

EXHIBIT P

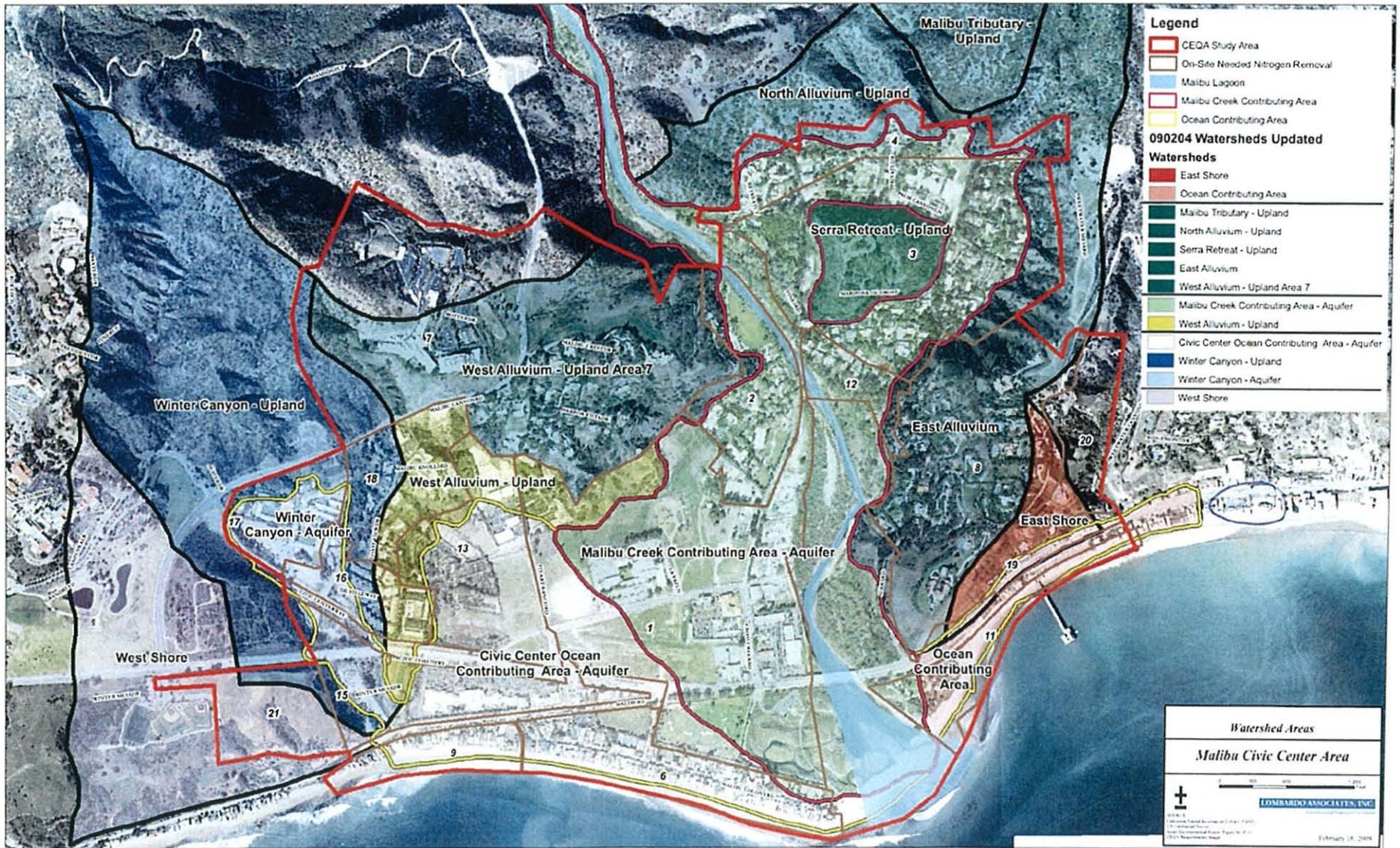


EXHIBIT Q



January 20, 2009

To: California Regional Water Quality Control Board
Los Angeles Region
320 w. 4th Street, Suite 200
Los Angeles, CA 90013

Attention: Ms. Rebecca Chou

Subject: CEQA Scoping Meeting, Proposed Septic Prohibition in the Malibu Civic Center Area (Public Notice No. 08-061) - Comments on Groundwater Basins in the Winter Canyon and Civic Center (Malibu Creek) Areas

Pursuant to the Notice of CEQA Scoping Meeting dated December 19, 2008, we appreciate the opportunity to comment on the proposed Amendment to the Water Quality Control Plan for the Los Angeles Region to incorporate a Septic (Onsite Wastewater Treatment System - OWTS) Prohibition in the Malibu Civic Center Area. We understand that according to the City of Malibu, Winter Canyon is not included in the area for the proposed OWTS moratorium. However, we have heard concerns raised that the Winter Canyon and Malibu Creek/Civic Center area groundwater basins are hydraulically connected. The implication from this connection is that the addition of water into either basin might cause an increase in groundwater levels in other basin. With respect to this issue, we provide the following information:

Winter Canyon and Malibu Creek are separate watersheds. Although they are adjacent, an intervening ridge divides surface waters such that each watershed drains independently towards the ocean. The ridge is composed of siltstone bedrock of the Monterey Formation, which is partially capped by Quaternary terrace deposits (see Figure 1).

Both Winter Canyon and the Malibu Creek/Civic Center area are filled with sediments capable of storing and transmitting water. These sediments could be considered "aquifers" in this sense, even if they are judged to lack yields significant enough to be considered as water supply sources.

The California Department of Water Resources (DWR) defines groundwater basin as follows:

"An alluvial aquifer or stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction and having a definable bottom"

By the DWR definition above, Winter Canyon is a separate groundwater basin, as its boundaries are well defined by the surrounding hills, including the bedrock ridge that separates it from the Malibu Creek/Civic Center area. Further, the DWR has delineated the

boundaries of the Malibu Creek groundwater basin, termed "Malibu Valley Groundwater Basin (2003), and has defined it as follows (2004):

"Malibu Valley Groundwater Basin is a small alluvial basin located along the Los Angeles County coastline. The basin is bounded by the Pacific Ocean on the south and by non water-bearing Tertiary age rocks on all remaining sides. The valley is drained by Malibu Creek to the Pacific Ocean."

The DWR boundaries of the Malibu Valley Groundwater Basin, shown on Figure 2, do not include Winter Canyon.

The lack of hydraulic connectivity between Winter Canyon and the Civic Center area is further illustrated in Figures 3 and 4, reproduced from Stone Environmental, Inc. (2004). Water levels measured during September 2003 (unbreached lagoon) and during March 2004 (breached lagoon) show:

- The two areas are very different with respect to water level and flow gradient.
- Neither system flows into the other – the only location where mixing of the waters might occur is south of Malibu Road, at the ocean/groundwater interface.
- Although flow patterns in the Malibu Creek/Civic Center area are altered significantly by changes in the lagoon's exposure to the ocean, Winter Canyon's water levels are not affected.

As demonstrated herein, the Winter Canyon and Malibu Creek/Civic Center area have separate and distinct groundwater basins. It is therefore our opinion it would not be appropriate, from a hydrogeologic point of view, to include Winter Canyon in the region under consideration for the proposed Malibu Civic Center Septic Prohibition area.

Thank you for your consideration,

EARTH CONSULTANTS INTERNATIONAL, Inc.



Dr. W. Richard Laton PG 7098
Senior Consultant



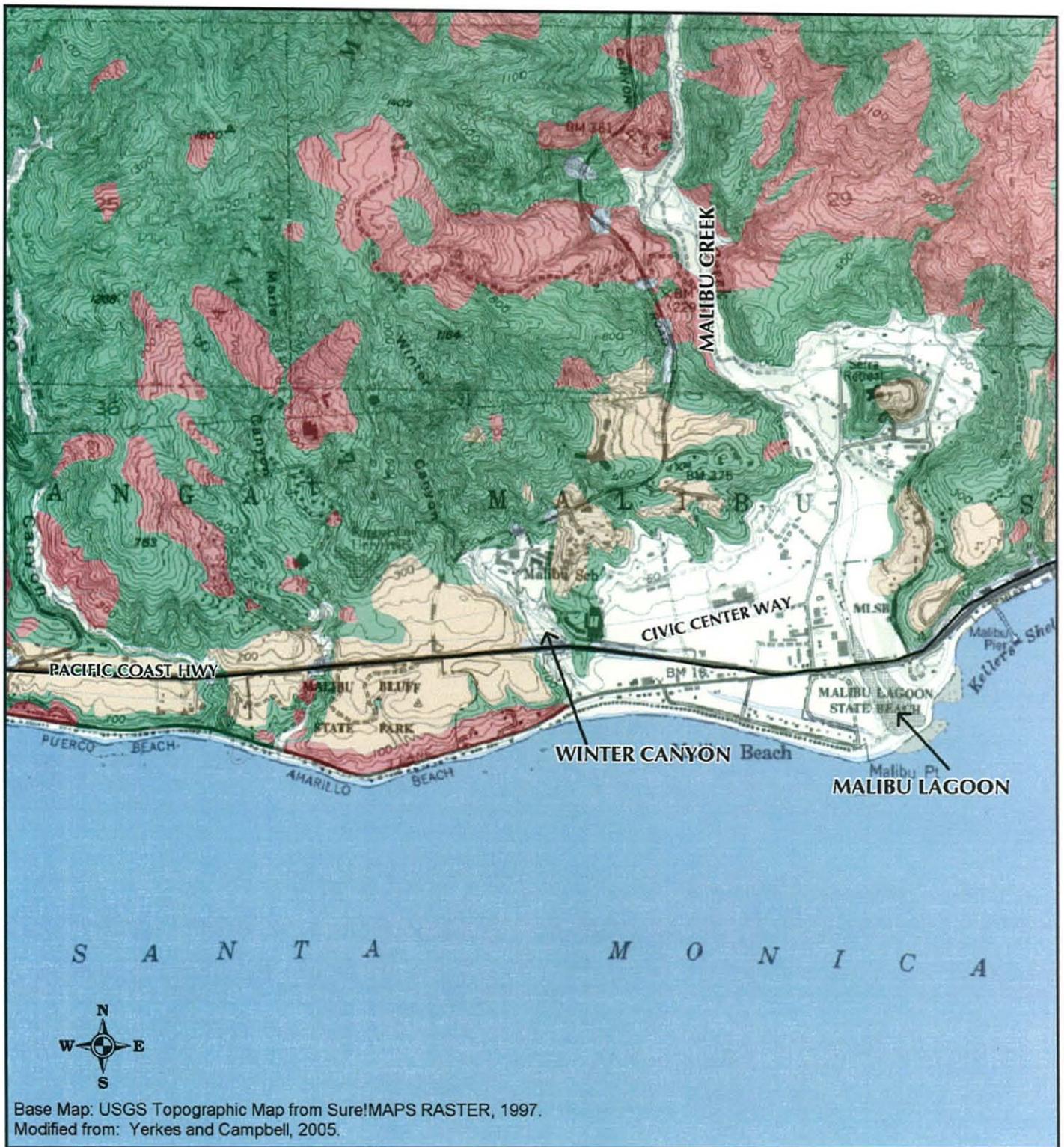
Kay St. Peters CEG 1477
Project Consultant



References

- California Department of Water Resources, 2003, Statewide Groundwater Basin Map with Subbasins, Version 3, dated October 2003.
- California Department of Water Resources, 2004, California's Groundwater, Bulletin 118, last update: February 27, 2004.
- California Department of Water Resources, 2009, Groundwater Glossary, www.groundwater.water.ca.gov/groundwater_basics/gwb_glossary
- Stone Environmental, 2004, Final Report, Risk Assessment of Decentralized Wastewater Treatment Systems in High Priority Areas in the City of Malibu, California, Project Number 011269-W, dated August 30, 2004.
- Yerkes, R. F. and Campbell, R. H., 2005, Preliminary Geologic Map of the Los Angeles 30' x 60' Quadrangle, Southern California, U.S. Geological Survey Open-File Report 2005-1019.





Scale: 1:24,000

Geologic Units

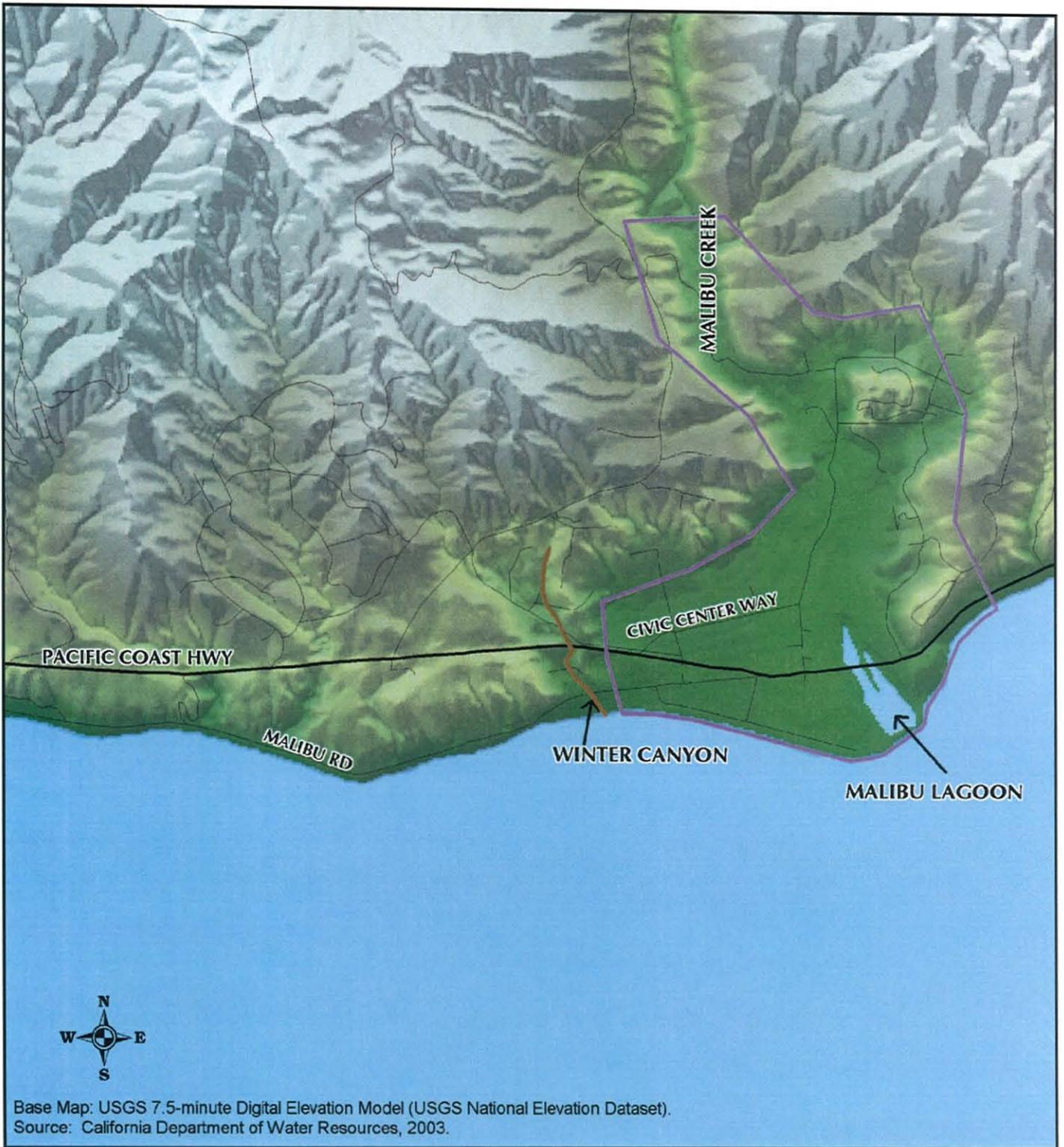
- | | |
|--|---|
|  Artificial Fill |  Landslide |
|  Young Alluvium |  Bedrock |
|  Terrace Deposits | |



Project Number: 2802
 Date: January 2009

Simplified Geologic Map
 Vicinity of Winter Canyon and Civic Center Area
 Malibu, California

Figure 1



Scale: 1:24,000

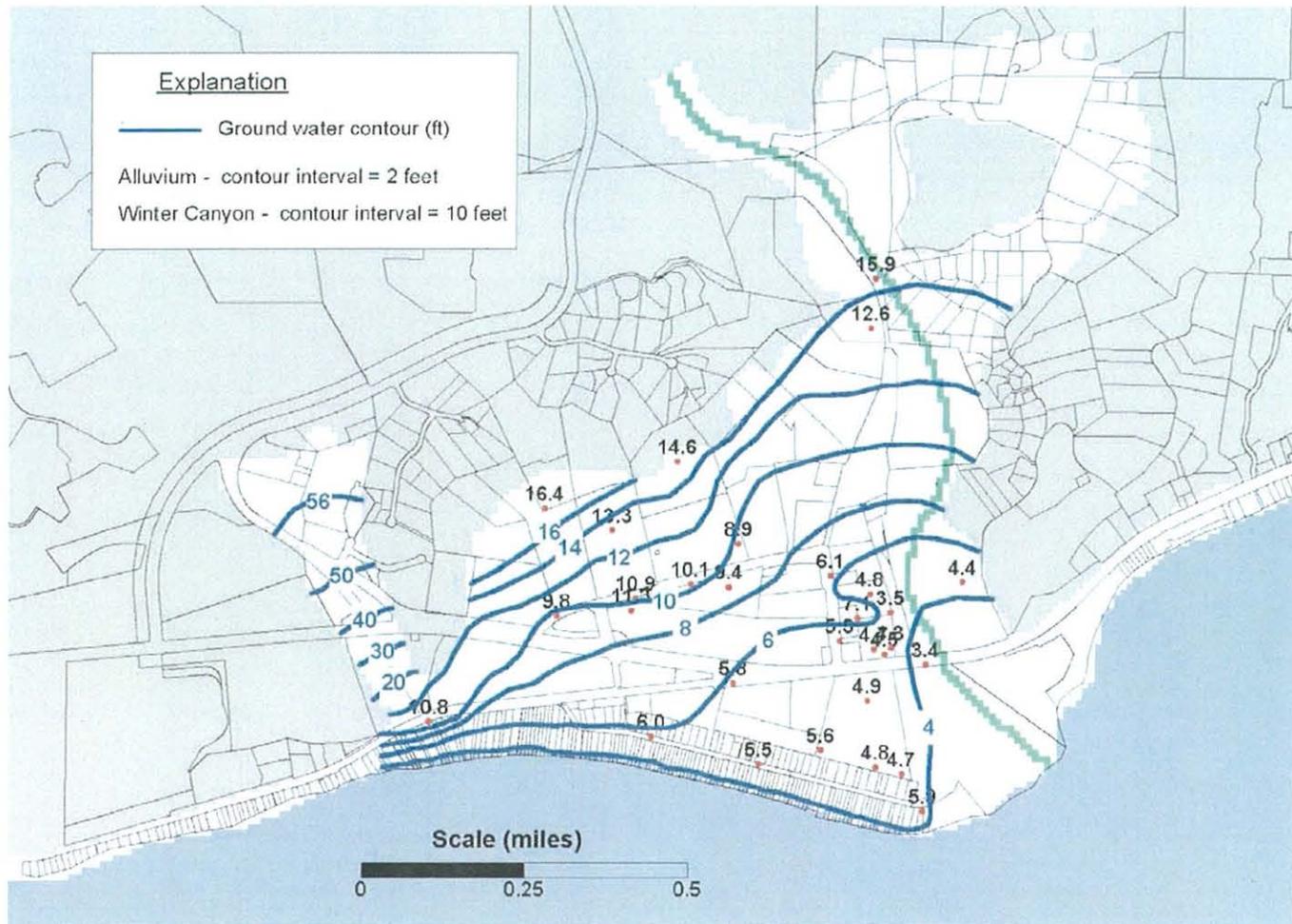
 DWR Limits of Groundwater Basin 4-22



Earth
 Consultants
 International
 Project Number: 2802
 Date: January 2009

Malibu Valley Groundwater Basin
(DWR Basin Number 4-22)
 Malibu, California

Figure 2



Source: Stone Environmental, 2004



Project Number: 2802
Date: January 2009

Water Levels Measured On March 9, 2004 Breached Lagoon

Figure 4

EXHIBIT R

Malibu Valley Groundwater Basin

- Groundwater Basin Number: 4-22
- County: Los Angeles
- Surface Area: 610 acres (1.0 square miles)

Basin Boundaries and Hydrology

Malibu Valley Groundwater Basin is a small alluvial basin located along the Los Angeles County coastline. The basin is bounded by the Pacific Ocean on the south and by non water-bearing Tertiary age rocks on all remaining sides. The valley is drained by Malibu Creek to the Pacific Ocean. Average annual precipitation ranges from 14 to 16 inches.

Hydrogeologic Information

Water Bearing Formations

Groundwater is found principally in Holocene alluvium which consists of clays, silts, sands, and gravels. Thickness of the alluvium ranges from 90 feet at the upper end to more than 140 feet at the lower end (DWR 1975).

Restrictive Structures

The Malibu Coast fault crosses the valley but is not a groundwater barrier (DWR 1975).

Recharge Areas

Recharge of the basin is from percolation of precipitation, runoff, and effluent from domestic septic systems.

Groundwater Level Trends

Groundwater moves south towards the Pacific Ocean.

Groundwater Storage

Groundwater Storage Capacity. No information is available.

Groundwater in Storage. No information is available.

Groundwater Budget (Type C)

No information is available.

Groundwater Quality

Characterization. Analysis of water from one well sampled in 1967 shows a TDS content of 1,310 mg/L (DWR 1975).

Impairments. Seawater intrusion occurred in 1950, and again in 1960, when seawater advanced 0.5 miles inland (DWR 1975). In December 1954 and April 1969, chloride concentrations exceeding 100 mg/L were found in groundwater in the coastal part of the basin (DWR 1975).

Well Production characteristics

Well yields (gal/min)		
Municipal/Irrigation	Range: 1,000– 1,060 gal/min	Average: 1,030 gal/min (2 Well Completion Reports)
Total depths (ft)		
Domestic	Range: 104-550 ft	Average: 293 ft (7 Well Completion Reports)
Municipal/Irrigation	Range: 150-158 ft	Average: 154 ft (2 Well Completion Reports)

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
	Groundwater levels	
	Miscellaneous water quality	
Department of Health Services and cooperators	Title 22 water quality	

Basin Management

Groundwater management:

Water agencies

Public	Los Angeles County Department of Public Works
Private	Malibu Water Company

References Cited

California Department of Water Resources (DWR). 1975. Sea-Water Intrusion in California: Inventory of Coastal Ground Water Basins. Bulletin 63-5.

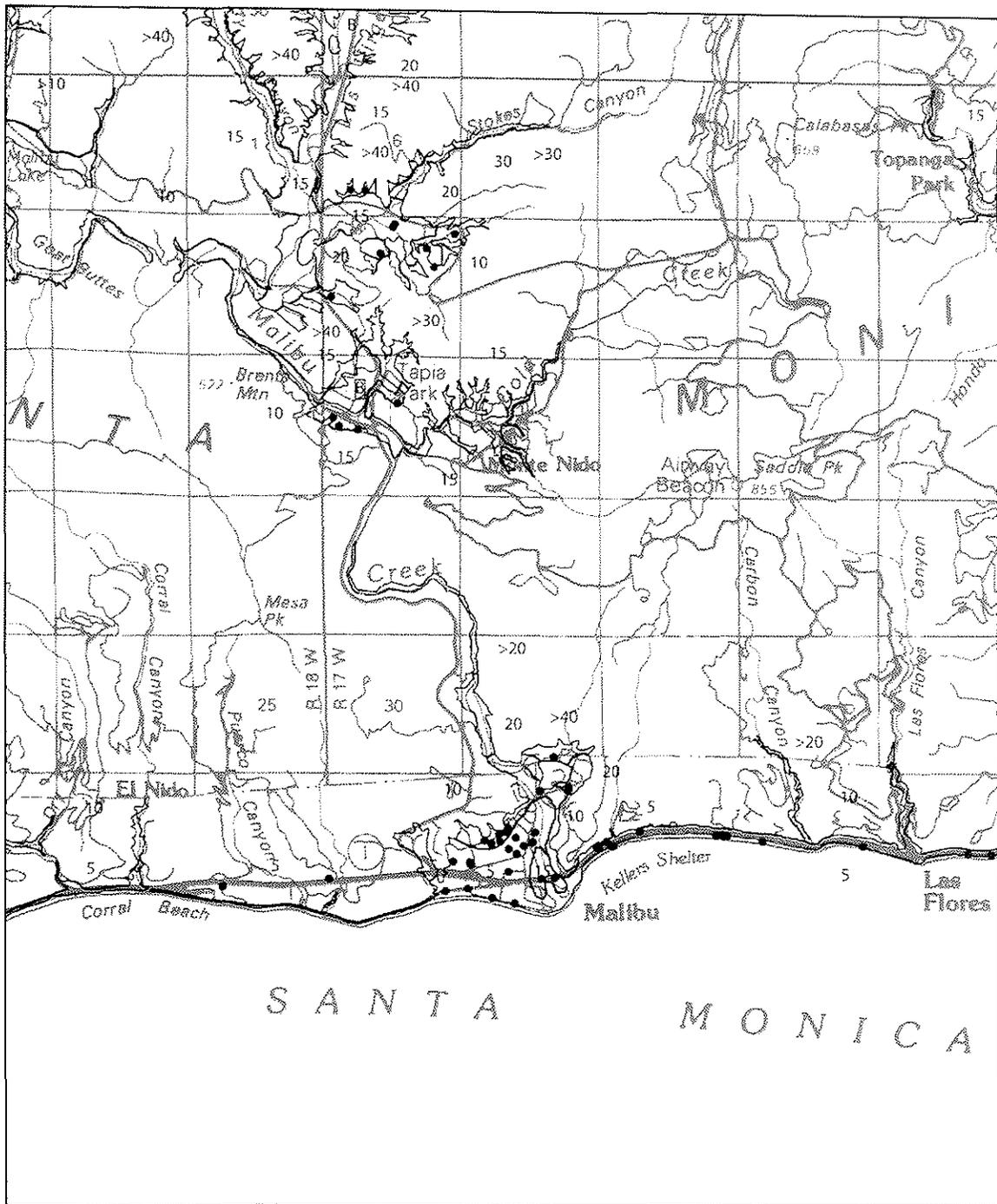
Additional References

California Department of Water Resources (DWR). 1975. *California's Ground Water*. Bulletin 118. 135 p.

Errata

Changes made to the basin description will be noted here.

EXHIBIT S

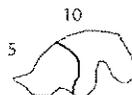


Base map enlarged from U.S.G.S. 30 x 60-minute series

MALIBU BEACH QUADRANGLE



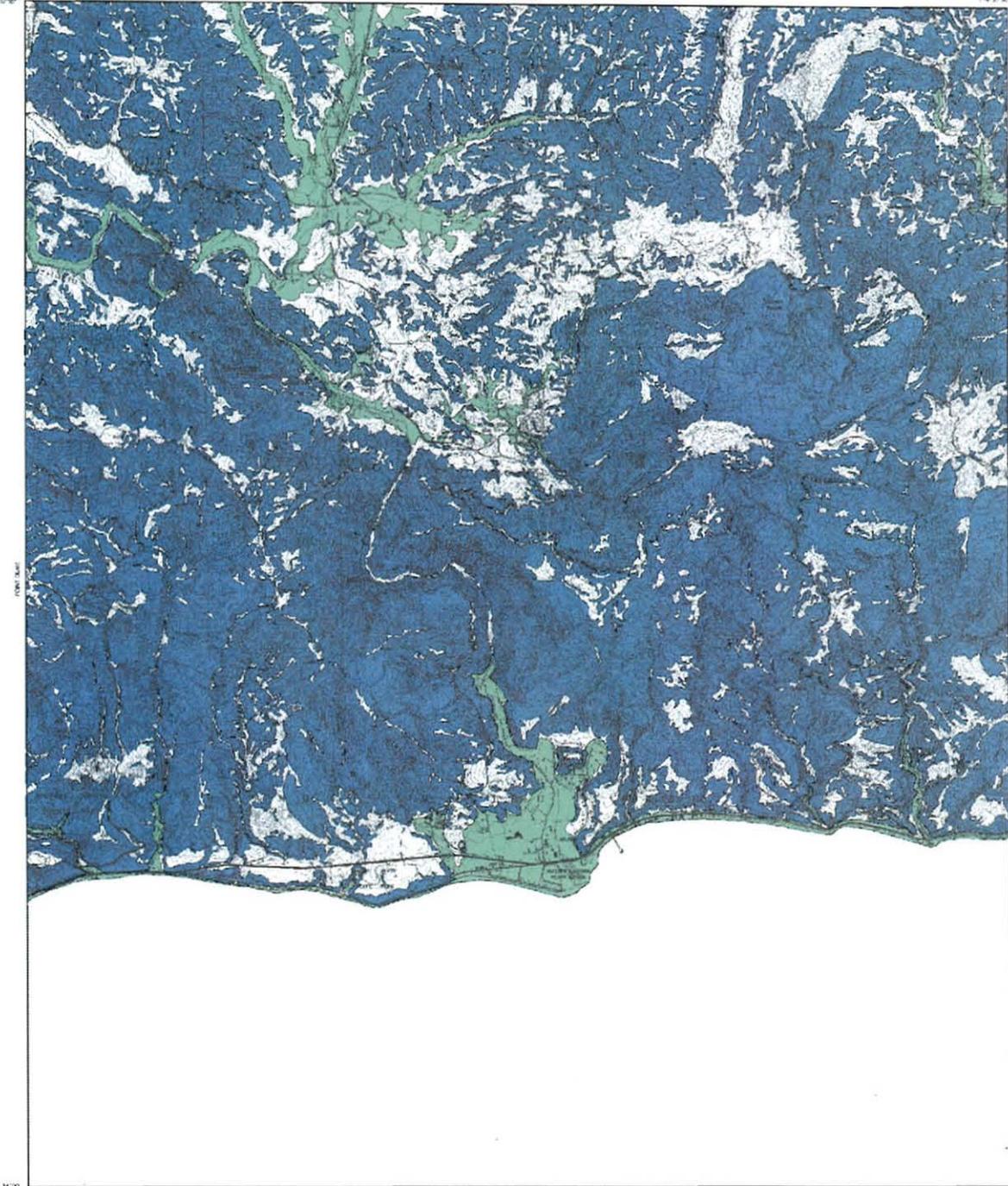
- Borehole Site
- B - Pre-Quaternary bedrock



Alluviated valley and areas of approximately constant groundwater depth (in feet)

Plate 1.2 Depth to historically high ground water and borehole locations, Malibu Beach 7.5-minute Quadrangle, California.

EXHIBIT T



118°40' Base Map prepared by U.S. Geological Survey, 1981 (photorevised 1985) 118°30'

PURPOSE OF MAP

This map will assist cities and counties in determining whether the public works for the public utility systems and other public works are in need of repair or replacement. The map is prepared for the State's Seismic Hazard Mapping Act (Public Resources Code Section 26000-26002). For information regarding this map and associated materials, see the map's title block. For information regarding this map and associated materials, see the map's title block. For information regarding this map and associated materials, see the map's title block.

IMPORTANT - PLEASE NOTE

1. This map may not show all areas that have the potential for liquefaction. Liquefaction is a complex process and is not shown on this map. Areas that are not shown on this map may still be susceptible to liquefaction. Areas that are not shown on this map may still be susceptible to liquefaction.
2. Liquefaction zones may also occur in areas susceptible to the effects of non-saturated soil liquefaction. This map does not show areas susceptible to non-saturated soil liquefaction. Areas that are not shown on this map may still be susceptible to non-saturated soil liquefaction.
3. This map does not show areas susceptible to landslides. Areas that are not shown on this map may still be susceptible to landslides. Areas that are not shown on this map may still be susceptible to landslides.
4. Liquefaction zones may also occur in areas susceptible to the effects of non-saturated soil liquefaction. This map does not show areas susceptible to non-saturated soil liquefaction. Areas that are not shown on this map may still be susceptible to non-saturated soil liquefaction.
5. U.S. Geological Survey (USGS) 100-year return period 1/8 g peak ground acceleration (PGA) is used as the basis for the liquefaction zones. Areas that are not shown on this map may still be susceptible to liquefaction. Areas that are not shown on this map may still be susceptible to liquefaction.
6. Information on this map is not sufficient to serve as a substitute for the geologic and engineering site investigations required under Chapter 7.1 and 7.3 of Division 2 of the Public Resources Code.
7. DISCLAIMER: The State of California and the Department of Conservation make no representation or warranty regarding the accuracy of the data from which this map was derived. Neither the State nor the Department shall be liable for any damages, including any direct, indirect, special, incidental or consequential damages, for any use of this map, whether or not such use was foreseeable, except as expressly provided herein.



**STATE OF CALIFORNIA
 SEISMIC HAZARD ZONES**

Developed in accordance with
 Chapter 7.1, Division 2 of the California Public Resources Code
 (Seismic Hazard Mapping Act)

**MALIBU BEACH QUADRANGLE
 OFFICIAL MAP**

Released: October 17, 2001

James F. Davis
 STATE GEOLOGIST

MAP EXPLANATION

- Zones of Required Investigation**
- Liquefaction**
 Areas where historic occurrence of liquefaction, or local geologic, geotechnical, and/or geotechnical conditions indicate a potential for permanent ground displacements such that mitigation is defined as Public Resources Code Section 26002 (a) is required.
 - Permissible Induced Landslides**
 Areas where previous occurrence of landslides, or local geologic, geotechnical, and/or geotechnical conditions indicate a potential for permanent ground displacements such that mitigation is defined as Public Resources Code Section 26002 (a) is required.

DATA FROM PHOTOLOGICAL SURVEY
 (THIS MAP IS UNCLASSIFIED)

Seismic Hazard Evaluation of the Malibu Beach 7.5 minute quadrangle, Los Angeles County, California, California Division of Mines and Geology, Seismic Hazard Report 100.

For additional information on seismic hazards in this map area, the website www.consrv.ca.gov/dmg/ for zoning and other information revealed refers to DMG's Web Site.

www.consrv.ca.gov/dmg/

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