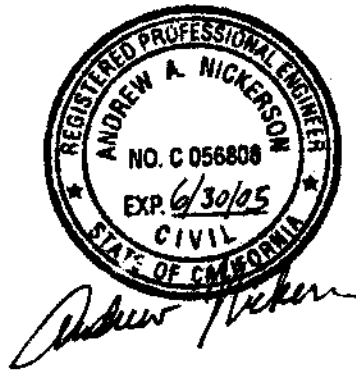


PRELIMINARY HYDROLOGY ANALYSIS

2nd REVISED VTTM 53072

April 3, 2003



BACKGROUND

VTTM 53072, 2nd revised, is a proposed 33 lot residential development in the Santa Monica Mountains adjacent to the existing Mountaingate residential community. The 33 lots consist of 29 hillside residential lots and 4 open space lots. Minimum residential lot size is proposed to be 17,300± square feet, and the minimum building pad area is proposed to be 10,700± square feet.

The analysis was done using the most recent County of Los Angeles hydrology method, using a 50-year storm recurrence interval. The area studied consisted of the tributary area upstream of the proposed detention basin and the development of lot number 29. The storm drain system will consist of a single system in each private street (Canyonback Road and Stoney Hill Road) which will gather runoff from the developed areas and convey it to the canyon bottom via storm drain pipes. At the terminus of each of these lines, the pipes will be fitted with an energy dissipater to reduce the velocities to a non-erosive state. Downstream of the dissipaters a detention basin will be constructed to offset the increased storm flows due to the proposed development.

9.7 acres of area will be added to the Bundy Canyon watershed due to the development. This area is comprised of the building pads fronting the proposed extensions of Canyonback and Stoney Hill Roads. 3.5 acres of the 9.7 acres will come from the adjacent watershed of Mandeville Canyon and 6.2 acres of the 9.7 acres will come from the watershed of Sepulveda Canyon via the Mission Canyon & Landfill. The addition of the 9.7 acres to the Bundy Canyon watershed is considered insignificant since it represents an increase of less than 4% to the 300+ acre Bundy Canyon watershed upstream of development.

SUMMARY OF FINDINGS

Peak pre-development $Q_{50} = 114$ cfs.

Peak post-development $Q_{50} = 151$ cfs.

Increase in peak $Q_{50} = 37$ cfs.

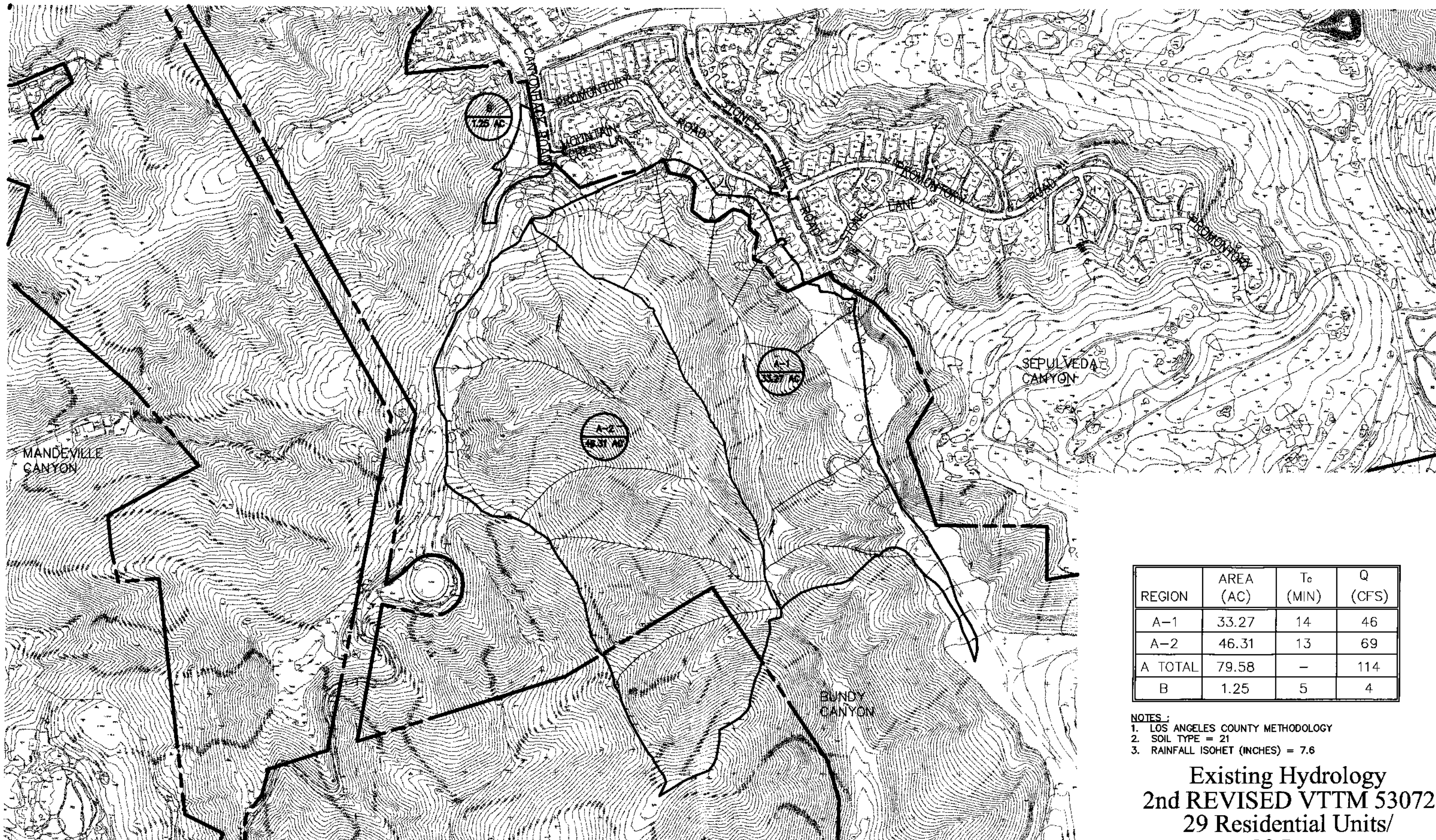
Required detention volume to offset increase in peak $Q_{50} = 0.348$ acre-foot.

Pre-development potential debris production = 8,498 CY.

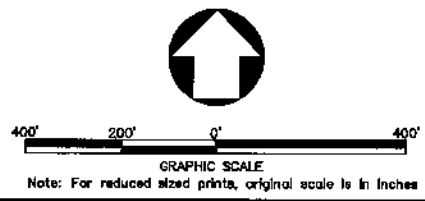
Post-development potential debris production = 5,370 CY.

Decrease in debris production = 3,128 CY.

EXISTING CONDITION



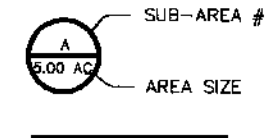
Mountaingate



LEGEND

SUB-AREA I.D. NO.

WATERSHED AREA



REGION	AREA (AC)	T _c (MIN)	Q (CFS)
A-1	33.27	14	46
A-2	46.31	13	69
A TOTAL	79.58	-	114
B	1.25	5	4

- NOTES:**
 1. LOS ANGELES COUNTY METHODOLOGY
 2. SOIL TYPE = 21
 3. RAINFALL ISOHET (INCHES) = 7.6

Existing Hydrology
 2nd REVISED VTTM 53072
 29 Residential Units/
 32 Lots

PSOMAS

DATE: 01-10-2000 REVISED ON: 04-04-03
 JOB No: 1MUR0103 SHEET 1 OF 2

Plotted: 04/04/03 13:11:57 W:\1MUR0103\FNCR\FXH1R\PtSst\pl-hvdr-exst1.dwg ANickerson

PROPOSED CONDITION



REGION	AREA (AC)	T _c (MIN)	Q (CFS)
A-1	40.92	14	67
A-2	49.76	12	84
A TOTAL	90.68	—	151
B	1.25	5	4

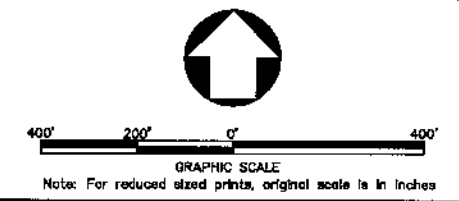
- NOTES:
1. LOS ANGELES COUNTY METHODOLOGY
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Proposed Hydrology
2nd REVISED VTTM 53072
29 Residential Units/
32 Lots

PSOMAS

DATE: 01-10-2000 REVISED ON: 04-04-03
 JOB No: 1MUR0103 SHEET 2 OF 2

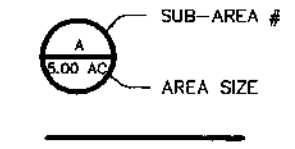
Mountaingate



LEGEND

SUB-AREA I.D. NO.

WATERSHED AREA



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DEBRIS PRODUCTION

DEBRIS PRODUCTION

The site is located in L.A. County debris production zone DPA 4. The entire watershed above the detention basins in the existing condition is 79.6 acres, of which 1.9 acres is residential development which will not produce any debris.

After development the watershed will be 90.7 acres, which will contain 22.5 acres of residential development, and 19.1 acres of stabilized canyon fill. Neither of these areas will produce debris.

The debris production rate for this watershed is 70,000 CY per square mile.

Under the existing condition the watershed has a potential debris production of:

$$[(79.6 - 1.9) / 640] \times 70,000 = 8,498 \text{ CY}$$

After development, the watershed will have a potential debris production of:

$$[(90.7 - 22.5 - 19.1) / 640] \times 70,000 = 5,370 \text{ CY}$$

REFERENCES

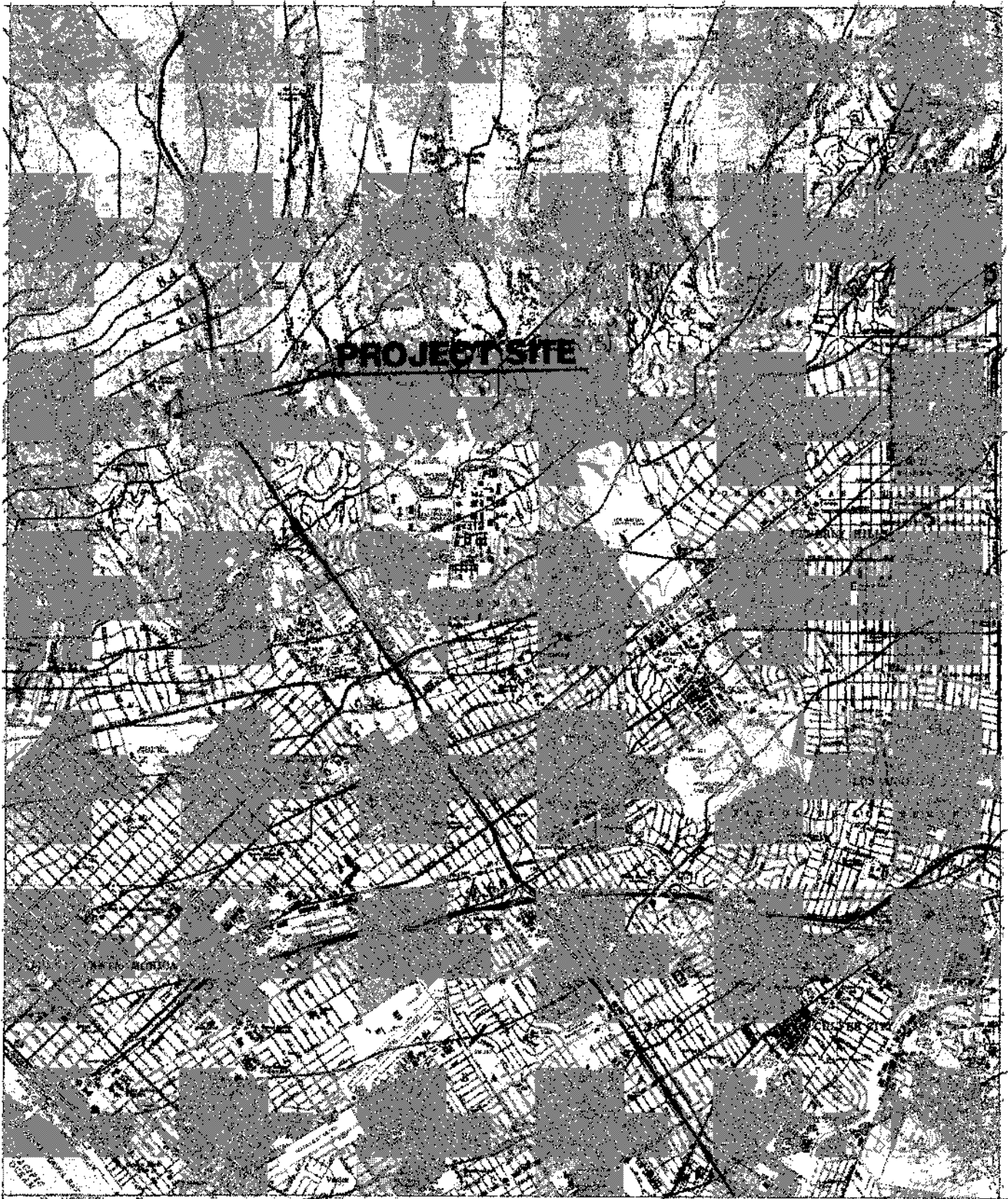
34° 07' 30"

VAN NUYS 1-HI.27

-118° 30' 00"

TOP ANGA 1-HI.16

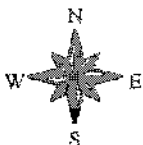
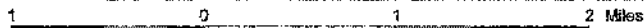
HOLLYWOOD 1-HI.18



-118° 22' 30"

VENICE 1-HI.7

34° 00' 00"



7.3
INCHES OF
RAINFALL

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

**BEVERLY HILLS
50-YEAR 24-HOUR ISOHYET**

1-HI.17





LEGEND

—— SOIL CLASSIFICATION AREA
 DEBRIS POTENTIAL AREA

----- RAINFALL ZONE
 —12— 50-YEAR ISOHYET
 (MAX. 24-HOUR AMOUNT)

LACDPW



BEVERLY HILLS

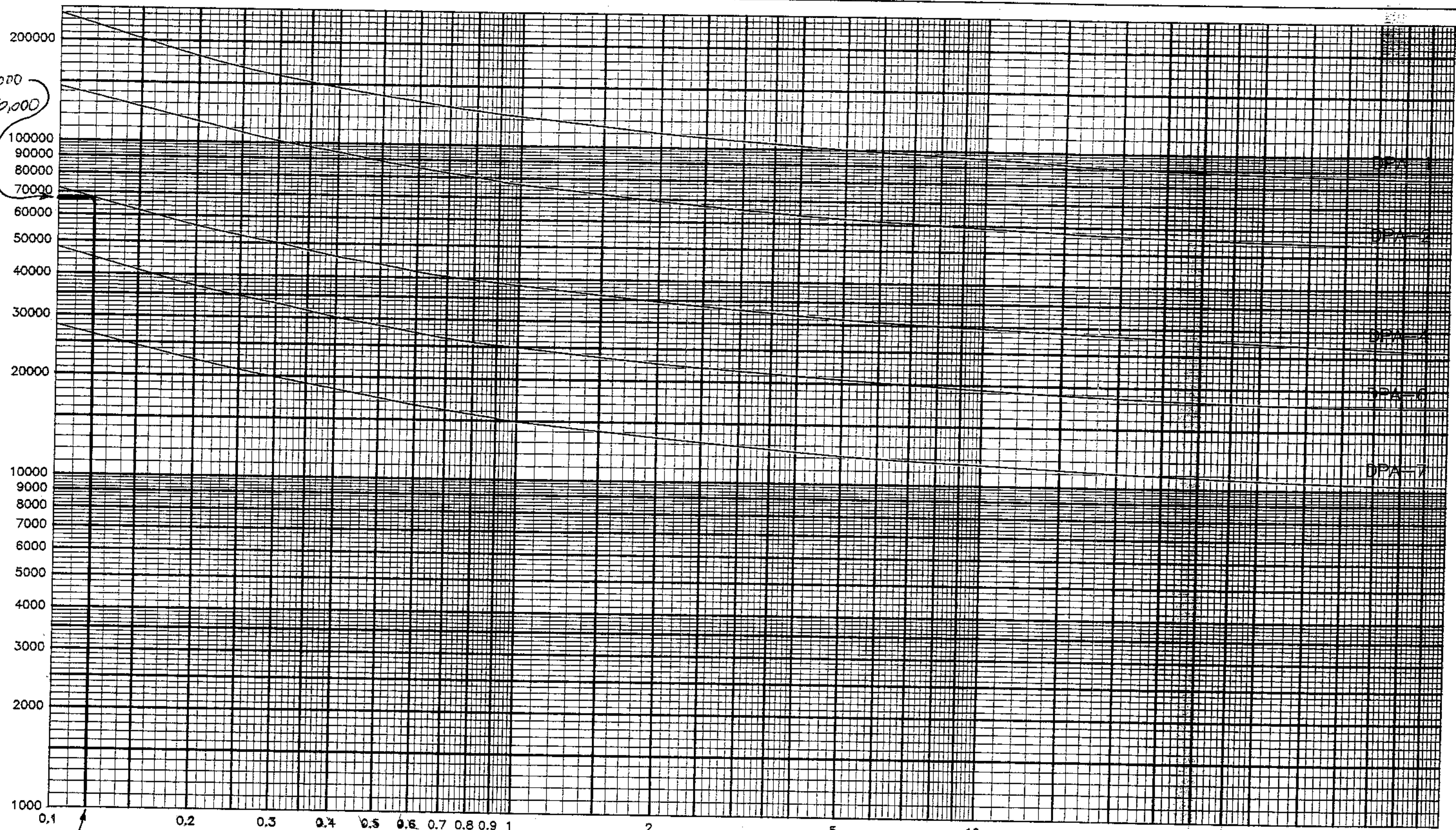
1981

hydrologic map

DP-LABH1.SPG

DEBRIS PRODUCTION RATE IN CUBIC YARDS PER SQUARE MILE

68,000
3470,000



0.12

DRAINAGE AREA IN SQUARE MILES

Los Angeles County
Department of Public Works
DEBRIS PRODUCTION RATES
for Los Angeles Basin