

TECHNICAL GUIDANCE DOCUMENT APPENDICES

APPENDIX XVI. EXHIBITS

XVI.1. Rainfall Zones Map

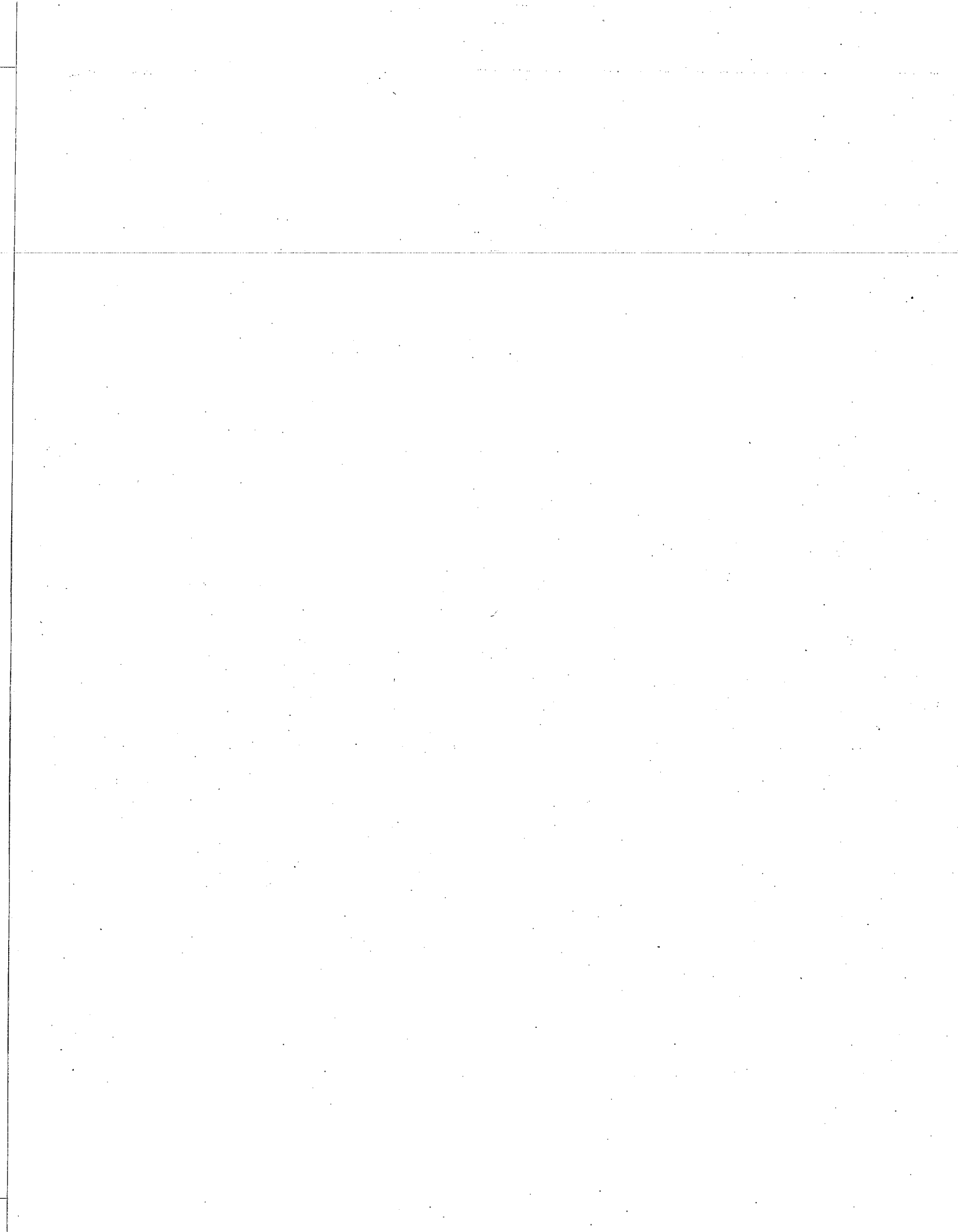
Figure XVI.1: Orange County Rainfall Zones Map

XVI.2. Infiltration Feasibility Constraints Maps

Figure XVI.2: Infiltration Feasibility Constraints Maps

XVI.3. North Orange County Hydromodification Susceptibility Maps

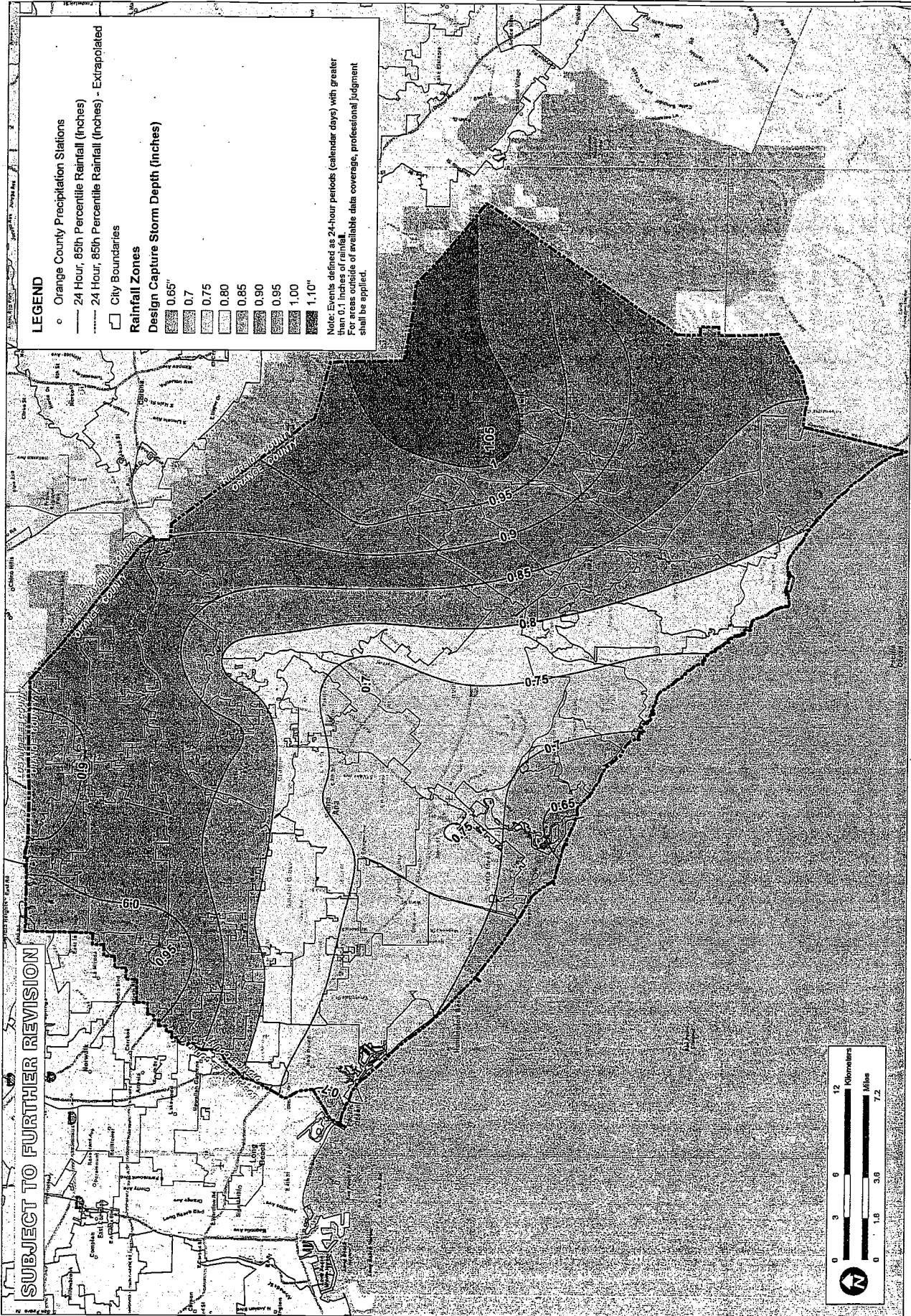
Figure XVI.3: North Orange County Hydromodification Susceptibility Maps



SCALE	1" = 1 MILE
ORANGE COUNTY	
PLANNED	TH
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DATE	02/27/10
PROJECT NO.	09065

**ORANGE COUNTY
TECHNICAL GUIDANCE
DOCUMENT**

RAINFALL ZONES



LEGEND

- Orange County Precipitation Stations
- 24 Hour, 85th Percentile Rainfall (Inches)
- 24 Hour, 85th Percentile Rainfall (Inches) - Extrapolated
- City Boundaries

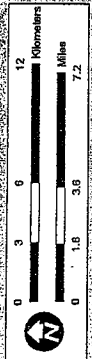
Rainfall Zones

Design Capture Storm Depth (inches)

0.65"
0.7
0.75
0.80
0.85
0.90
0.95
1.00
1.10"

Note: Events defined as 24-hour periods (calendar days) with greater than 0.1 inches of rainfall.
For areas outside of available data coverage, professional judgment shall be applied.

SUBJECT TO FURTHER REVISION



NRCS HYDROLOGIC
SOILS GROUPS

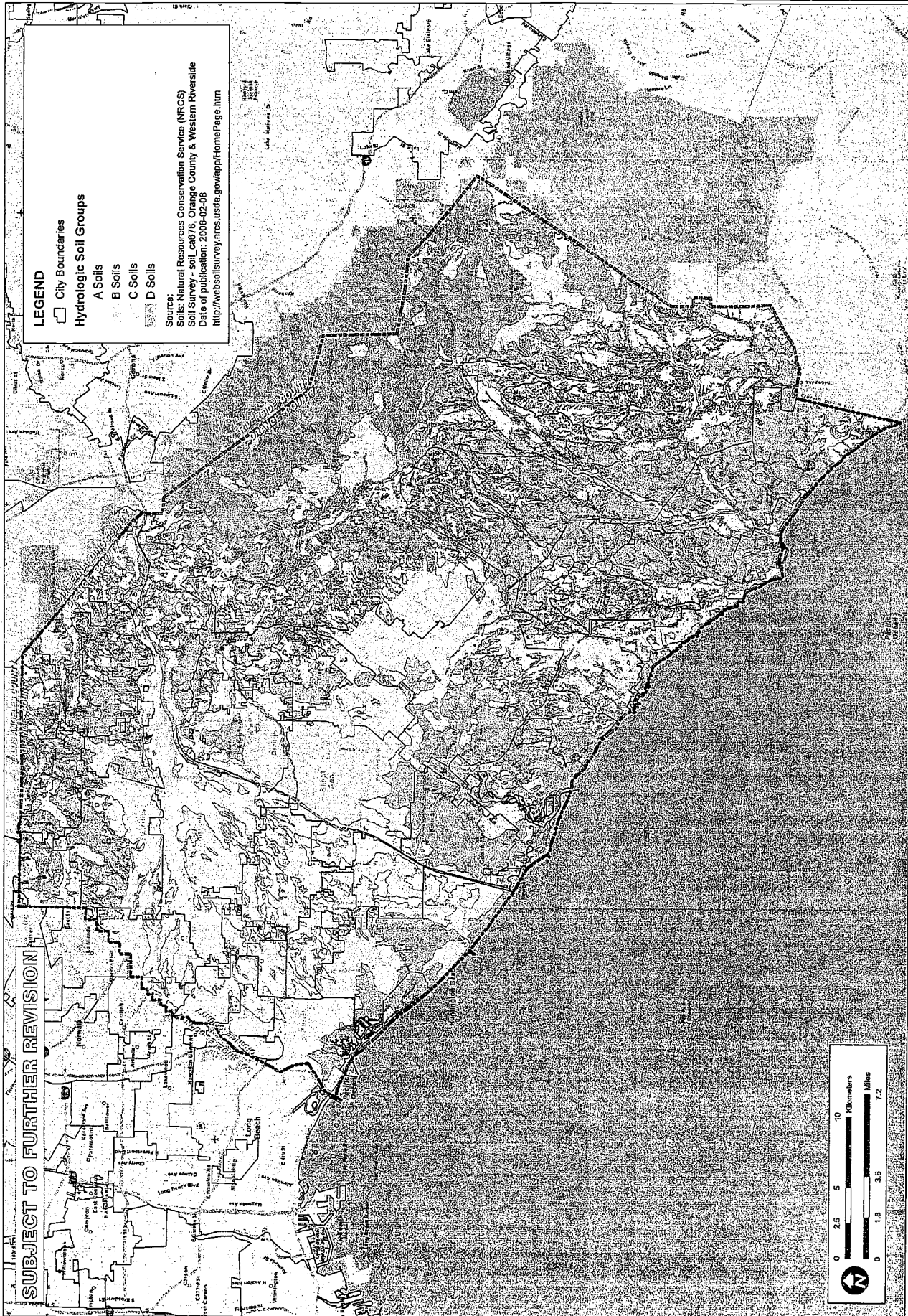
ORANGE COUNTY
INFILTRATION STUDY

ORANGE CO. CA

DATE	04/01/11
DRAWN BY	MLP
CHECKED BY	MLP
DATE	04/01/11
DESIGNED BY	MLP
SCALE	1" = 1 MILE



FIGURE
XVI-2a

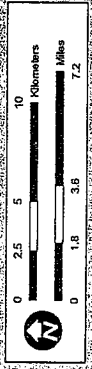


LEGEND

- City Boundaries
- Hydrologic Soil Groups
 - A Soils
 - B Soils
 - C Soils
 - D Soils

Source: Soils: Natural Resources Conservation Service (NRCS)
Soil Survey - soil_c4676, Orange County & Western Riverside
Date of publication: 2006-02-08
<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>

SUBJECT TO FURTHER REVISION



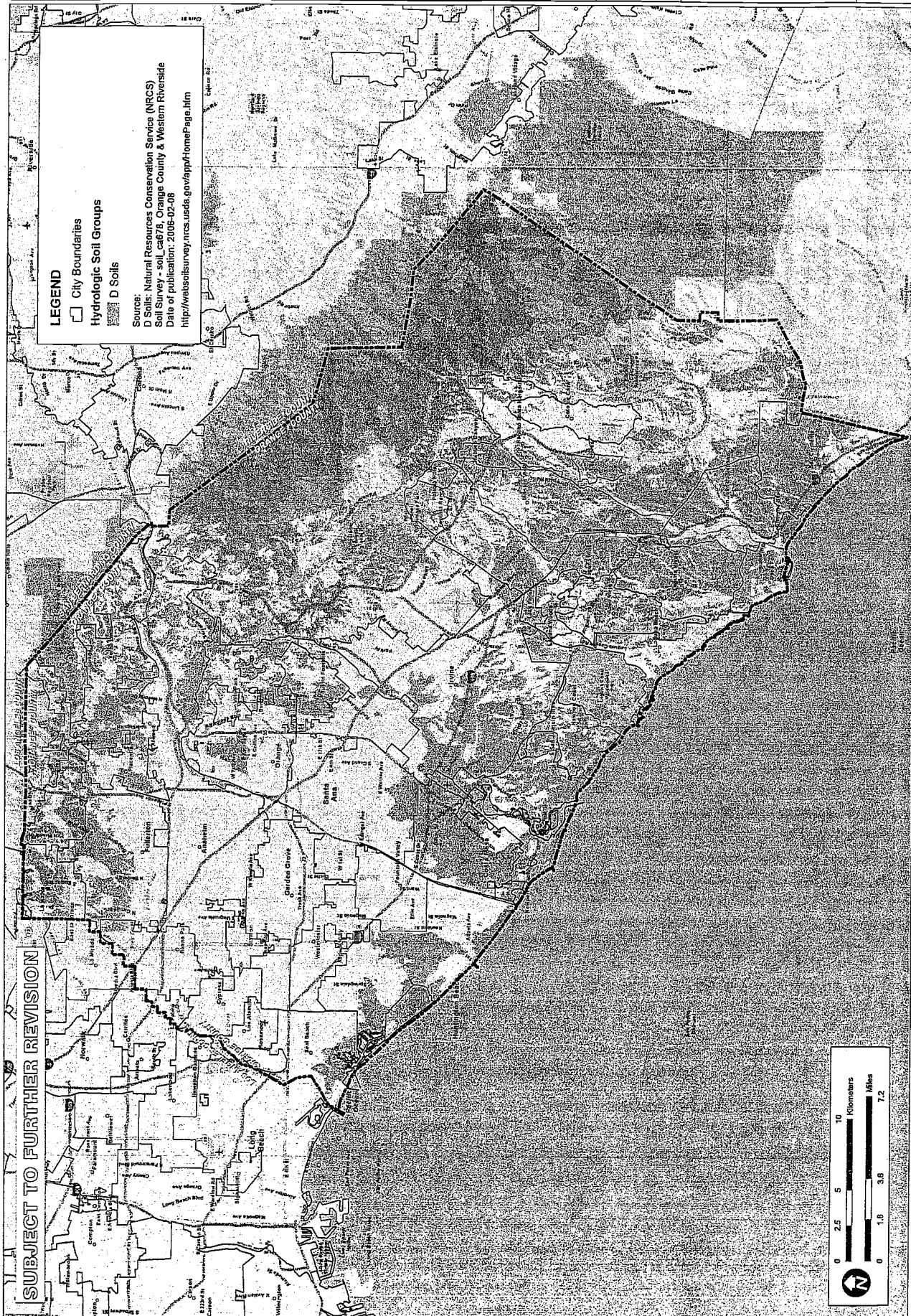


SCALE	1" = 1.0 MILE
REVISION	III
DATE	02/20/11
JOB NO.	09362

ORANGE COUNTY
INFILTRATION STUDY

CA

HYDROLOGIC SOIL GROUP
TYPE D NRCS SOIL SURVEY

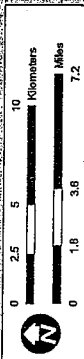


LEGEND

- City Boundaries
- Hydrologic Soil Groups
- D Soils

Source: D. Soils: Natural Resources Conservation Service (NRCS) Soil Survey - soil_cad74; Orange County & Western Riverside
Date of publication: 2/06-02-06
<http://websoilsurvey.nrcs.usda.gov/app/soilPage.htm>

SUBJECT TO FURTHER REVISION



HYDROLOGIC SOIL GROUP
TYPE D MRCS SOIL SURVEY

CA

ORANGE COUNTY
INFILTRATION STUDY

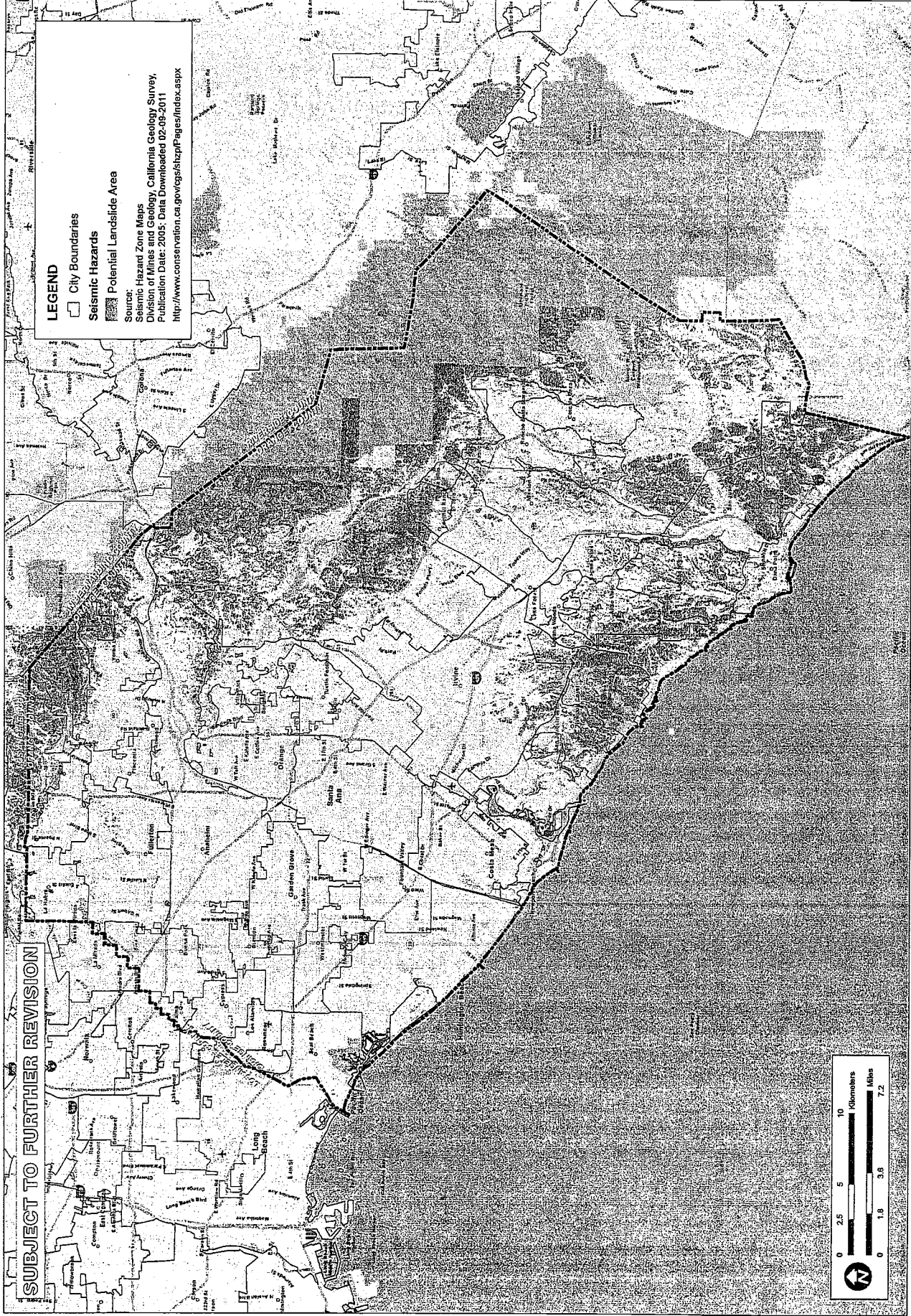
ORANGE CO.

SCALE	1" = 2.5 Miles
DESIGNED	HL
DRAWN	HL
CHECKED	HL
DATE	02/29/11
PROJECT	IR
NO.	10000
DATE	02/29/11
SCALE	1" = 2.5 Miles



FIGURE

XVI-2C

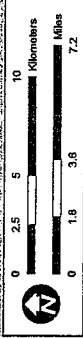


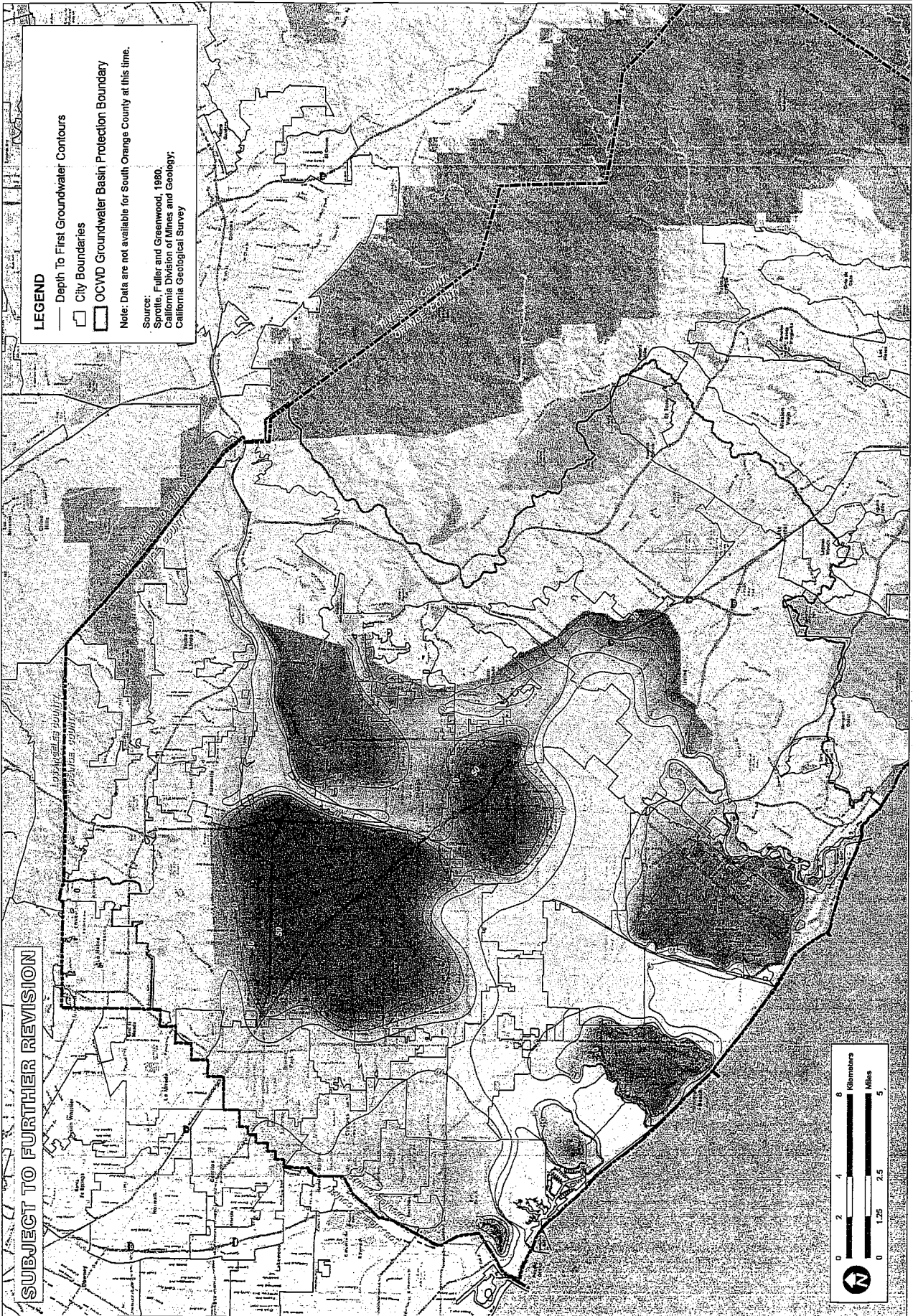
LEGEND

- City Boundaries
- Seismic Hazards
- Potential Landslide Area

Source:
Seismic Hazard Zone Maps
Division of Mines and Geology, California Geology Survey,
Publication Date: 2005; Data Downloaded 02-08-2011
<http://www.conservation.ca.gov/cgs/ship/Pages/Index.aspx>

SUBJECT TO FURTHER REVISION





LEGEND

- Depth To First Groundwater Contours
- City Boundaries
- OCWD Groundwater Basin Protection Boundary

Note: Data are not available for South Orange County at this time.

Sources: Fuller and Greenwood, 1980.
 Sprille, Fuller and Greenwood, 1980.
 California Division of Mines and Geology.
 California Geological Survey

SUBJECT TO FURTHER REVISION



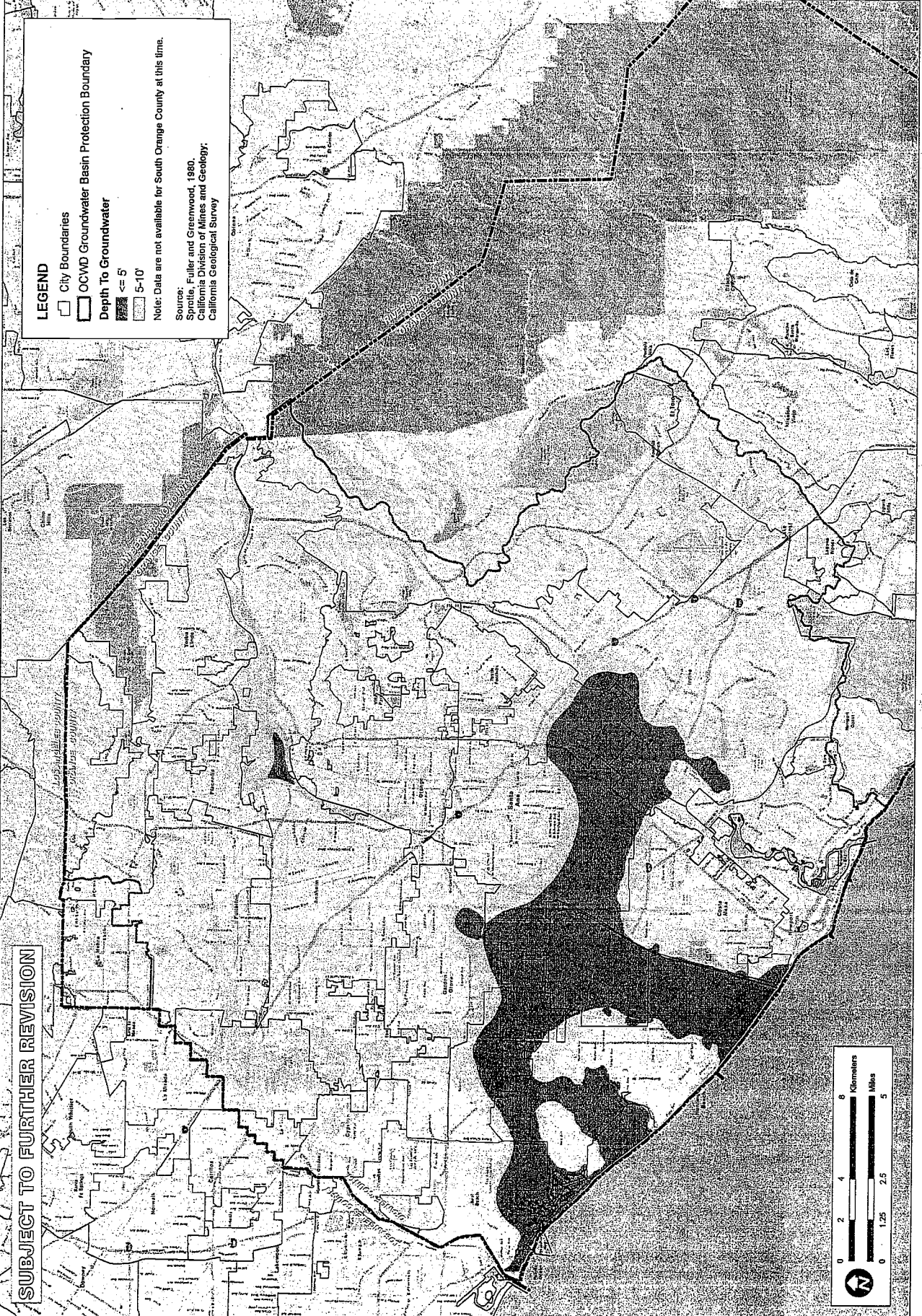
**NORTH ORANGE COUNTY
 MAPPED DEPTH TO FIRST
 GROUNDWATER**

**ORANGE COUNTY
 INFILTRATION STUDY**

SCALE	1" = 1.25 MILES
PROJECT	
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PROJECT	



FIGURE XVI-2d



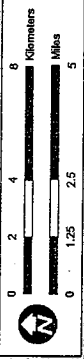
LEGEND

- City Boundaries
- OCWD Groundwater Basin Protection Boundary
- Depth To Groundwater
 - <= 5'
 - 5-10'

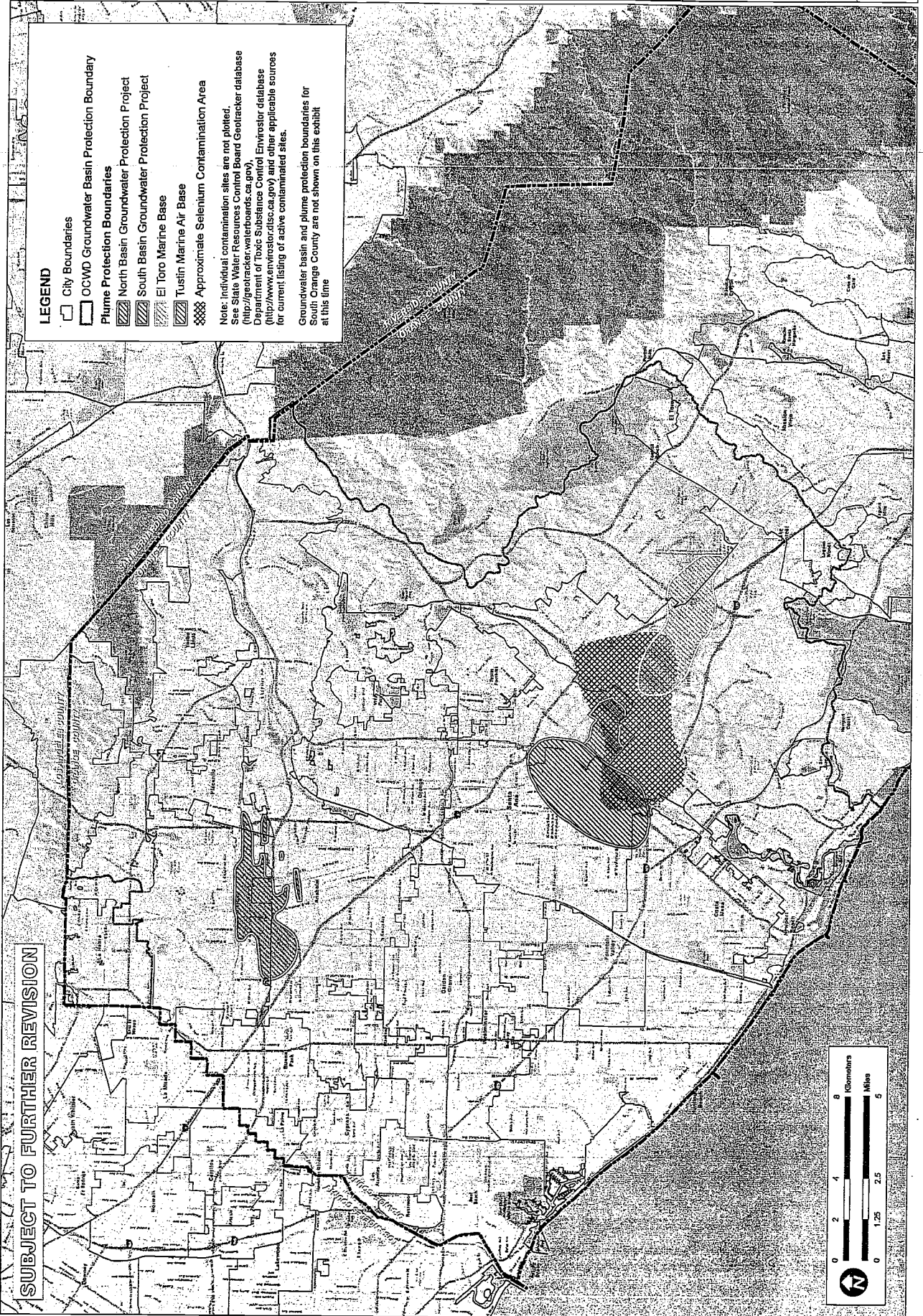
Note: Data are not available for South Orange County at this time.

Source:
 Sprittle, Fuller and Greenwood, 1980,
 California Division of Mines and Geology,
 California Geological Survey

SUBJECT TO FURTHER REVISION



SUBJECT TO FURTHER REVISION



LEGEND

- City Boundaries
- OCWD Groundwater Basin Protection Boundary
- Plume Protection Boundaries
 - North Basin Groundwater Protection Project
 - South Basin Groundwater Protection Project
- El Toro Marine Base
- Tustin Marine Air Base
- Approximate Selenium Contamination Area

Note: Individual contamination sites are not plotted. See State Water Resources Control Board Geotracker database (<http://geotracker.waterboards.ca.gov/>) Department of Toxic Substance Control Envirostar database (<http://www.envirostar.dsc.ca.gov/>) and other applicable sources for current listing of active contaminated sites.

Groundwater basin and plume protection boundaries for South Orange County are not shown on this exhibit at this time

NORTH ORANGE COUNTY GROUNDWATER PROTECTION AREAS

ORANGE COUNTY INFILTRATION STUDY

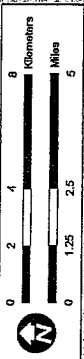
CA

ORANGE CO.

SCALE	1" = 1.25 MILES
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DATE	02/22/10
DESIGNED	02/11/10
CHECKED	02/11/10
DATE	02/11/10
PROJECT	02/11/10



XVI-2f





SUBJECT TO FURTHER REVISION

LEGEND

- OCWMD Groundwater Basin Protection Boundary
- City Boundaries
- Infiltration Constraints**
- 1 Constraint
- 2 Overlapping Constraints
- 3 Overlapping Constraints
- 4 Overlapping Constraints

Analysis Layers included: 1. Hydrologic Soil Group D, 2. Landslide Hazard Zone, 3. Groundwater Protection Areas 4. Approximate Selenium Area, 5. Depth to Groundwater <= 5'

Note: Screening datasets are not exhaustive. The applicant should always conduct a review of available site-specific information relative to infiltration constraints as part of assessing the feasibility of stormwater infiltration.

Source:
Infiltration Constraint Analysis: PACE/Geosyntec

INFILTRATION ANALYSIS
OVERLAPPING CONSTRAINT
LOCATIONS

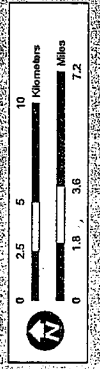
ORANGE COUNTY
INFILTRATION STUDY

ORANGE CO.
CA

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DRAWN BY	JLB
CHECKED BY	
DATE	02/22/10
PROJECT	
CLIENT	
NO. 1000	
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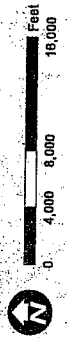
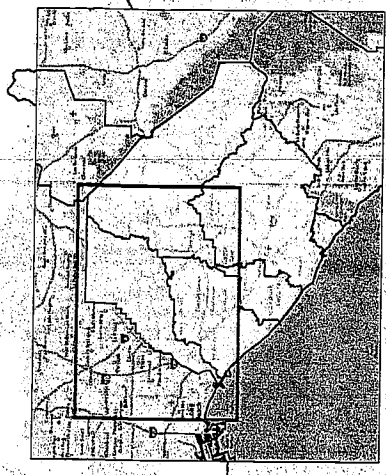
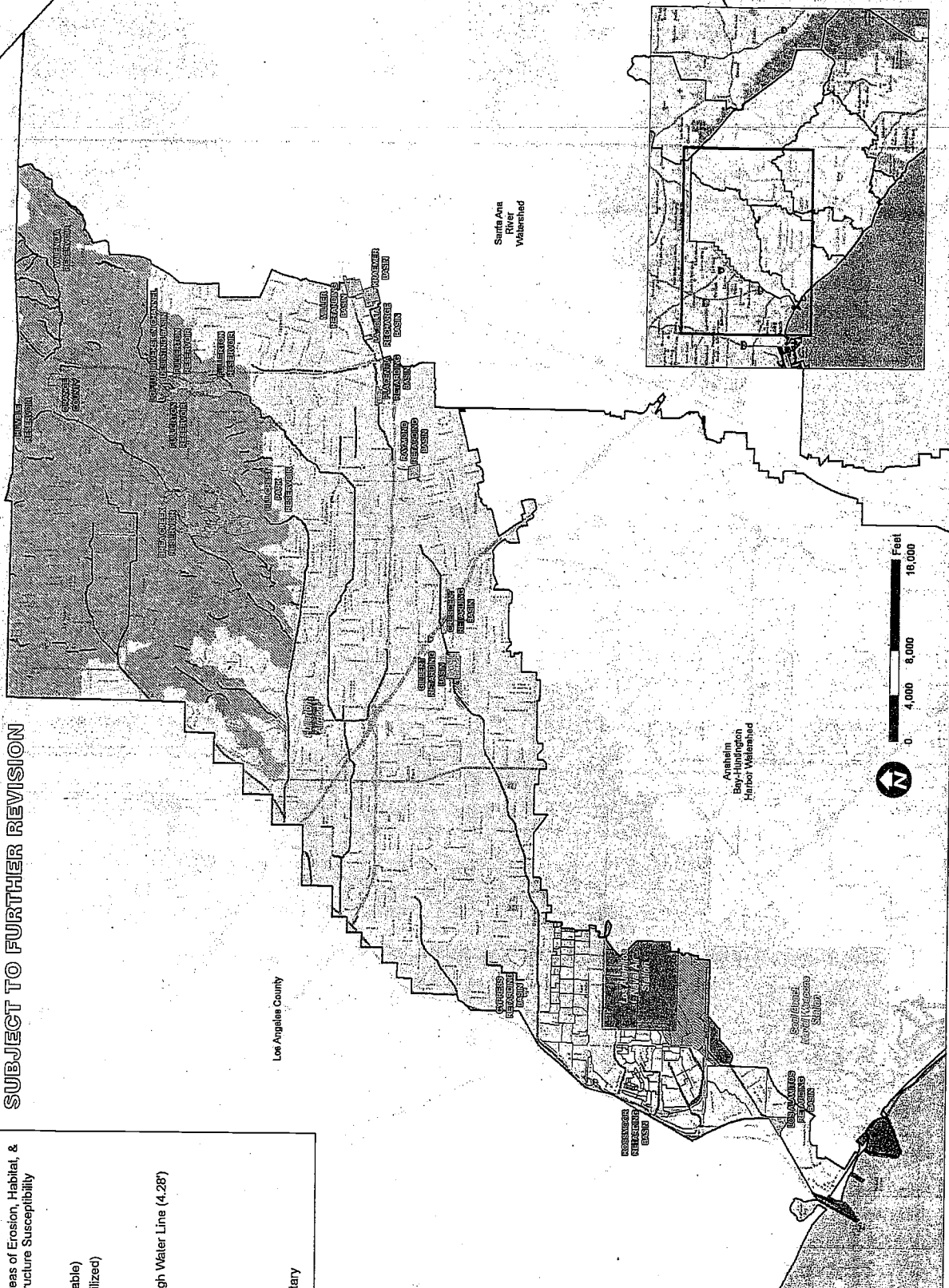


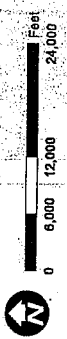
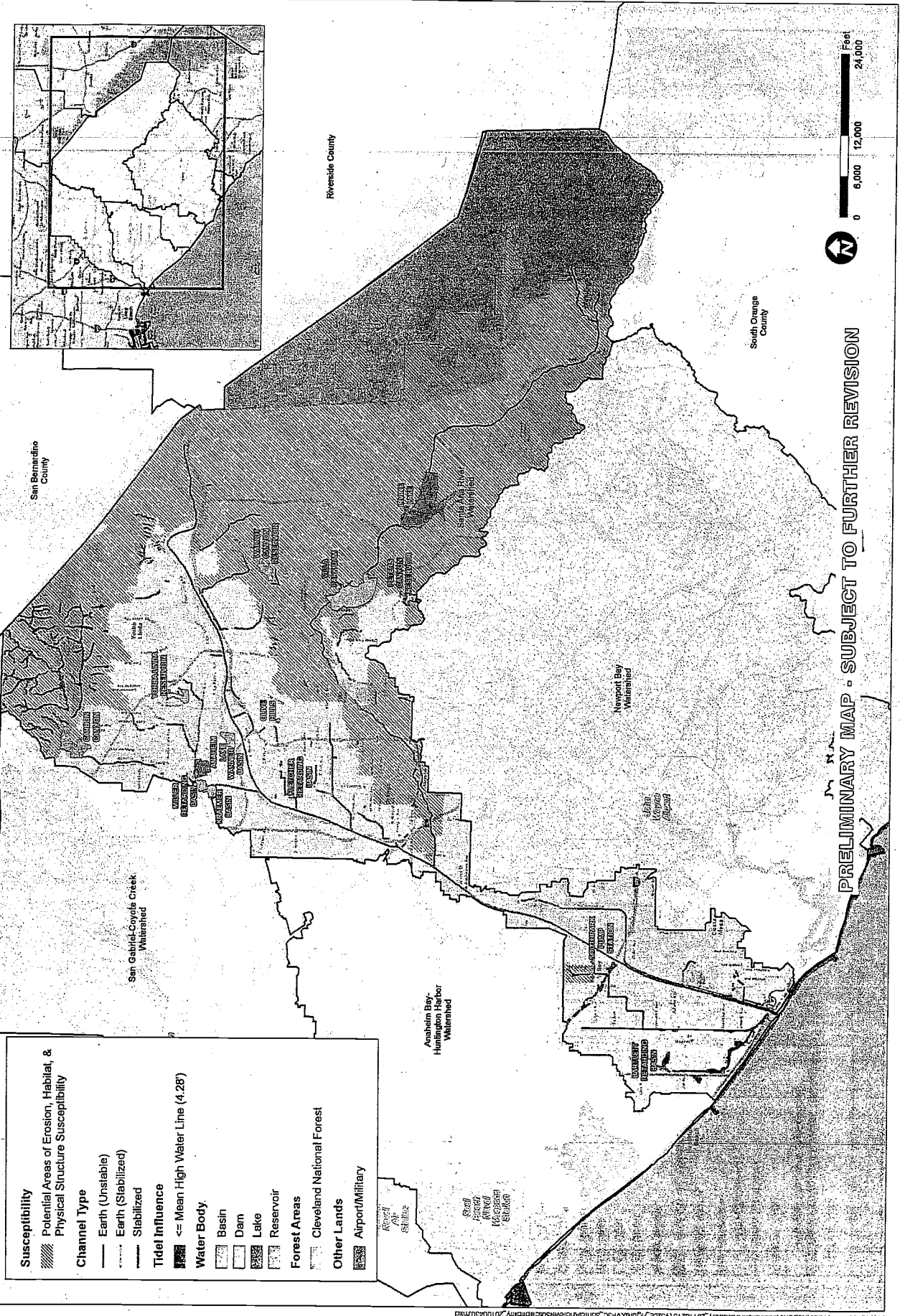
FIGURE
XVI-29



**PRELIMINARY MAP
SUBJECT TO FURTHER REVISION**

	Susceptibility
	Potential Areas of Erosion, Habitat, & Physical Structure Susceptibility
	Channel Type
	Earth (Unstable)
	Earth (Stabilized)
	Stabilized
	Tidal Influence
	<= Mean High Water Line (4.28')
	Water Body
	Basin
	Lake
	Reservoir
	Other Lands
	Airports/Military





PRELIMINARY MAP - SUBJECT TO FURTHER REVISION

Susceptibility

- Potential Areas of Erosion, Habitat, & Physical Structure Susceptibility

Channel Type

- Earth (Unstable)
- Earth (Stabilized)
- Stabilized

Tidal Influence

- <= Mean High Water Line (4.28')

Water Body

- Basin
- Dam
- Lake
- Reservoir

Forest Areas

- Cleveland National Forest

Other Lands

- Airport/Military

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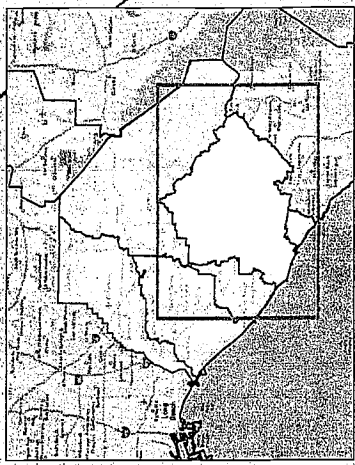
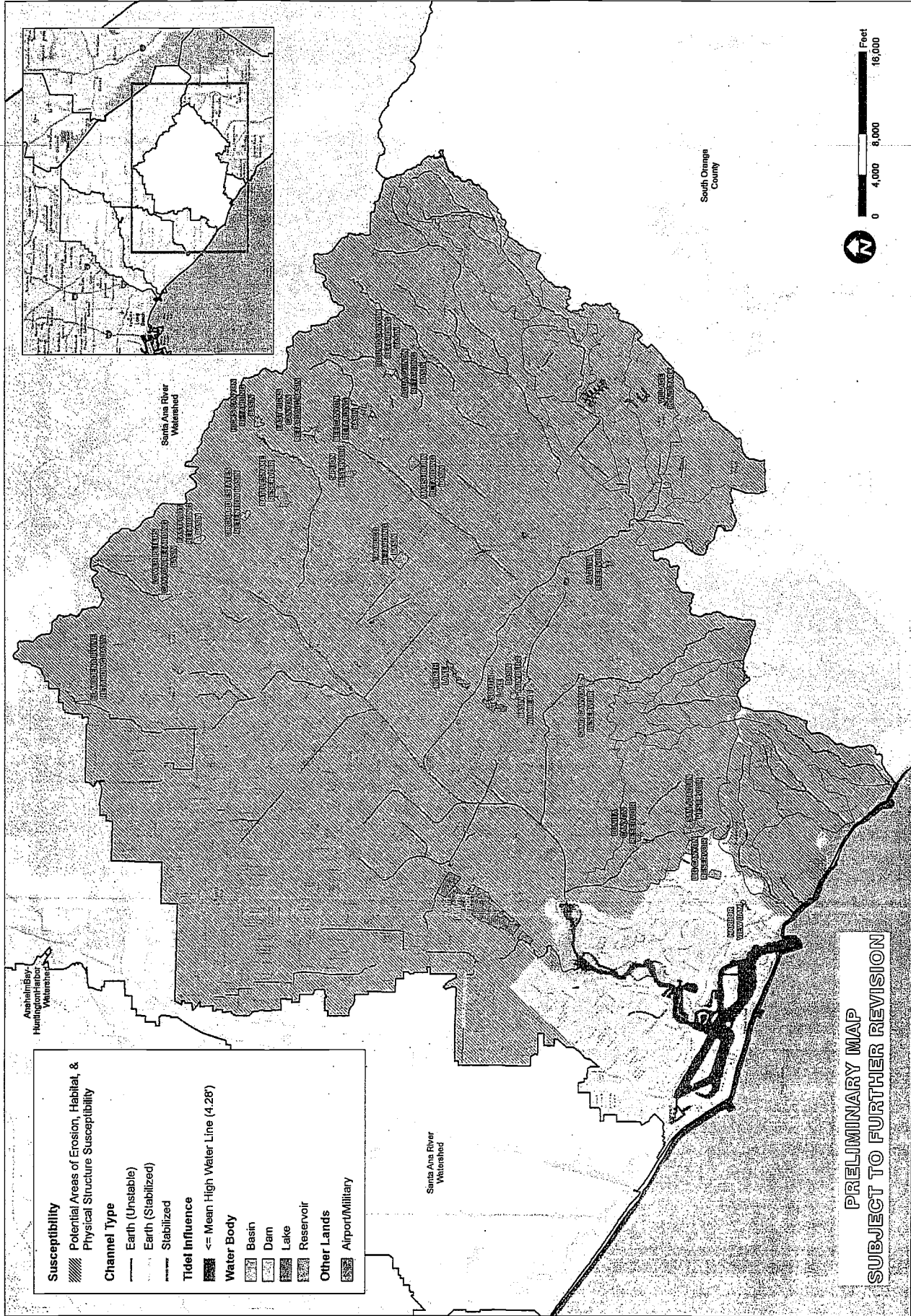
**SUSCEPTIBILITY ANALYSIS
NEWPORT BAY-
NEWPORT COASTAL STREAMS**

**ORANGE COUNTY
WATERSHED
MASTER PLANNING**

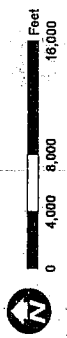
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DRAWN BY	TH
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DATE	01/20/10
SCALE	1" = 10,000'



PROJECT
XVI-3d



South Orange
County



Susceptibility

- Potential Areas of Erosion, Habitat, & Physical Structure Susceptibility

Channel Type

- Earth (Unstabilized)
- Earth (Stabilized)
- Stabilized

Tidal Influence

- <= Mean High Water Line (4.28')

Water Body

- Basin
- Dam
- Lake
- Reservoir

Other Lands

- Airport/Military

**PRELIMINARY MAP
SUBJECT TO FURTHER REVISION**

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