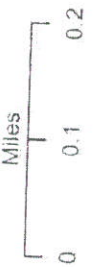


APPENDIX A



Department of Conservation
Division of Land Resource
Protection

Attachment A
Inland Empire Utilities Agency
Local Prime Farmland

APPENDIX B

Prado Basin and Vicinity, Including Reach 9 and
Stabilization of the Bluff Toe at Norco Bluffs

Supplemental Final Environmental Impact Statement/Environmental Impact Report

(State Clearinghouse No. 97071087)

Riverside, San Bernardino and Orange Counties, California

U.S. Army Corps of Engineers
Los Angeles District

Prepared by:

Larry Munsey International
Tustin, California

and

Aspen Environmental Group
Agoura Hills, California

November 2001

Inland Empire Utilities Agency
Attachment

C

1 of 5

**Prado Basin and Vicinity, Including Reach 9 and
Stabilization of the Bluff Toe at Norco Bluffs**

**Supplemental Final Environmental Impact
Statement/Environmental Impact Report**

(State Clearinghouse No. 97071087)

Riverside, San Bernardino and Orange Counties, California

**U.S. Army Corps of Engineers
Los Angeles District**

November 2001

**Inland Empire Utilities Agency
Attachment**

**C
2 of 5**

FINAL
SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
AND ENVIRONMENTAL IMPACT REPORT (SEIS/EIR)
FOR PRADO BASIN AND VICINITY, INCLUDING REACH 9 AND
STABILIZATION OF THE BLUFF TOE AT NORCO BLUFFS

ORANGE, RIVERSIDE, AND SAN BERNARDINO COUNTIES, CALIFORNIA

LEAD AGENCIES: U.S. Army Corps of Engineers, Los Angeles District (NEPA), and the
County of Orange (CEQA).

AFFECTED
JURISDICTIONS: Counties of Orange, Riverside, and San Bernardino, California.
Cities of Corona, Norco, Chino, Chino Hills, Yorba Linda, and
Anaheim

ABSTRACT: This document has been prepared to augment the environmental analysis provided in previous NEPA/CEQA documents associated with the Santa Ana River Mainstem Flood Control Project (SARP). The purpose of the SARP is to provide flood protection to areas susceptible to floods ranging from 100-year to 190-year frequencies. The SARP project area ranges over the counties of San Bernardino, Riverside, and Orange and includes over two million people and numerous businesses and structures. There are various features of the SARP that remain to be implemented, primarily in the Prado Basin and the 12-km (7.4 mi) reach of the Santa Ana River directly below the Basin. All of the remaining features of the SARP were addressed in the *Phase II General Design Memorandum (GDM)*, and the 1988 *Phase II GDM Supplemental Environmental Impact Statement (SEIS)*. However, since 1988, several new flood protection features have been added or the previously approved features have been modified for various reasons. Also analyzed are the effects of previously approved features on the Santa Ana sucker, southwestern willow flycatcher, and least Bell's vireo. These new impacts are due to changes in the environmental conditions that were documented in the previous NEPA/CEQA documents. This Final SEIS/EIR also includes an evaluation of structural stabilization alternatives for the Norco Bluffs along the southern bank of the Santa Ana River downstream of Interstate 15. The stabilization of the Norco Bluffs is a new feature that has not been previously analyzed.

Analyses and documentation are consistent with the NEPA, CEQA, and other applicable laws regulations and policies, and have been conducted in coordination with concerned resource agencies and members of the public. Information referred to in this document, the accompanying feasibility report, and appendices is incorporated by reference.

FOR FURTHER INFORMATION CONTACT:

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Inland Empire Utilities Agency
Attachment

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SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT/REPORT
PRADO BASIN AND VICINITY, INCLUDING REACH 9 AND STABILIZATION OF THE
BLUFF TOE AT NORCO BLUFFS

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2.5.2.1 Alternative B1: Prado Basin Flood Control Improvements

Dam Embankment

In order to increase the reservoir capacity, the dam embankment must be raised and extended in length to the area of the existing spillway. An addition of 28.4 feet of earthfill embankment on top of the existing dam would be accomplished by first removing the top 8 feet of the embankment and the 12 inches of gravel on its downstream slope. Compacted fill would then be placed on the scarified surface of the downstream slope, and 24 inches of stone protection over 9 inches of bedding and 6 inches of filter would be placed on the upstream slope of the raised embankment. A typical section of the dam embankment is shown on Page D-5 in Appendix D. Extension of the embankment from the existing dam to the spillway would be about 800 feet in length and approximately 30 feet above the ground surface. The cross section of extension embankment would be identical to the raised embankment, and would be constricted at the same time with the raised embankment to form a homogeneous section after the completion of the outlet works. The top of the raised embankment between station 0+00 and station 4+70 would be offset approximately 50 feet south of the remaining part of the dam to allow for construction of a turnaround and a vehicular access to the top of the dam, the outlet works, and the spillway would be provided from the existing SR-71. The existing tower and bridge on the basin side of the dam at the existing outlet works would be removed when the dam embankment is raised.

This project feature is identical to the feature approved as part of the Phase II GDM and analyzed in the 1988 Phase II GDM SEIS; therefore, only the potential for effects on the Santa Ana sucker, southwestern willow flycatcher, and least Bell's vireo are analyzed.

Water surface elevations and the size and duration of inundated areas under existing conditions and under conditions with the raised dam embankment are presented in Table 2-5, below. Note that inundation elevations behind the dam would be generally lower with the proposed improvements and impounded flood waters would drain more quickly than under current conditions.

Table 2-5 Water Surface Elevations, Inundation Levels, and Durations Behind Dam

Storm Event	Existing Conditions					With Project Conditions				
	10-yr	25-yr	50-yr ¹	100-yr ²	500-yr	10-yr	25-yr	50-yr	100-yr	500-yr
Water Surface Elevation	501.22'	516.98'	531.56'	545.32'	558.87'	501.23'	515.96'	528.12'	541.10'	557.97'
Acreage of Inundation	1,745	3,465	5,114	6,881	9,255	1,746	3,343	4,630	6,306	11,424
Time to Drain to Elevation 505' (days)	-	4	10	18	20	-	3	5	6	11

¹ Water is flowing one foot over the spillway (Spillway crest elevation is 543')

² 50,000 cfs is flowing over the spillway (gates are closed). At the 200-year event, flows over the spillway increase to 160,000 cfs.

Outlet Works

The recommended outlet works would be designed to release up to 30,000 ft³/s, an increase of more than three times the capacity of the existing outlet works. Consequently, a new outlet structure would be provided between the eastern end of the existing embankment and the spillway. The existing outlet works would be used for diversion and control of water during construction of the proposed outlet works and would be plugged with concrete throughout their entire length upon completion of the new outlet structure. The proposed outlet works would consist of an approach channel, a regulating

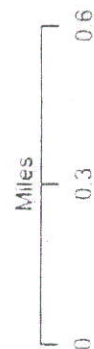
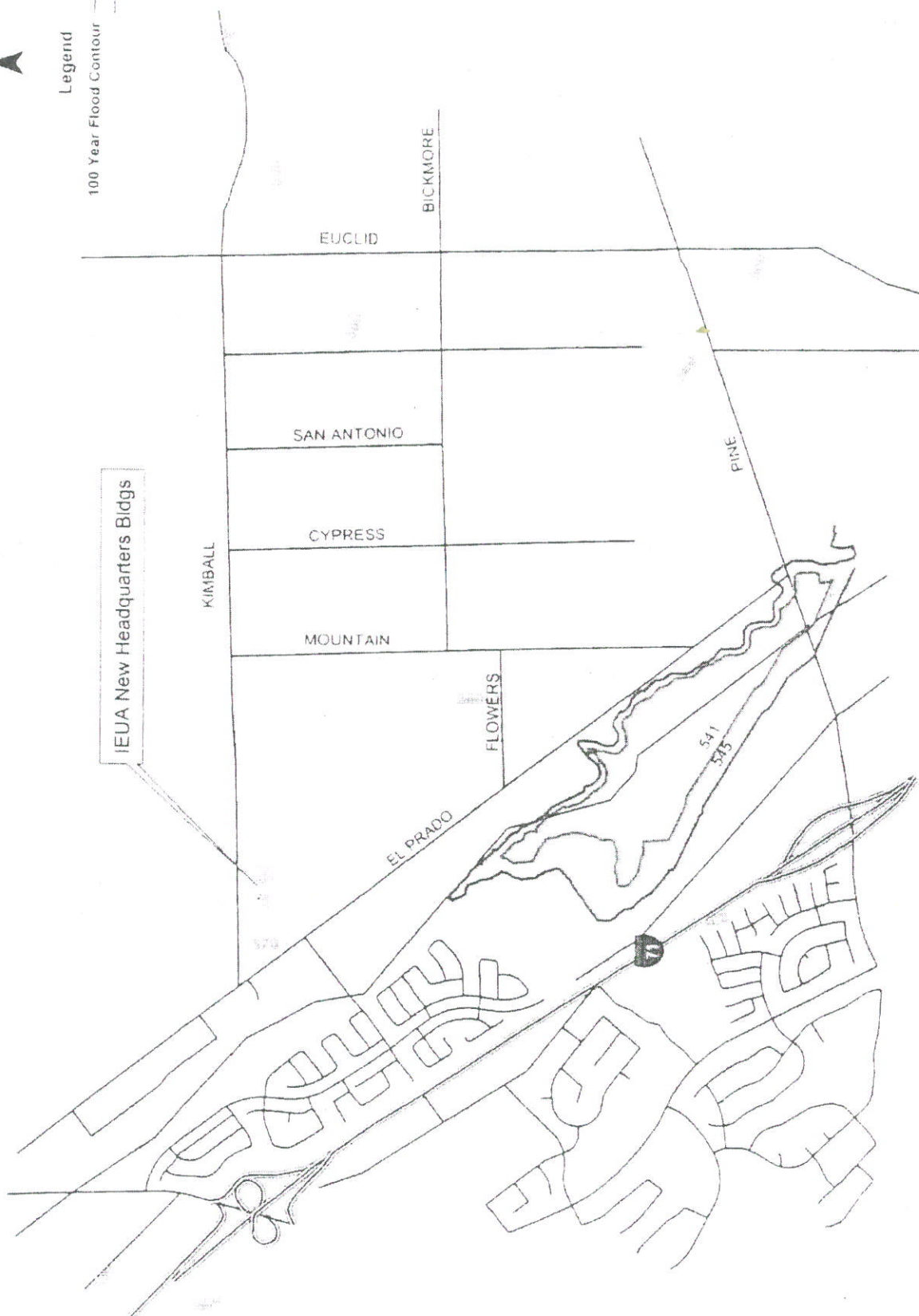
APPENDIX C



Legend

100 Year Flood Contour
541 FT
545 FT

IEUA New Headquarters Bldgs



Attachment D
Inland Empire Utilities Agency
Topographic Map

APPENDIX D

Narrative

SUMMARY OF PRELIMINARY REVIEW COMMENTS:

- 1) The site boundary presented is inconsistent with other site boundaries.
- 2) The restored site area drawing shows sidewalks within the area keyed as restored. Restored areas shall not include sidewalks, paved areas, turf play fields or conventional lawns.
- 3) It is unclear if the 32,948 s.f. expansion area is included in the calculation of restored area.

RESUBMITTAL:

- 1) The site boundary presented in all credits is consistent. Square footage numbers have been verified and are consistent across all credits. The site boundary line, although consistent, was drawn differently, making it appear inconsistent. The graphical differences have been made consistent to ensure that all drawings are consistent in appearance.
- 2) The walkways depicted within the restored area are decomposed granite paths and not paved sidewalks. These paths provide access for visitors and maintenance staff while maintaining a natural environment within the restored area. These pathways will be used to link the headquarters site with a larger restored area located to the south of the site. The attached narrative from IEUA describes the restoration process and the plans for extension of this natural habitat.
- 3) The 32,948 s.f. expansion area is not included within the overall calculation for restored areas. Calculations on the revised exhibits have been tabulated to clearly demonstrate this.

ORIGINAL NARRATIVE:

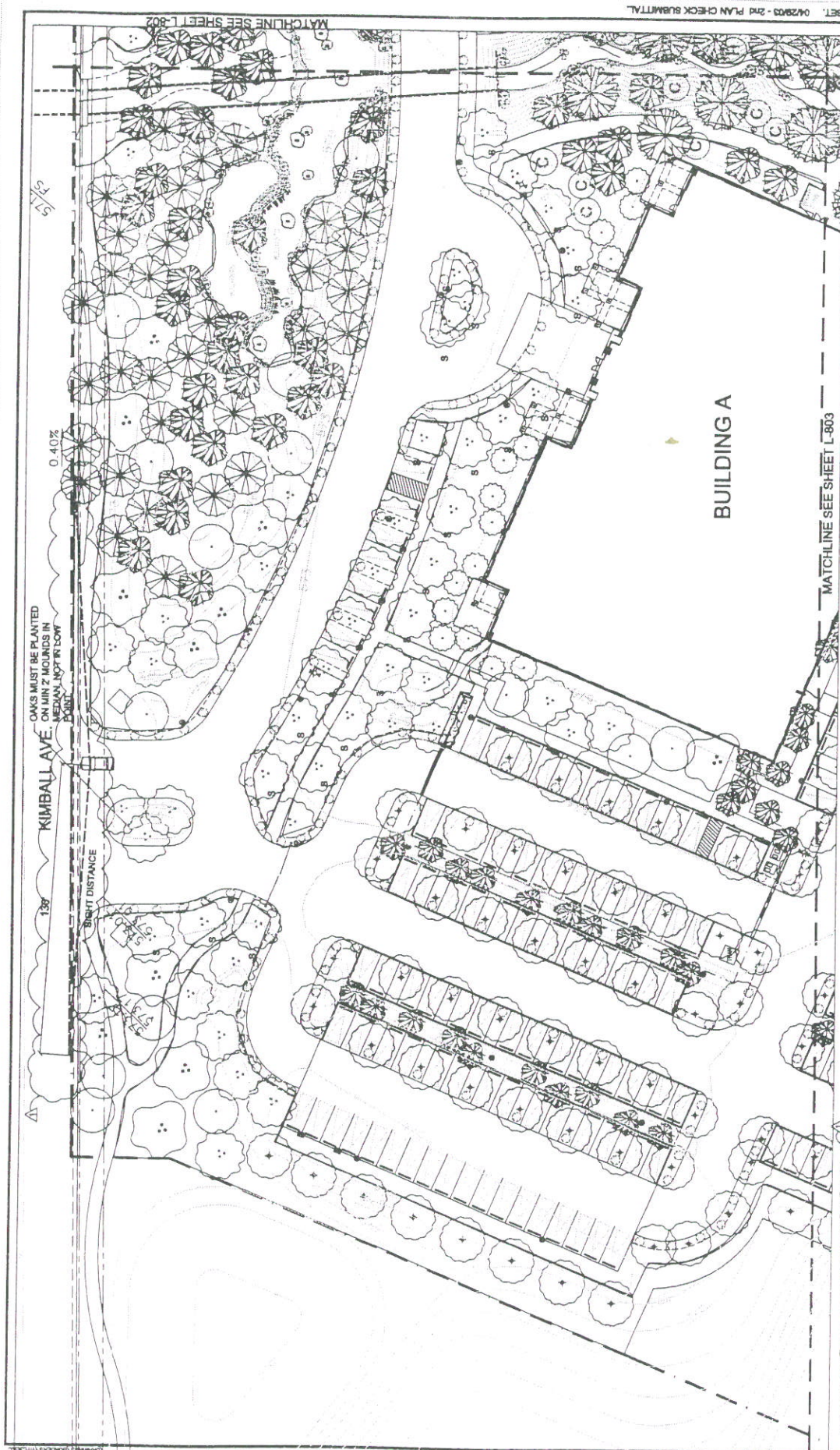
Prior to IEUA purchase of the land, the site was occupied by an operating dairy farm. Due to the environmental problems associated with dairy farm operation, the site is considered to be a degraded site. The project is restoring the open space areas, designated on the attached site plan, with a California native and California adaptive landscape palette, with the exception of the event lawn area (See attached Planting Plans.)

Calculation:

601,786 SF site - 68,040 SF building footprint = 533,746 SF total remaining open space after development.

Required: 50% of remaining open space = 266,873 SF

Provided: 269,765 SF of restored degraded open space habitat.



NOTE: ALL IMPROVEMENTS ARE TO BE MAINTAINED BY THE PROPERTY OWNER.

2500 Highway 41 Suite 125 San Jose, CA 95128 408.260.0000 408.260.0003		INLAND EMPIRE UTILITIES AGENCY A Member of the SOUTHERN CALIFORNIA GAS COMPANY 1700 North Main Street San Jose, CA 95131 (408) 281-1700		IEUA HEADQUARTERS PHASE 1 - PROJECT # EN 02038 TREE PLANTING PLAN L-801	
REVISIONS NO. DATE 1 3/25/03 2 6/7/03 3		DESIGNED BY: WS DRAWN BY: BG CHECKED BY: TW/AC DATE: 12/13/02 BY: 12/13/02 DATE: 12/13/02		REVIEWED BY: _____ PROJECT MANAGER: P. BIA DATE: _____	
FIRST PLAN CHECK: REVISION SECOND PLAN CHECK: REVISION BOUNDARY REVISION		SCALE AS SHOWN 1" = 40'-0"		NOTES: - SEE SHEET L-101 FOR KEY MAP - SEE SHEET L-800 FOR SHRUB/TREE LEGENDS & DRY HYDROSEED MIX (NON-IRRIGATED)	

12/19/02 - BID SET, 04/29/03 - 2nd PLAN CHECK SUBMITTAL



und design
2500 Pritchelson dr
suite 125
lrvine ca 92612
949 250 0023
949 250 0043

Date		REV.	NO.	DATE	BY	APPROV.	DESCRIPTION
Designed	WS 12/19/02						
Drawn	BG 12/19/02						
Checked	TW/AC 12/19/02						

THE GEMINIS

SCALE AS SHOWN

A

NI AND EMPIRE UTILITIES AGENCY

SCALE: 1"=20'-0"

1° 20'

371

APPENDIX E

Figure 819.2A
Runoff Coefficients for Undeveloped Areas
Watershed Types

	Extreme	High	Normal	Low
Relief	.28 -.35 Steep, rugged terrain with average slopes above 30%	.20 -.28 Hilly, with average slopes of 10 to 30%	.14 -.20 Rolling, with average slopes of 5 to 10%	.08 -.14 Relatively flat land, with average slopes of 0 to 5%
Soil Infiltration	.12 -.16 No effective soil cover, either rock or thin soil mantle of negligible infiltration capacity	.08 -.12 Slow to take up water, clay or shallow loam soils of low infiltration capacity, imperfectly or poorly drained	.06 -.08 Normal; well drained light or medium textured soils, sandy loams, silt and silt loams	.04 -.06 High; deep sand or other soil that takes up water readily, very light well drained soils
Vegetal Cover	.12 -.16 No effective plant cover, bare or very sparse cover	.08 -.12 Poor to fair; clean cultivation crops, or poor natural cover, less than 20% of drainage area over good cover	.06 -.08 Fair to good; about 50% of area in good grassland or woodland, not more than 50% of area in cultivated crops	.04 -.06 Good to excellent; about 90% of drainage area in good grassland, woodland or equivalent cover
Surface Storage	.10 -.12 Negligible surface depression few and shallow; drainageways steep and small, no marshes	.08 -.10 Low; well defined system of small drainageways; no ponds or marshes	.06 -.08 Normal; considerable surface depression storage; lakes and pond marshes	.04 -.06 High; surface storage, high; drainage system not sharply defined; large flood plain storage or large number of ponds or marshes
Given	An undeveloped watershed consisting of; 1) rolling terrain with average slopes of 5%, 2) clay type soils, 3) good grassland area, and 4) normal surface depressions.			Solution: Relief 0.14 Soil Infiltration 0.08 Vegetal Cover 0.04 Surface Storage 0.06 C= 0.32
Find	The runoff coefficient, C, for the above watershed.			