

VOLUME II: EIS FIGURES
DRAFT ENVIRONMENTAL IMPACT STATEMENT

**SAN JUAN CREEK AND WESTERN SAN MATEO CREEK WATERSHED
SPECIAL AREA MANAGEMENT PLAN (SAMP)**

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November 2005

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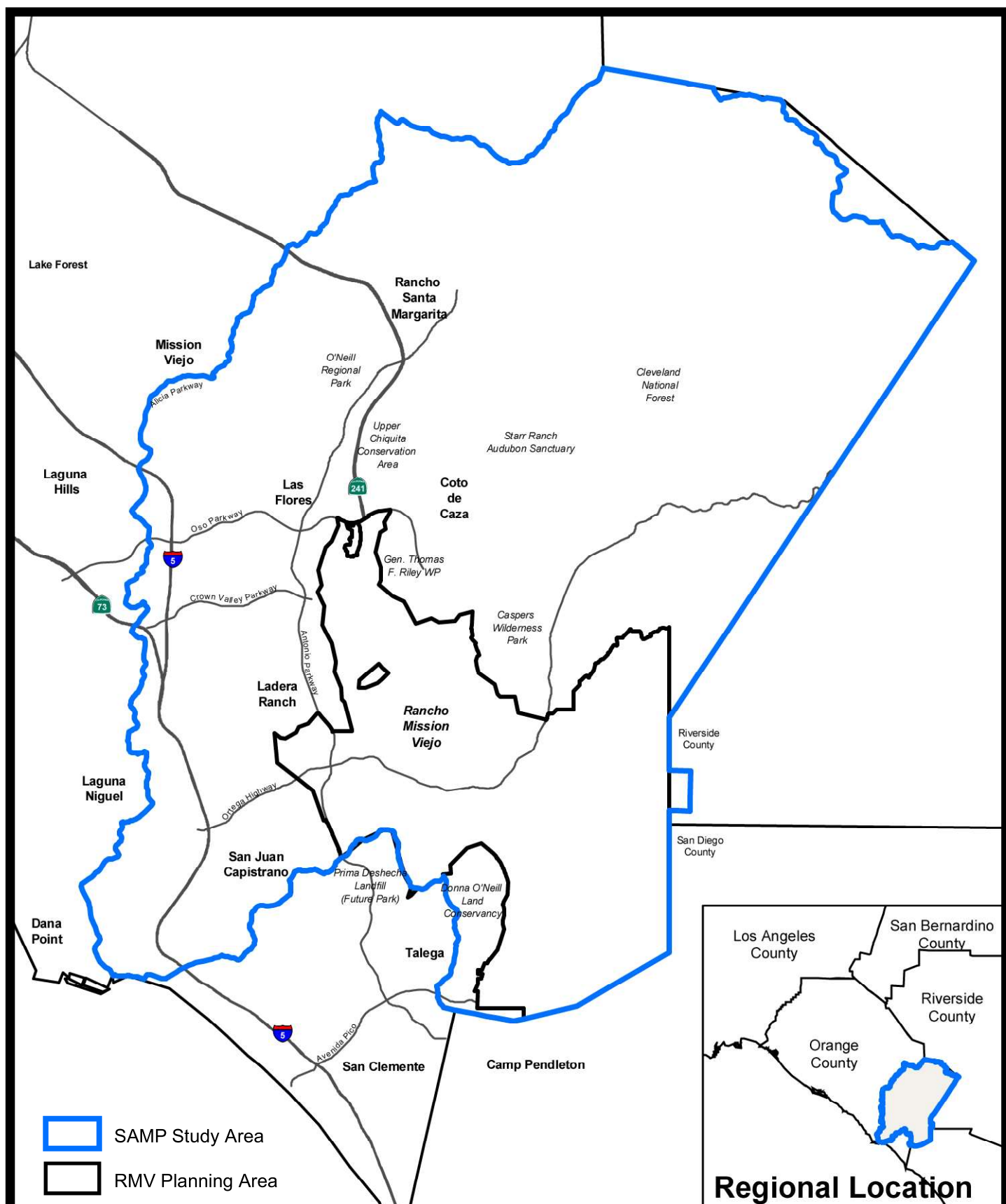
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SAMP Study Area Regional Map

Not to Scale

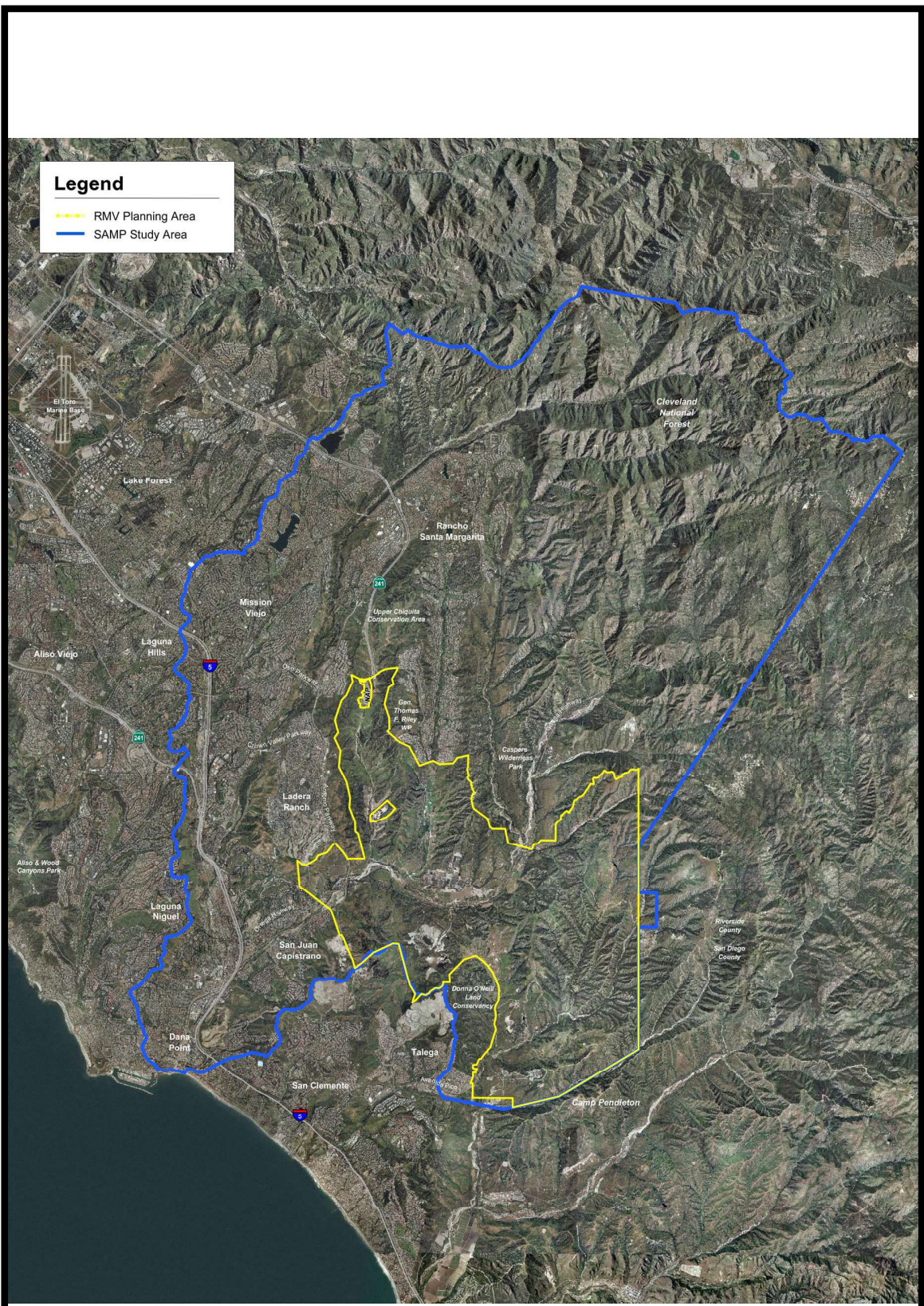
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 1-1

Source: EDAW, 2004



Date: Nov. 2005



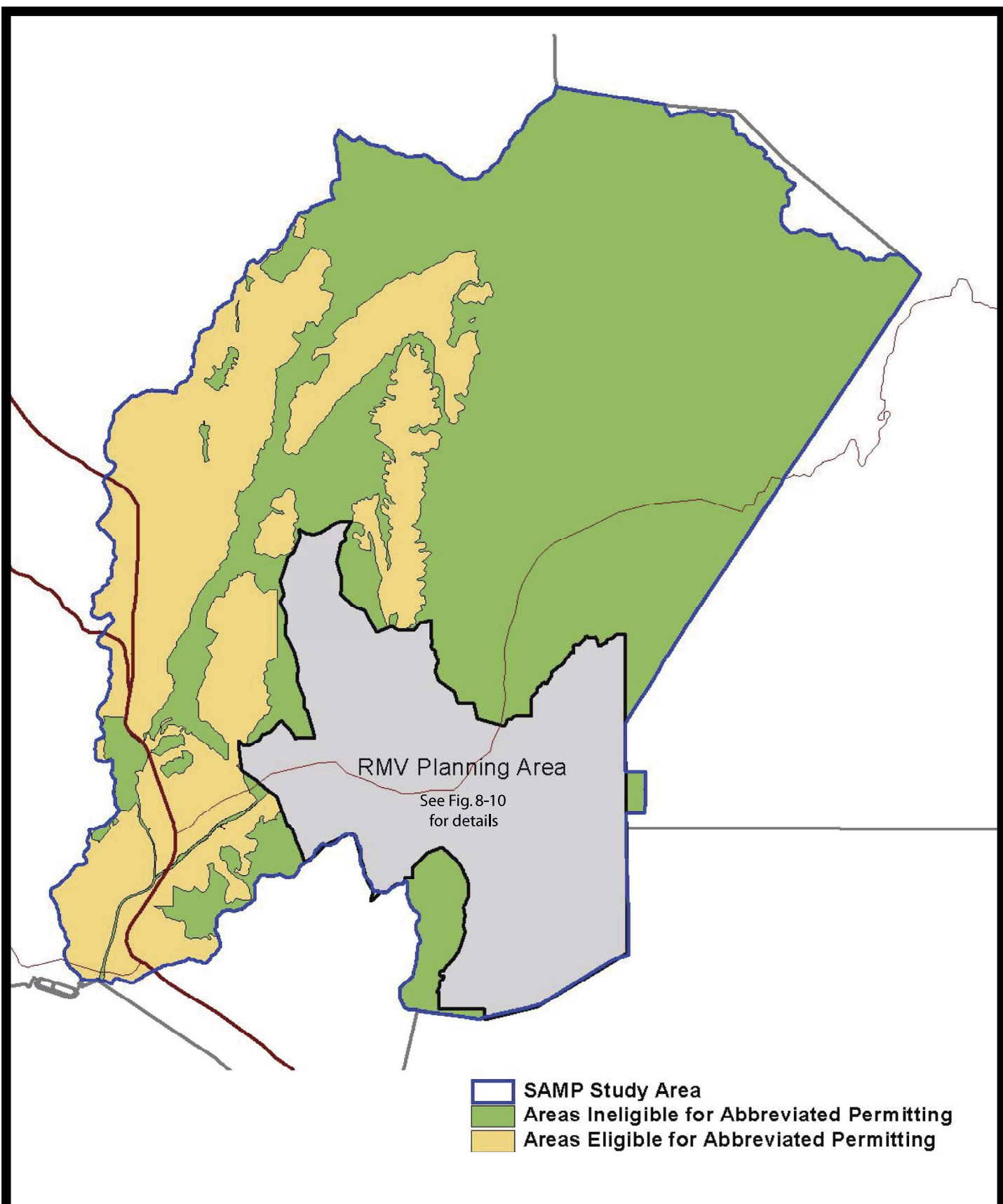
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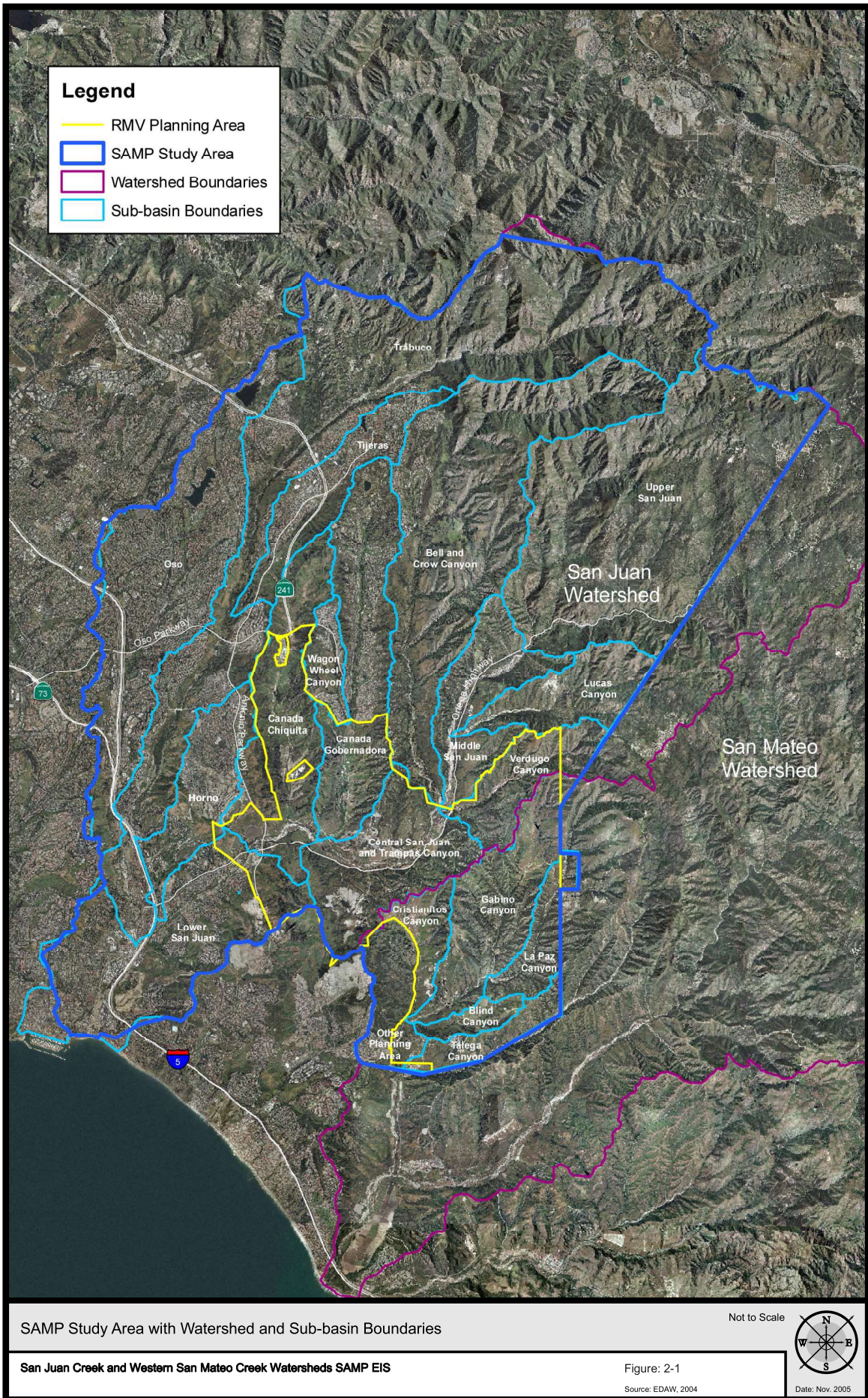
- RMV Planning Area
- SAMP Study Area

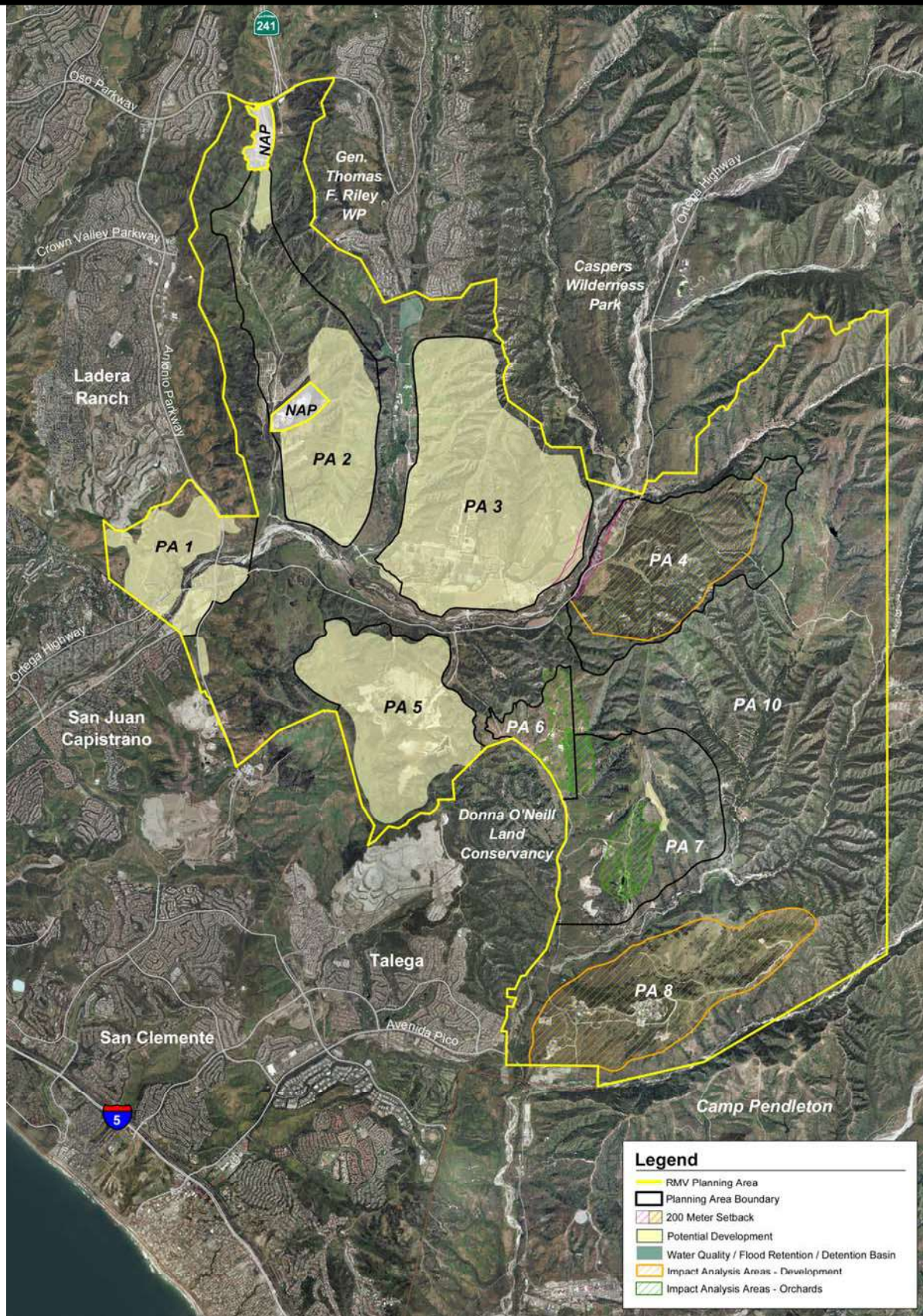
SAMP Study Area Boundary

Not to Scale









B-12 Alternative

Not to Scale

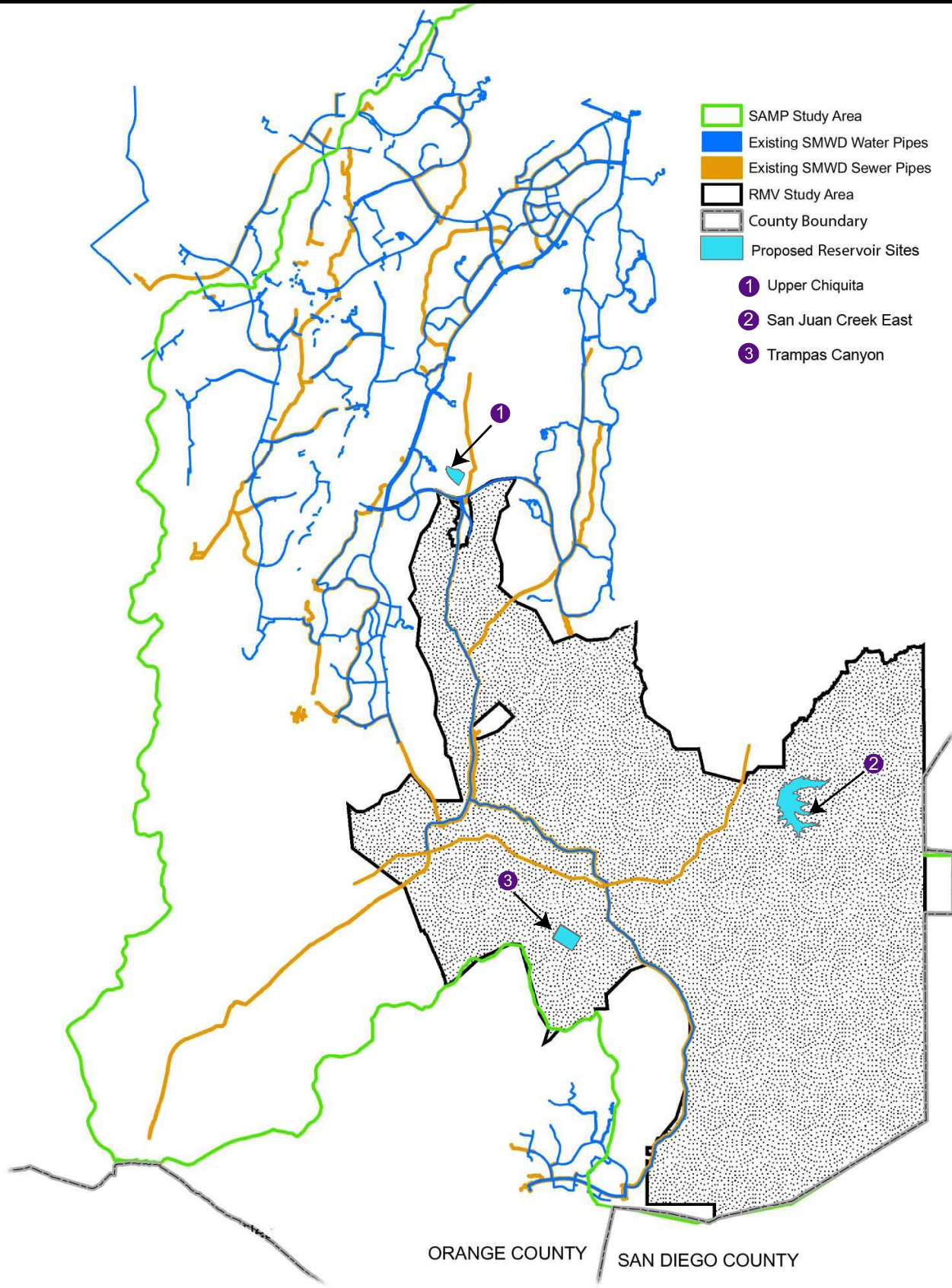
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 2-2

Source: EDAW, 2005



Date: Nov. 2005



SMWD Existing and Future Facilities

Not to Scale

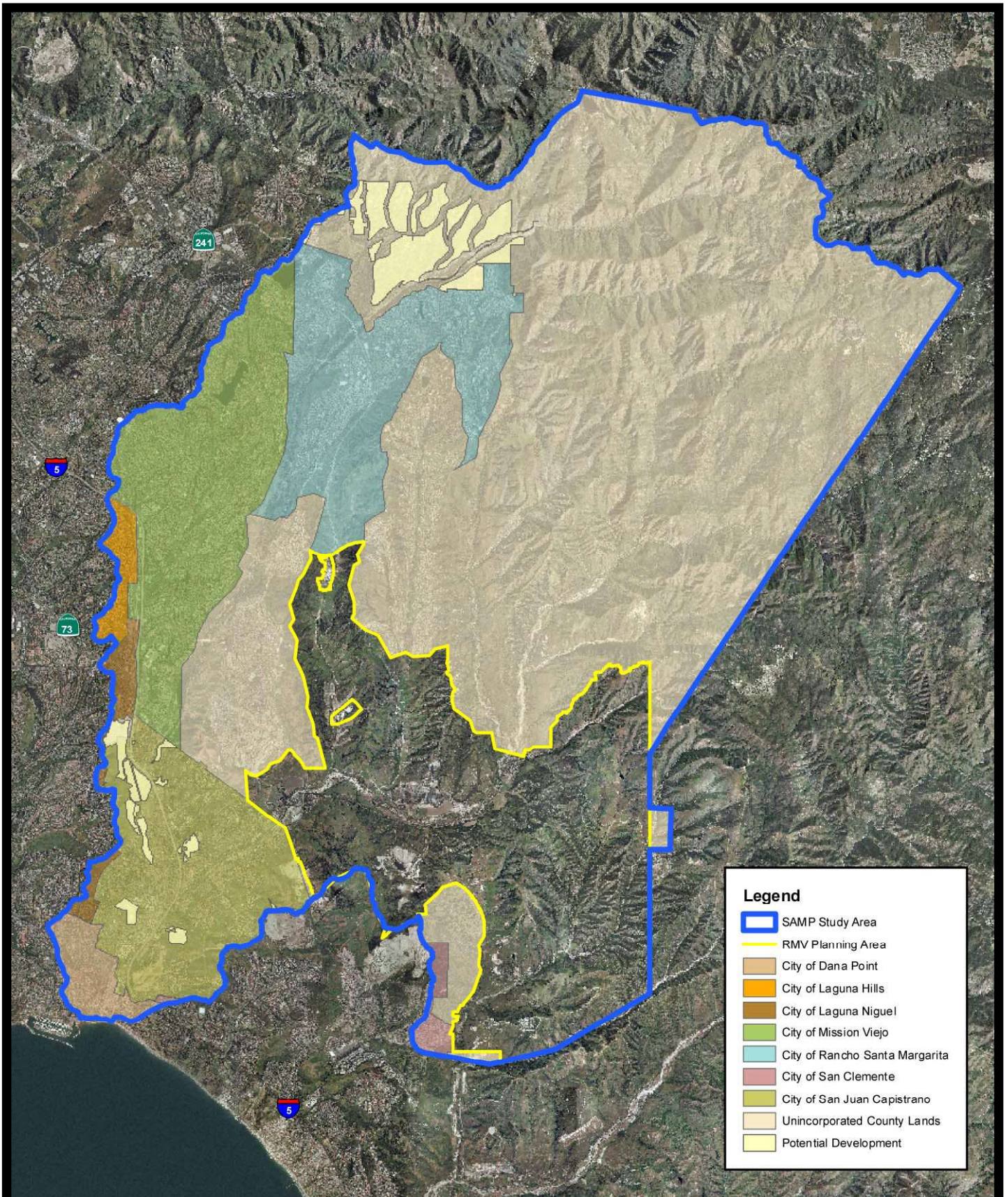
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 2-3

Source: Glenn Lukos Associates



Date: Nov. 2005



Future Potential Participants/ Development Areas within SAMP Study Area

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

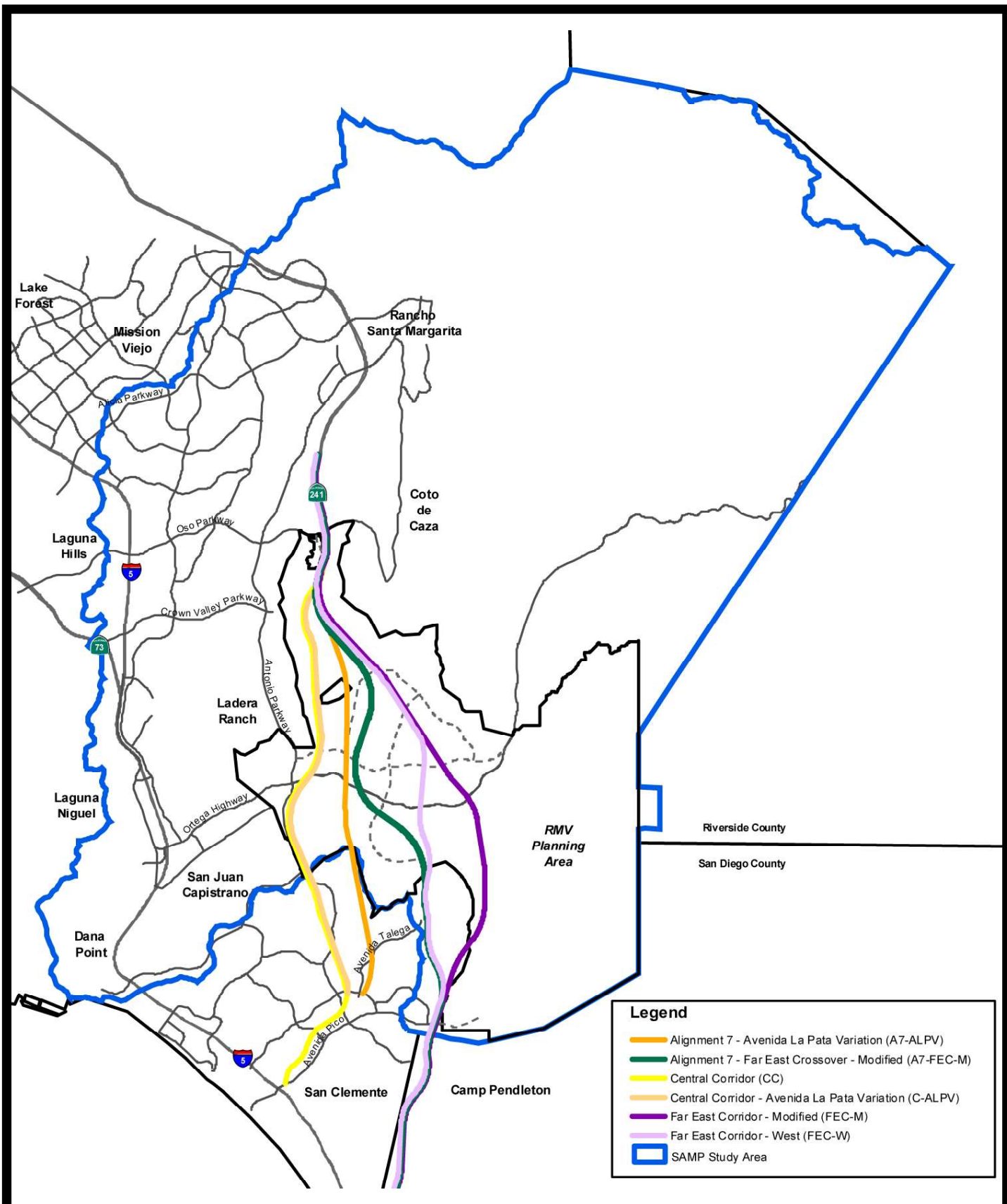
Scale: 1" = 13,000'

Figure: 2-4

Source: EDAW, 2005



Date: Nov. 2005



SOCTIIP Alternatives

Not to Scale

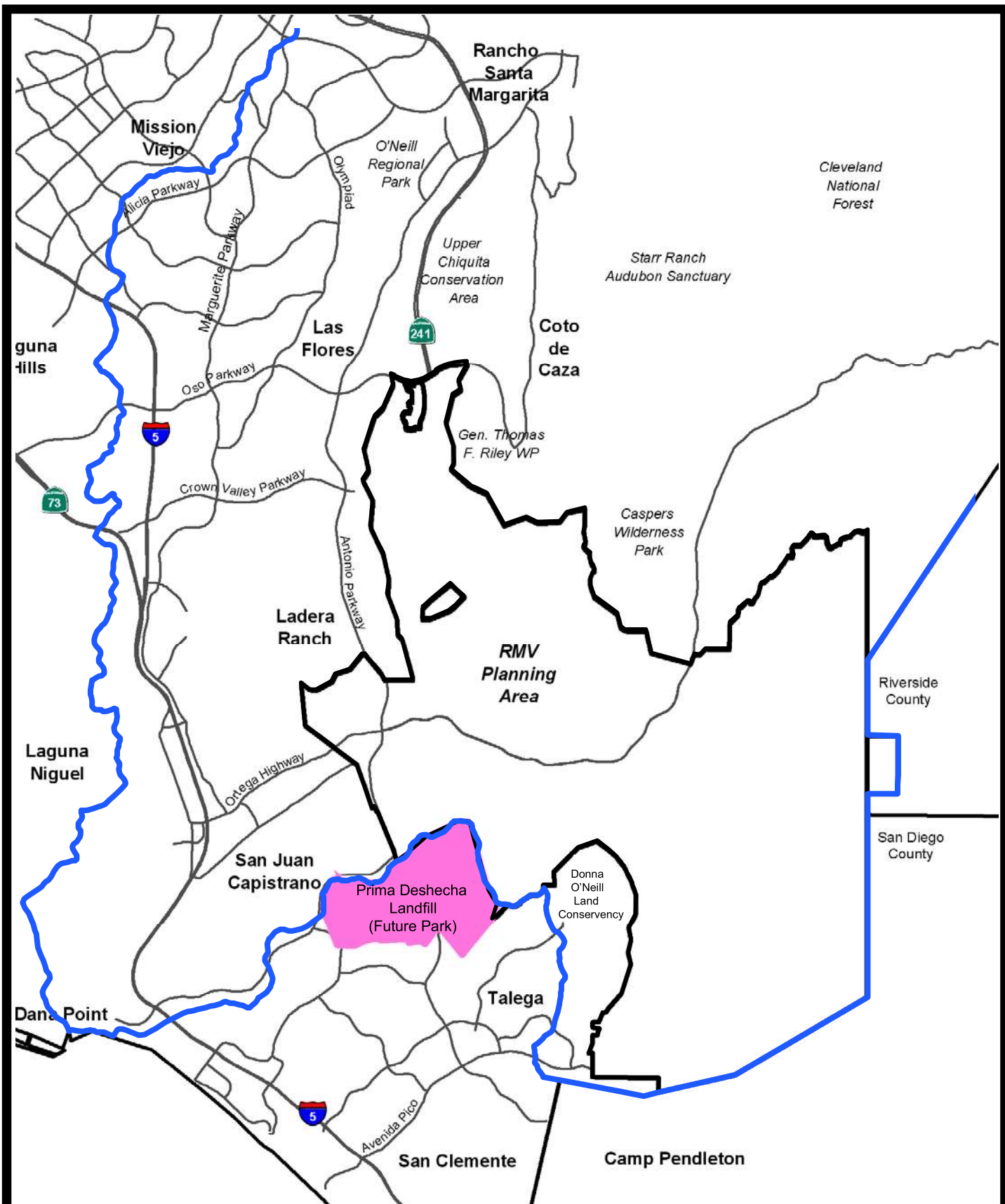
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 2-5

Source: TCA/ EDAW, 2004



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Prima Deshecha Landfill

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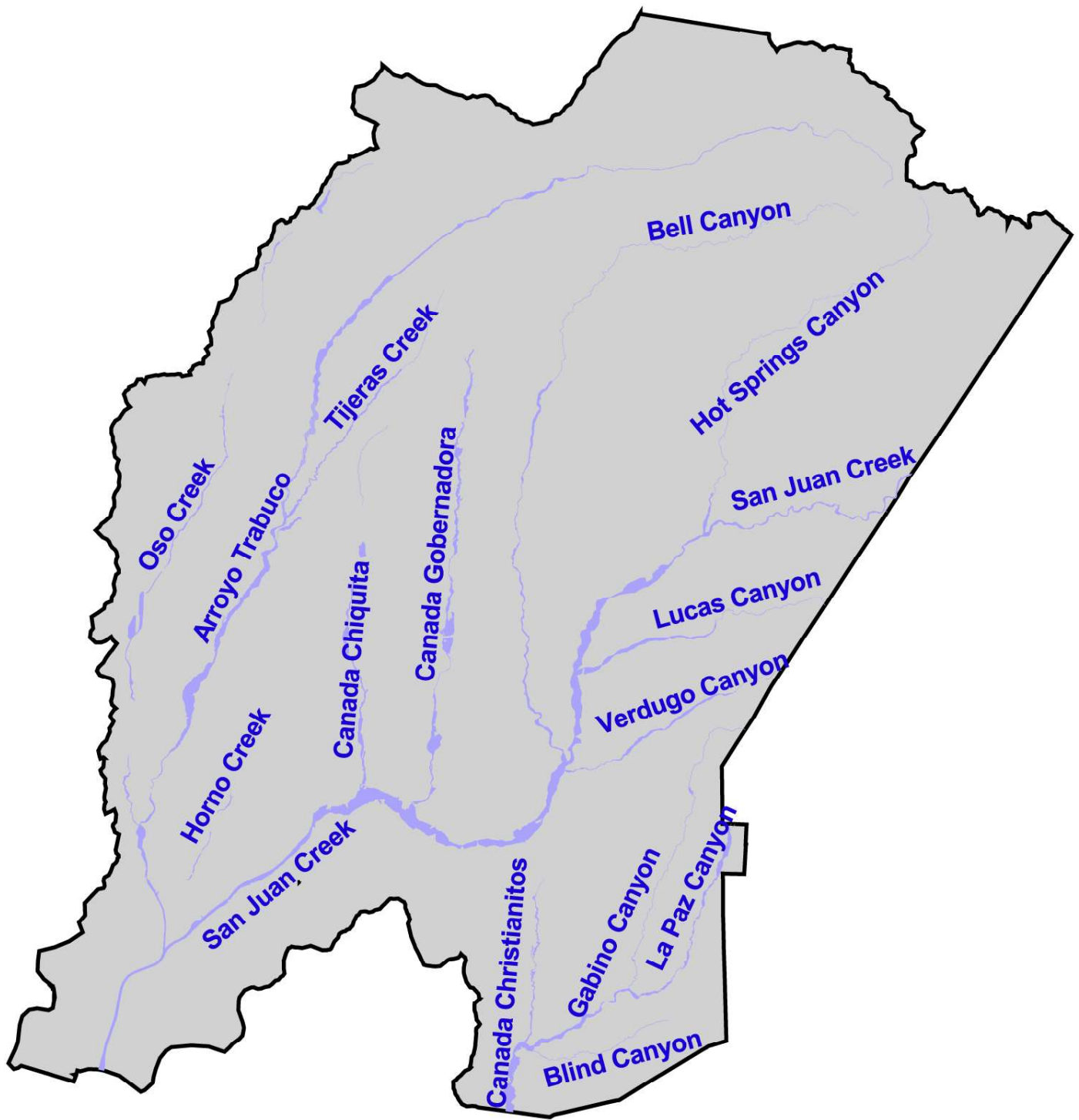
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 2-6

Source: County of Orange



Date: Nov. 2005



Major Streams in San Juan Creek and
Western San Mateo Creek Watersheds

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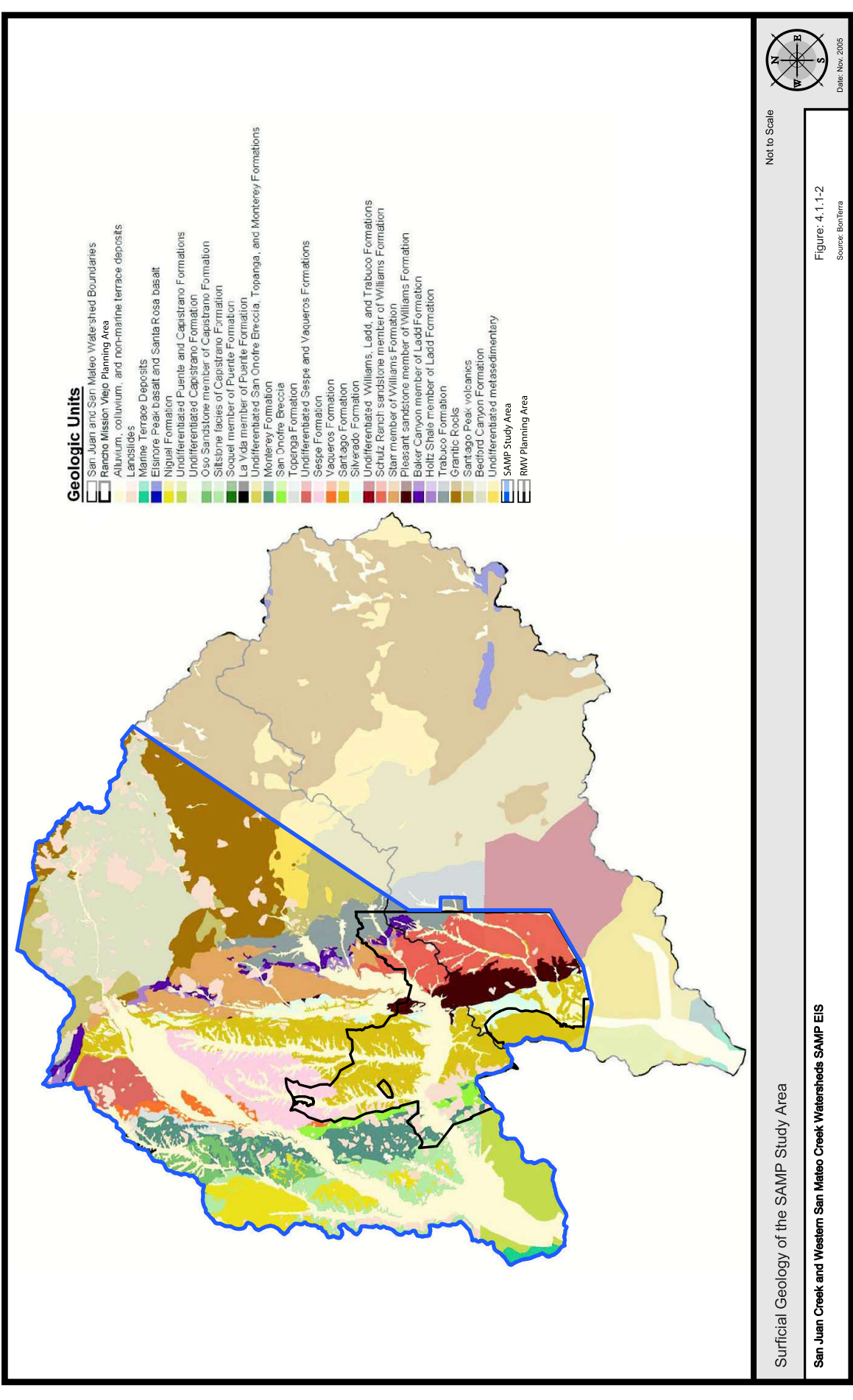
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

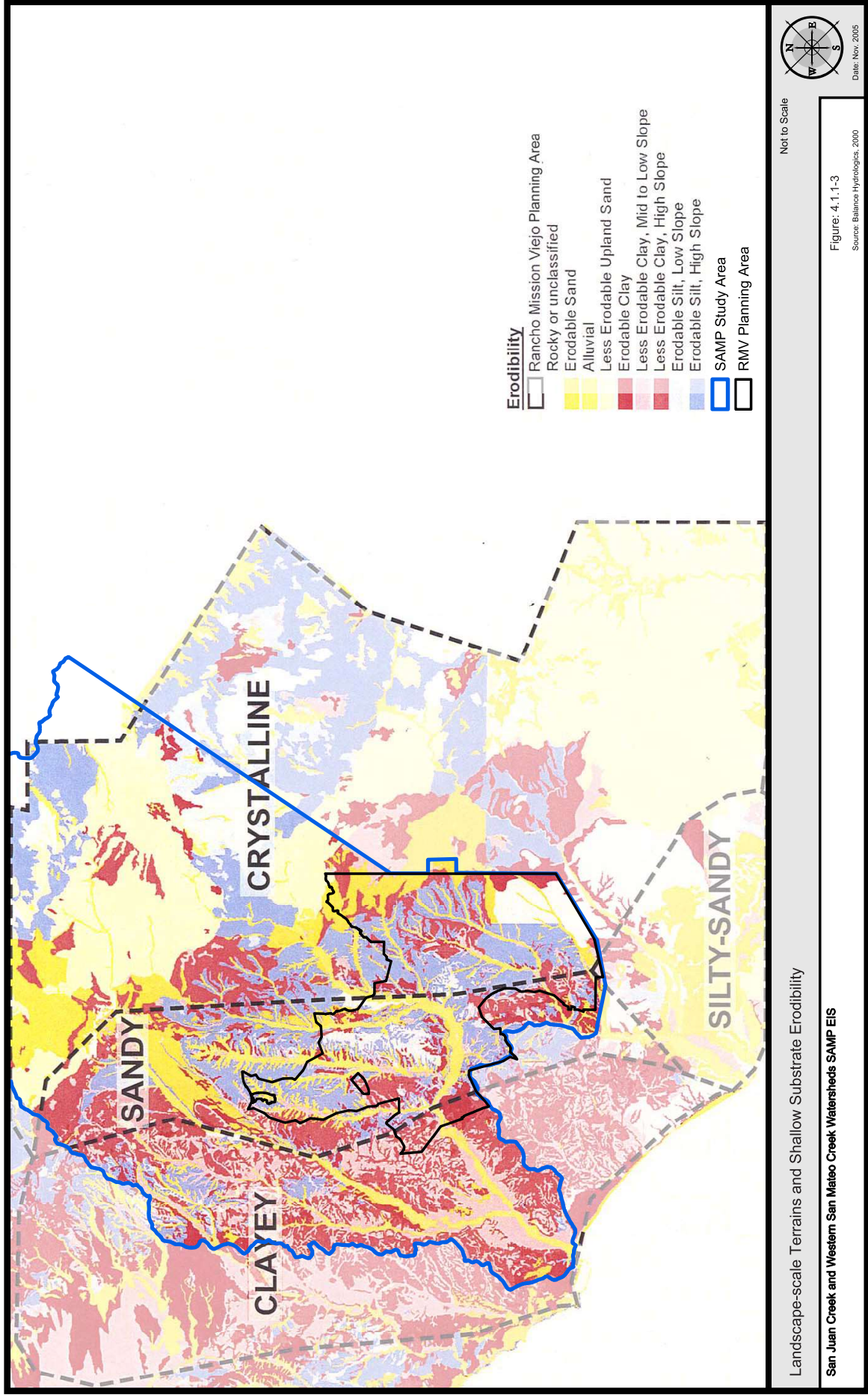
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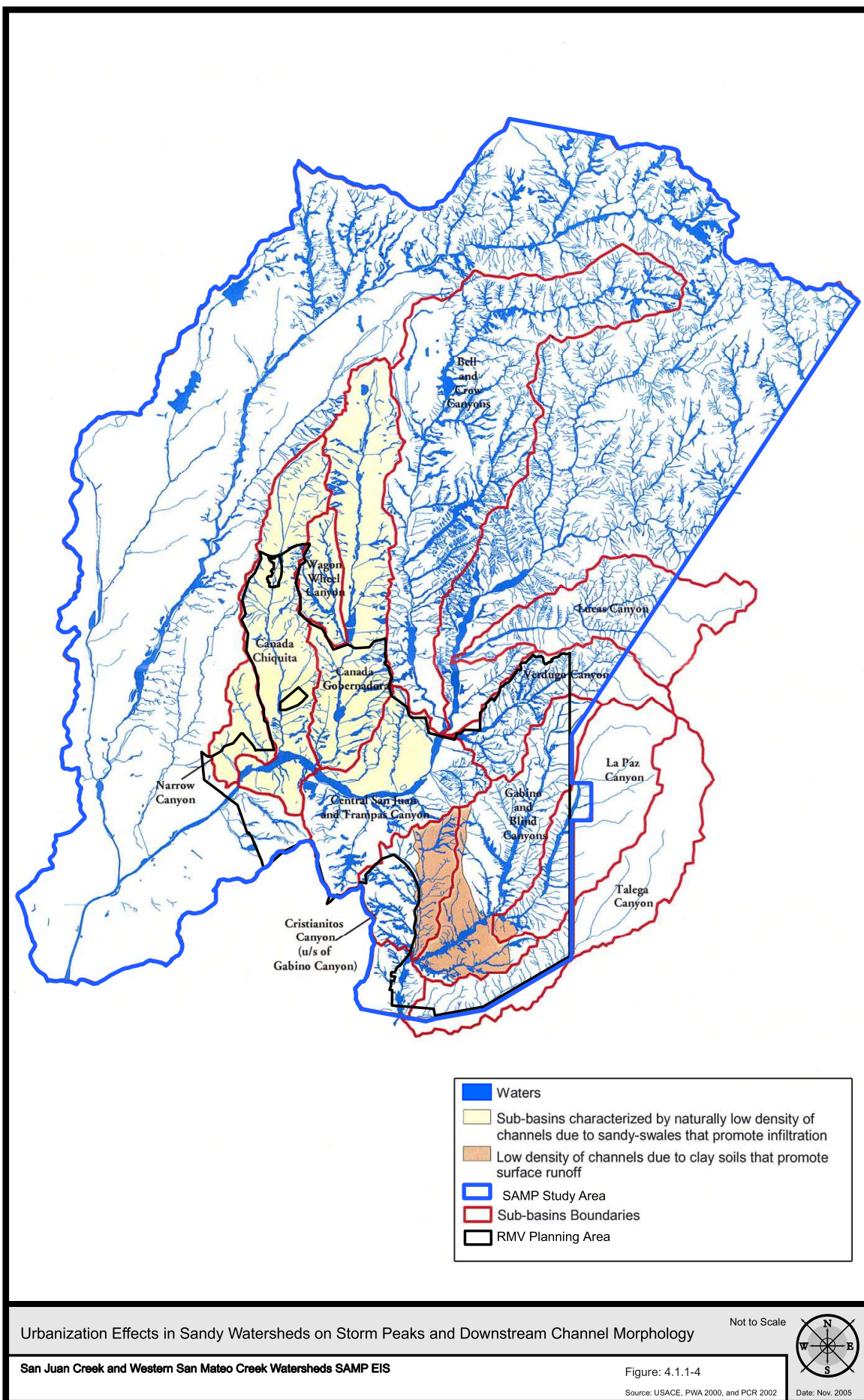
Source: USACE



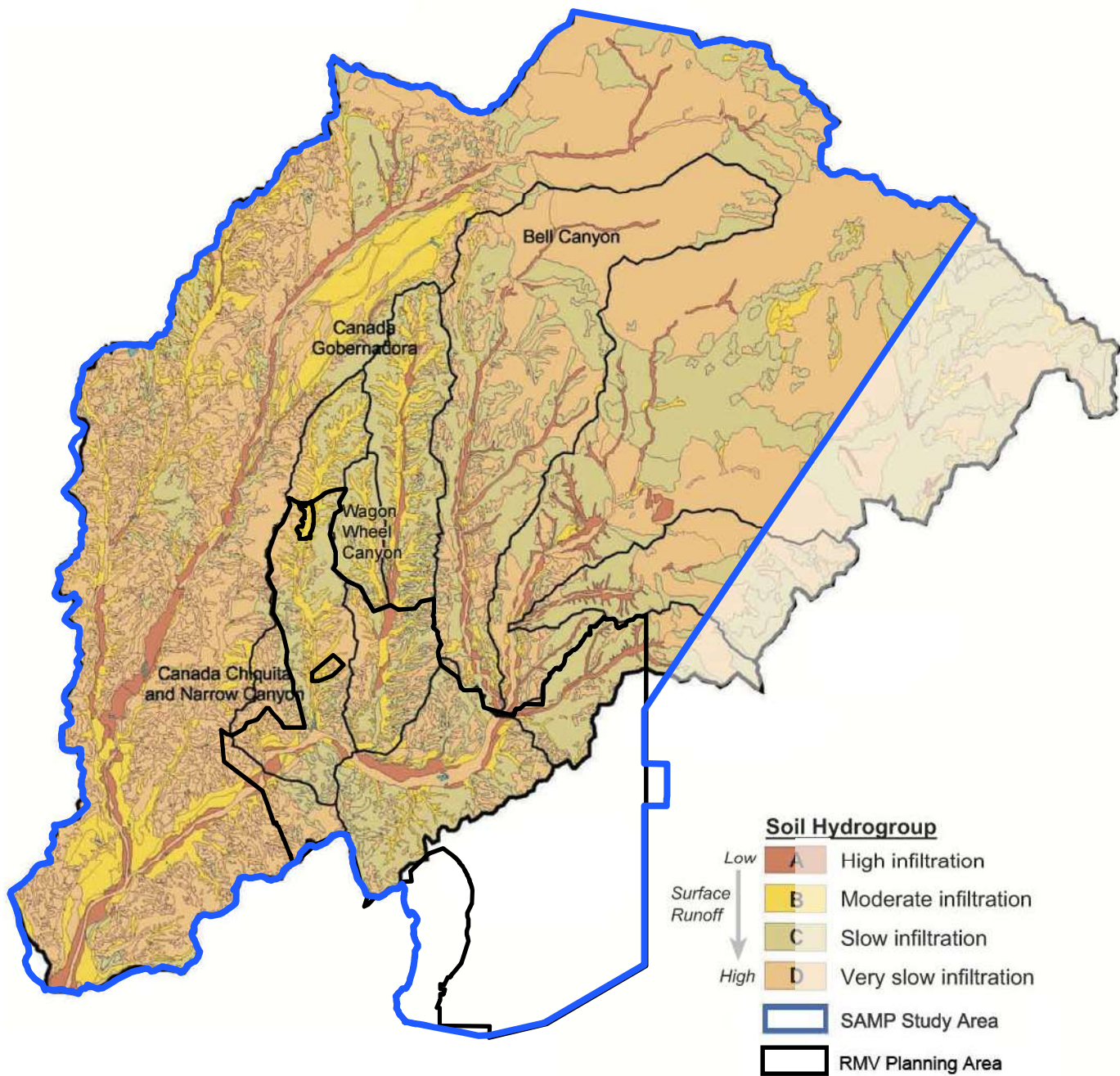
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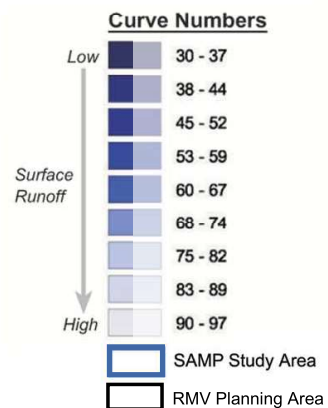
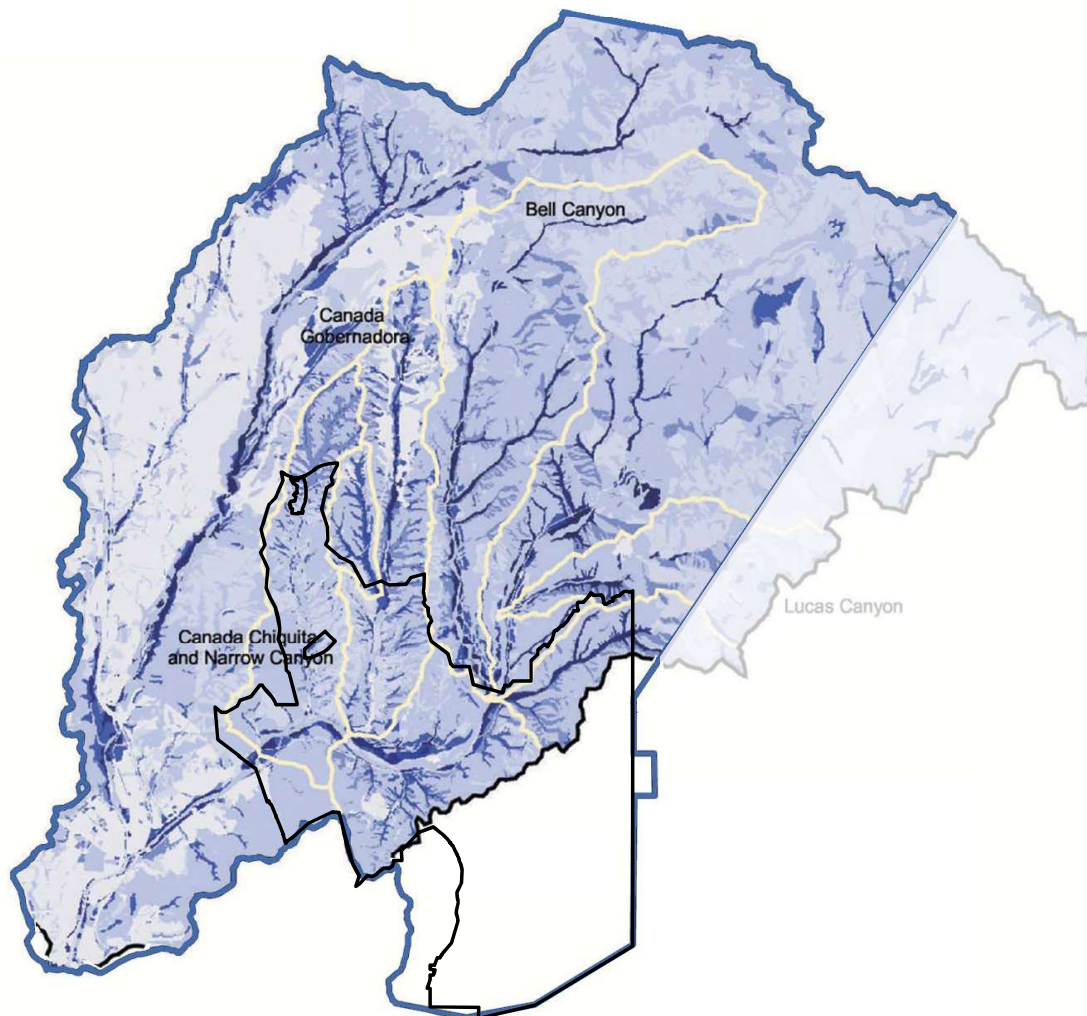
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Distribution of Hydrological Soils in the San Juan Creek Watershed

Not to Scale





Distribution of Soil Conservation Service Runoff Curve Numbers for the San Juan Creek Watershed

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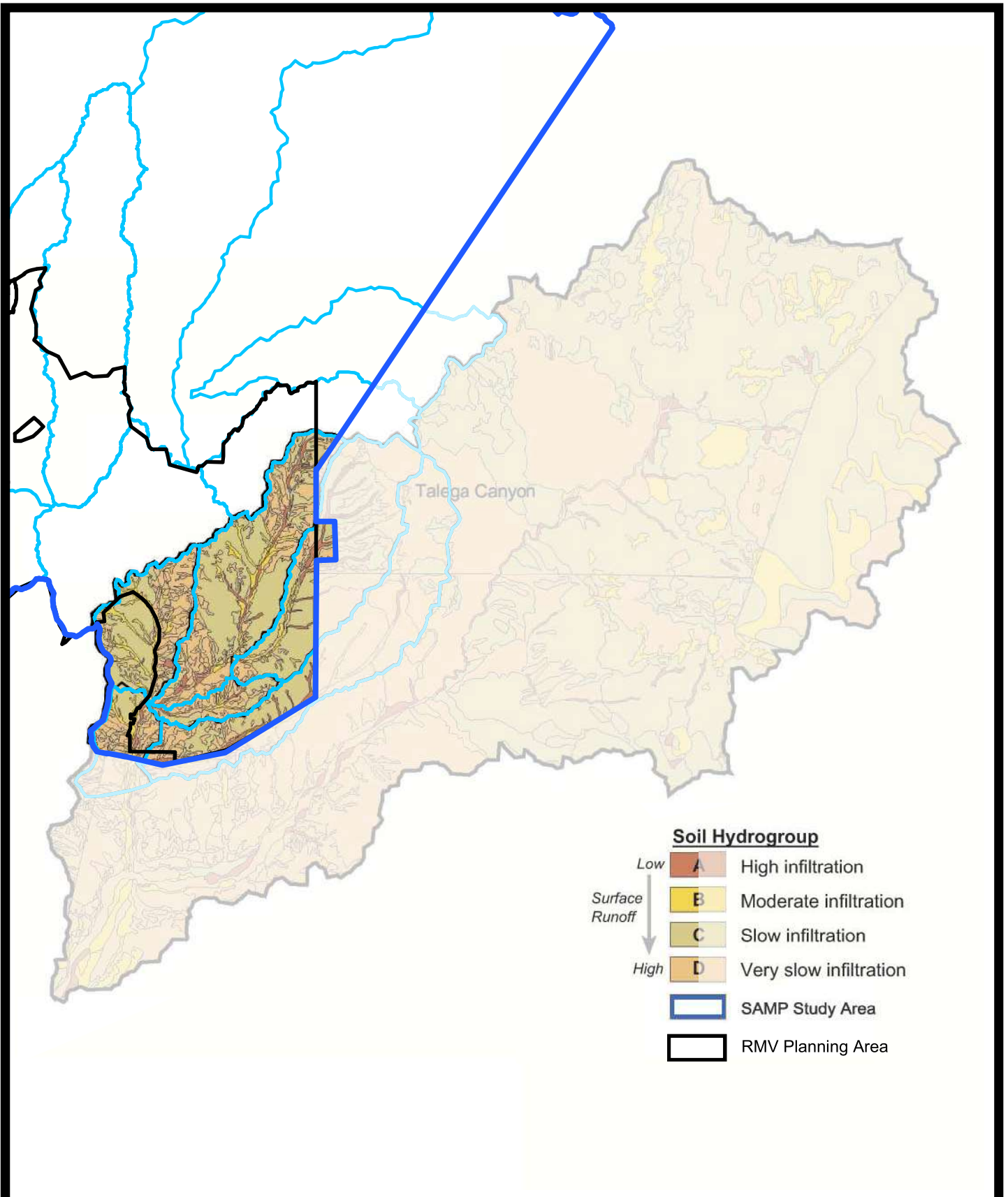


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.1-7

Source: PWA, 2000

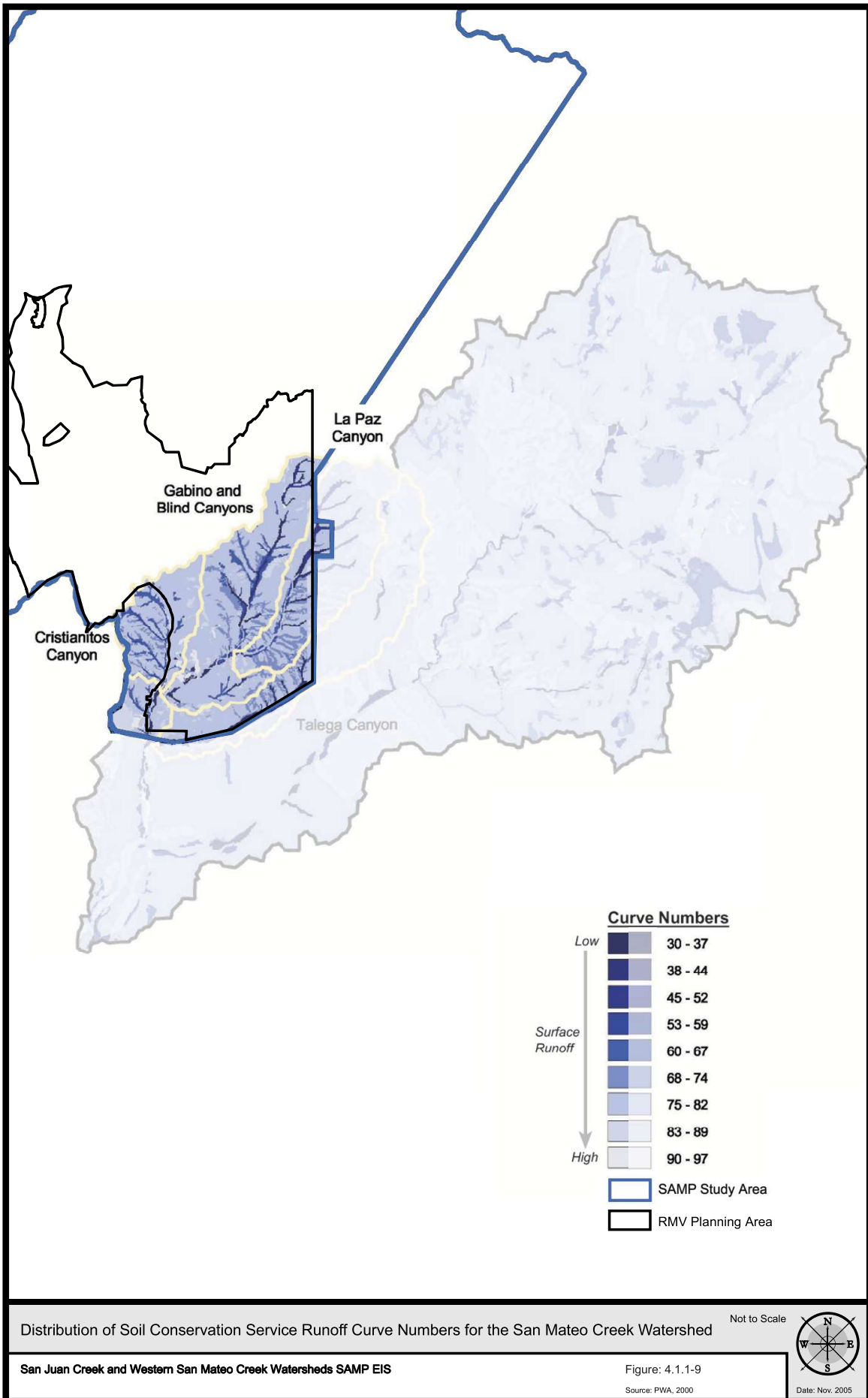
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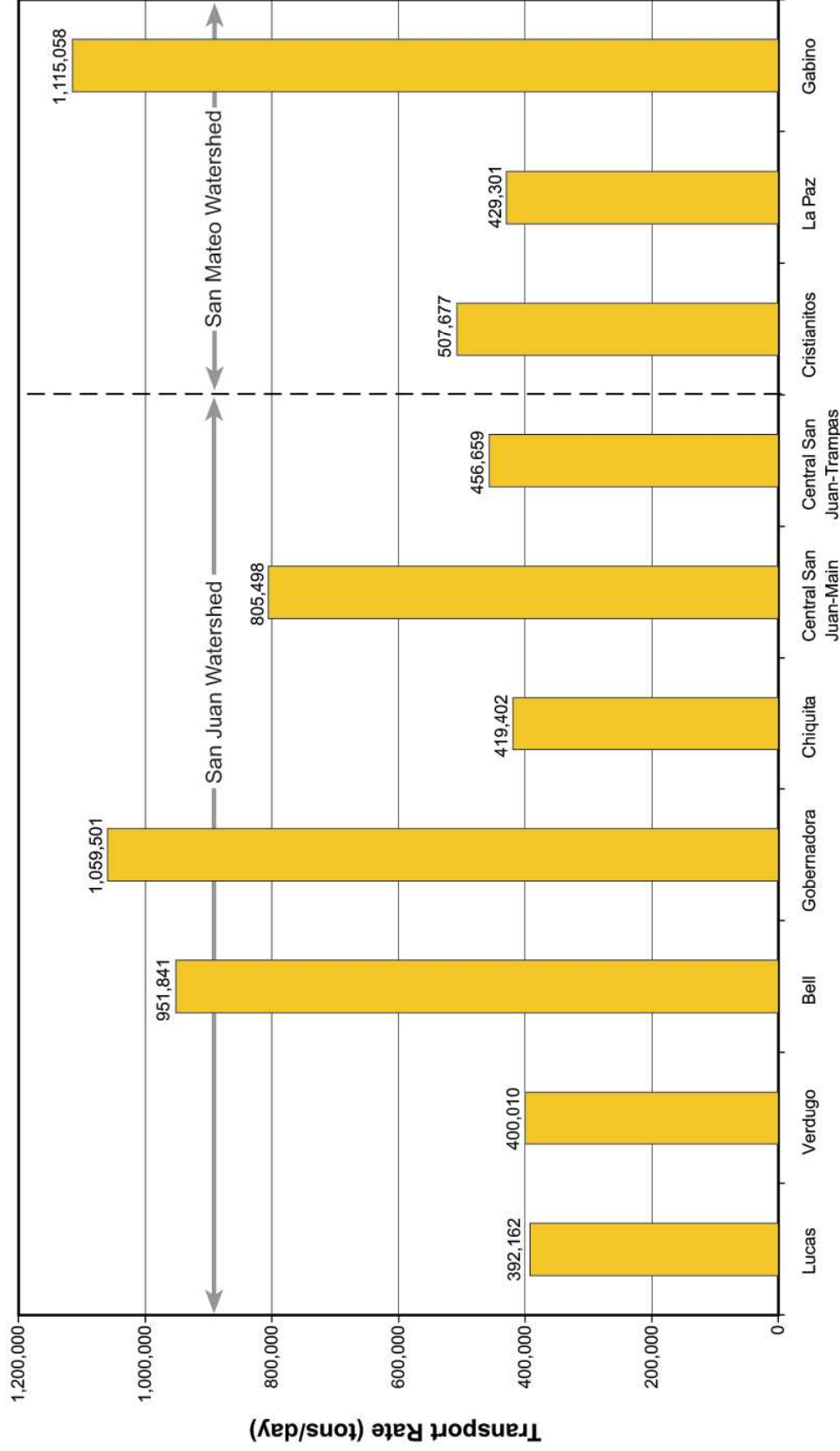


Distribution of Hydrological Soils in the San Mateo Creek Watershed

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Sub-Basin

Notes: USACOE SAM model was used in analysis based on Laursen (Madden) transport function.

San Juan Creek and Western San Mateo Watershed: Absolute Peak Sediment Transport Capacities for each Major Sub-Basin during the 100-Year Flow Event

Not to Scale

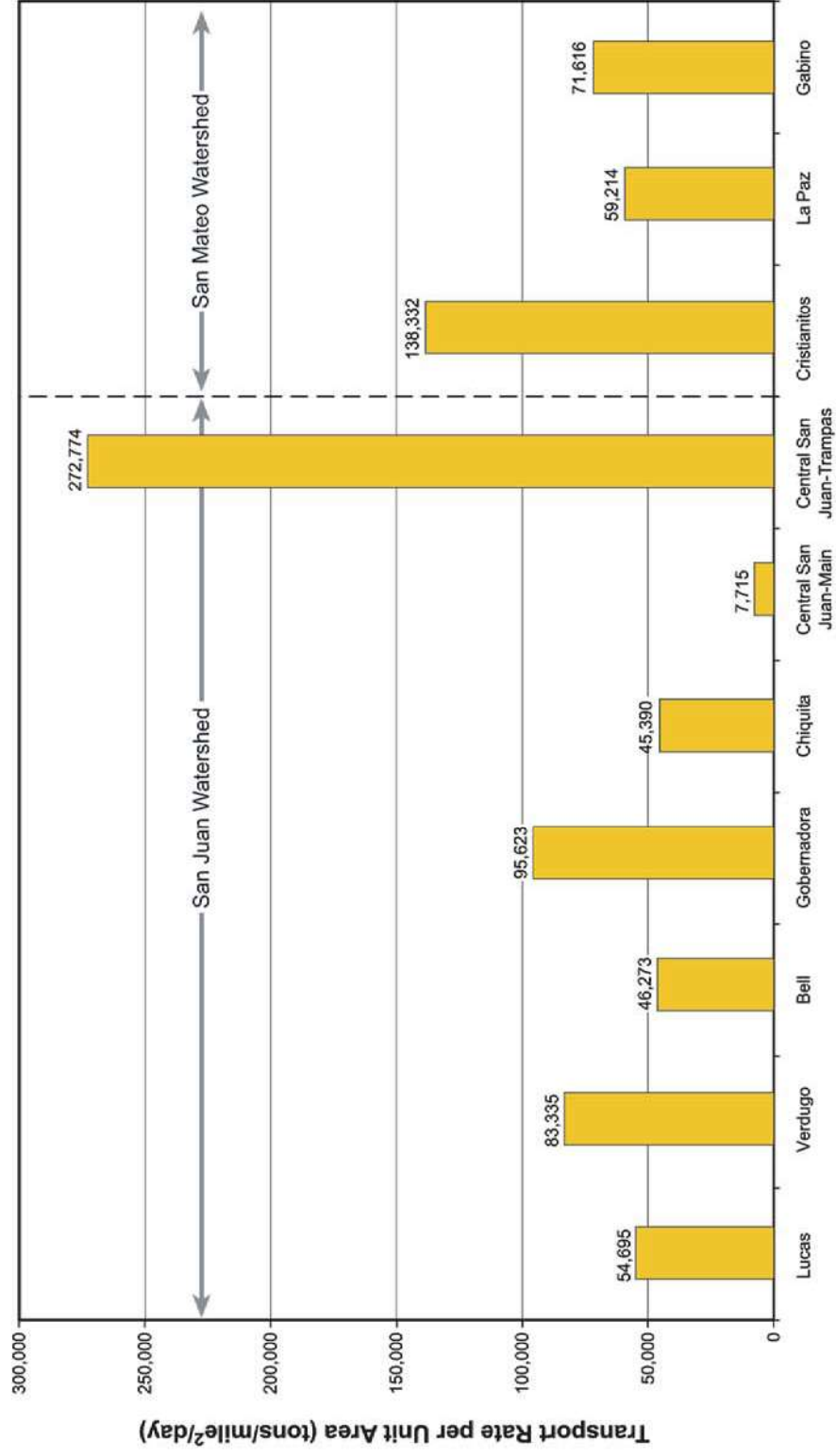


Date: Nov. 2005

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.1-10

Source: PWA, 2000



Sub-Basin

Notes: USACOE SAM model was used in analysis based on Laursen (Madden) transport function.

San Juan Creek and Western San Mateo Watershed: Transport Rates per Unit at the Most Downstream Reach of Each Sub-Basin for a 100-Year Flow

Not to Scale

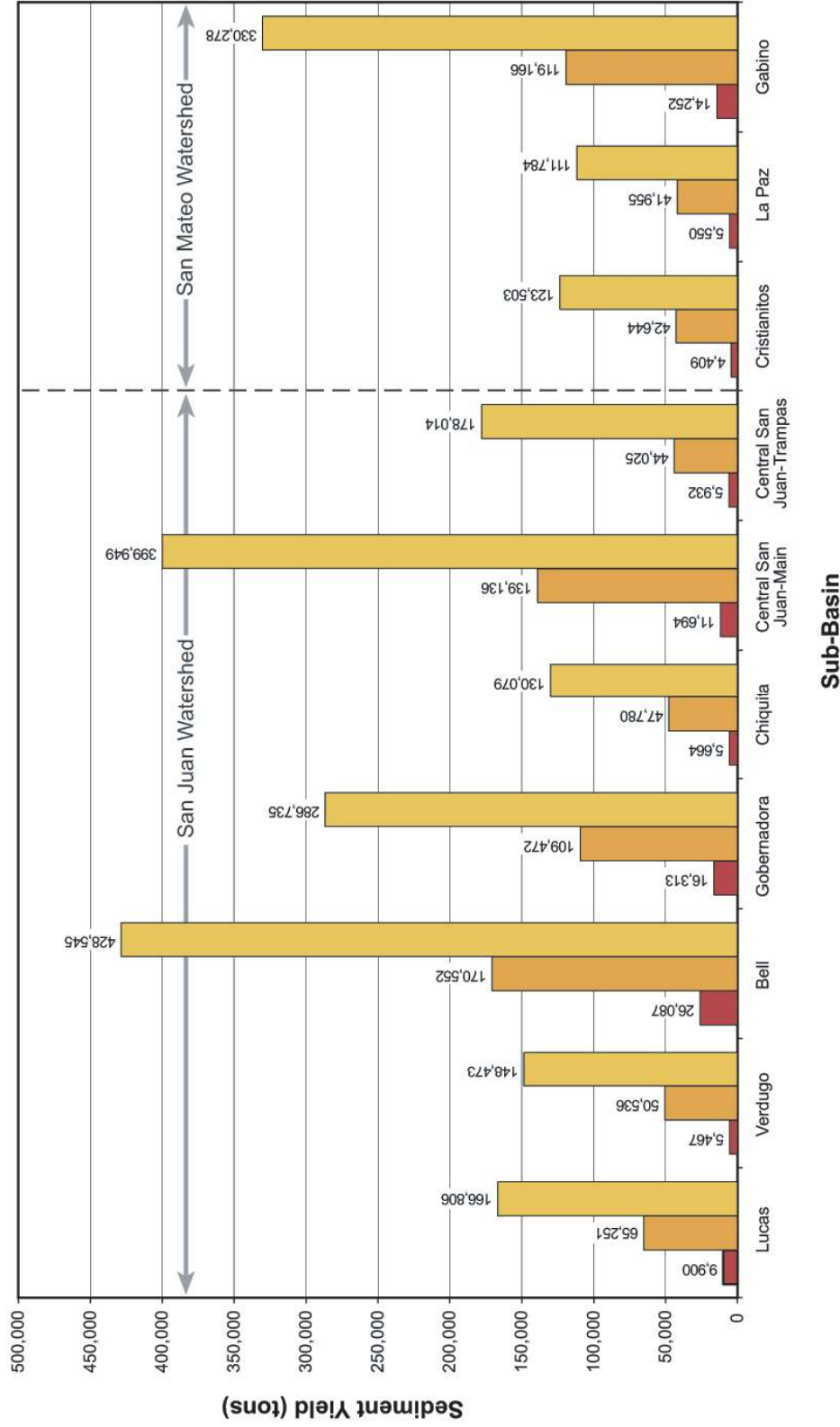
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.1-11

Source: PWA, 2000



Date: Nov. 2005



Notes: USACOE SAM model was used in analysis based on Laursen (Madden) transport function.

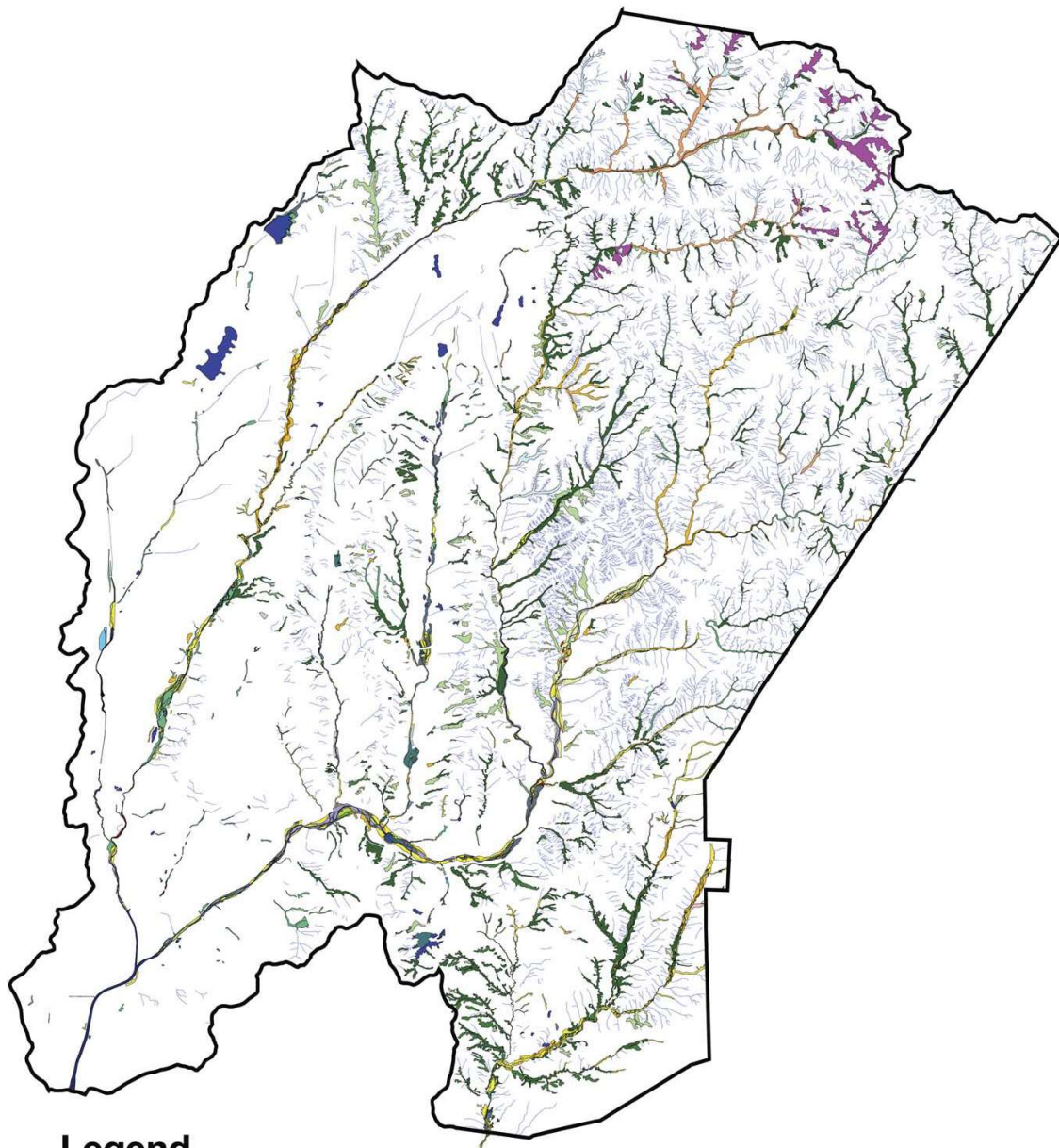
San Juan Creek and Western San Mateo Watershed: Calculated Sediment Yields for the 2-year, 10-year, 100-year Storm Events

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.1-12
Source: PWA, 2000



Date: Nov. 2005



Legend

- | | | |
|--------------------------------------|---------------------------------|---|
| Annual Grassland | Eucalyptus | Riparian Herb |
| Arundo donax | Flood Control Channels | Salix exigua |
| Bigcone Spruce-Cany. Live Oak Forest | Floodplain Sage Scrub | Southern Arroyo Willow Forest |
| Canyon Live Oak Forest | Fluctuating Shorelines | Southern Coast Live Oak Riparian Forest |
| Canyon Live Oak Ravine Forest | Intermittent Rivers and Streams | Southern Coastal Salt Marsh |
| Chamise-Sage Scrub | Mitigation site | Southern Sycamore Riparian Woodland |
| Coast Live Oak Forest | Mulefat Scrub | Southern Willow Scrub |
| Coast Live Oak Savanna | Open Water | Spreading Grounds and Detention Basins |
| Coast Live Oak Woodland | Perennial Rivers and Streams | White Alder Riparian Forest |
| Coastal Freshwater Marsh | Rhus integrifolia | Watercourses |
| Ephemeral Rivers and Streams | Riparian Herb | |

Aquatic Resources, Riparian Communities, and Watercourses in SAMP Study Area
Based on the Planning Level Delineation

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

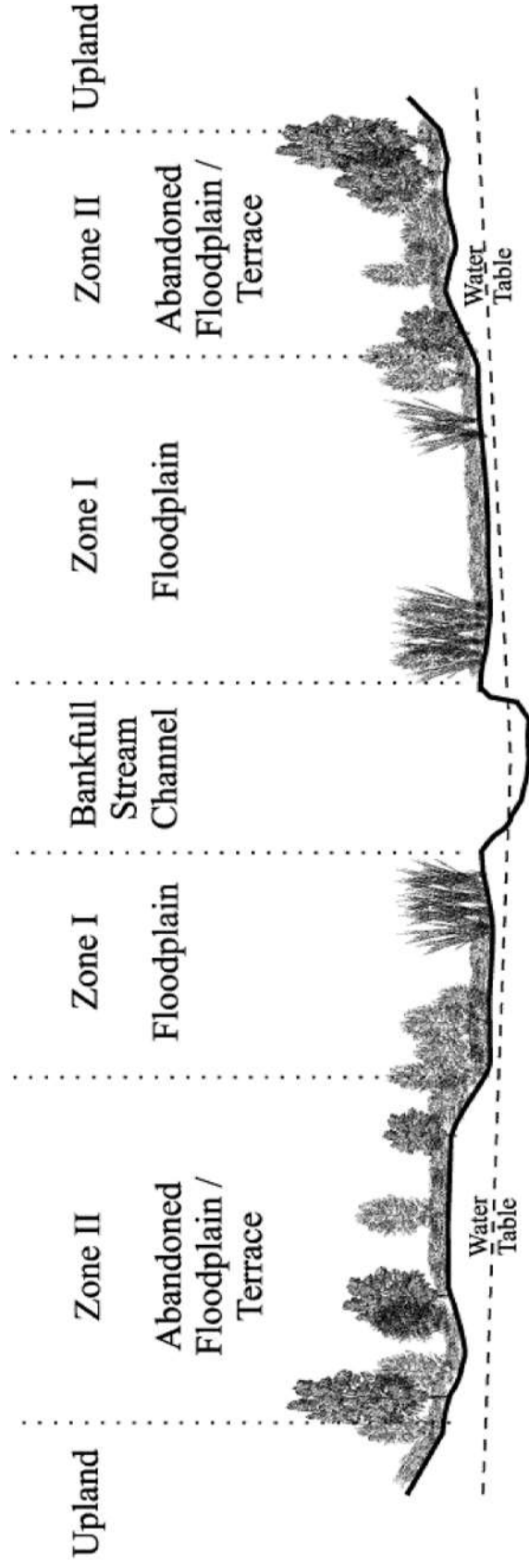
Figure: 4.1.2-1

Source: USACE, WES Report

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Date: Nov 2005

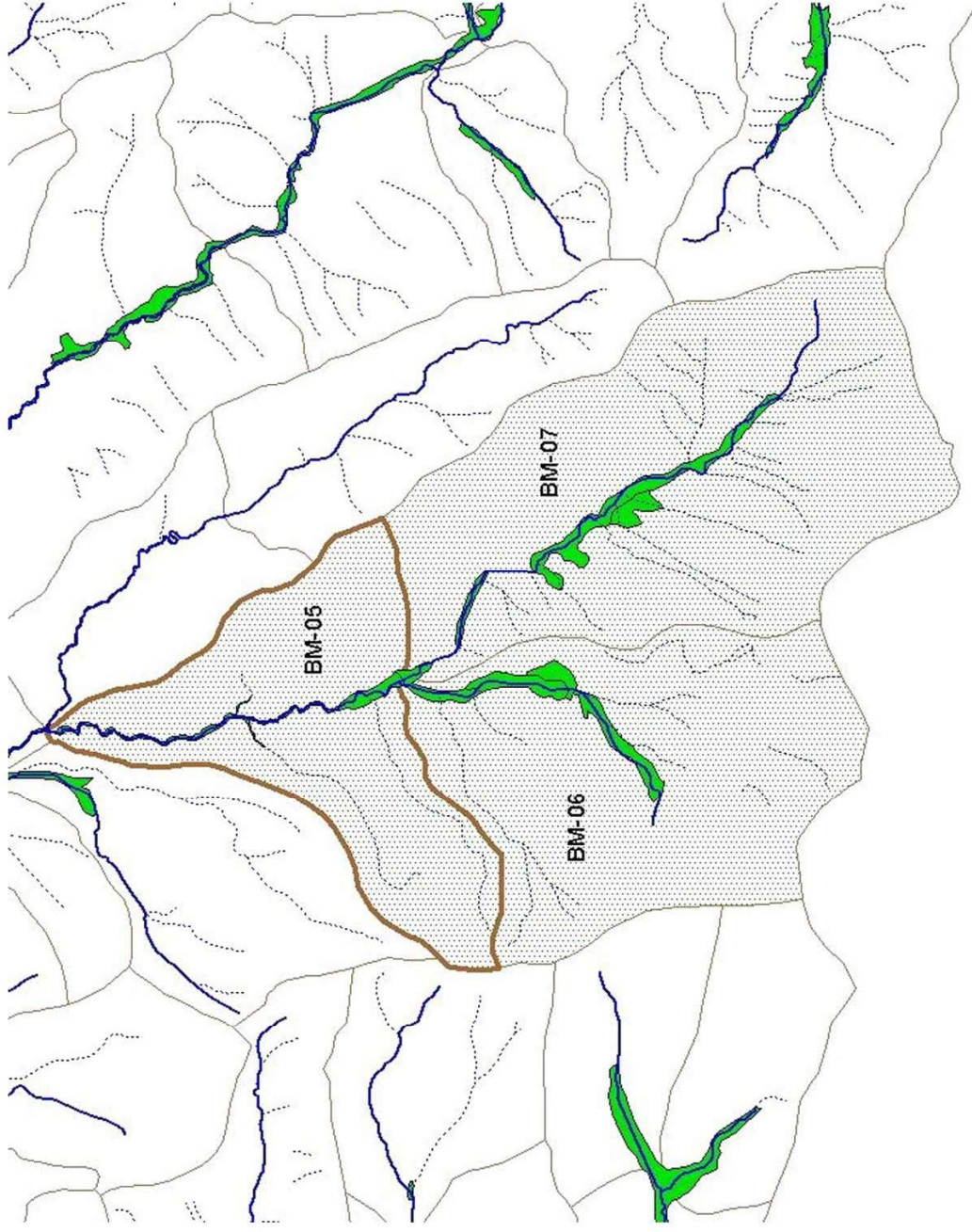


Cross-Sectional Profile of a Representative Riparian Ecosystem

Not to Scale



Date: Nov. 2005



Stream Channels
Main Stem
Tributary
Riparian Ecosystems
BM-05 Local Drainage Boundary
Other Riparian Reach Local Drainage Boundaries
BM-05 Drainage Basin

Illustration of a Riparian Reach and Local Drainage Area

Not to Scale

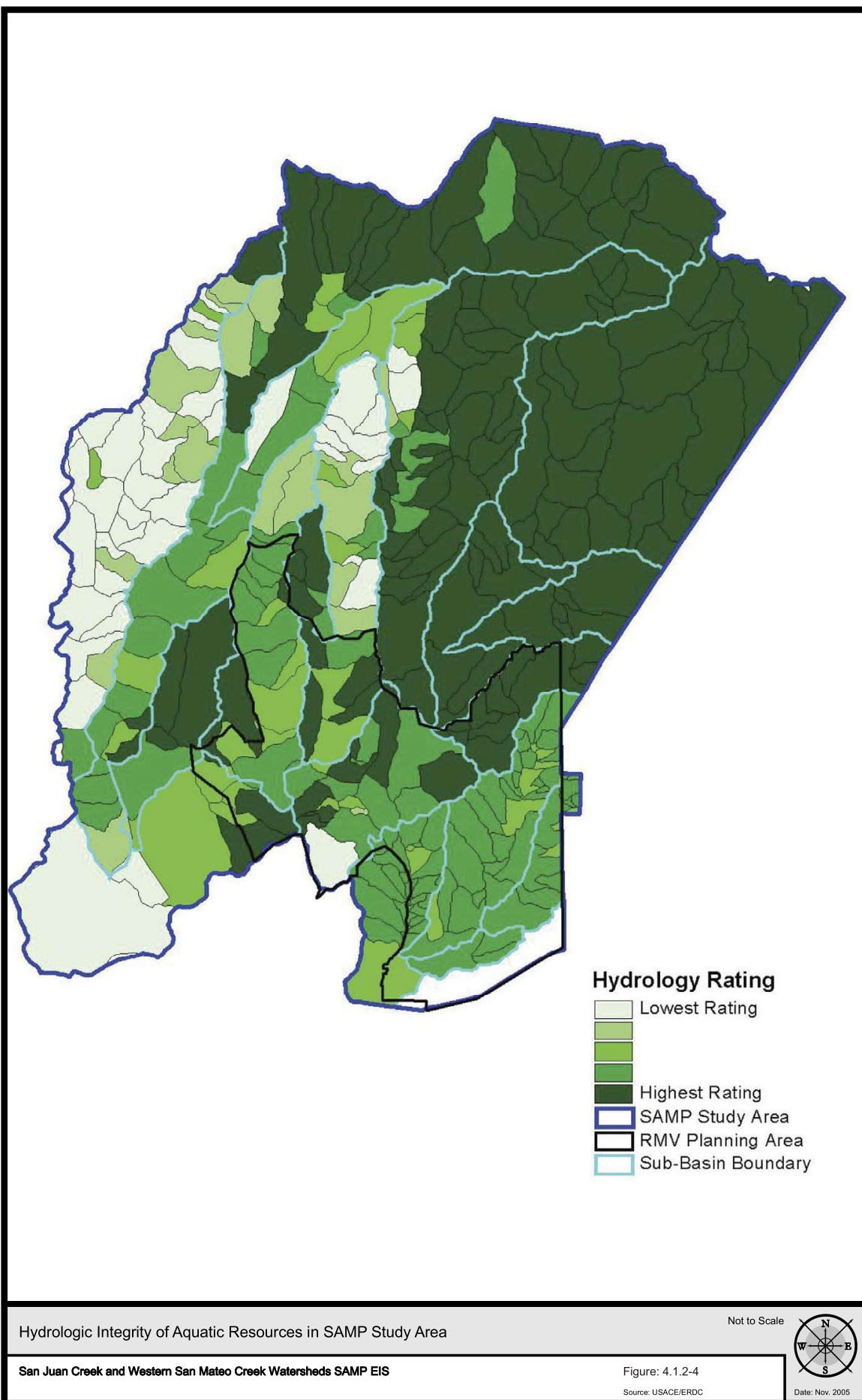


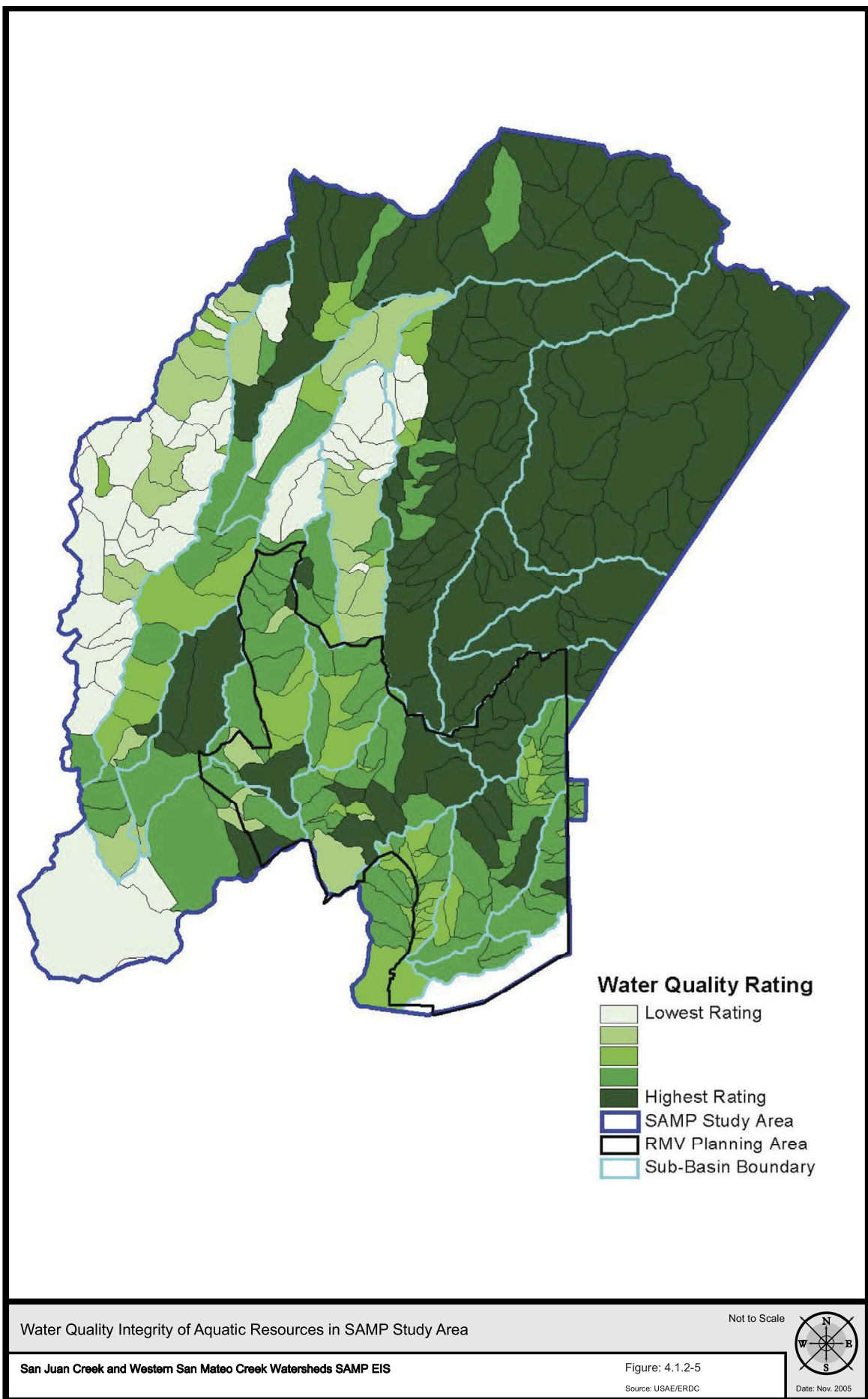
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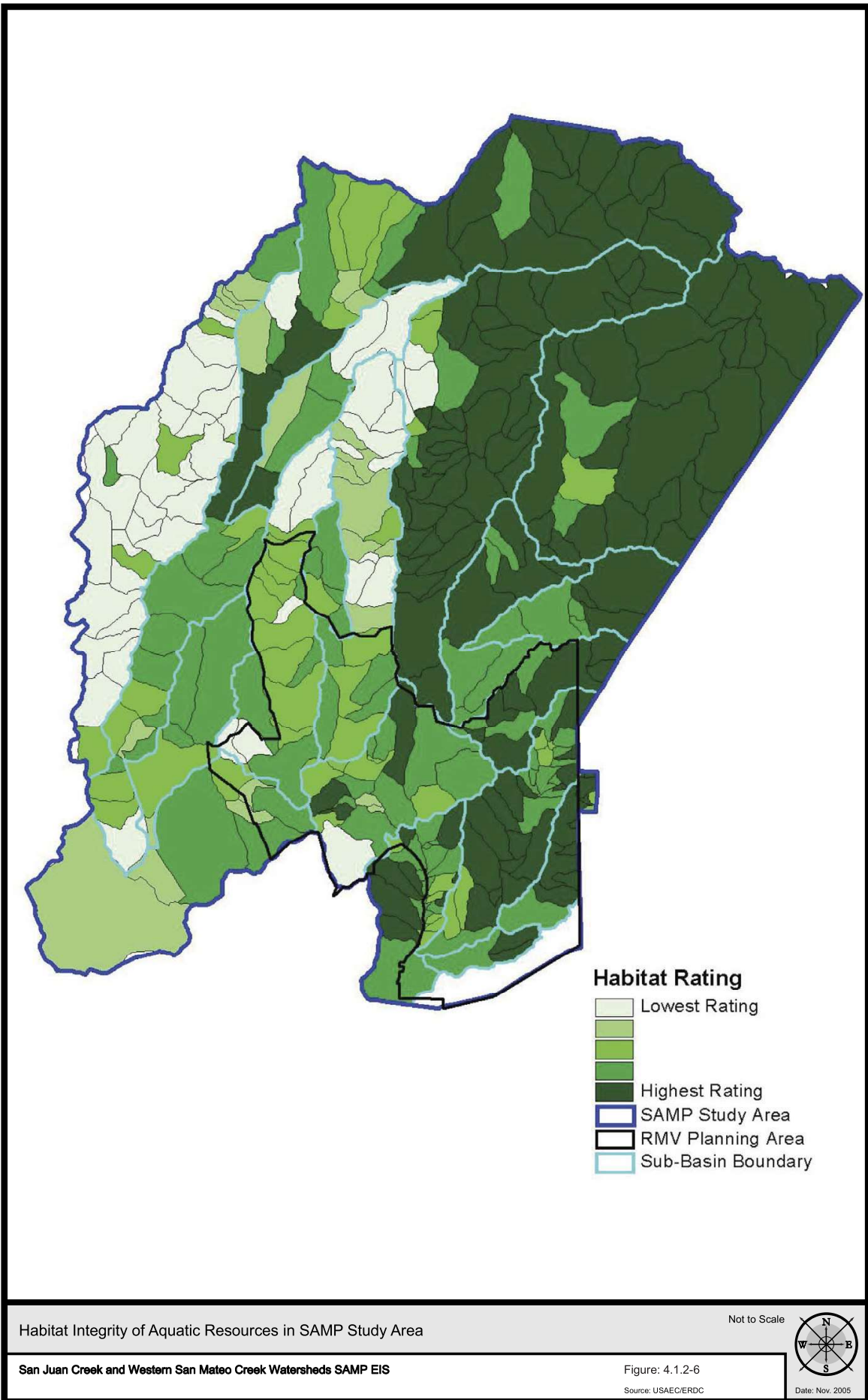
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

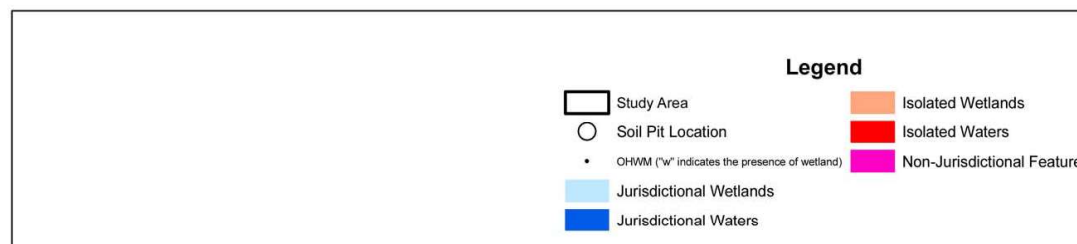
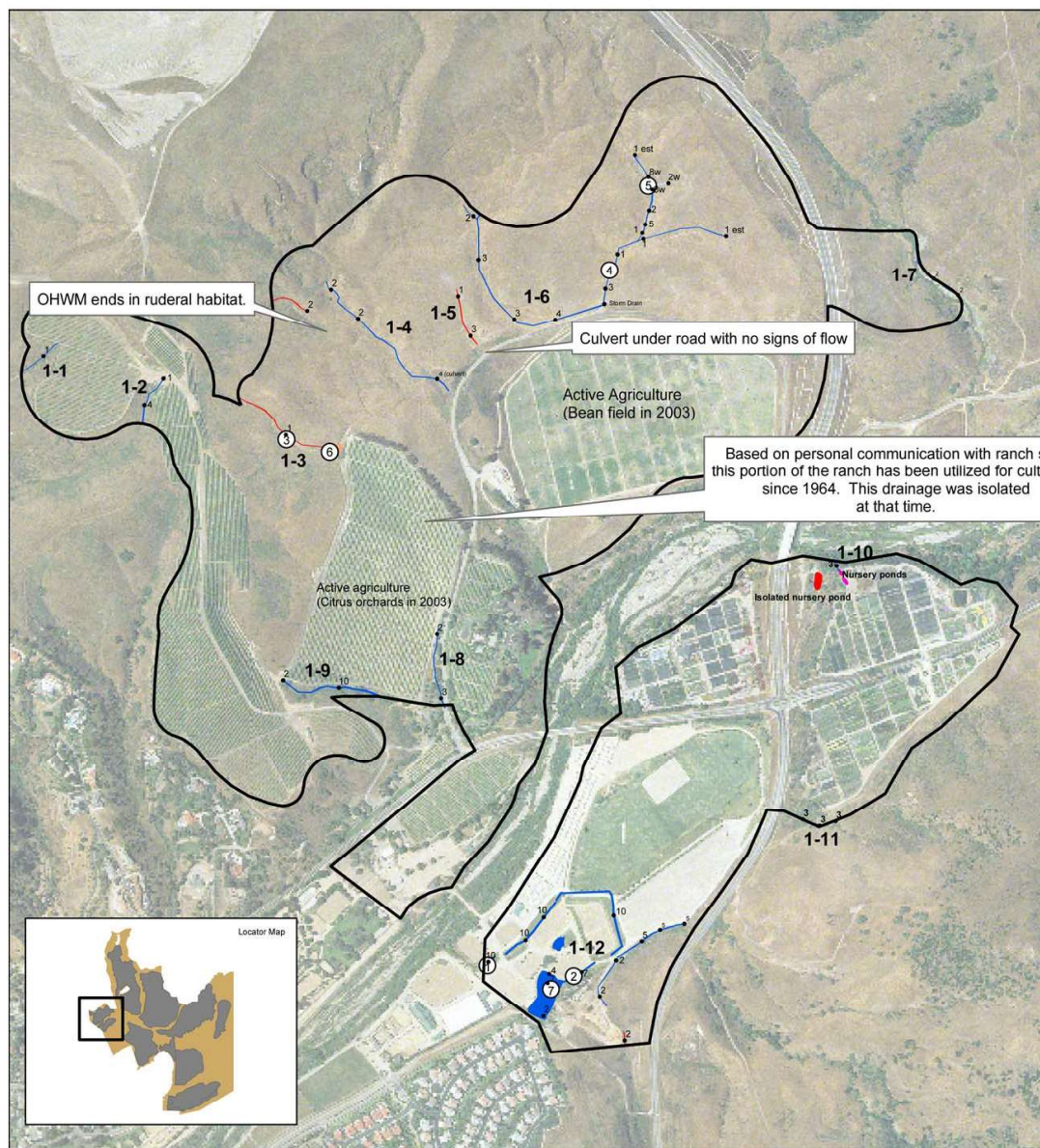
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Source: USACE



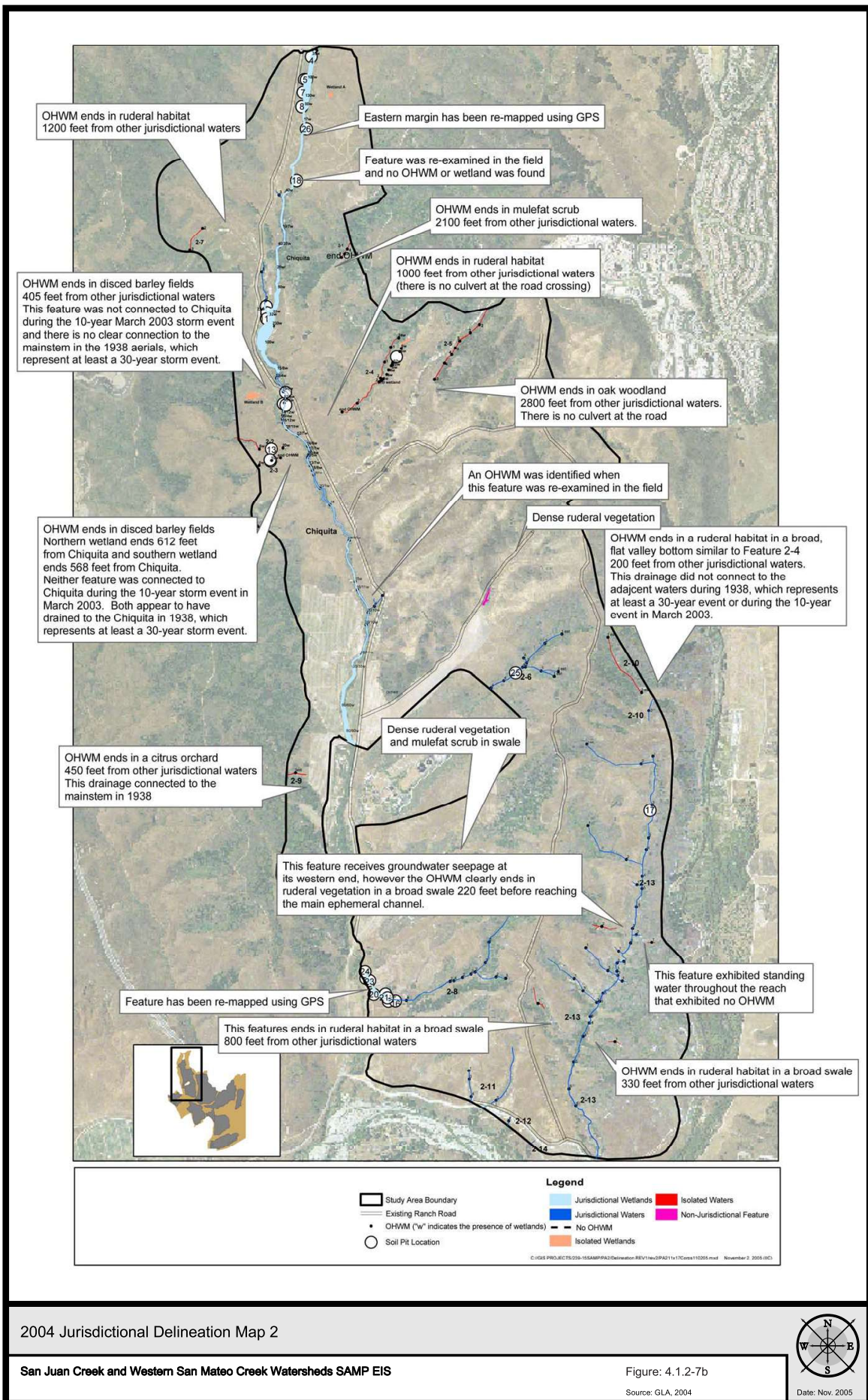


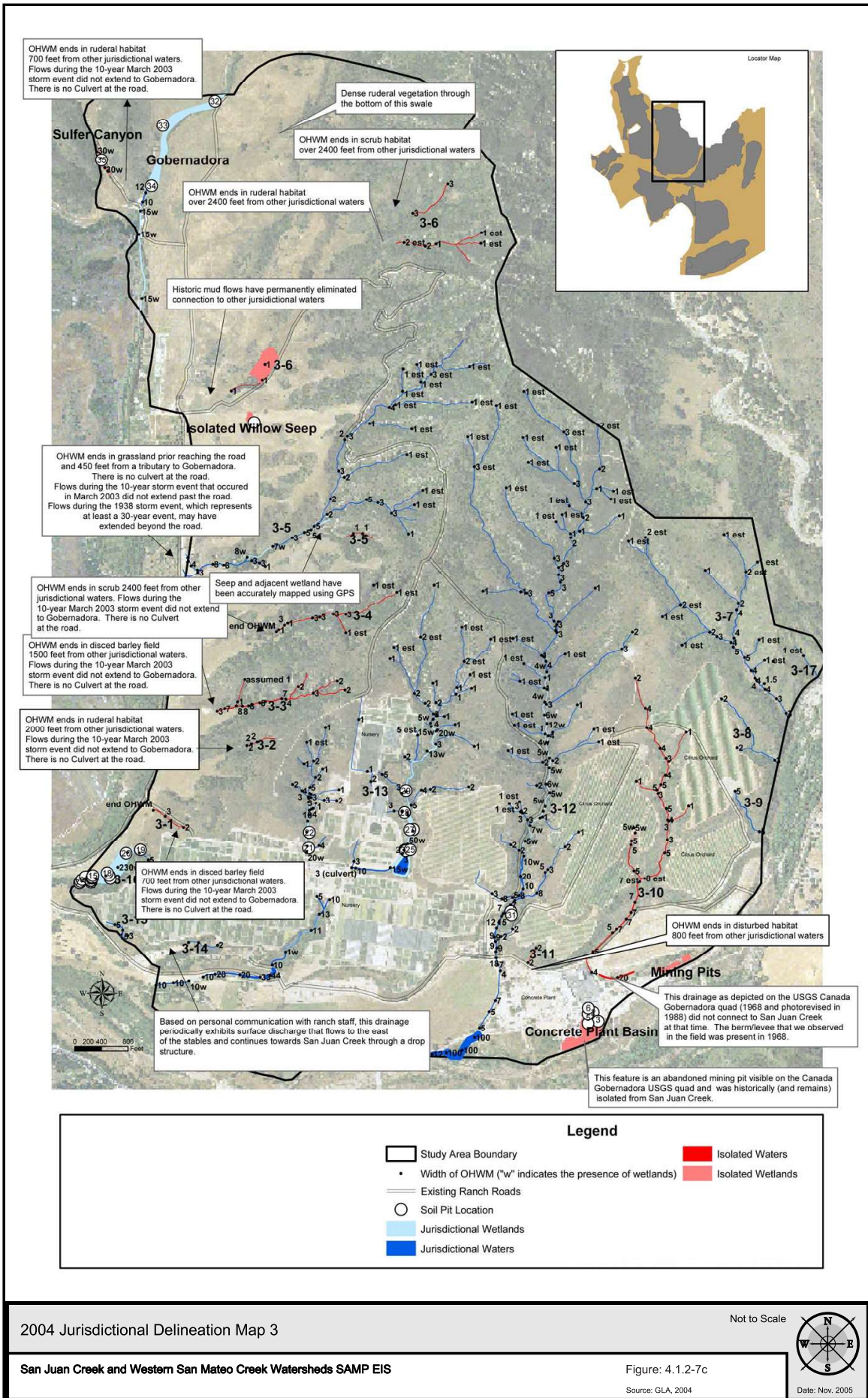


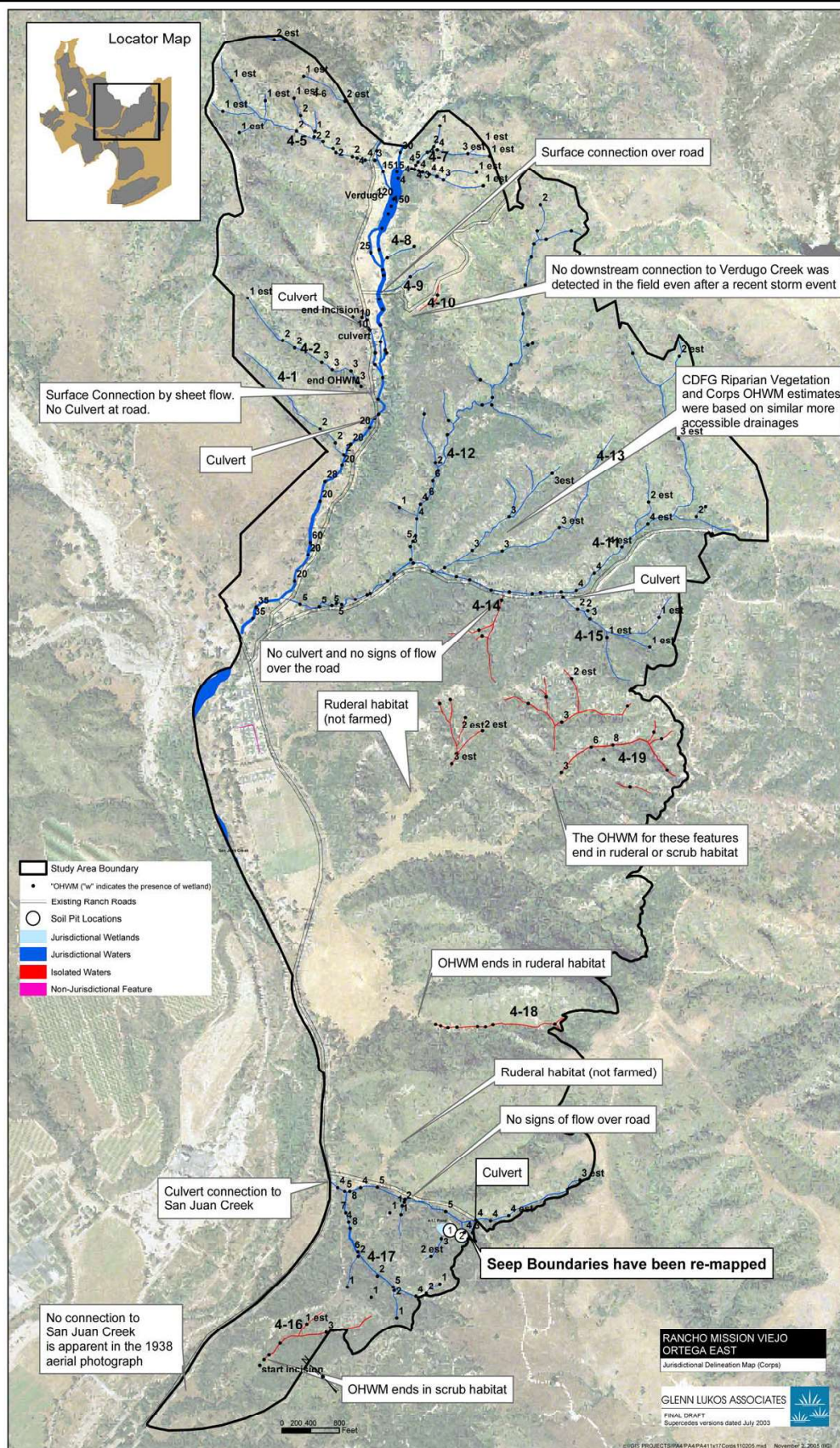


2004 Jurisdictional Delineation Map 1

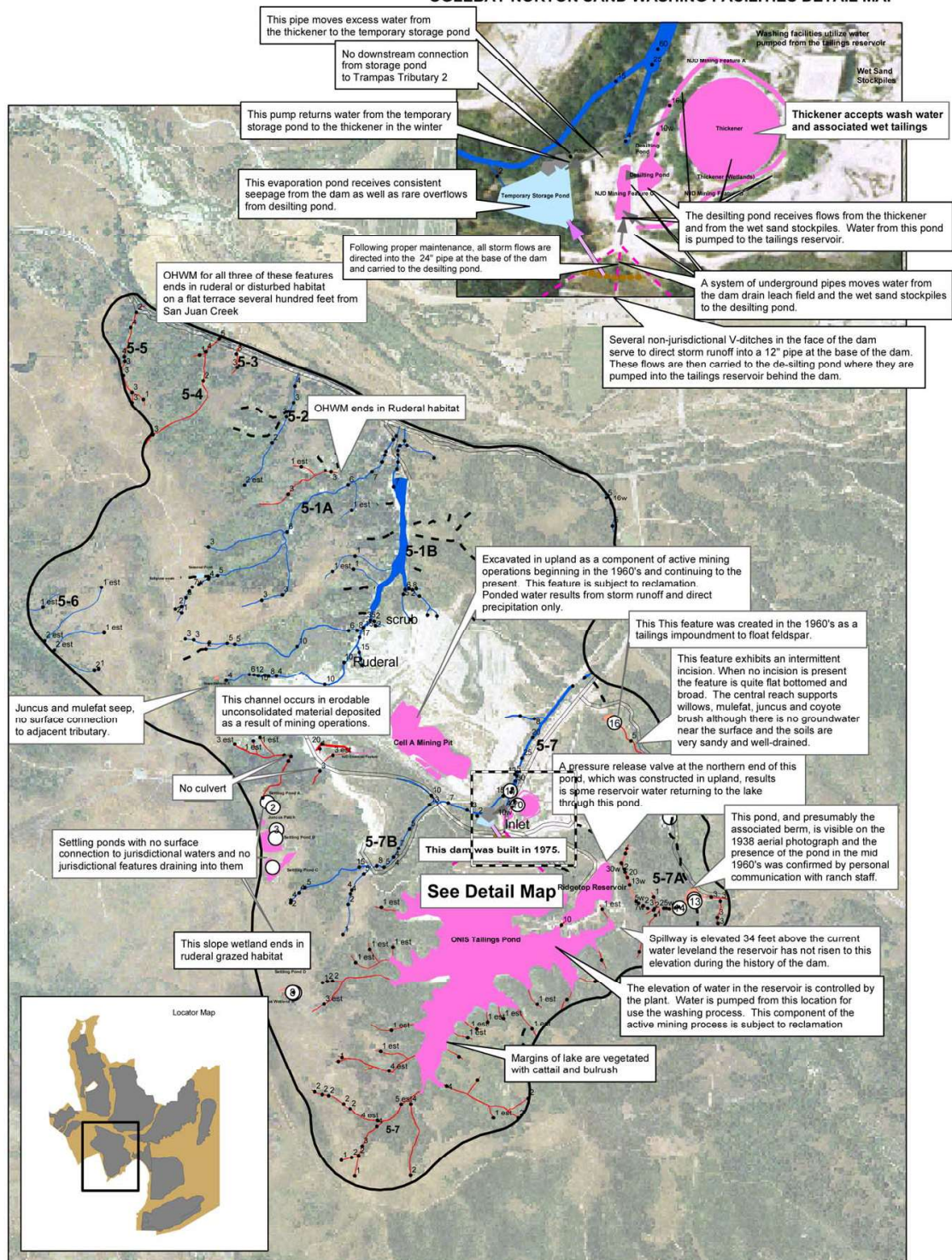


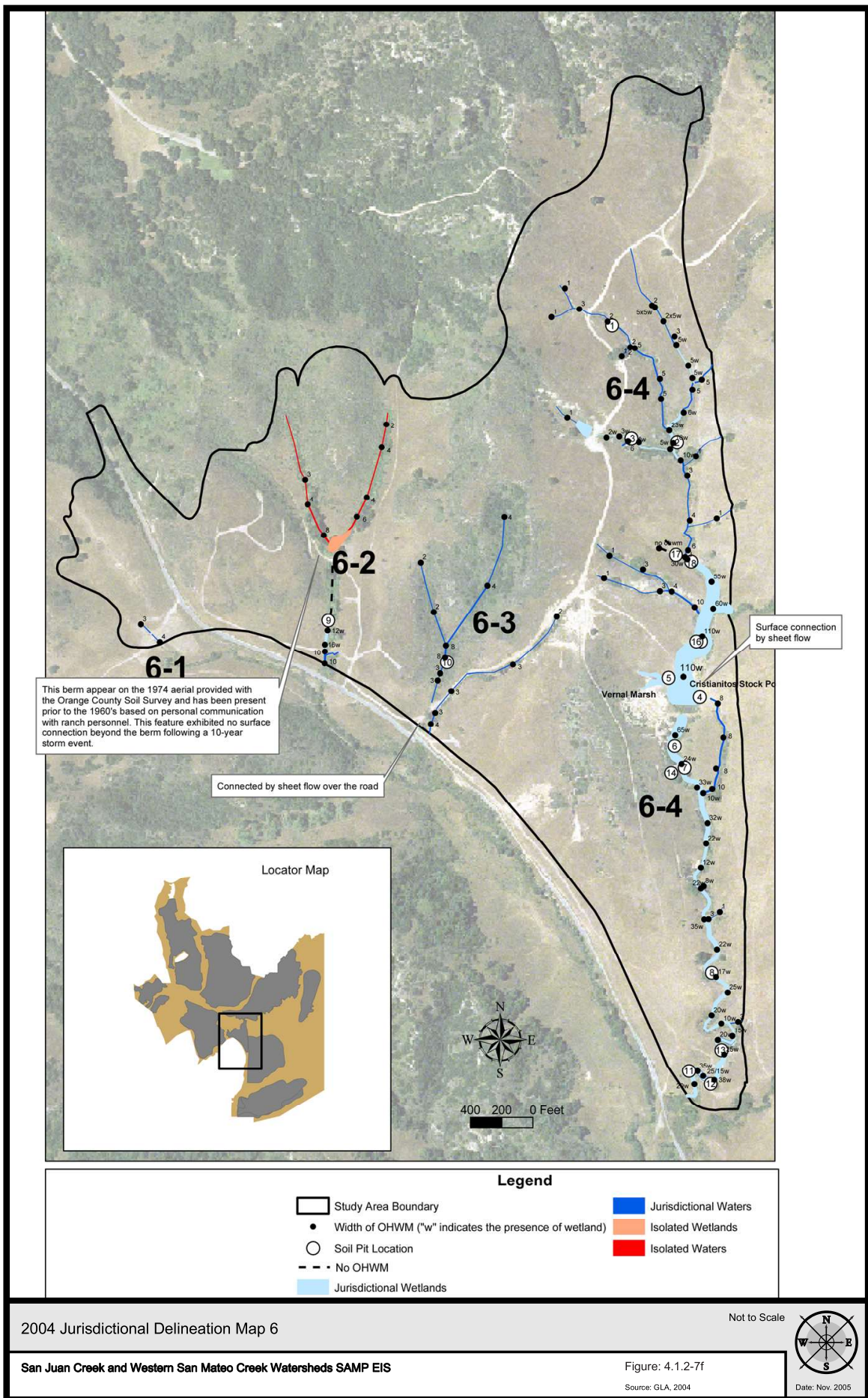


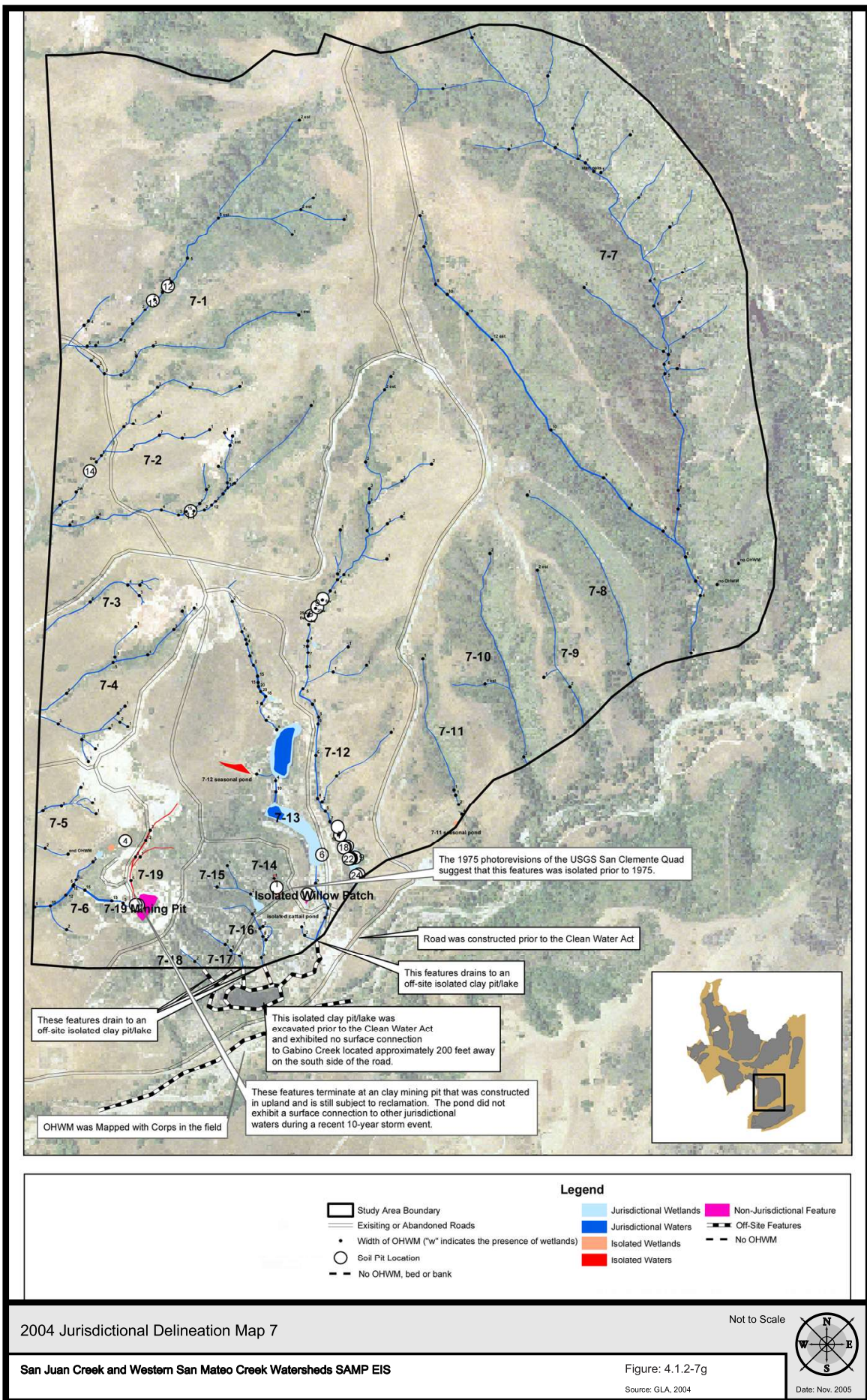


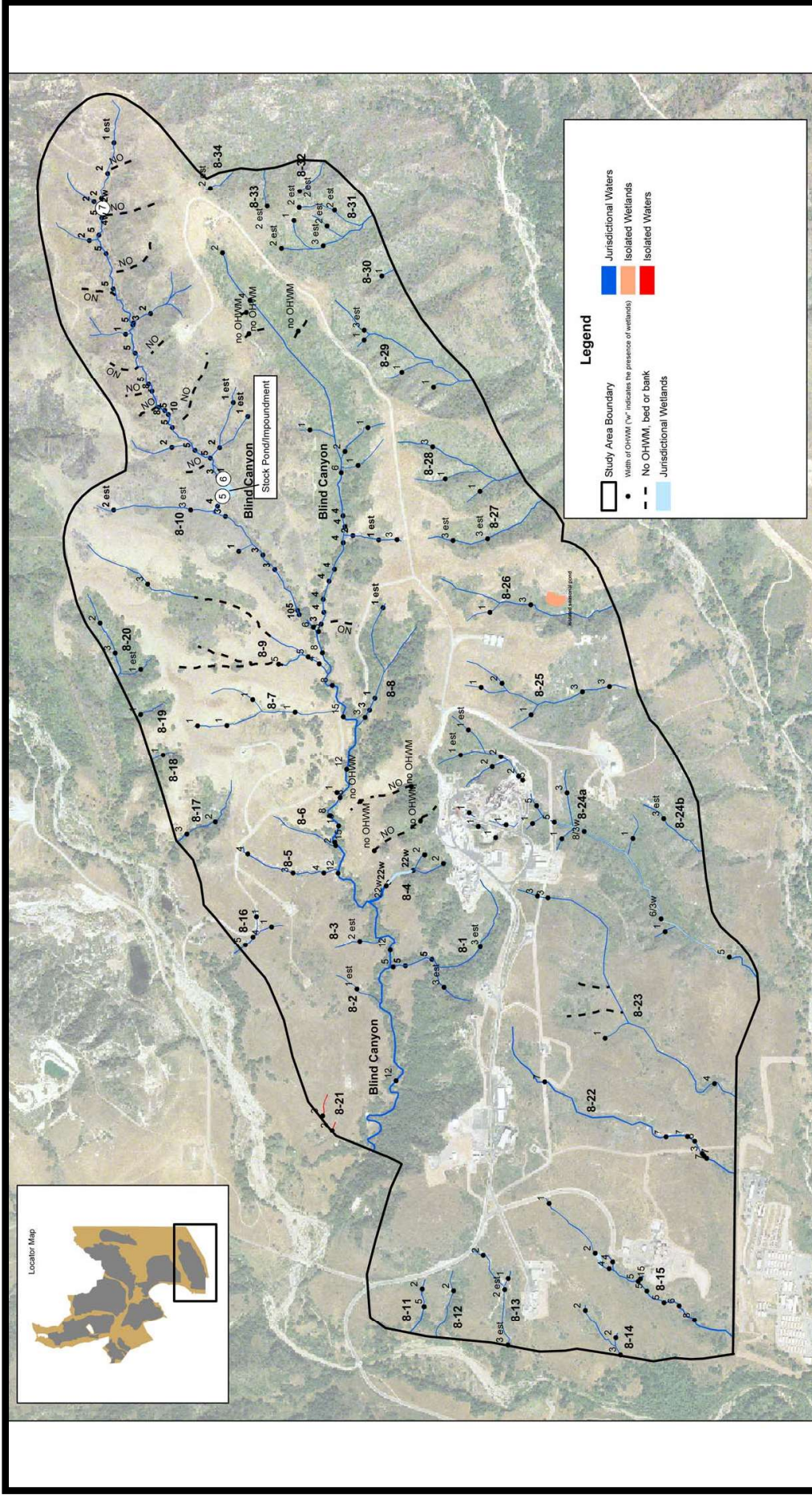


OGLEBAY NORTON SAND WASHING FACILITIES DETAIL MAP









2004 Jurisdictional Delineation Map 8

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

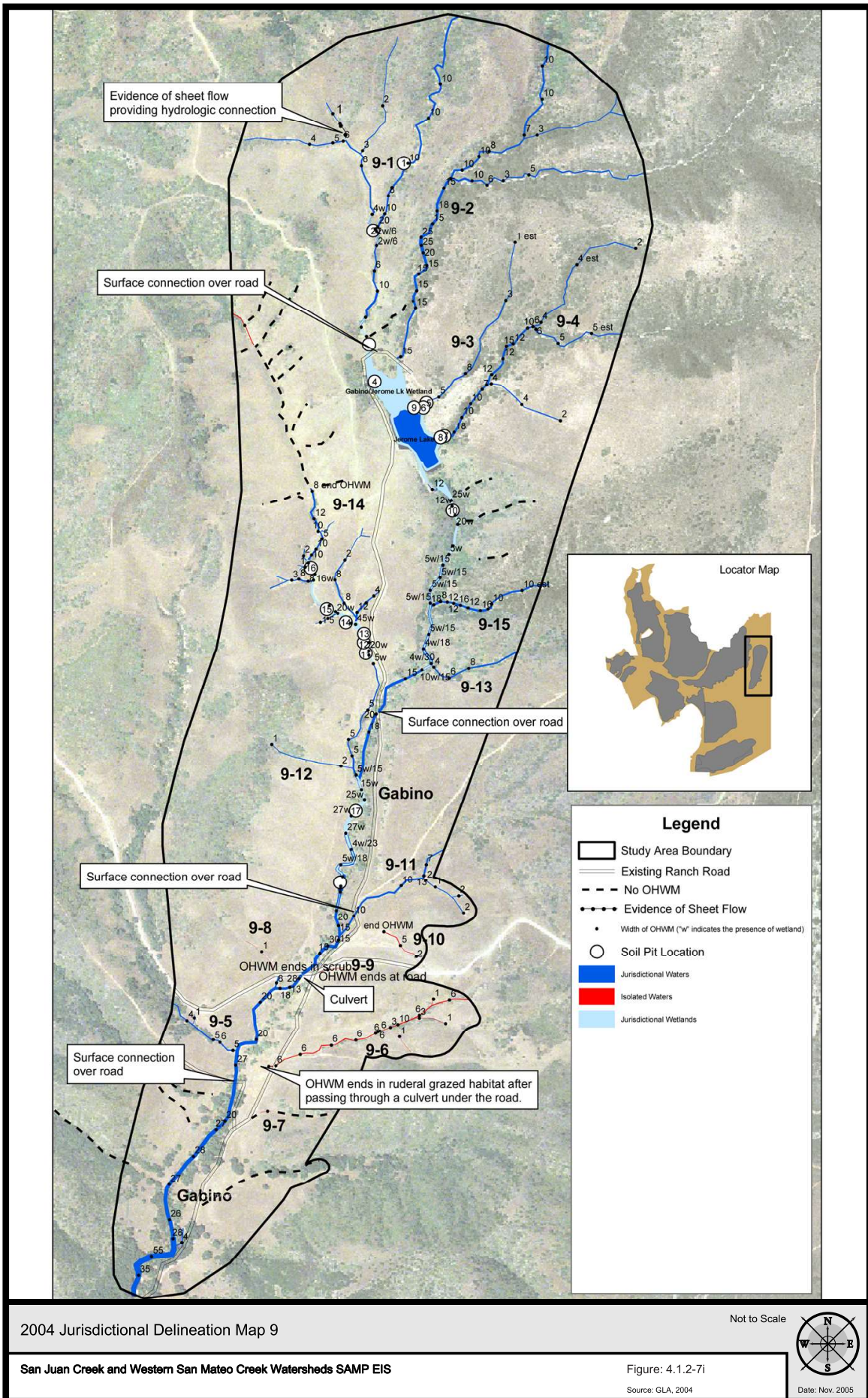
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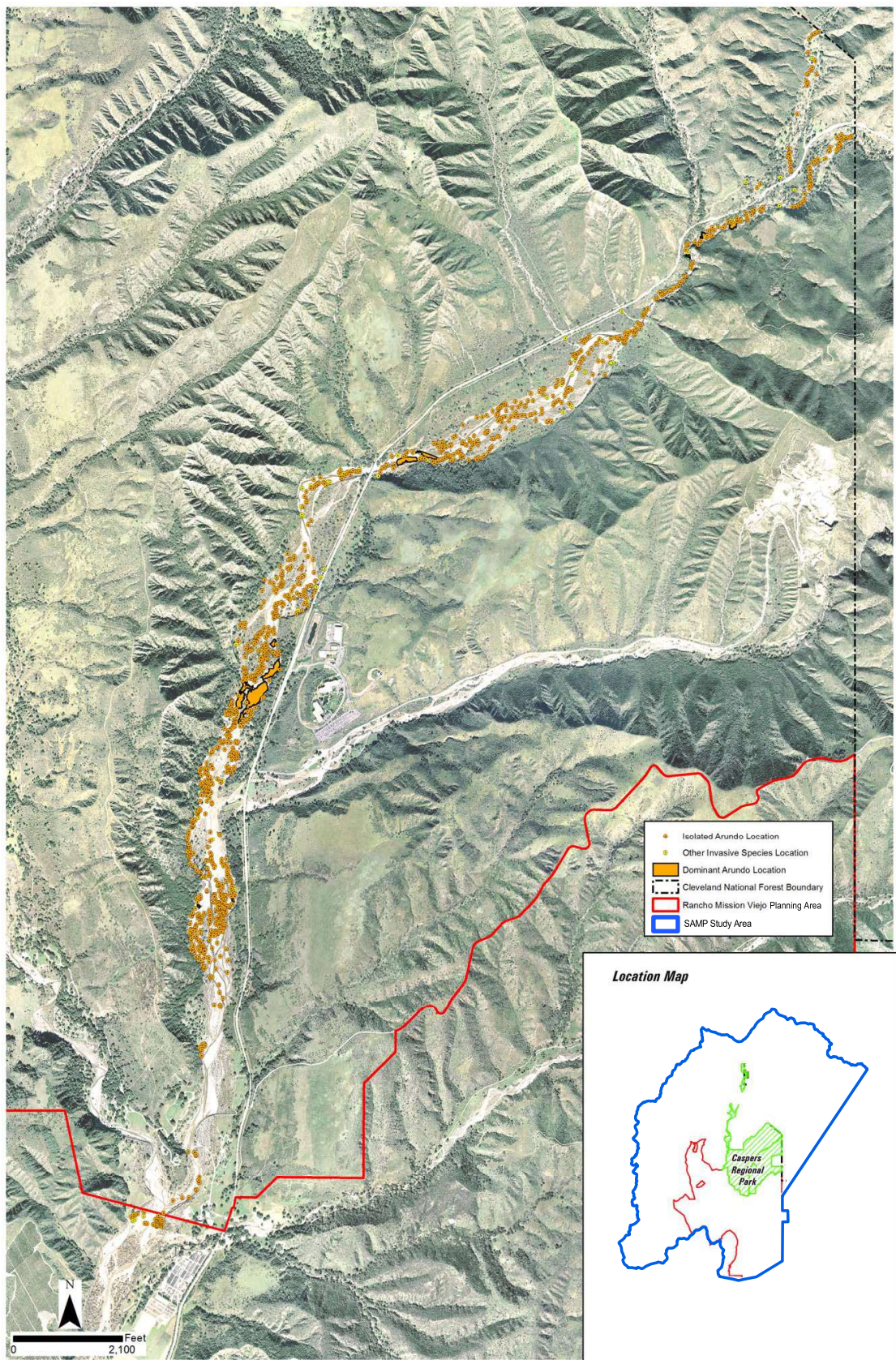
Source: GLA, 2004

Not to Scale



Date: Nov. 2005





Invasive Species in Caspers Regional Park

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

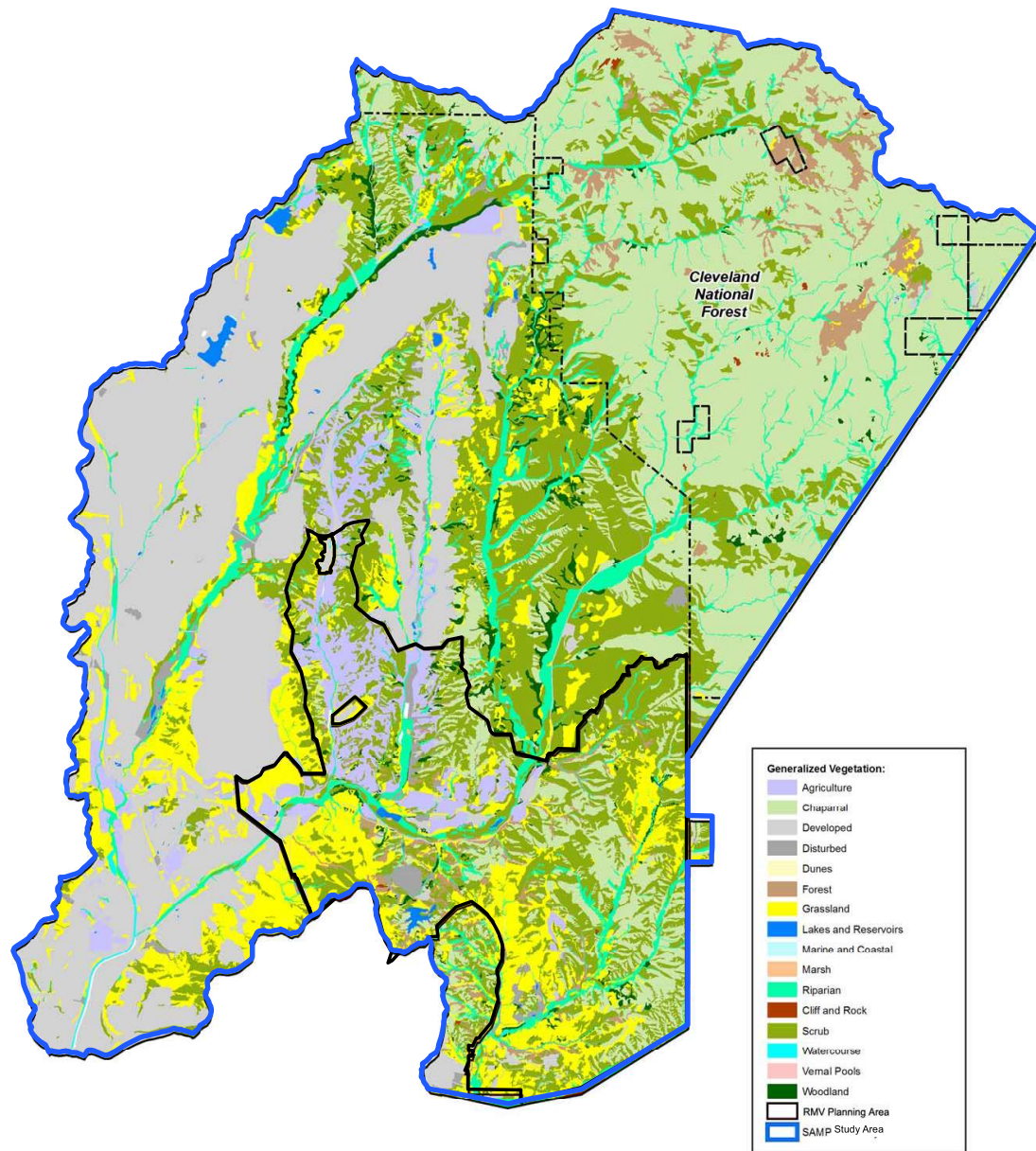
Figure: 4.1.2-8

Source: Dudek

Not to Scale



Date: Nov. 2005



General Vegetation Map

1" = 1.75 miles

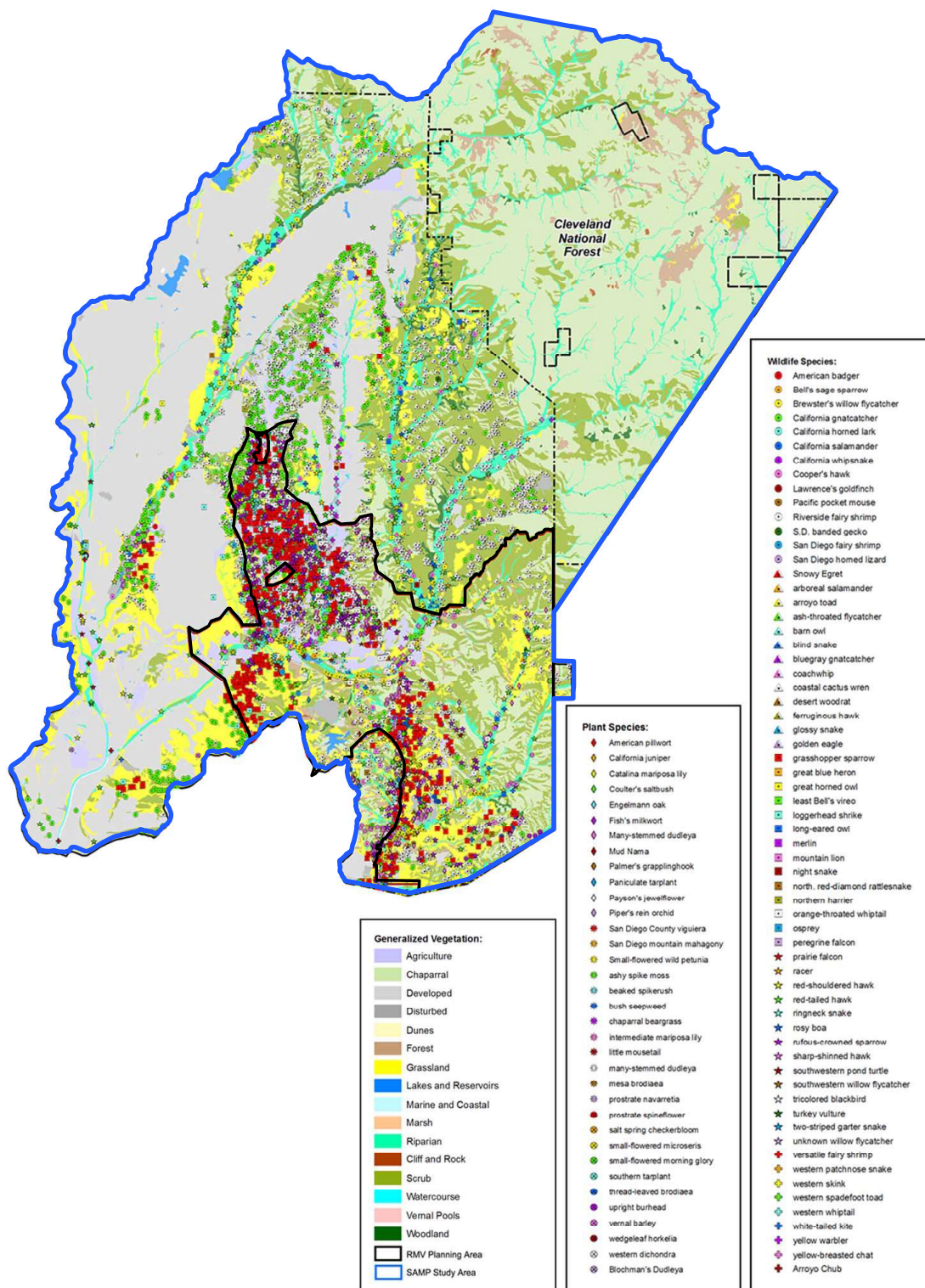


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.3-1

Source: Dudek, 2003

Date: Nov. 2005



Vegetation and Sensitive Species in SAMP Study Area

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

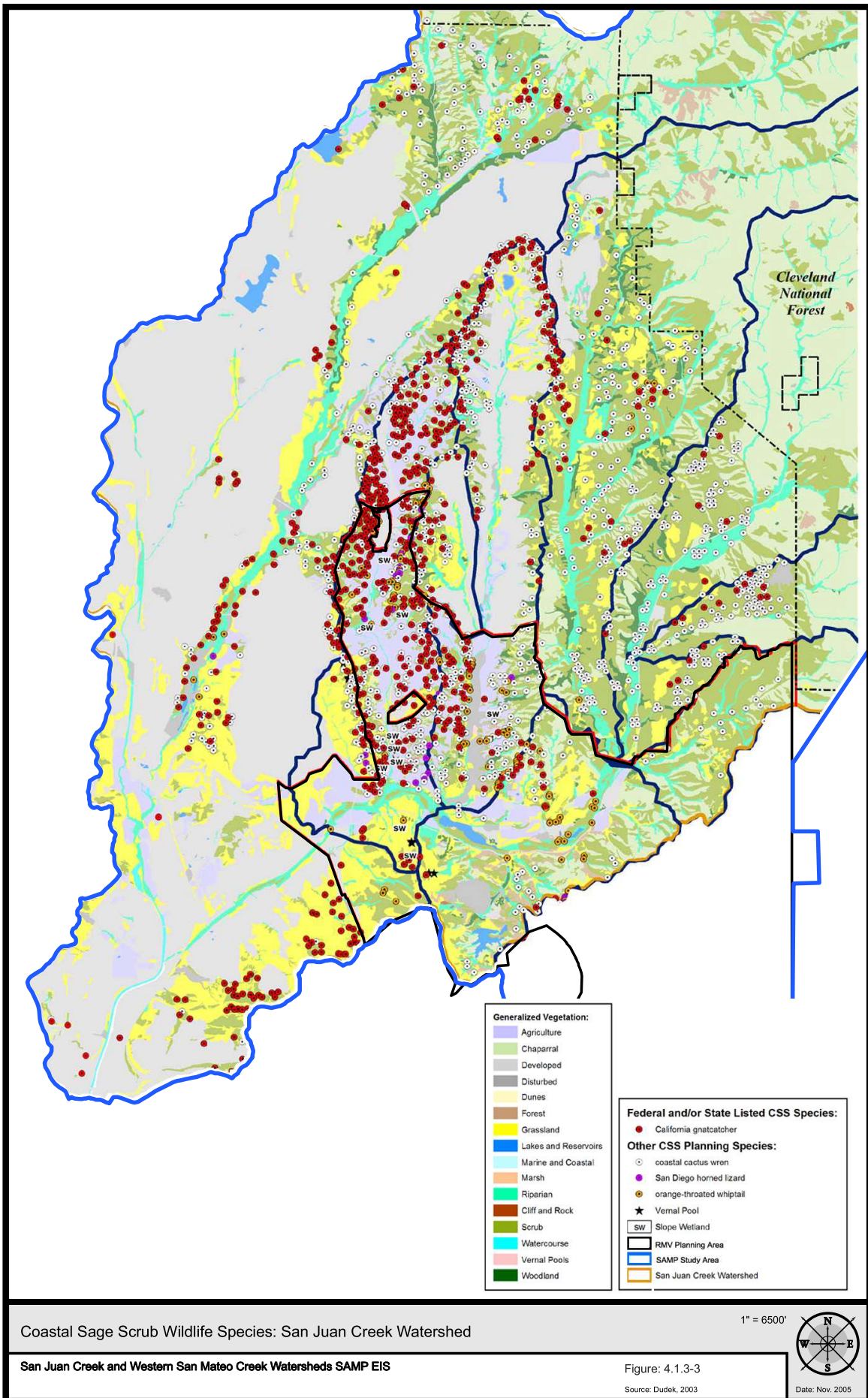
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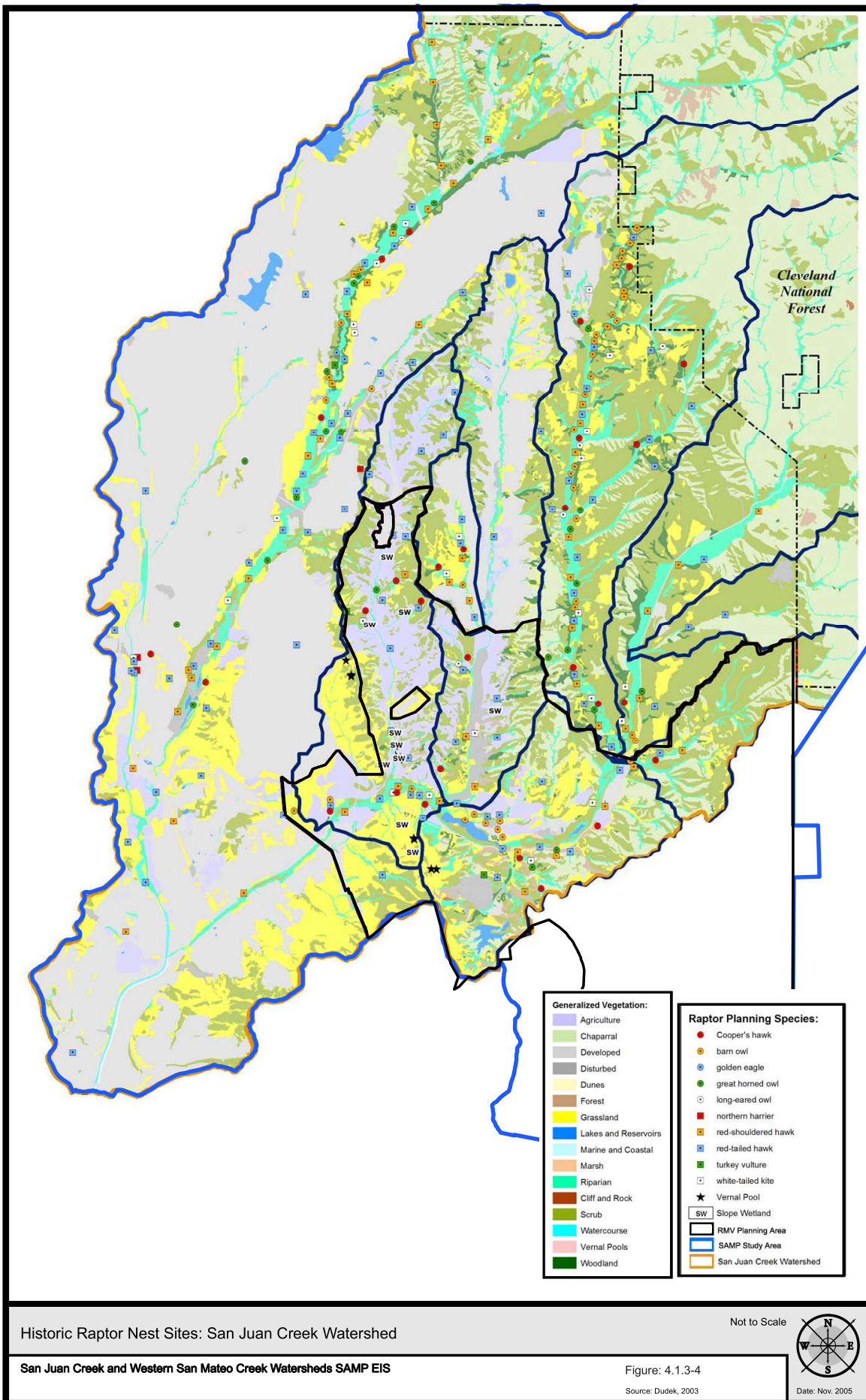
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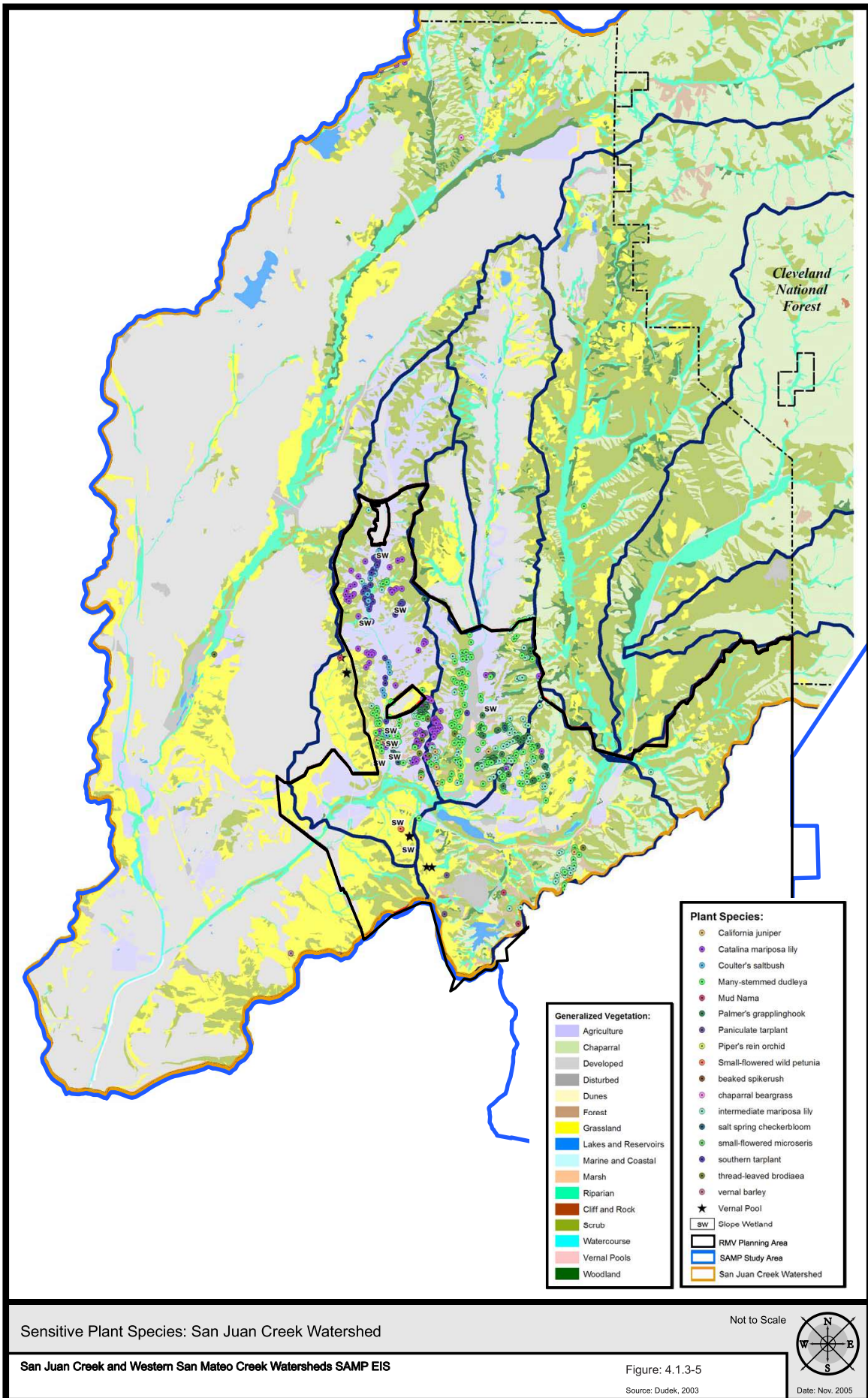
1" = 1.75 mi

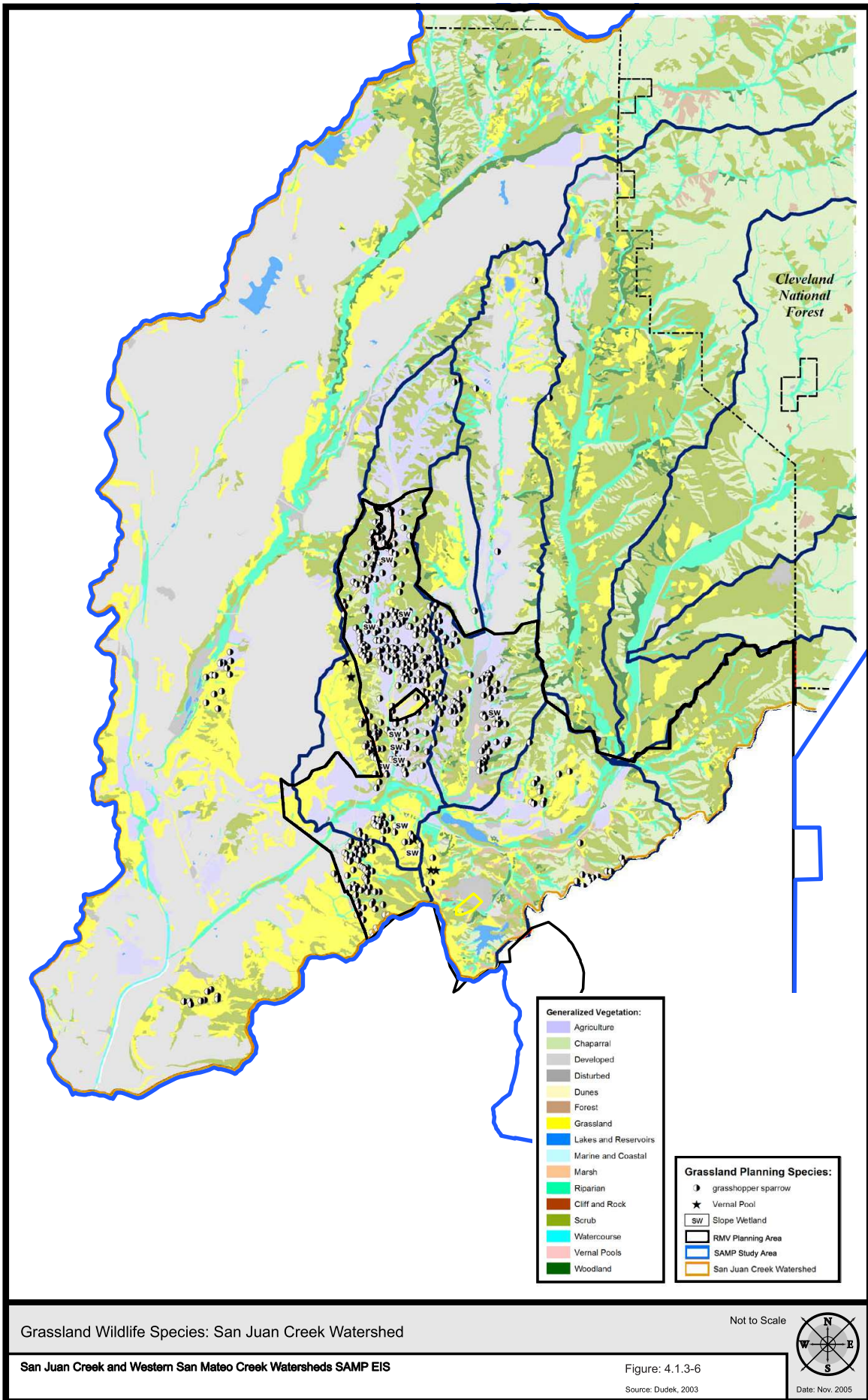


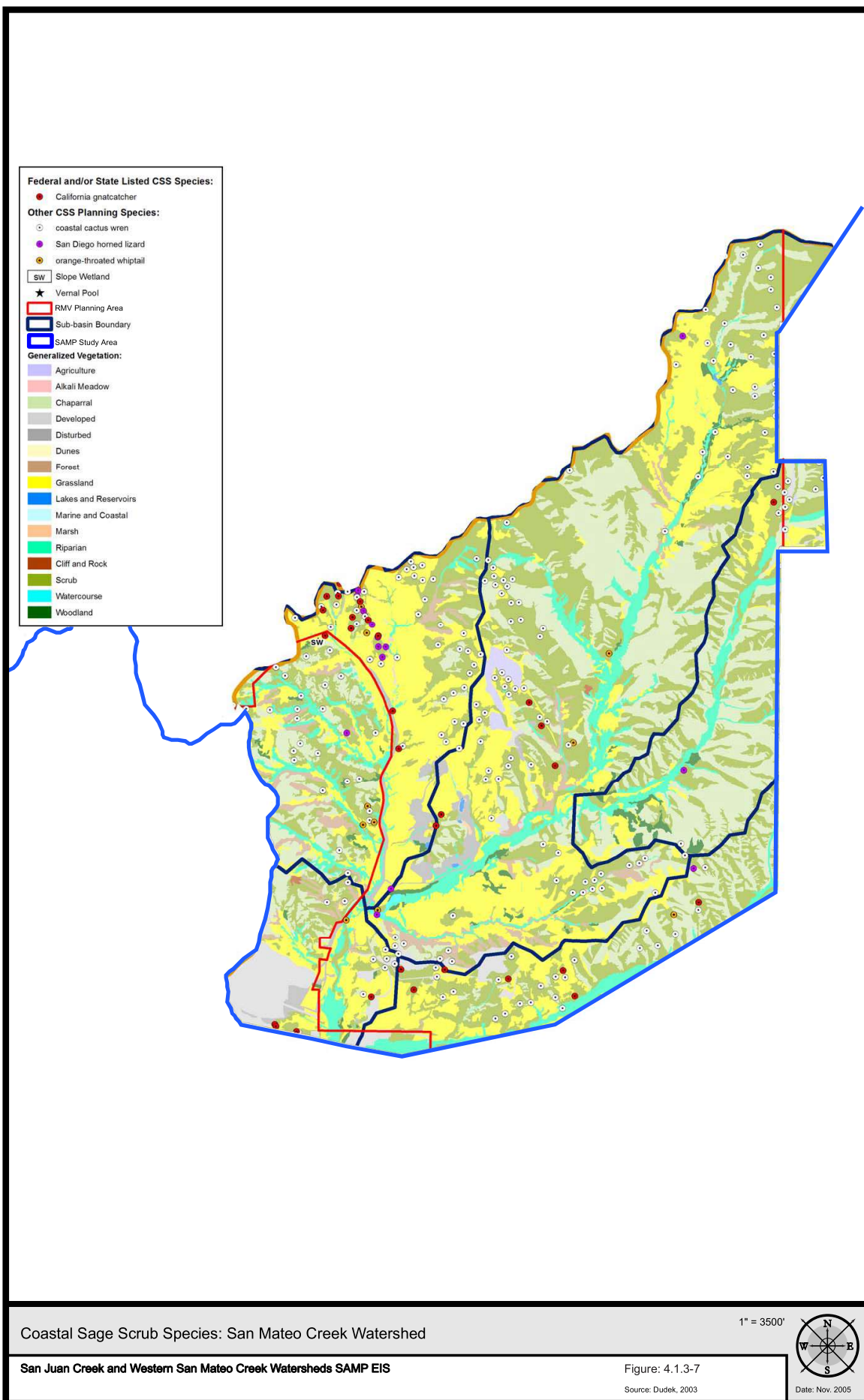
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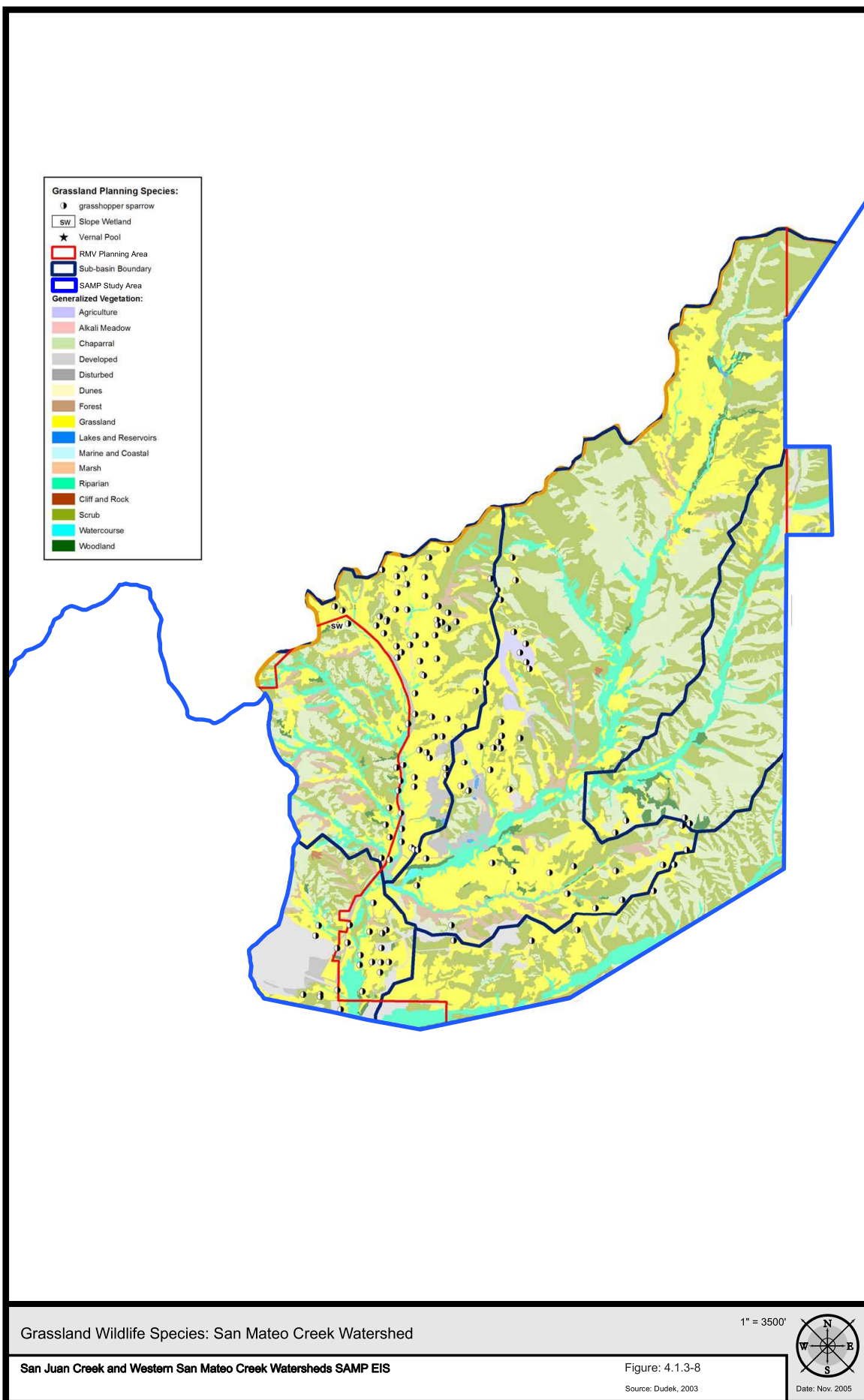




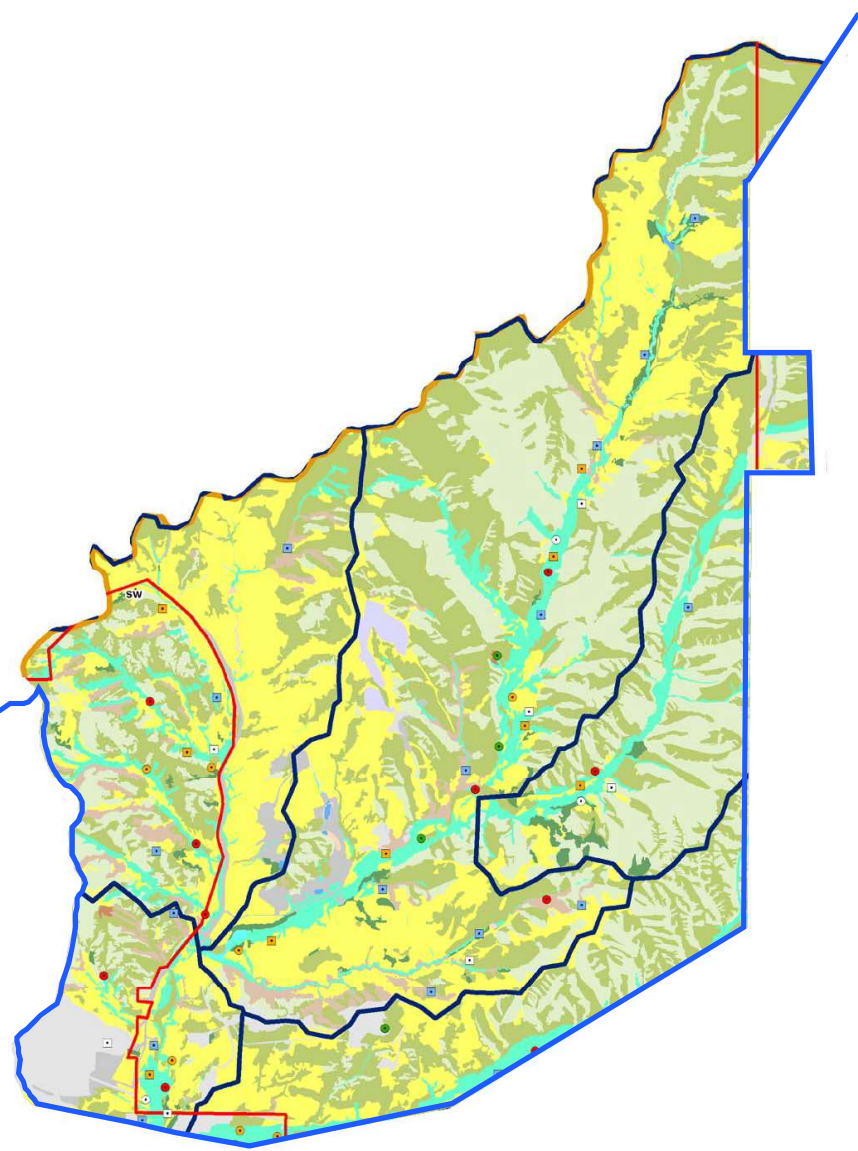








- Raptor Planning Species:**
- Cooper's hawk
 - barn owl
 - golden eagle
 - great horned owl
 - long-eared owl
 - northern harrier
 - red-shouldered hawk
 - red-tailed hawk
 - turkey vulture
 - white-tailed kite
 - SW Slope Wetland
 - ★ Vernal Pool
 - RMV Planning Area
 - Sub-basin Boundary
 - SAMP Study Area
- Generalized Vegetation:**
- Agriculture
 - Alkali Meadow
 - Chaparral
 - Developed
 - Disturbed
 - Dunes
 - Forest
 - Grassland
 - Lakes and Reservoirs
 - Marine and Coastal
 - Marsh
 - Riparian
 - Cliff and Rock
 - Scrub
 - Watercourse
 - Woodland



Historic Raptor Nest Site: San Mateo Creek Watershed

1" = 3500'



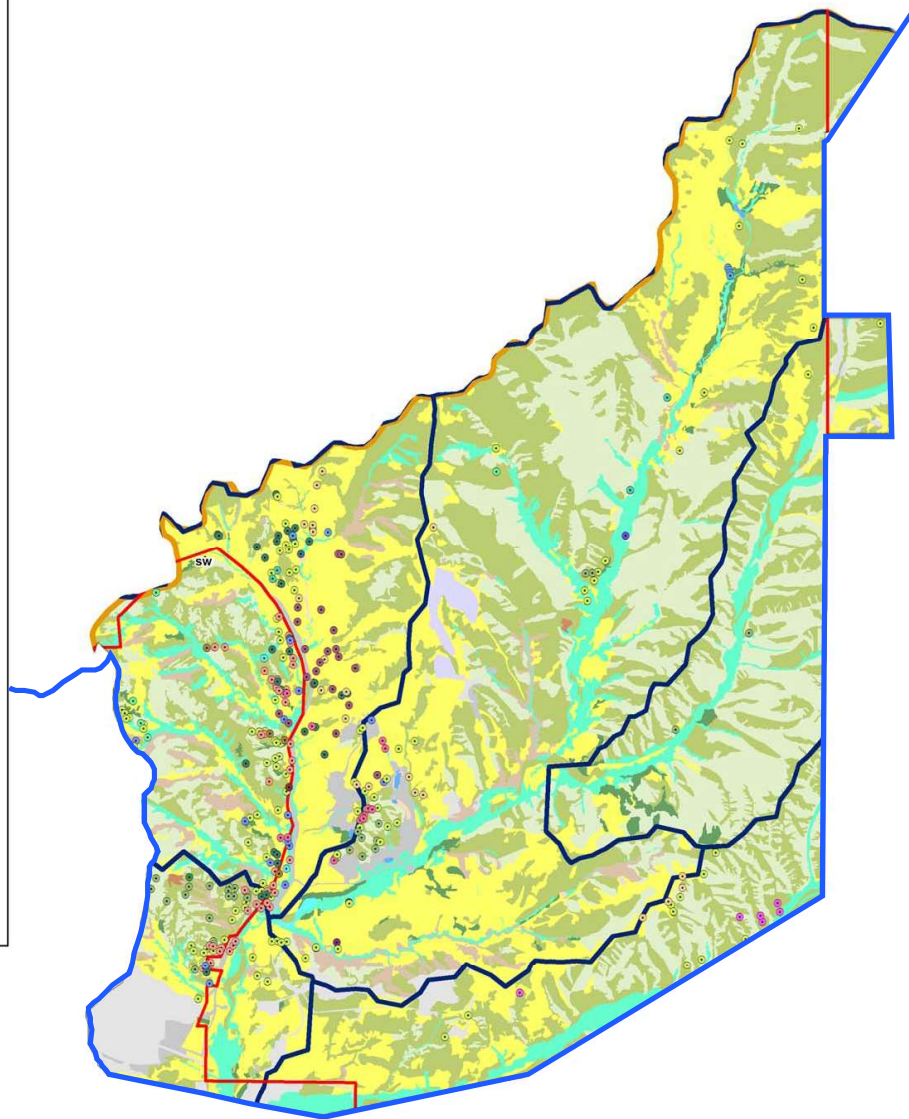
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.3-9

Source: Dudek, 2003

Date: Nov. 2005

- Plant Species:**
- California juniper
 - Catalina mariposa lily
 - Coulter's saltbush
 - Engelmann oak
 - Fish's milkwort
 - Many-stemmed dudleya
 - Palmer's grapplehook
 - Payson's jewelflower
 - San Diego County viguiera
 - San Diego mountain mahogany
 - ashy spike moss
 - chaparral beargrass
 - intermediate mariposa lily
 - many-stemmed dudleya
 - mesa brodiaea
 - prostrate spineflower
 - small-flowered microseris
 - small-flowered morning glory
 - thread-leaved brodiaea
 - upright burhead
 - vernal barley
 - wedgeleaf horkelia
 - western dichondra
 - ★ Vernal Pool
- Generalized Vegetation:**
- Agriculture
 - Alkali Meadow
 - Chaparral
 - Developed
 - Disturbed
 - Dunes
 - Forest
 - Grassland
 - Lakes and Reservoirs
 - Marine and Coastal
 - Marsh
 - Riparian
 - Cliff and Rock
 - Scrub
 - Watercourse
 - Woodland
- Legend:**
- SW Slope Wetland
 - RMV Planning Area
 - Sub-basin Boundary
 - SAMP Study Area



Sensitive Plant Species: San Mateo Creek Watershed

1" = 3500'

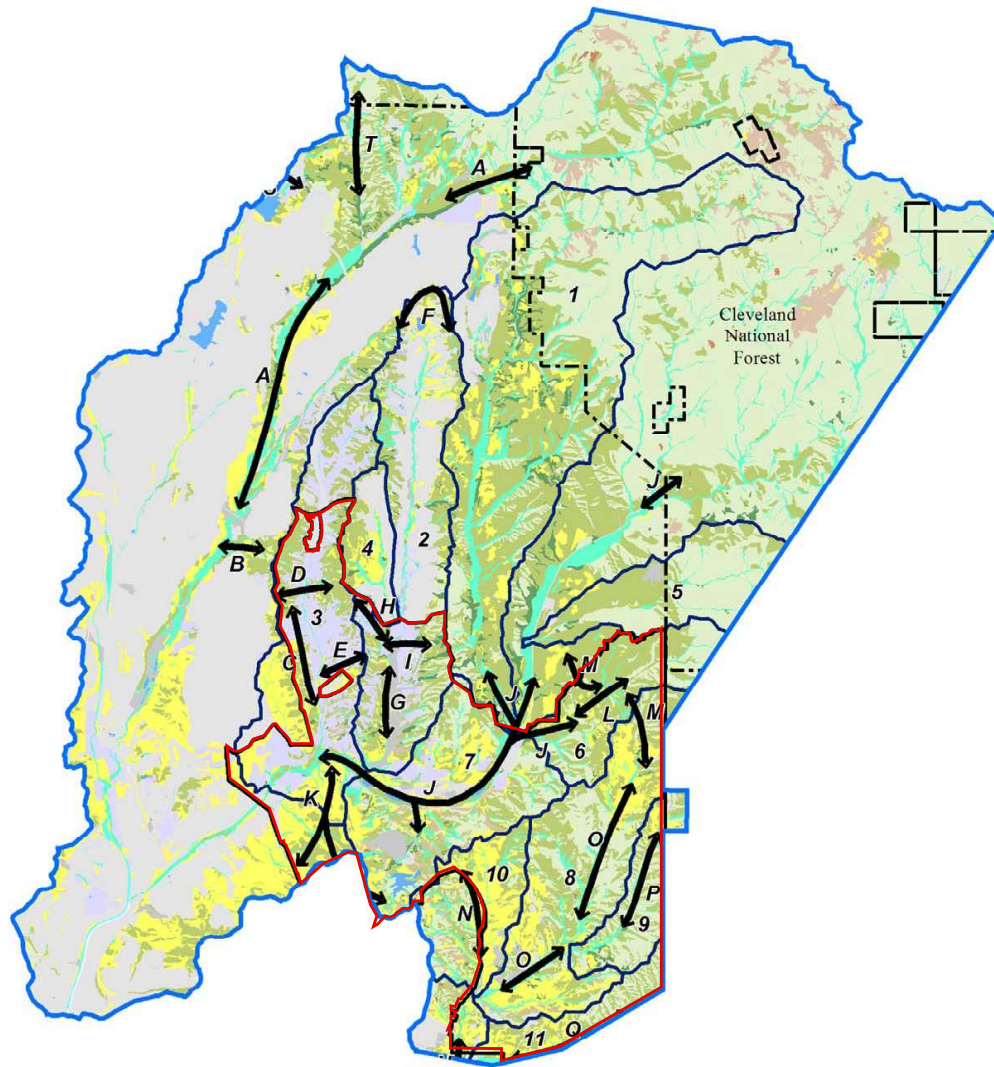


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.3-10

Source: Dudek, 2003

Date: Nov. 2005



SAMP Study Area
 RMV Planning Area

Sub-basins:

- 1 - Bell Canyon
- 2 - Canada Gobernadora
- 3 - Canada Chiquita and Narrow Canyon
- 4 - Wagon Wheel Canyon
- 5 - Lucas Canyon
- 6 - Verdugo Canyon
- 7 - Central San Juan and Trampas Canyon
- 8 - Gabino and Blind Canyons
- 9 - La Paz Canyon
- 10 - Cristianitos Canyon (u/s of Gabino Canyon)
- 11 - Talega Canyon

Identified Linkage or Corridor (see text for details)

Generalized Vegetation:

- Agriculture
- Chaparral
- Developed
- Disturbed
- Dunes
- Forest
- Grassland
- Lakes and Reservoirs
- Marine and Coastal
- Marsh
- Riparian
- Cliff and Rock
- Scrub
- Watercourse
- Vernal Pools
- Woodland

Cleveland National Forest Boundary

Wildlife Corridors and Habitat Linkages

Not to Scale

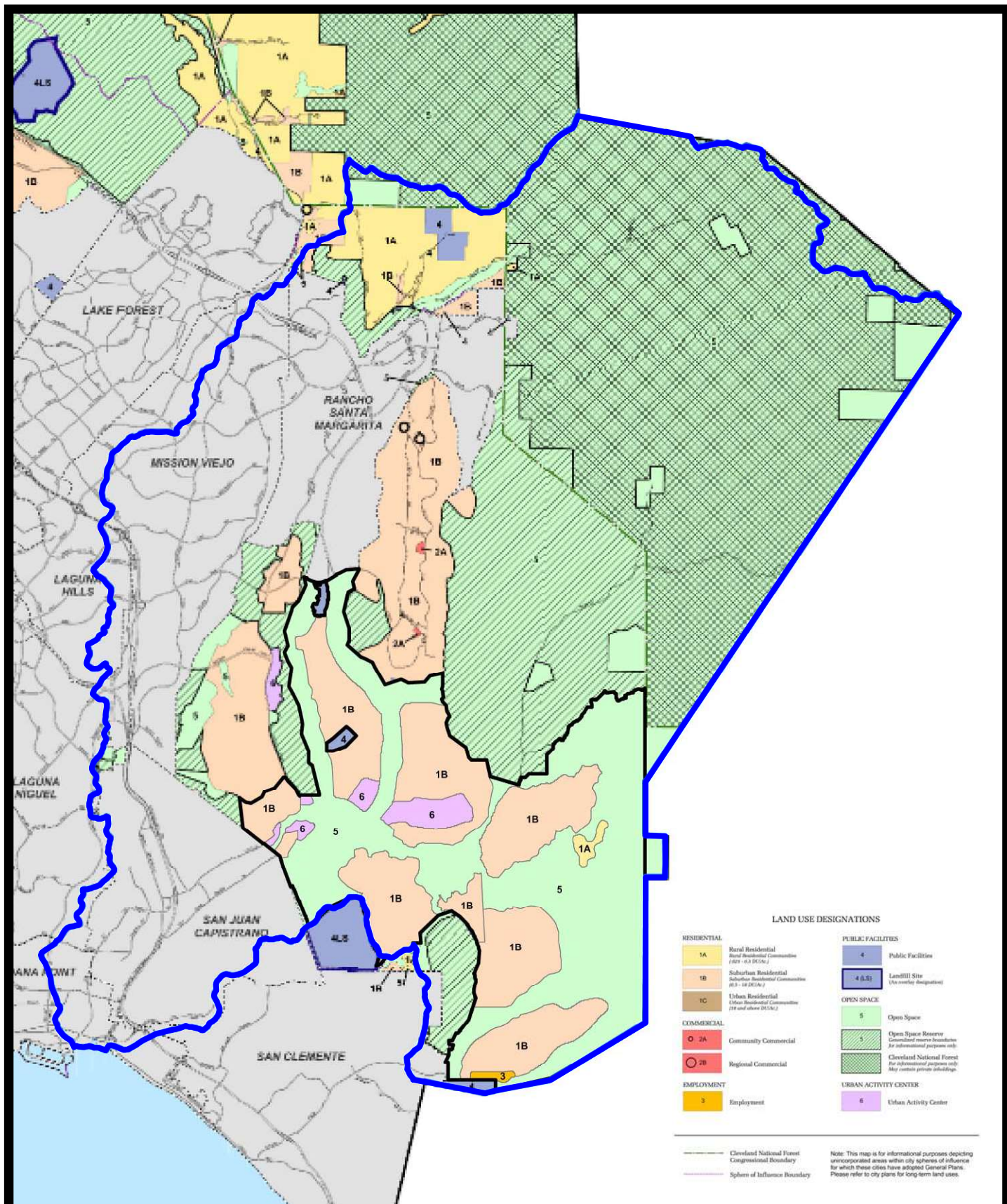


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.3-11

Source: Dudek, 2004

Date: Nov. 2005



Orange County General Plan Land Use Designations

Scale: 1"=13,000'

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.4-1

Source: County of Orange



Date: Nov. 2005

Inside SAMP Study Area



City of Dana Point General Plan Land Use Designations

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

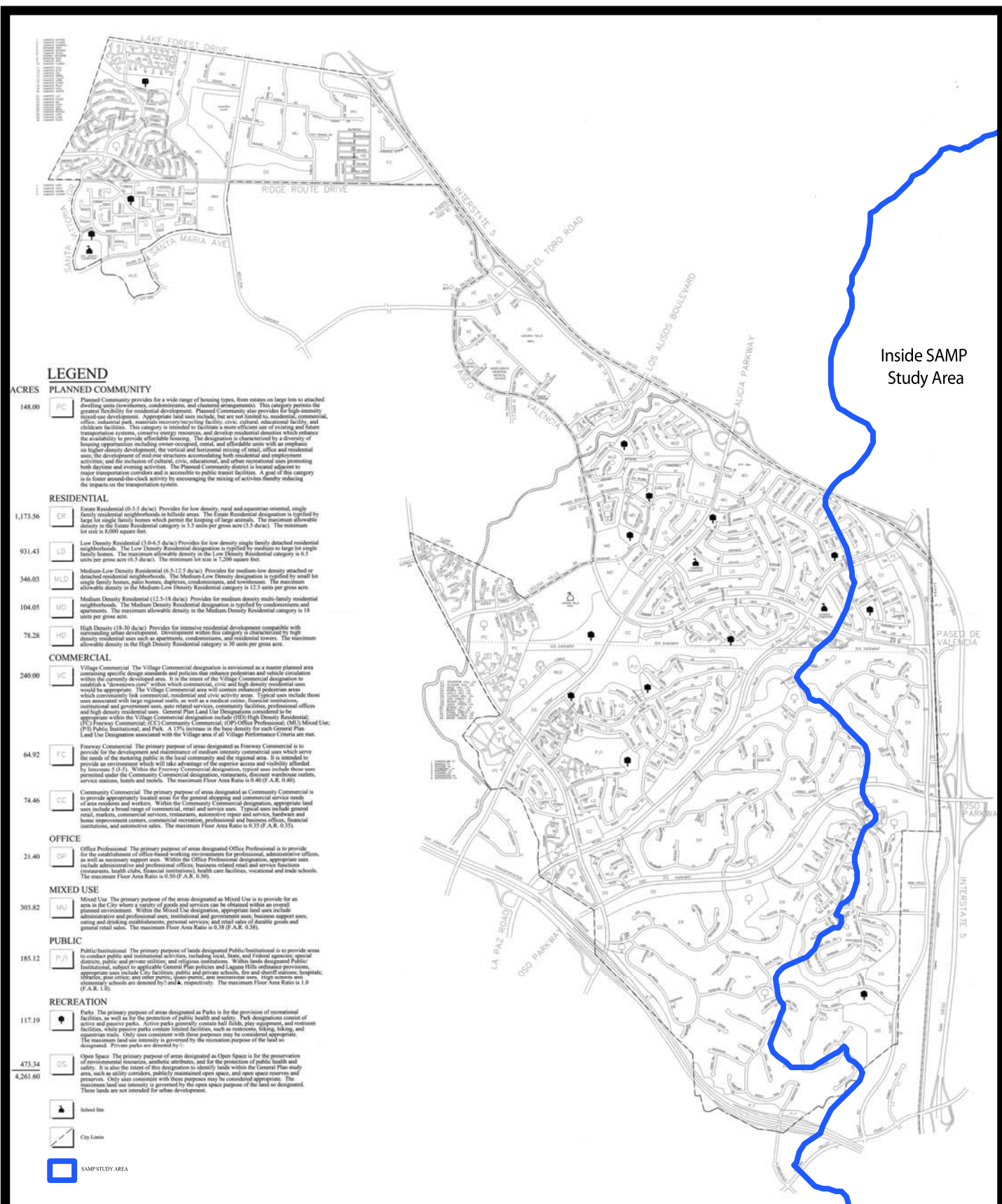
Figure: 4.1.4-2

Source: City of Dana Point

Not to Scale



Date: Nov. 2005



City of Laguna Hills General Plan Land Use Designations

Not to Scale

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

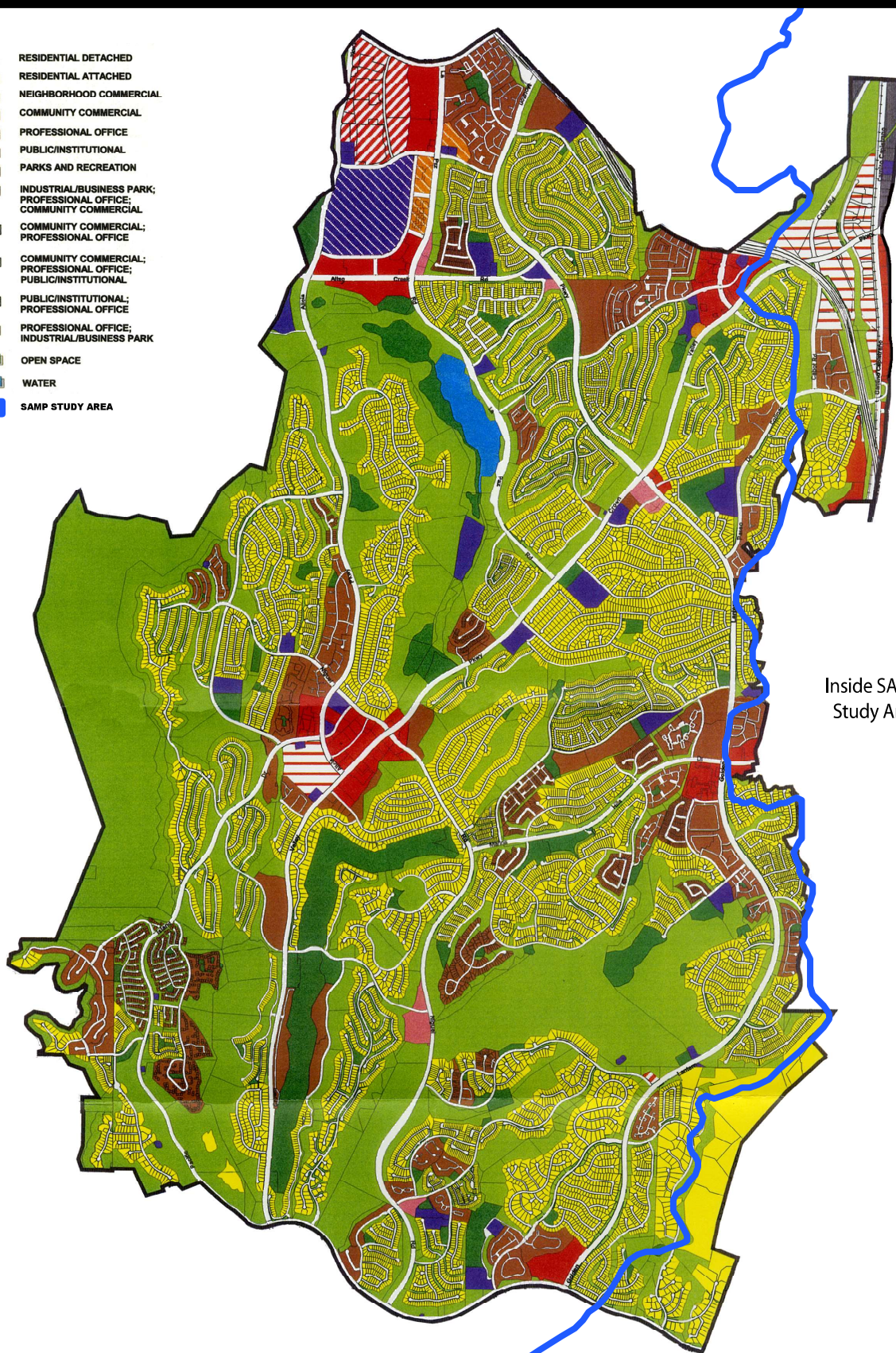
Figure: 4.1.4-3

Source: City of Laguna Hills



Date: Nov. 2005

- RESIDENTIAL DETACHED
- RESIDENTIAL ATTACHED
- NEIGHBORHOOD COMMERCIAL
- COMMUNITY COMMERCIAL
- PROFESSIONAL OFFICE
- PUBLIC/INSTITUTIONAL
- PARKS AND RECREATION
- INDUSTRIAL/BUSINESS PARK;
PROFESSIONAL OFFICE;
COMMUNITY COMMERCIAL
- COMMUNITY COMMERCIAL;
PROFESSIONAL OFFICE
- COMMUNITY COMMERCIAL;
PROFESSIONAL OFFICE;
PUBLIC/INSTITUTIONAL
- PUBLIC/INSTITUTIONAL;
PROFESSIONAL OFFICE
- PROFESSIONAL OFFICE;
INDUSTRIAL/BUSINESS PARK
- OPEN SPACE
- WATER
- SAMP STUDY AREA



Inside SAMP
Study Area

City of Laguna Niguel General Plan Land Use Designations

Not to Scale

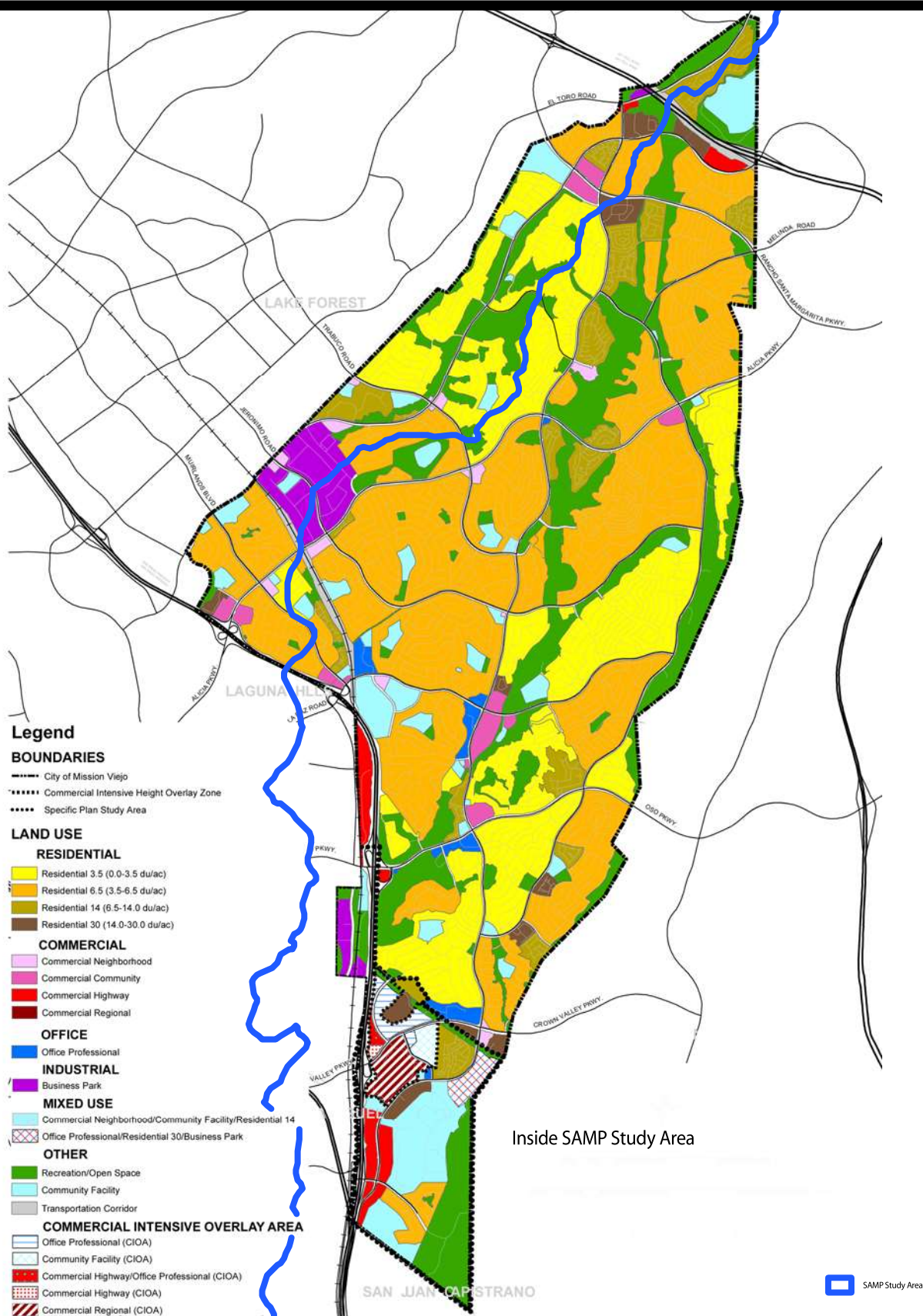
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.4-4

Source: City of Laguna Niguel



Date: Nov, 2005



City of Mission Viejo General Plan Land Use Designations

Not to Scale

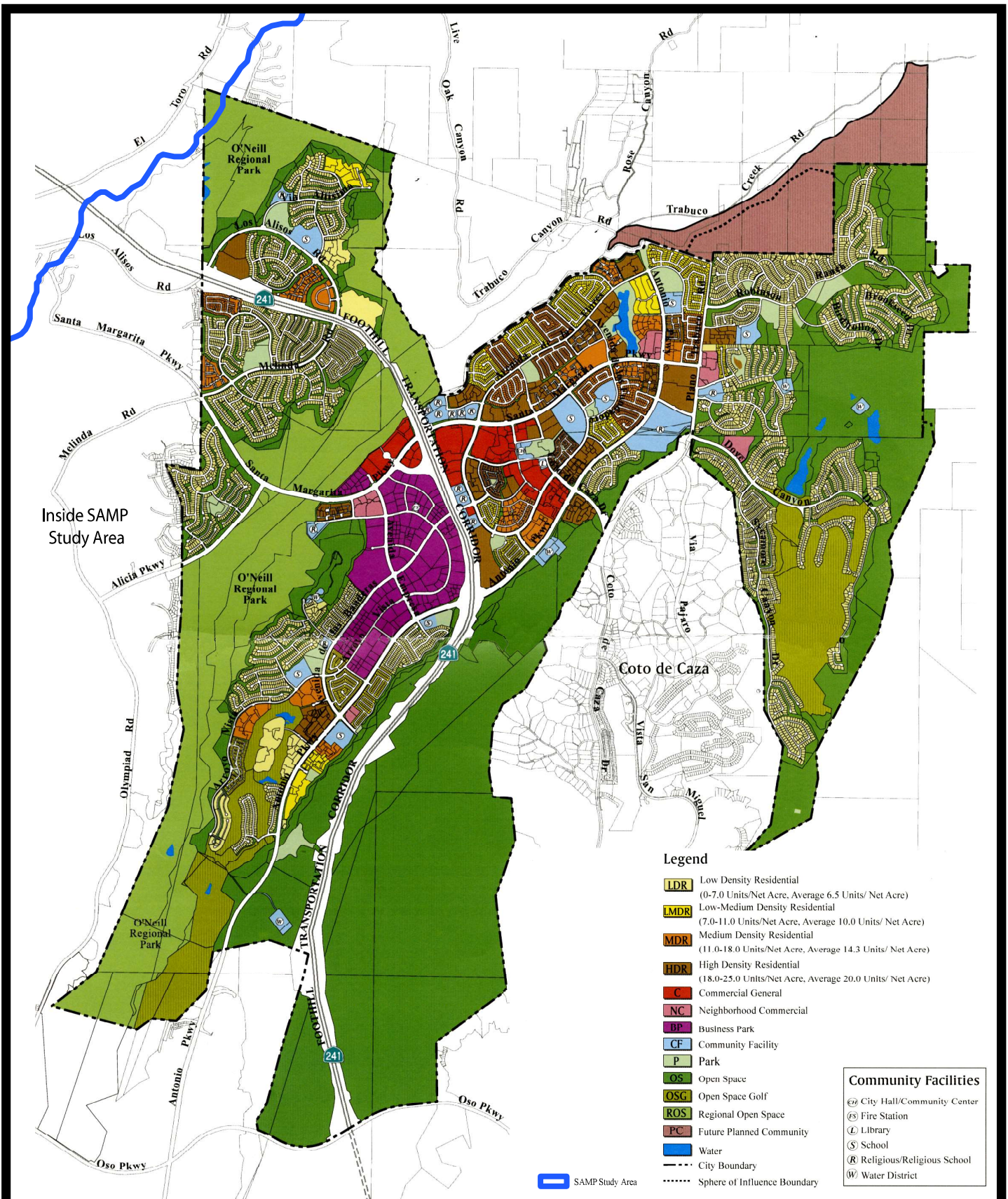
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.4-5

Source: City of Mission Viejo



Date: Nov. 2005



City of Rancho Santa Margarita General Plan Land Use Designations

Not to Scale

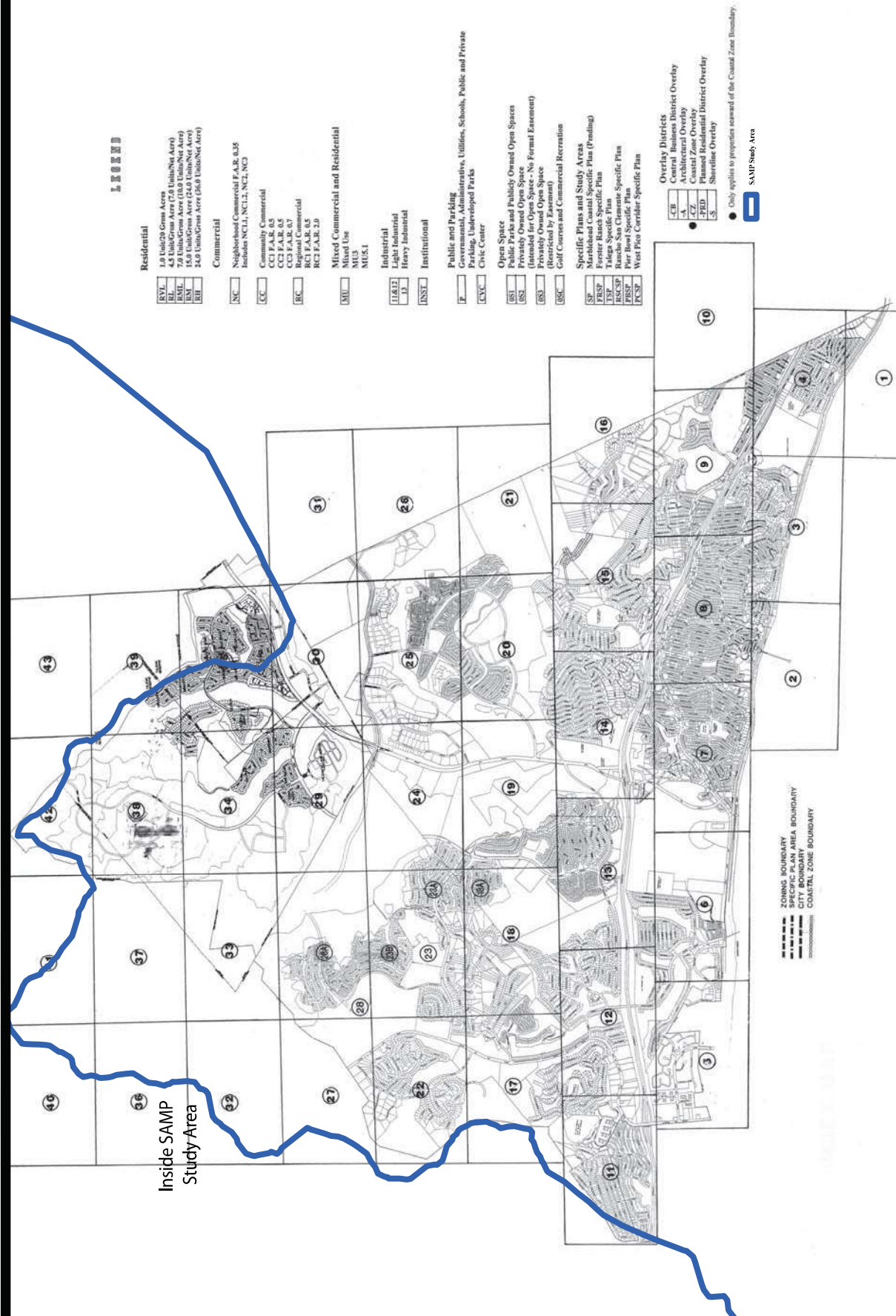
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.4-6

Source: City of Rancho Santa Margarita



Date: Nov, 2005



City of San Clemente General Plan Land Use Designations

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Not to Scale



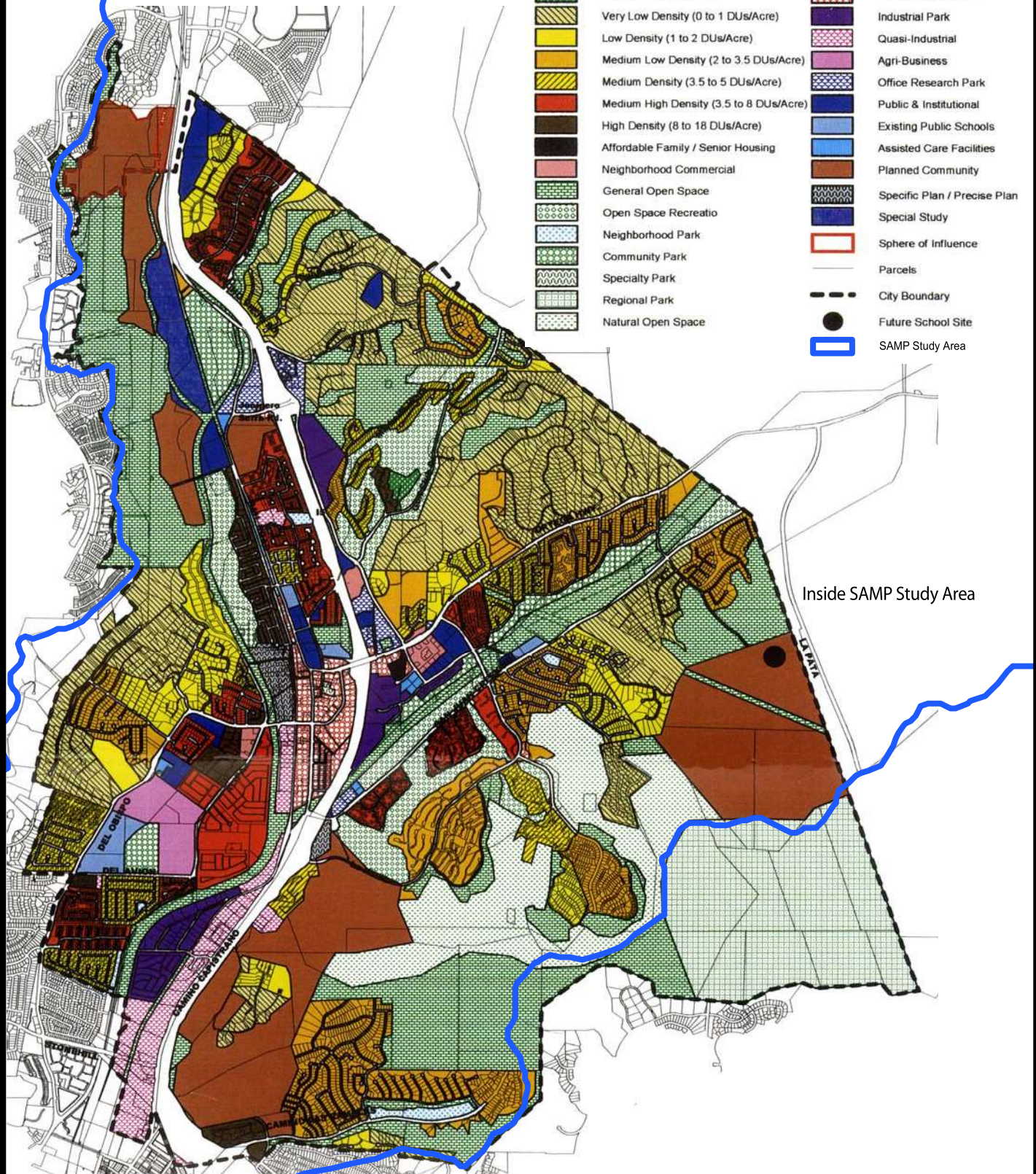
Figure: 4.1.4-7

Source: City of San Clemente

Date: Nov. 2005

LAND USE DESIGNATIONS

	Recreation Commercial		General Commercial
	Very Low Density (0 to 1 DUs/Acre)		Industrial Park
	Low Density (1 to 2 DUs/Acre)		Quasi-Industrial
	Medium Low Density (2 to 3.5 DUs/Acre)		Agri-Business
	Medium Density (3.5 to 5 DUs/Acre)		Office Research Park
	Medium High Density (3.5 to 8 DUs/Acre)		Public & Institutional
	High Density (8 to 18 DUs/Acre)		Existing Public Schools
	Affordable Family / Senior Housing		Assisted Care Facilities
	Neighborhood Commercial		Planned Community
	General Open Space		Specific Plan / Precise Plan
	Open Space Recreation		Special Study
	Neighborhood Park		Sphere of Influence
	Community Park		Parcels
	Specialty Park		City Boundary
	Regional Park		Future School Site
	Natural Open Space		SAMP Study Area



Inside SAMP Study Area

City of San Juan Capistrano General Plan Land Use Designations

Not to Scale

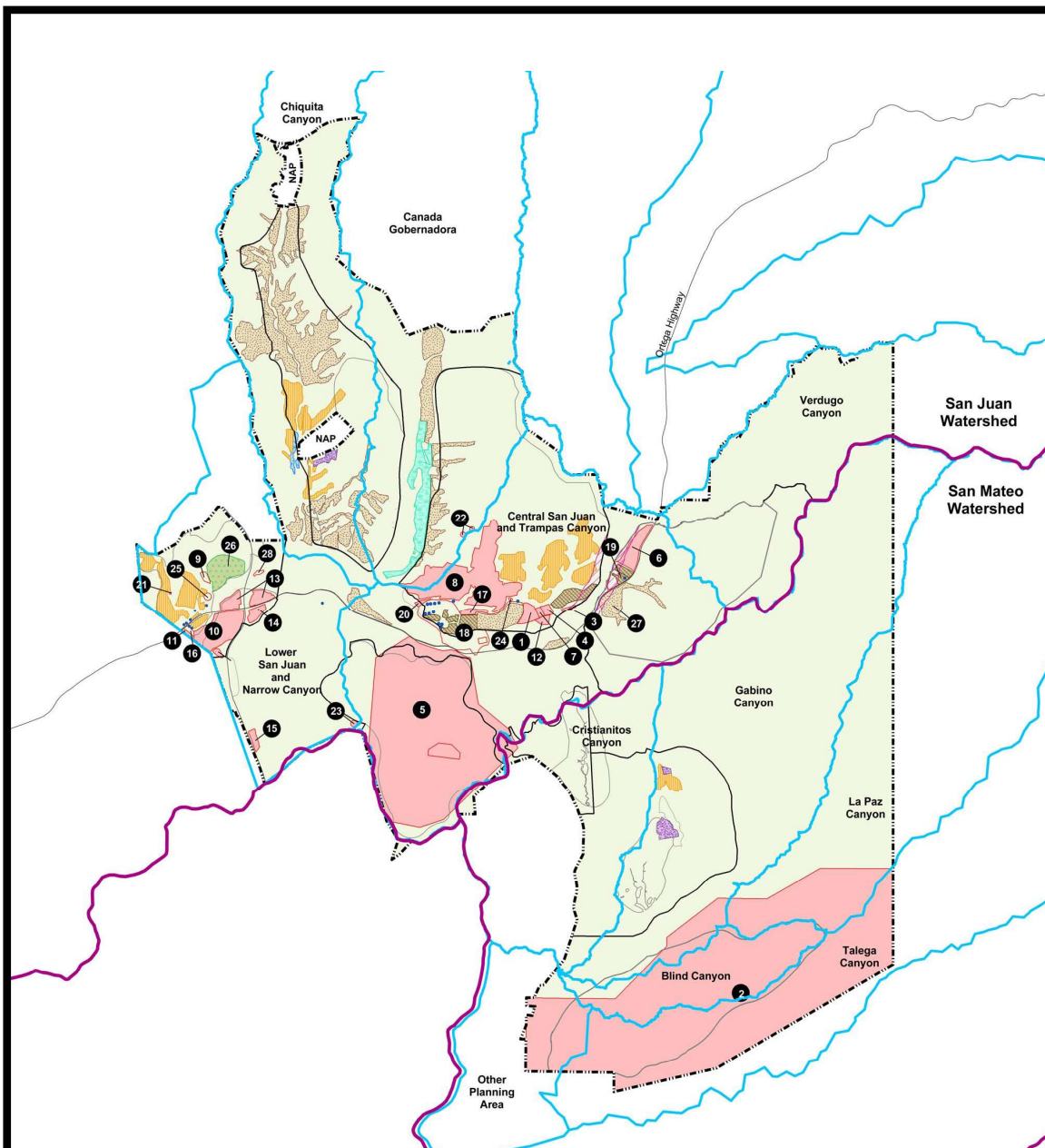


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.4-8

Source: City of San Juan Capistrano

Date: Nov. 2005



Location Names

- 1 California Portland Cement
aka Catalina Pacific Concrete - North
- 2 Northrop Grumman - Capistrano Test Site
- 3 John B. Ewles, Inc. aka Ewles Materials
- 4 Solag Disposal, Inc.
- 5 Oglebay Norton Industrial Sands
- 6 Tree of Life Nursery
- 7 Transit Mixed Concrete Co. aka City Concrete/ Southdown
- 8 Color Spot Nursery
- 9 Ladera Ranch Construction Yard
- 10 The Blenheim Oaks Rancho Mission Viejo Riding Park
- 11 The Oaks Corral
- 12 Olsen Pavingstones Inc.
- 13 DM Color Express
- 14 TruGreen Nurseries

- 15 Tierra Verde Industries, Inc. aka La Pata Greenwaste
- 16 Ranch Buildings
- 17 RMV Maintenance Shop - Cow Camp
- 18 RMV Cow Camp
- 19 RJO Horse Ranch
- 20 St. Augustine's Training Center
- 21 Antenna Site (Lemon Grove)
- 22 Antenna Site (North) Airtouch, Pacbell Wireless
- 23 Antenna Site (South)
- 24 Bell South, Saddleback KSBR, SDG & E, SCE.
- 25 O'Connell Landscaping Yard
- 26 RMV Headquarters
- 27 Seasonal Row Crops
- 28 South Forty
- 29 SMWD San Juan Creek Lift Station

Planning Boundaries

- Planning Area Boundary
- Development Boundary
- Ranch Plan Boundary

Existing Land Use Legend

- Existing Uses
- Lease Areas
- GERA Mitigation Area
- Chiquita Canyon Mitigation Site
- RMV Residence

Existing Agriculture

- Avocado Trees
- Seasonal Row Crops
- Citrus Trees
- Irrigated Pasture Land
- Barley Fields

RMV Planning Area Existing Land Uses

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

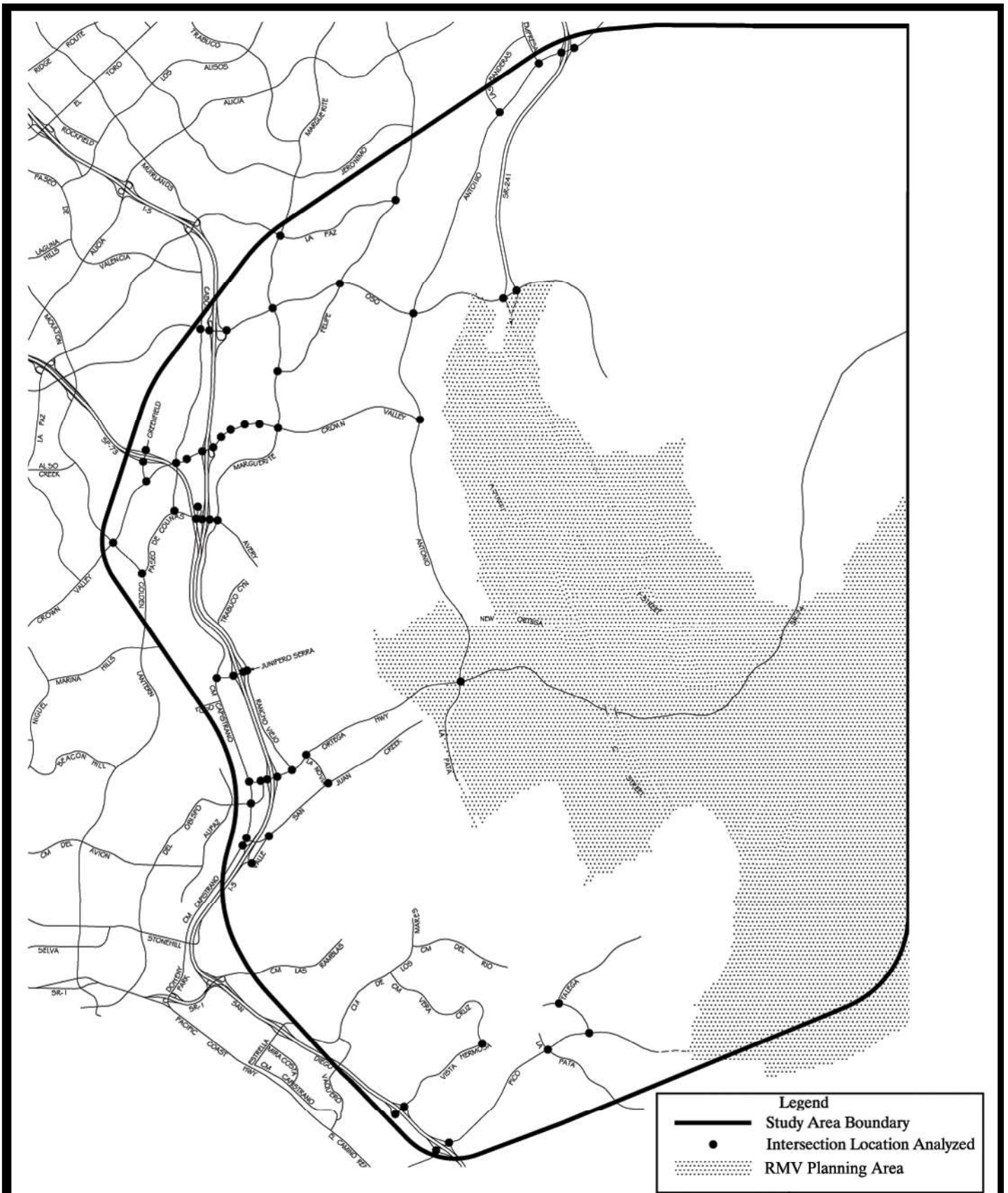
Figure: 4.1.4-9

Source: RMV, 2004

Not to Scale



Date: Nov. 2005



RMV Planning Area Traffic Study Area

Not to Scale

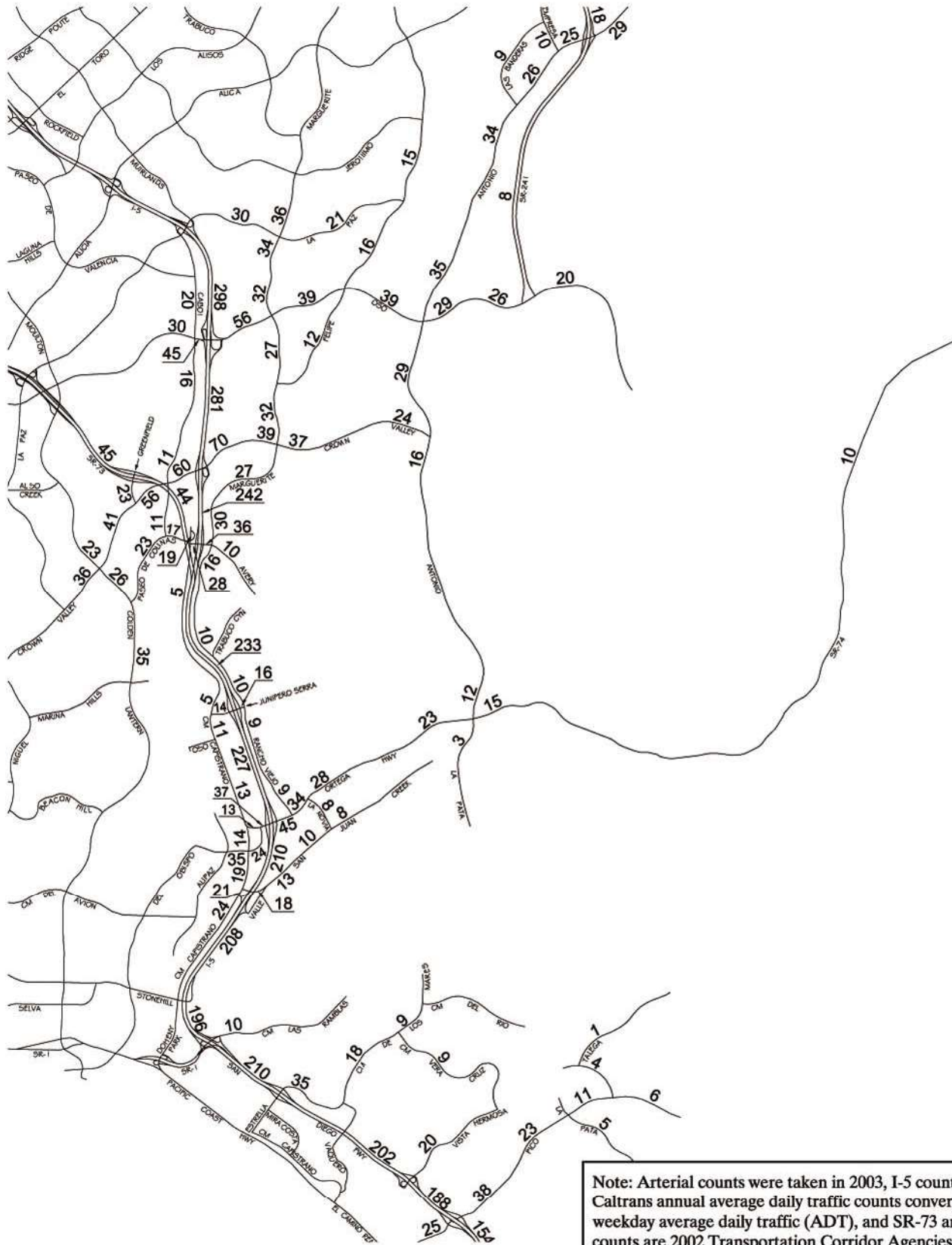


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.5-1

Source: Austin-Foust Associates, Inc., 2004

Date: Nov. 2005



RMV Planning Area Average Daily Traffic Volumes

Not to Scale

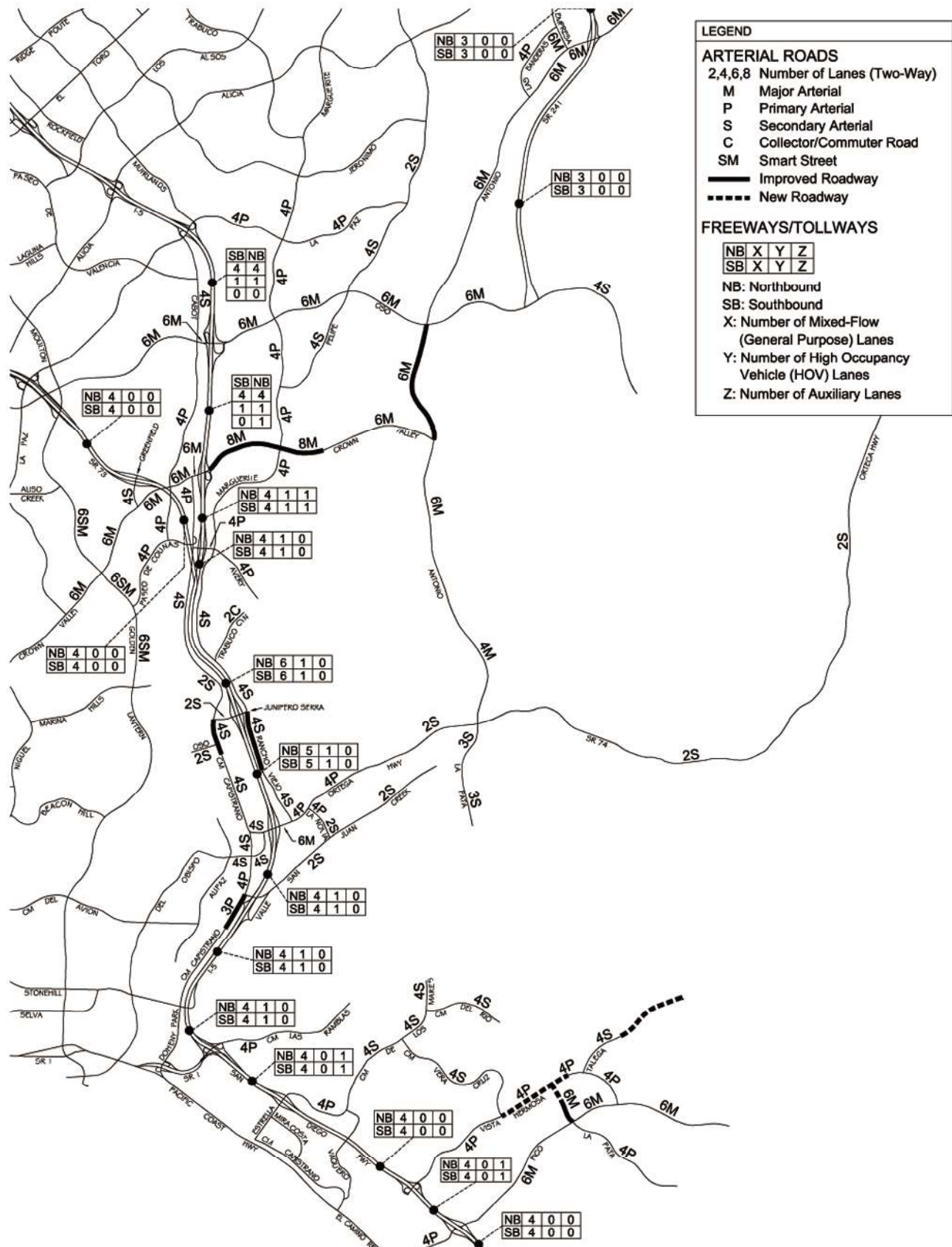
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.5-2

Source: Austin-Foust Associates, Inc., 2004



Date: Nov. 2005



Interim Committed Circulation System Improvements

Not to Scale

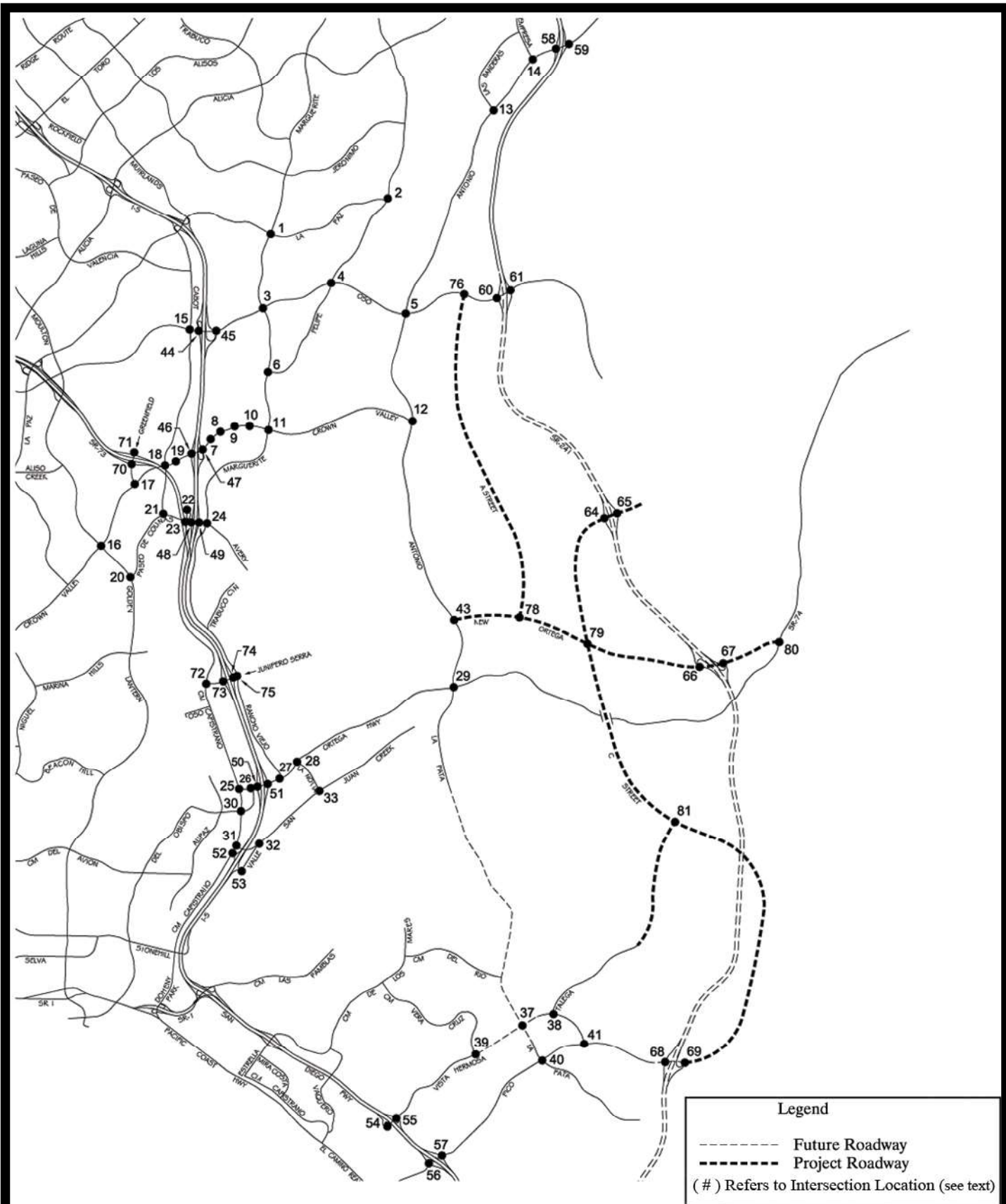


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.5-3

Source: Austin-Foust Associates, Inc., 2004

Date: Nov. 2005



MPAH Buildout Circulation System Improvements

Not to Scale

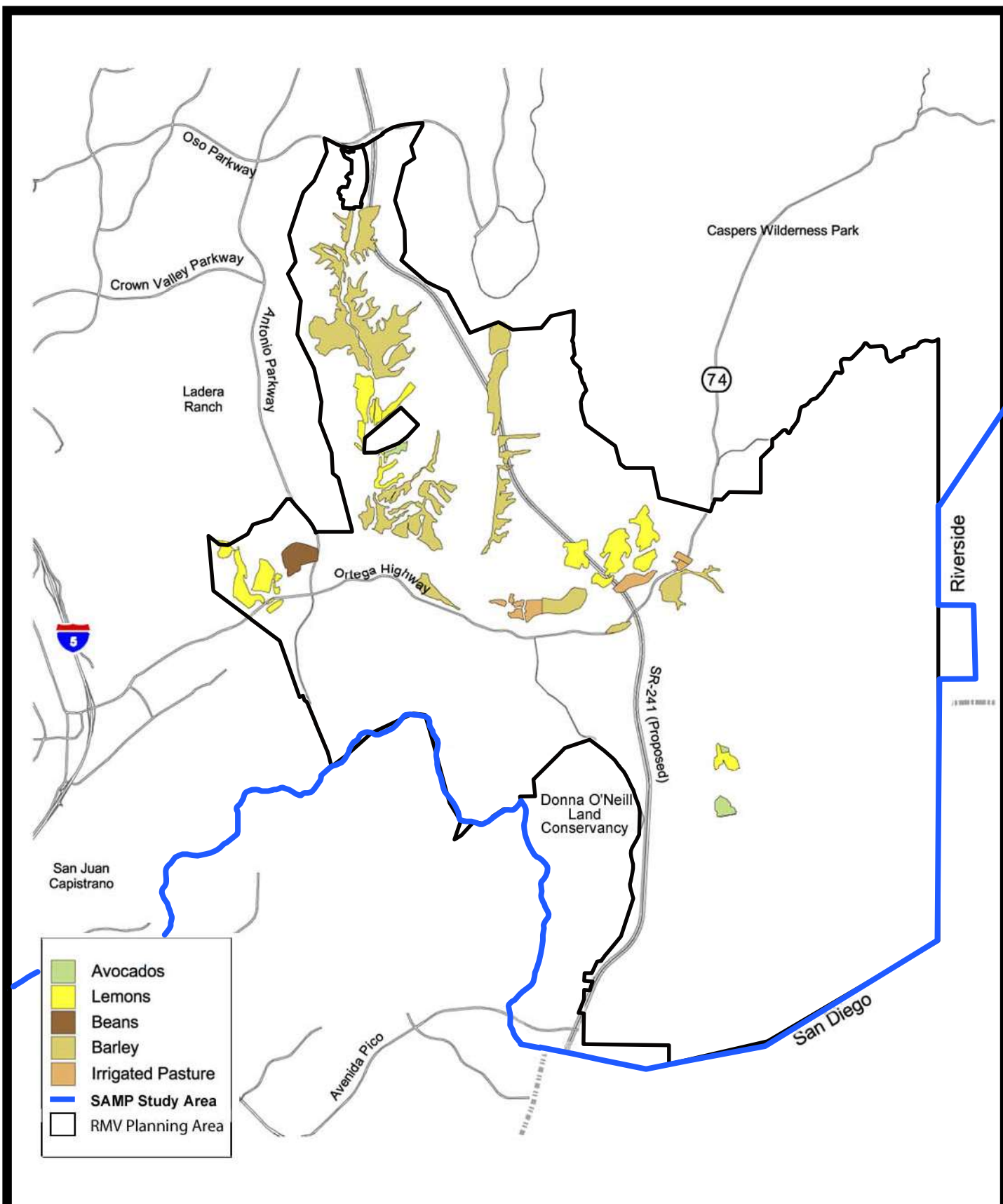
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.5-4

Source: Austin-Foust Associates, Inc., 2004

Date: Nov. 2005





RMV Planning Area Existing Agricultural Resources

Not to Scale

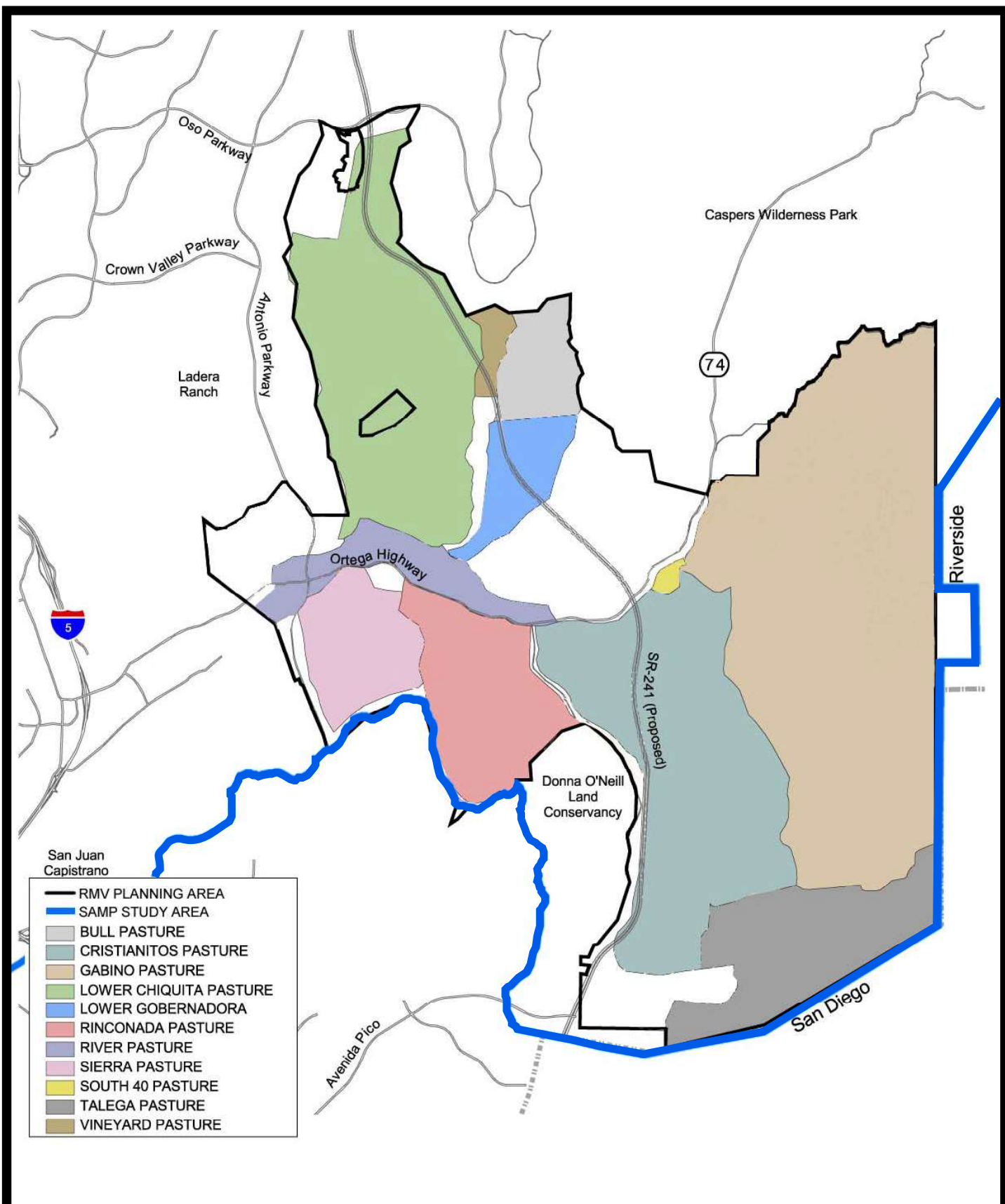
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.6-1

Source: RMV, 2004



Date: Nov. 2005



RMV Planning Area Existing Pasture Lands

Not to Scale

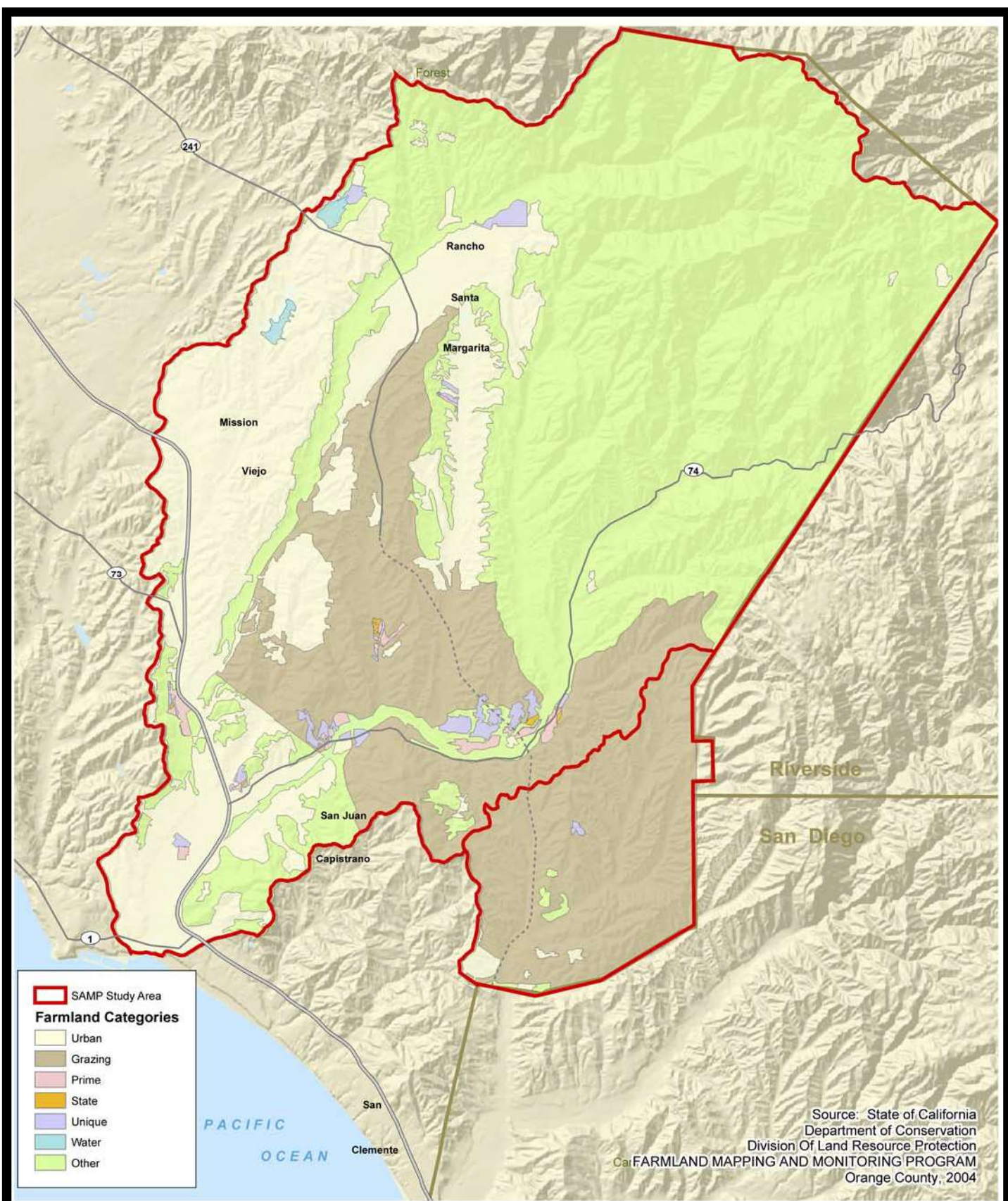
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.6-2

Source: Huitt-Zollars, 2003



Date: Nov. 2005



Important Farmlands in SAMP Study Area

Not to Scale

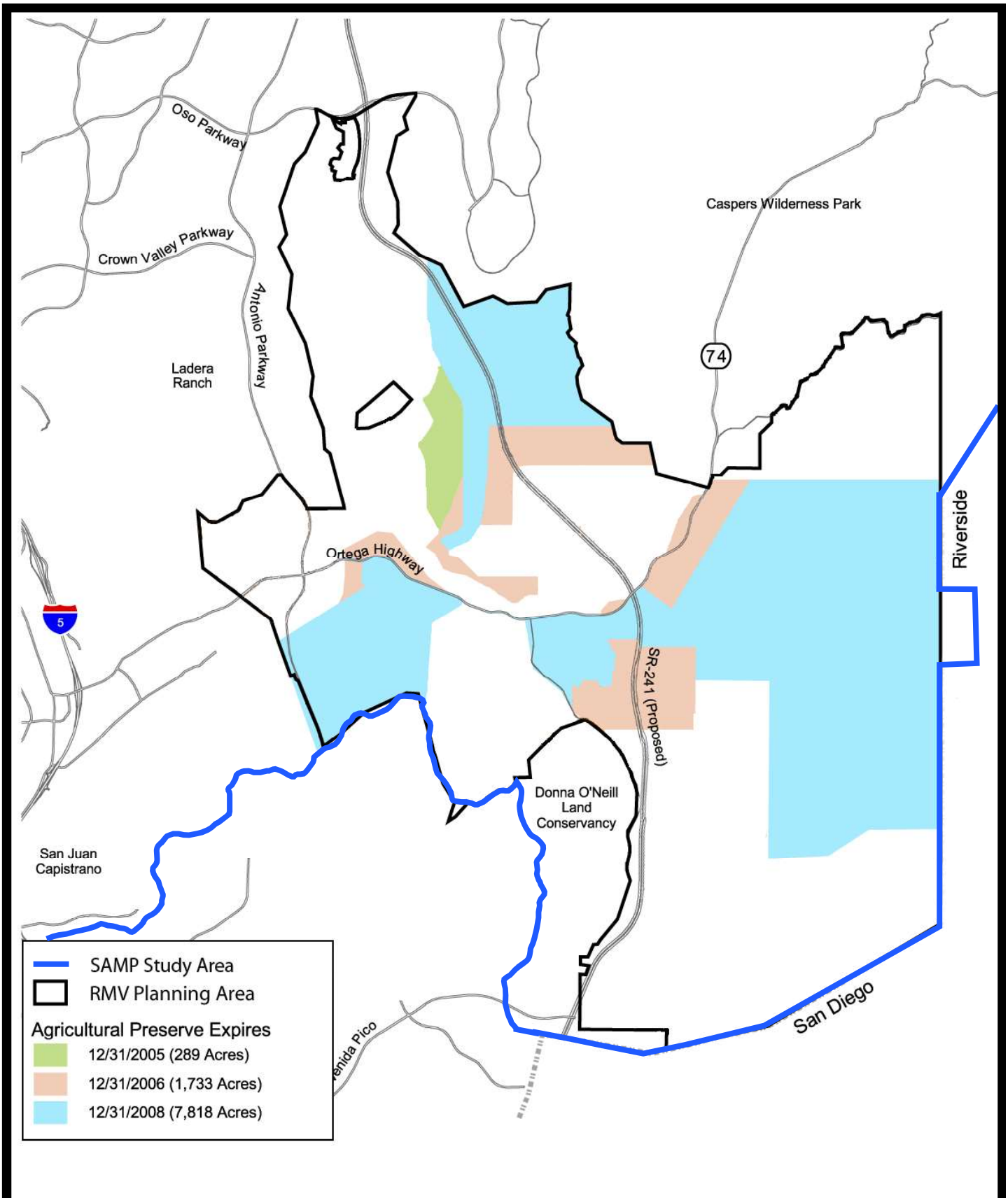
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.6-3

Source: California Department of Conservation
Farmland Mapping and Monitoring Program
Orange County, 2004



Date: Nov. 2005



RMV Planning Area Agricultural Preserves

Not to Scale

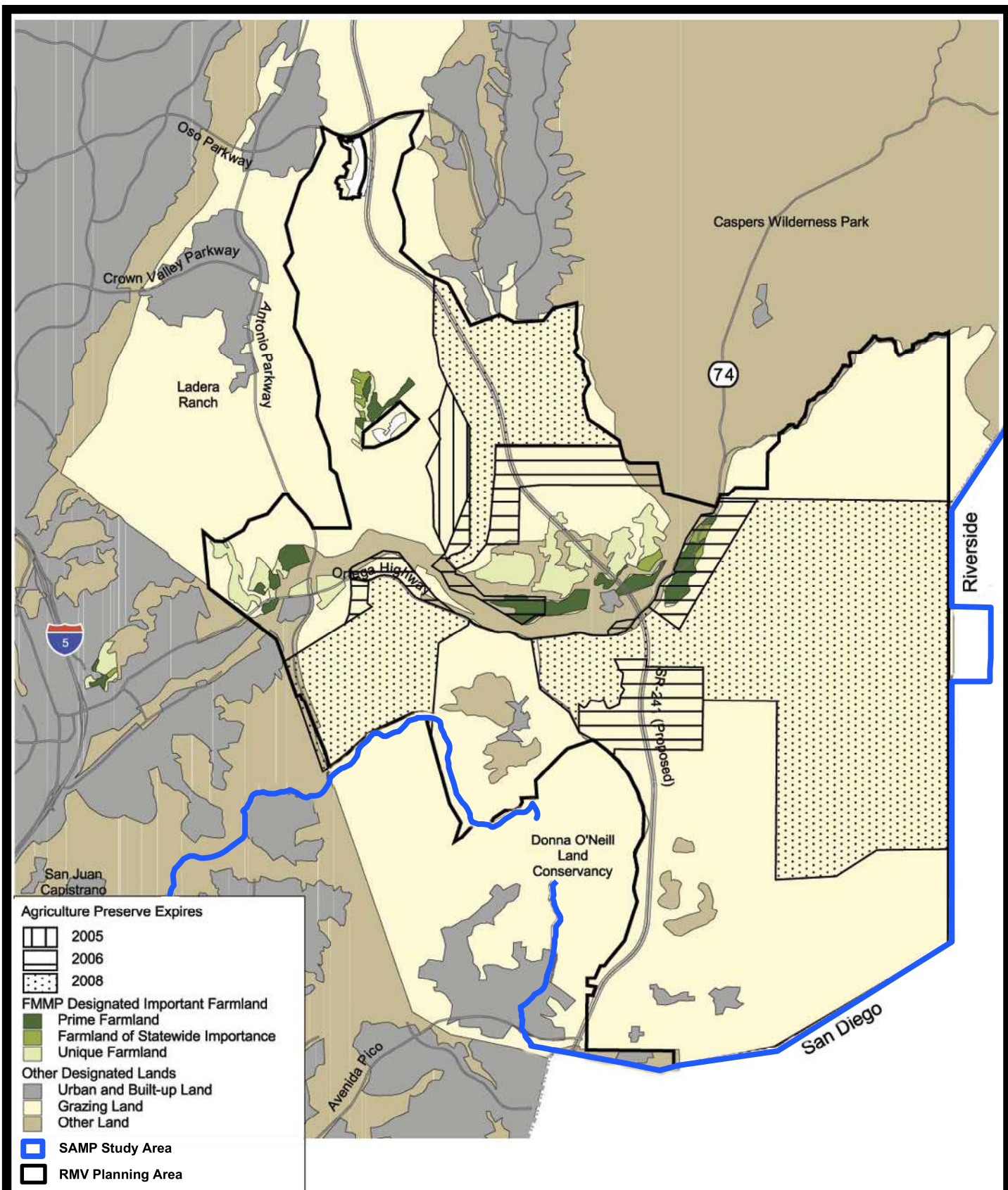
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.6-4

Source: Huitt-Zollars, 2003



Date: Nov. 2005



RMV Planning Area Important Farmlands in Agricultural Preserves

Not to Scale

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.6-5

Source: California Department of Conservation, 2002



Date: Nov. 2005

SOUND LEVELS AND LOUDNESS OF ILLUSTRATIVE NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS

Numbers in Parentheses are the A-Scale Weighted Sound Levels for that Noise Event

dB(A)	OVER-ALL LEVEL Sound Pressure Level Reference: 0.0002 Microbars	COMMUNITY (Outdoor)	HOME OR INDUSTRY	LOUDNESS Human Judgement of Different Sound Levels
130		Military Jet Aircraft Take-Off With After-Burner From Aircraft Carrier @ 50 Ft. (130)	Oxygen Torch (121)	120 dB(A) 32 Times as Loud
120 110	UNCOMFORTABLY LOUD	Concord Takeoff (113)*	Riveting Machine (110) Rock-N-Roll Band (108-114)	110 dB(A) 16 Times as Loud
100		Boeing 747-200 Takeoff (101)*		100 dB(A) 8 Times as Loud
90	VERY LOUD	Power Mower (96) DC-10-30 Takeoff (96)* Motorcycle @25 Ft. (90)	Newspaper Press (97)	90 dB(A) 4 Times as Loud
80		Car Wash @ 20 Ft. (89) Boeing 727 w/ Hushkit Takeoff (96)* Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	80 dB(A) 2 Times as Loud
70	MODERATELY LOUD	High Urban Ambient Sound (80) Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @ 50 Ft. From Pavement Edge, 10:00 AM (76 +or- 6) Boeing 757 Takeoff (76)*	Living Room Music (76) TV-Audio, Vacuum Cleaner	70 dB(A)
60		Propeller Airplane Takeoff (67)* Air Conditioning Unit @ 100 Ft. (60)	Cash Register @ 10 Ft. (65-70) Electric Typewriter @ 10 Ft. (64) Dishwasher (Rinse) @ 10 Ft. (60) Conversation (60)	60 dB(A) 1/2 as Loud
50	QUIET	Large Transformers @ 100 Ft. (50)		50 dB(A) 1/4 as Loud
40		Bird Calls (44) Lower Limit Urban Ambient Sound (40)		40 dB(A) 1/8 as Loud
20	JUST AUDIBLE	dB(A) Scale Interrupted) Desert at Night		
10	THRESHOLD OF HEARING			

*Aircraft takeoff noise measured 6,500 meters from beginning of takeoff roll

SOURCE: Leo L. Beranek "Noise And Vibration Control," 1971

*Aircraft Levels From FAA Advisory Circular AC-36-3G

Noise Levels

Not to Scale



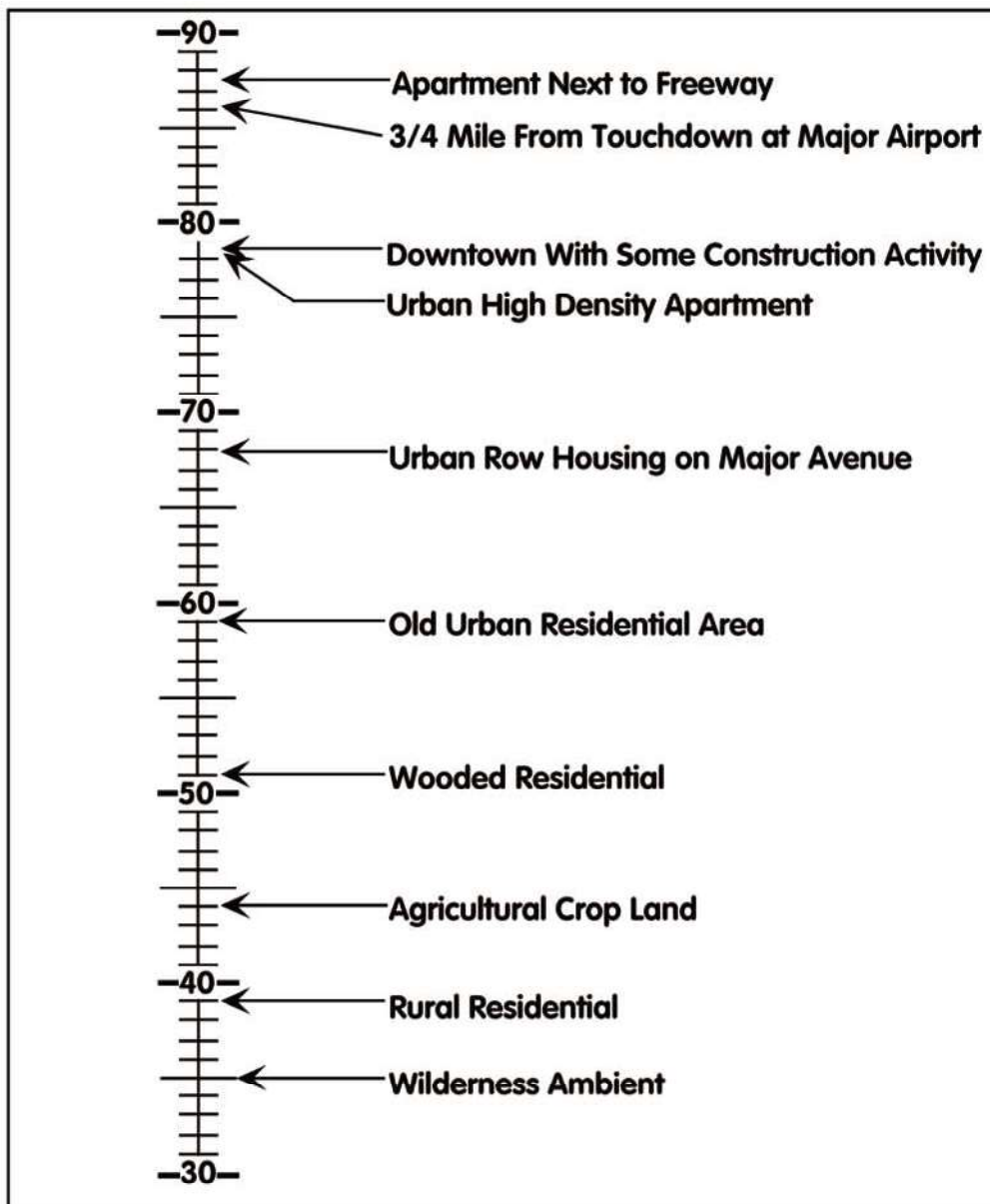
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.8-1

Source: Mestres Greve Associates, 2004

Date: Nov. 2005

CNEL Outdoor Location



Source: U.S. Environmental Protection Agency, "Impact Characterization of Noise Including Implications of Identifying and Achieving Levels of Cumulative Noise Exposure," EPA Report NTID 73.4, 1973.

CNEL Noise Levels

Not to Scale

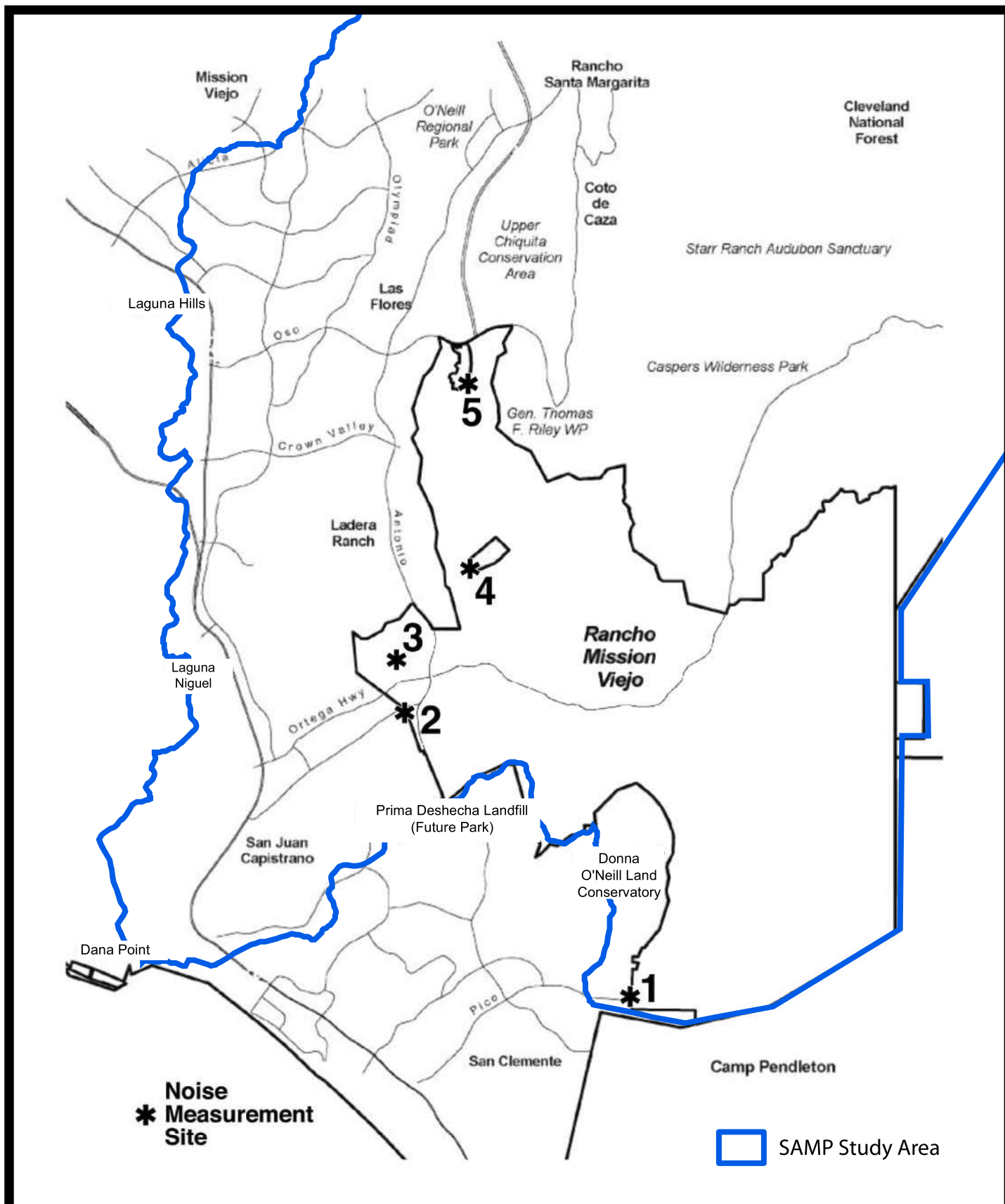
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.8-2

Source: Mestre Greve Associates, 2004



Date: Nov. 2005



Noise Measurement Sites

Not to Scale

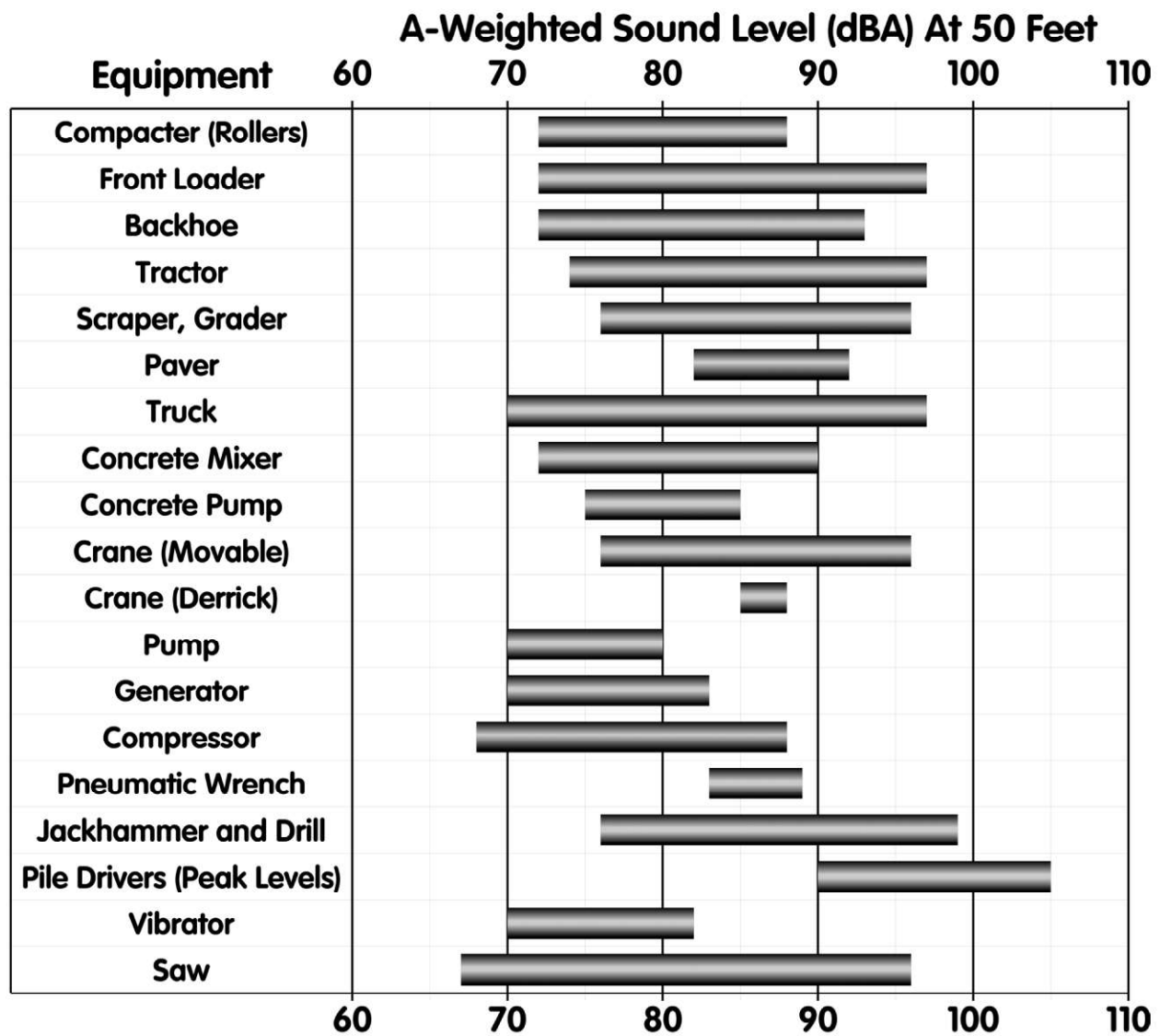
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.8-3

Source: Mestre Greve Associates, 2004



Date: Nov. 2005



Constuction Equipment Noise Levels

Not to Scale

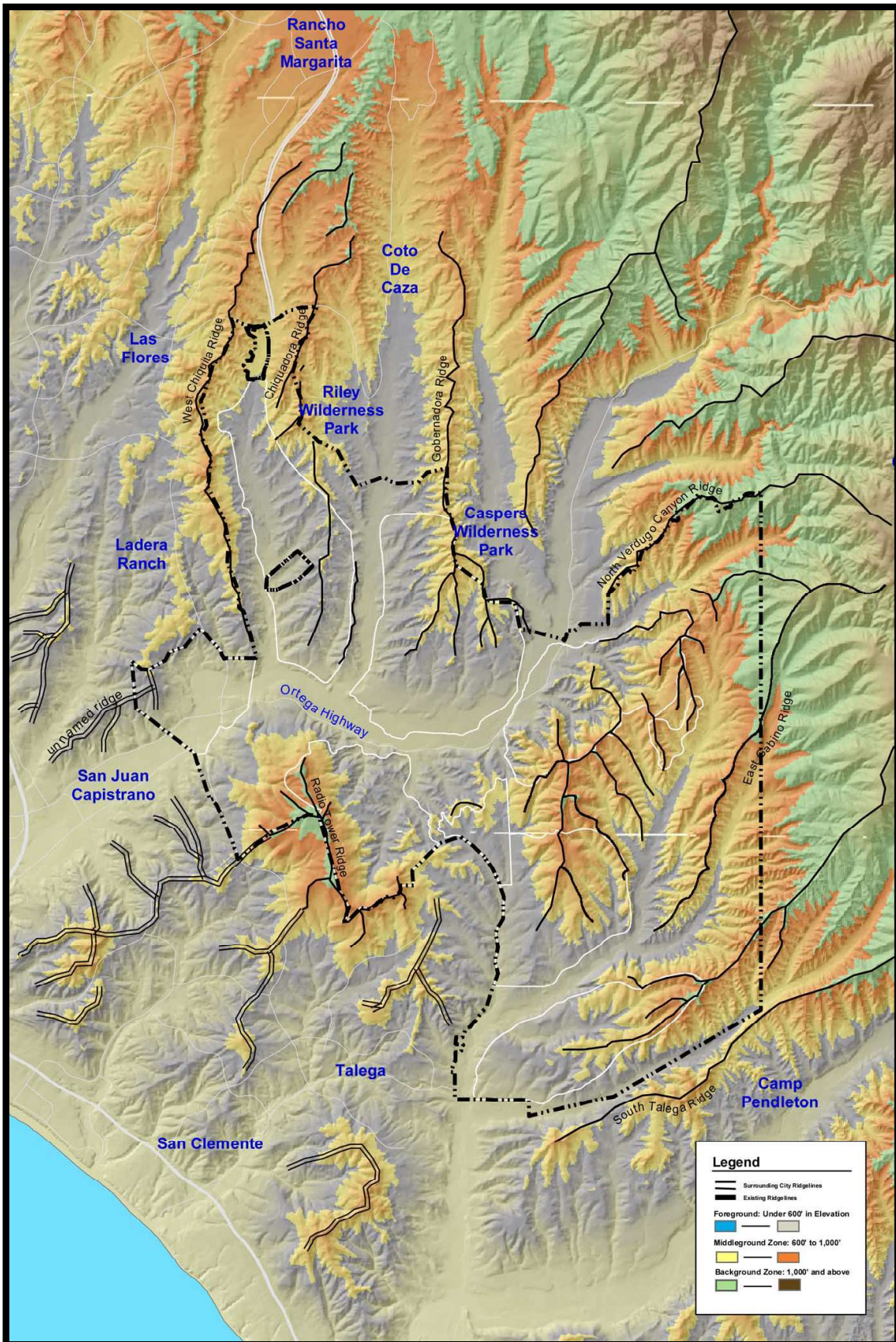


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.8-4

Source: Handbook of Noise Control,
by Cyril Harris, 1979

Date: Nov. 2005



Landscape Zones and Ridgeline Analysis

Not to Scale

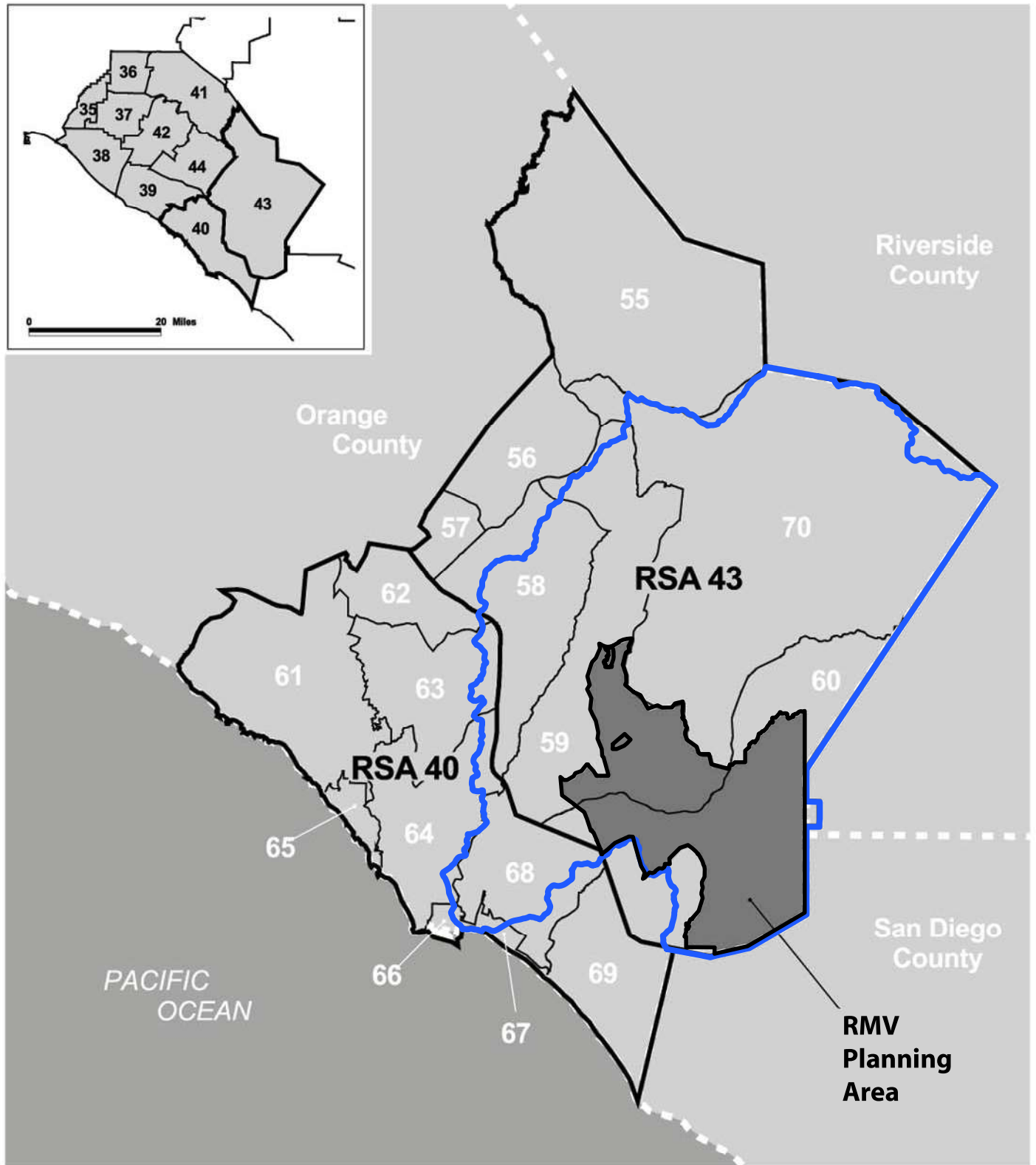
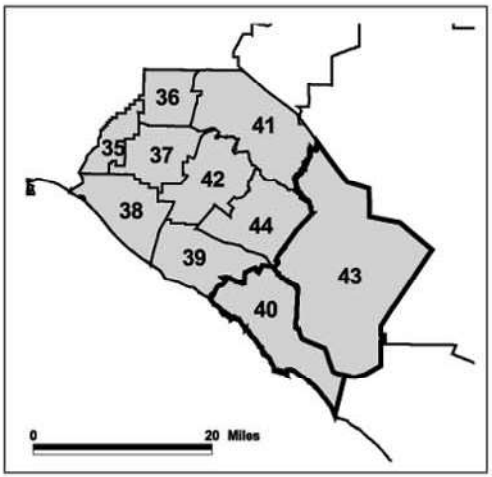


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.9-1

Source: EDAW, 2005

Date: Nov. 2005



 SAMP Study Area

Regional Statistical Areas

Not to Scale

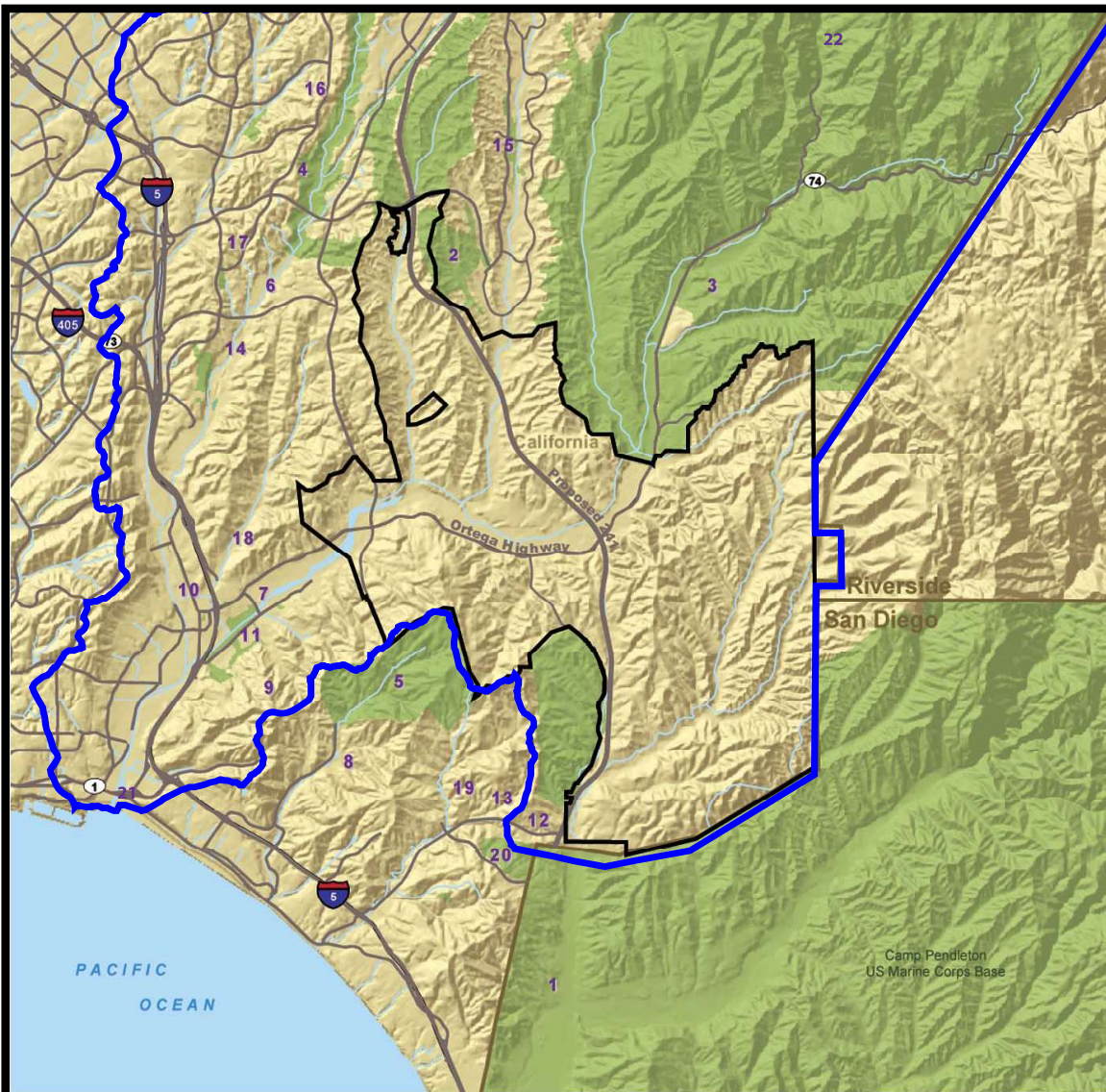


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.11-1

Source: BonTerra

Date: Nov. 2005



- | | | |
|--|--------------------------------|---|
| 1. San Onofre State Beach | 9. Acu Canyon Park | 17. Mission Viejo Golf Course |
| 2. General Thomas F. Riley Wilderness Park | 10. Descanso Park | 18. Marbella Golf Course and Country Club |
| 3. Ronald W. Caspers Wilderness Park | 11. Four Oaks Park | 19. Talega Golf Course |
| 4. O'Neill Regional Park | 12. Talega Park 1 | 20. Pacific Golf Club and Country Club |
| 5. Proposed Prima Deshecha Regional Park | 13. Talega Park 2 | 21. Doheny State Park |
| 6. Ladera Ranch County Sports Park | 14. Arroyo Trabuco Golf Course | SAMP Study Area |
| 7. Russell Cook Park | 15. Coto de Caza | RMV Planning Area |
| 8. Forster Ranch Community Park | 16. Tijeras Creek Golf Course | |

Recreational Facilities in and near SAMP Study Area

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

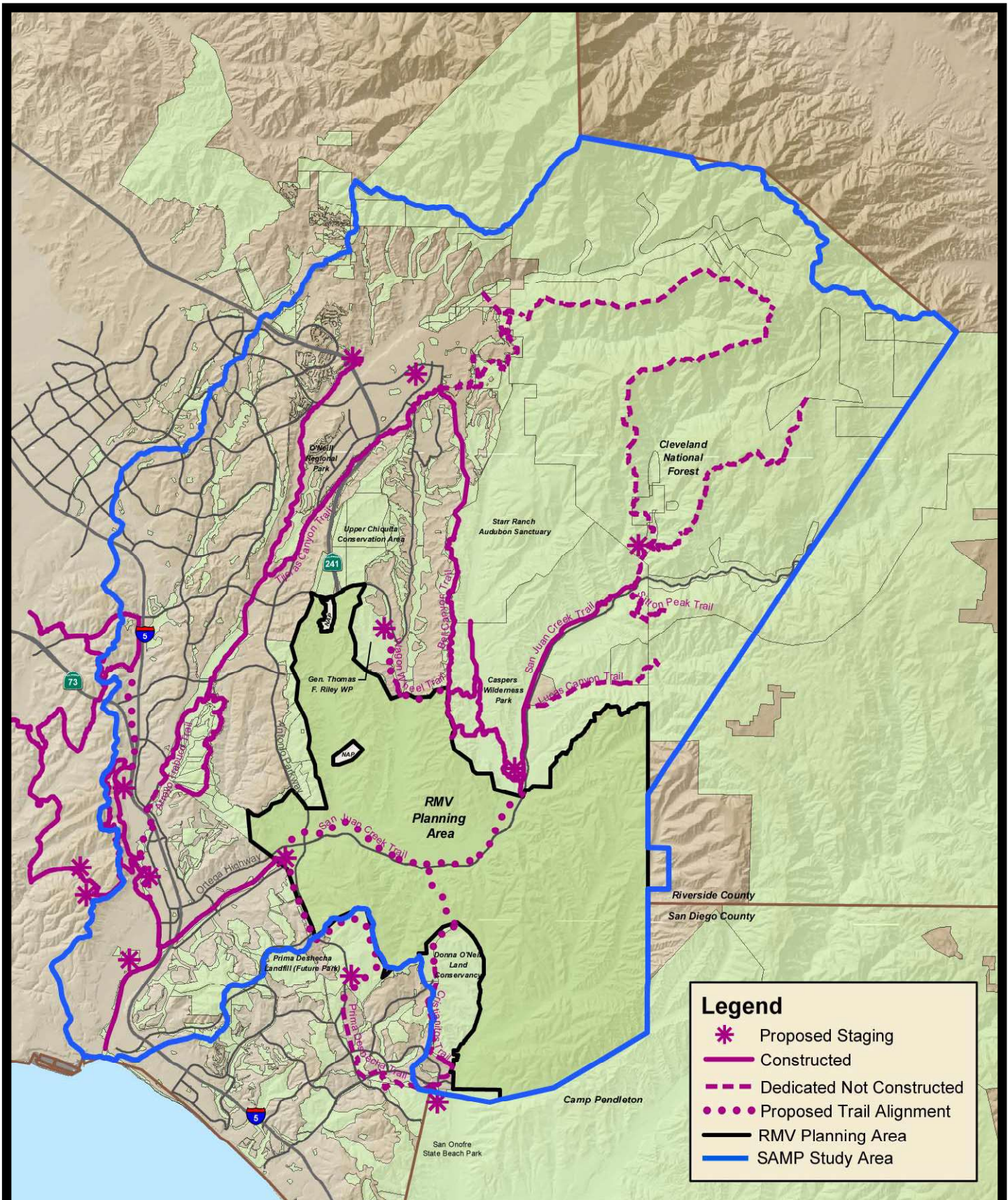
Figure: 4.1.12-1

Source: BonTerra

Not to Scale



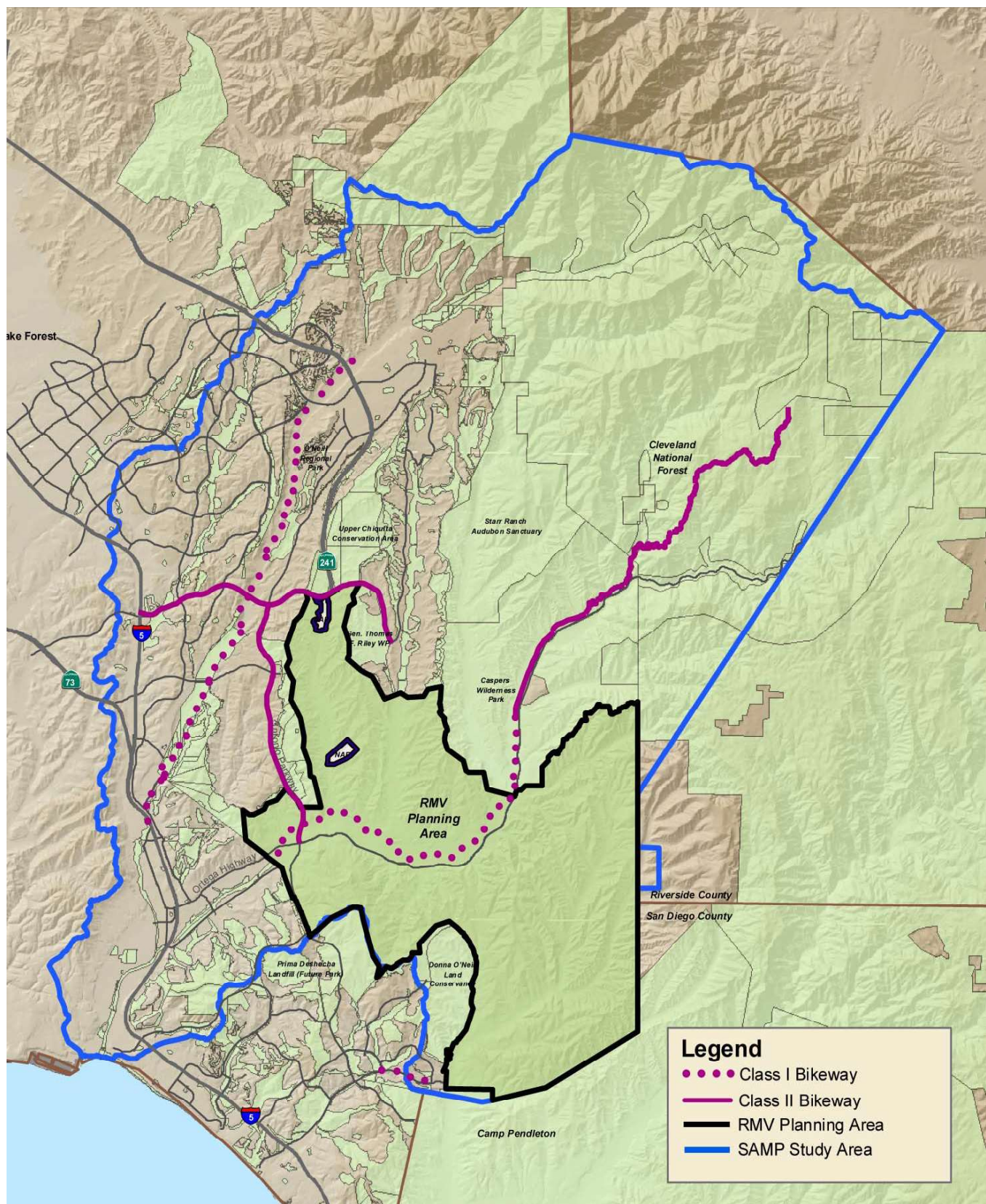
Date: Nov. 2005



Trails in SAMP Study Area

Not to Scale





Commuter Bikeway Strategic Plan Bikeways in SAMP Study Area

Not to Scale

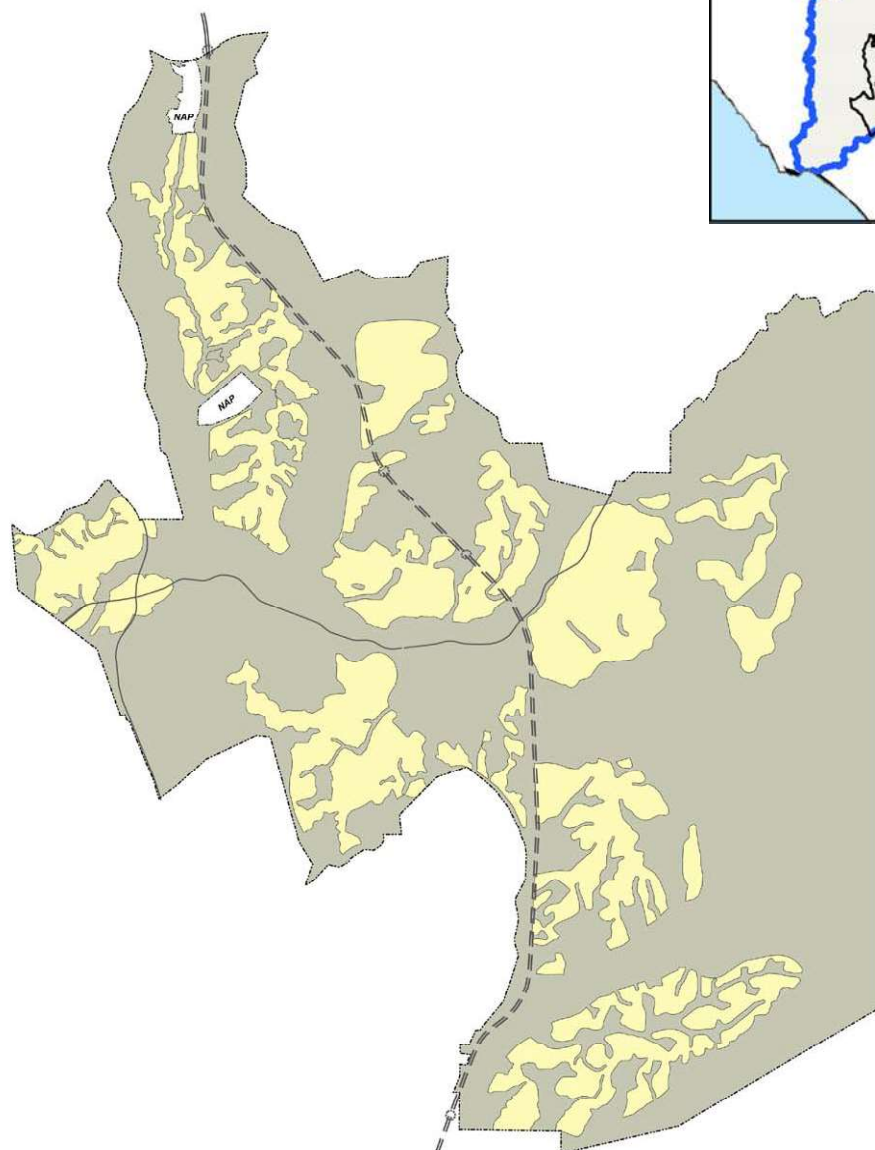
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 4.1.12-3

Source: EDAW, 2004



Date: Nov. 2005



Legend

- Potential Development
- Open Space

-- MPAH FTC - South: Shown for Informational Purposes Only

Alternative A-5

Not to Scale

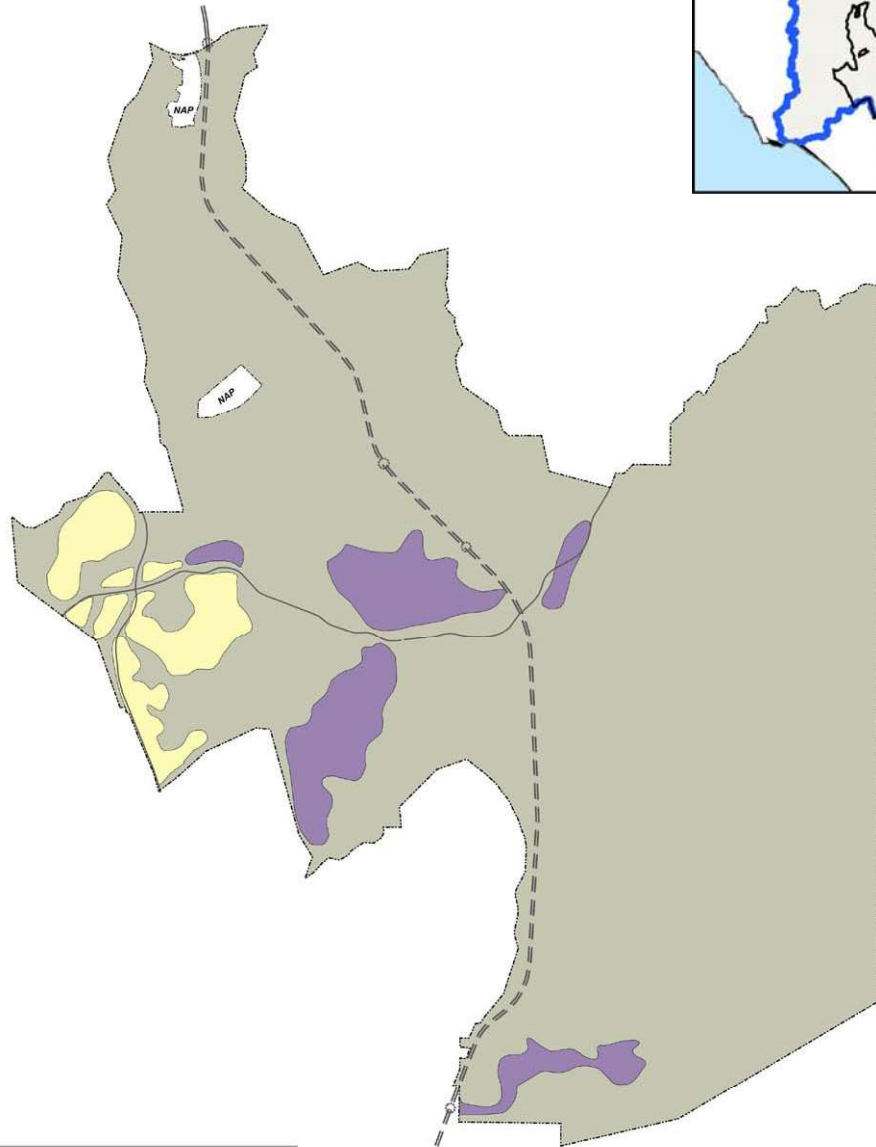
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-1

Source: EDAW, 2005



Date: Nov. 2005



Legend

- Potential Development
- Restoration Area
- Open Space

== MPAH - FTC - South: Shown for Informational Purposes Only

Alternative B-1

Not to Scale

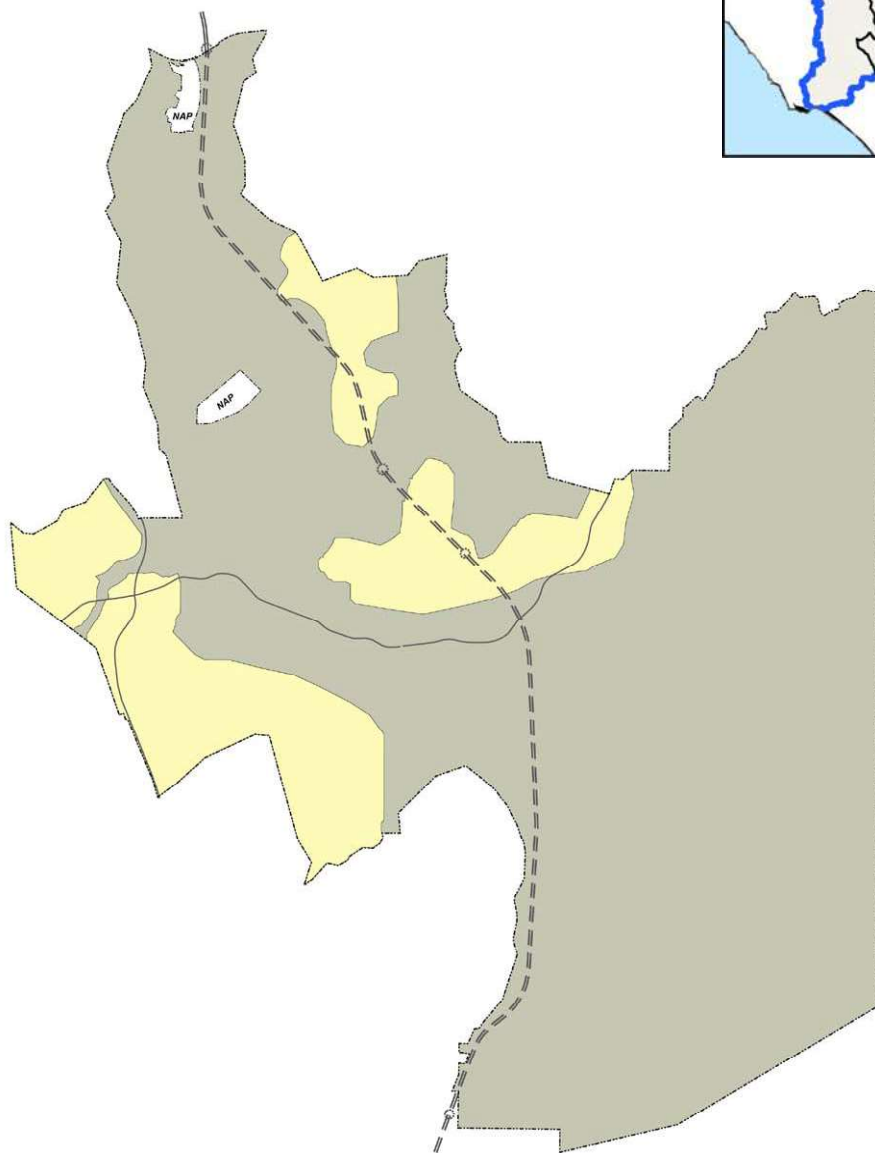
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-2

Source: EDAW, 2003



Date: Nov. 2005



Legend

- Potential Development
- Open Space

== MPAH FTC - South: Shown for Informational Purposes Only

Alternative B-2

Not to Scale

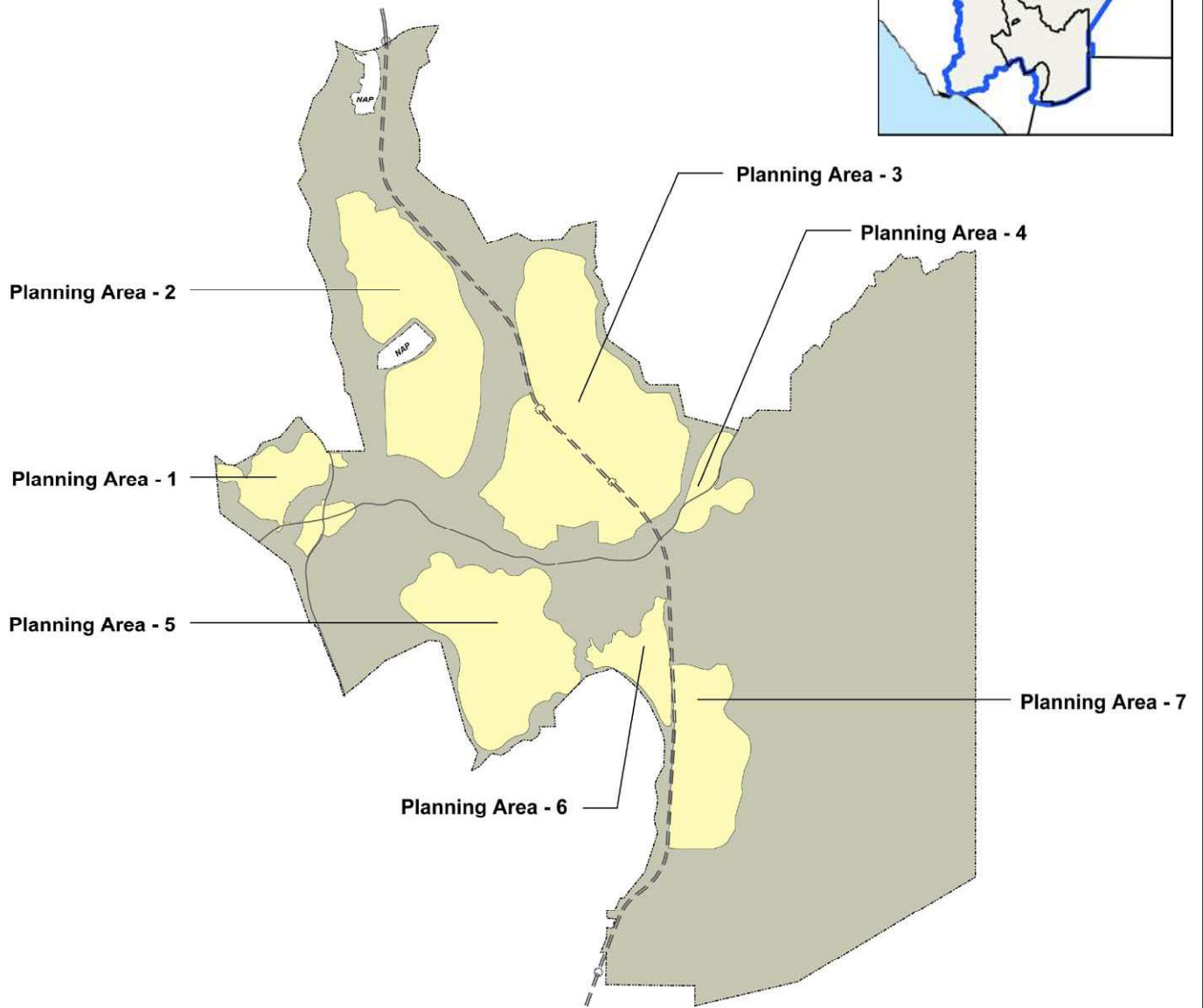
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-3

Source: EDAW, 2003



Date: Nov. 2005



Legend

- Potential Development
- Open Space

== MPAH FTC - South: Shown for Informational Purposes Only

Alternative B-3

Not to Scale

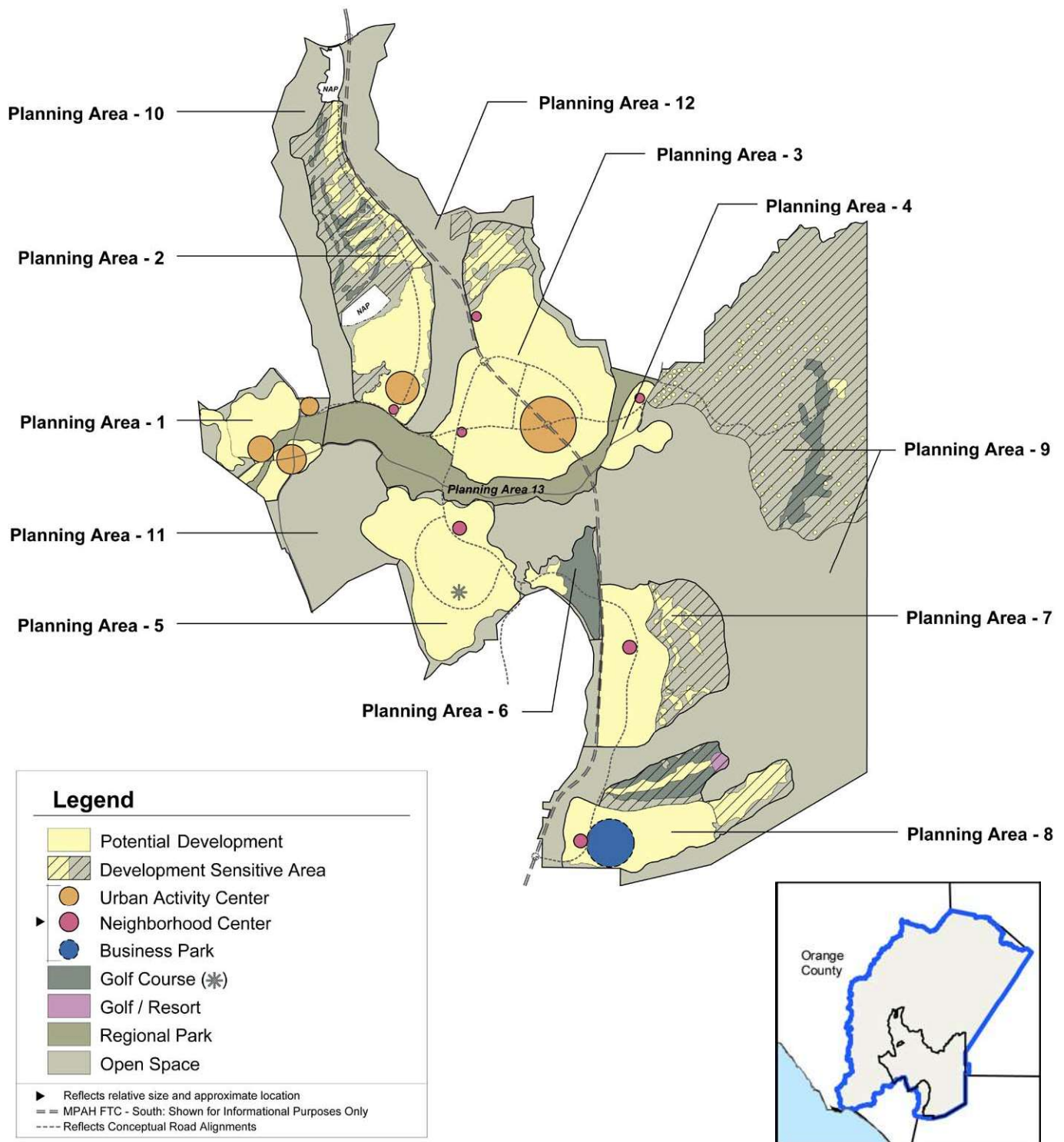
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-4

Source: EDAW, 2003



Date: Nov. 2005



Alternative B-4

Not to Scale

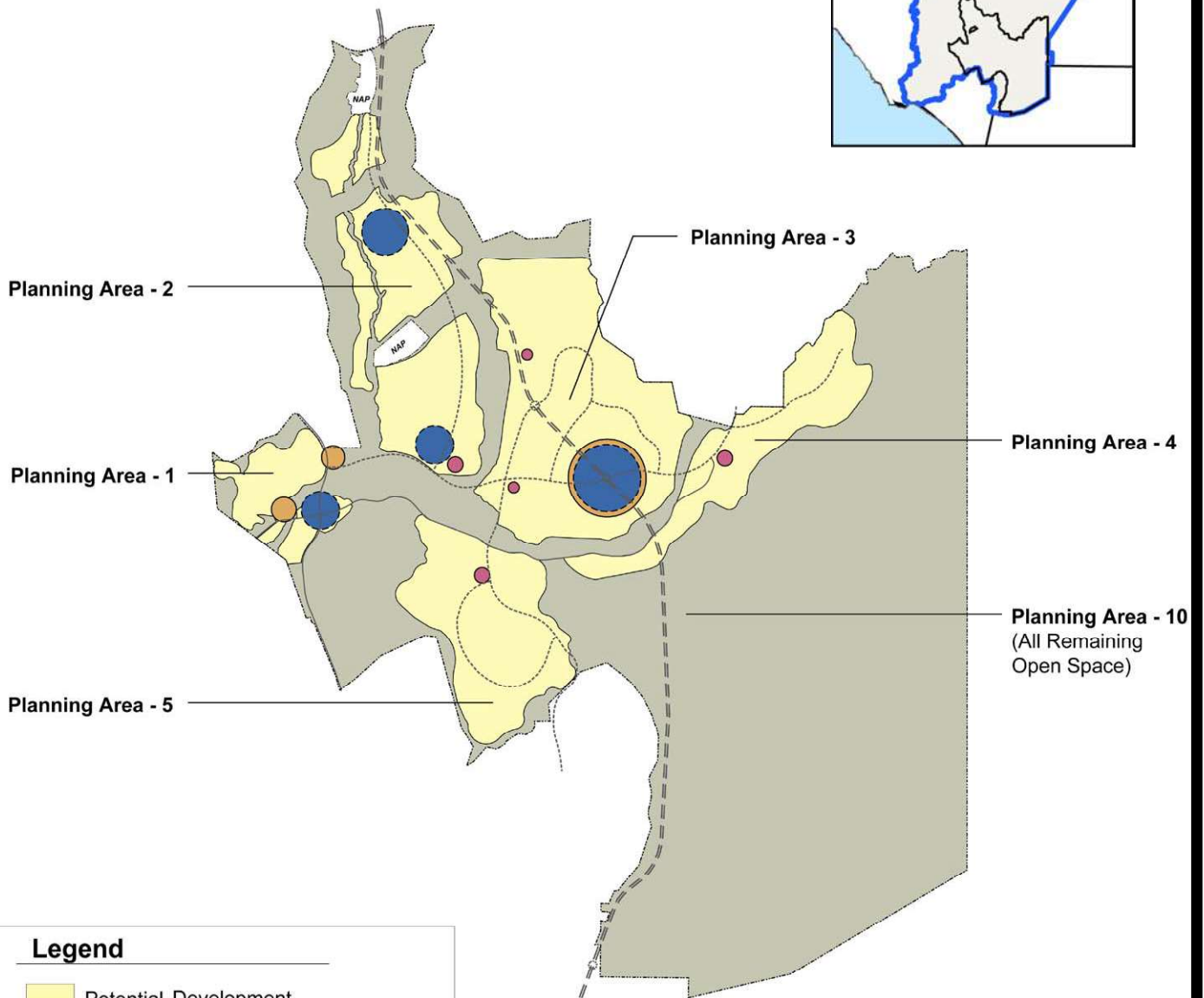
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-5

Source: EDAW, 2003



Date: Nov. 2005



Legend

- Potential Development
 - Urban Activity Center
 - Neighborhood Center
 - Business Park
 - Open Space
- ▶ Reflects relative size and approximate location
- == MPAH FTC - South: Shown for Informational Purposes Only
- Reflects Conceptual Road Alignments

Alternative B-5

Not to Scale

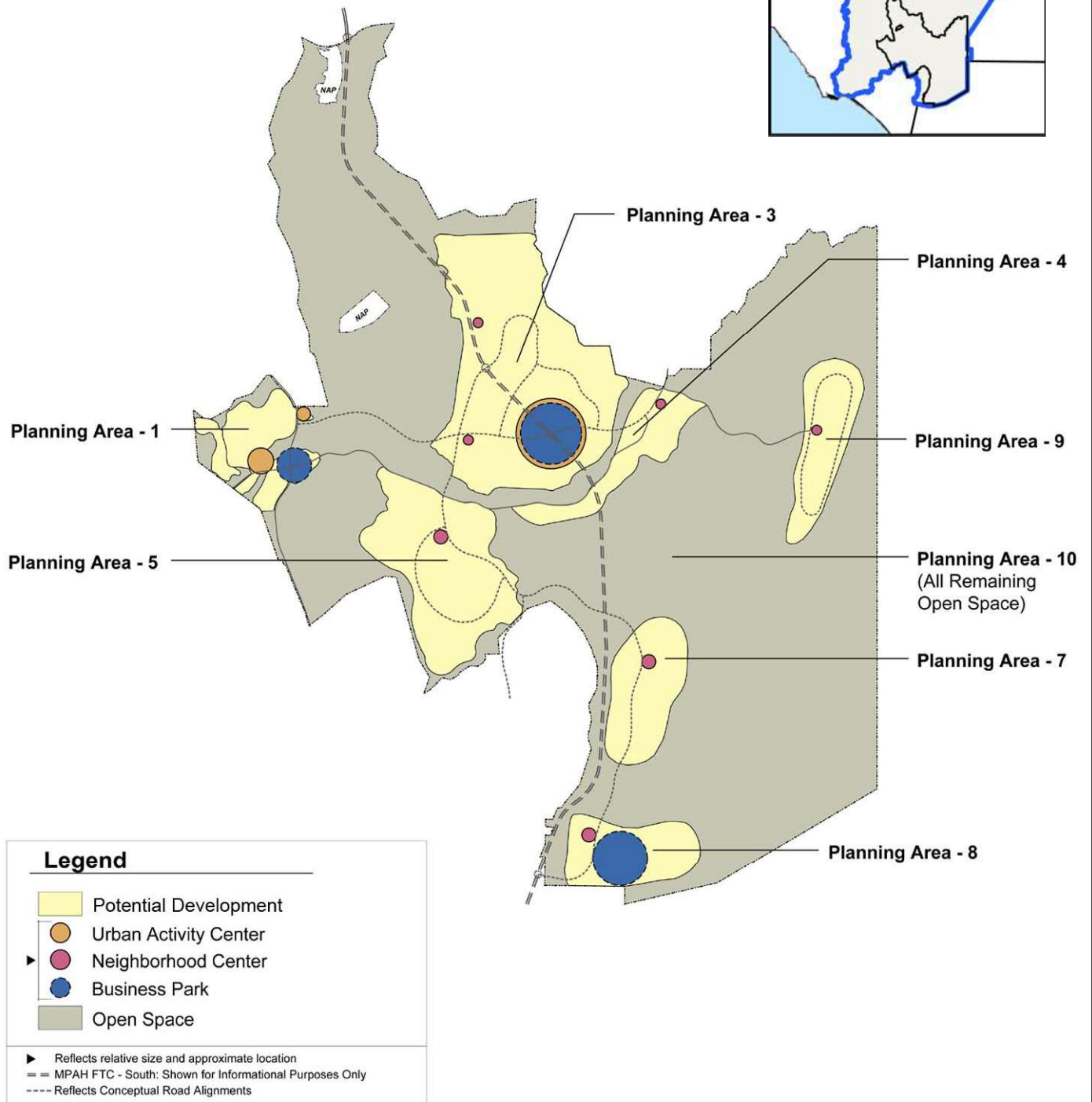
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-6

Source: EDAW, 2003



Date: Nov. 2005



Alternative B-6

Not to Scale

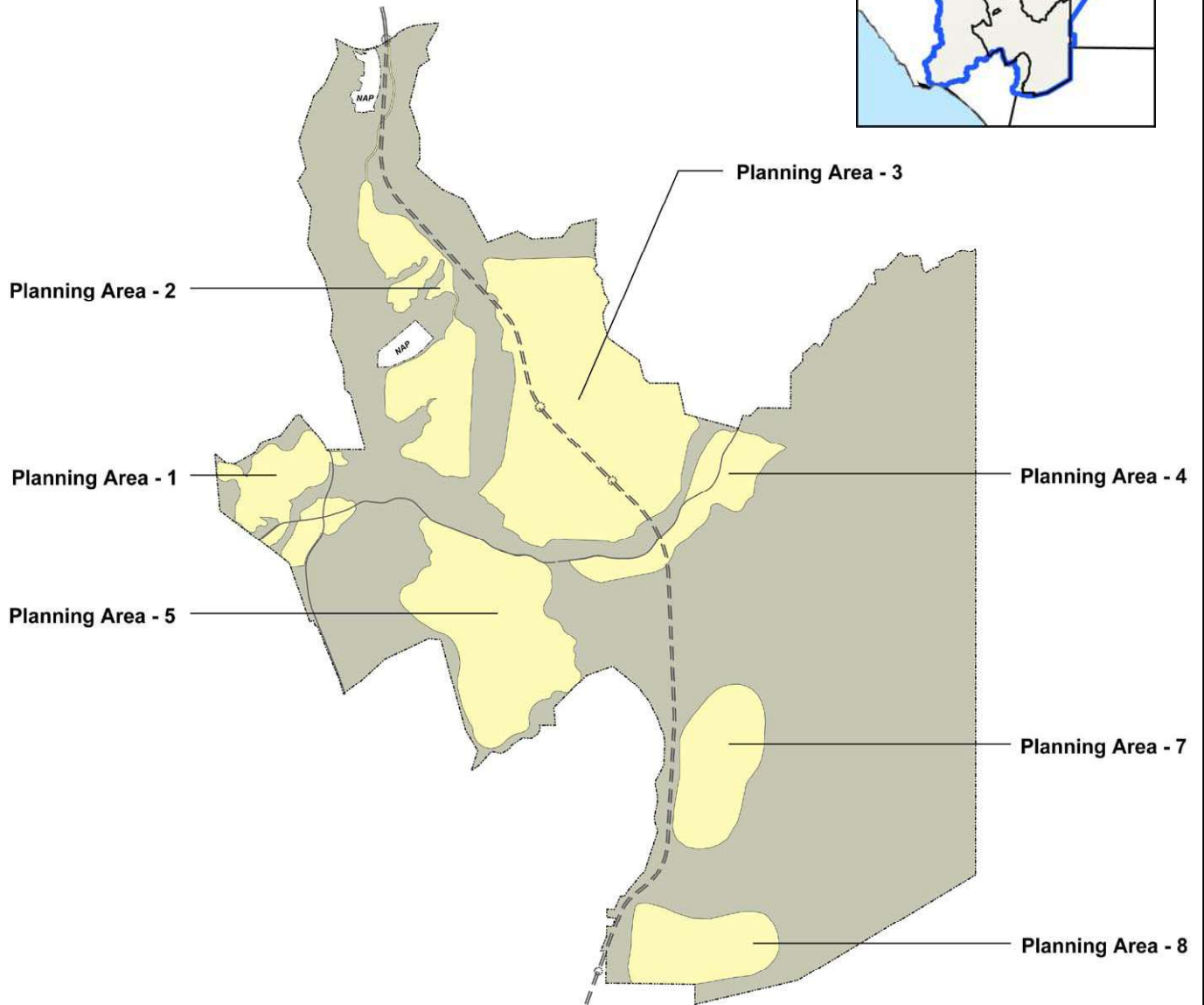
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-7

Source: EDAW, 2003



Date: Nov. 2005



Legend

- Potential Development
- Open Space

== MPAH FTC - South: Shown for Informational Purposes Only

Alternative B-7

Not to Scale

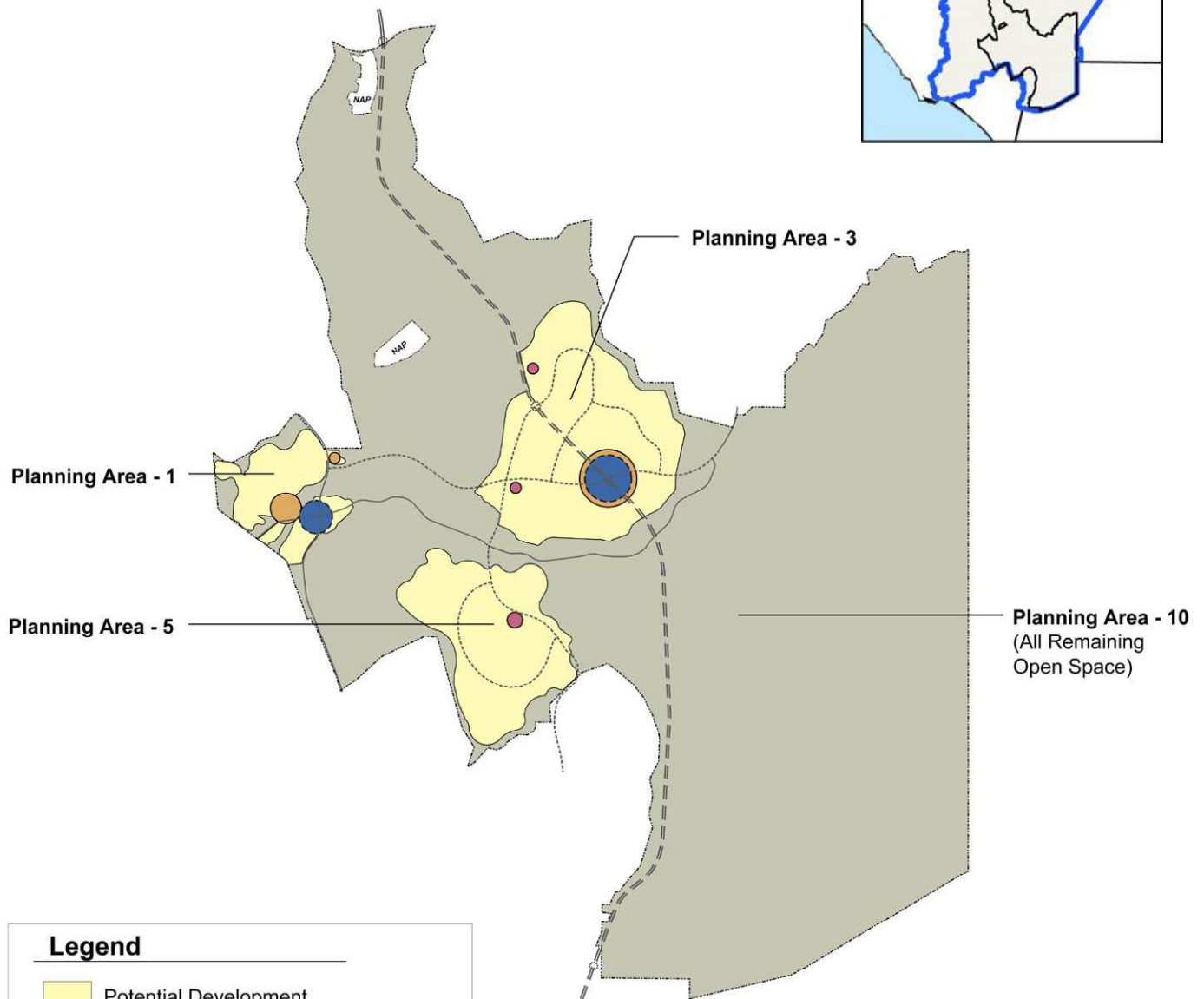
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-8

Source: EDAW, 2003



Date: Nov. 2005



Legend

- Potential Development
 - Urban Activity Center
 - Neighborhood Center
 - Business Park
 - Open Space
- ▶ Reflects relative size and approximate location
- == MPAH FTC - South: Shown for Informational Purposes Only
- Reflects Conceptual Road Alignments

Alternative B-8

Not to Scale

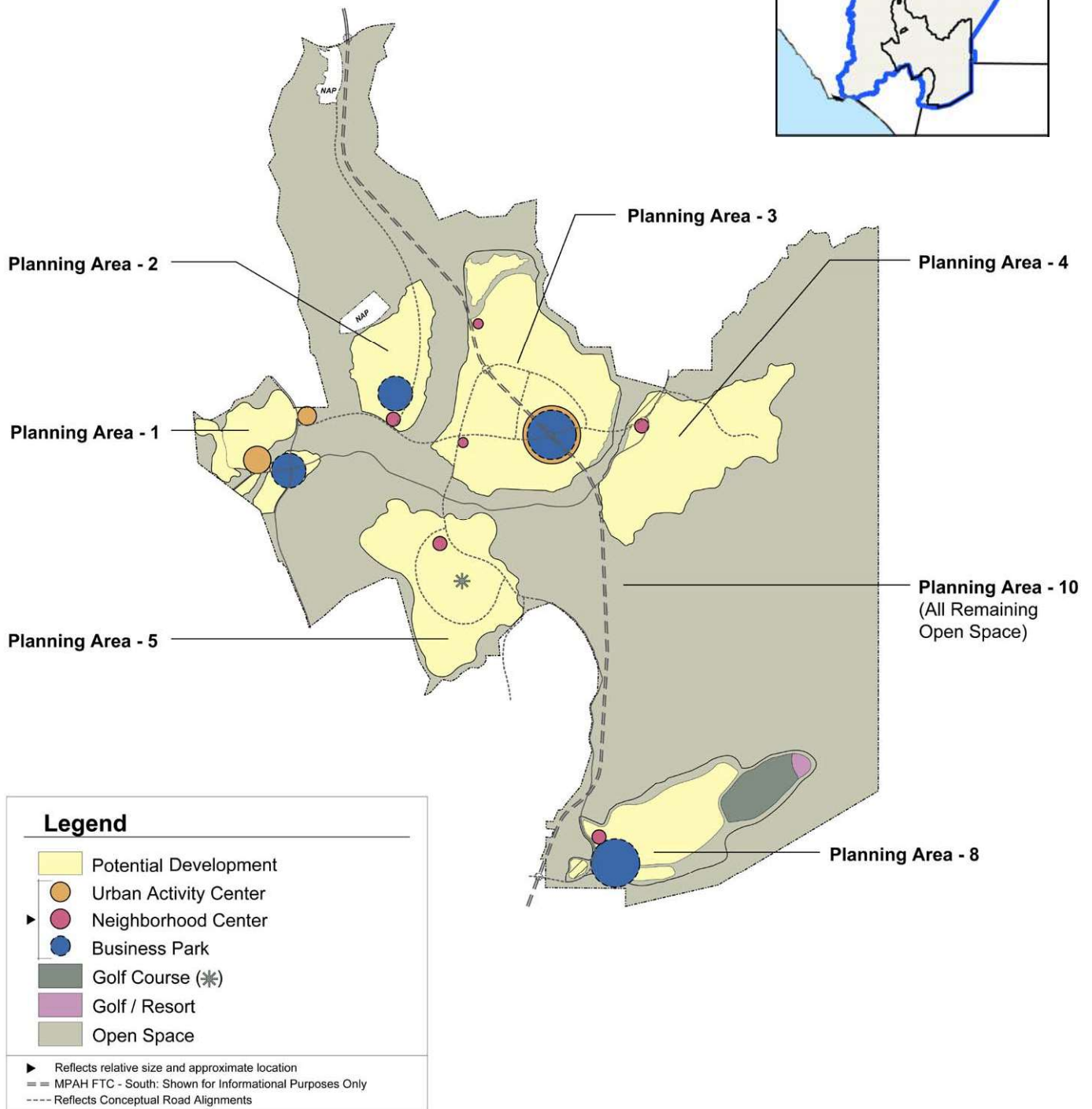
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-9

Source: EDAW, 2003



Date: Nov. 2005



Alternative B-9

Not to Scale

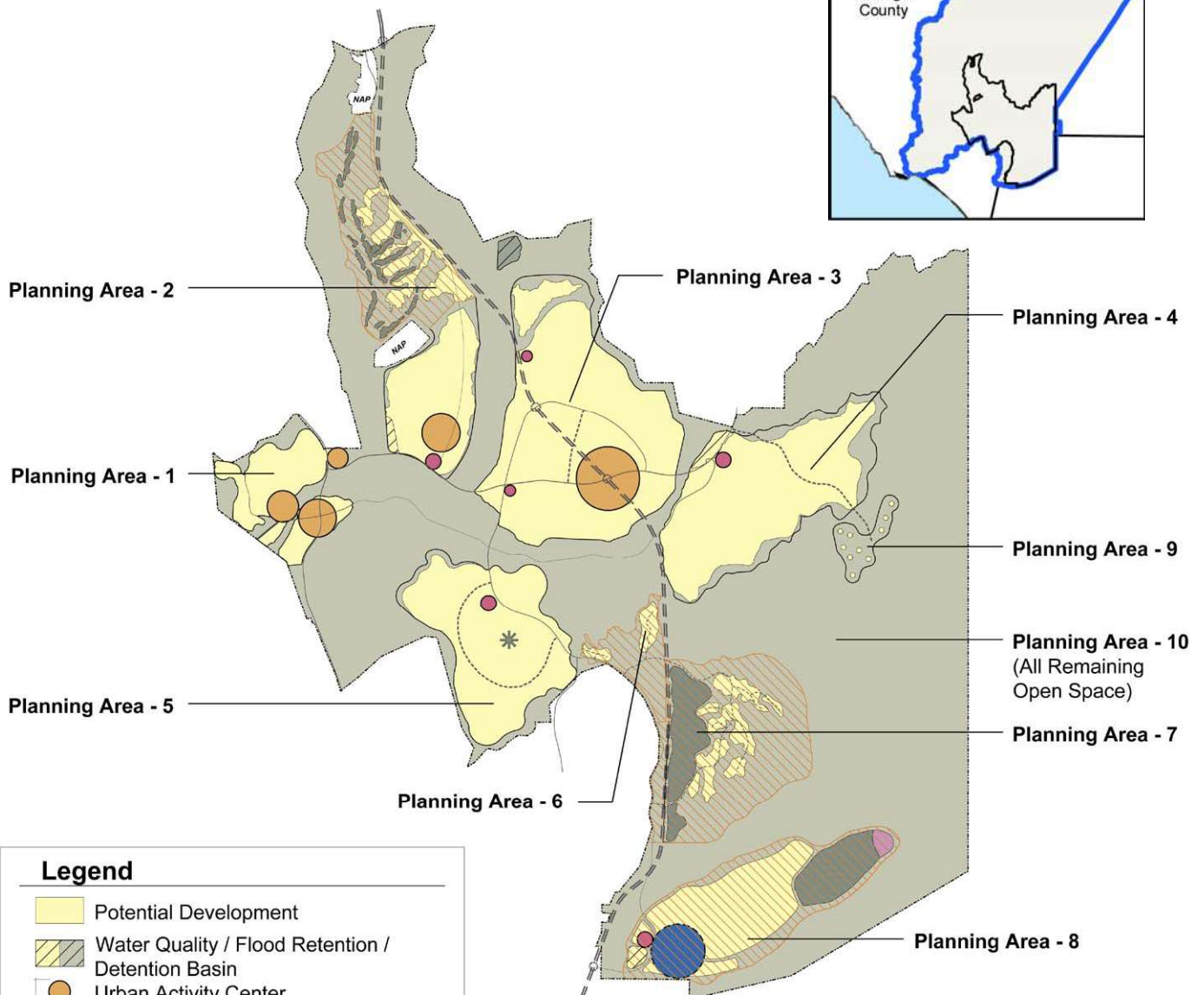
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-10

Source: EDAW, 2003



Date: Nov. 2005



Legend

- Potential Development
- Water Quality / Flood Retention / Detention Basin
- Urban Activity Center
- Neighborhood Center
- Business Park
- Golf Course (*)
- Golf / Resort
- Open Space
- Planning Reserve

- Reflects relative size and approximate location
- MPAH FTC - South: Shown for Informational Purposes Only
- Reflects Conceptual Road Alignments

Alternative B-10 Modified

Not to Scale

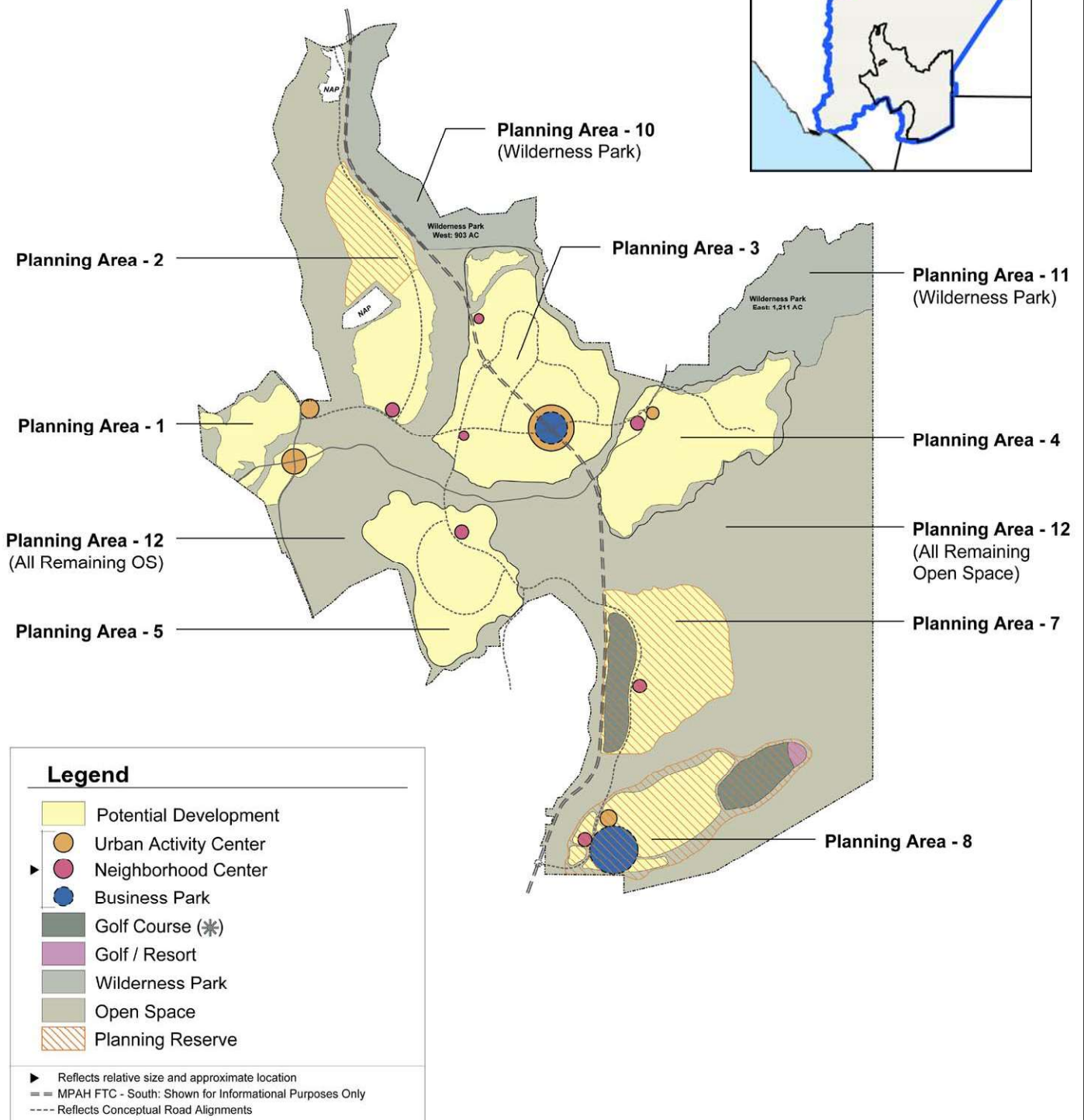
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-11

Source: EDAW, 2004



Date: Nov. 2005



Alternative B-11

Not to Scale

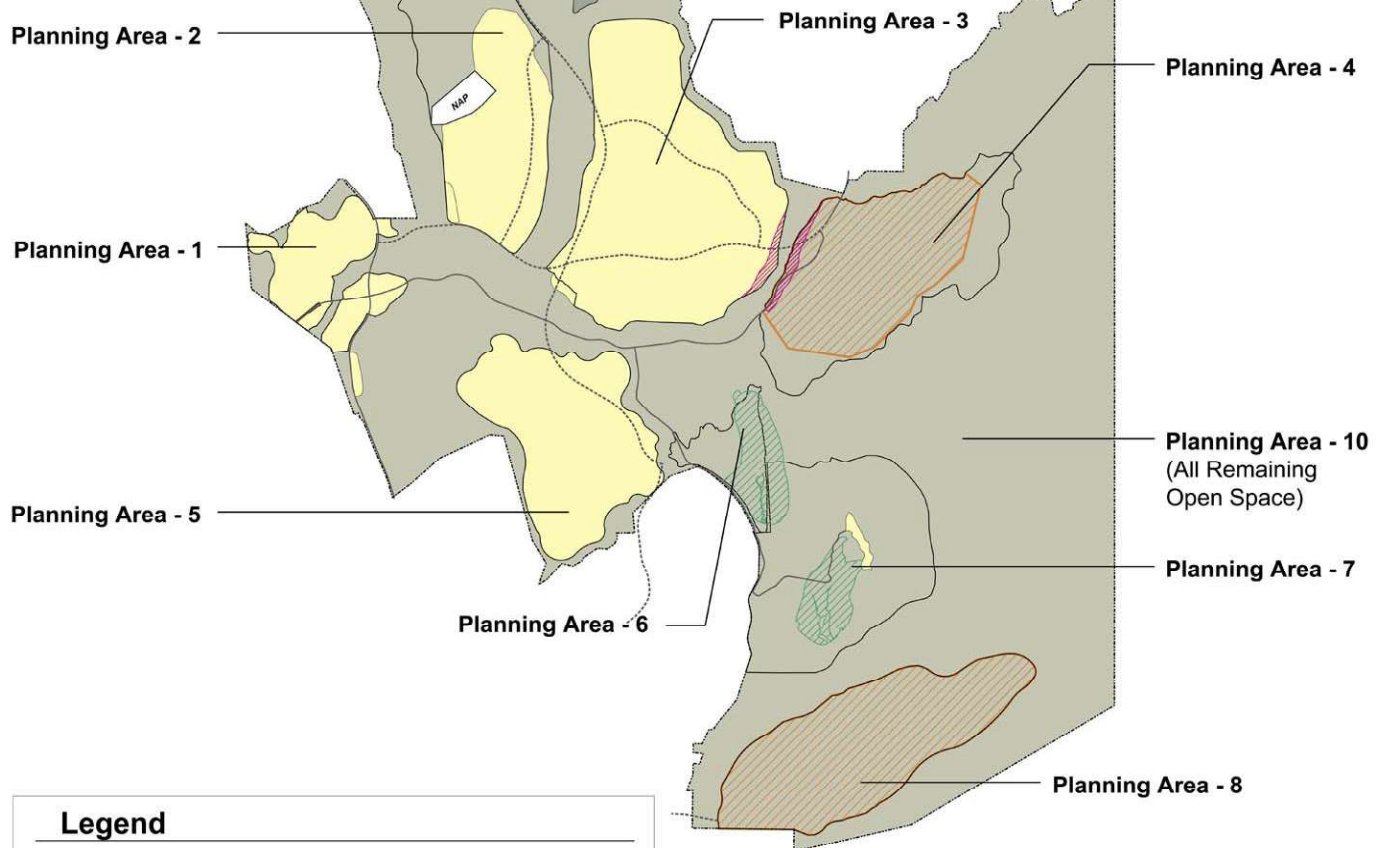
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-12

Source: EDAW, 2003



Date: Nov. 2005



Legend

- Planning Area Boundary
- 200 Meter Setback
- Potential Development
- Water Quality/ Flood Retention/ Detention Basin
- Impact Analysis Areas - Development
- Impact Analysis Areas - Potential Orchards
- Open Space

----- Reflects Conceptual Road Alignments

Alternative B-12

Not to Scale

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

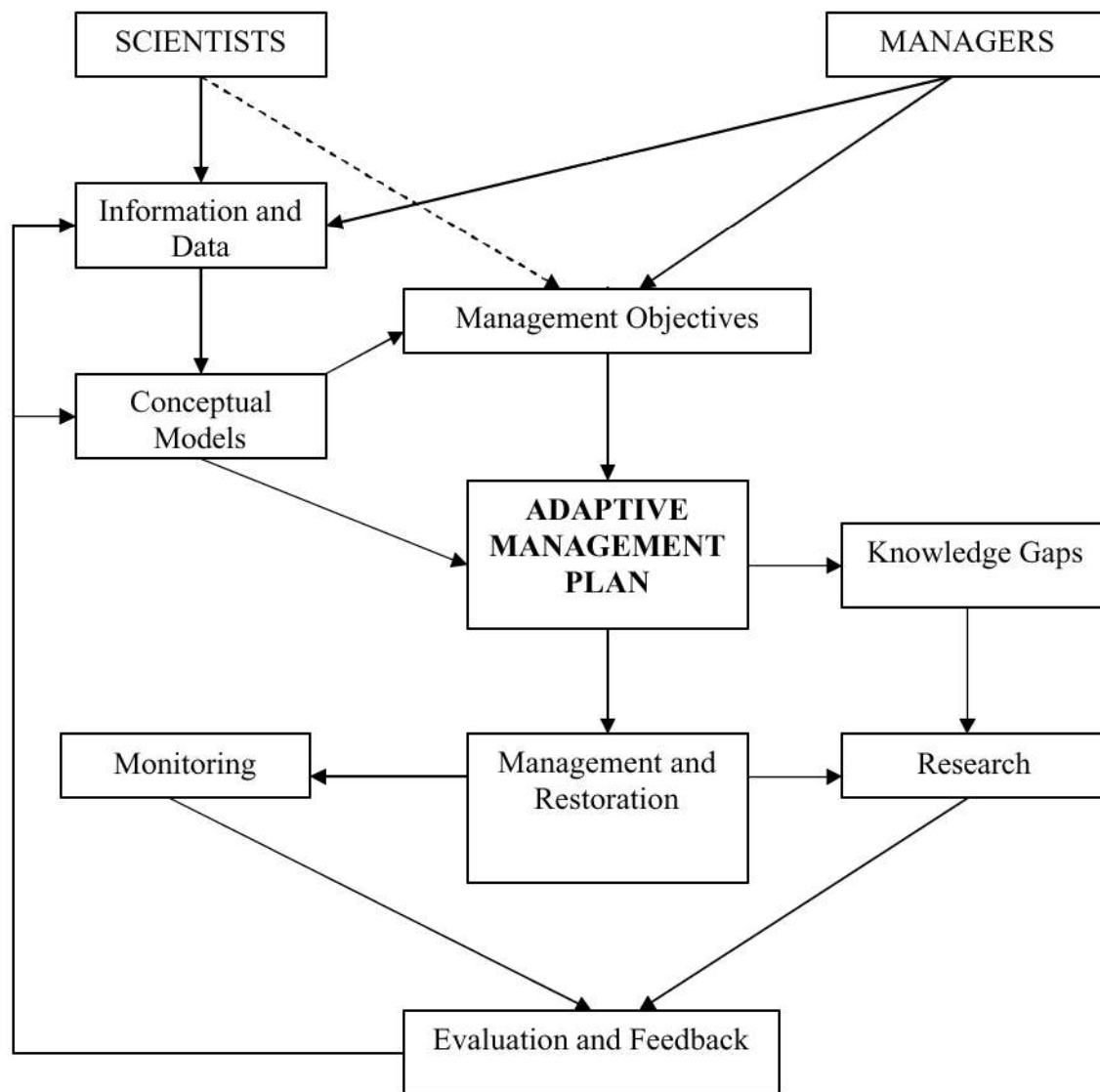
Figure: 5-13

Source: EDAW, 2005



Date: Nov. 2005

Aquatic Resources Adaptive Management Program Flowchart



Aquatic Resources Adaptive Management Program Conceptual Flowchart

Not to Scale

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 5-14

Source: ScienceAdvisors/PrinciplesforAdaptiveManagement,SouthernOrangeCo.NCCP,1997



Date: Nov. 2005



Geomorphology Terrains

Not to Scale

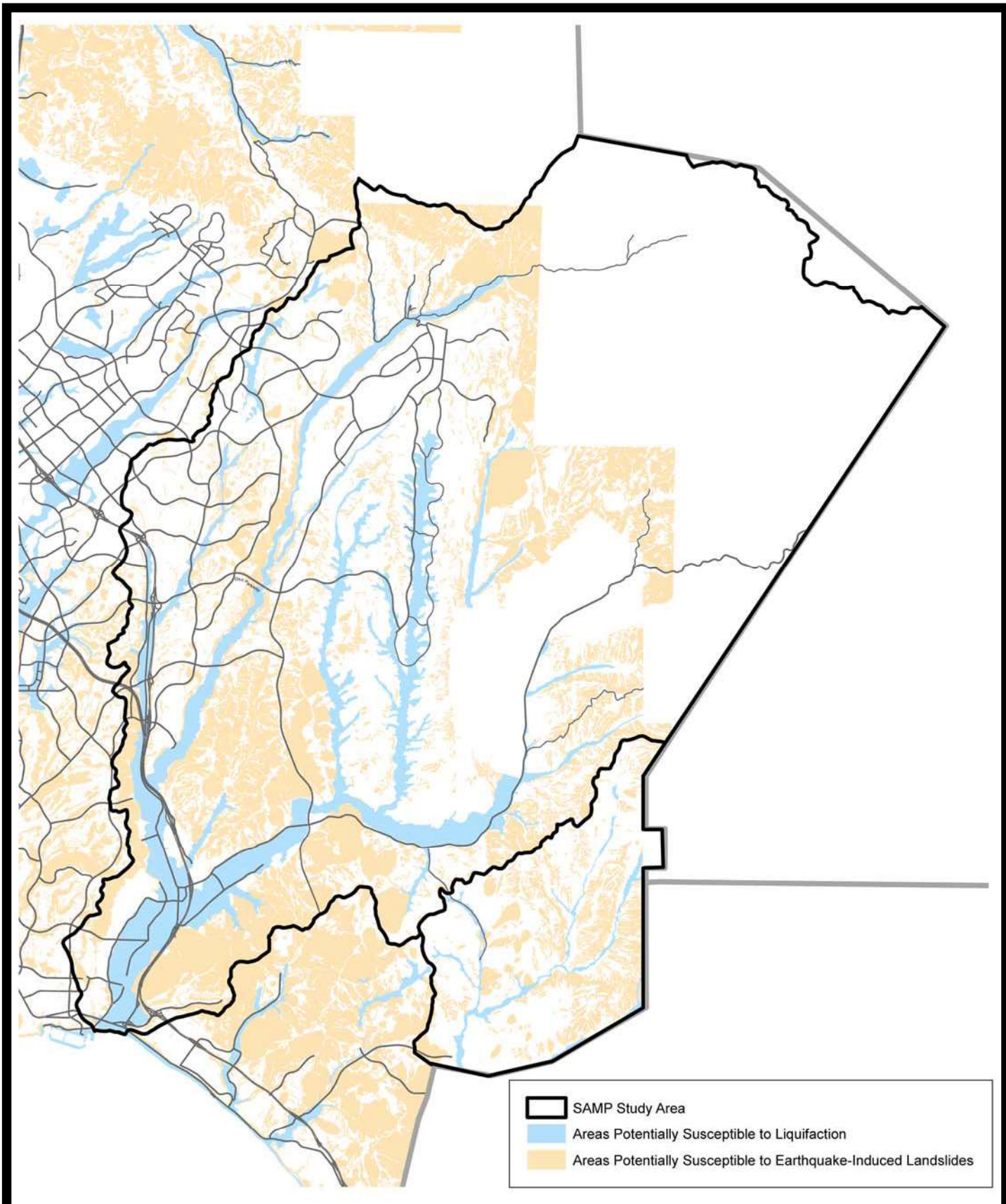
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 6-1

Source: Balance Hydrologics, 2000



Date: Nov. 2005



Seismic Hazards Zone Map

Not to Scale

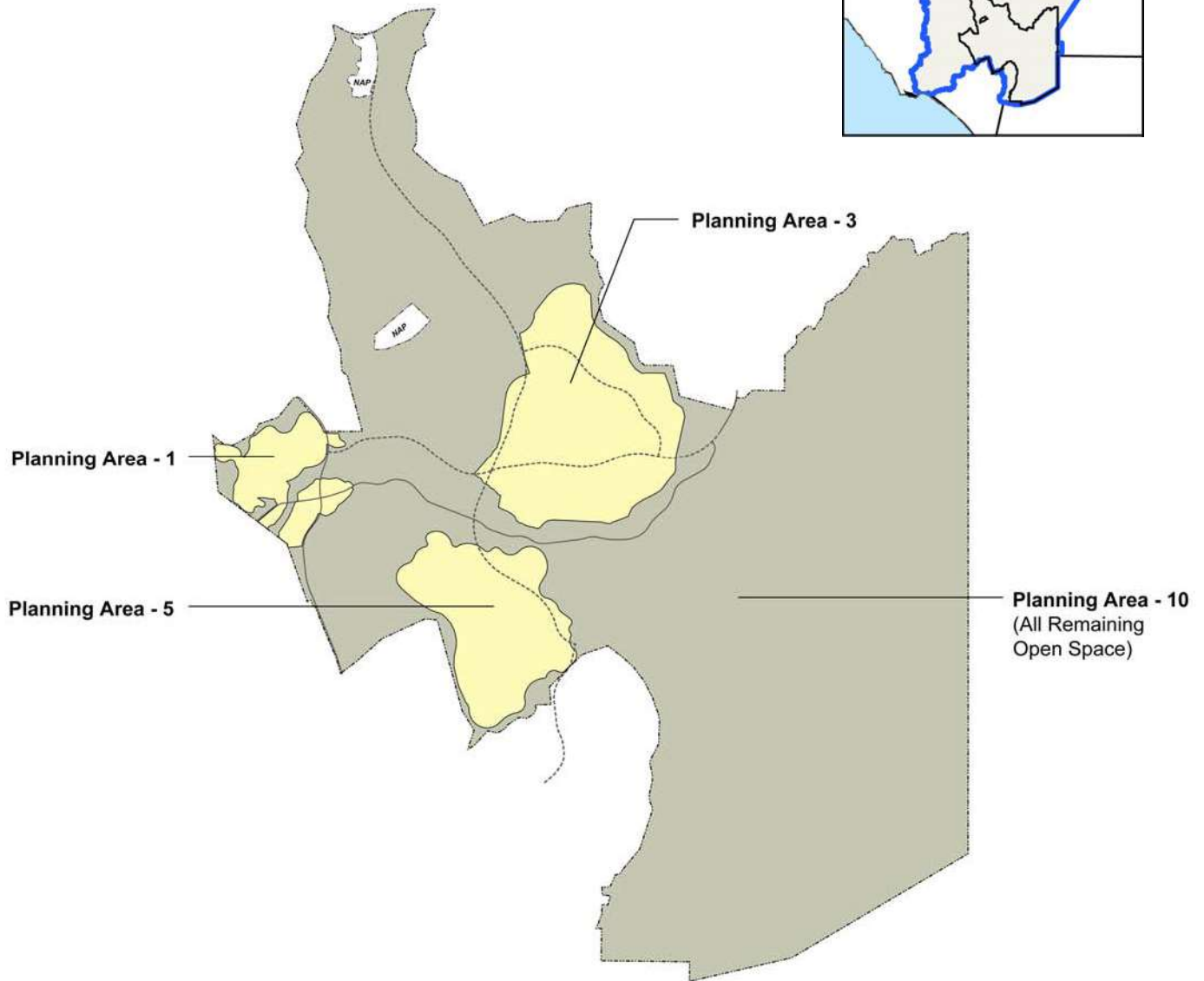
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 6-2

Source: California Geological Survey,
2001 and 2002



Date: Nov. 2005



Legend

- Potential Development
- Open Space

----- Reflects Conceptual Road Alignments

Alternative B-8 Circulation

Not to Scale

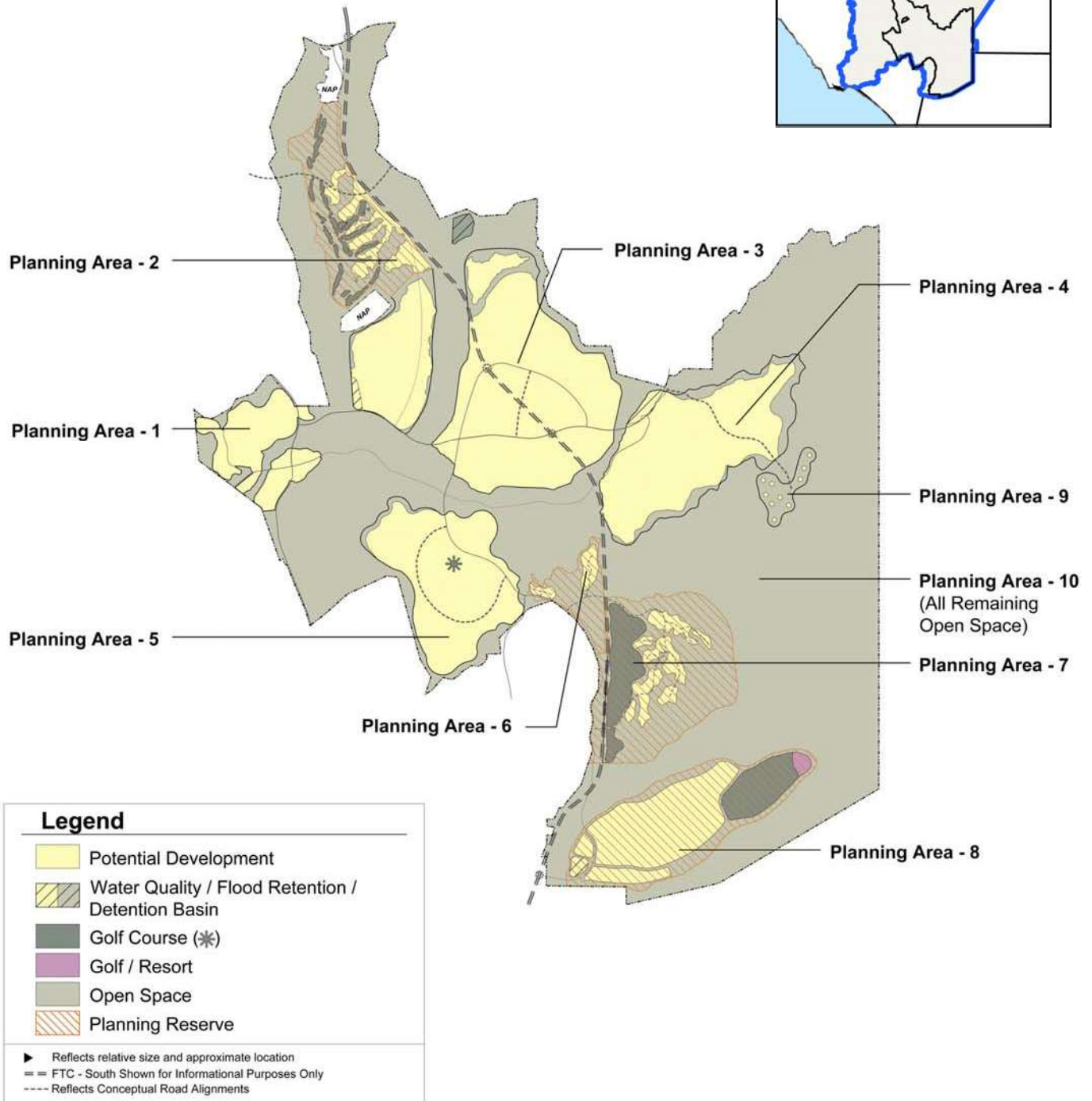
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 6-3

Source: EDAW, 2003



Date: Nov. 2005



Alternative B-10: Modified Circulation System

Not to Scale

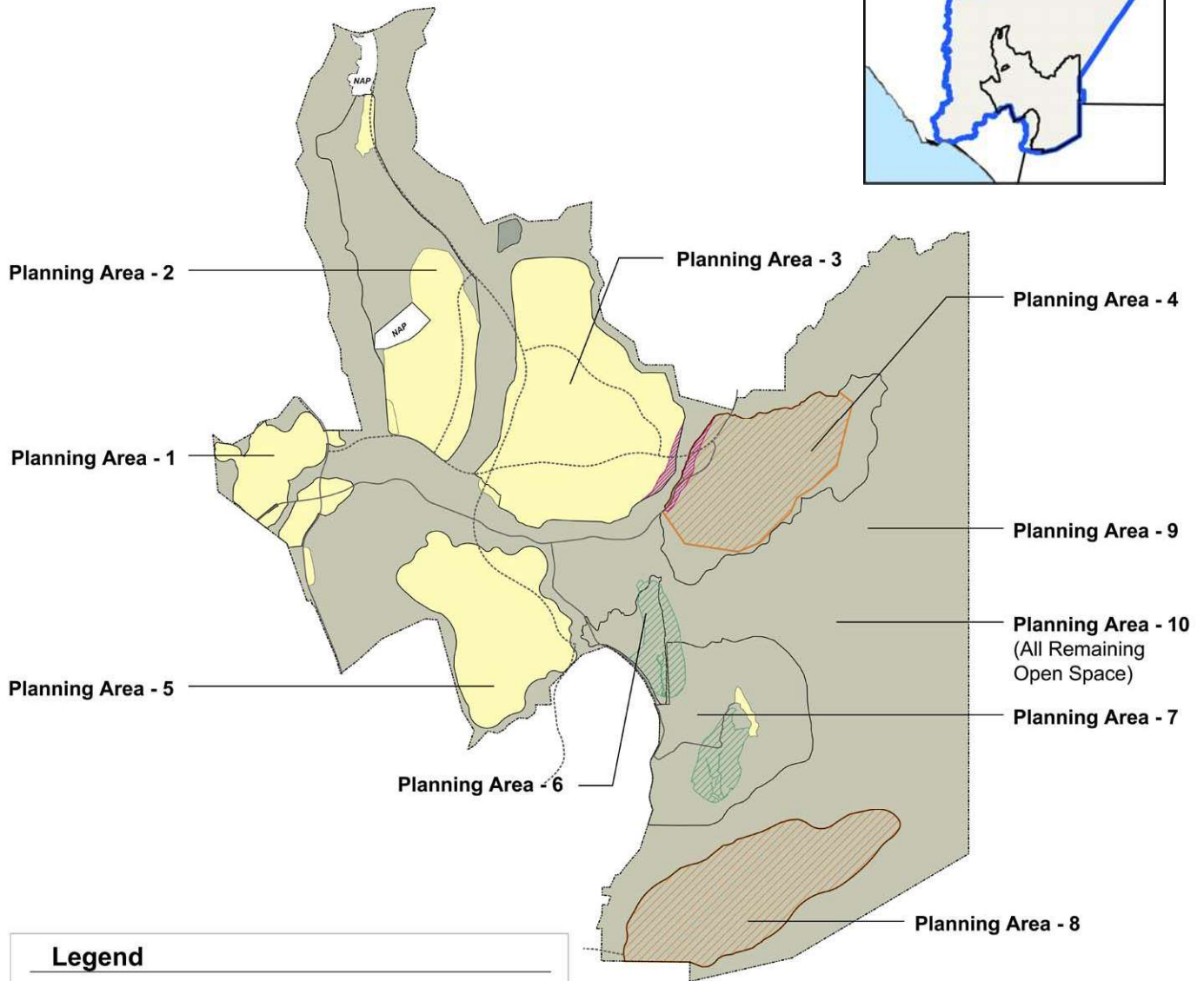
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 6-4

Source: EDAW, 2004



Date: Nov. 2005



Legend

- Planning Area Boundary
- 200 Meter Setback
- Potential Development
- Water Quality/ Flood Retention/ Detention Basin
- Impact Analysis Areas - Development
- Impact Analysis Areas - Potential Orchards
- Open Space

----- Reflects Conceptual Road Alignments

Alternative B-12 Circulation System

Not to Scale

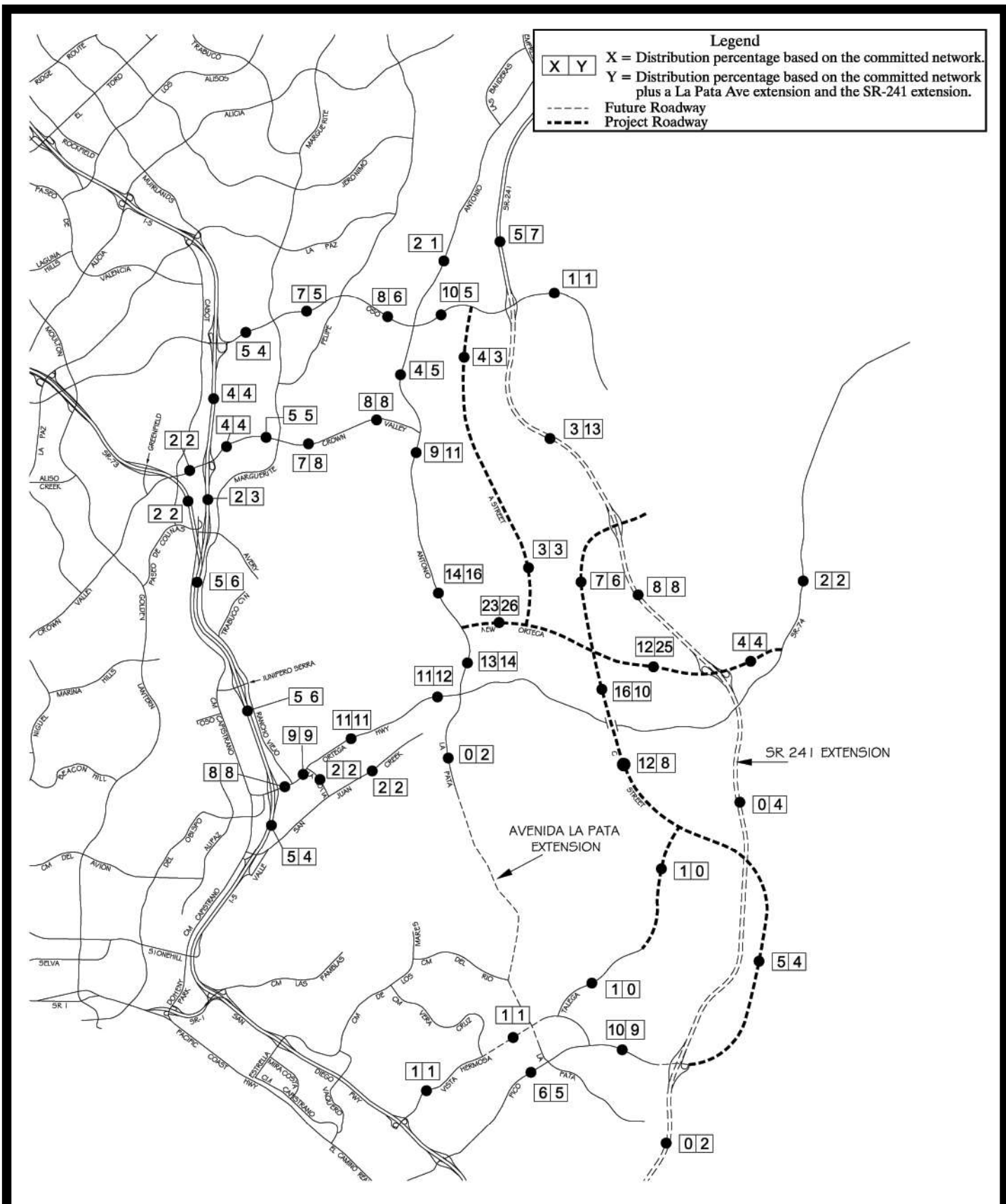
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 6-5

Source: EDAW, 2005



Date: 11-7-05



Alternative B-10 Modified Buildout Trip Distribution

Not to Scale

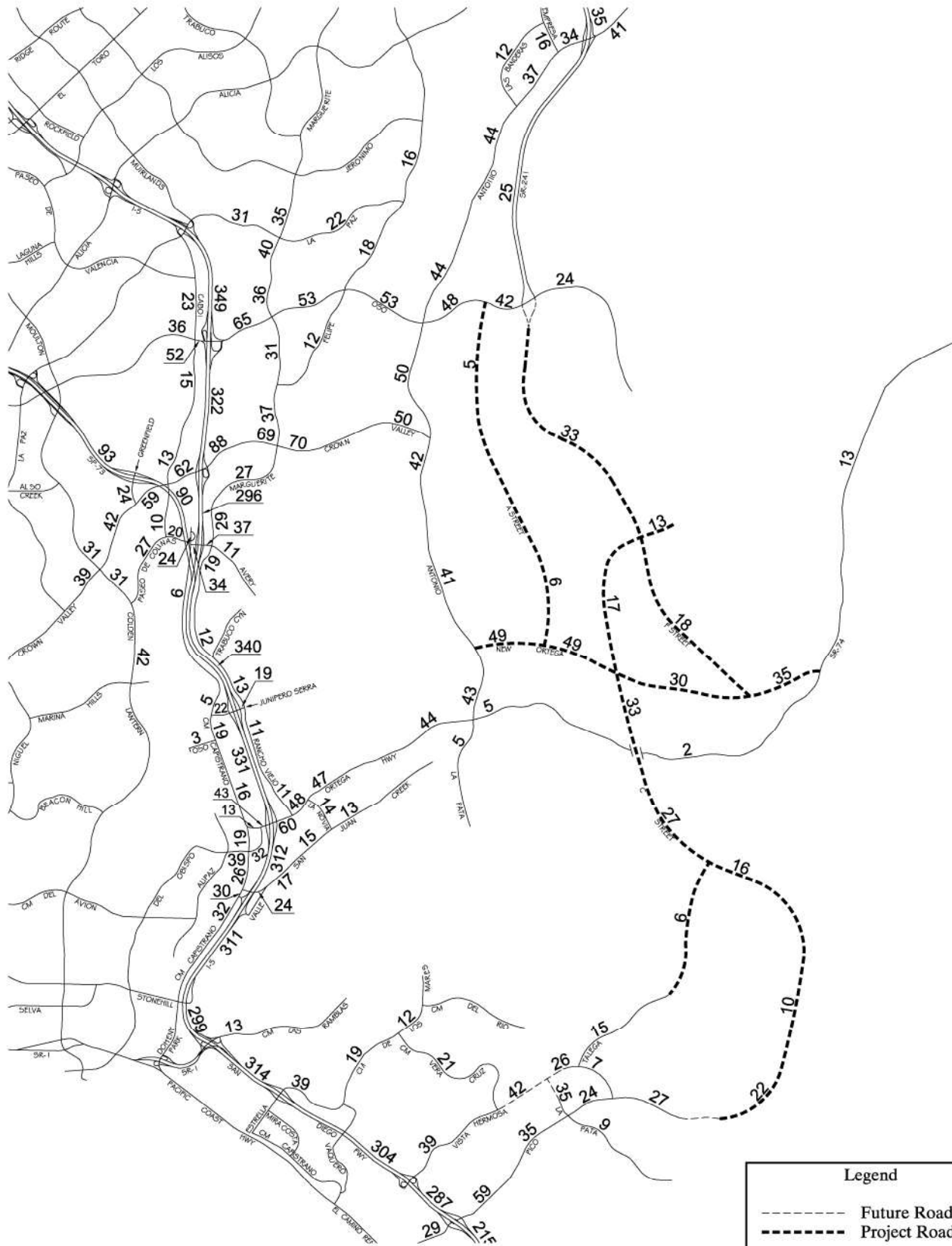
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.3-1

Source: Austin-Foust, 2004



Date: Nov. 2005



2025 + Alternative B-10 Modified Buildout: ADT Volumes (000s)
(Committed Circulation System)

Not to Scale

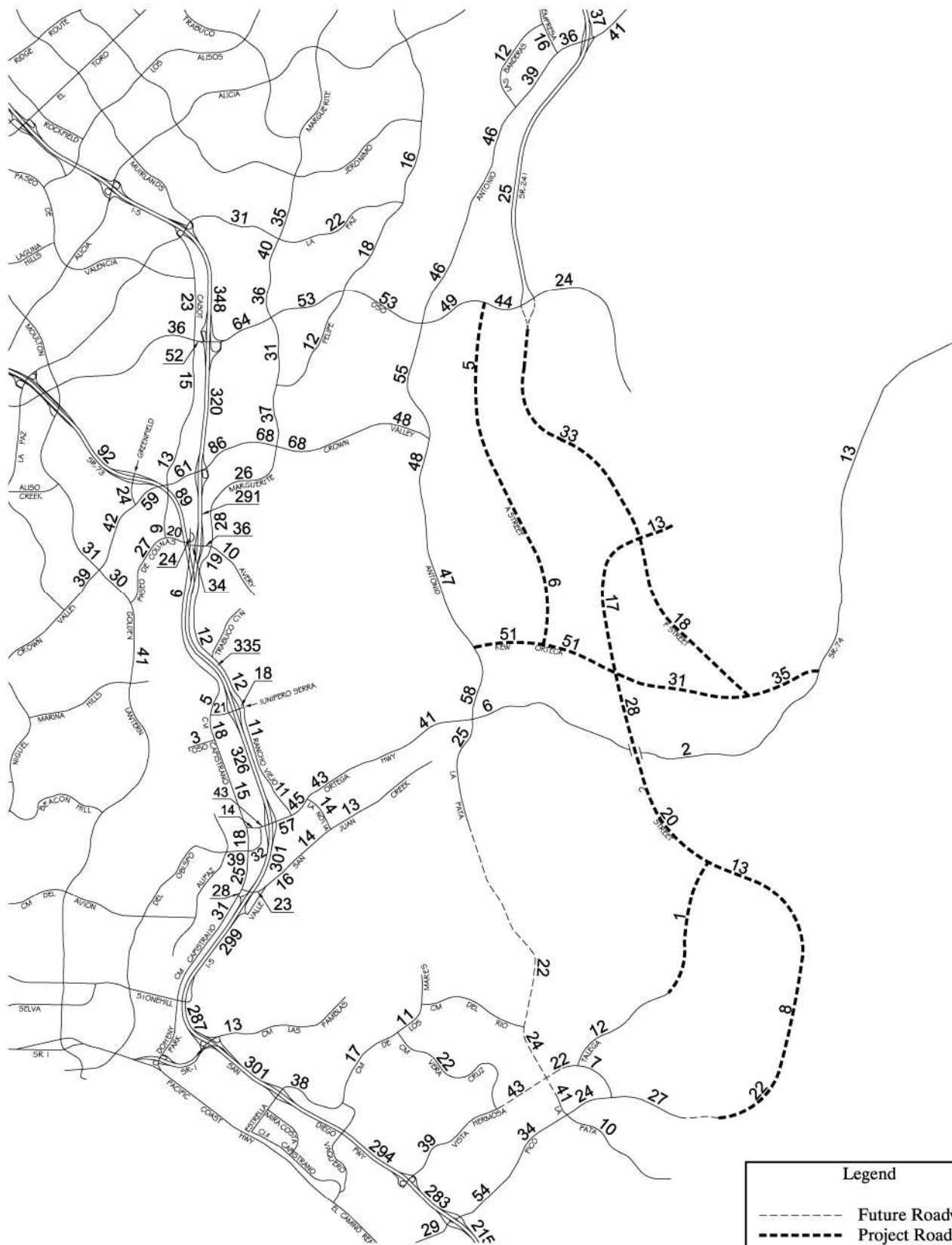
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.3-3

Source: Austin-Foust, 2004



Date: Nov. 2005



2025 + Alternative B-10 Modified Buildout: ADT Volumes (000s)
(Committed Circulation System with La Pata)

Not to Scale

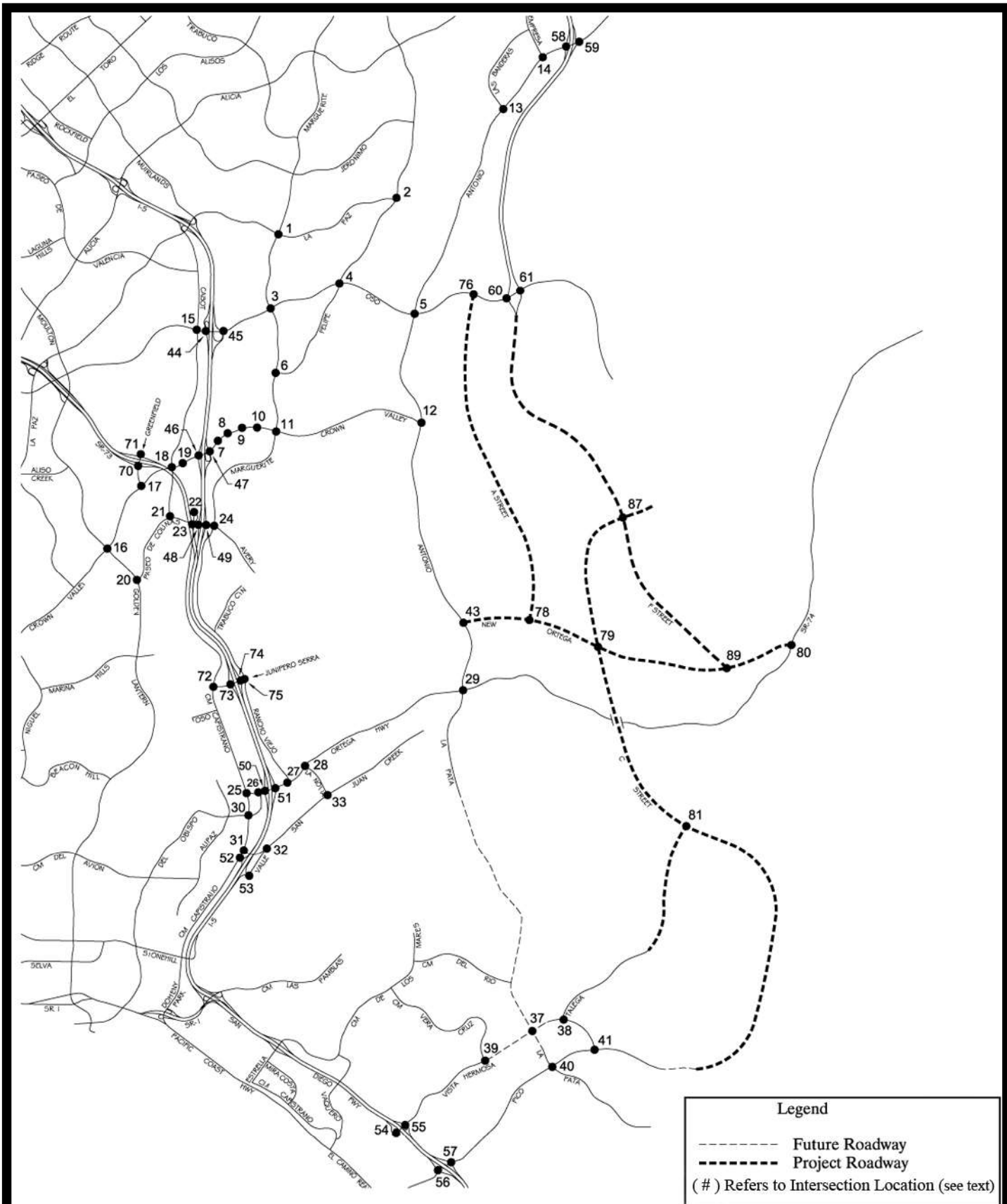


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.3-4

Source: Austin-Foust, 2004

Date: Nov. 2005



2025 + Alternative B-10 Modified Buildout: Intersection Location Map
(Without SR-241 Extension)

Not to Scale

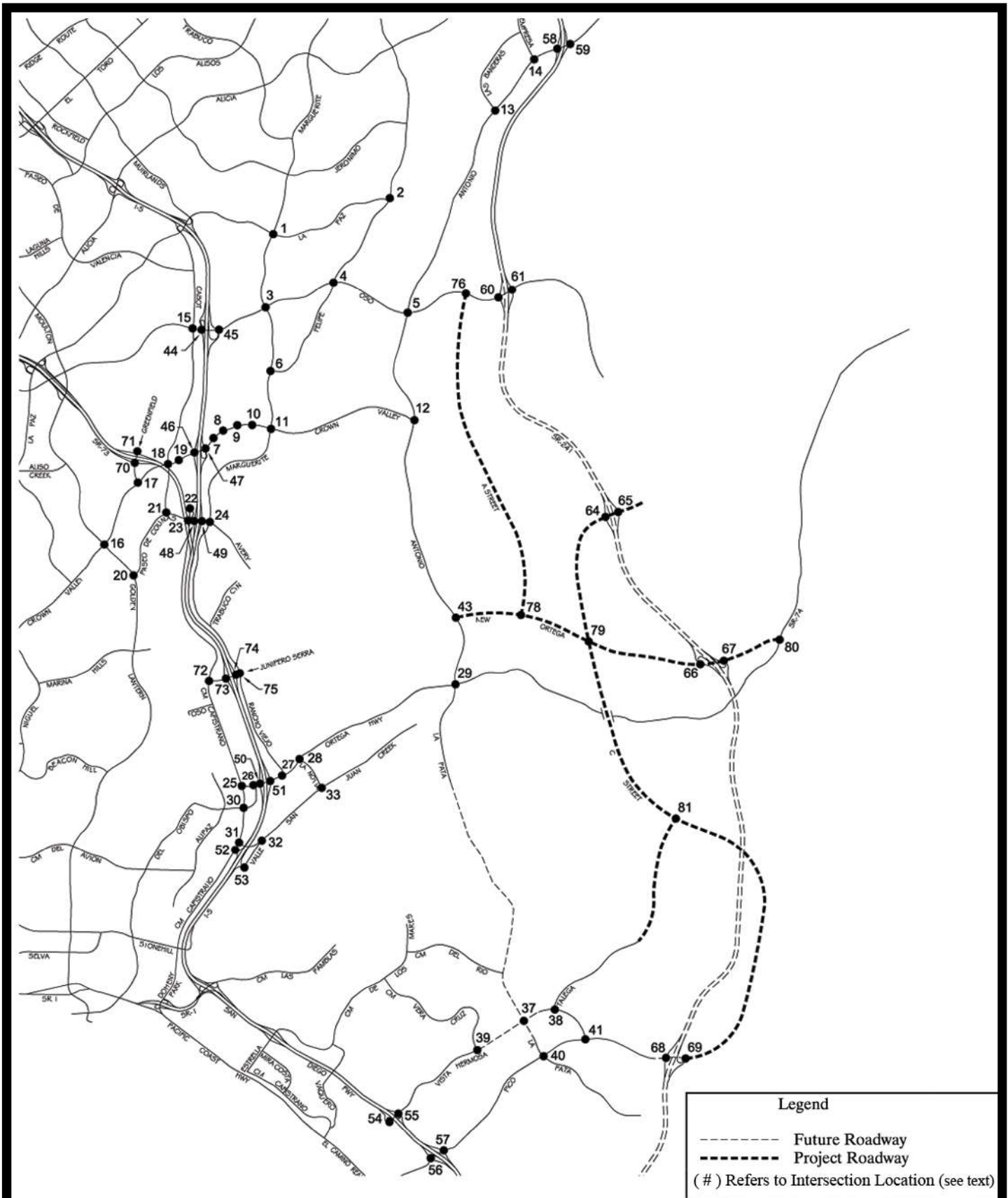


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.3-6

Source: Austin-Foust, 2004

Date: Nov. 2005



2025 + Alternative B-10 Modified Buildout: Intersection Location Map
(With SR-241 Extension)

Not to Scale

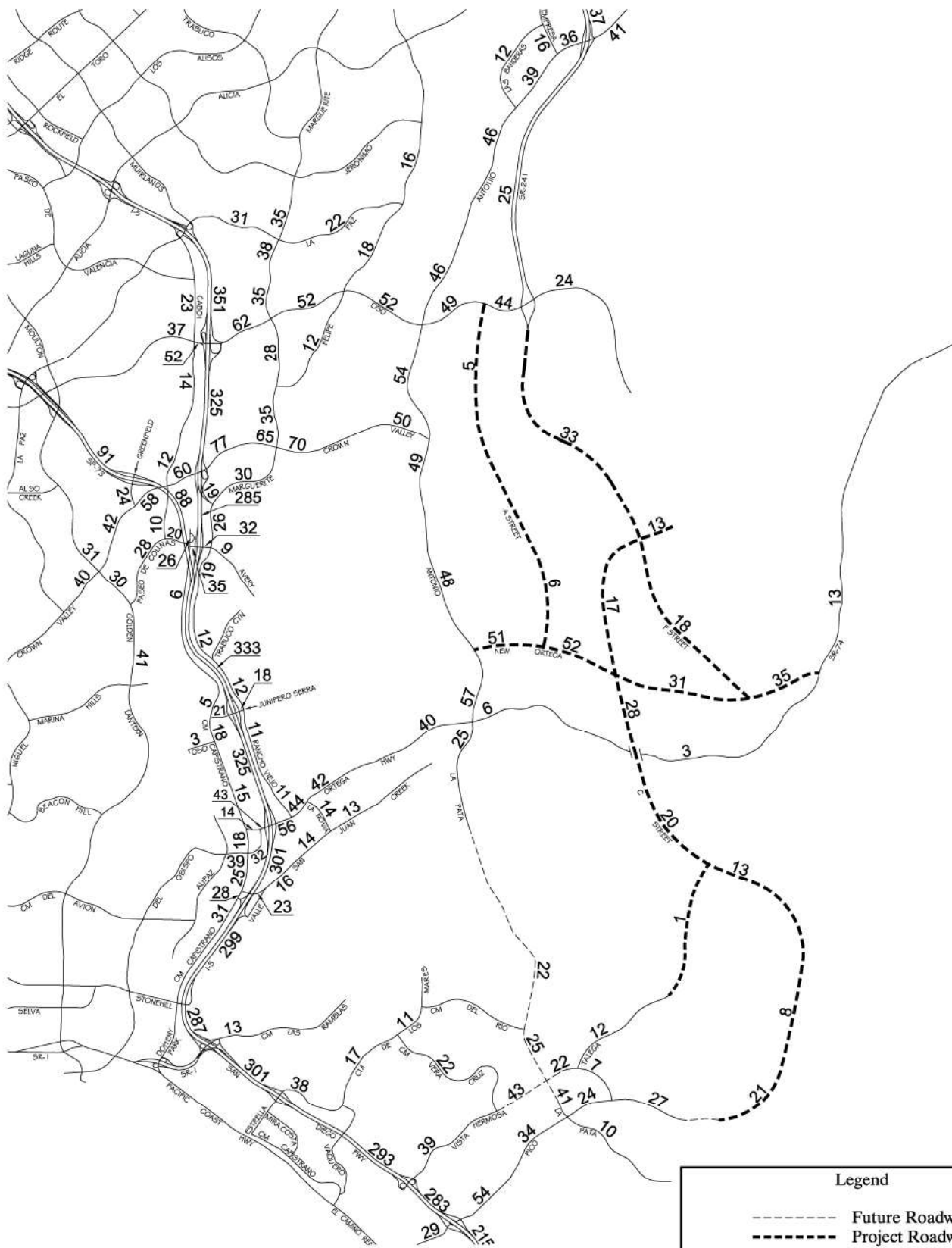


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.3-7

Source: Austin-Foust, 2004

Date: Nov. 2005



2025 With Alternative B-10 Modified + Mitigation: ADT Volumes (000s)
(Without SR-241)

Not to Scale

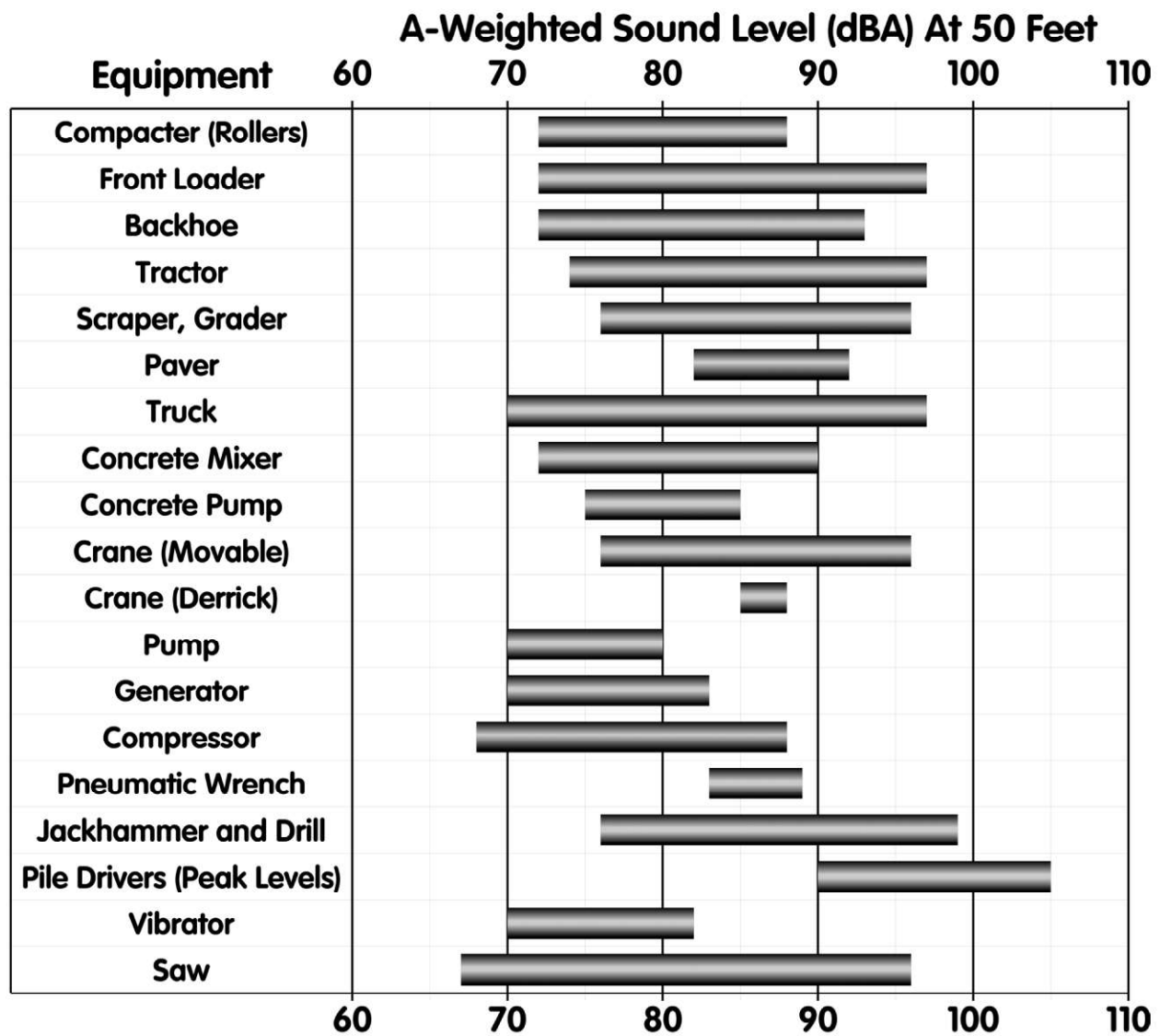
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.3-10

Source: Austin-Foust, 2004



Date: Nov. 2005



Construction Equipment Noise Levels

Not to Scale

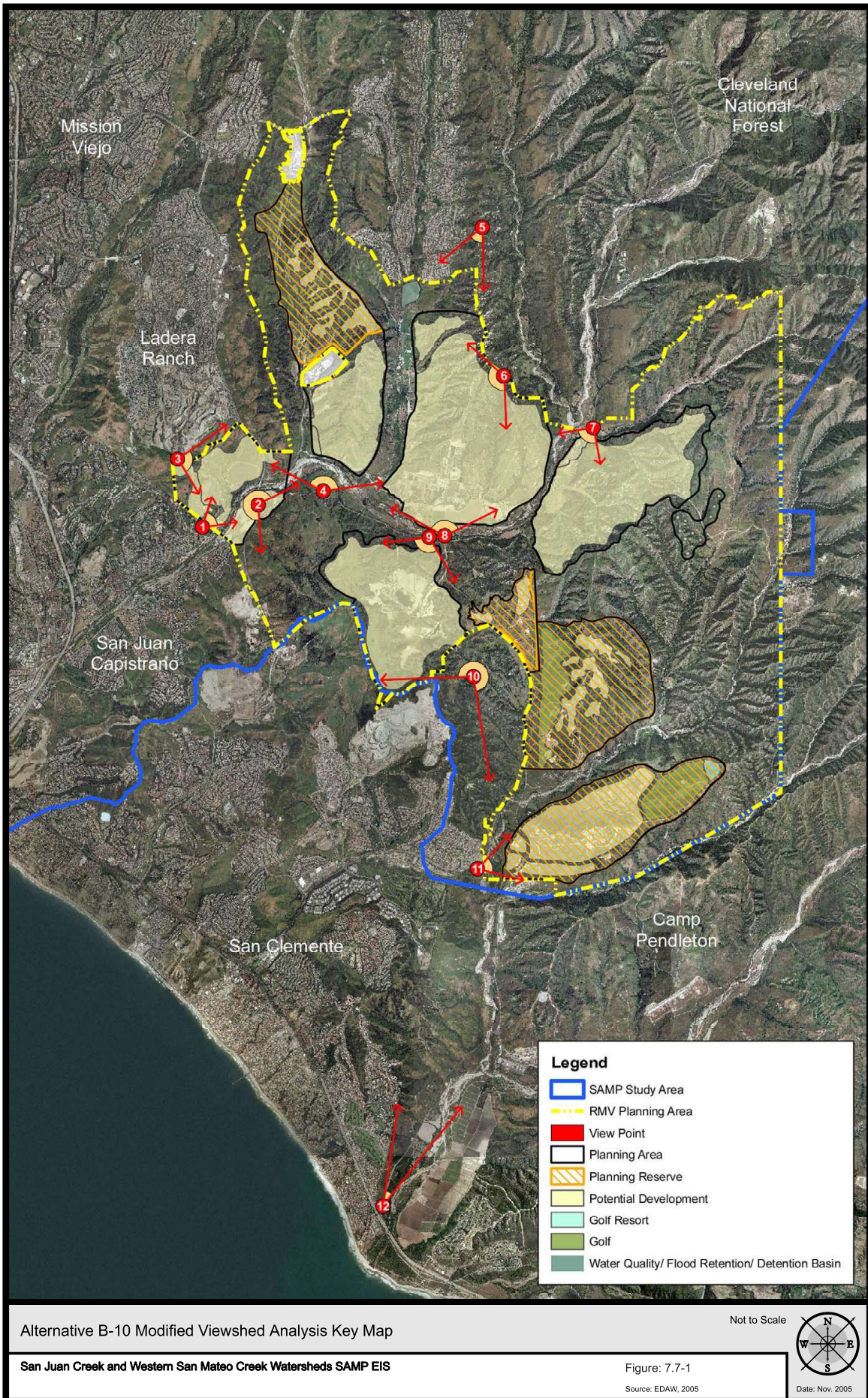


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

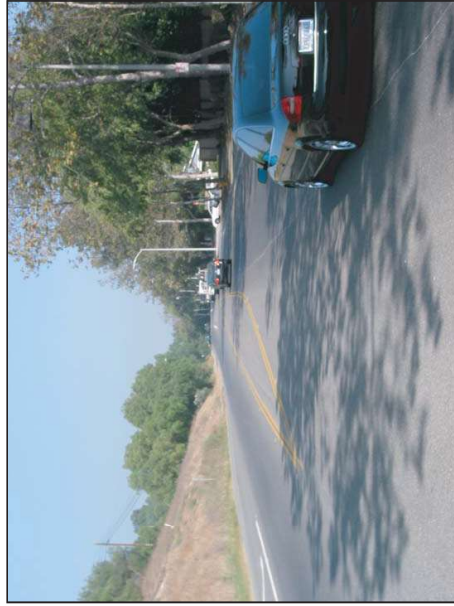
Figure: 7.6-1

Source: Handbook of Noise Control,
by Cyril Harris, 1979

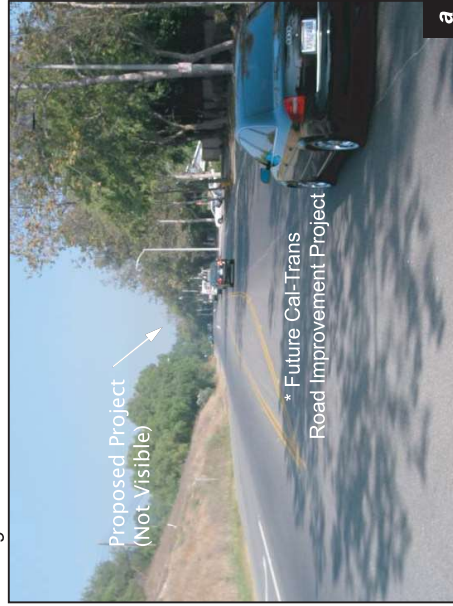
Date: Nov. 2005



Key Map



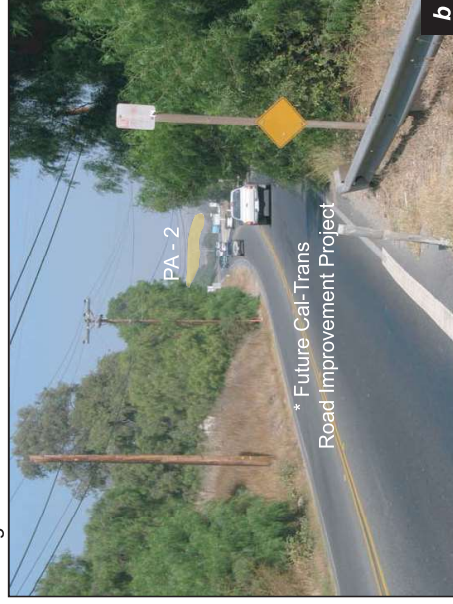
Existing



Proposed



Existing



Proposed

* Work will include road widening, traffic calming, and landscape improvements

Legend



Proposed
Development
Footprint

Proposed Development footprint(s) show development horizontal areas only. Vertical development heights and finished elevations are not generally depicted, unless specifically designated in the view.

Viewshed Analysis View 1a, 1b

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Not to Scale



Date: Nov. 2005

Figure: 7.7-2
Source: EDAW, Inc

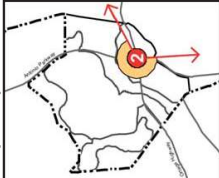


Existing



Proposed

Key Map



Legend



Proposed Development footprint(s) show development horizontal areas only. Vertical development heights and finished elevations are not generally depicted, unless specifically designated in the view.

Viewshed Analysis View 2

Not to Scale



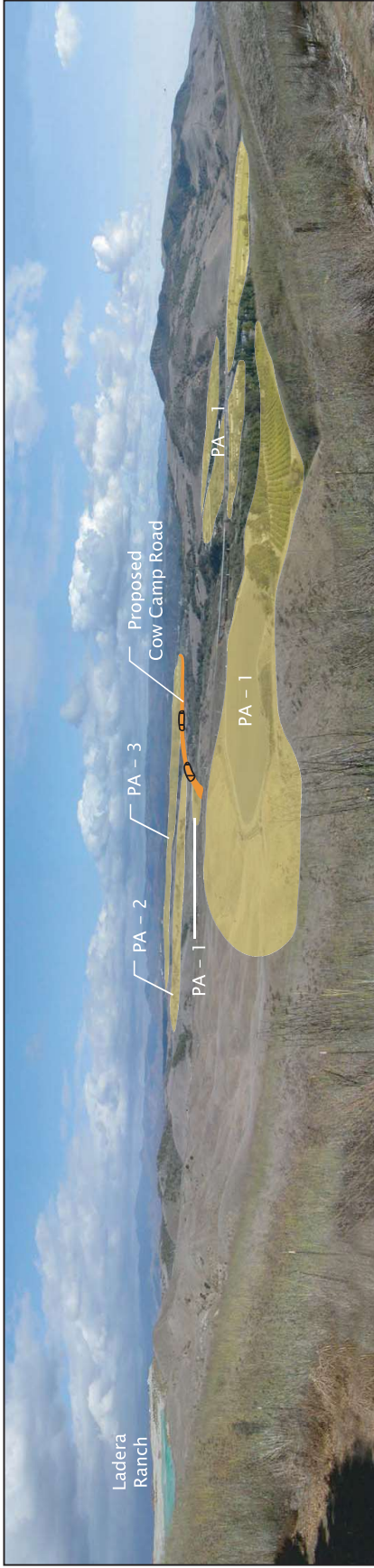
Date: Nov. 2005

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.7-3
Source: ED&W, Inc



Existing



Proposed

Key Map



Legend

Proposed Development Footprint



Proposed Cow Camp Road



Proposed Bridge Crossing



Proposed Development footprint(s) show development horizontal areas only. Vertical development, heights, and finished elevations are not generally depicted, unless specifically designated in the view.

Viewshed Analysis View 3

Not to Scale



Date: Nov. 2005

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.7-4

Source: ED&W, Inc.



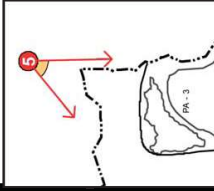
Existing



Proposed

Reflects a Conceptual Example of Proposed Project Development

Key Map



Viewshed Analysis View 5

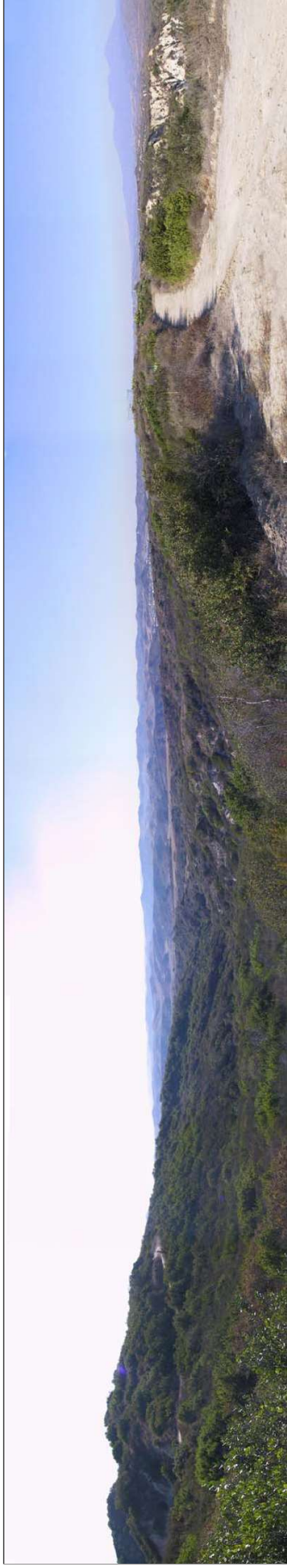
Not to Scale



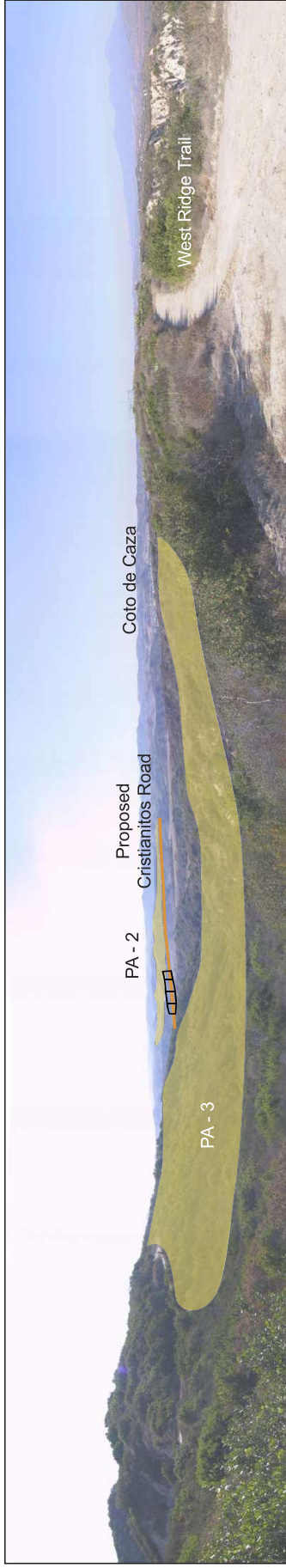
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.7-6
Source: EDAW, Inc

Date: Nov. 2005



Existing

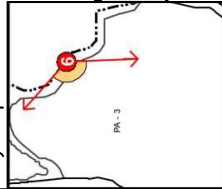


Proposed

Legend

- Proposed Development Footprint
- Proposed Cristianitos
- Proposed Bridge Crossing

Key Map



Proposed Development footprint(s) show development horizontal areas only. Vertical development heights and finished elevations are not generally depicted, unless specifically designated in the view.

Not to Scale



Date: Nov. 2005

Viewshed Analysis View 6

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.7-7
Source: EDAW, Inc

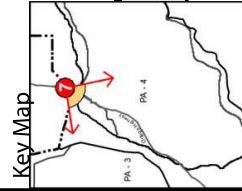


Existing



Proposed

Reflects a Conceptual Example of Proposed Project Development



Viewshed Analysis View 7

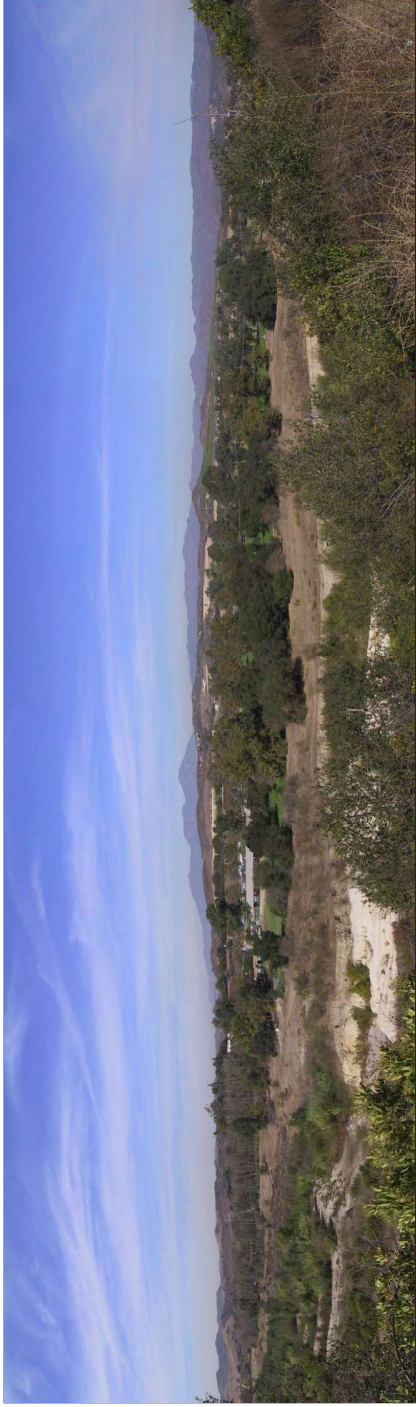
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Not to Scale



Date: Nov. 2005

Figure: 7.7-8
Source: EDAW, Inc.



Existing



Proposed

Key Map



Viewshed Analysis View 8

Not to Scale



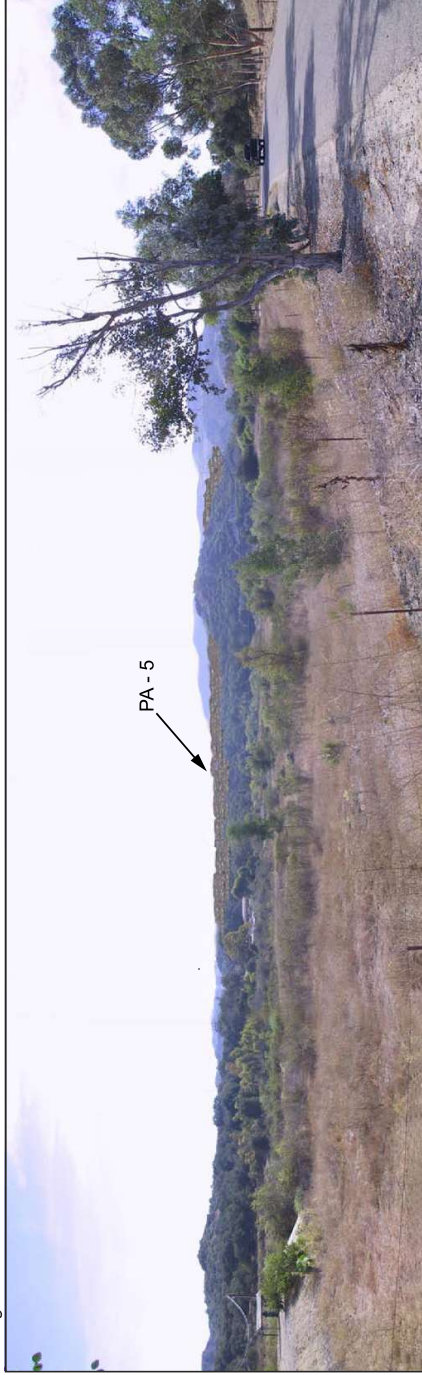
Date: Nov. 2005

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.7-9
Source: EDAW, Inc



Existing



Proposed

Key Map



Viewshed Analysis View 9

Not to Scale



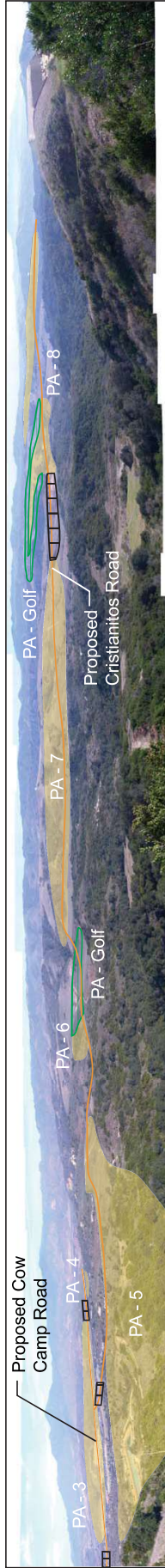
Date: Nov 2005

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 7.7-10
Source: EDAW, Inc



Existing



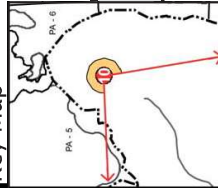
Proposed

Proposed Development footprint(s) show development horizontal areas only. Vertical development heights and finished elevations are not generally depicted, unless specifically designated in the view.

Legend

- Proposed Development Footprint
- Proposed Golf Course
- Proposed Cristianitos Road and Cow Camp Road
- Proposed Bridge Crossing

Key Map



Not to Scale

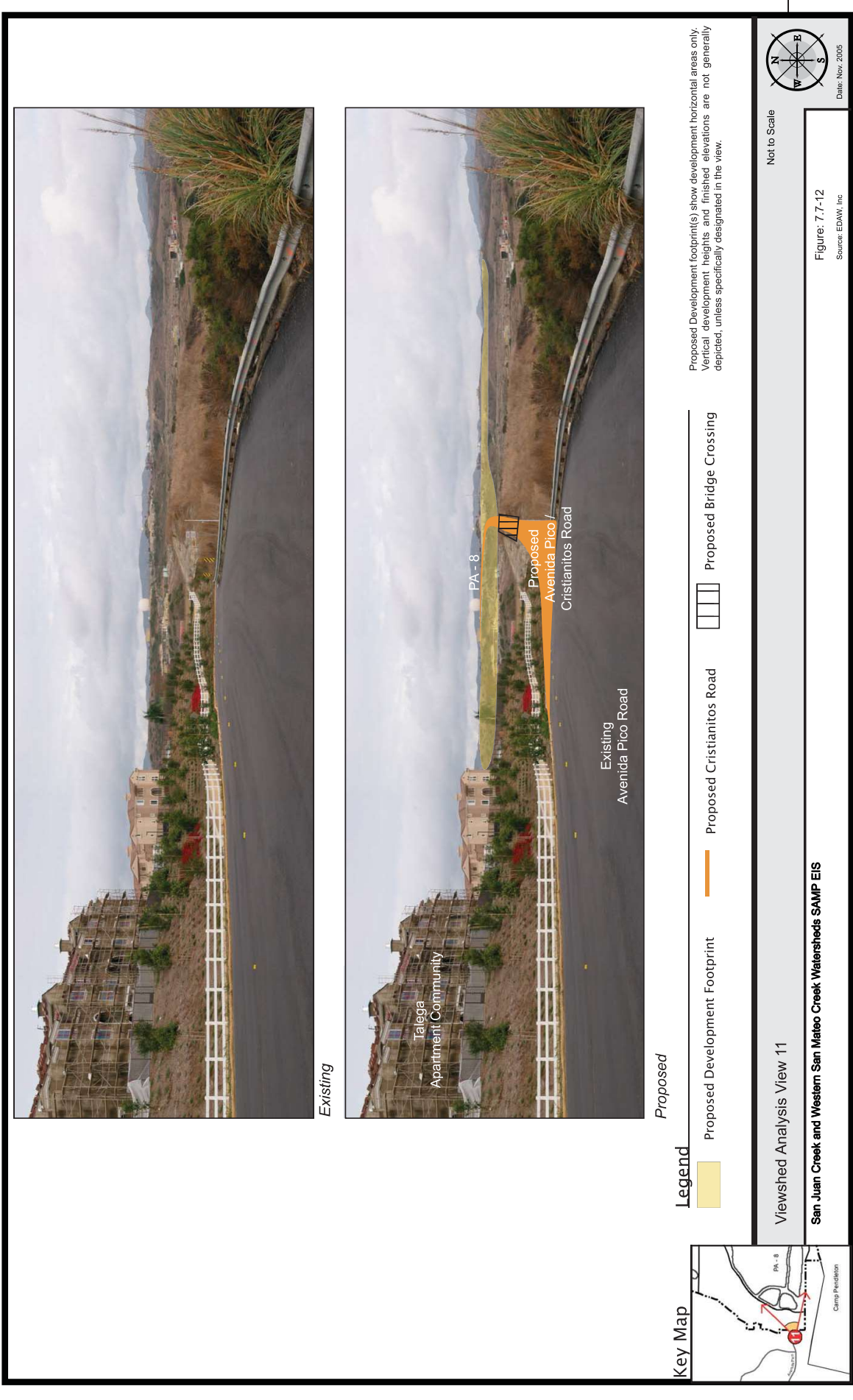


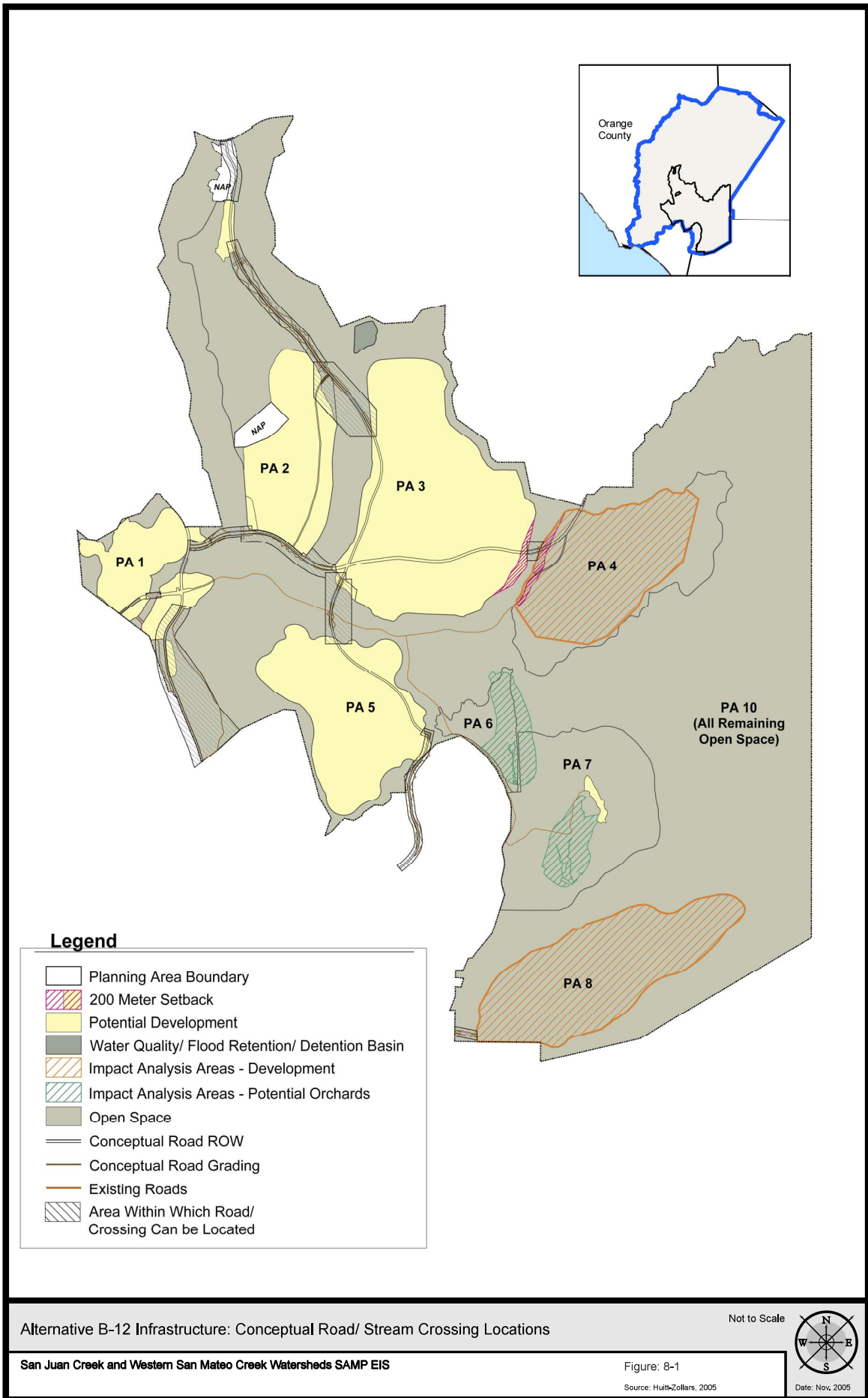
Date: Nov. 2005

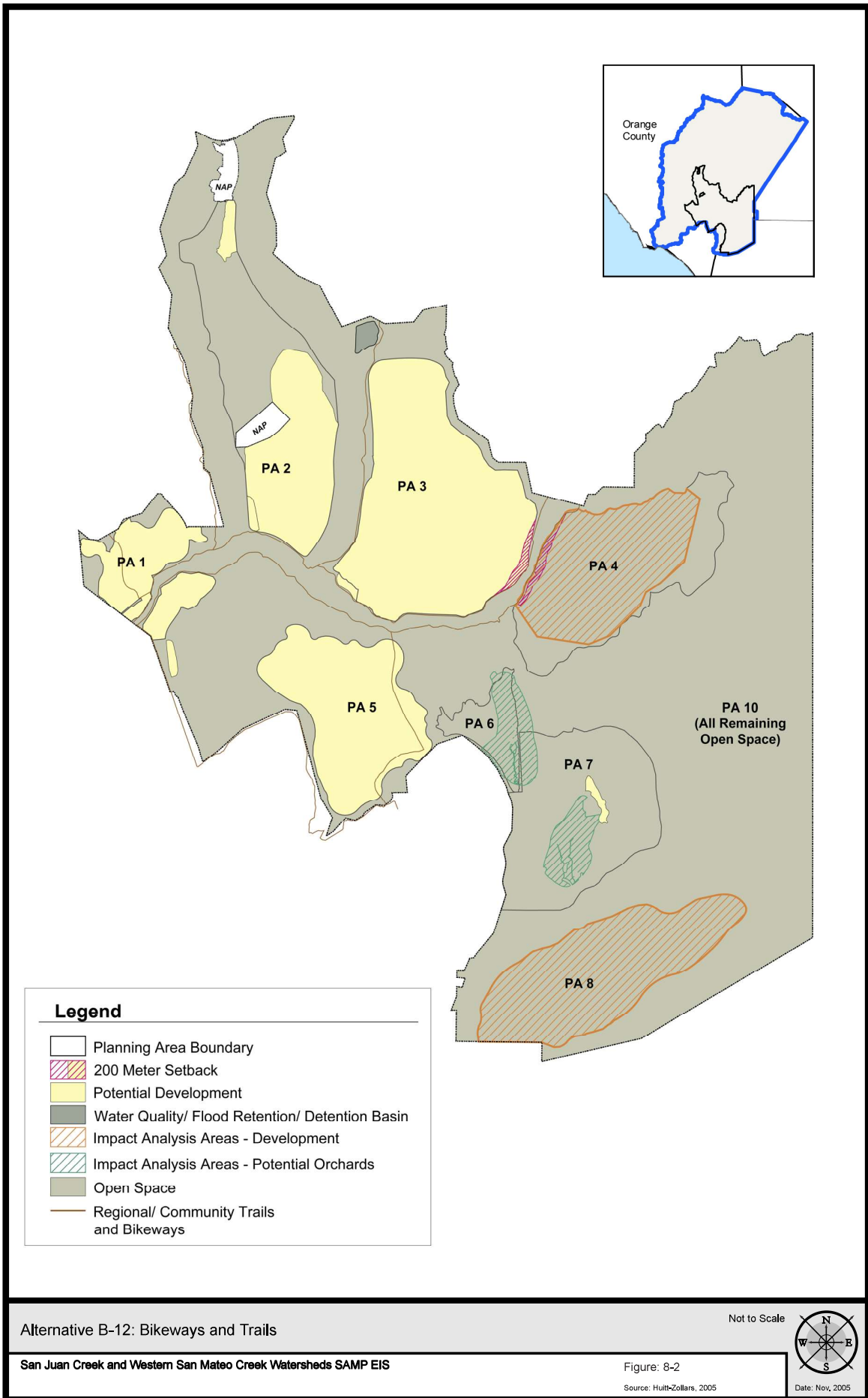
Viewshed Analysis View 10

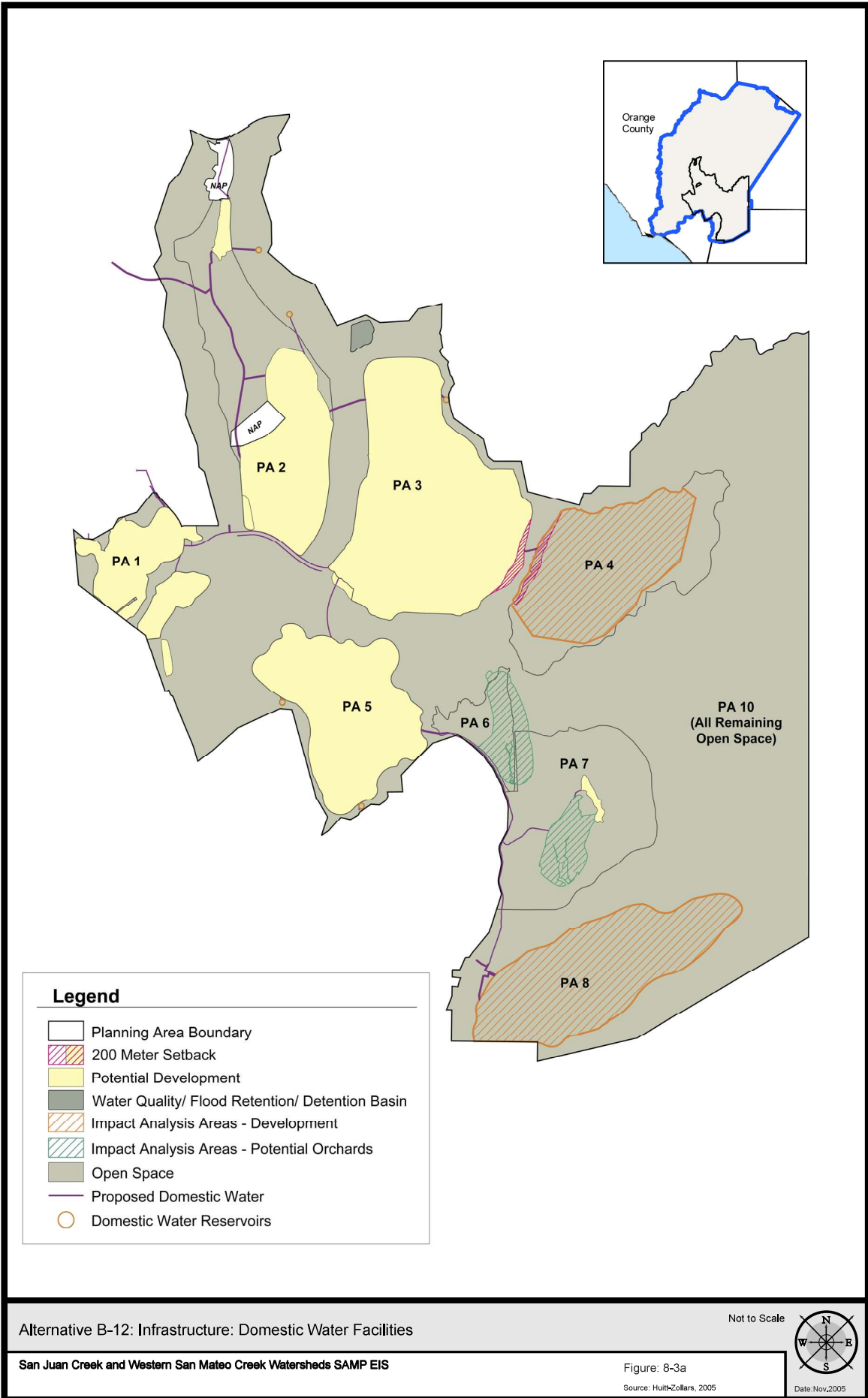
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

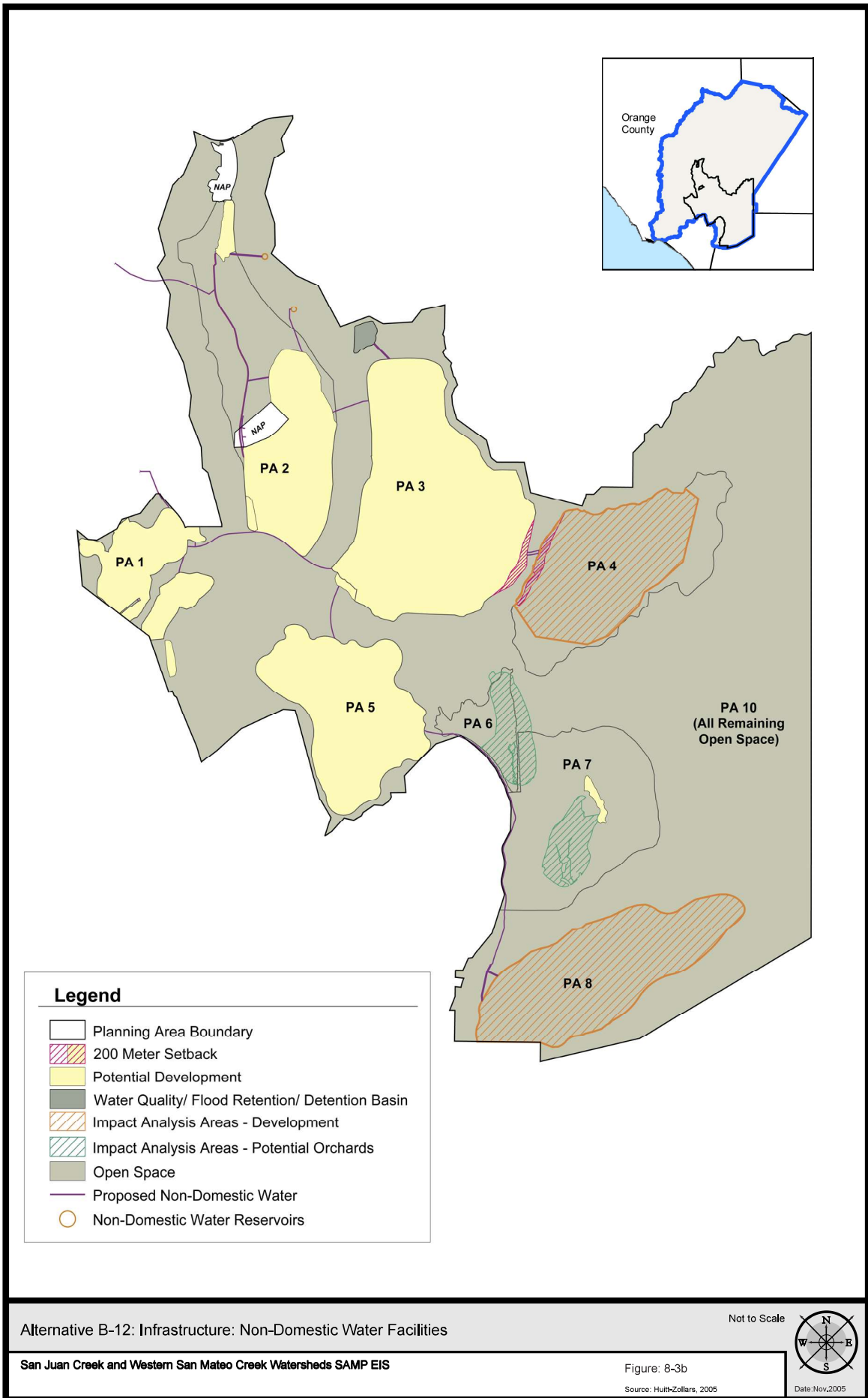
Figure: 7.7-11
Source: EDAW, Inc.

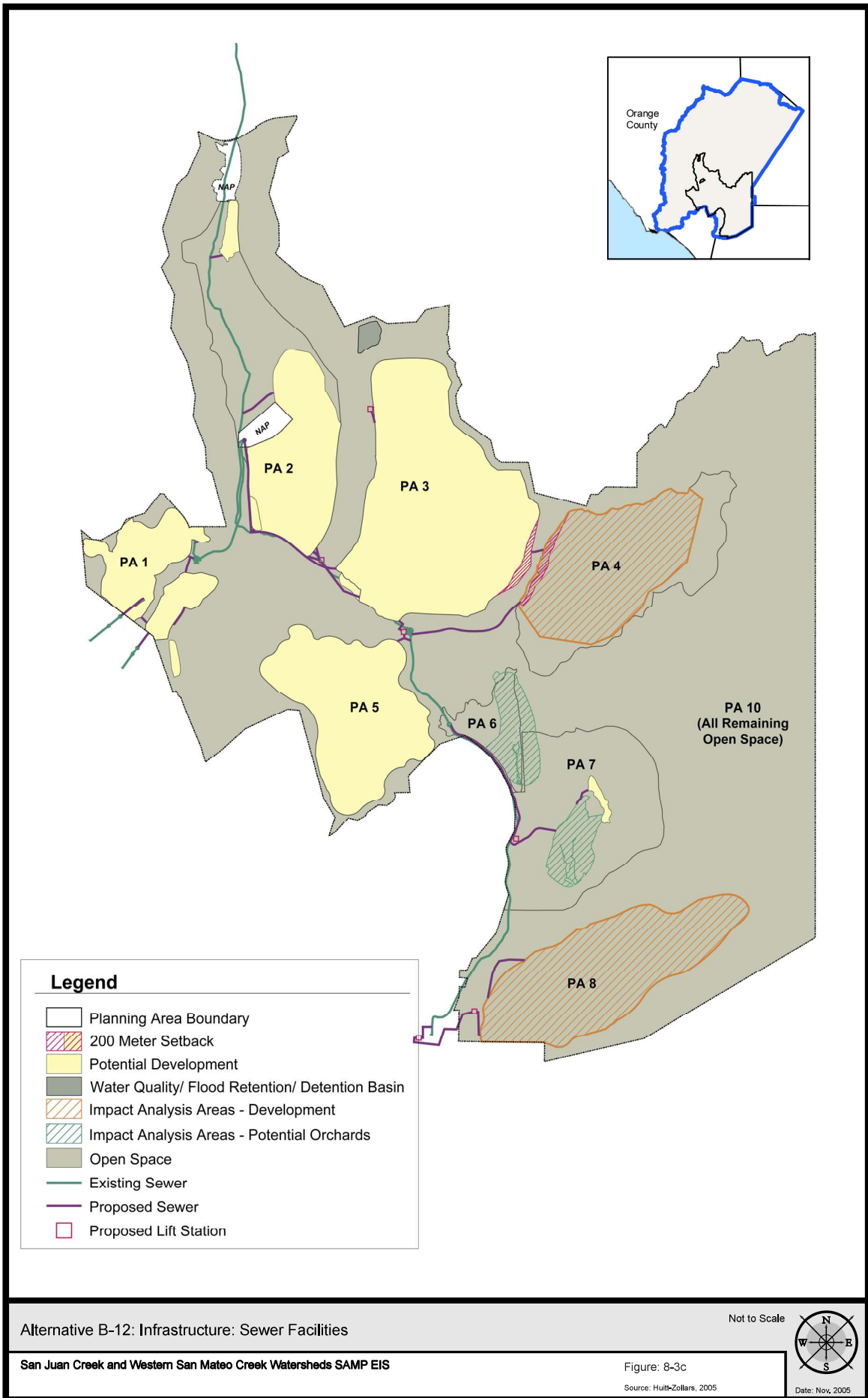


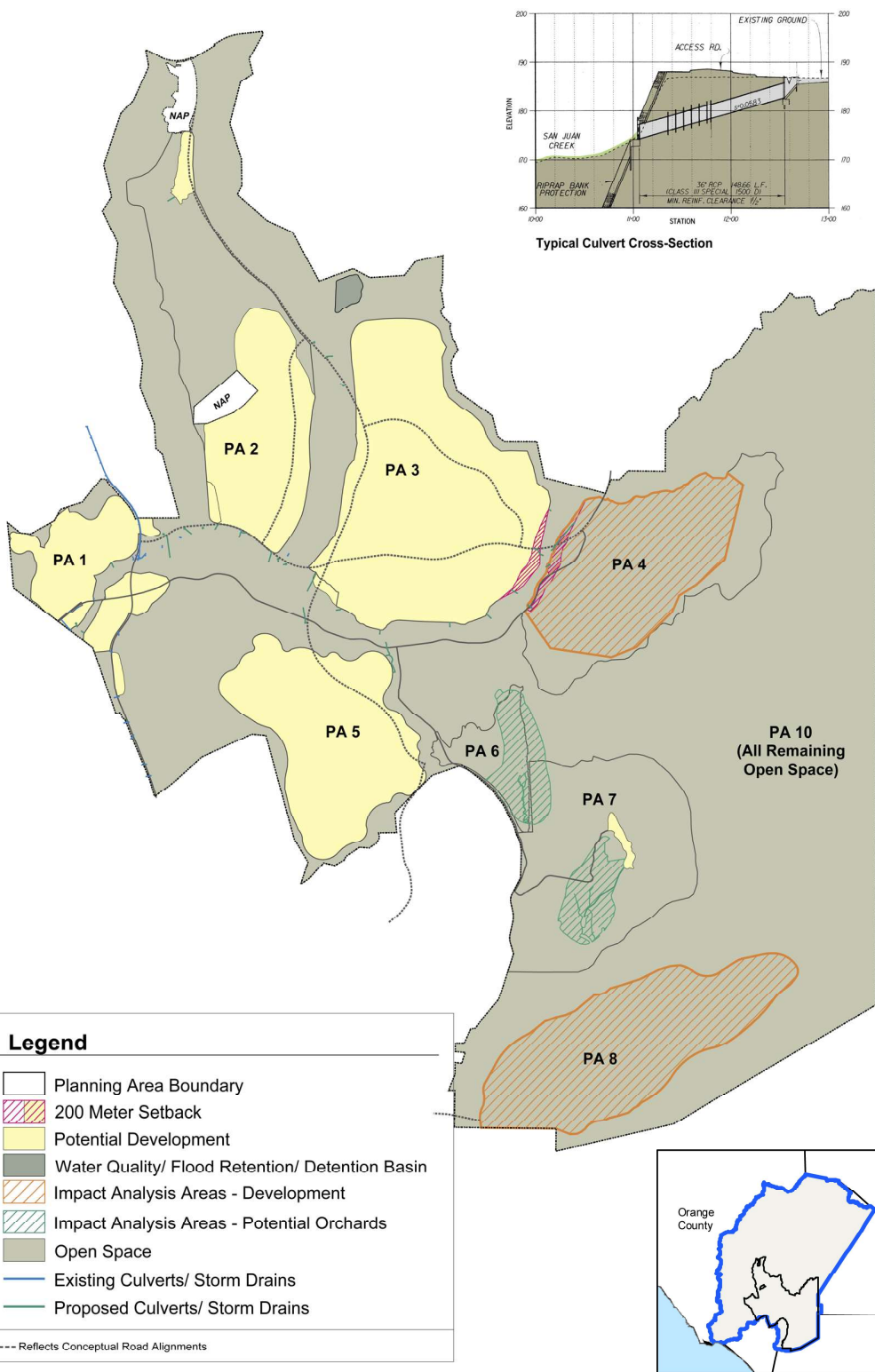












Alternative B-12: Infrastructure: Drainage Facilities

Not to Scale

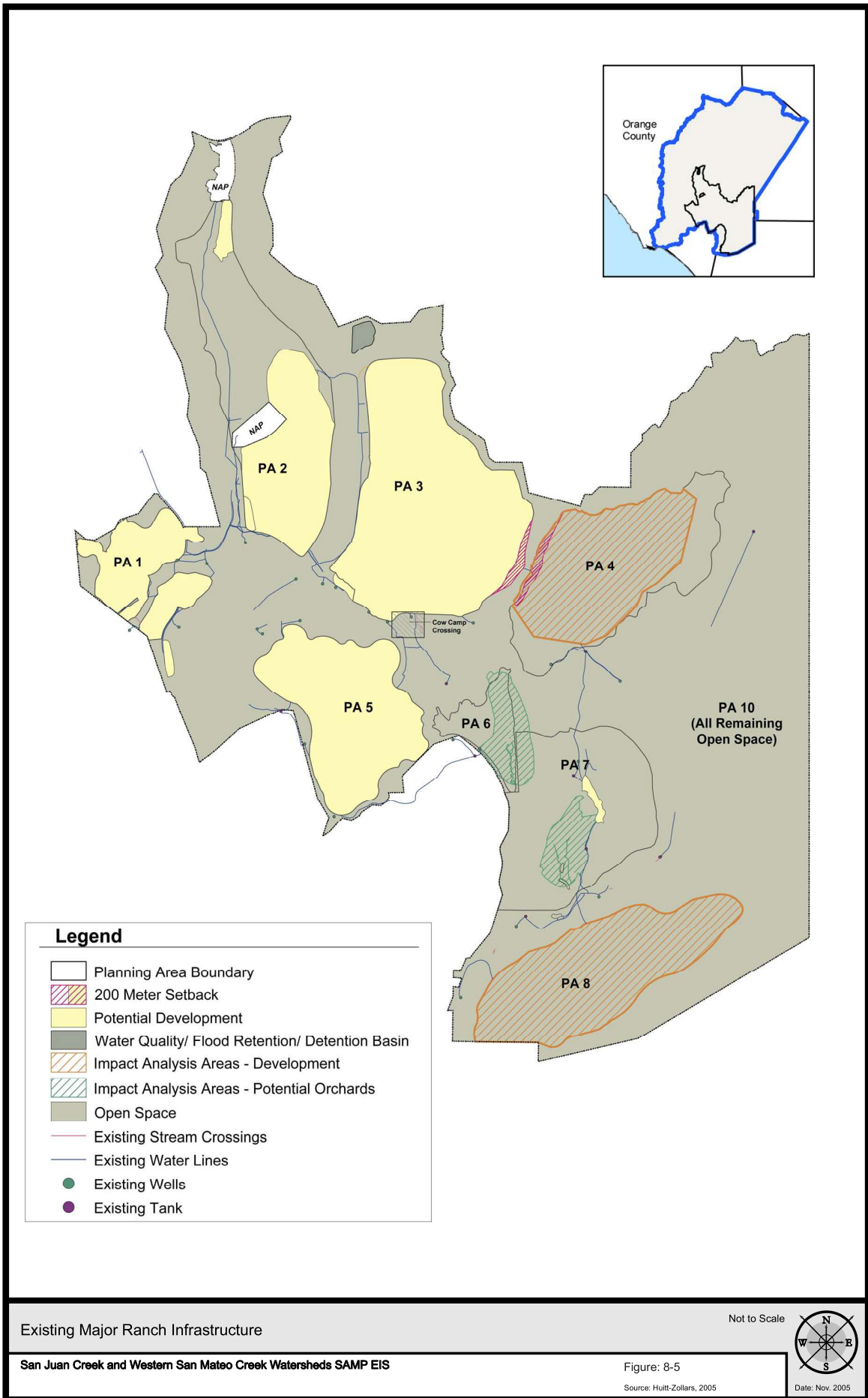
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

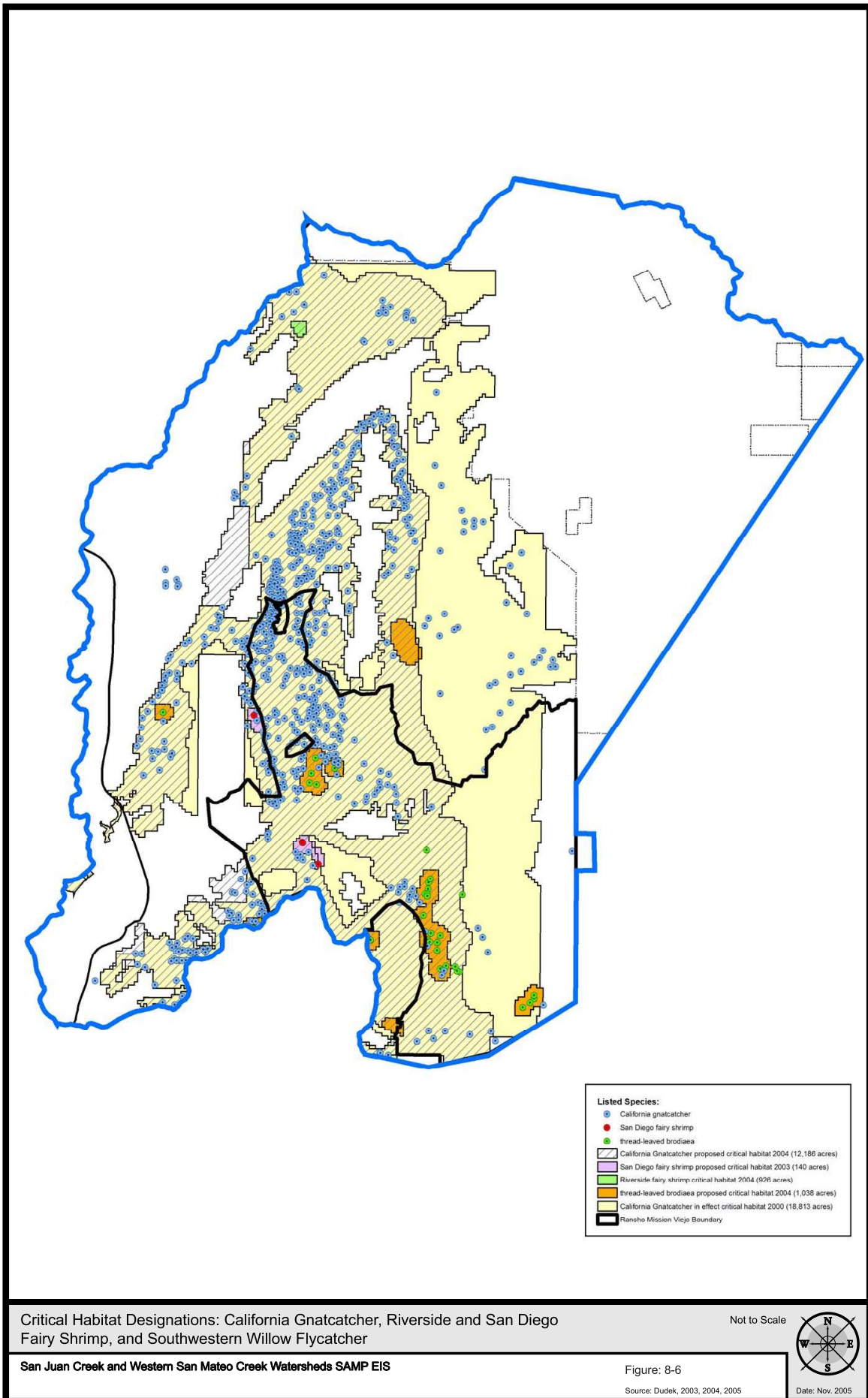
Figure: 8-4

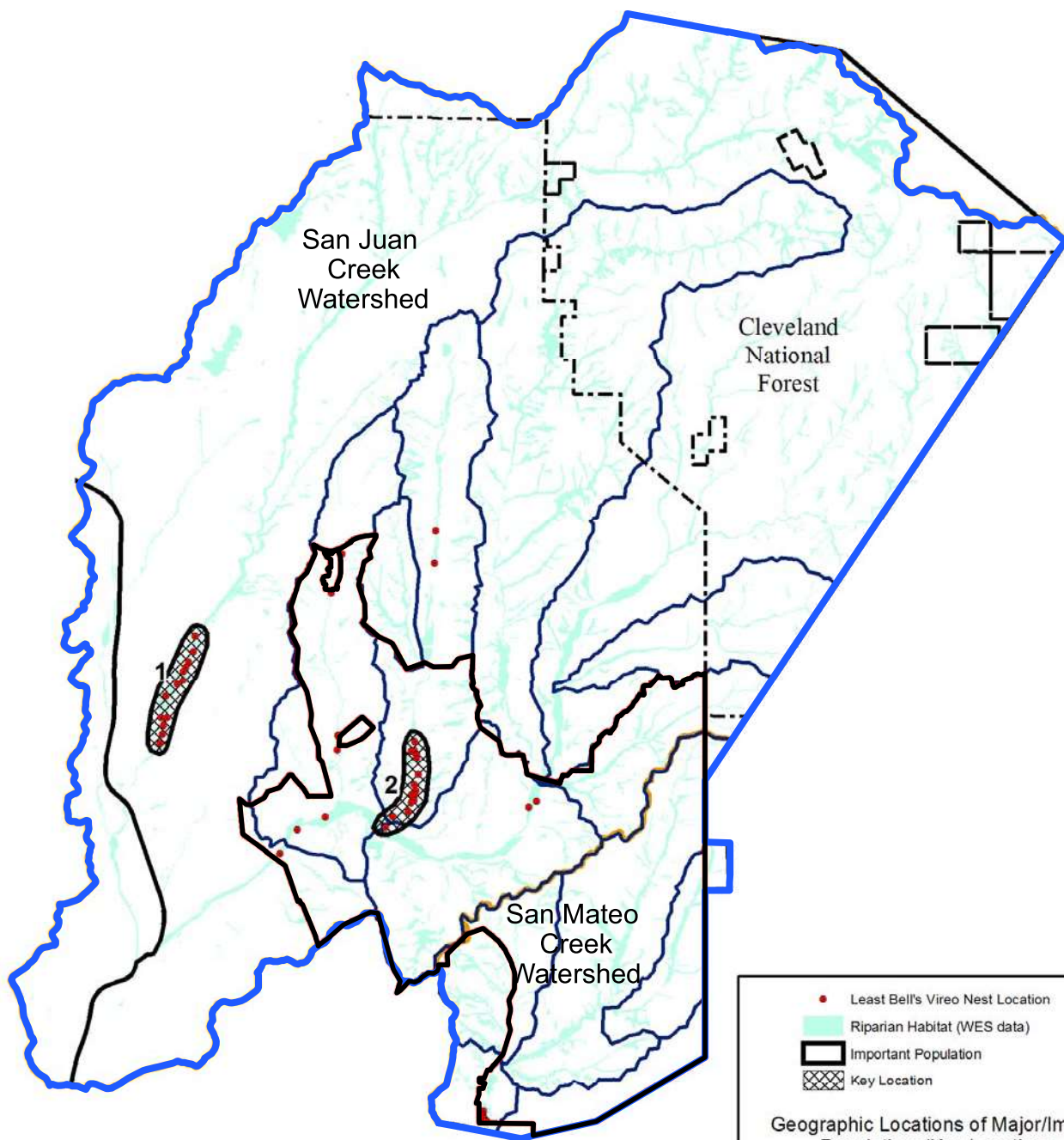
Source: Hult-Zollars, 2005



Date: Nov, 2005







Least Bell's Vireo Key Locations

1" = 2 miles

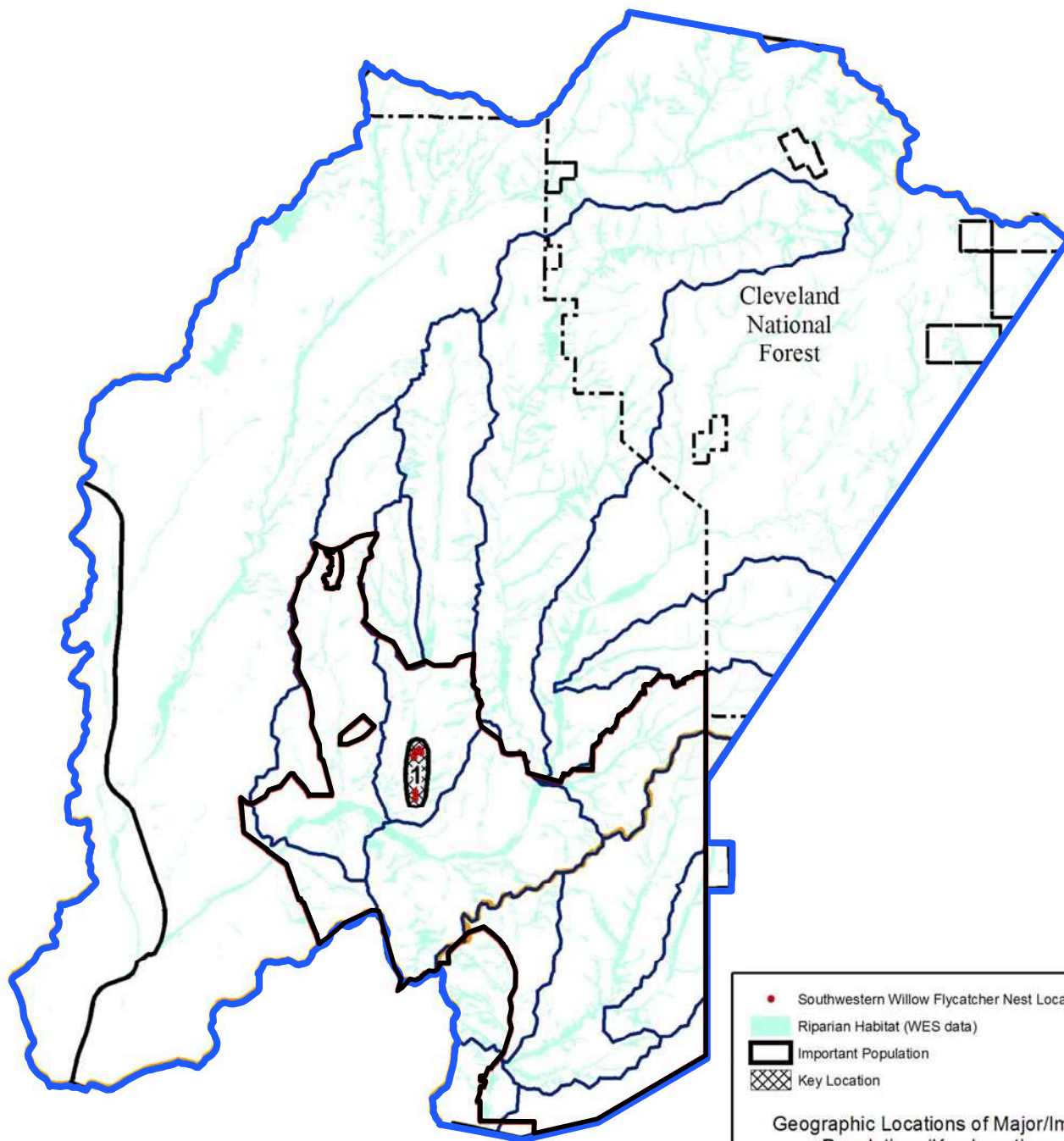


San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 8-7

Source: Dudek, 2003

Date: Nov. 2005



Southwestern Willow Flycatcher Key Locations

Not to Scale

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 8-8

Source: Dudek, 2003



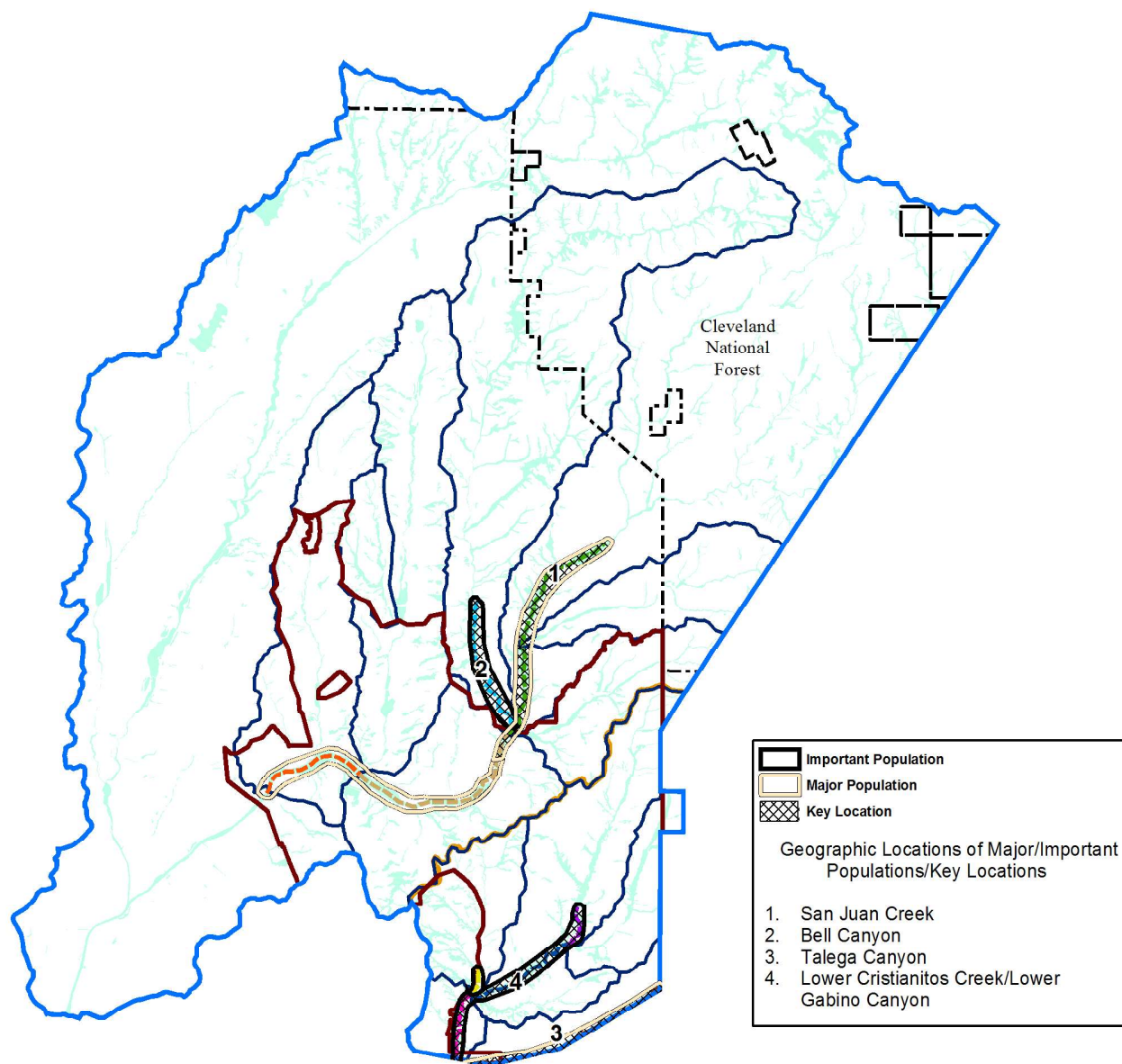
Date: Nov. 2005

Riparian Habitat (WFS data)

Arroyo Toad Reach: Source+Year (Number of Estimated Individuals)

- Bell Canyon: Dudek pre-1997 (11); Bloom 1998 (29); Dudek 1998 (1)
- Central San Juan Creek: Dudek pre-1997 (24); Bloom 1998 (22); Dudek 1998 (2); Bloom/Niemela 2001 (14)
- Cristianitos D/S Gabino: Dudek pre-1997 (37); Bloom 1998 (11); Griffin et al 1998 (7); Bloom 2001 (26)
- Cristianitos U/S Gabino, Bloom 2001 (5)
- Lower Gabino: Dudek pre-1997 (30); Bloom 1998 (21); Griffin et al 1998 (21); Bloom 2001 (8 adults, 200 metamorphs)
- Middle Gabino: Dudek pre-1997 (3); Bloom 1998 (2); Griffin et al 1998 (2)
- San Juan Creek/Chiquita: Dudek pre-1997 (14); Bloom 1998 (6); Bloom/Niemela 2001 (8)
- Talega Canyon: Dudek pre-1997 (5); Bloom 1998 (Abundant); Griffin et al 1998 (41)
- Upper San Juan Creek: Dudek pre-1997 (2); Bloom 1998 (435); Bloom 2001 (12 metamorphs)*

* Bloom 2001 data are limited to a single location and do not represent the entire reach of upper San Juan Creek.



Arroyo Toad Key Locations

Not to Scale

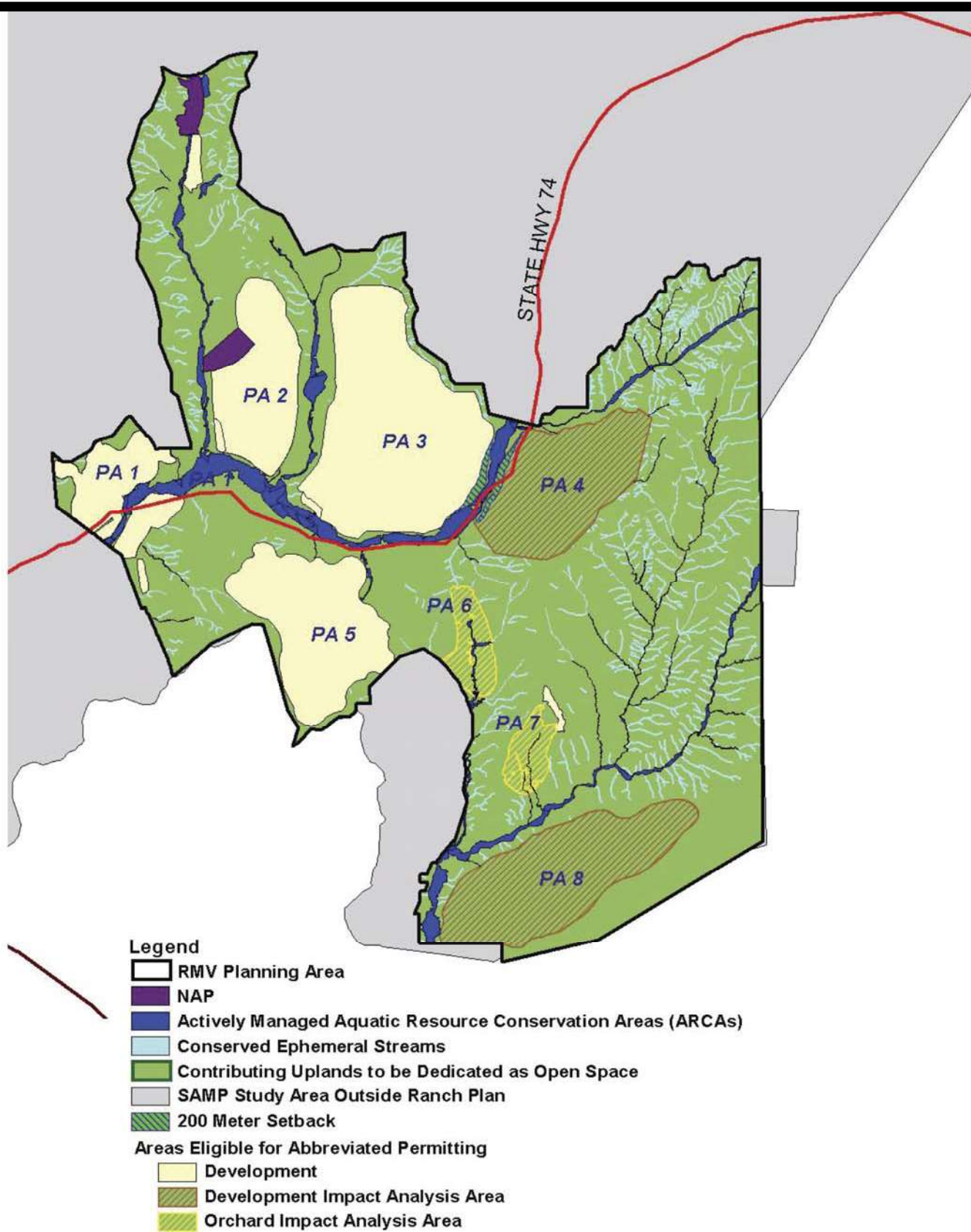
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 8-9

Source: Dudek, 2003



Date: Nov, 2005



Aquatic Resources Conservation Areas

Not to Scale

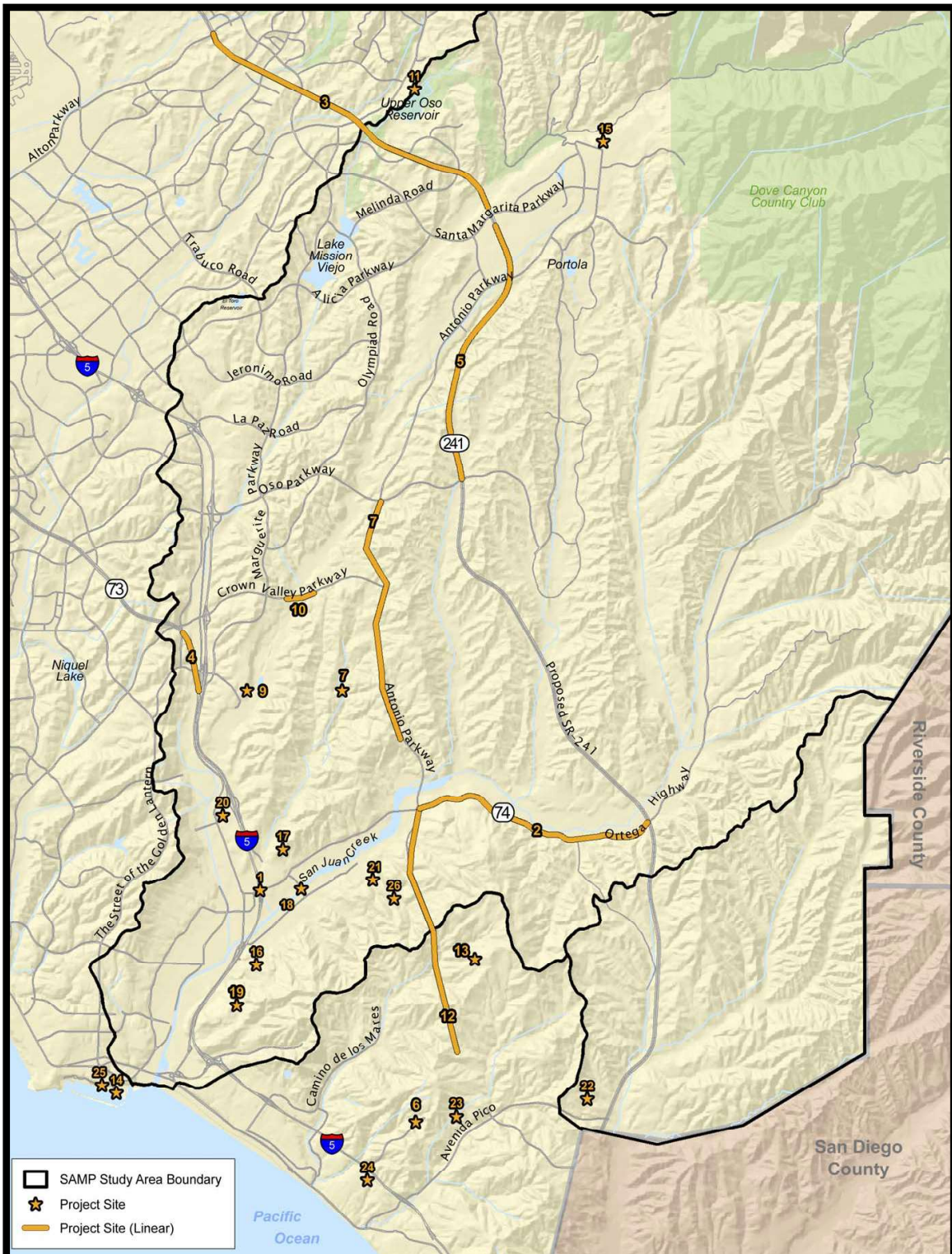
San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 8-10

Source: USACE, 2005



Date: Nov. 2005



- | | | | |
|--|--|---------------------------------------|---------------------------------|
| 1. Ortega Highway/I-5 Interchange | 8. Antonio Parkway | 15. Robinson Ridge Development | 22. Talega Valley Specific Plan |
| 2. Ortega Highway Widening | 9. Arroyo Trabuco Golf Course | 16. San Juan Meadows | 23. Forster Ranch |
| 3. SR-241 (North of Santa Margarita Parkway) | 10. Crown Valley Parkway Bridge Widening | 17. Honeyman Ranch | 24. Marblehead Coastal |
| 4. SR-73 (North of I-5) | 11. Saddleback Meadows | 18. La Novia Bridge | 25. Dana Point Headlands |
| 5. SR-241 (Oso Parkway to Santa Margarita Parkway) | 12. La Pata Avenue | 19. Pacifica San Juan | 26. San Juan Hills High School |
| 6. Avenida Vista Hermosa | 13. Prima Deshecha Landfill | 20. JSerra High School (South Campus) | |
| 7. Ladera Ranch | 14. Dana Point Harbor | 21. Whispering Hills | |

Cumulative Projects

San Juan Creek and Western San Mateo Creek Watersheds SAMP EIS

Figure: 9-1

Source: BonTerra, 2005

Not to Scale



Date: Nov. 2005