

SUBJECT TO FURTHER REVISION

LEGEND

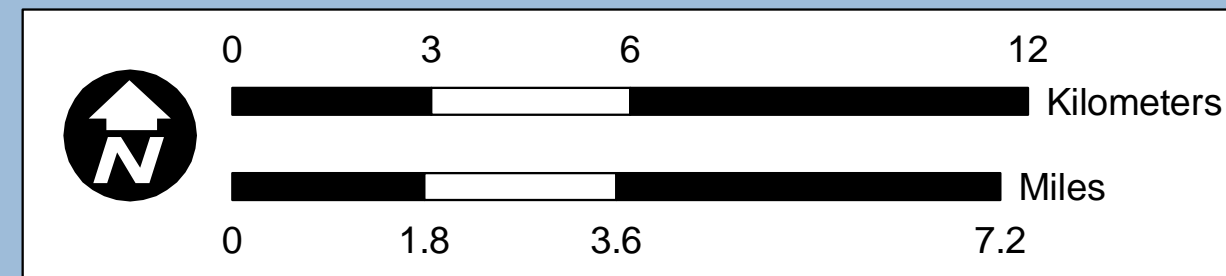
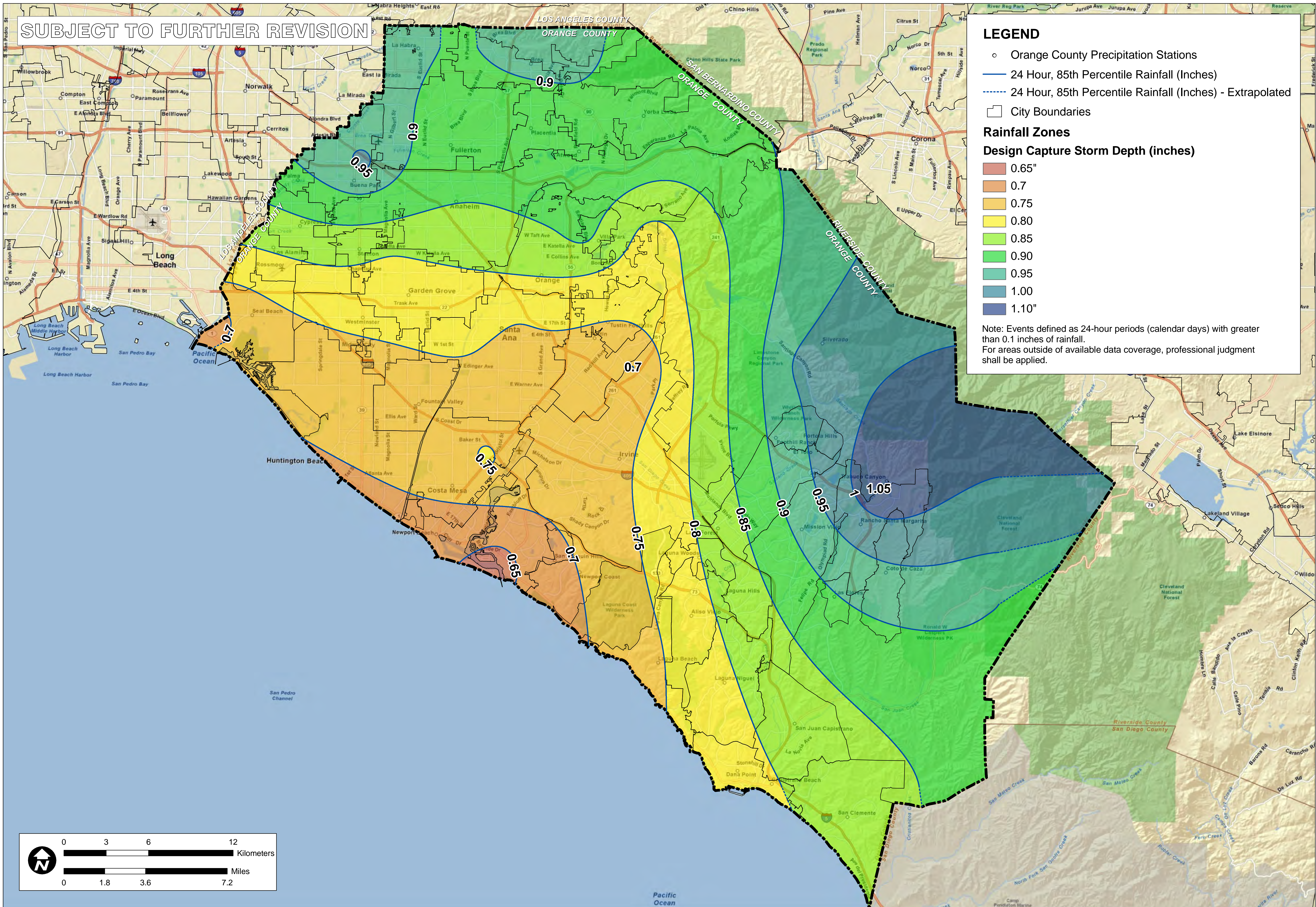
- Orange County Precipitation Stations
- 24 Hour, 85th Percentile Rainfall (Inches)
- - - 24 Hour, 85th Percentile Rainfall (Inches) - Extrapolated
- City Boundaries

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.



RAINFALL ZONES

CA

ORANGE COUNTY
TECHNICAL GUIDANCE
DOCUMENT

ORANGE CO.

SCALE	1" = 1.8 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-E



FIGURE
XVI-1

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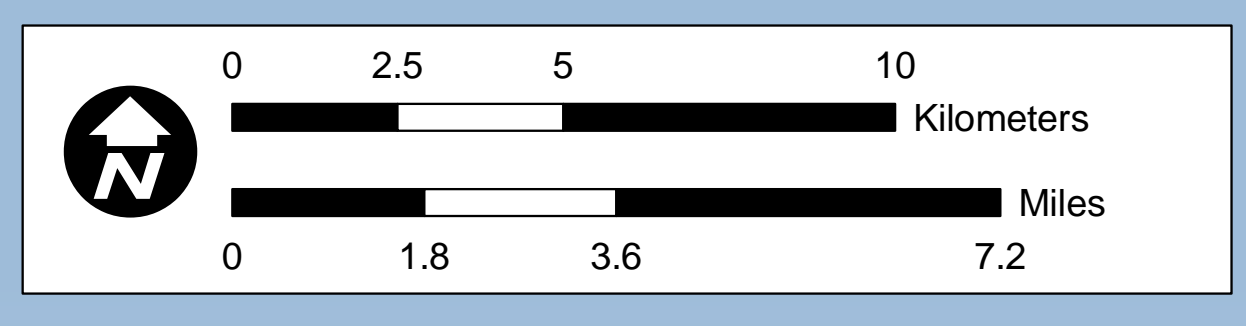
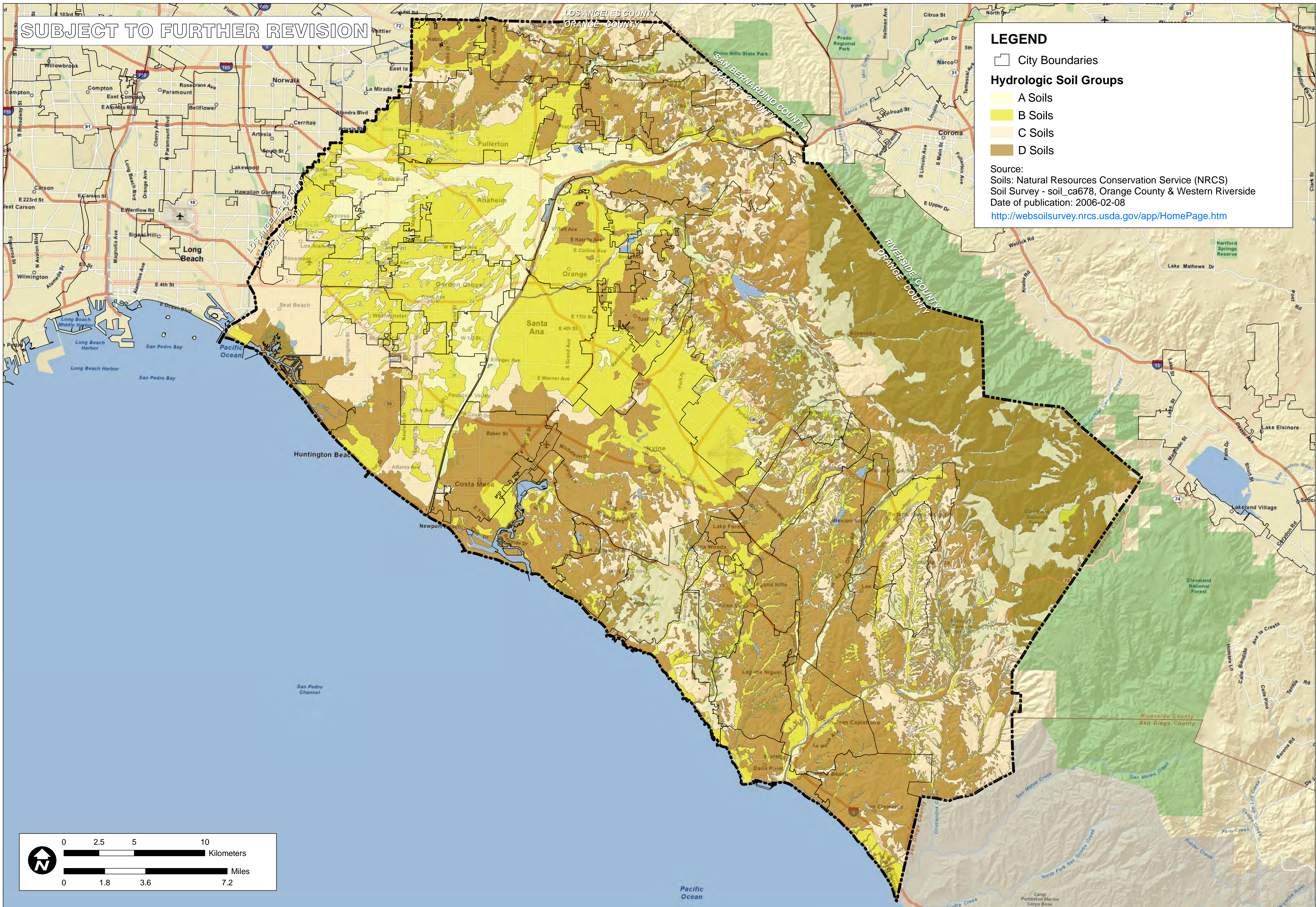
LEGEND

- City Boundaries

Hydrologic Soil Groups

- A Soils
- B Soils
- C Soils
- D Soils

Source:
 Soils: Natural Resources Conservation Service (NRCS)
 Soil Survey - soil_ca678, Orange County & Western Riverside
 Date of publication: 2006-02-08
<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>



TITLE: NRCS HYDROLOGIC SOILS GROUPS
 JOB: ORANGE COUNTY INFILTRATION STUDY
 SCALE: 1" = 1.8 miles
 DESIGNED: TH
 DRAWING: TH
 CHECKED: BMP
 DATE: 02/09/11
 JOB NO.: 9526-E
 ORANGE CO. CA



FIGURE XVI-2a

P:\9526E\6-GIS\Mxd\Reports\Infiltration\Feasibility_20110215\9526E_FigureXVI-2a_HydroSoils_20110215.mxd

SUBJECT TO FURTHER REVISION

LEGEND

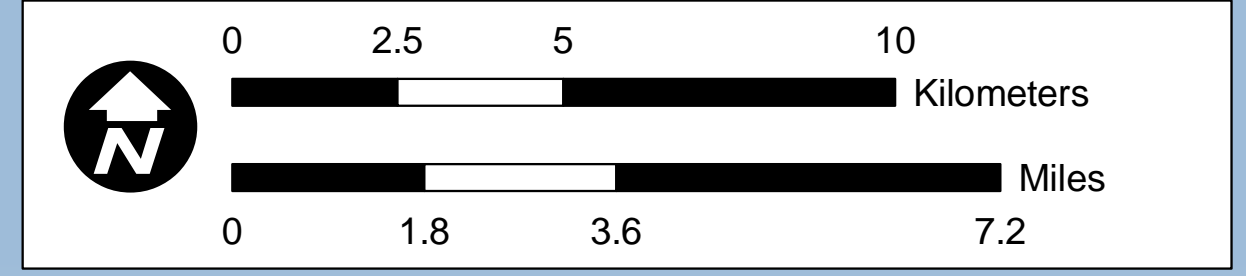
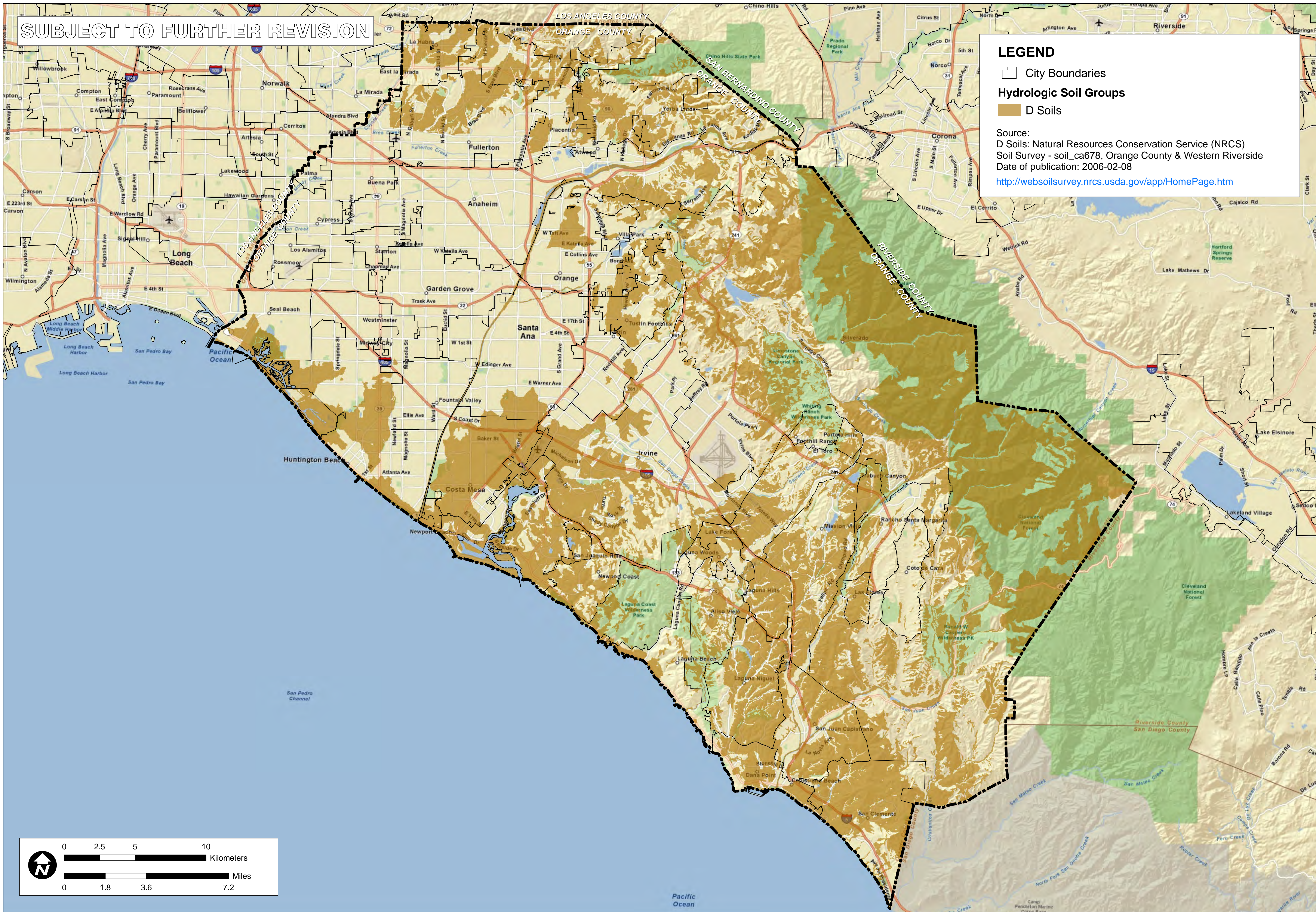
City Boundaries

Hydrologic Soil Groups

D Soils

Source:
D Soils: Natural Resources Conservation Service (NRCS)
Soil Survey - soil_ca678, Orange County & Western Riverside
Date of publication: 2006-02-08

<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>



TITLE

HYDROLOGIC SOIL GROUP
TYPE D NRCS SOIL SURVEY

JOB

ORANGE COUNTY
INFILTRATION STUDY

SCALE

1" = 1.8 miles



FIGURE

XVI-2b

CA

ORANGE CO.

DESIGNED TH

DRAWING TH

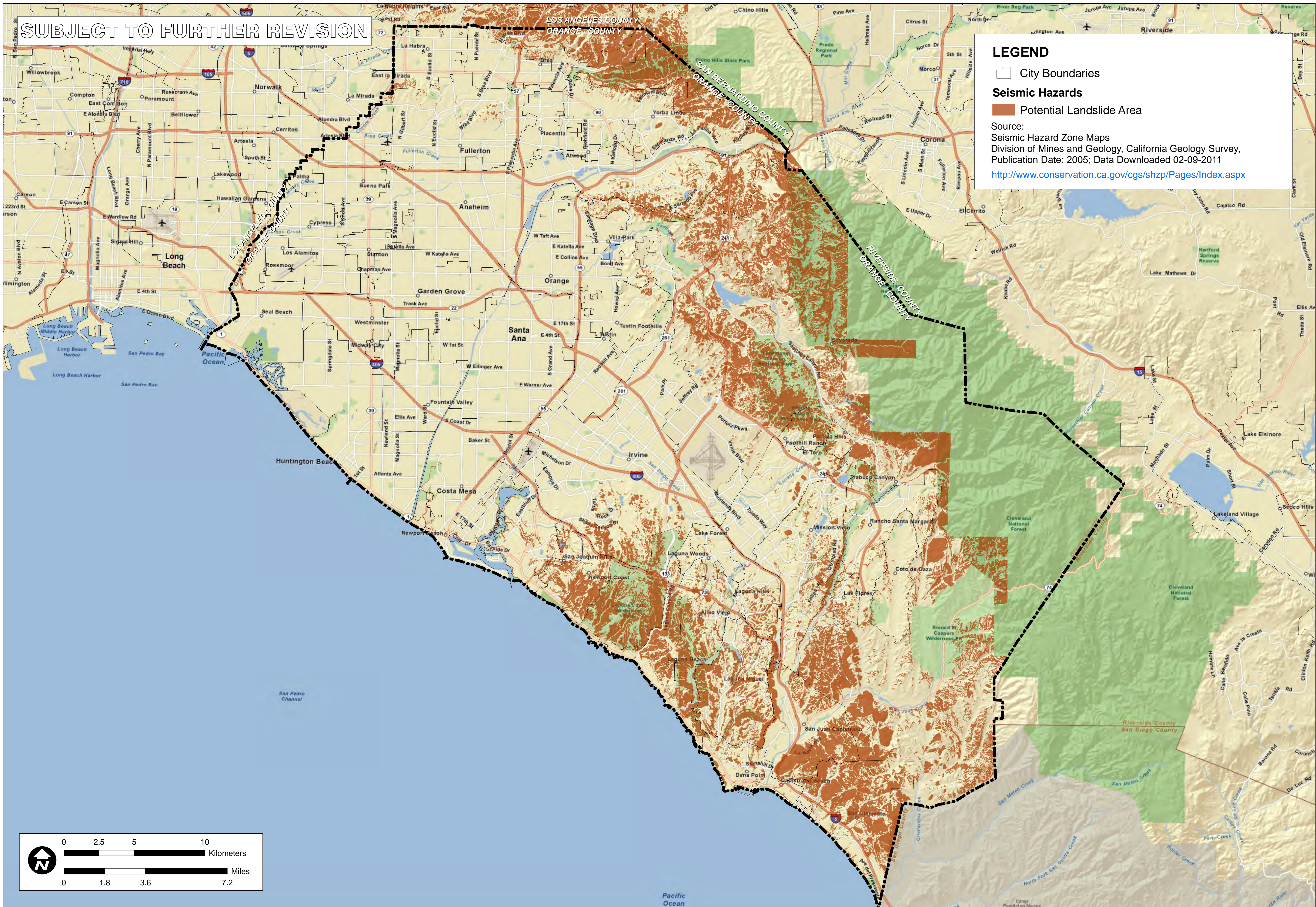
CHECKED BMP

DATE 02/09/11

JOB NO. 9526-E

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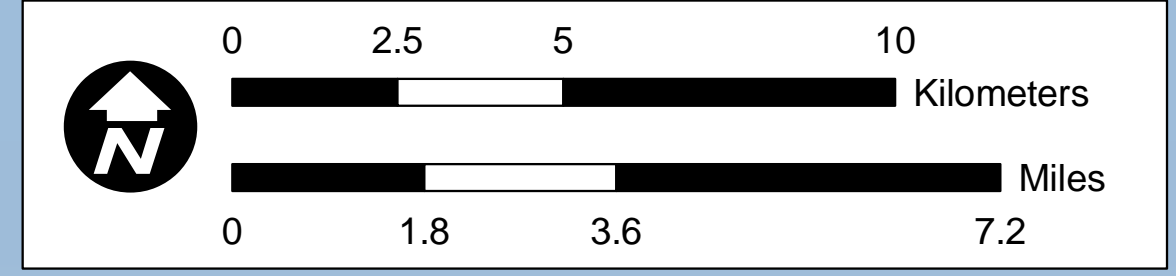
SUBJECT TO FURTHER REVISION



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 02-09-2011
<http://www.conservation.ca.gov/cgs/shzp/Pages/Index.aspx>



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<p>ORANGE COUNTY INFILTRATION STUDY</p>		<p>CA ORANGE CO.</p>
<p>JOB</p>		<p>SCALE 1" = 1.25 miles</p>
<p>DESIGNED TH</p>	<p>TH</p>	
<p>CHECKED BMP</p>	<p>DATE 02/09/11</p>	
<p>JOB NO. 9526-E</p>		
<p>FIGURE</p>		<p>XVI-2c</p>

HYDROLOGIC SOIL GROUP
 TYPE D NRCS SOIL SURVEY

TITLE
 ORANGE COUNTY
 INFILTRATION STUDY
 CA
 ORANGE CO.

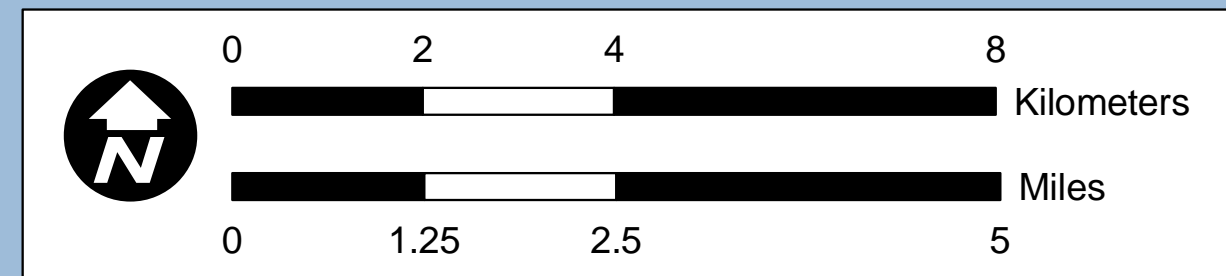
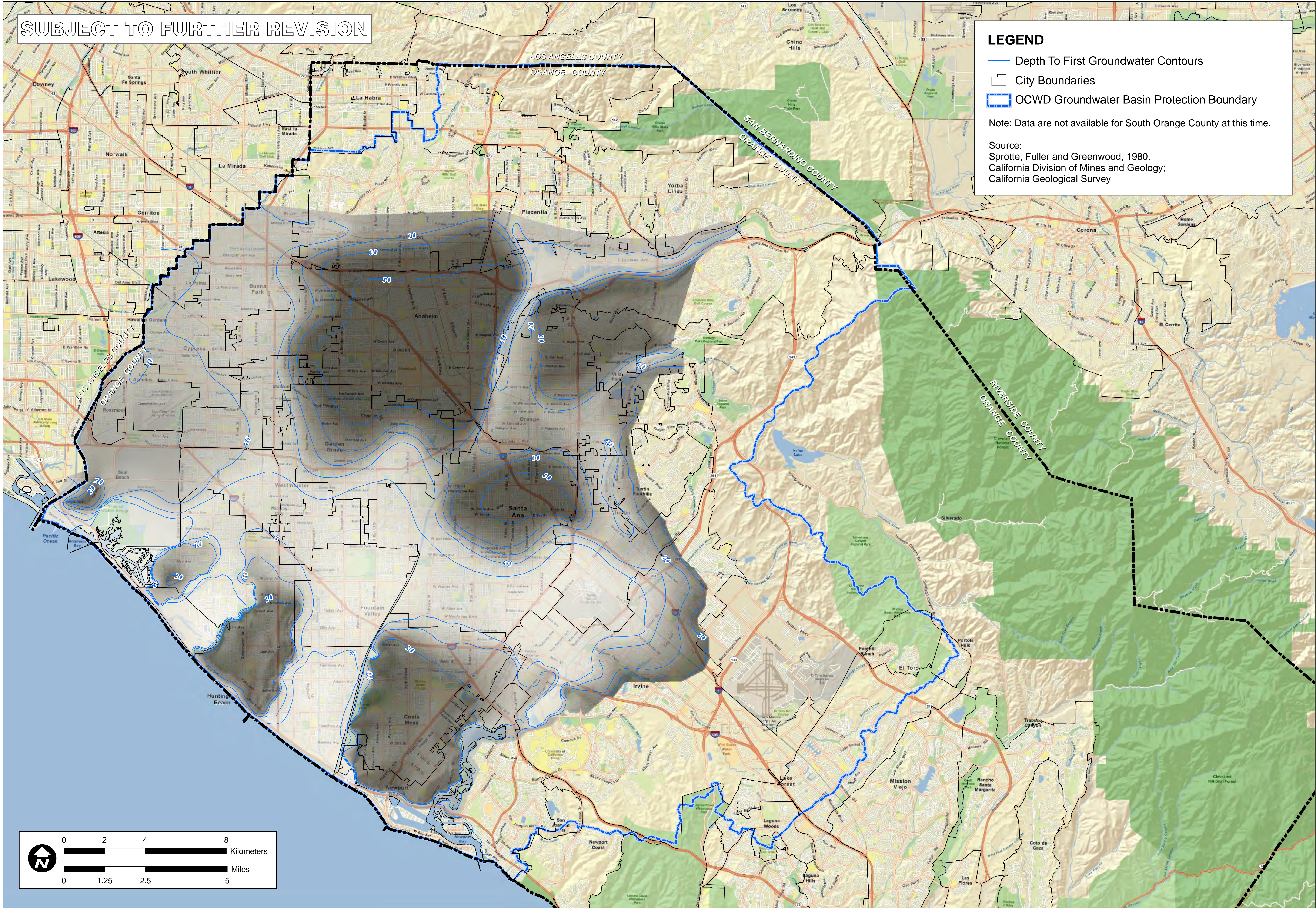
SUBJECT TO FURTHER REVISION

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.

Source:
Sprotte, Fuller and Greenwood, 1980.
California Division of Mines and Geology;
California Geological Survey



TITLE: NORTH ORANGE COUNTY MAPPED DEPTH TO FIRST GROUNDWATER

JOB: ORANGE COUNTY INFILTRATION STUDY

SCALE: 1" = 1.25 miles

DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/09/11
JOB NO.	9526-E

ORANGE CO. CA

FIGURE: XVI-2d

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SUBJECT TO FURTHER REVISION

LEGEND

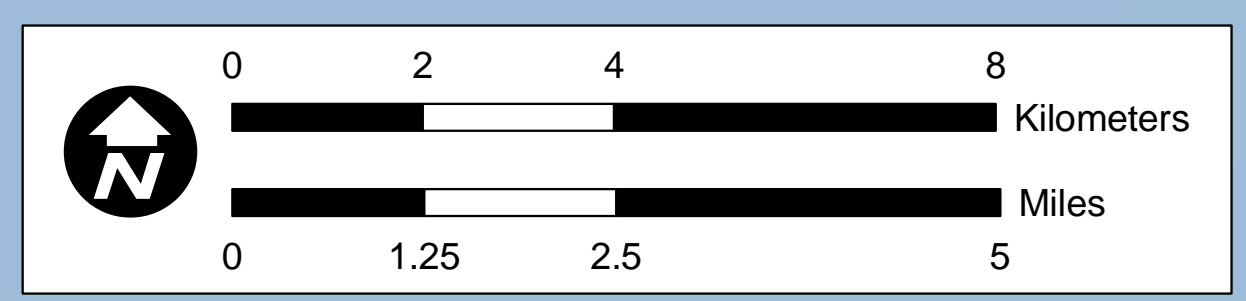
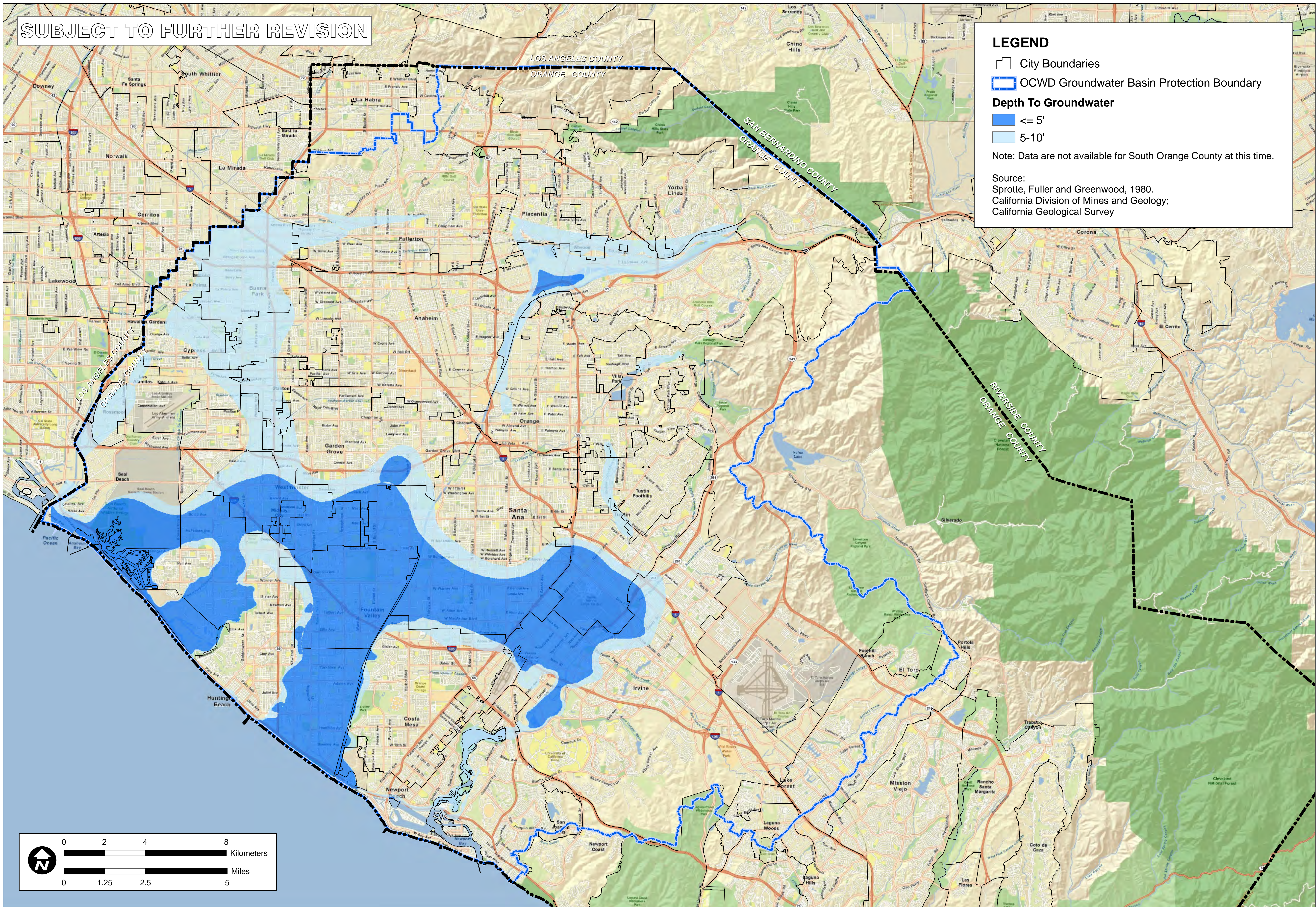
- City Boundaries
- OCWD Groundwater Basin Protection Boundary

Depth To Groundwater

- ≤ 5'
- 5-10'

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

Source:
 Sprotte, Fuller and Greenwood, 1980.
 California Division of Mines and Geology;
 California Geological Survey



P:\9526E\6-GIS\Mxd\Reports\Infiltration\Feasibility_20110215\9526E_FigureXVI-2e_DepthToGroundwater15ft_20110215.mxd

TITLE		NORTH ORANGE COUNTY MAPPED SHALLOW GROUNDWATER	
JOB		ORANGE COUNTY INFILTRATION STUDY	
SCALE 1" = 1.25 miles		ORANGE CO.	
DESIGNED TH	CHECKED BMP	CA	
DRAWING TH	DATE 02/09/11	ORANGE CO.	
JOB NO. 9526-E		ORANGE CO.	
		FIGURE	
		XVI-2e	

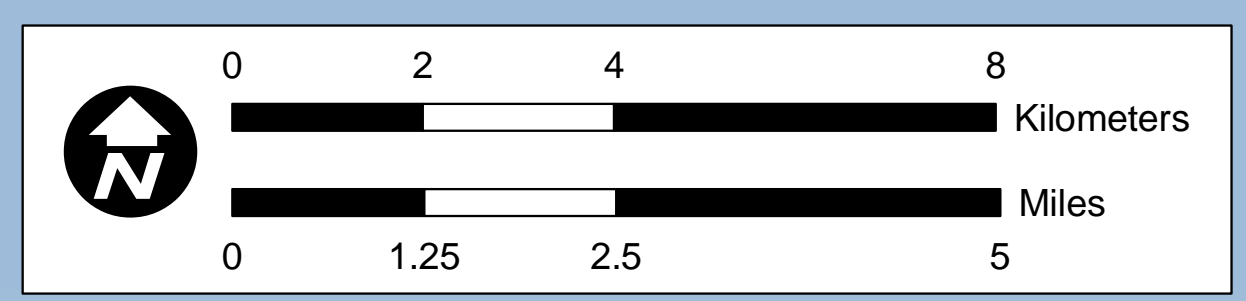
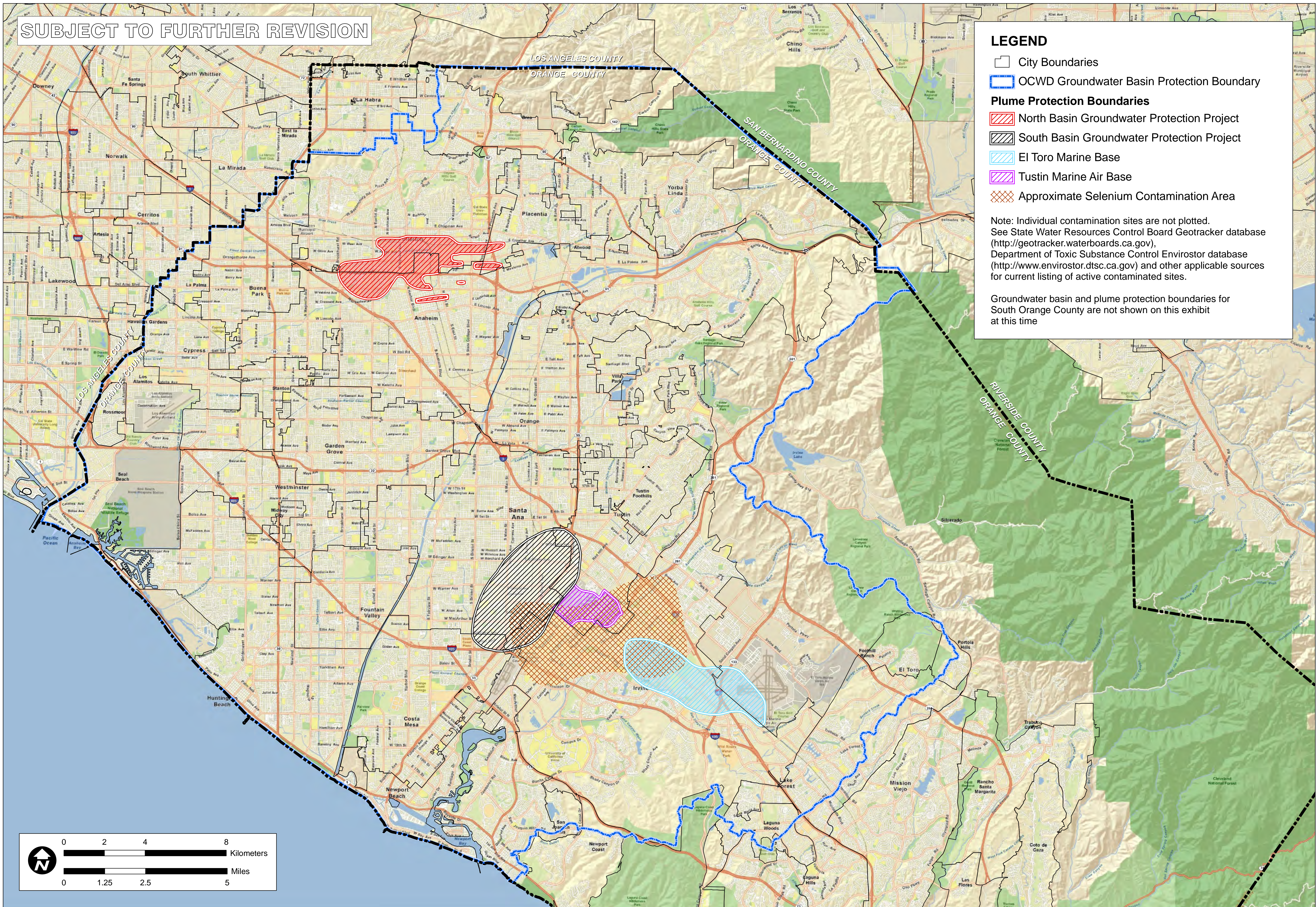
SUBJECT TO FURTHER REVISION

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 Envirostor database (<http://www.envirostor.dtsc.ca.gov>) and other applicable sources for current listing of active contaminated sites.

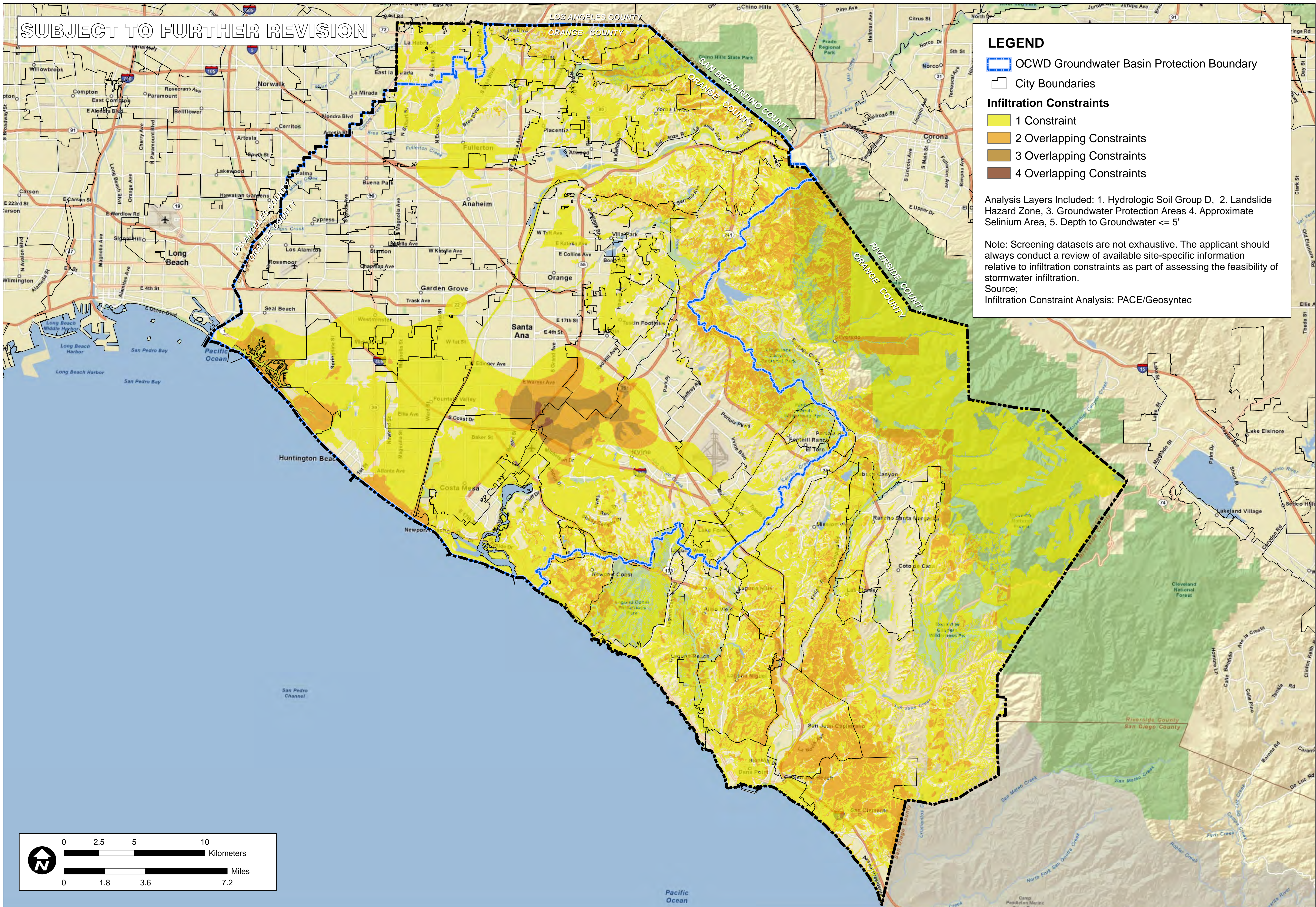
Groundwater basin and plume protection boundaries for South Orange County are not shown on this exhibit at this time



<p>NORTH ORANGE COUNTY GROUNDWATER PROTECTION AREAS</p>	
TITLE	CA
<p>ORANGE COUNTY INFILTRATION STUDY</p>	
JOB	ORANGE CO.
SCALE 1" = 1.25 miles	JOB NO. 9526-E
DESIGNED TH	DRAWING TH
CHECKED BMP	DATE 04/22/10
<p>FIGURE XVI-2f</p>	

P:\9526E\6-GIS\Mxd\Reports\Infiltration\Feasibility_20110215\9526E_NorthOCGroundwaterProtectionAreasStreetMap_20110215.mxd

SUBJECT TO FURTHER REVISION



LEGEND

- OCWD Groundwater Basin Protection Boundary
- City Boundaries

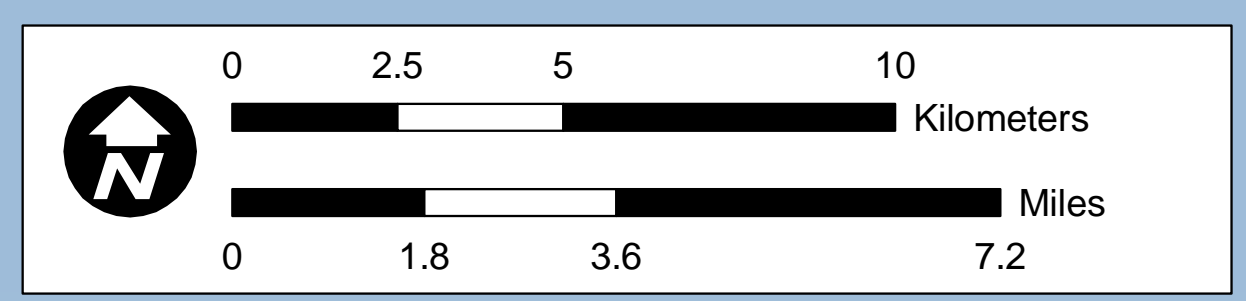
Infiltration Constraints

- 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



TITLE: INFILTRATION ANALYSIS OVERLAPPING CONSTRAINT LOCATIONS
 JOB: ORANGE COUNTY INFILTRATION STUDY
 ORANGE CO. CA
 SCALE: 1" = 1.8 miles
 DESIGNED: TH
 DRAWING: TH
 CHECKED: BMP
 DATE: 04/22/10
 JOB NO.: 9526-E
 FIGURE: XVI-2g

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PA\9526E\6-CIS\Mxd\Reports\InfiltrationFeasibility_20110215_9526E_FigureXVI-3a_SanGabrielCoyoteCreekWatershedSusceptibility_20100331.mxd

PRELIMINARY MAP SUBJECT TO FURTHER REVISION

Susceptibility

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

Channel Type

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

Tidel Influence

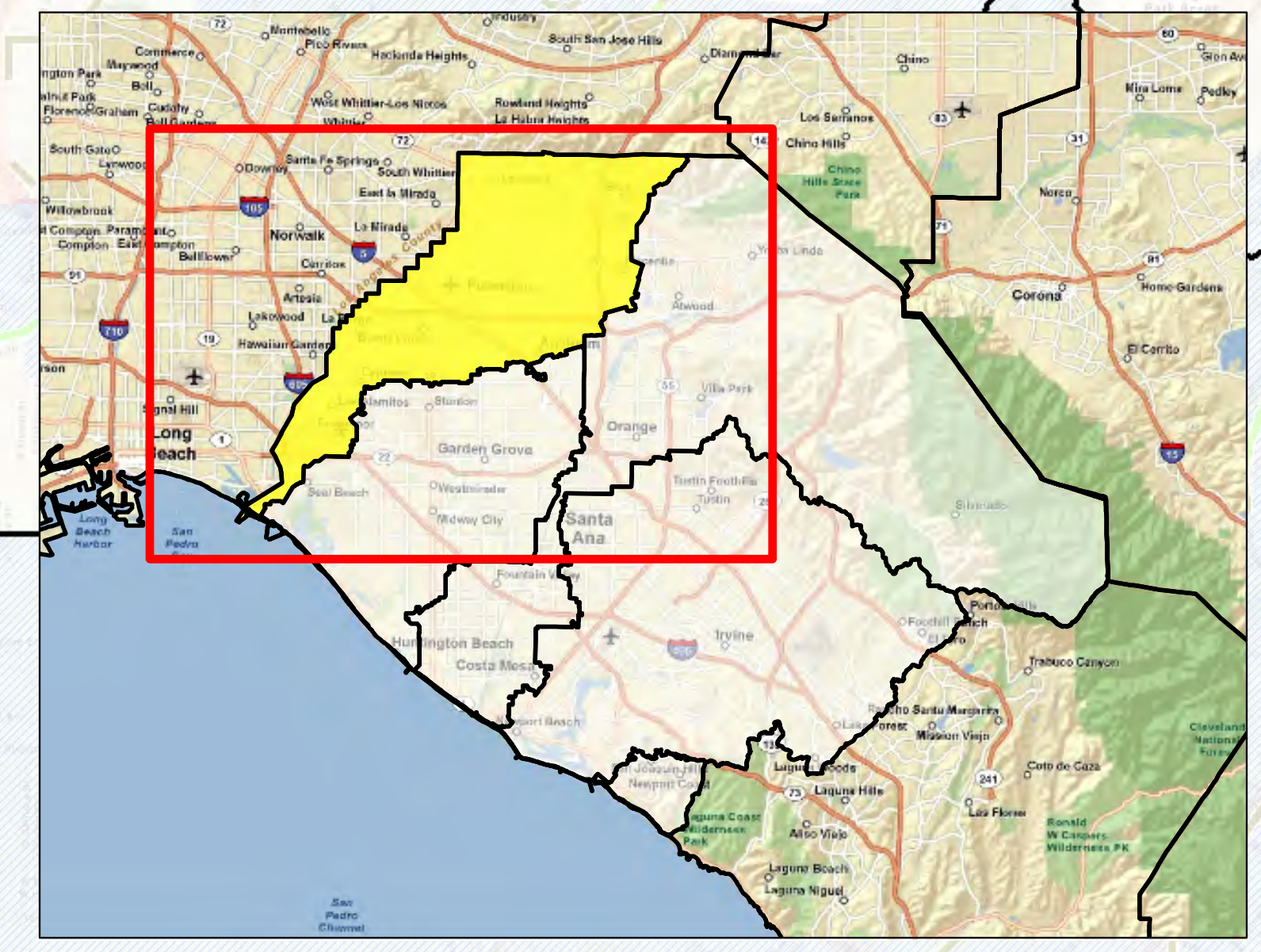
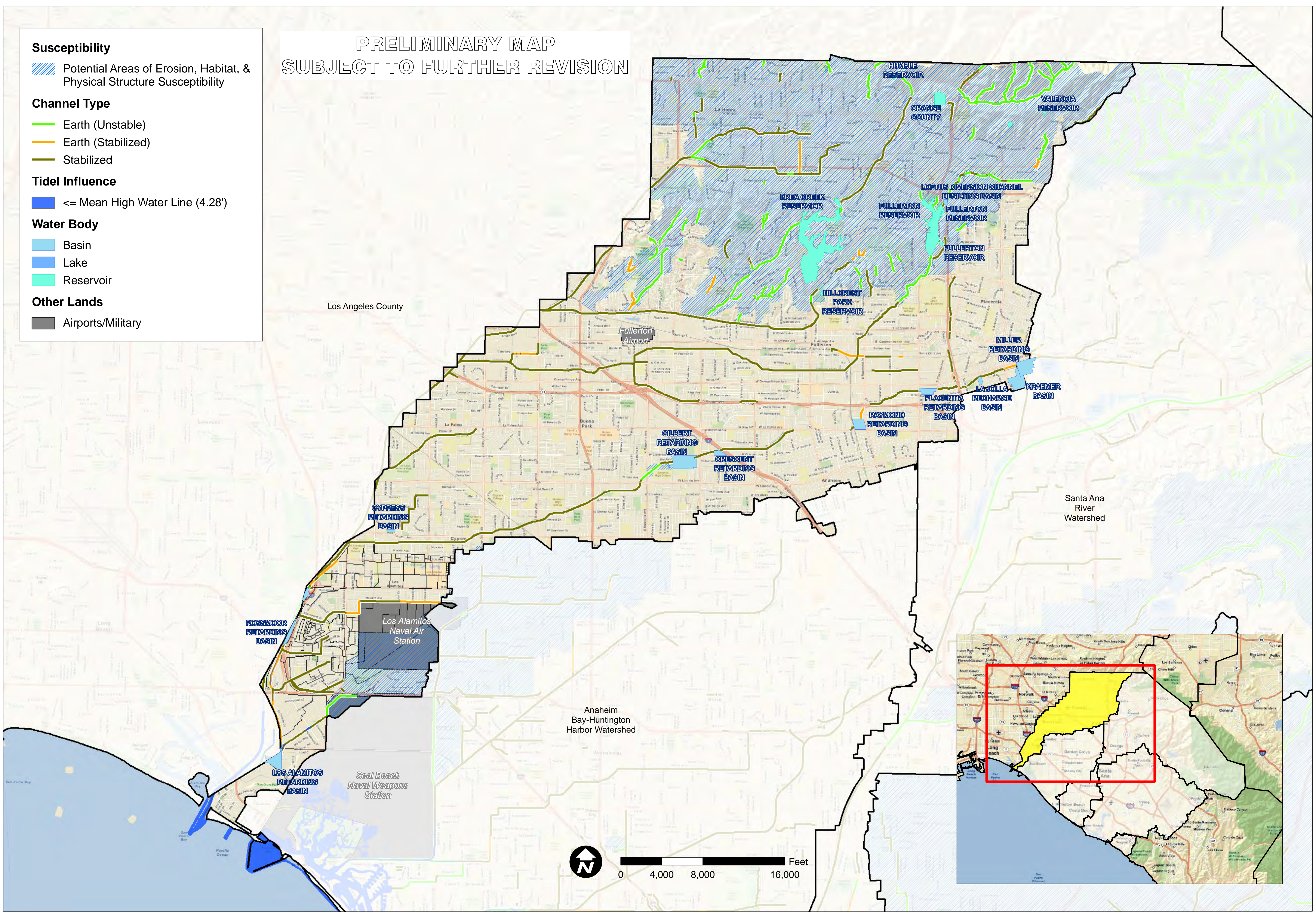
- <= Mean High Water Line (4.28')

Water Body

- Basin
- Lake
- Reservoir

Other Lands

- Airports/Military



TITLE
**SUSCEPTIBILITY ANALYSIS
SAN GABRIEL-COYOTE CREEK**

JOB
**ORANGE COUNTY
WATERSHED
MASTER PLANNING**

CA

ORANGE CO.

SCALE	1" = 4000'
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-E

FIGURE
XVI-3a

P:\9526E\6-CIS\Mxd\Reports\Infiltration\Feasibility_20110215_9526E\FigureXVI-3b_AnahaimBayWatershedSusceptibility_20100331.mxd

PRELIMINARY MAP - SUBJECT TO FURTHER REVISION

Susceptibility

 Potential Areas of Erosion, Habitat, & Physical Structure Susceptibility

Channel Type

 Earth (Unstable)

 Earth (Stabilized)

 Stabilized

Tidel Influence

 <= Mean High Water Line (4.28')

Water Body

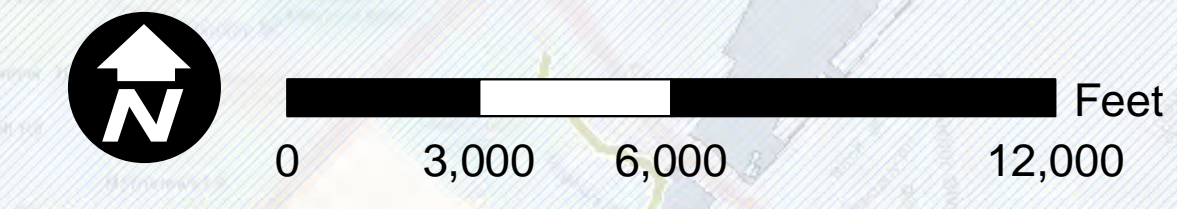
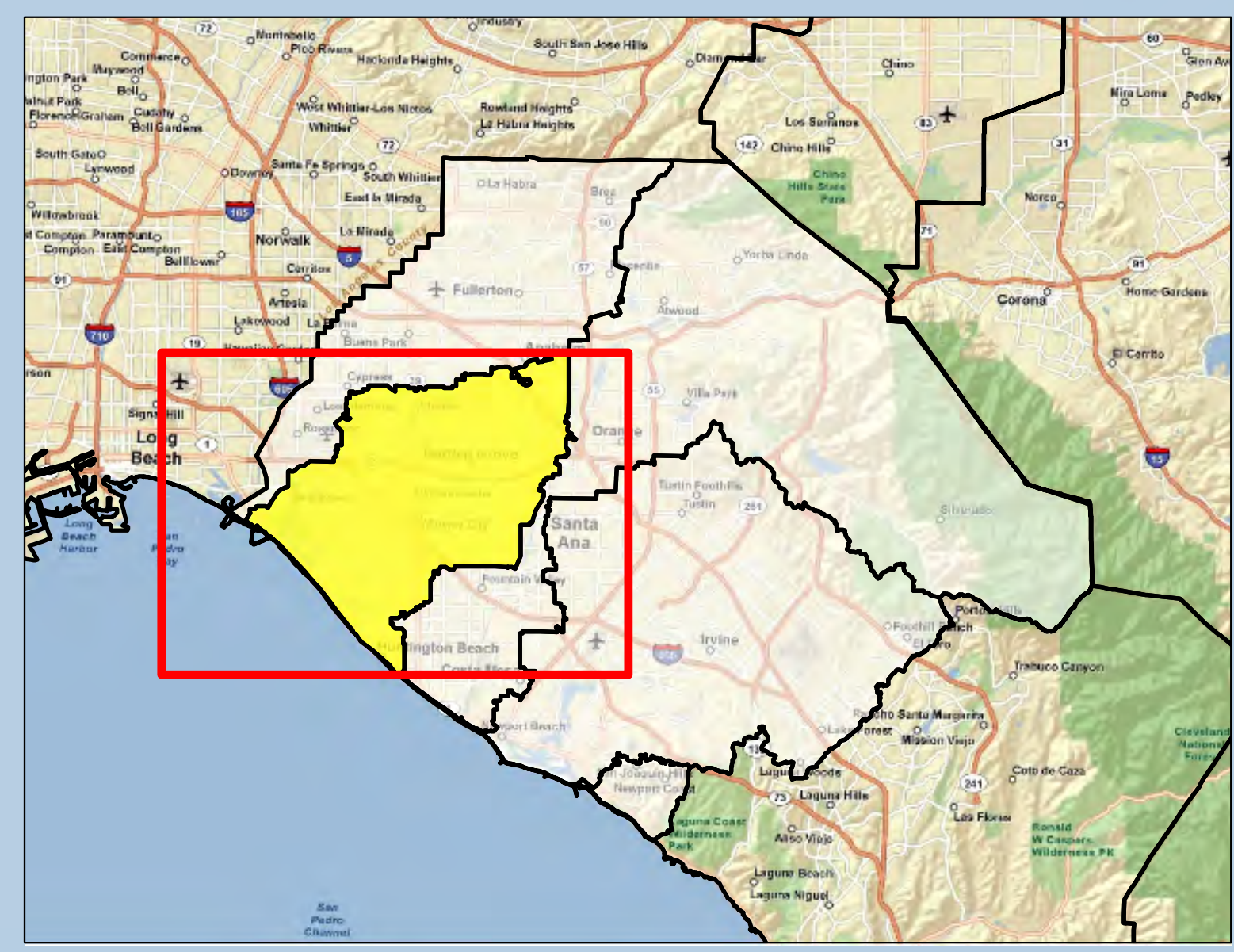
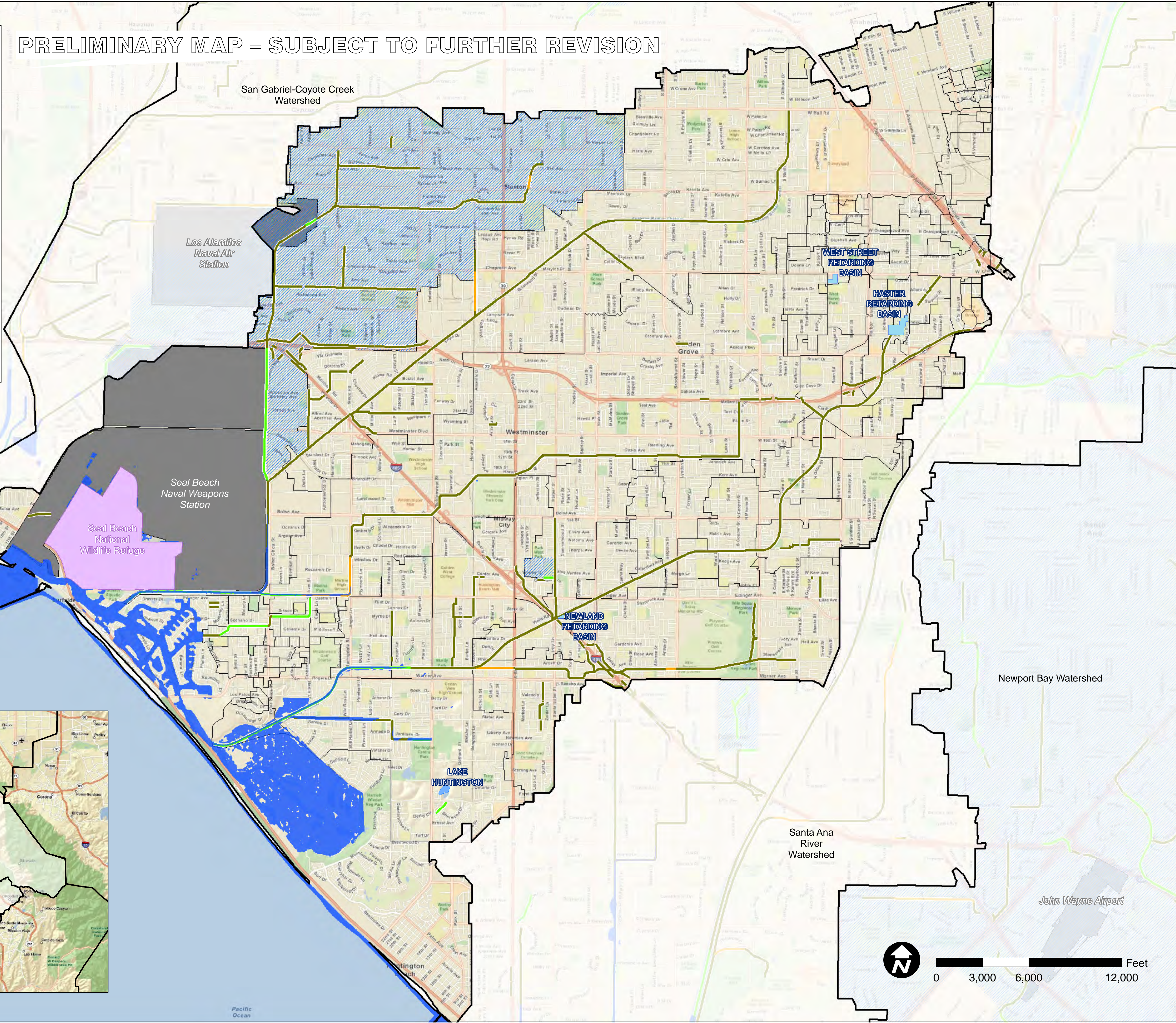
 Basin

 Lake

Federal & Other Lands

 Seal Beach National Wildlife Refuge

 Airports/Military



TITLE
SUSCEPTIBILITY ANALYSIS
ANAHEIM BAY-
HUNTINGTON HARBOR

JOB
ORANGE COUNTY
WATERSHED
MASTER PLANNING

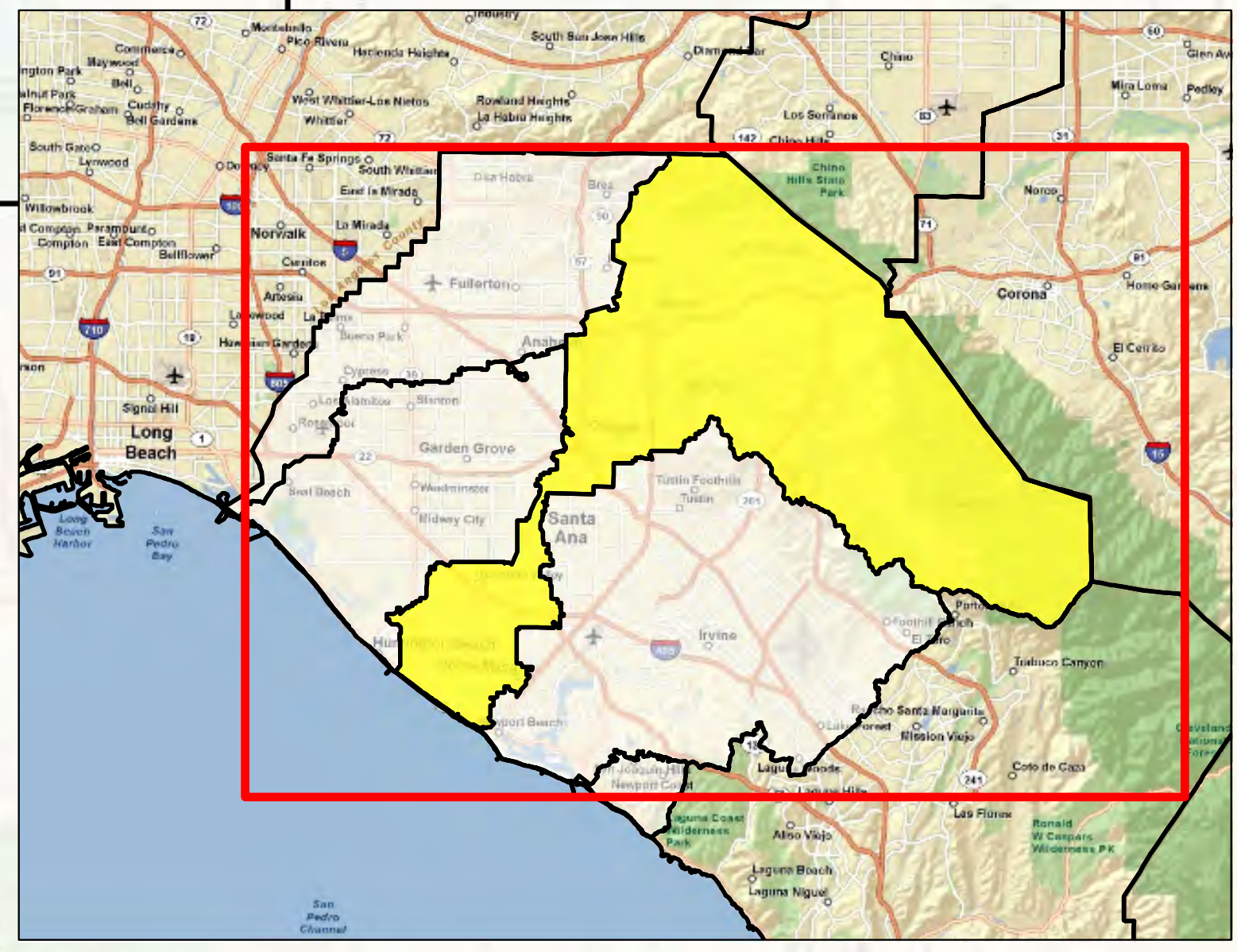
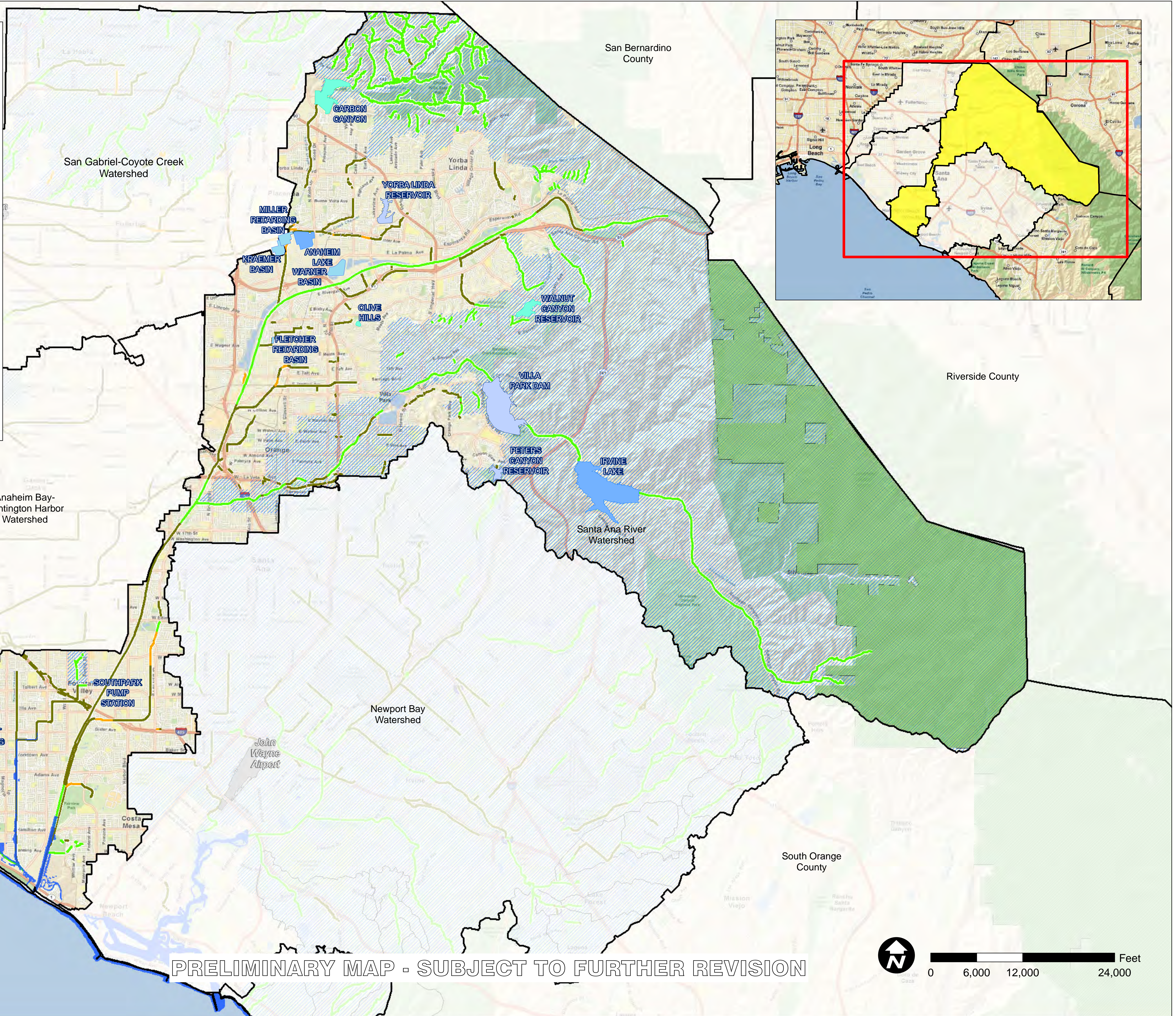
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DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-E



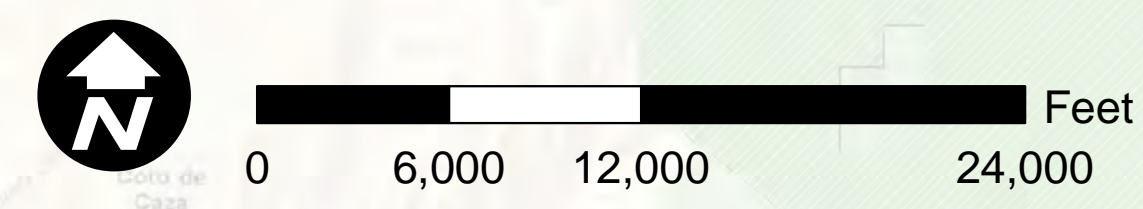
FIGURE
XVI-3b

P:\9526E\6-GIS\Mxd\Reports\InfiltrationFeasibility_20110215\9526E_FigureXVI-3c_SantaAnaRiverSusceptibility_20100430.mxd

- Susceptibility**
- Potential Areas of Erosion, Habitat, & Physical Structure Susceptibility
- Channel Type**
- Earth (Unstable)
 - Earth (Stabilized)
 - Stabilized
- Tidel Influence**
- <= Mean High Water Line (4.28')
- Water Body**
- Basin
 - Dam
 - Lake
 - Reservoir
- Forest Areas**
- Cleveland National Forest
- Other Lands**
- Airport/Military



PRELIMINARY MAP - SUBJECT TO FURTHER REVISION



TITLE
SUSCEPTIBILITY ANALYSIS
SANTA ANA RIVER

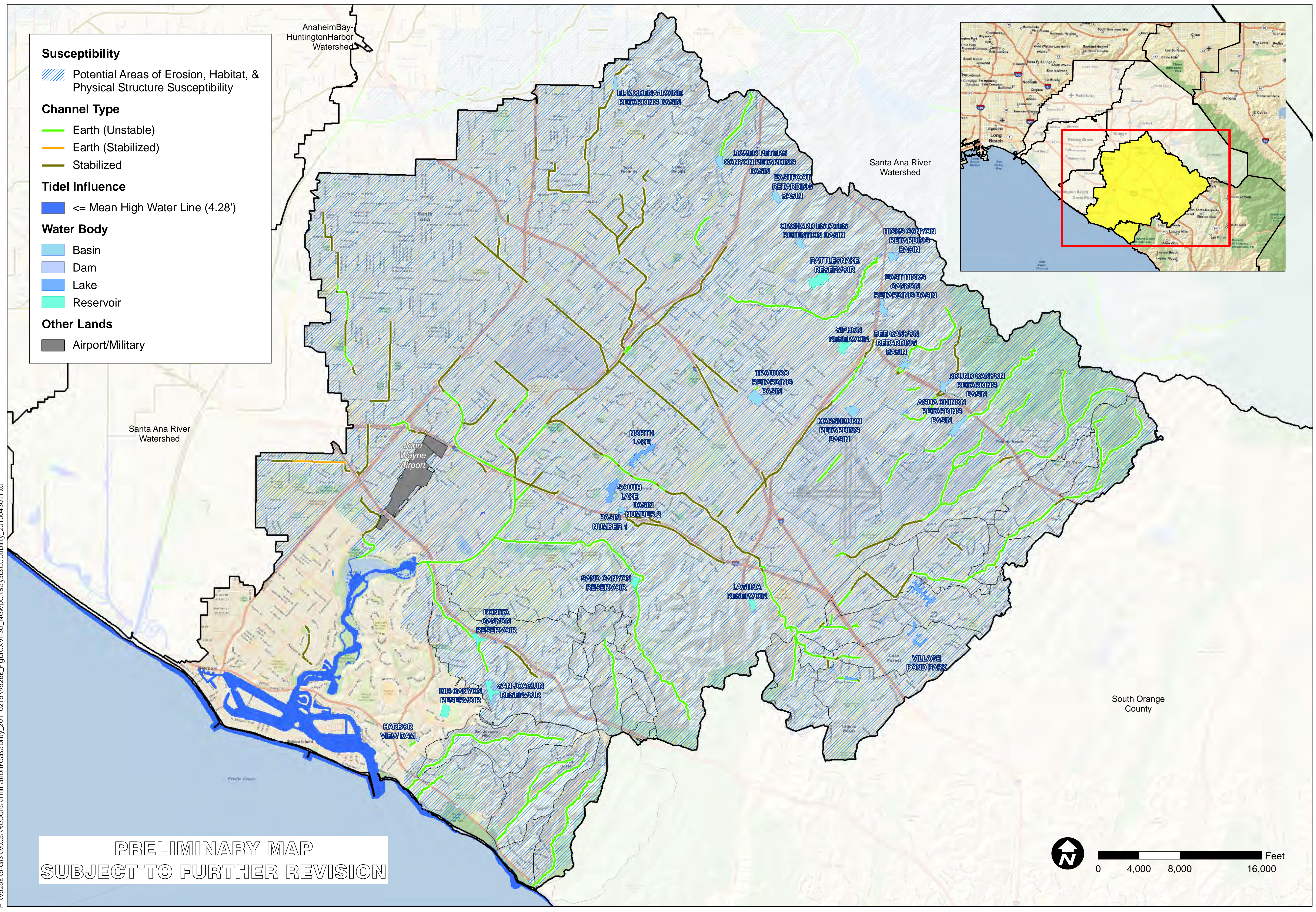
JOB
ORANGE COUNTY
WATERSHED
MASTER PLANNING
ORANGE CO.
CA

SCALE	1" = 6000'
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/30/10
JOB NO.	9526-E



FIGURE
XVI-3c

P:\9526E\6-GIS\Mxd\Reports\InfiltrationFeasibility_20110215\9526E_FigureXVI-3d_NewportBaySusceptibility_20100430.mxd



Susceptibility

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

Channel Type

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

Tidal Influence

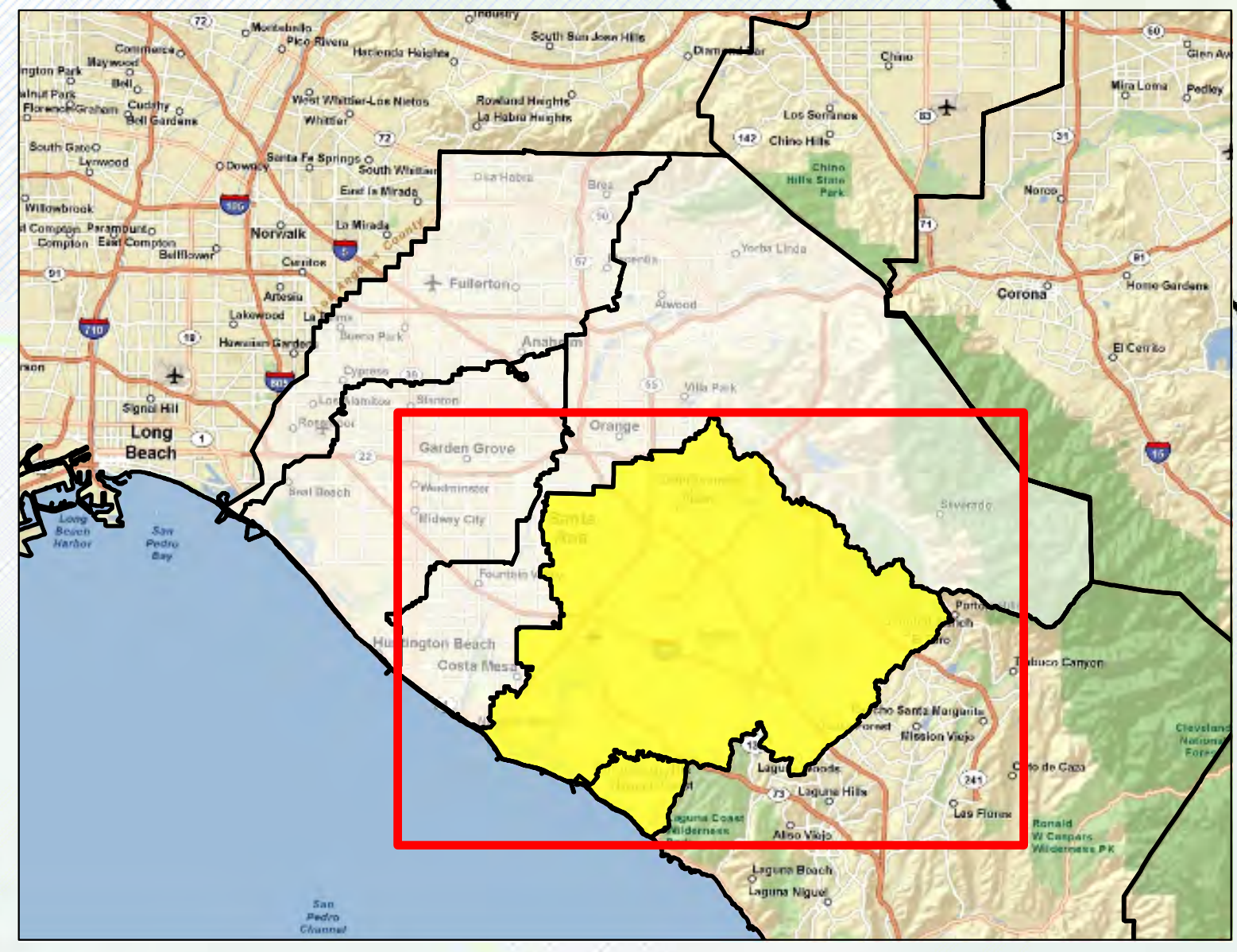
- <= Mean High Water Line (4.28')

Water Body

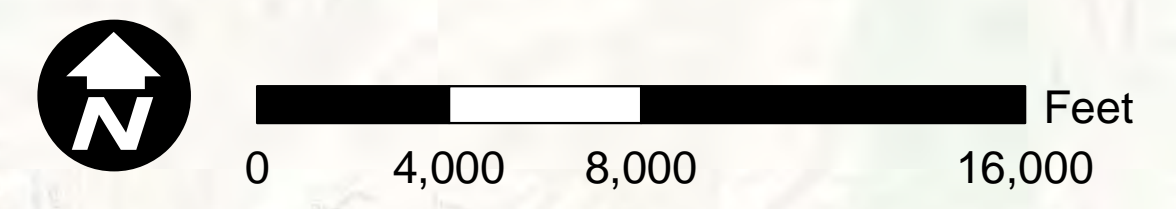
- Basin
- Dam
- Lake
- Reservoir

Other Lands

- Airport/Military



PRELIMINARY MAP
SUBJECT TO FURTHER REVISION



TITLE

SUSCEPTIBILITY ANALYSIS
NEWPORT BAY-
NEWPORT COASTAL STREAMS

JOB

ORANGE COUNTY
WATERSHED
MASTER PLANNING

ORANGE CO.
CA

SCALE	1" = 4000'
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/30/10
JOB NO.	9526-E

FIGURE

XVI-3d