groundwater monitoring sites and depict land capability districts.

Additionally, groundwater wells were placed at two depths, 20 inches and 40 inches near the center of each parcel on May 2, 2006 and monitored throughout the spring snow melt period of May and early June, 2006. The wells consist of slotted pipe, backfilled with sand (ASTM Specifications) and sealed around the top with bentonite. A sedimentation basin constructed immediately downslope, between Pine Road and Lake Tahoe, was also monitored. Photographs of the site and surrounds are attached.

FINDINGS

The vegetation community type found is *Type 17: Mixed Conifer*, consisting of dominantly Jeffrey pine (*Pinus jefferyii*), with few lodgepole pine (*P. contorta var. murrayana*) and an understory of dominantly blue wild rye (*Ilymus glaucus*). This is not an SEZ indicator community according to Chapter 37 (Figs. 3 – 5).

Results of groundwater monitoring produced zero (0) inches within the upper 40 inches of the natural ground surface from May 2 through early July, 2006. This hydrologic year for the Central Sierra is reported by the California State Water Resources Department as 180 percent of average. The sedimentation basin directly downslope of the project site, between Pine Road and Lake Tahoe, was dry during this monitoring time period (Fig. 1 & 6).

Soils were found to be deep somewhat excessively drained and members of Soil Hydrologic Group A. They can be characterized as having dark brown loamy coarse sand topsoil over dark yellowish brown loamy coarse sand parent materials displaying relic redox accumulations of strong brown. These soils are slightly different in color with respect to the Elmira and Gefo series as currently shown. They differ from the Ev (Elmira wet variant) because they do not exhibit redox depletions. These soils are different than Jabu because the lack a fragipan, and argillic subhorizon.

For the purpose of Land Capability, these soils place in Class 7 based on Soil Hydrologic Group A with slopes less than 5 percent (*Table 4 – Basis of capability classification for Lake Tahoe basin lands*, Bailey, 1974). This finding does not change the current designation of Class 7 on the TRPA overlays.

Because SEZ is absent on these lots, Parcel 15 should receive an IPES score. New information that was not known at the time the initial score was done, site specific groundwater monitoring, is now available (37.10.c). Based on nonexistent SEZ, this parcel should receive 949 points with 30 percent allowable coverage.

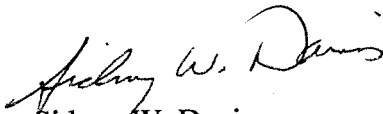
Still need
precip data
for SW?

CONCLUSIONS AND RECOMMENDATIONS

Our work shows that no SEZ exists on either of the parcels evaluated. There are neither primary nor secondary indicators of SEZ present. Under Bailey's (1974) land capability classification criteria, these parcels would remain as mapped, Class 7. An IPES score should be awarded to the vacant lot, which was erroneously given a zero (0) score, based on presence of SEZ. Our calculations justify an IPES score of 949 and 30 percent coverage.

Please refer to the following soil profile descriptions that justify land capability, the attached IPES score sheet for the vacant lot and the attached map showing where soils were described, and the location of the groundwater monitoring wells.

Respectfully submitted,



Sidney W. Davis
Certified Professional
Soil Scientist No. 1031

Representative Soil Profile Description
(Colors are moist unless otherwise indicated)

Stop No. 1

- A 0 to 7 inches, loamy coarse sand, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, loose, nonsticky and nonplastic; many very fine and fine roots; many very fine and fine interstitial pores.
- AC 7 to 13 inches, loamy coarse sand, dark brown (10YR 3/3) moist; weak fine granular structure; soft, loose, nonsticky and nonplastic; many fine medium and coarse roots; many very fine and fine interstitial pores.
- C1 13 to 26 inches, loamy coarse sand, dark yellowish brown (10YR 3/4) with strong brown (7.5YR 4/6) redox concentrations, moist; single grain; soft, loose, nonsticky and nonplastic; common fine medium roots; many very fine and fine interstitial pores.
- C2 26 to 40 inches, very gravelly loamy coarse sand, strong brown (7.5YR 4/6) with dark yellowish brown (10YR 3/4) redox concentrations, moist; single grain; soft, loose, nonsticky and nonplastic; common fine medium roots; many very fine and fine interstitial pores.

Note: No groundwater within 40 inches. Two monitoring wells placed 20" and 40" depth. Relic redox features.

Soil Series: Unnamed

Soil Classification: Sandy, mixed, frigid, Humic Dystrocherepts

Soil Drainage Class: Somewhat excessive

Soil Hydrologic Group: A

Stop No. 2

- A 0 to 6 inches, loamy coarse sand, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, loose, nonsticky and nonplastic; many very fine and fine roots; many very fine and fine interstitial pores; clear smooth boundary.
- AC 6 to 14 inches, loamy coarse sand, dark brown (10YR 3/3) moist; weak fine granular structure; soft, loose, nonsticky and nonplastic; common fine medium roots; many very fine and fine interstitial pores; gradual smooth boundary.
- C1 14 to 26 inches, loamy coarse sand, very dark grayish brown (10YR 4/3) with common distinct strong brown (7.5YR 4/6) redox concentrations, moist;

single grain structure; soft, loose, nonsticky and nonplastic; common fine medium roots; many very fine and fine interstitial pores; gradual wavy boundary.

- C2 26 to 40 inches, very gravelly loamy coarse sand, strong brown (7.5YR 4/6) with common distinct dark yellowish brown (10YR 3/4) redox concentrations, moist; single grain; soft, loose, nonsticky and nonplastic; common fine medium roots; many very fine and fine interstitial pores.

Note: No groundwater within 40 inches. Two monitoring wells installed 20" and 40" depth. Subsoil too coarse for cambic. Relic redox features.

Soil Series: Unnamed

Soil Classification: Sandy, mixed, frigid, Humic Dystrochrepts

Soil Drainage Class: Somewhat excessive

Soil Hydrologic Group: A



Fig. 3 - APN 029-081-03, looking north from Manzanita Ave

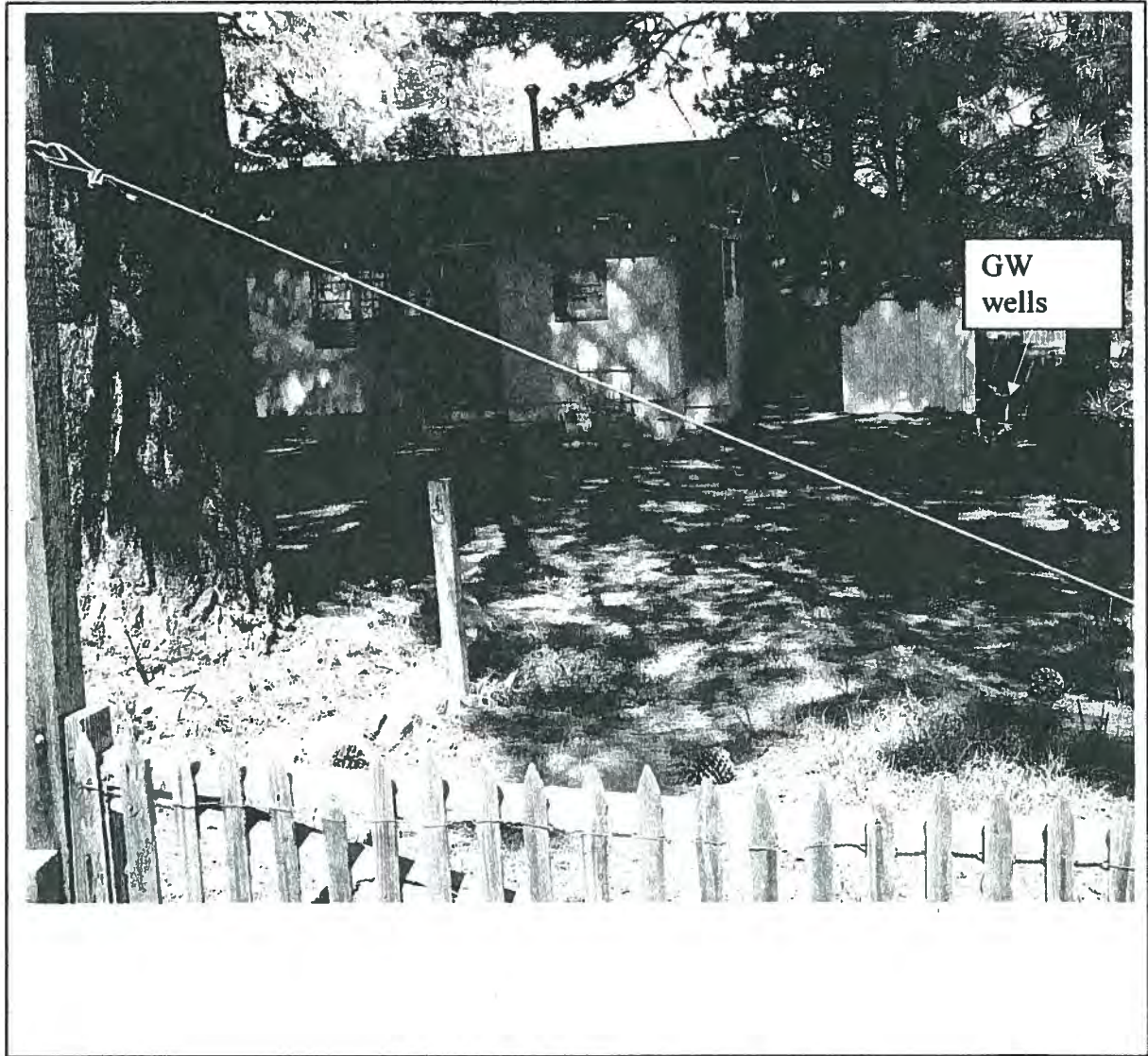


Fig. 4 - Location of groundwater monitoring wells

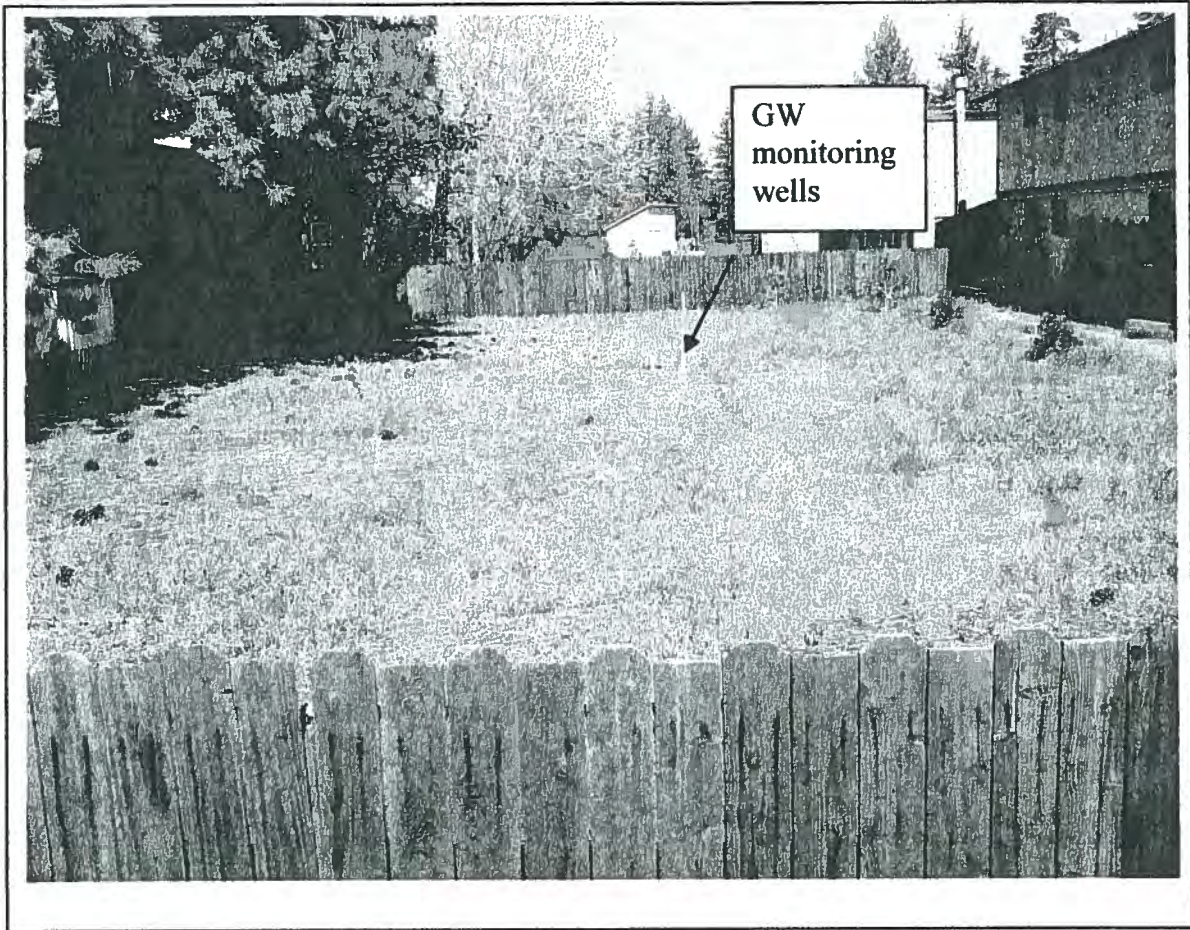


Fig. 5 - Parcel 029-081-15 – groundwater monitoring wells near center of parcel.



Fig. 6 - Sedimentation basin located between Pine Road and L. Tahoe – dry May 2, 2006

7/12/2006

APN: 029-081-15

Soil Symbol:	xxx (As found)		
OVERRIDE K Factor:	0.05	OVERRIDE LS Factor:	
R Factor:	45		
Slope:	d (u,d)		
L1:	58	S1:	2
L2:	72	S2:	1
L3:		S3:	
L4:		S4:	
L5:		S5:	
L6:		S6:	
OVERRIDE REH:	(Points)		
REH:	435 (Points)		
OVERRIDE Hyd. Grp:	a (a,b,c,d)		
Veg. Cover:	g (p,f,g)		
OVERRIDE Runoff Pot:	(Points)		
Runoff Potential:	200 (Points)		
		REH + Runoff Pot:	635
		Coverage:	30%

Access thru SEZ:	<input type="text" value="no"/>	(no,p,s,ch)
New Access:	<input type="text" value="u"/>	(no,u,d)
OVERRIDE Exc. Diff:	<input type="text" value="sli"/>	(sli,mod,sev)
Cut Height:	<input type="text" value="0"/>	(Feet)
20 ft. Access Slope:	<input type="text" value="2"/>	(%)
Fill height:	<input type="text" value="0"/>	(Feet)
Parking in SEZ:	<input type="text" value="n"/>	(y,n)
Grading @ Street:	<input type="text" value="no"/>	(no,mi,ma)
Grading @ 20 ft:	<input type="text" value="0"/>	(Feet)
OVERRIDE Access:		(Points)
Access Difficulty:	170	(Points)
Util. thru SEZ:	<input type="text" value="no"/>	(no,p,s,ch)
OVERRIDE Utility:		(Points)
Utility thru SEZ:	110	(Points)
Watershed Number:	41	Bijou Park
OVERRIDE Watershed:		(Points)
Cond. of Watershed:	40	(Points)
OVERRIDE Veg. Group:	a	(a,b,e,g)
Slope @ Bldg. Site:	2	(%)
Aspect:	n	(Degrees)
Elevation:	6239	(Feet)
OVERRIDE Revegetate:	35	(Points)
Ability to Reveg:	35	(Points)
Needed WQ CIP:	42	(Points)
Proximity to Water:	0	(Points)
Parcel Size:	6000	(Sq. Ft.)
SEZ Area:		(Sq. Ft.)
SEZ Setback:		(Sq. Ft.)
Raw IPES Score:	1,032	
5,000 s.f. Factor:	1.00	
10,000 s.f. Factor:	0.92	
Final IPES Score:	949	

Nolan Project Site

El Dorado County APNs 029-081-03 & 15



Legend

- Project Boundary
- NRCS Soils



Figure 1

Attachment D
Site Photographs

PHOTOGRAPHS (Addendum to APN 029-081-003, March 14, 2024, Staff Summary)



Photo 1 – a. Soil pit. Photo 1- b. Looking west from Manzanita Avenue towards residence.

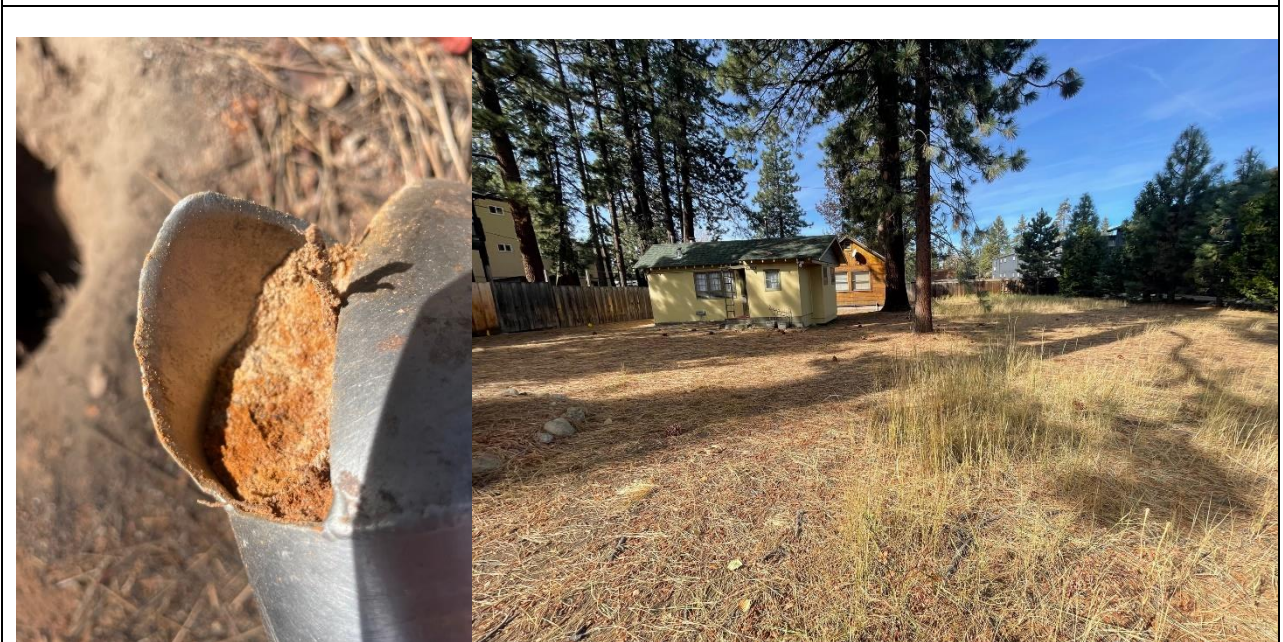


Photo 2 – a. Soil sample from 45 inches. Photo 2- b. View of LCC parcel and adjacent IPES parcel (on right) which was part of the original soil investigations.

