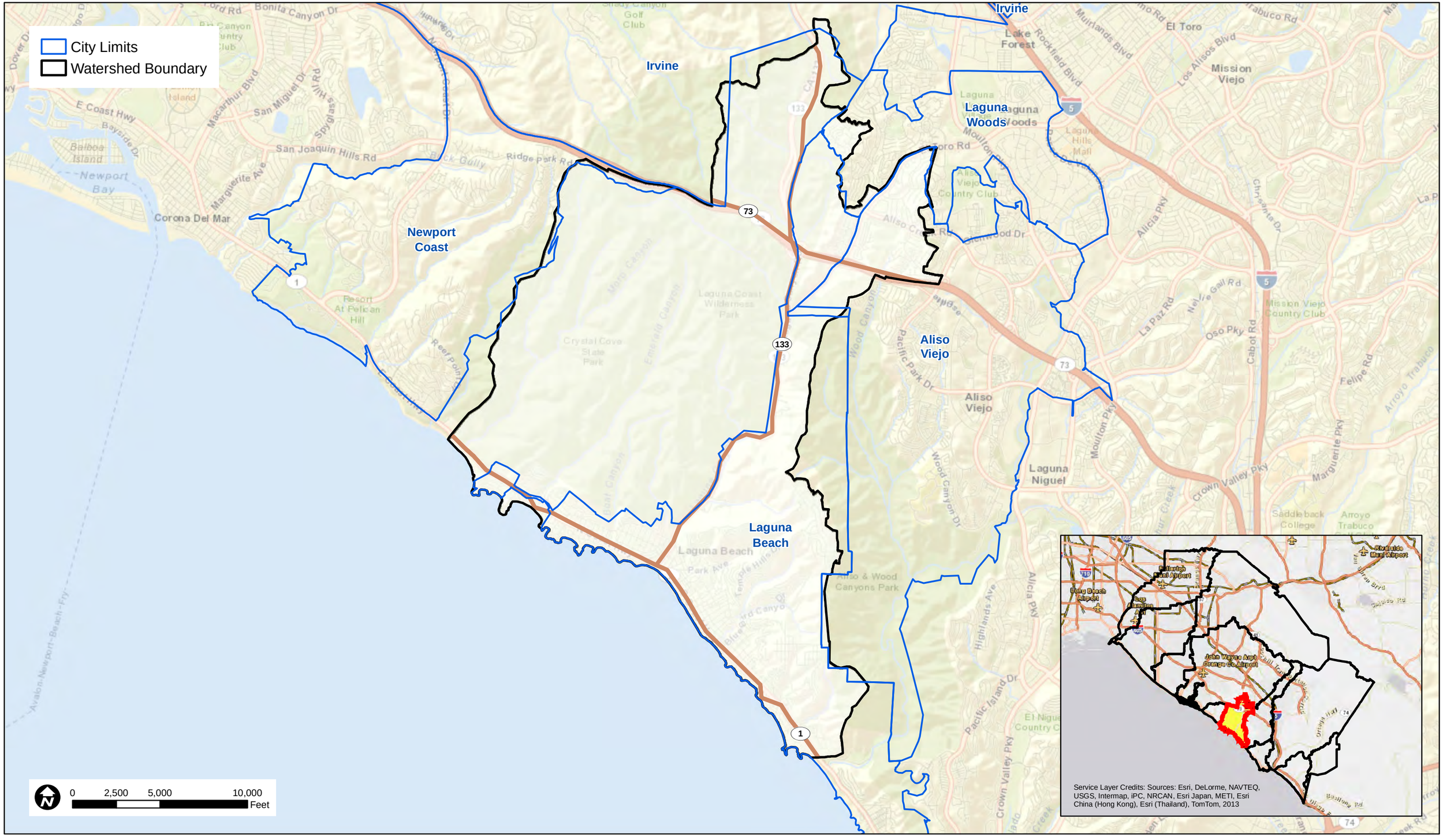
Appendix I.1: WMAA Watershed Characterization Map Exhibits



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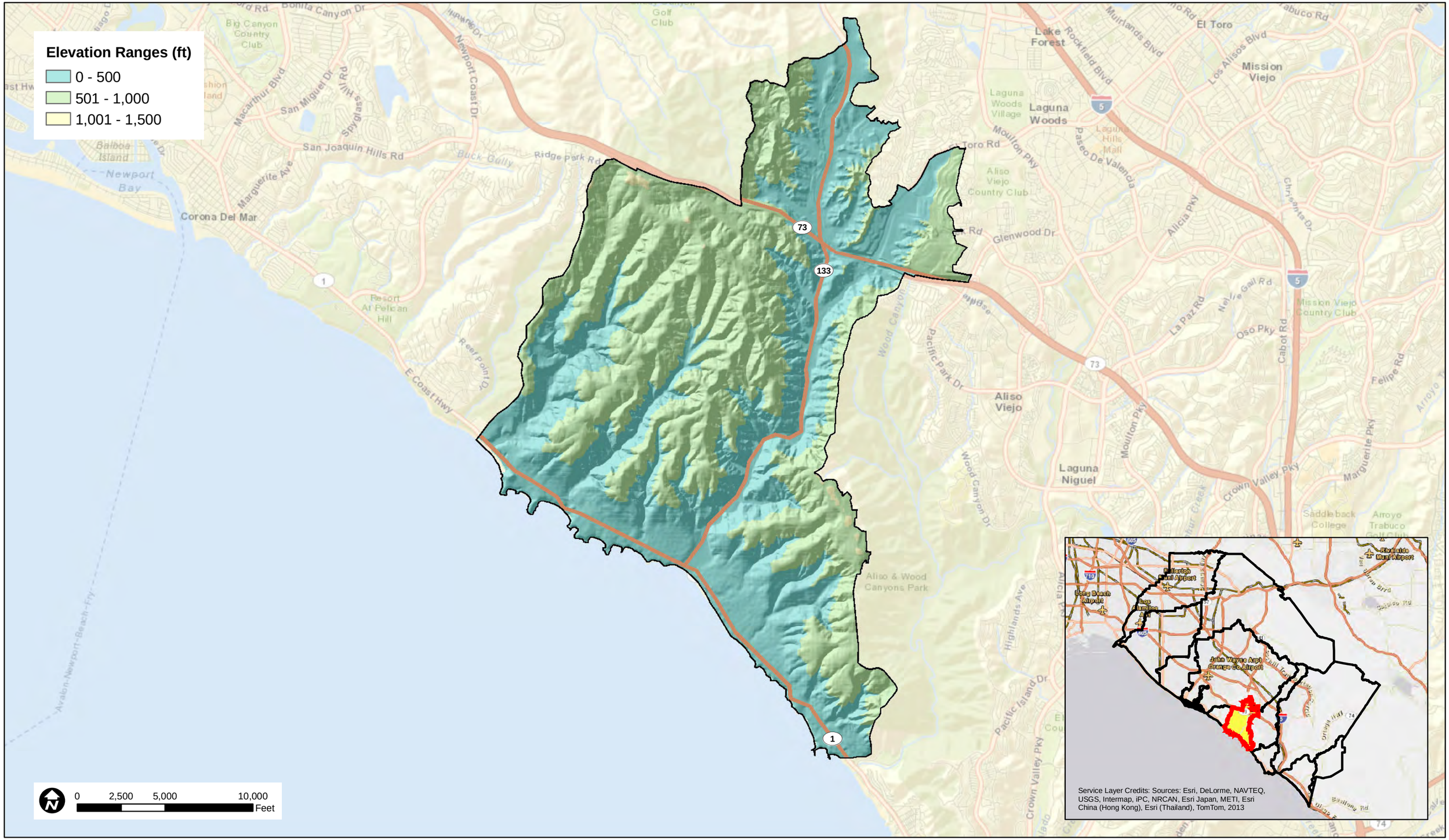
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.1
WATERSHED EXTENT
LAGUNA COAST WATERSHED



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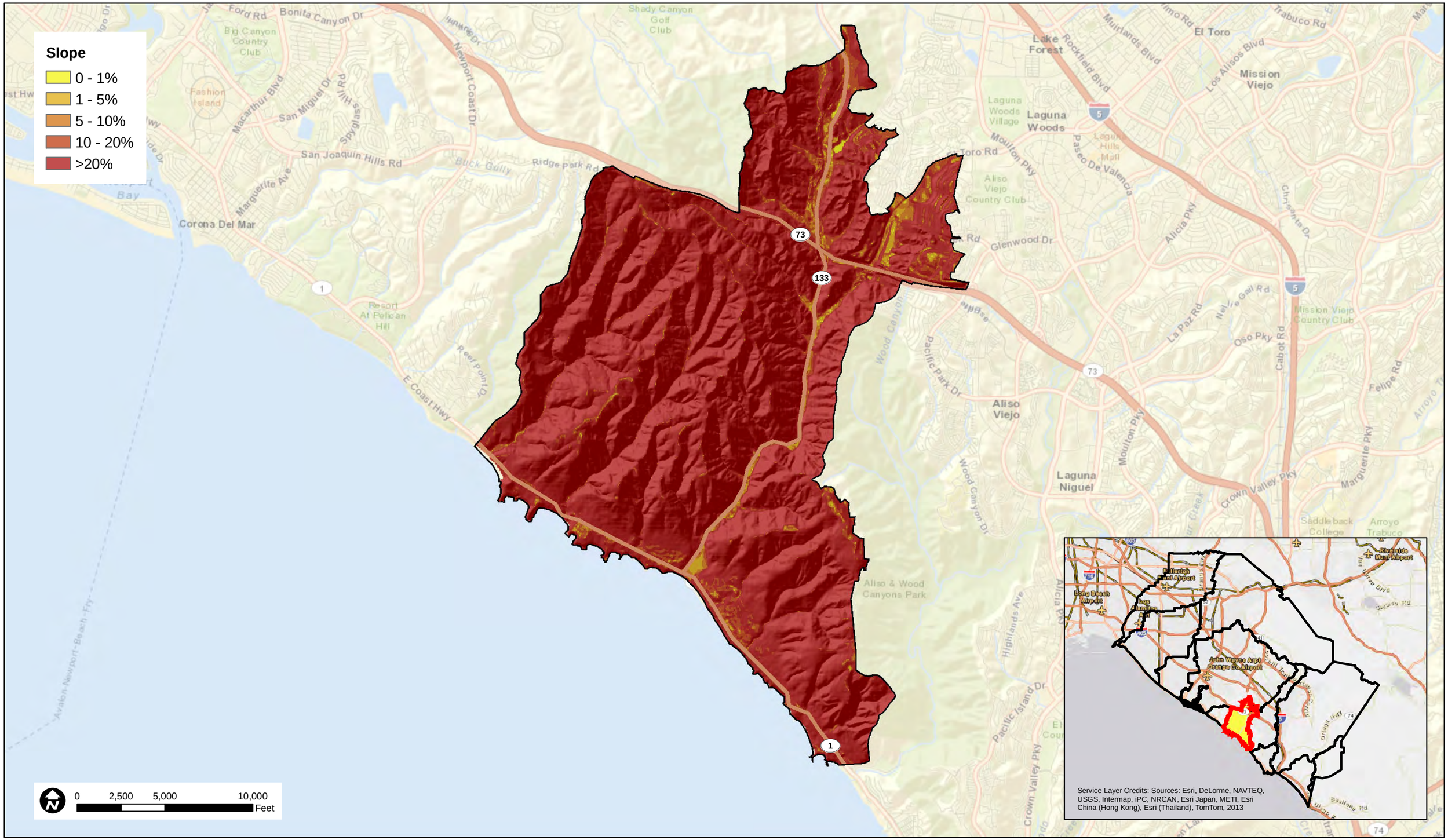
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.2a
ELEVATION DATA
LAGUNA COAST WATERSHED



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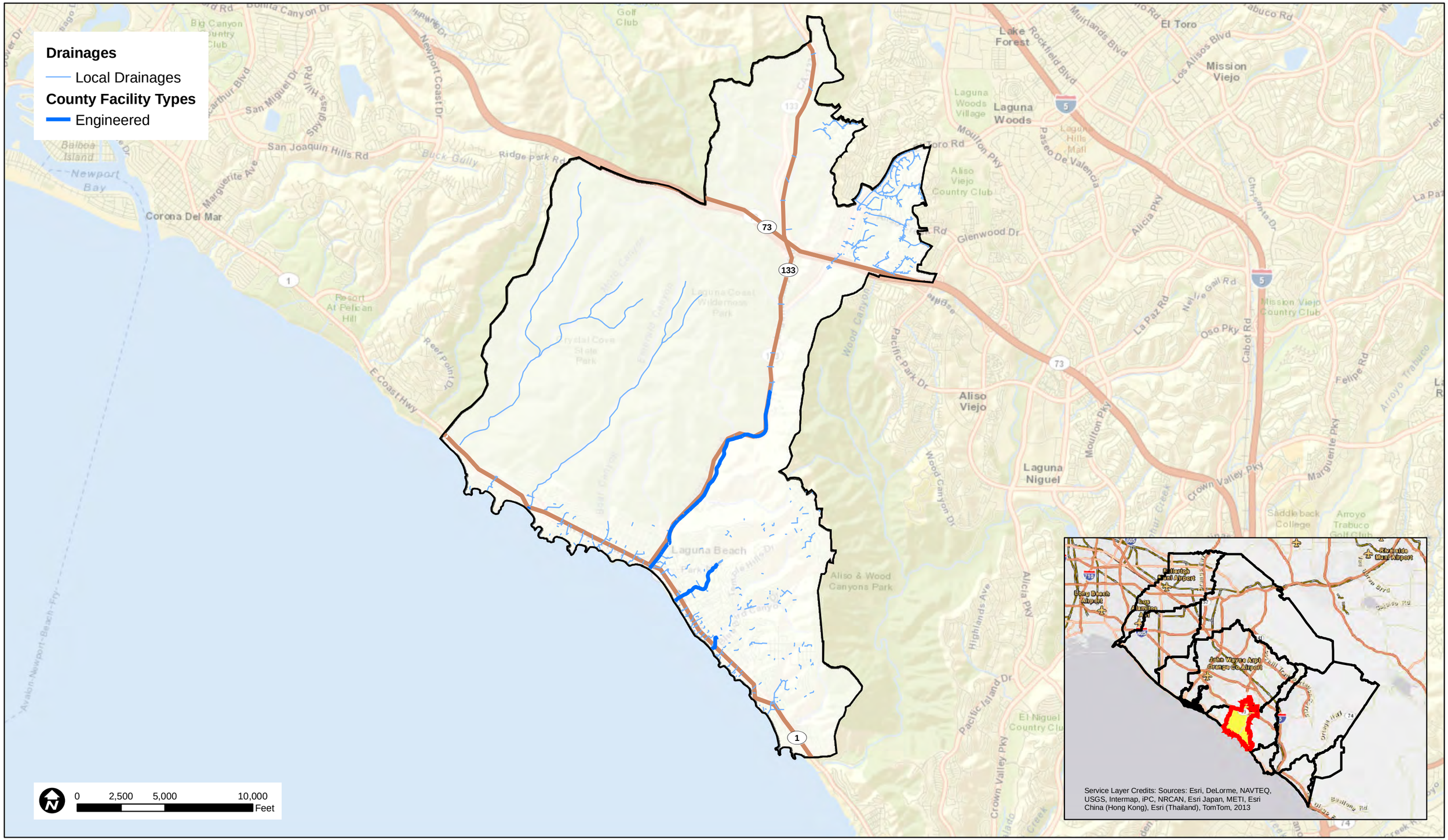
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.2b

SLOPE
LAGUNA COAST WATERSHED



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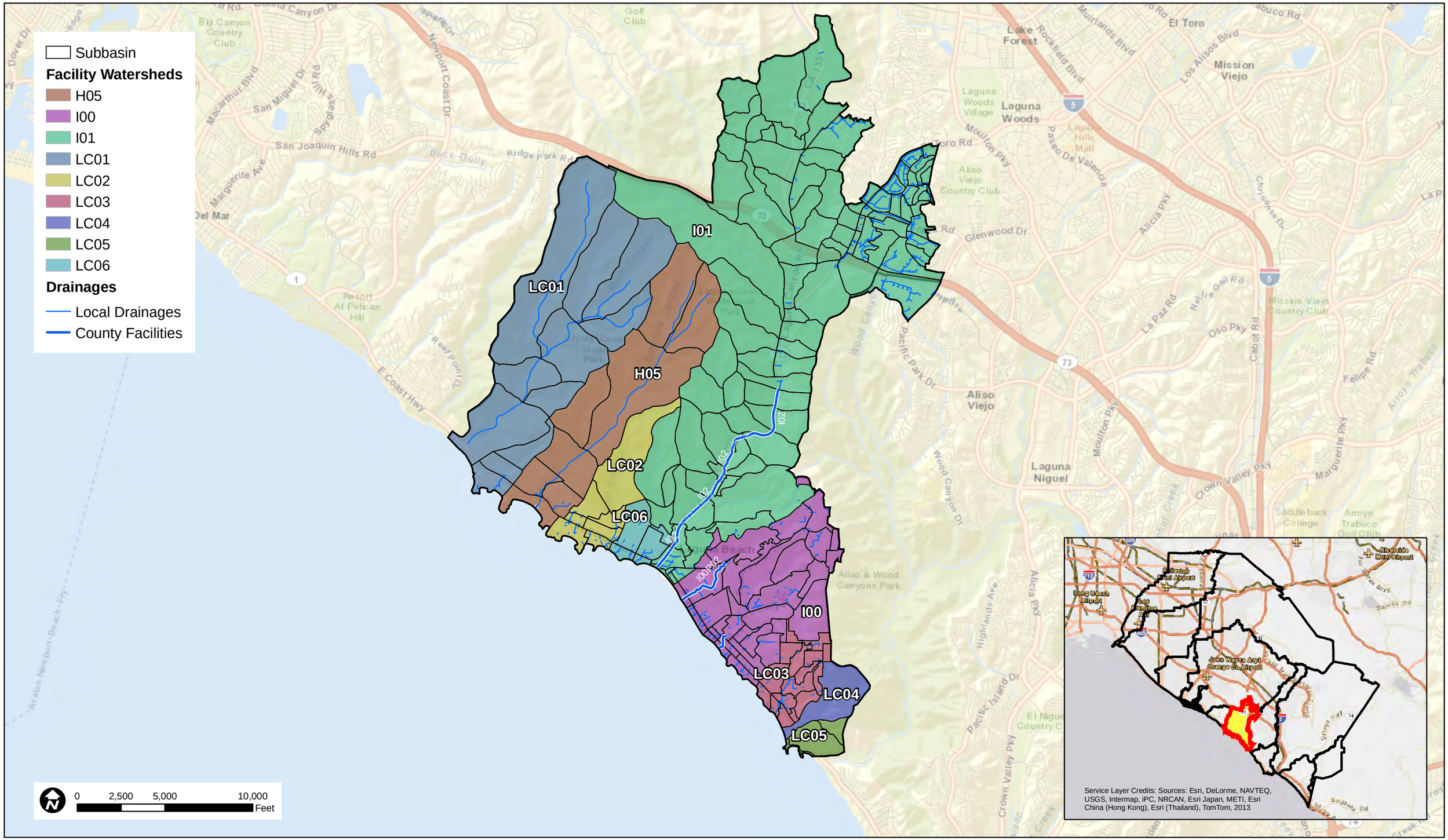
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.3
COUNTY DRAINAGE FACILITIES
LAGUNA COAST WATERSHED



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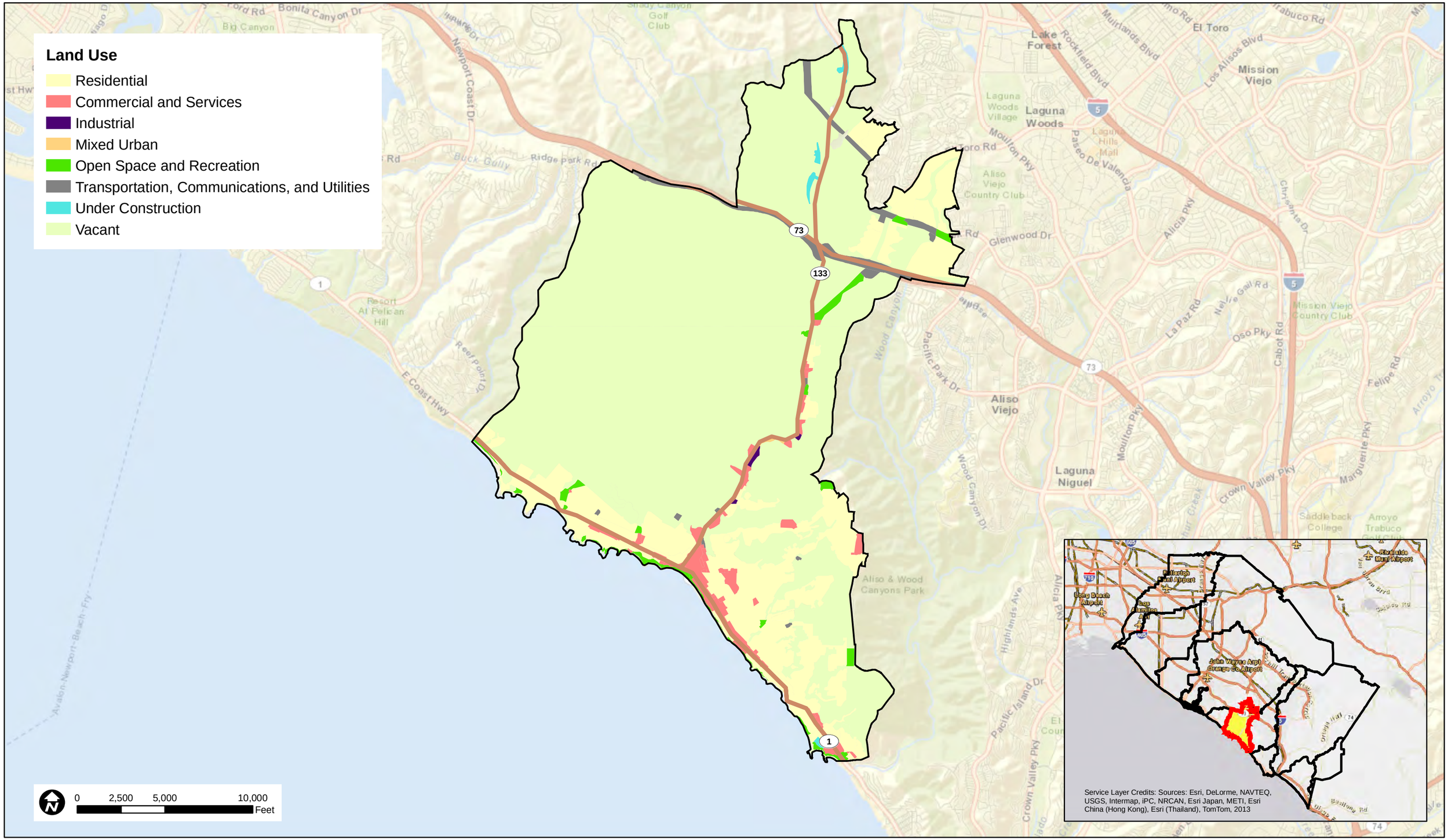
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 6.4

COUNTY SUBBASINS & FACILITY WATERSHED DELINEATION
LAGUNA COAST WATERSHED



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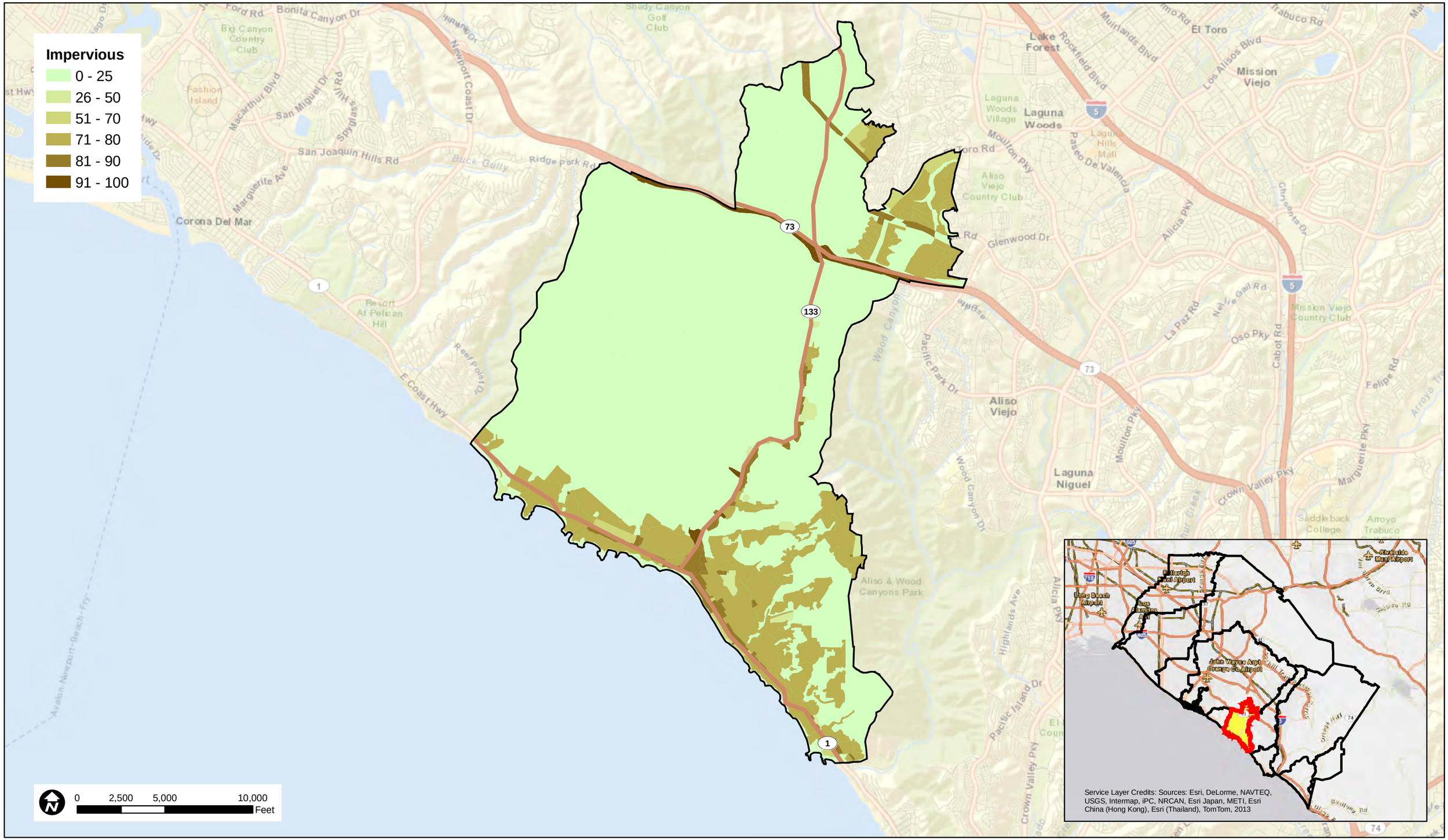
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.5
LAND USE
LAGUNA COAST WATERSHED



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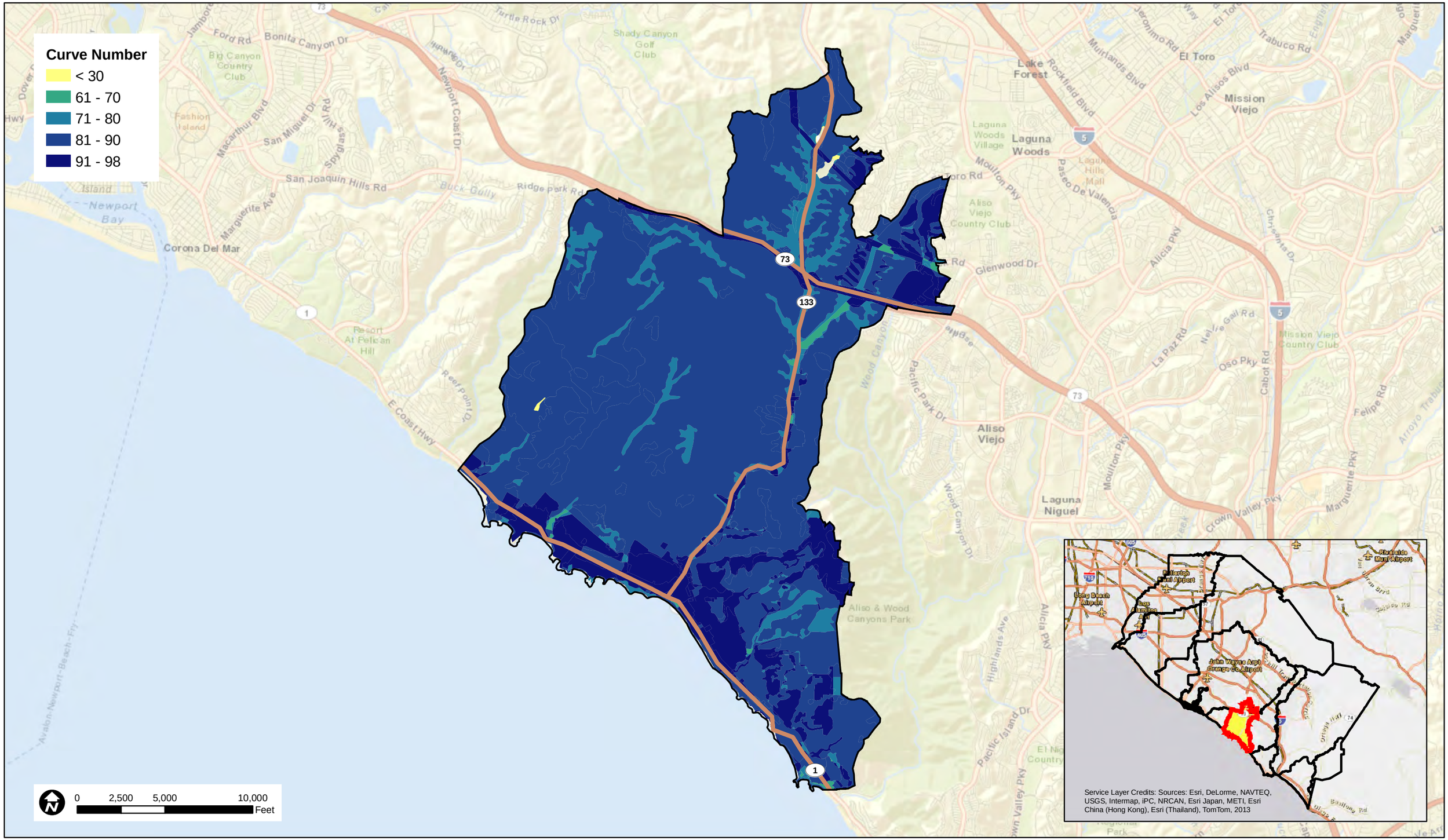
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 6.6
EXISTING IMPERVIOUSNESS
LAGUNA COAST WATERSHED



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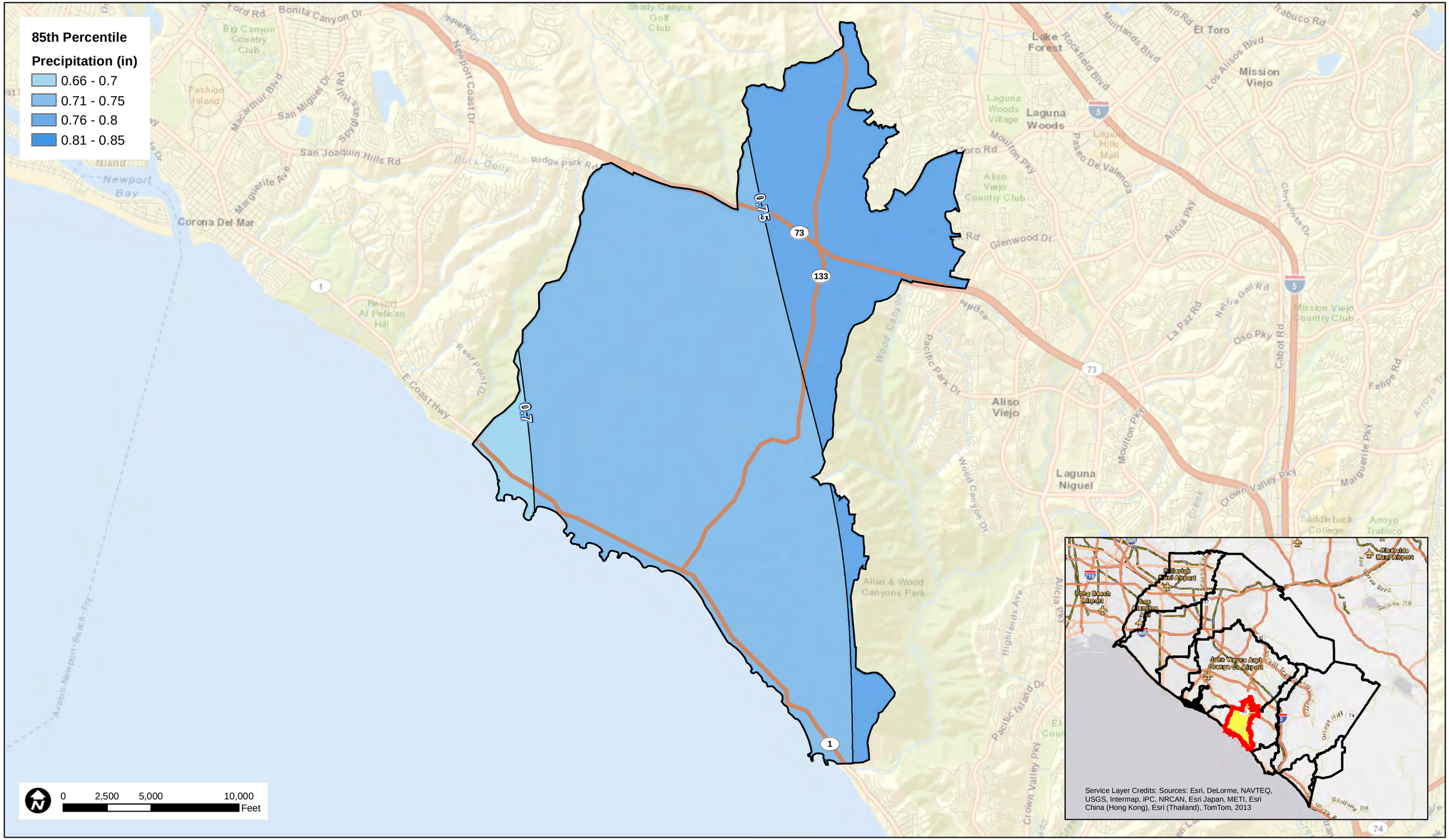
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.7
EXISTING CURVE NUMBER ANALYSIS
LAGUNA COAST WATERSHED



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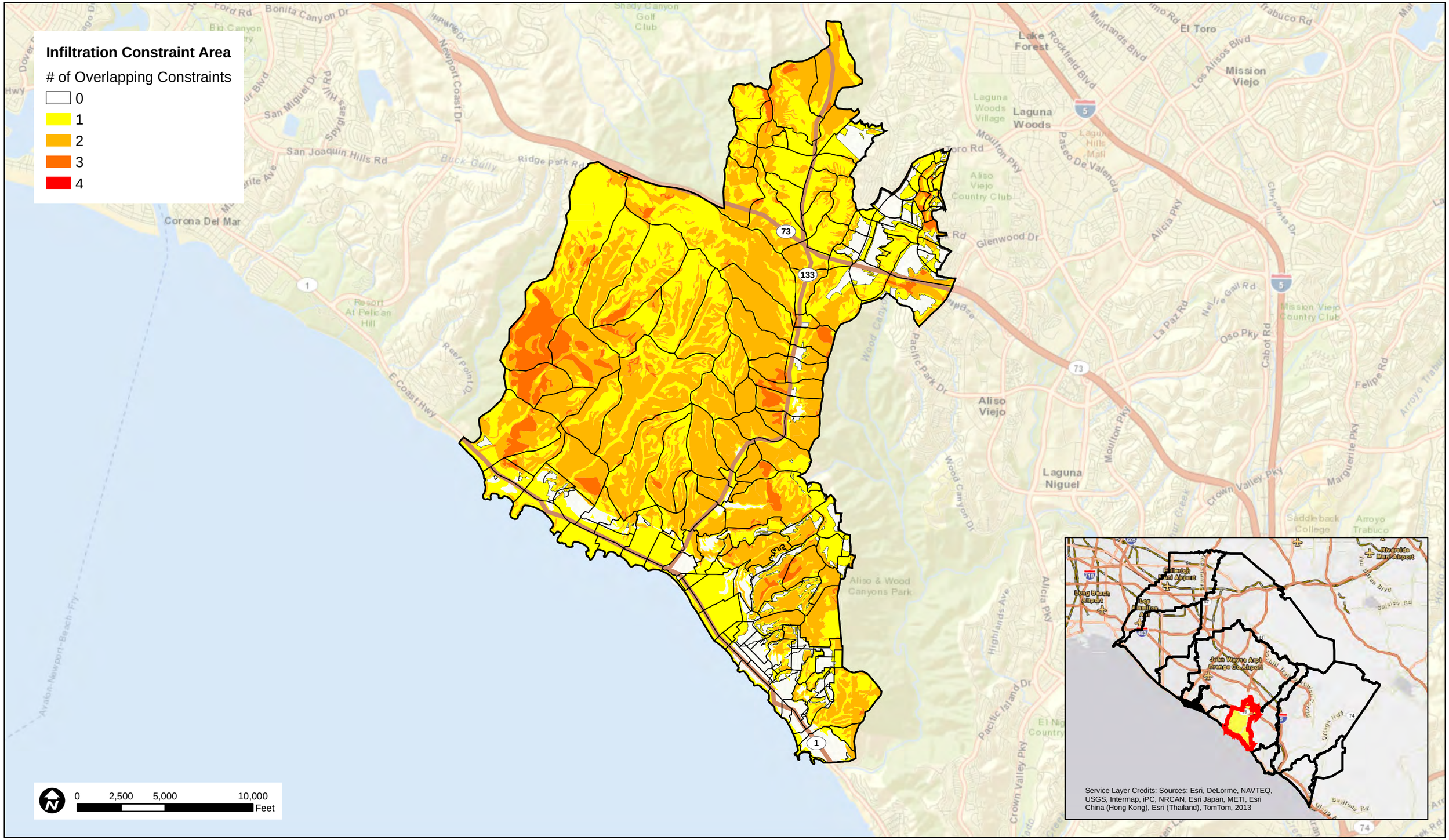
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.8

PRECIPITATION - 85TH PERCENTILE
LAGUNA COAST WATERSHED



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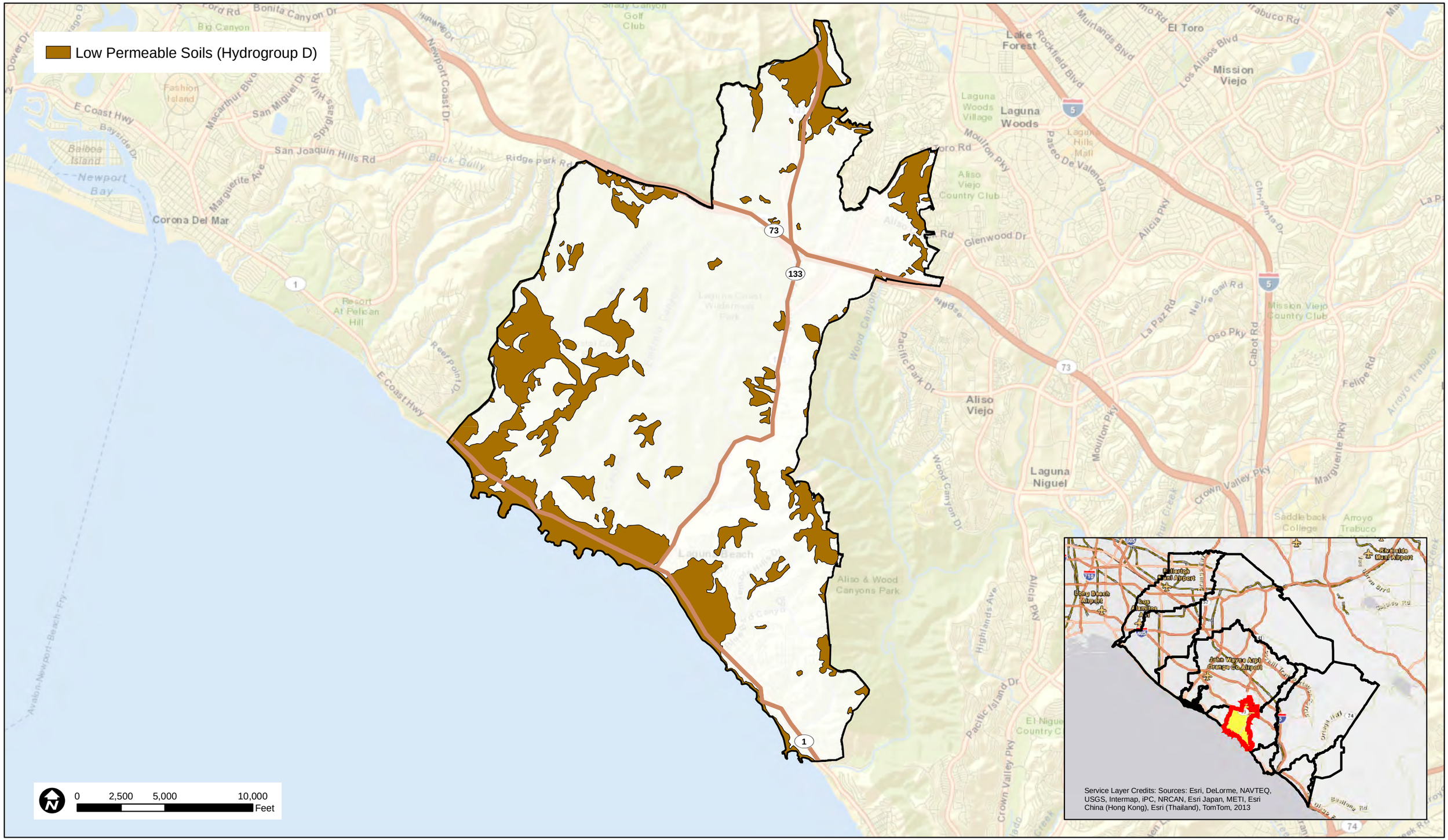
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.9

INFILTRATION CONSTRAINT - OVERALL CONSTRAINTS
LAGUNA COAST WATERSHED



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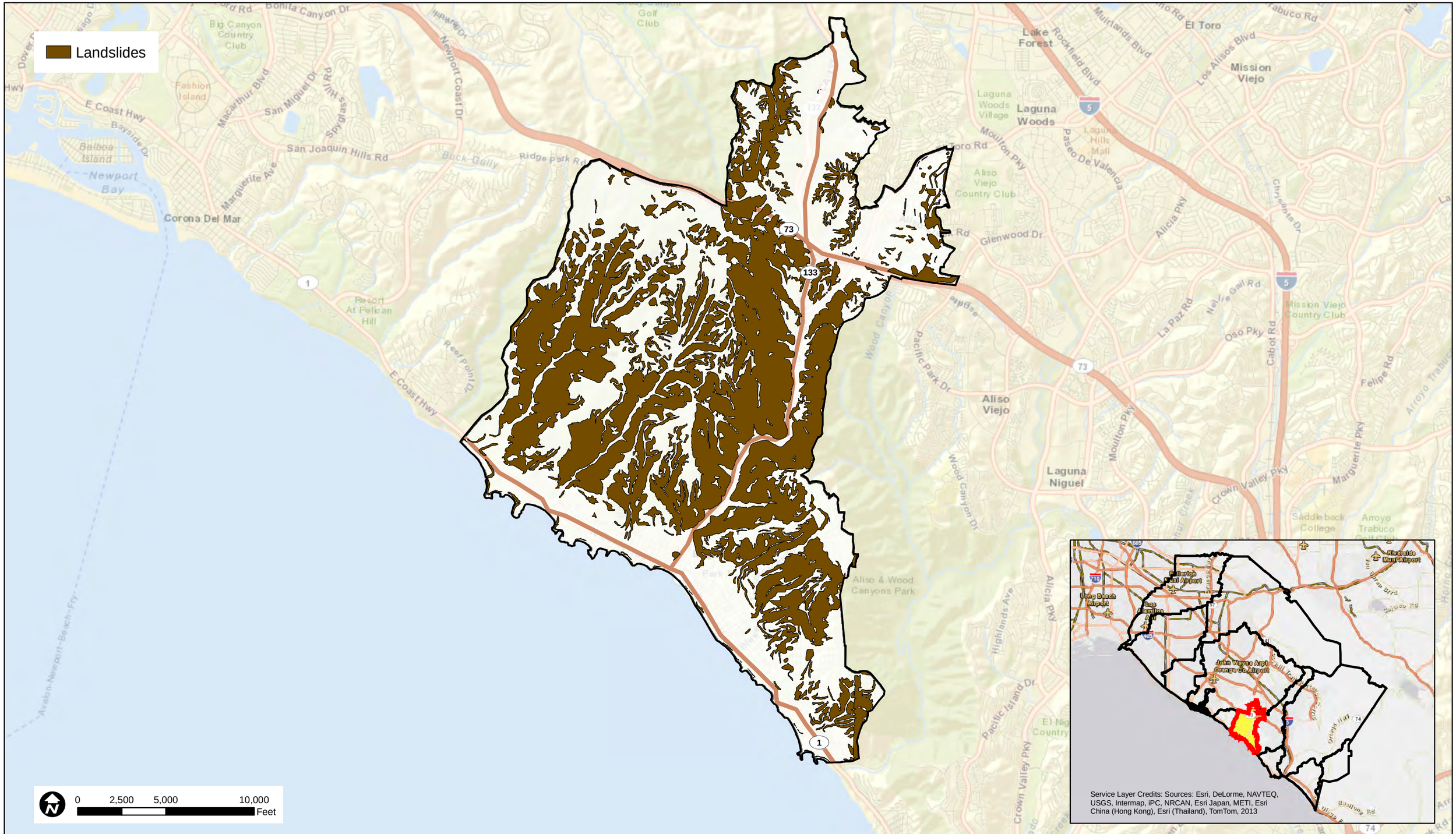
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.9a

INFILTRATION CONSTRAINT - D SOILS (LOW PERMEABLITY)
LAGUNA COAST WATERSHED



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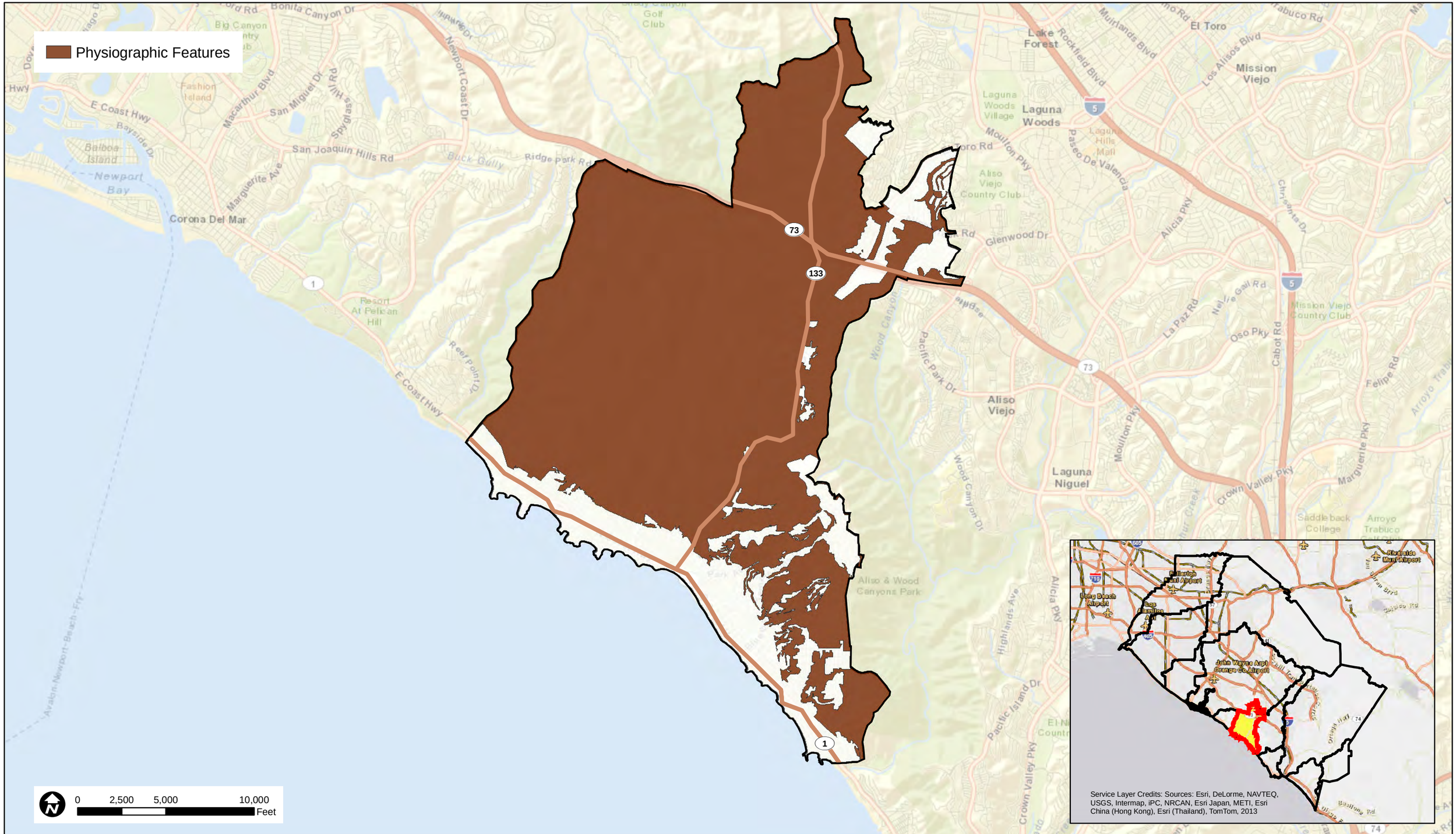
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 6.9b

INFILTRATION CONSTRAINT - LANDSLIDES
LAGUNA COAST WATERSHED



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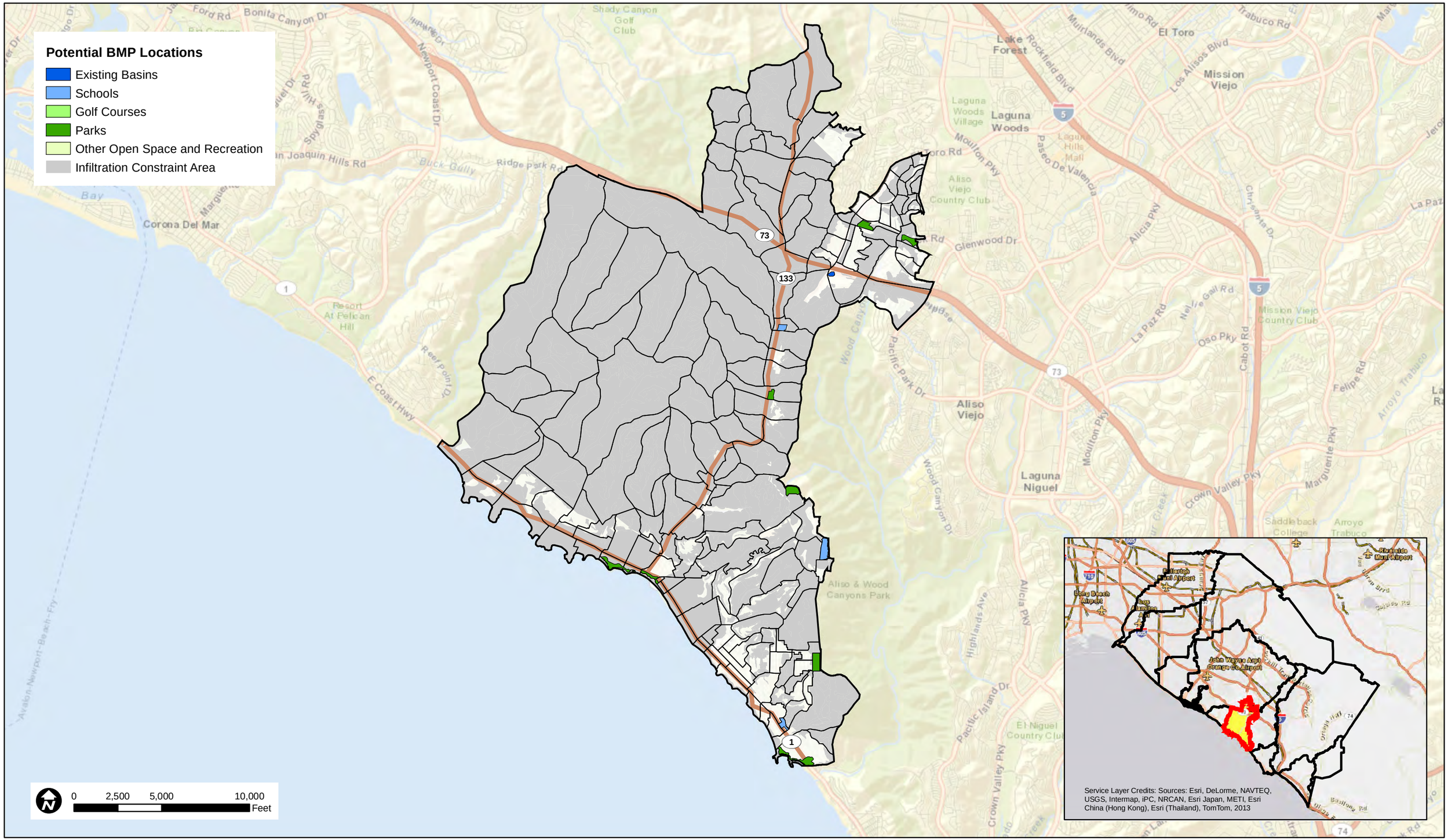
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.9c

INFILTRATION CONSTRAINT - PHYSIOGRAPHIC FEATURES
LAGUNA COAST WATERSHED



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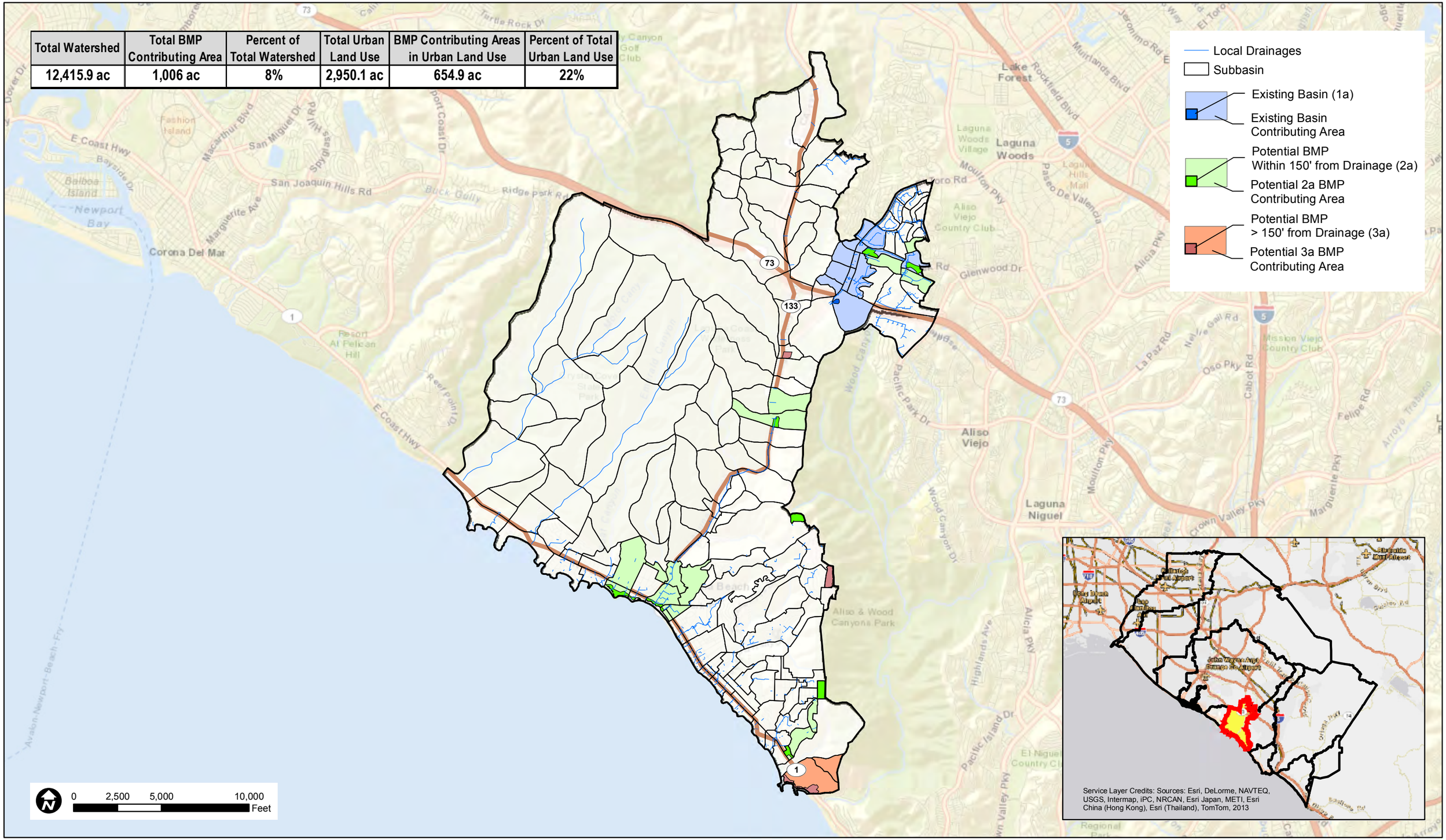
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 6.11

EXISTING AND POTENTIAL BMP LOCATIONS
LAGUNA COAST WATERSHED

Total Watershed	Total BMP Contributing Area	Percent of Total Watershed	Total Urban Land Use	BMP Contributing Areas in Urban Land Use	Percent of Total Urban Land Use
12,415.9 ac	1,006 ac	8%	2,950.1 ac	654.9 ac	22%



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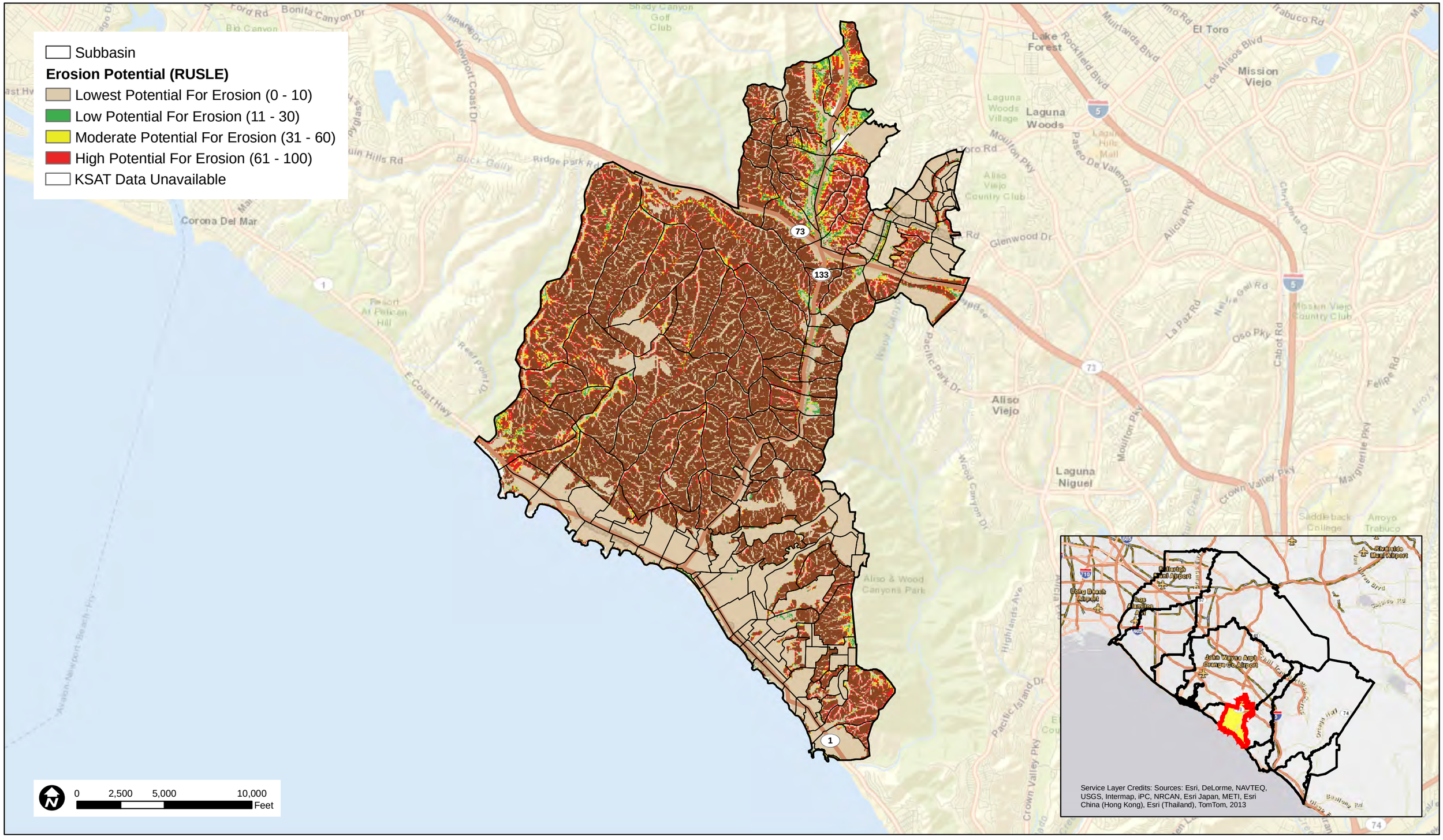
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 6.12

EXISTING AND POTENTIAL BMP CONTRIBUTING AREAS LAGUNA COAST WATERSHED



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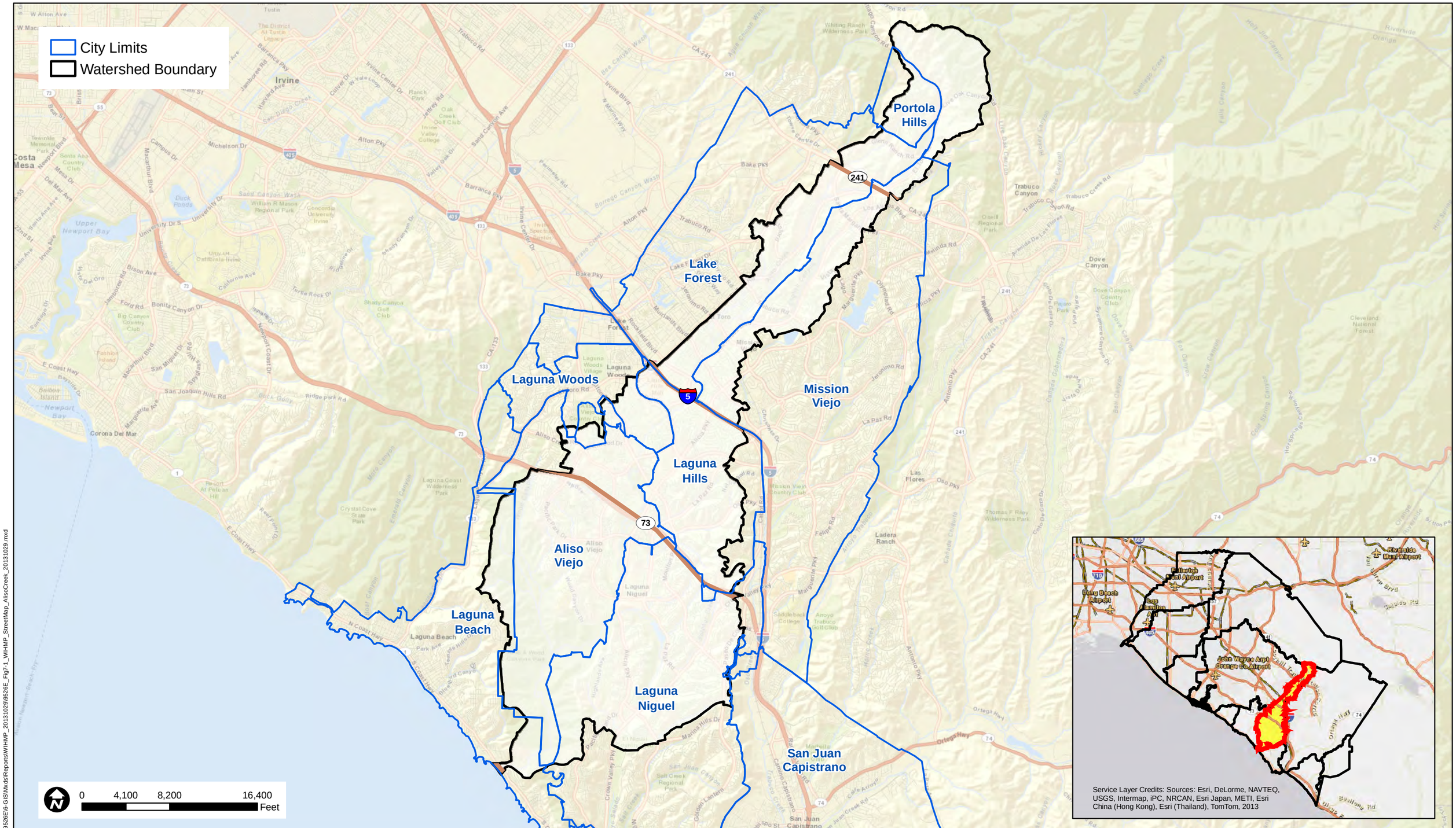
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 6.14
ERODIBILITY (RUSLE)
LAGUNA COAST WATERSHED



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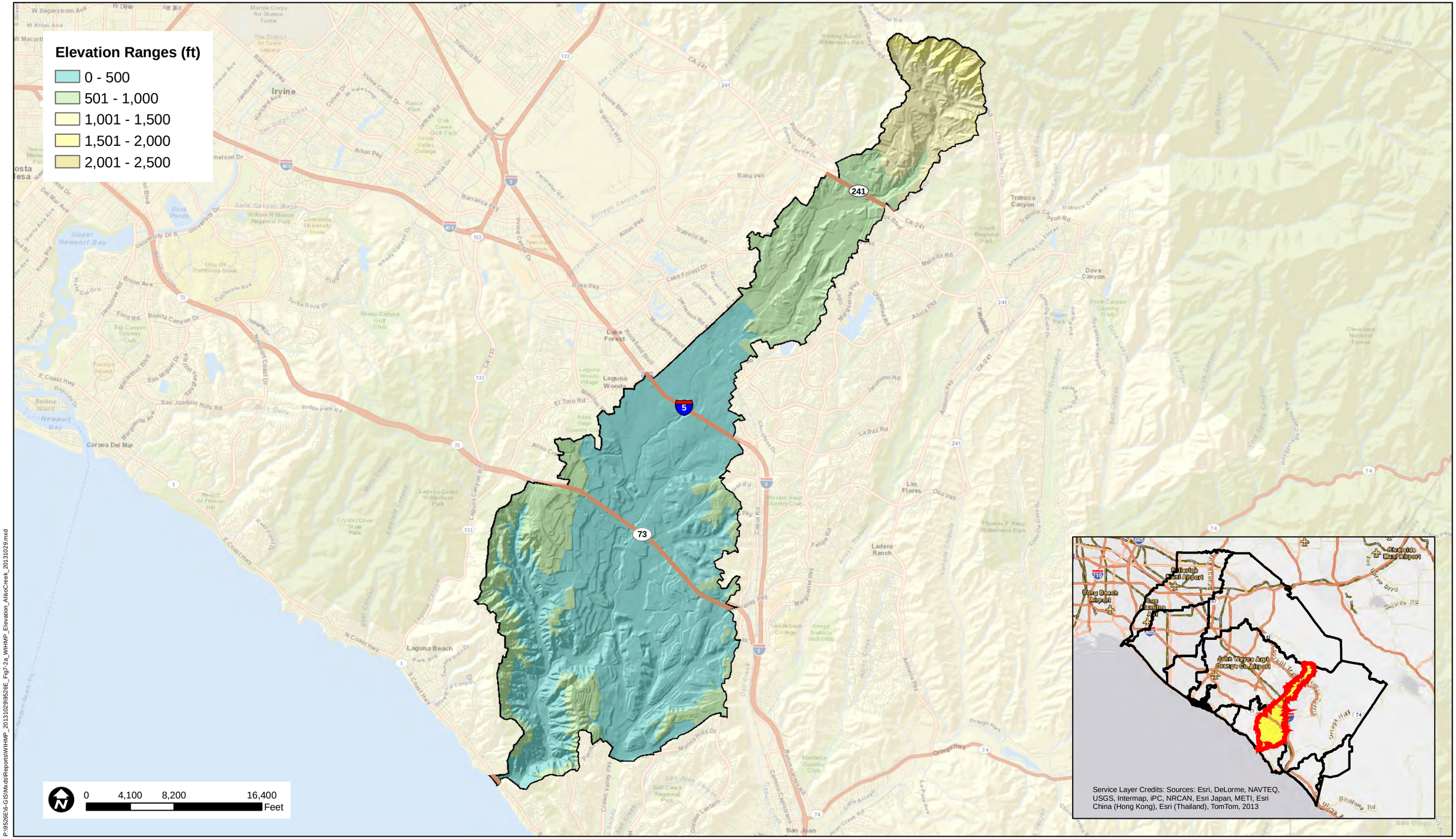
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 7.1
WATERSHED EXTENT
ALISO CREEK WATERSHED



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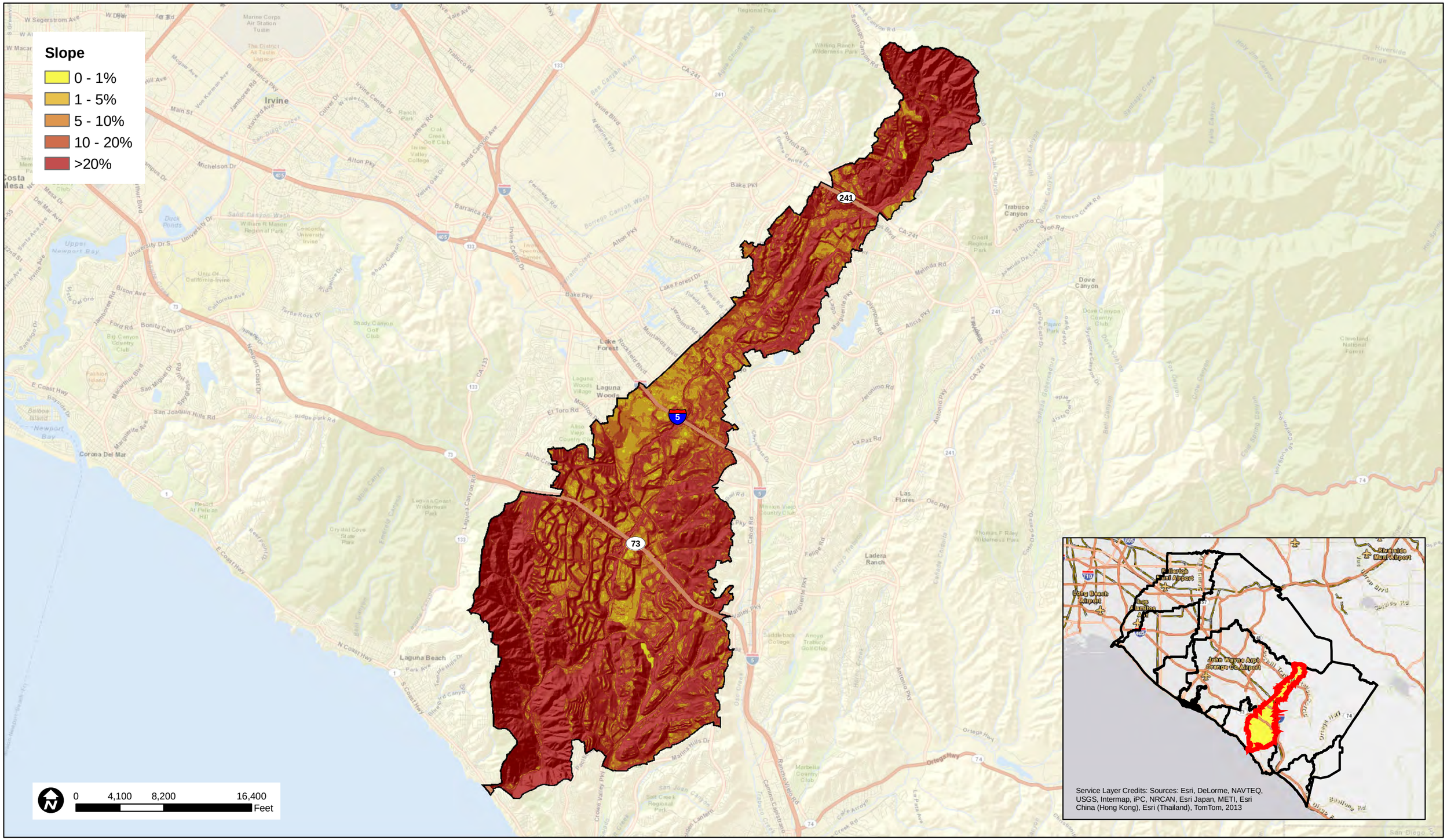
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 7.2a
ELEVATION DATA
ALISO CREEK WATERSHED



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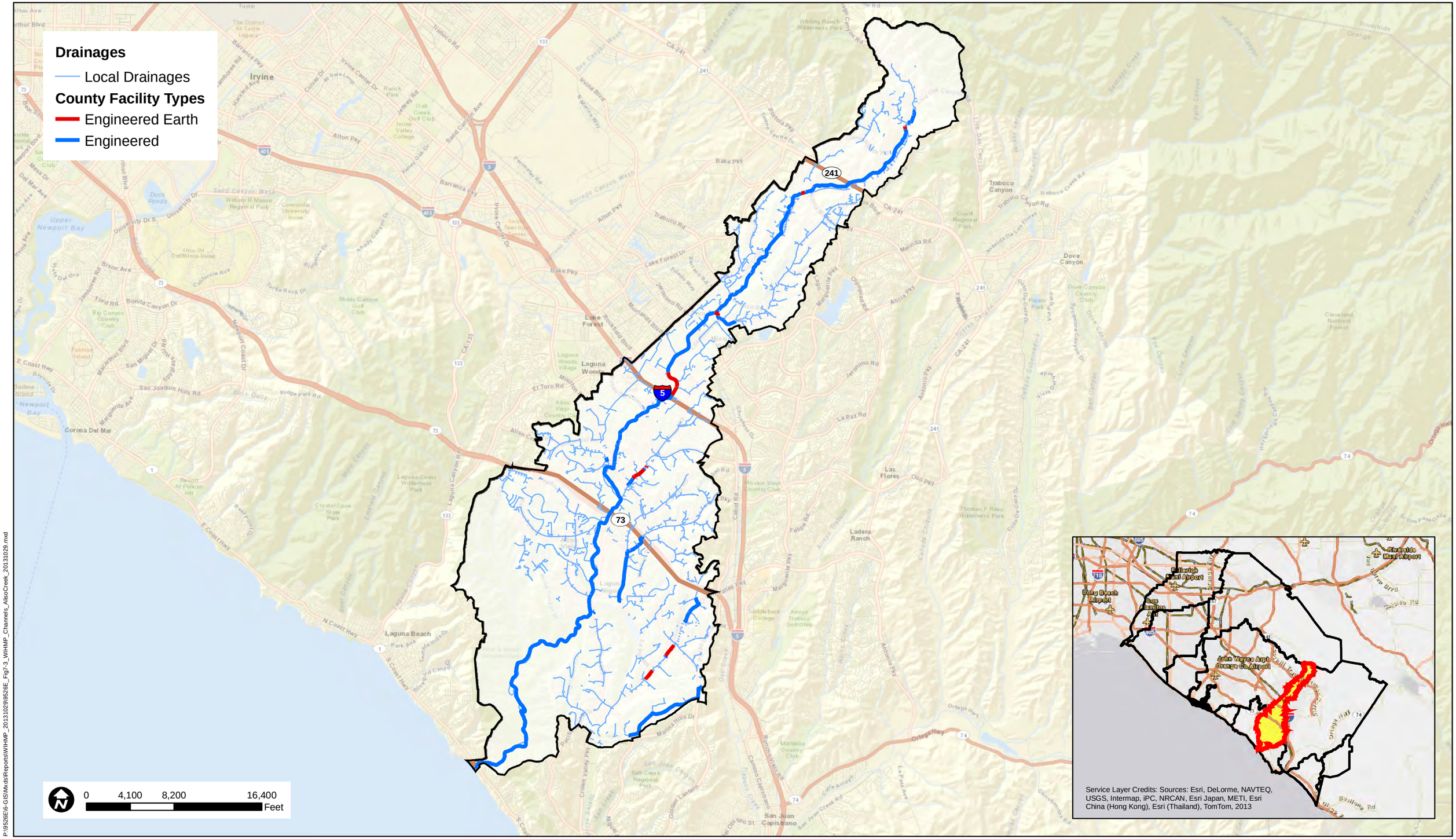
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 7.2b
SLOPE
ALISO CREEK WATERSHED



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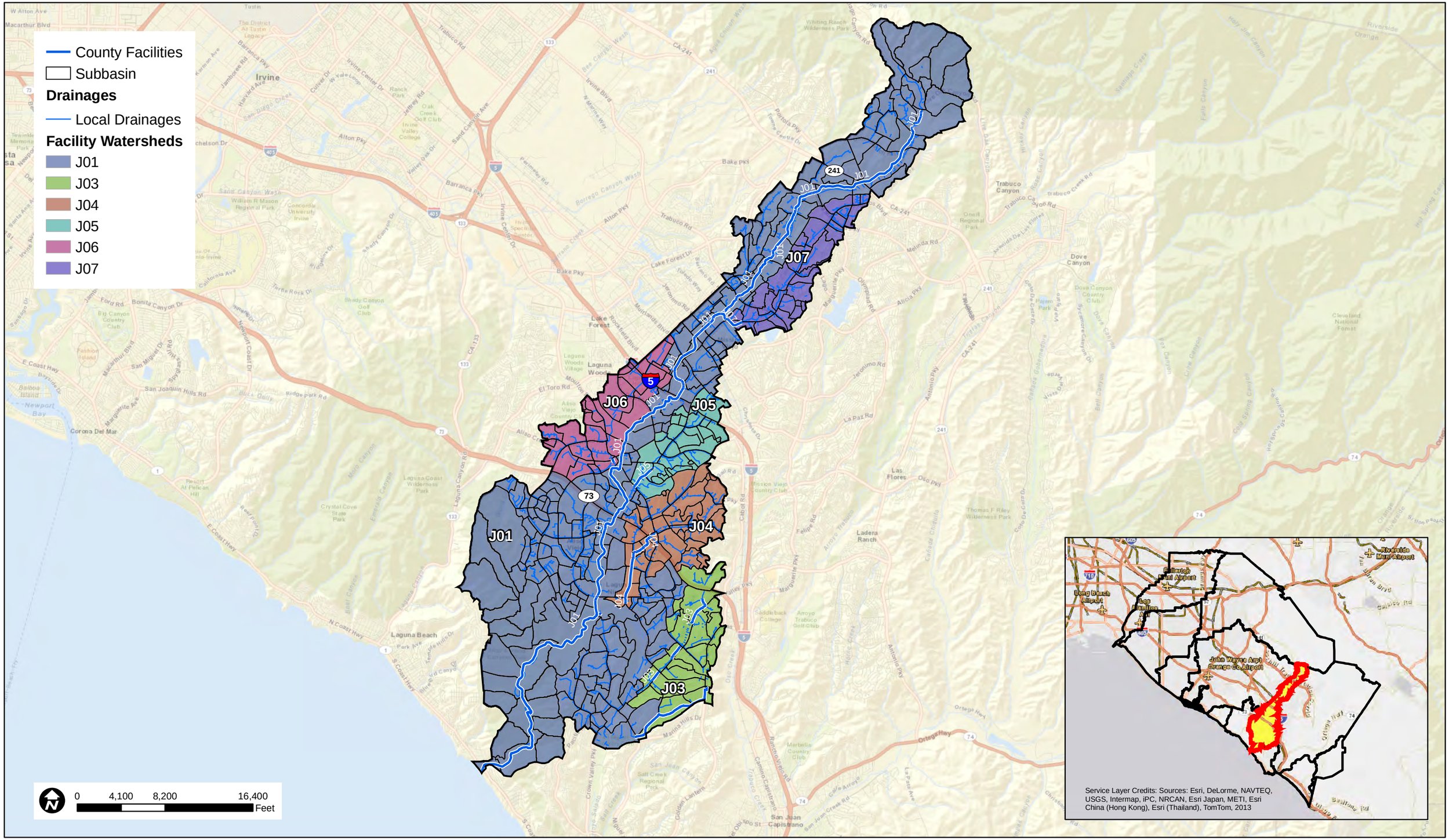
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 7.3
COUNTY DRAINAGE FACILITIES
ALISO CREEK WATERSHED



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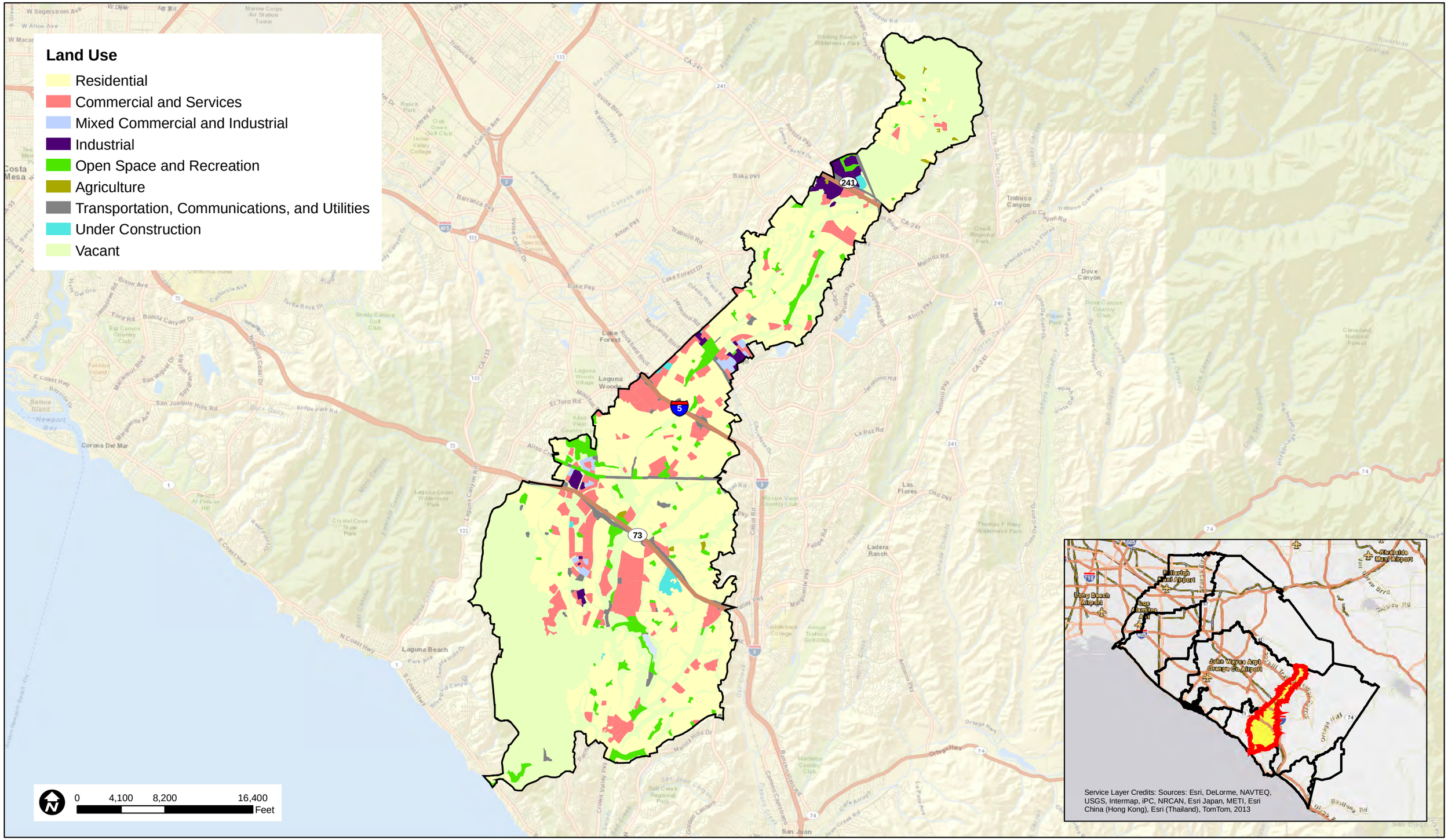
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 7.4
COUNTY SUBBASINS & FACILITY WATERSHED DELINEATION ALISO CREEK WATERSHED



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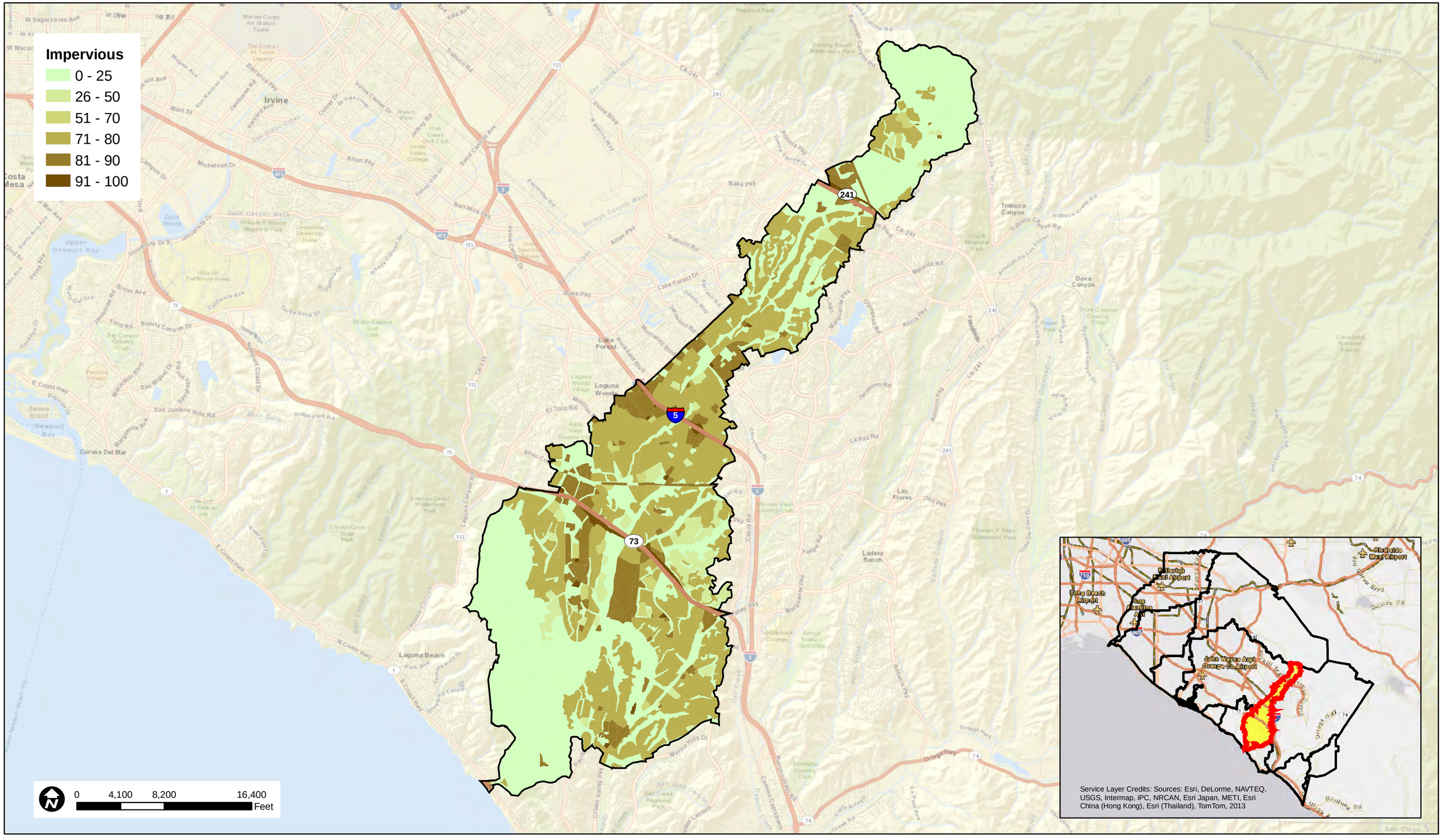
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 7.5
LAND USE
ALISO CREEK WATERSHED



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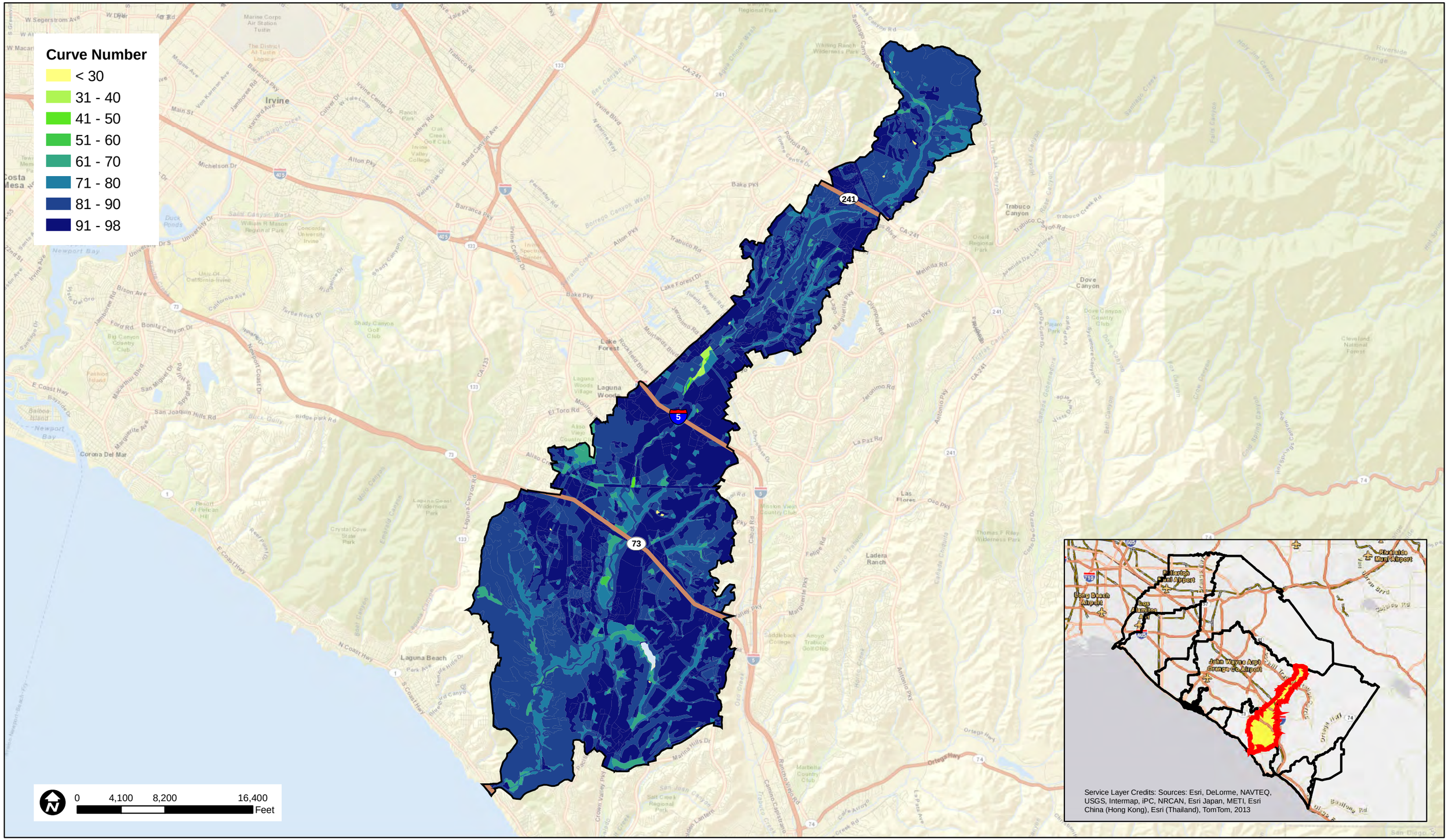
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 7.6

EXISTING IMPERVIOUSNESS
ALISO CREEK WATERSHED



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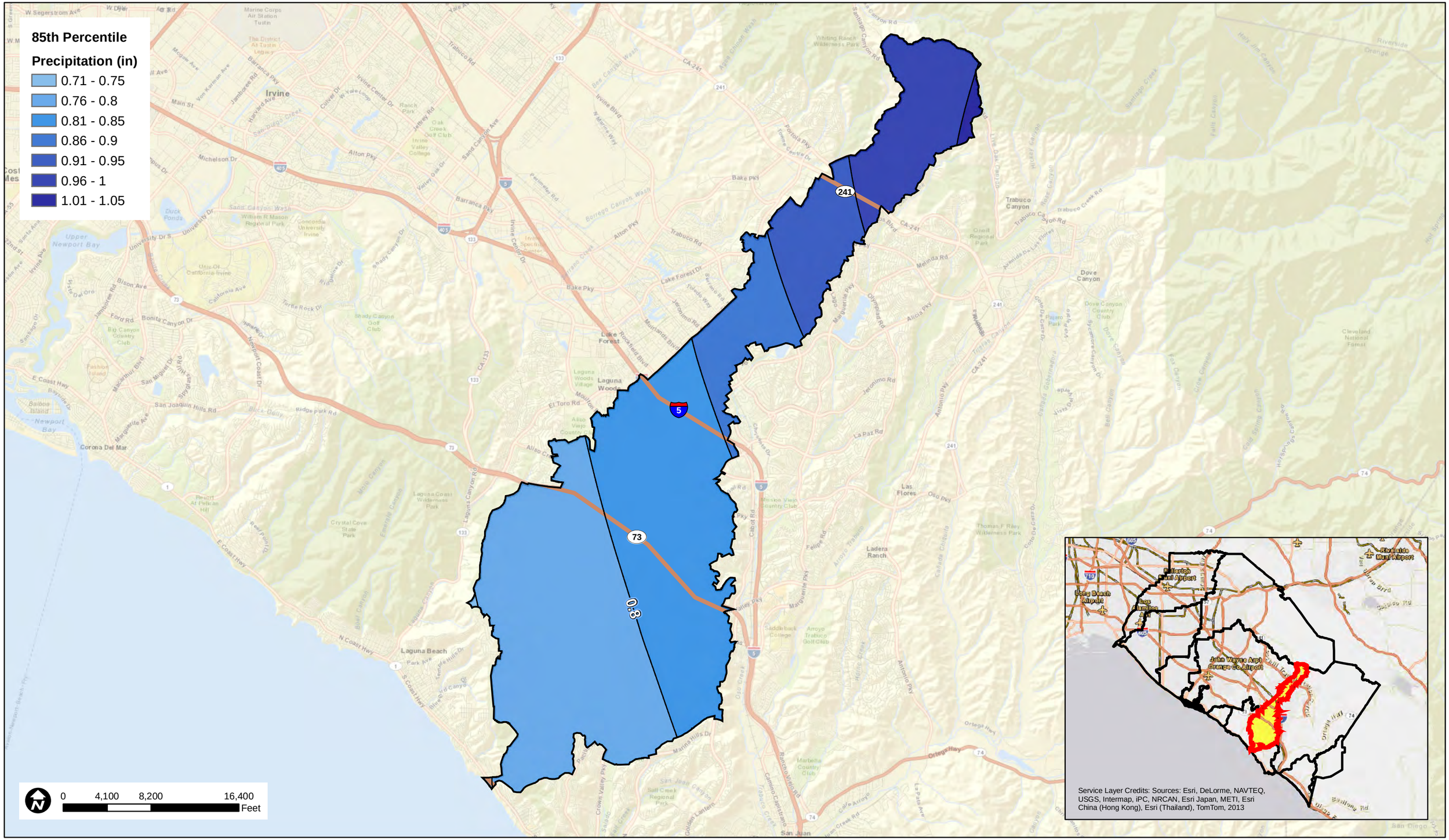
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 7.7

EXISTING CURVE NUMBER ANALYSIS ALISO CREEK WATERSHED



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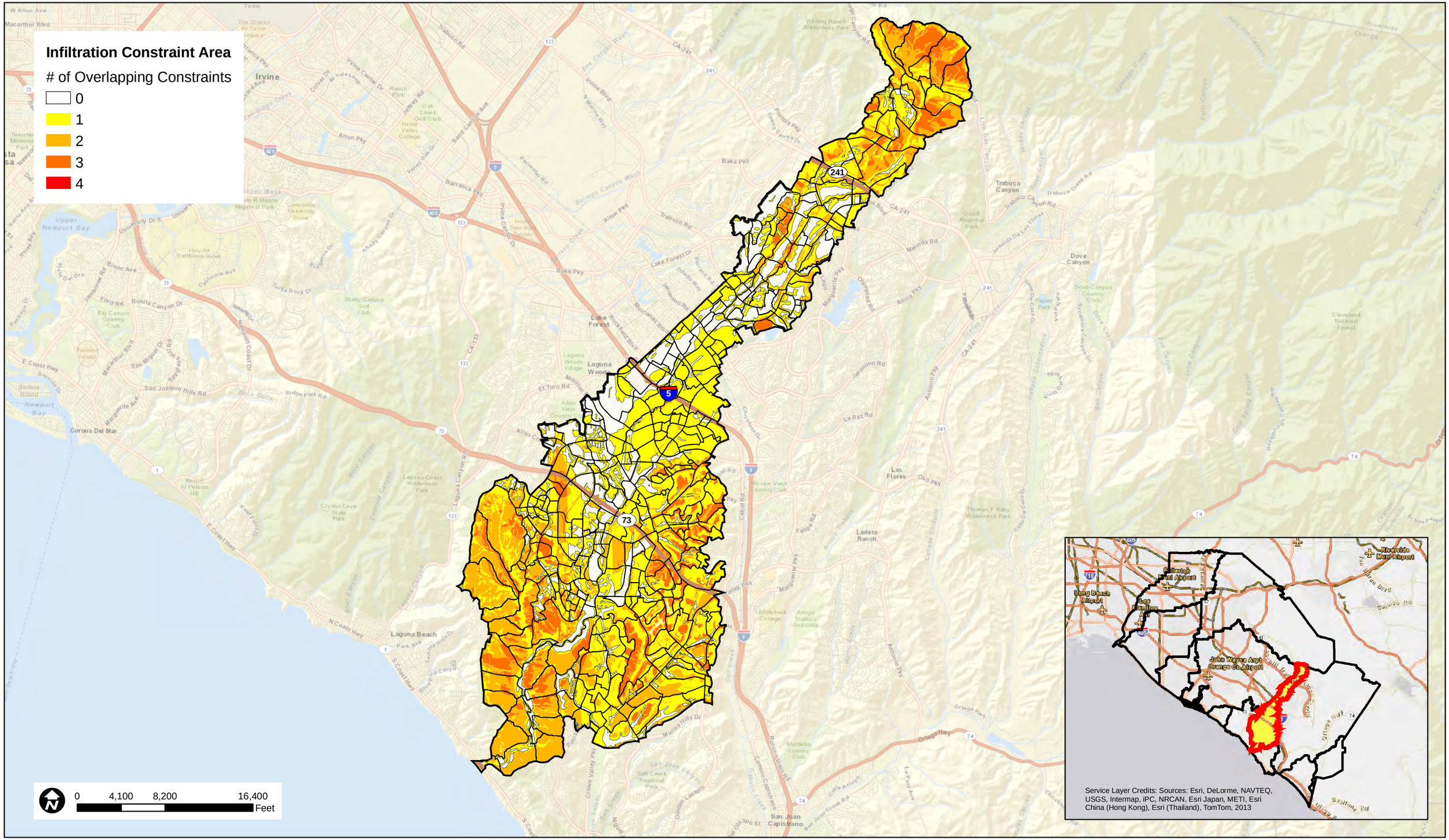
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 7.8

PRECIPITATION - 85TH PERCENTILE
ALISO CREEK WATERSHED



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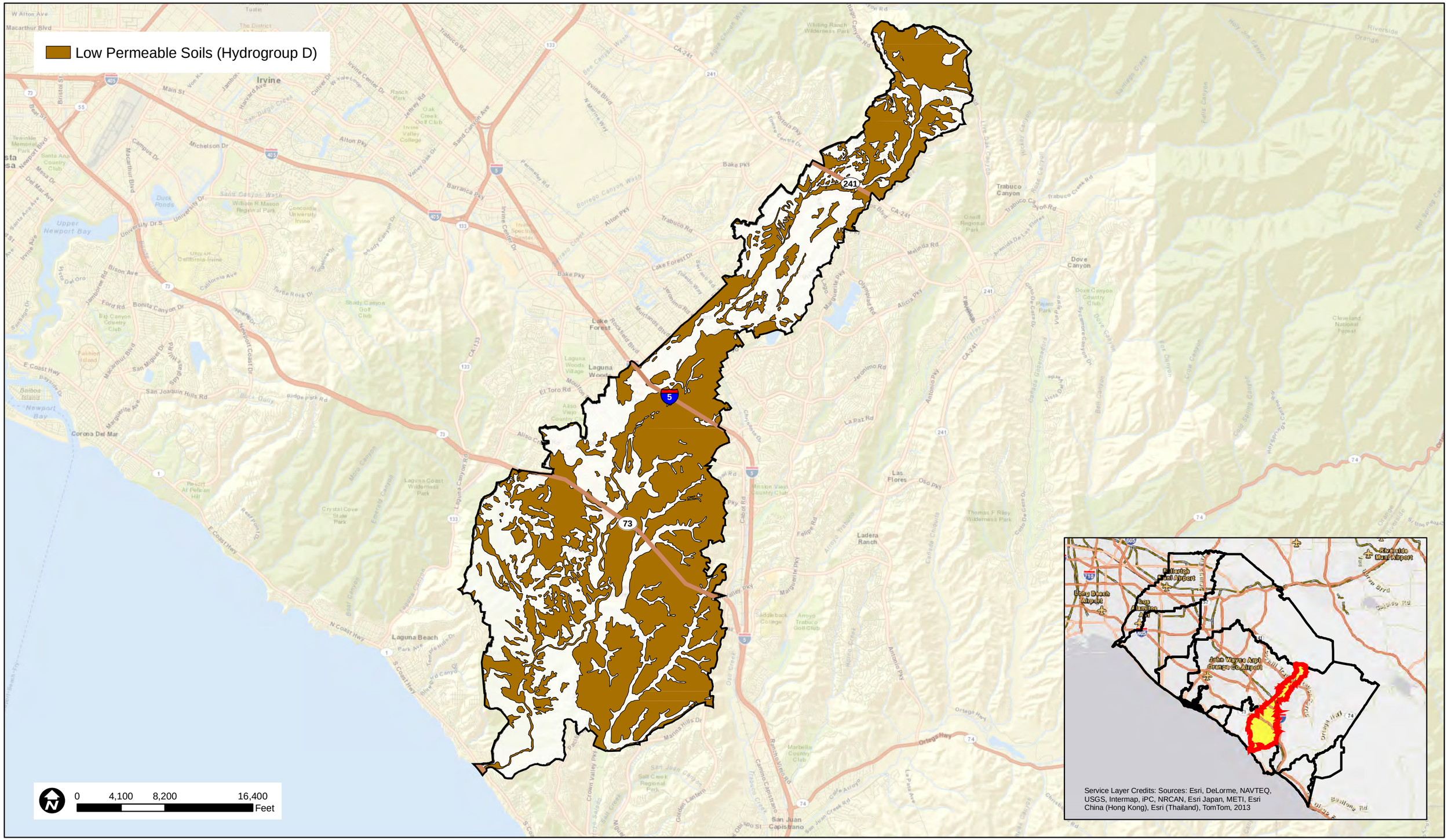
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 7.9

INFILTRATION CONSTRAINT - OVERALL CONSTRAINTS
ALISO CREEK WATERSHED



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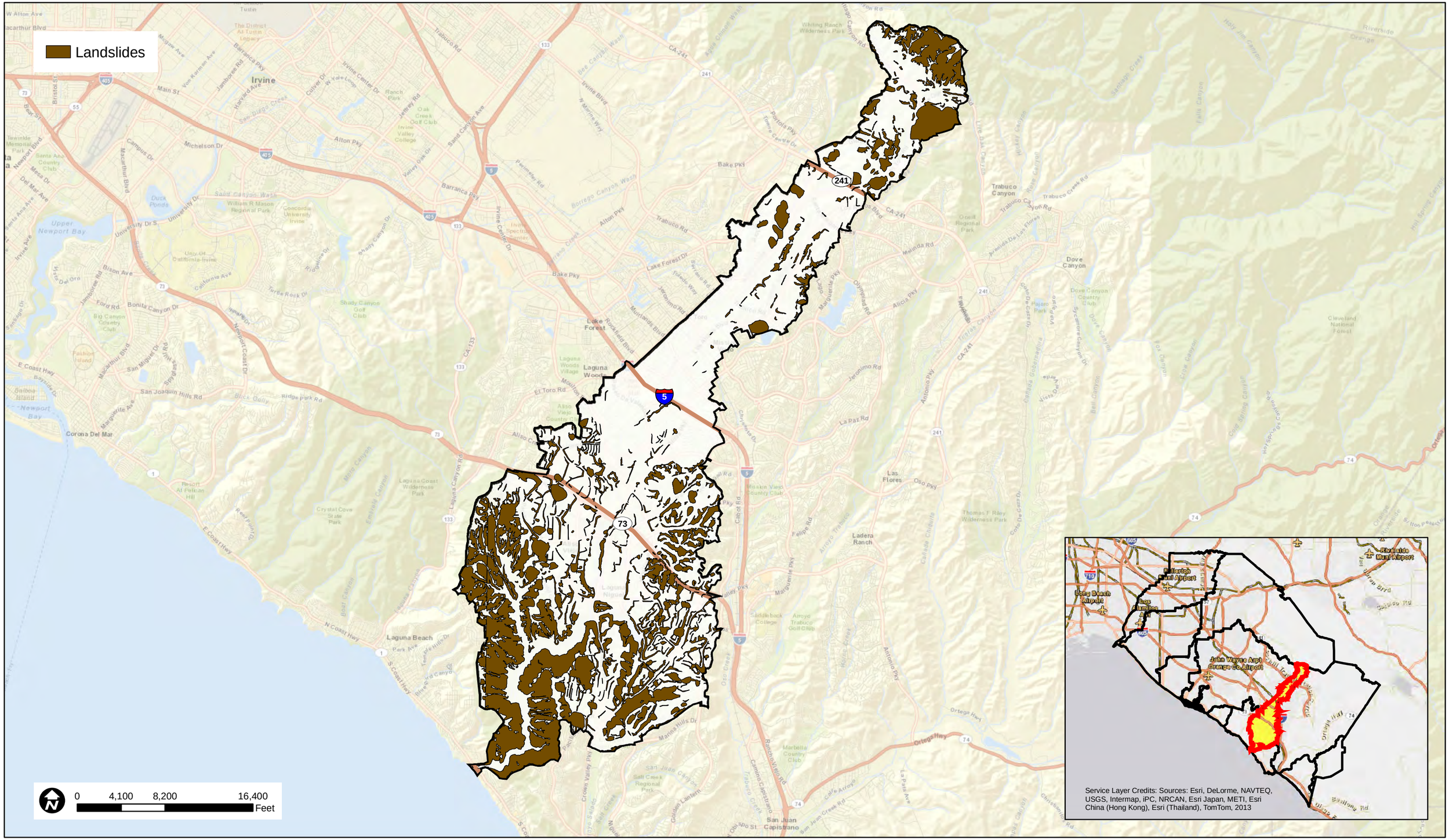
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 7.9a

INFILTRATION CONSTRAINT - D SOILS (LOW PERMEABLITY)
ALISO CREEK WATERSHED



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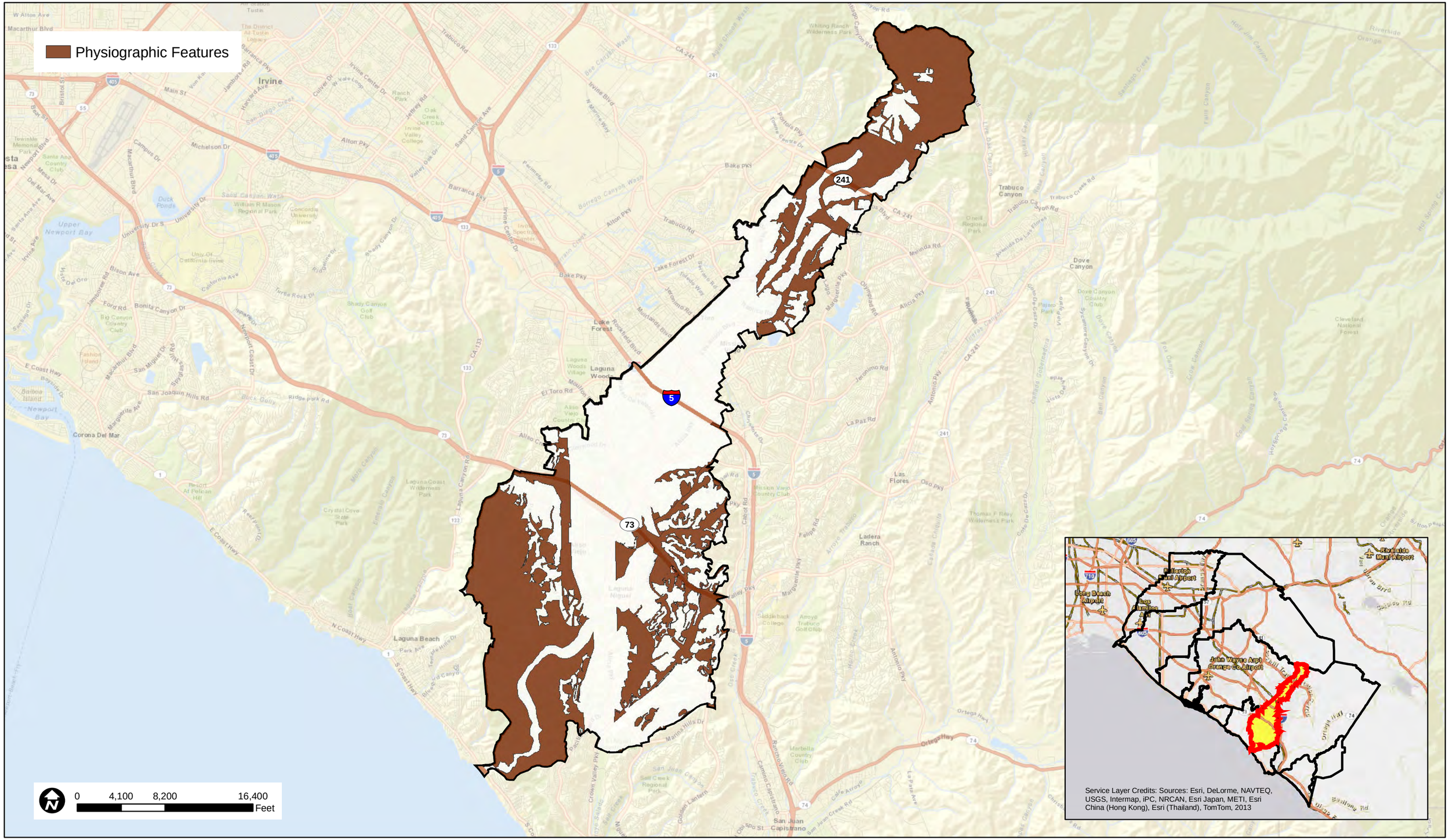
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 7.9b

INFILTRATION CONSTRAINT - LANDSLIDES
ALISO CREEK WATERSHED



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COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 7.9c

INFILTRATION CONSTRAINT - PHYSIOGRAPHIC FEATURES
ALISO CREEK WATERSHED

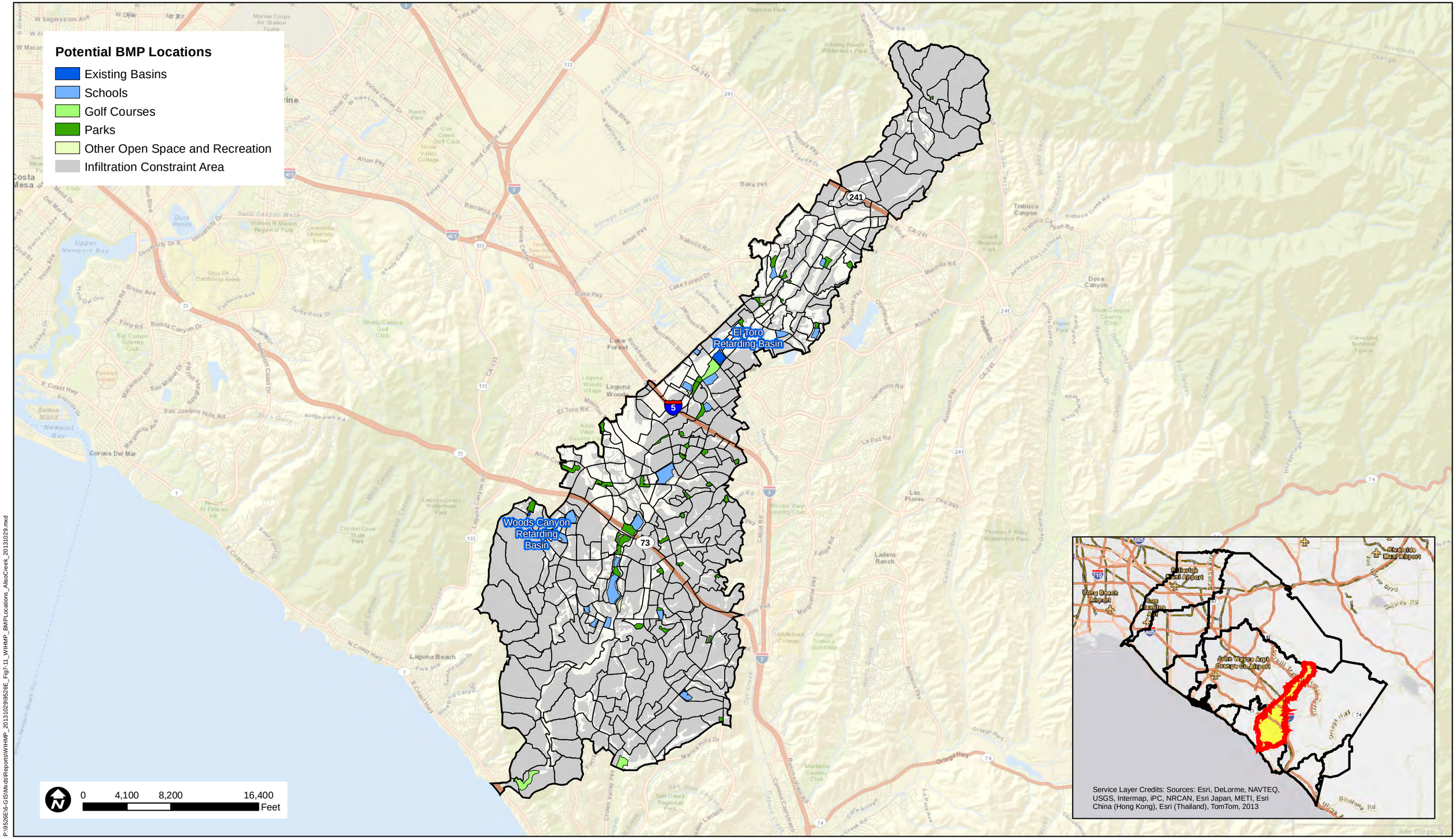

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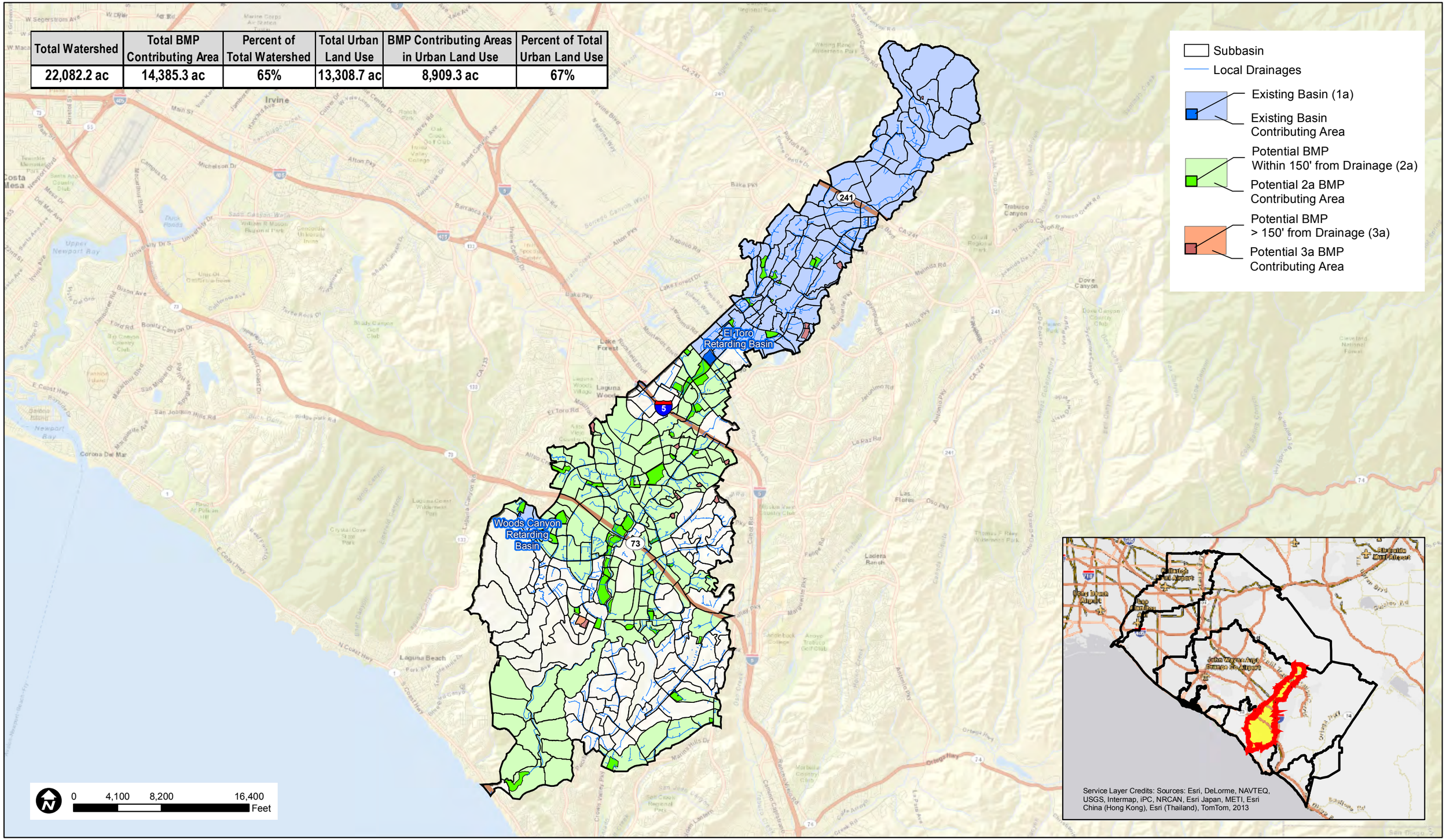
FIGURE 7.11

EXISTING AND POTENTIAL BMP LOCATIONS
ALISO CREEK WATERSHED

COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

Total Watershed	Total BMP Contributing Area	Percent of Total Watershed	Total Urban Land Use	BMP Contributing Areas in Urban Land Use	Percent of Total Urban Land Use
22,082.2 ac	14,385.3 ac	65%	13,308.7 ac	8,909.3 ac	67%



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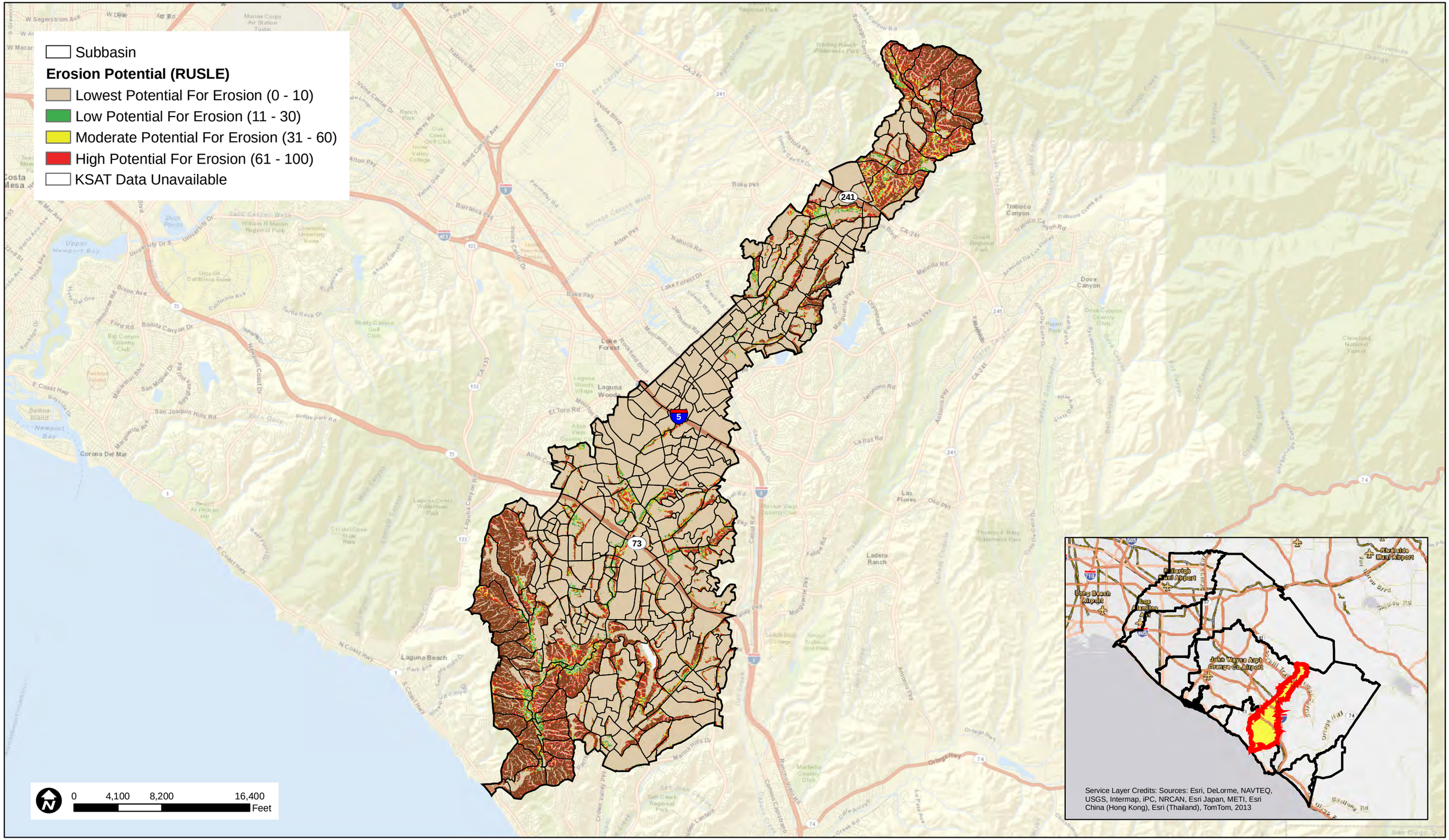
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 7.12

EXISTING AND POTENTIAL BMP CONTRIBUTING AREAS ALISO CREEK WATERSHED



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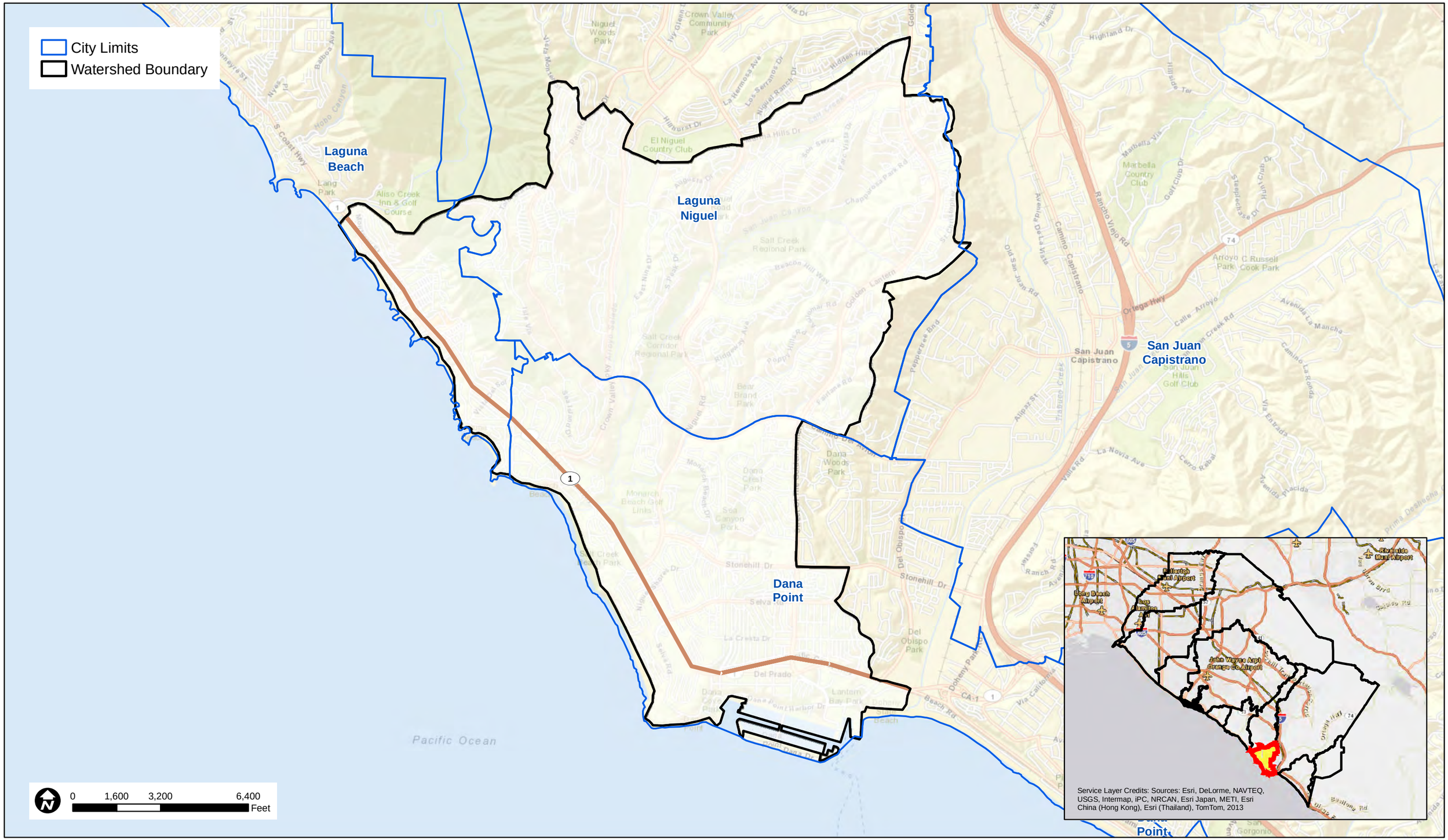
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 7.14
ERODIBILITY (RUSLE)
ALISO CREEK WATERSHED



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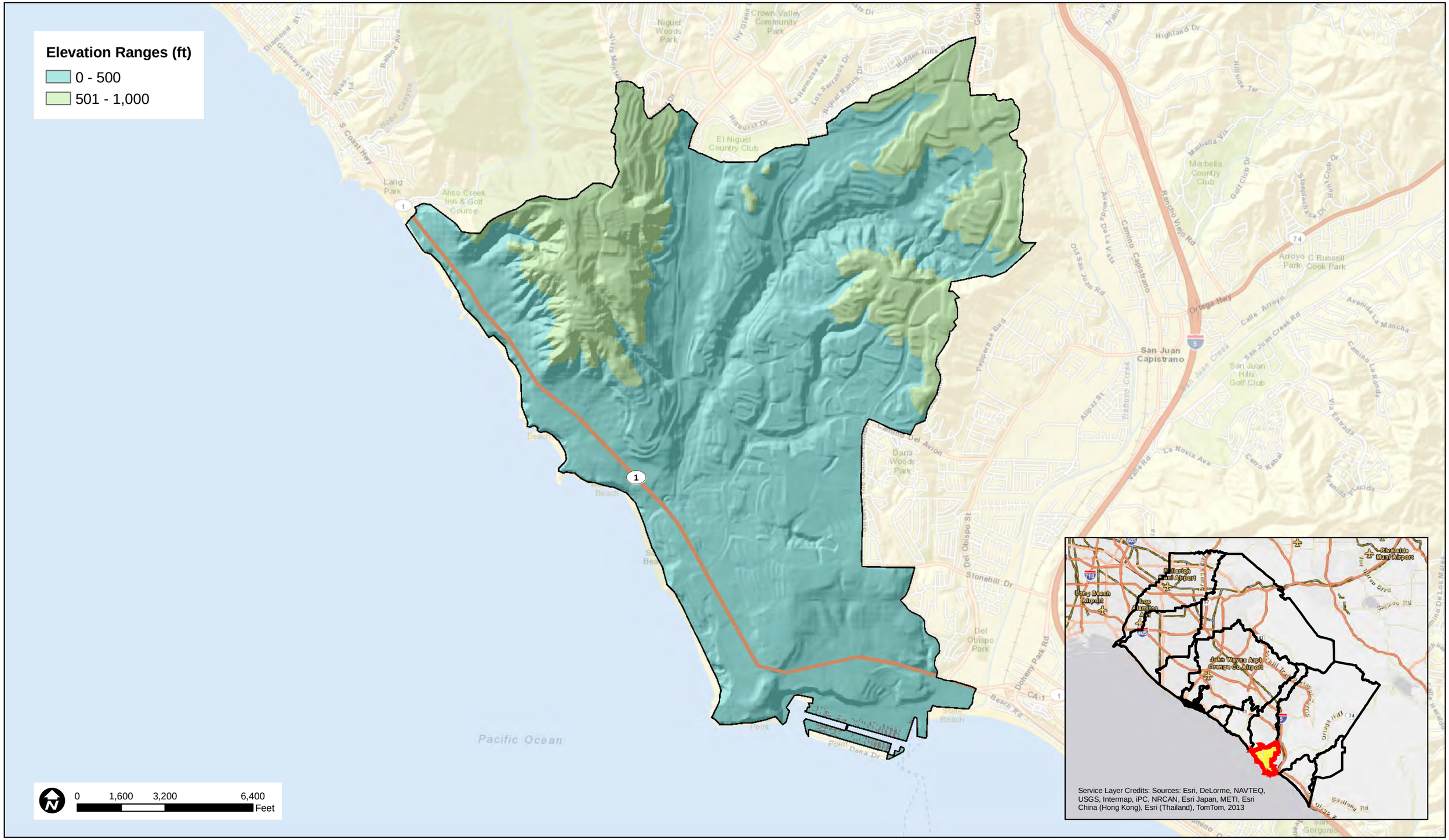
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 8.1
WATERSHED EXTENT
DANA POINT WATERSHED



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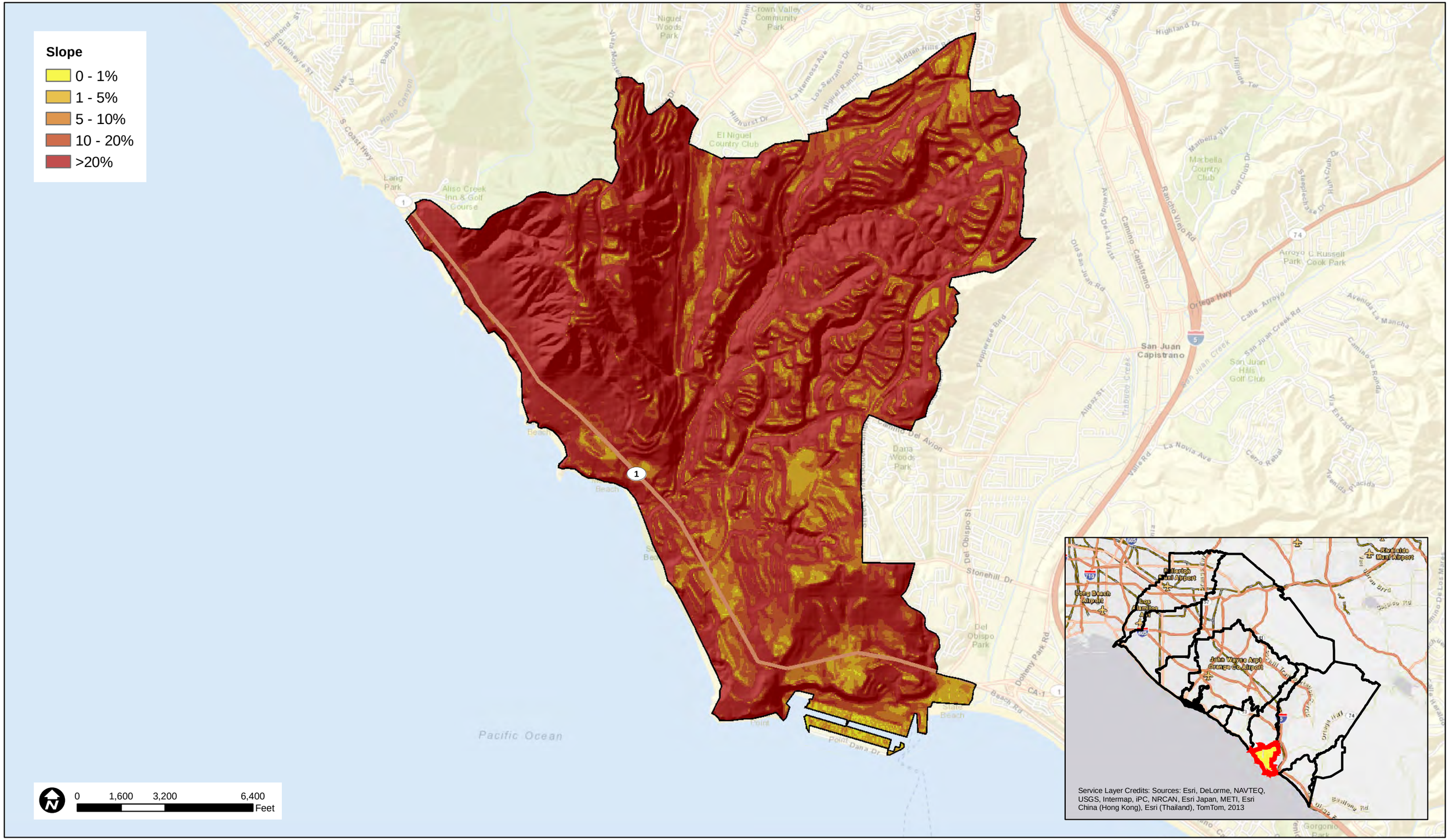
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 8.2a

ELEVATION DATA
DANA POINT WATERSHED



P:\9526E\6-GIS\Mxds\Reports\WIHMP_20131029\9526E_Fig8-2b_WIHMP_Slope_DanaPoint_20131029.mxd

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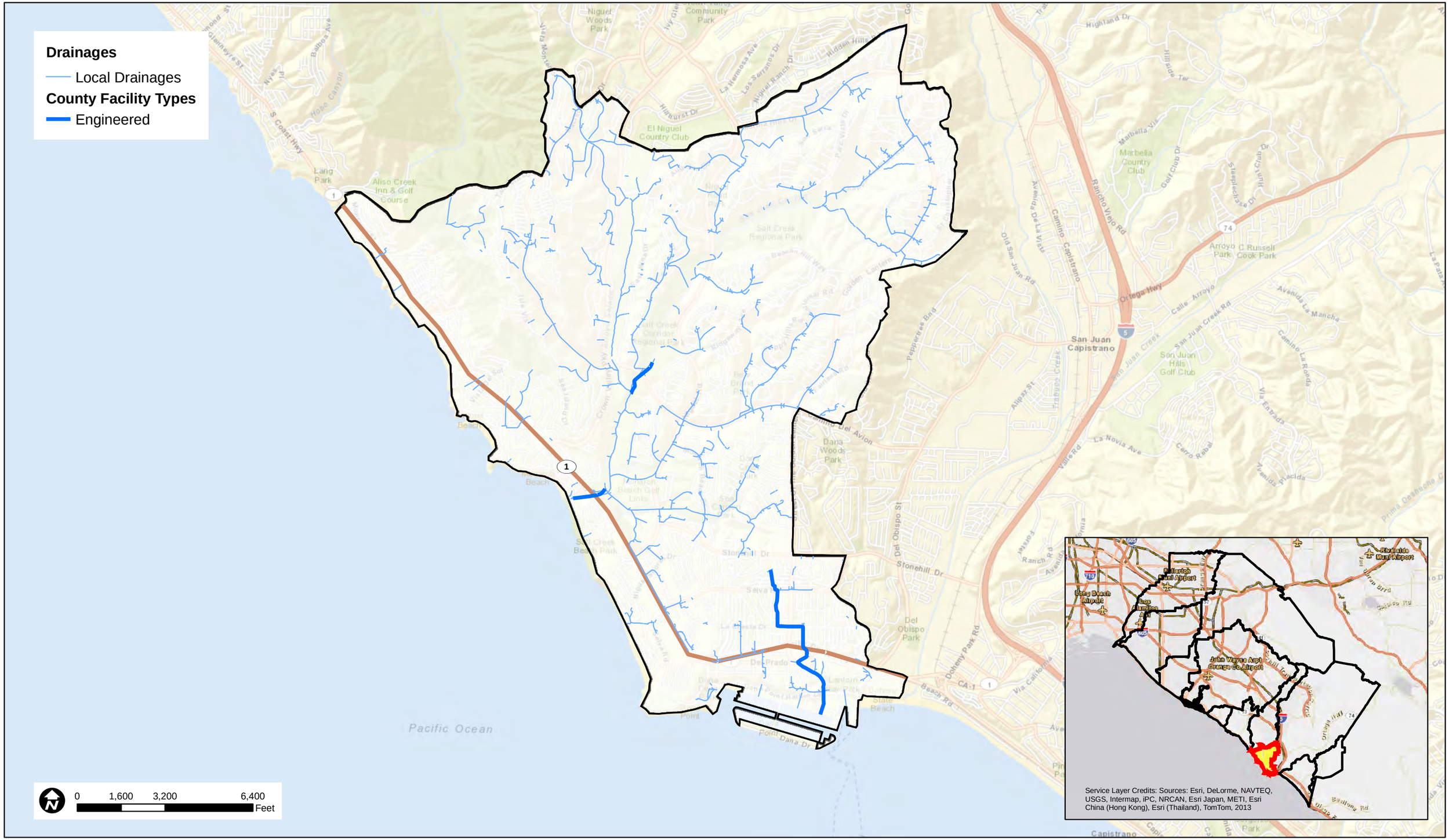
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 8.2b
SLOPE
DANA POINT WATERSHED



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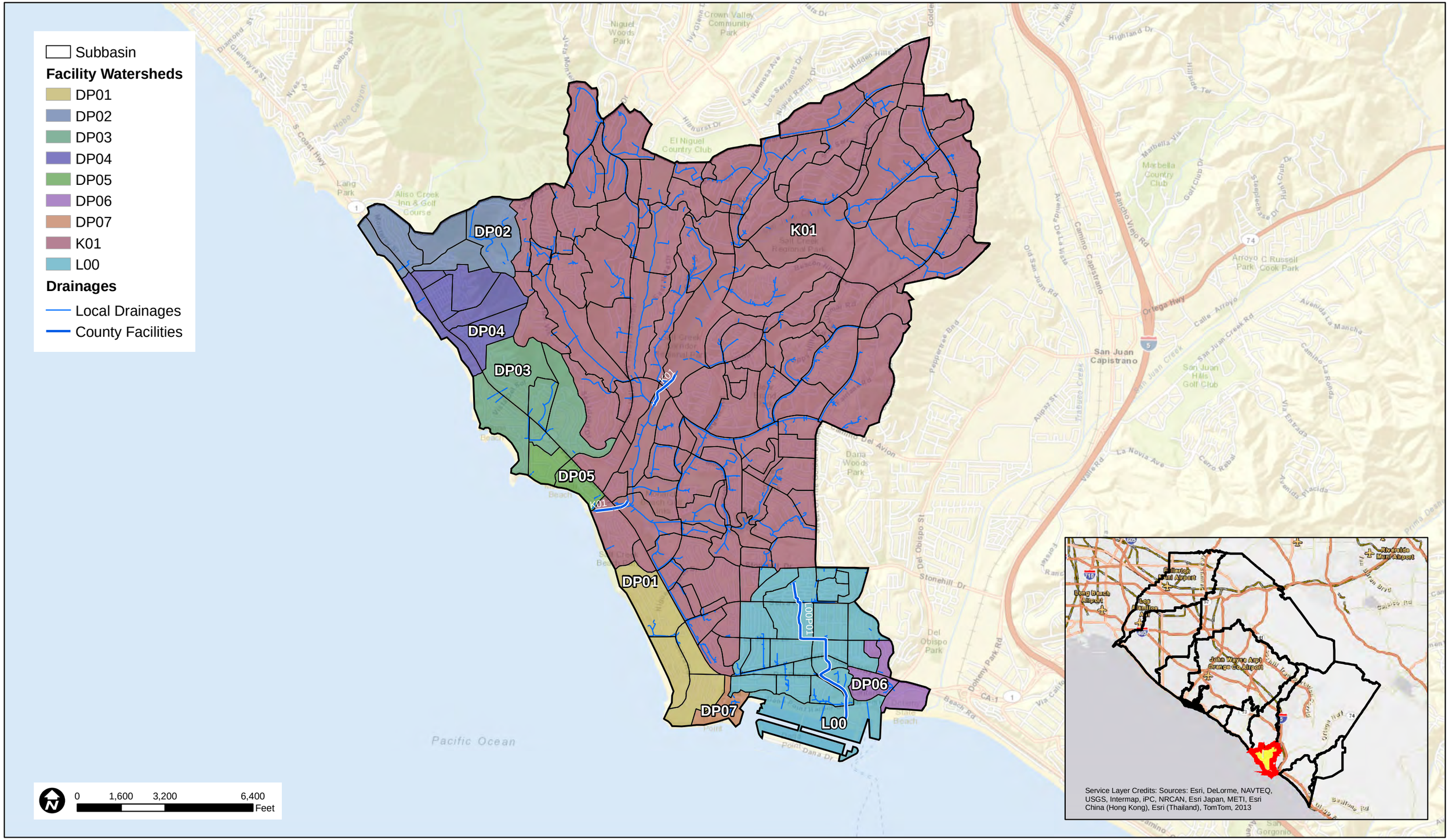
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 8.3
COUNTY DRAINAGE FACILITIES
DANA POINT WATERSHED



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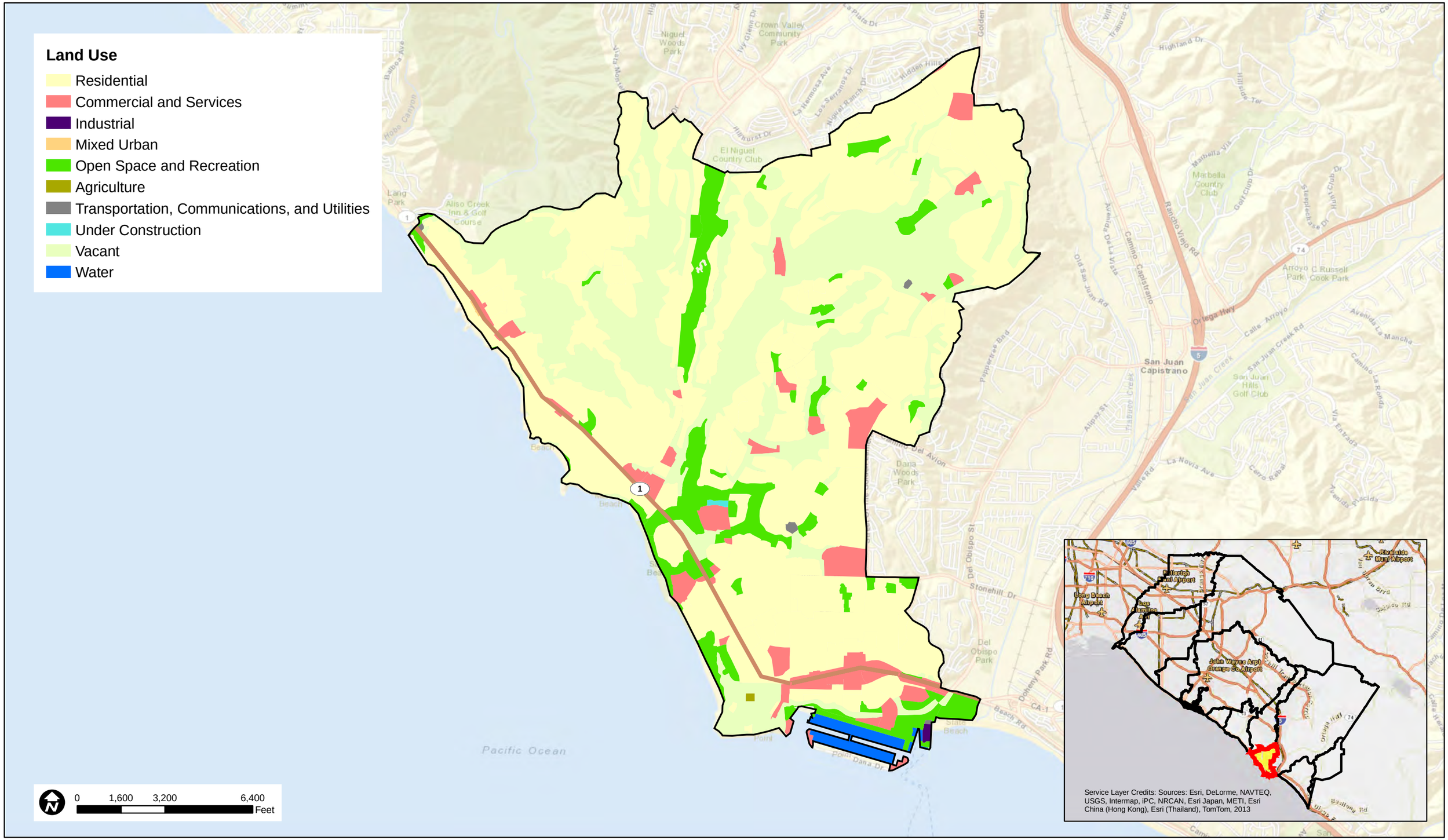
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 8.4

COUNTY SUBBASINS & FACILITY WATERSHED DELINEATION
DANA POINT WATERSHED



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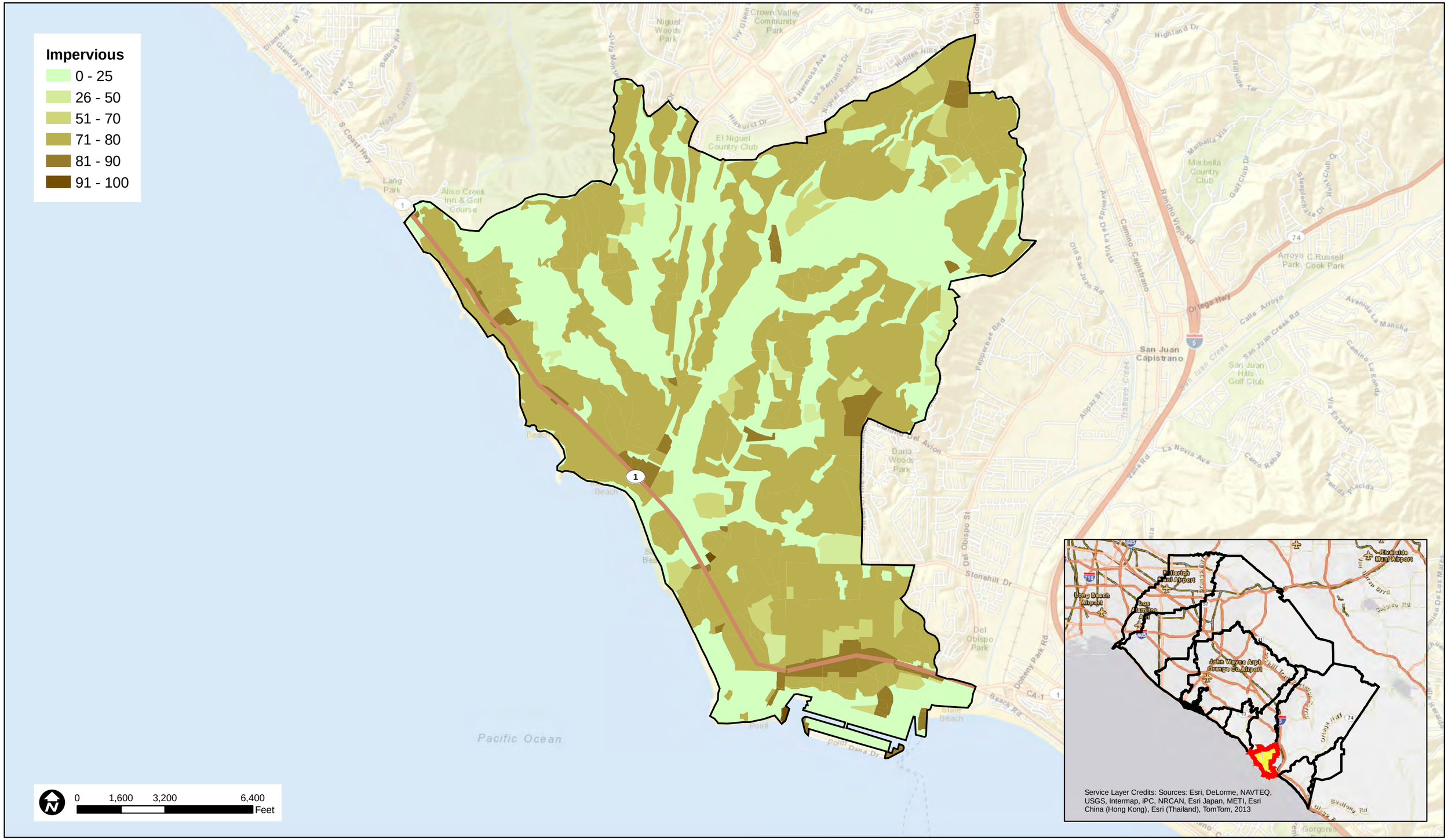
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 8.5

LAND USE
DANA POINT WATERSHED



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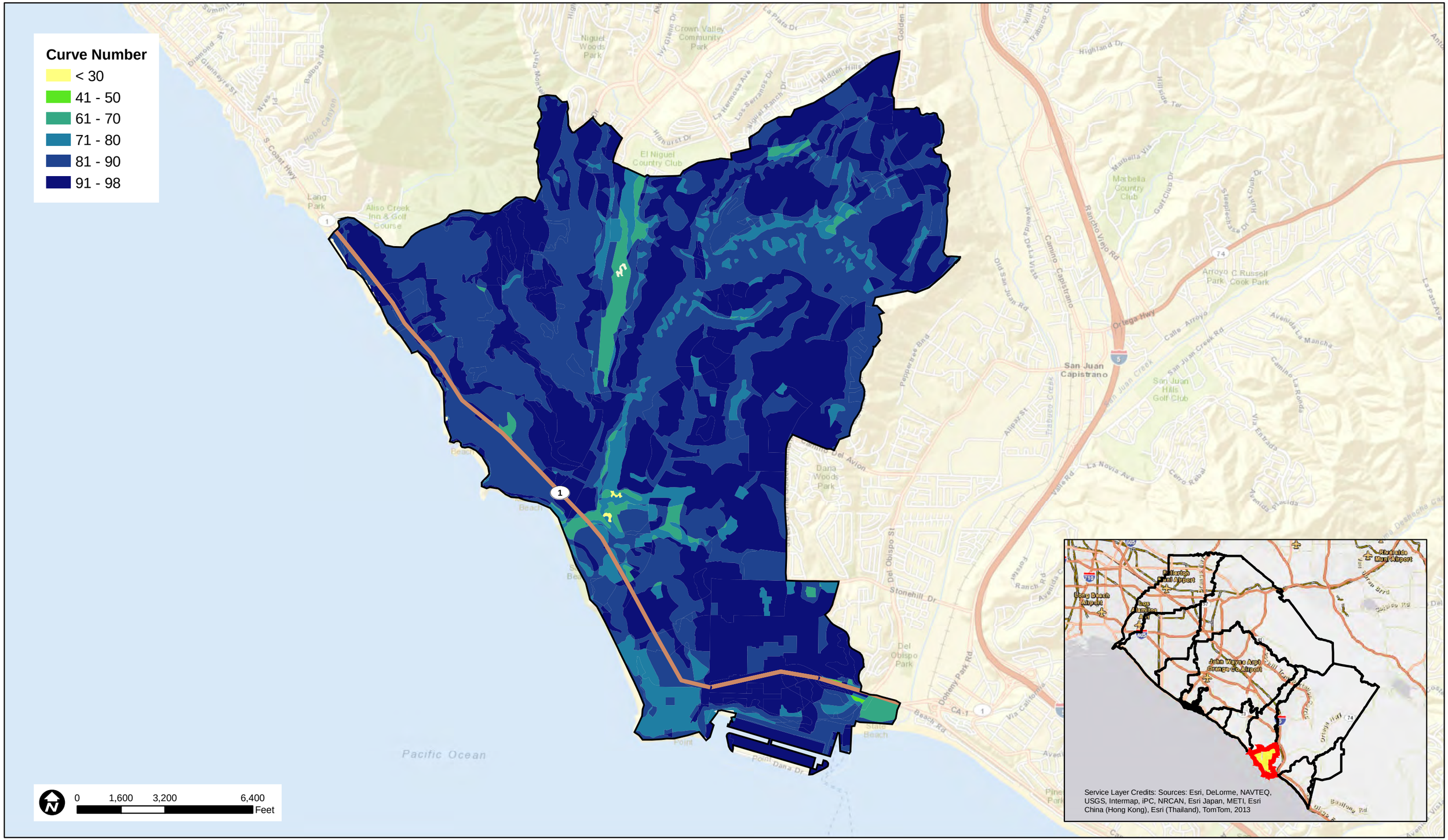
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 8.6

EXISTING IMPERVIOUSNESS
DANA POINT WATERSHED



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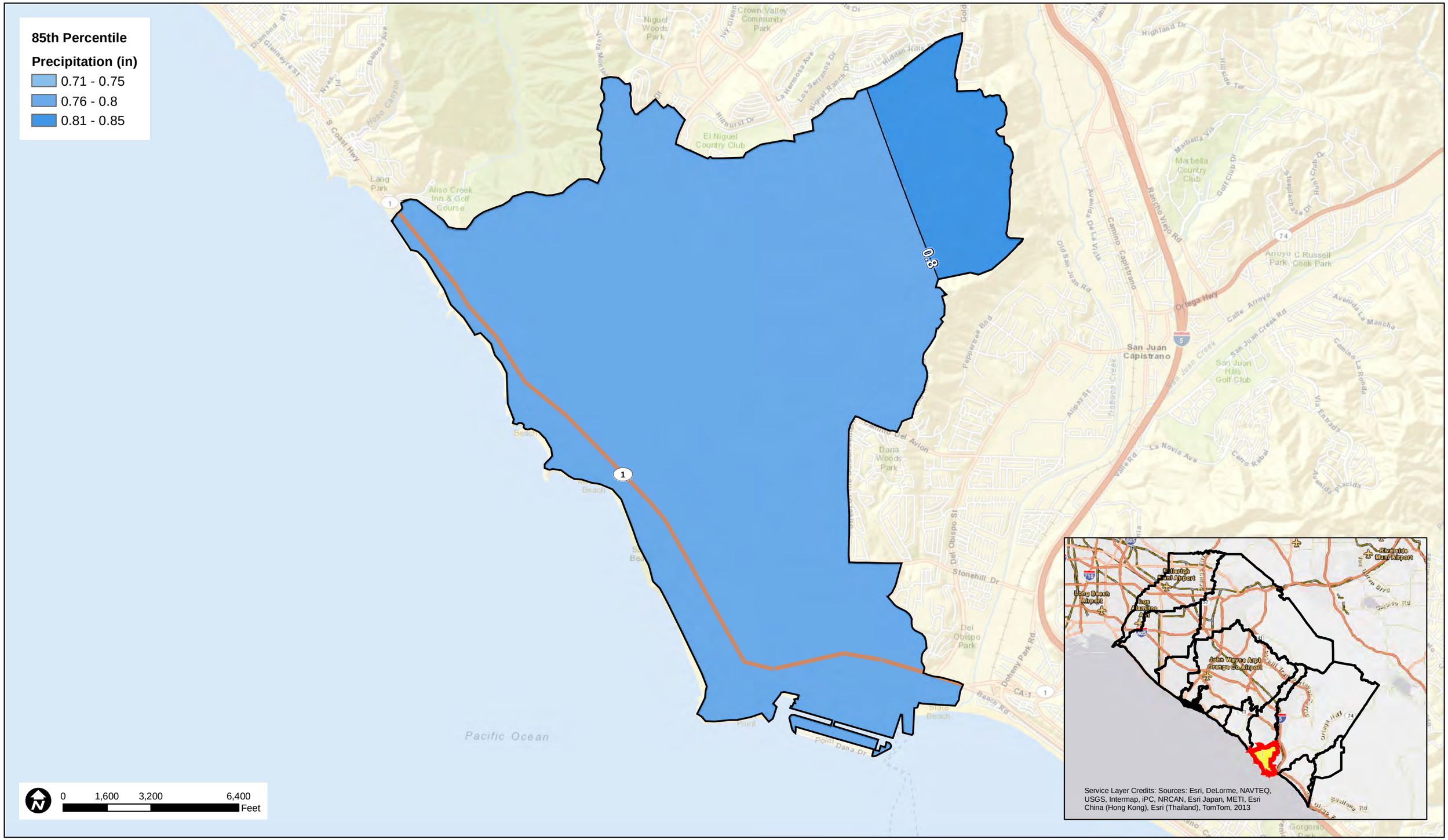
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 8.7
EXISTING CURVE NUMBER ANALYSIS
DANA POINT WATERSHED



P:\9526E\6-GIS\Mxds\Reports\WIHMP_20131029\9526E_Fig8-8_WIHMP_85thPercentileRainfall_DanaPoint_20131029.mxd

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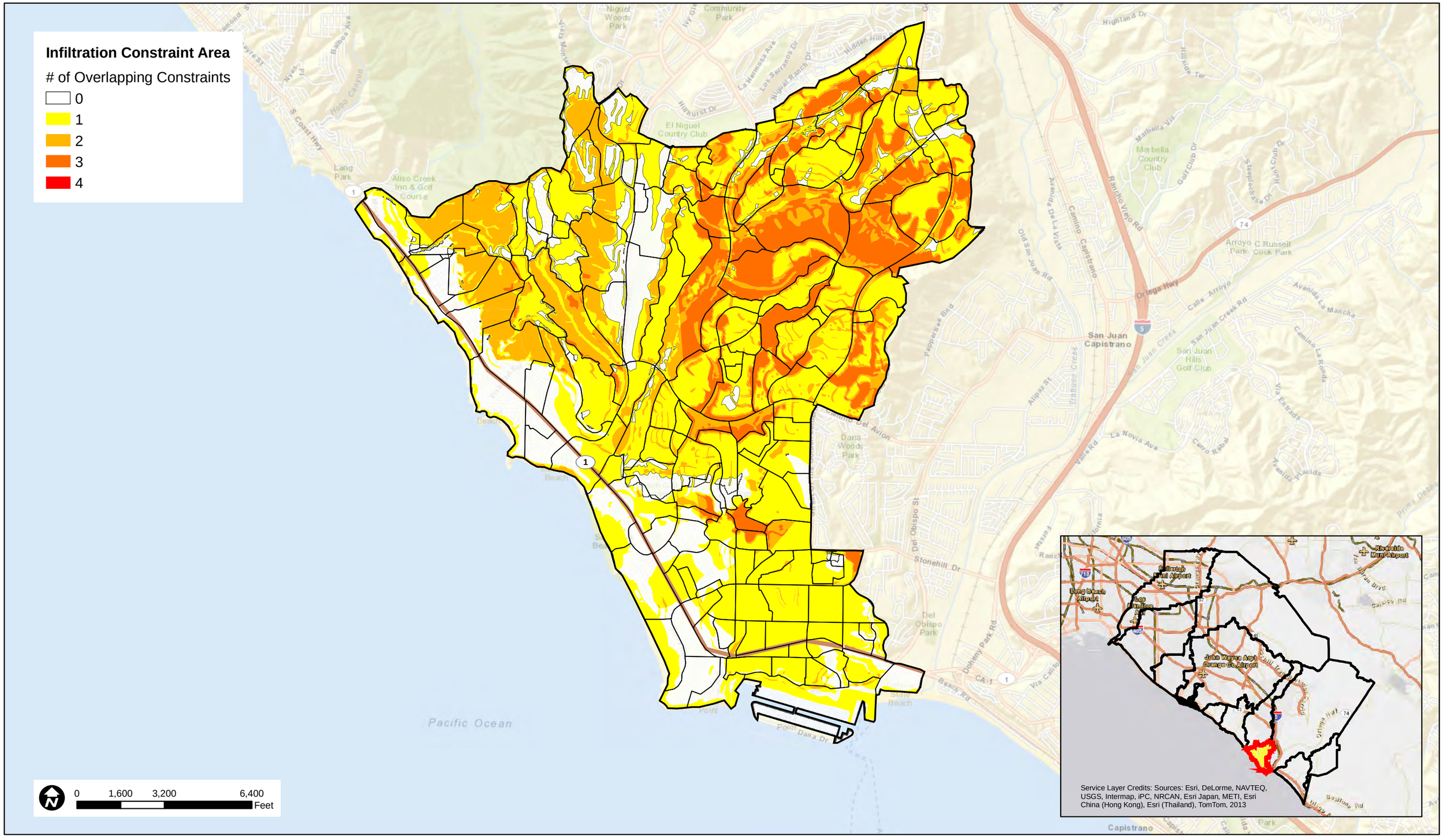
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 8.8

PRECIPITATION - 85TH PERCENTILE
DANA POINT WATERSHED



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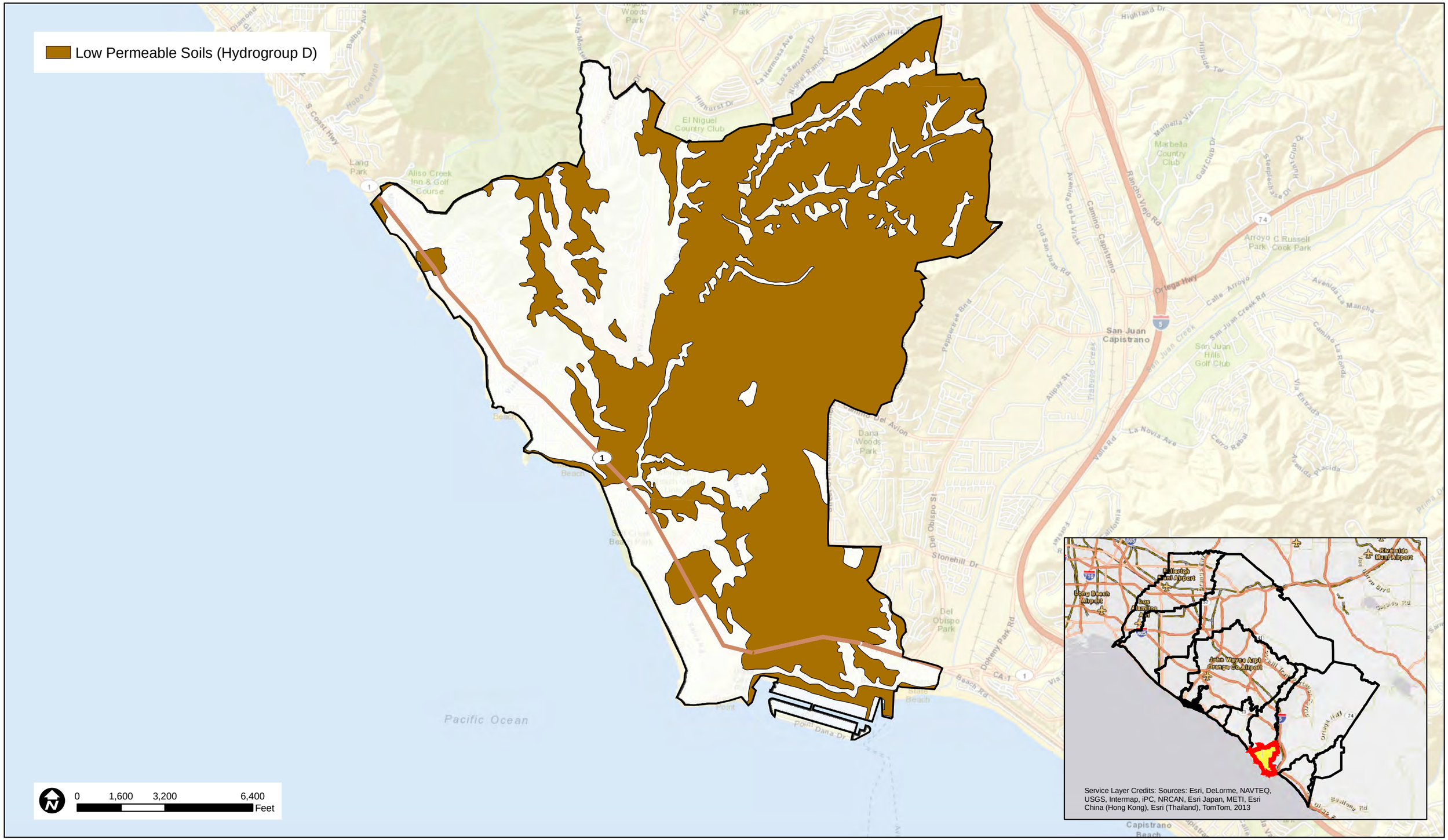
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 8.9

INFILTRATION CONSTRAINT - OVERALL CONSTRAINTS
DANA POINT WATERSHED



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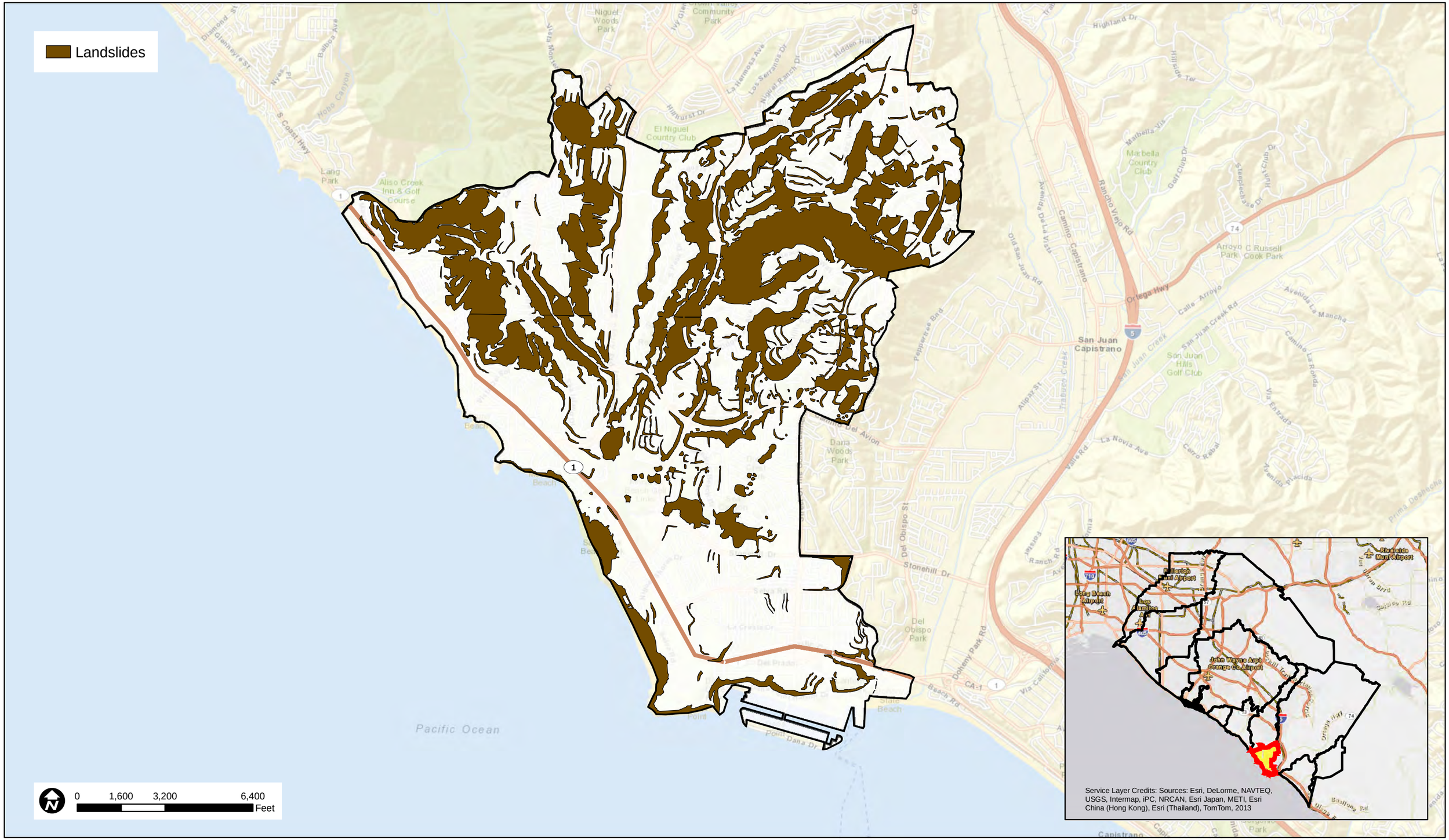
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 8.9a

INFILTRATION CONSTRAINT - D SOILS (LOW PERMEABLITY)
DANA POINT WATERSHED



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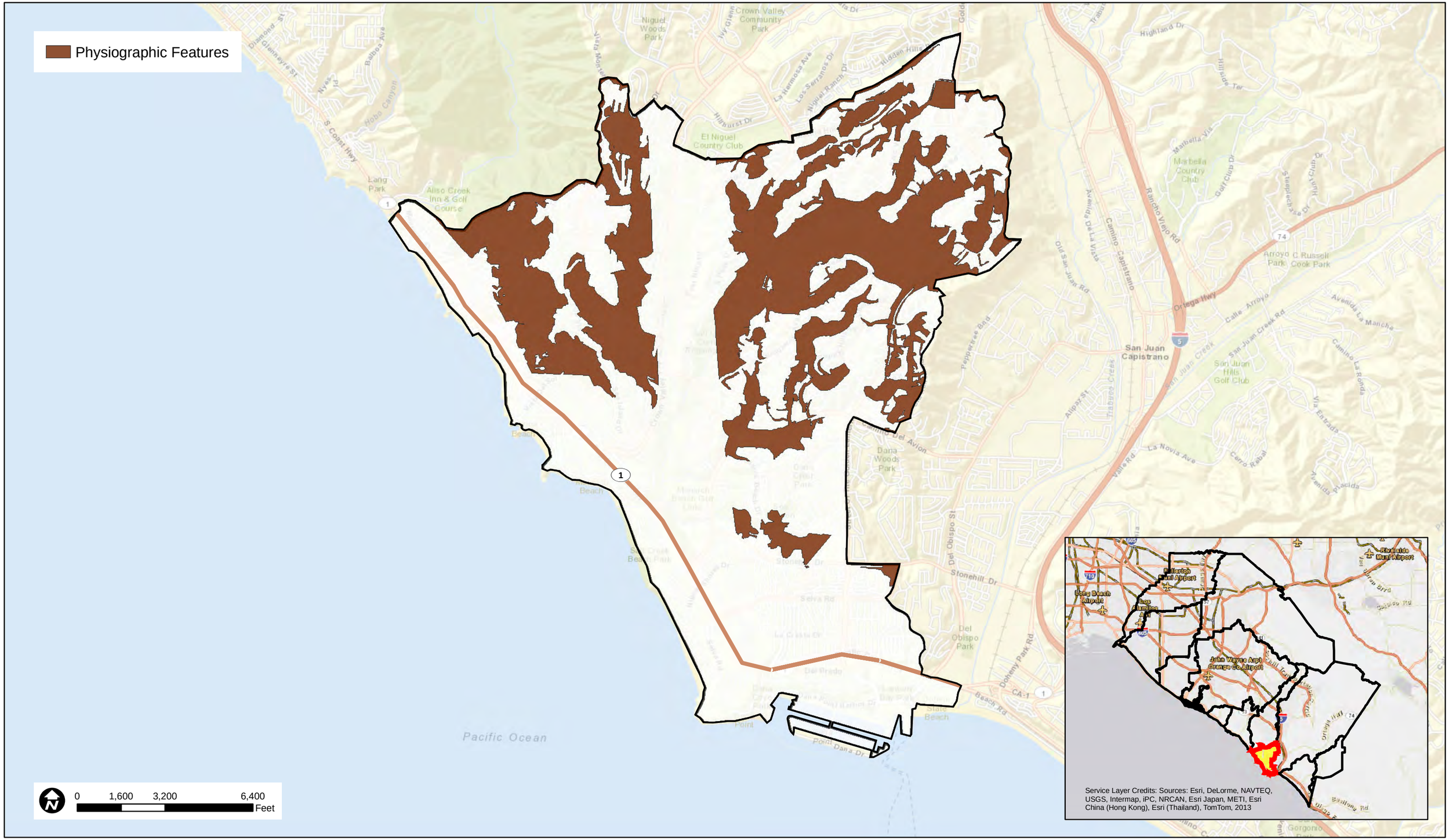
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 8.9b
INFILTRATION CONSTRAINT - LANDSLIDES
DANA POINT WATERSHED



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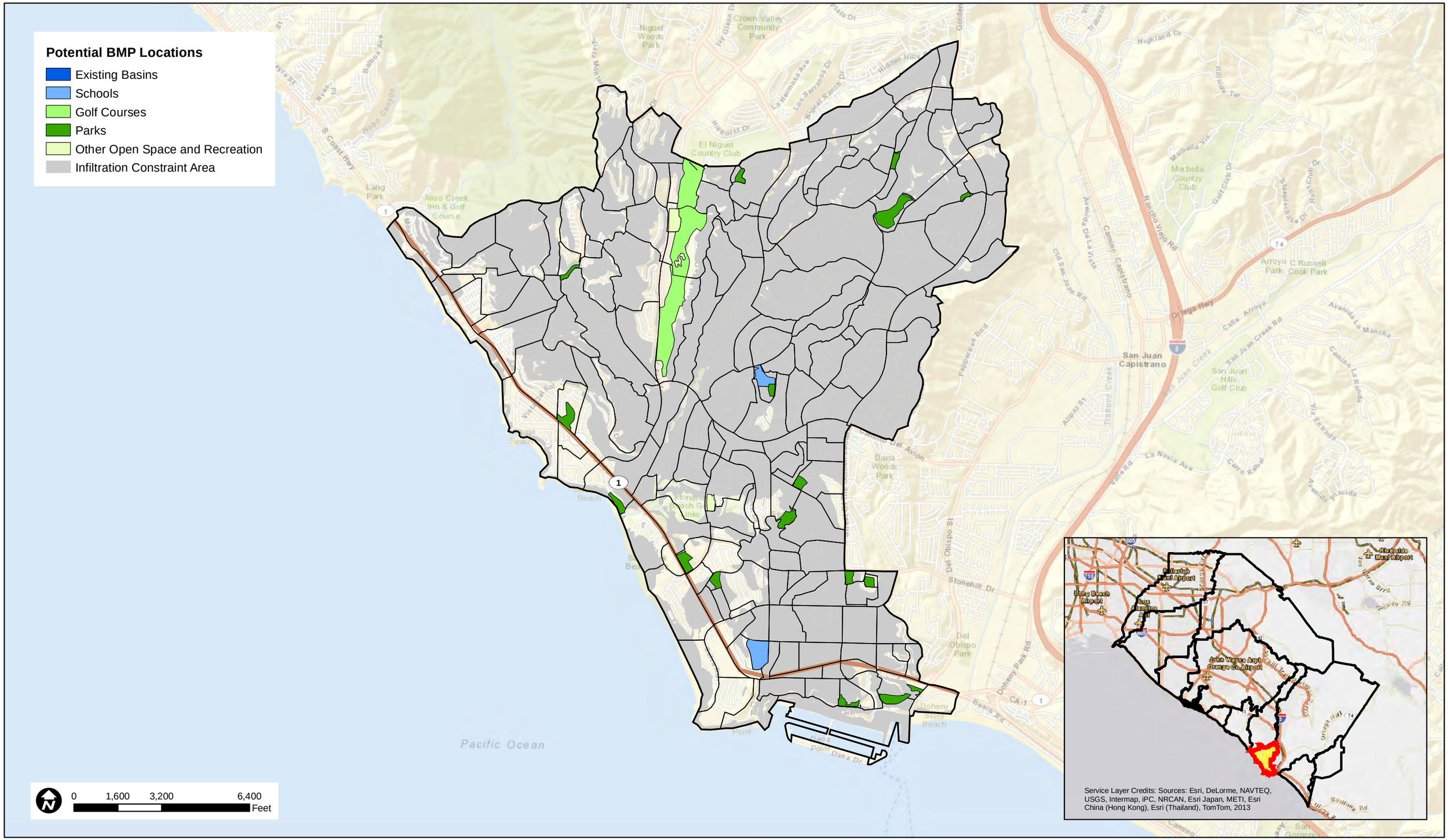
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 8.9c

INFILTRATION CONSTRAINT - PHYSIOGRAPHIC FEATURES
DANA POINT WATERSHED



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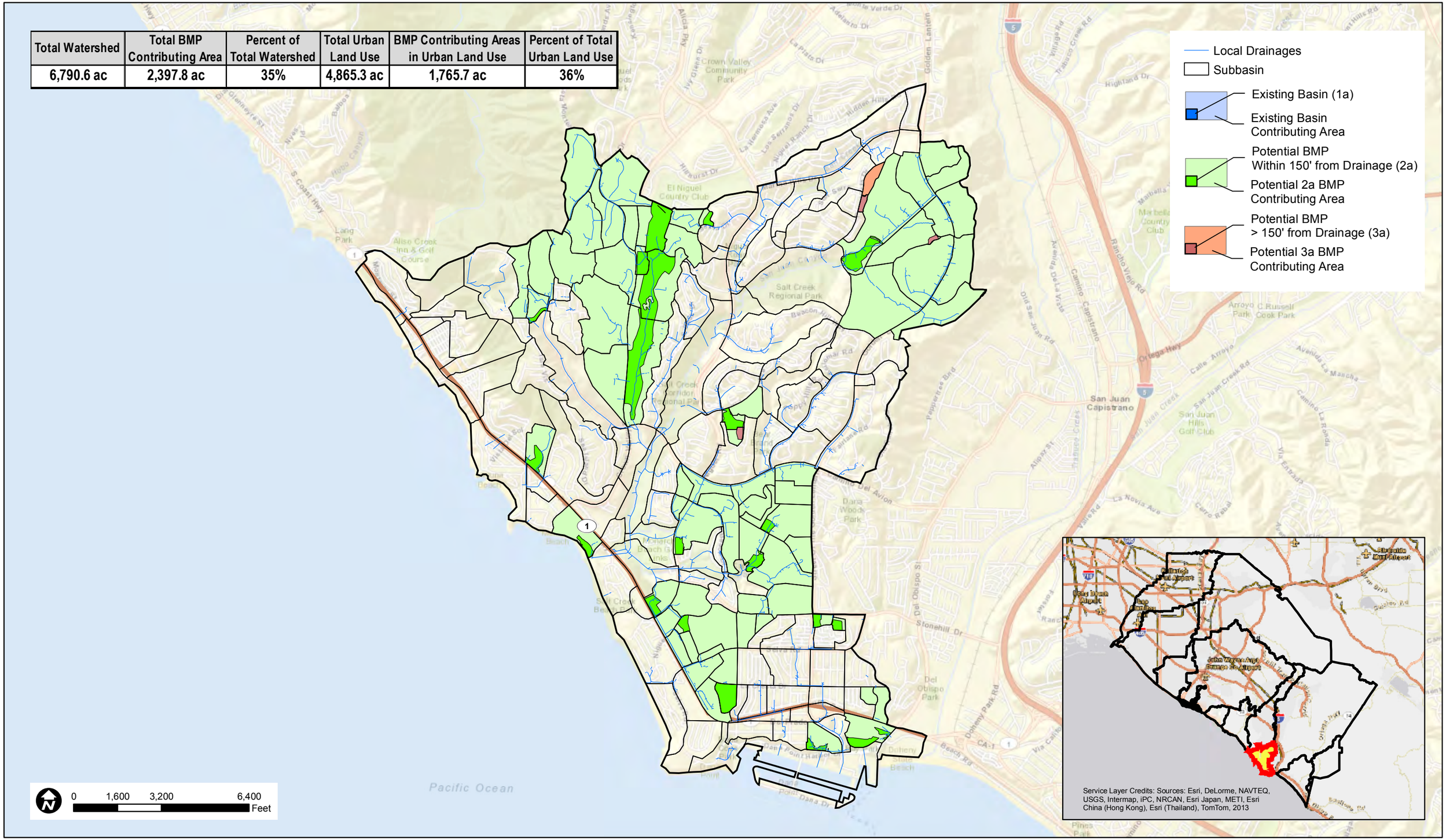
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 8.11

EXISTING AND POTENTIAL BMP LOCATIONS DANA POINT WATERSHED

Total Watershed	Total BMP Contributing Area	Percent of Total Watershed	Total Urban Land Use	BMP Contributing Areas in Urban Land Use	Percent of Total Urban Land Use
6,790.6 ac	2,397.8 ac	35%	4,865.3 ac	1,765.7 ac	36%



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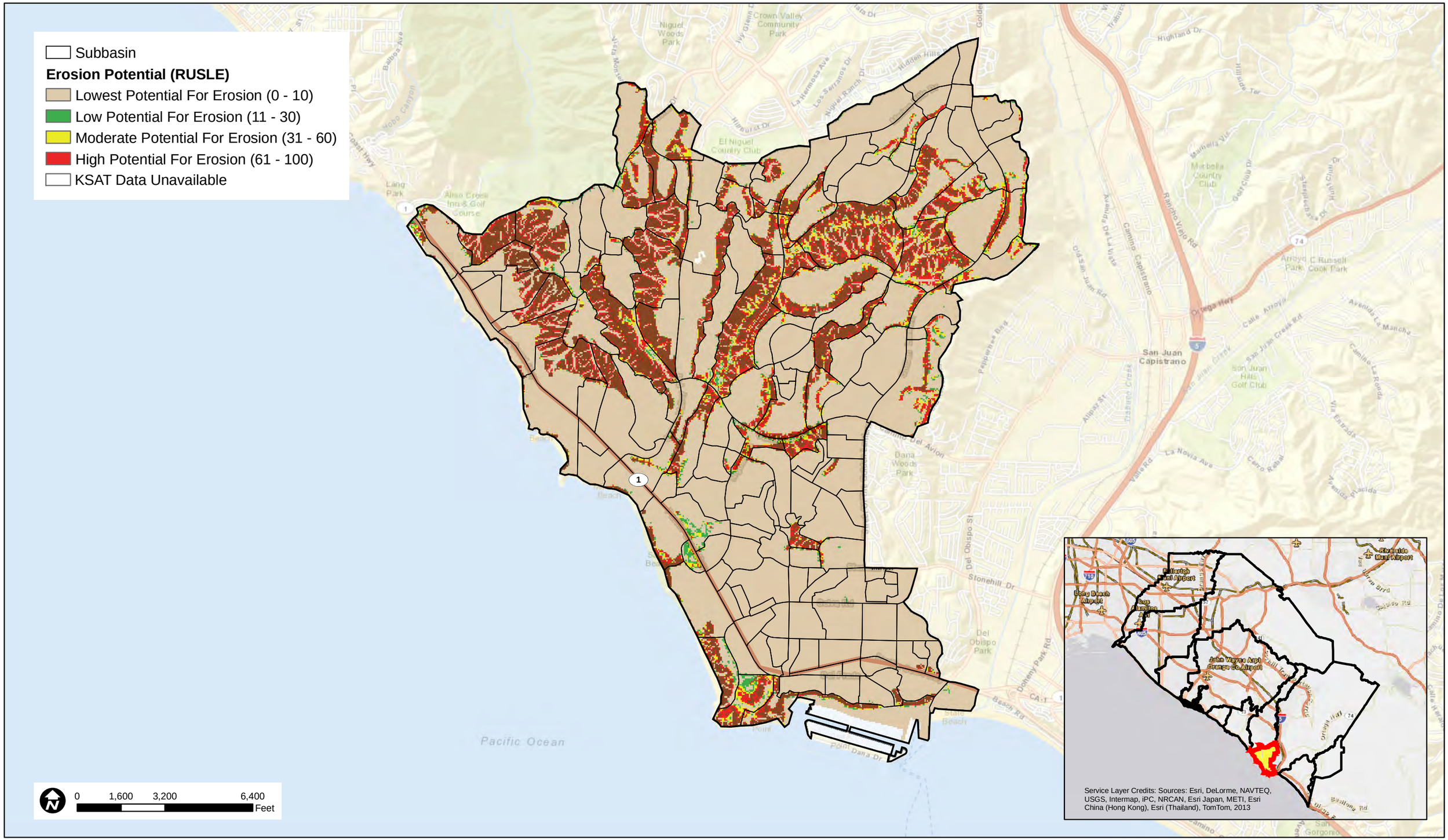
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 8.12

EXISTING AND POTENTIAL BMP CONTRIBUTING AREAS DANA POINT WATERSHED



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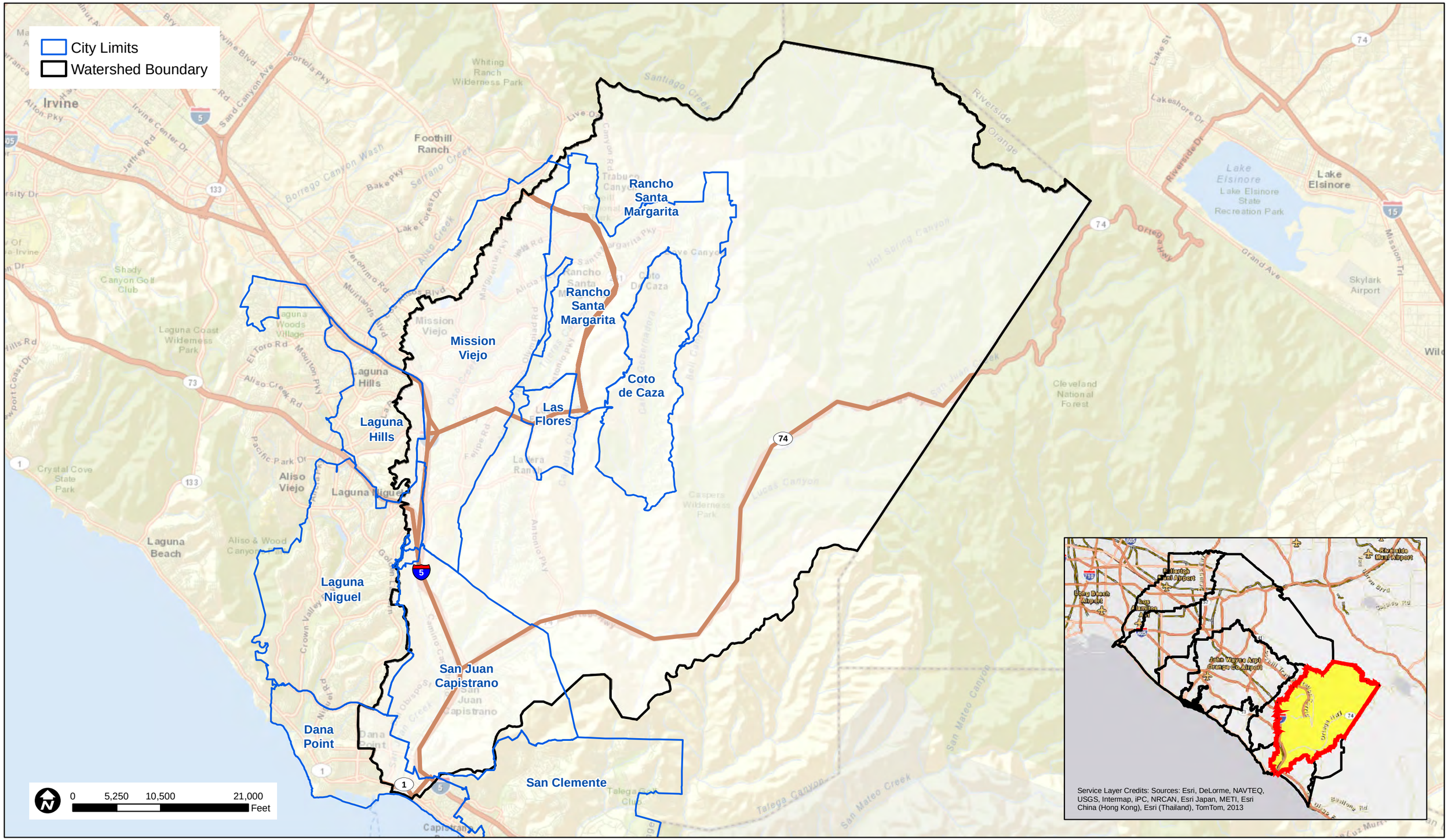
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 8.14

ERODIBILITY (RUSLE)
DANA POINT WATERSHED



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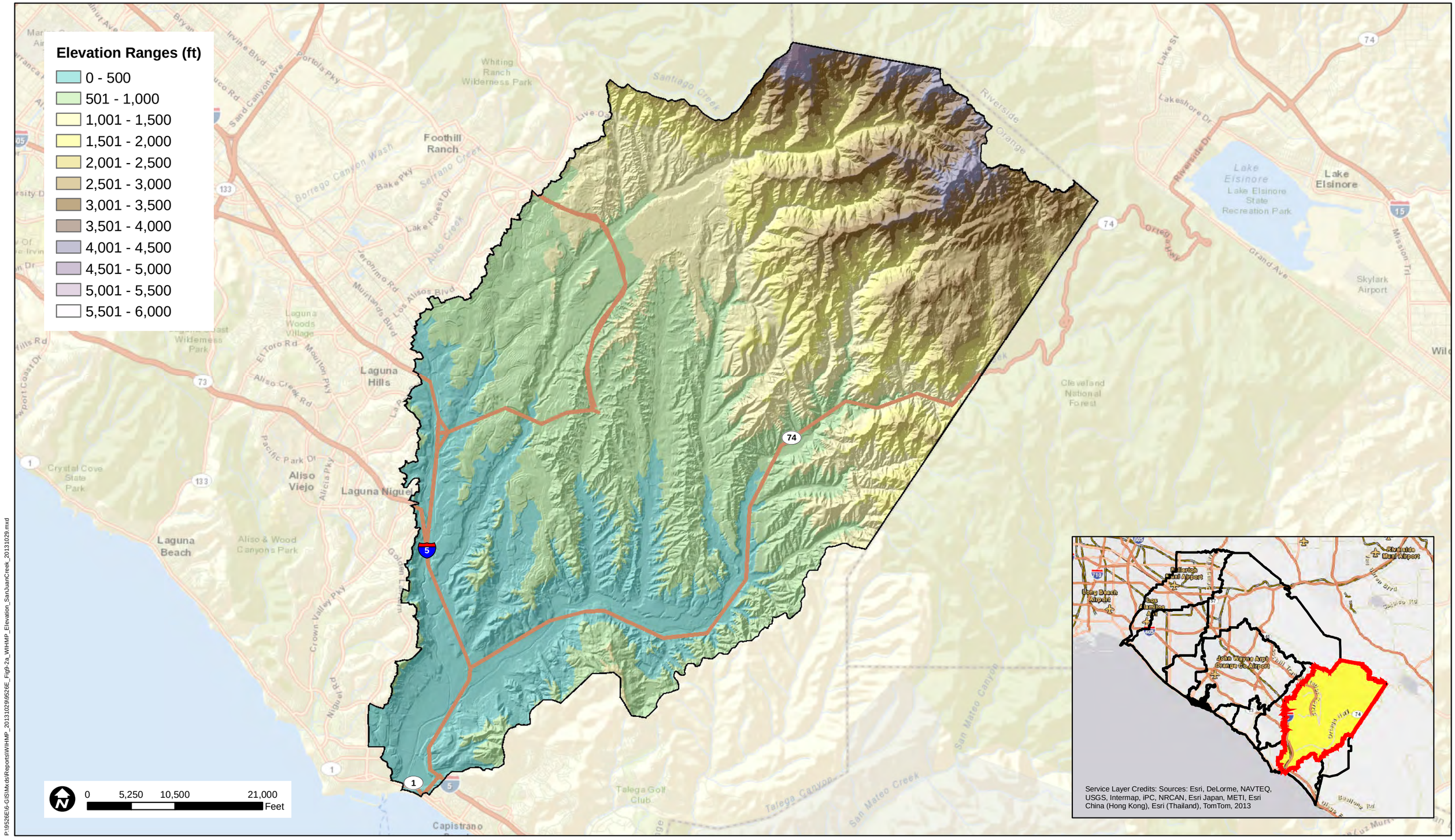
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 9.1
WATERSHED EXTENT
SAN JUAN CREEK WATERSHED



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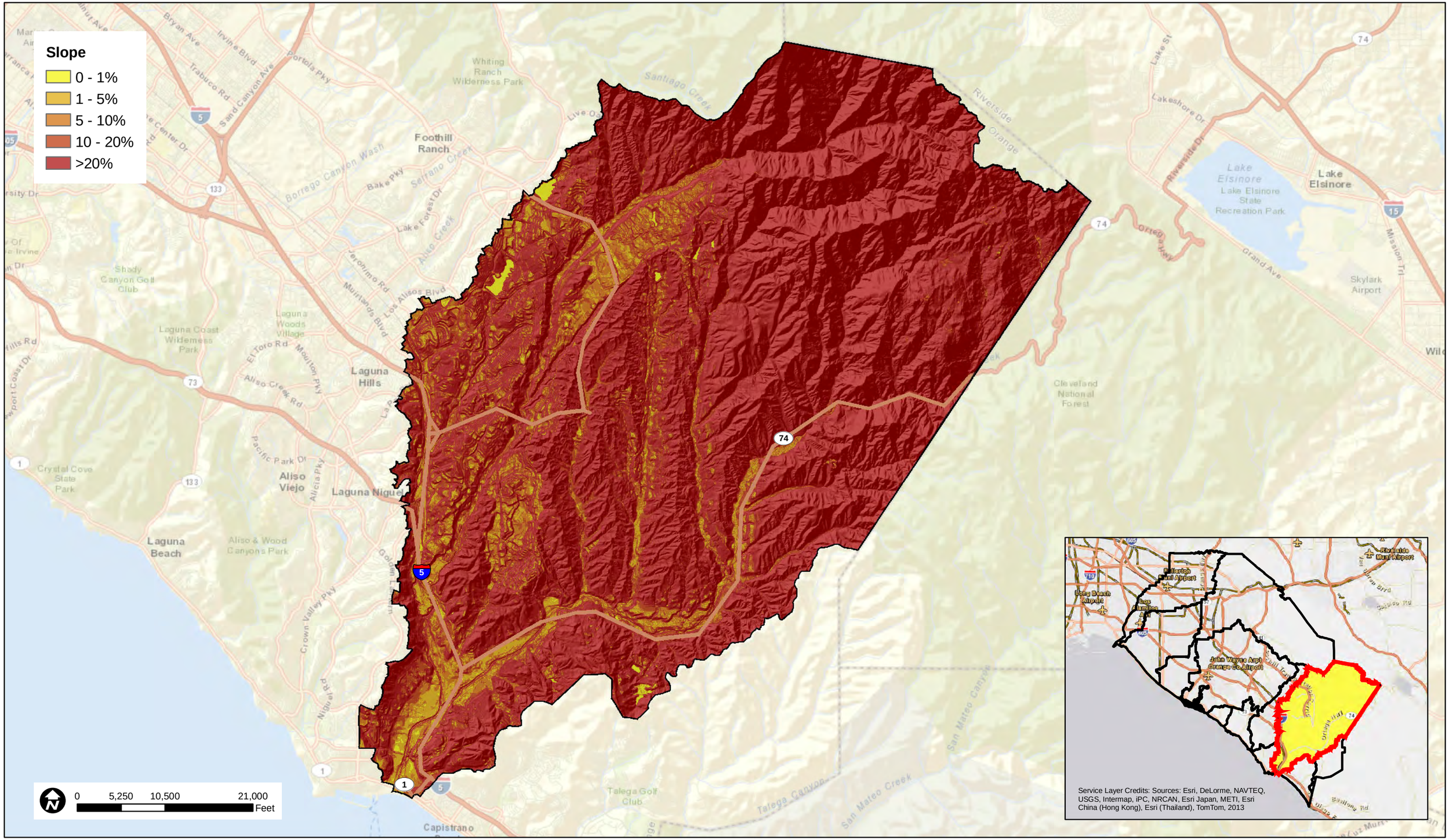
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 9.2a
ELEVATION DATA
SAN JUAN CREEK WATERSHED



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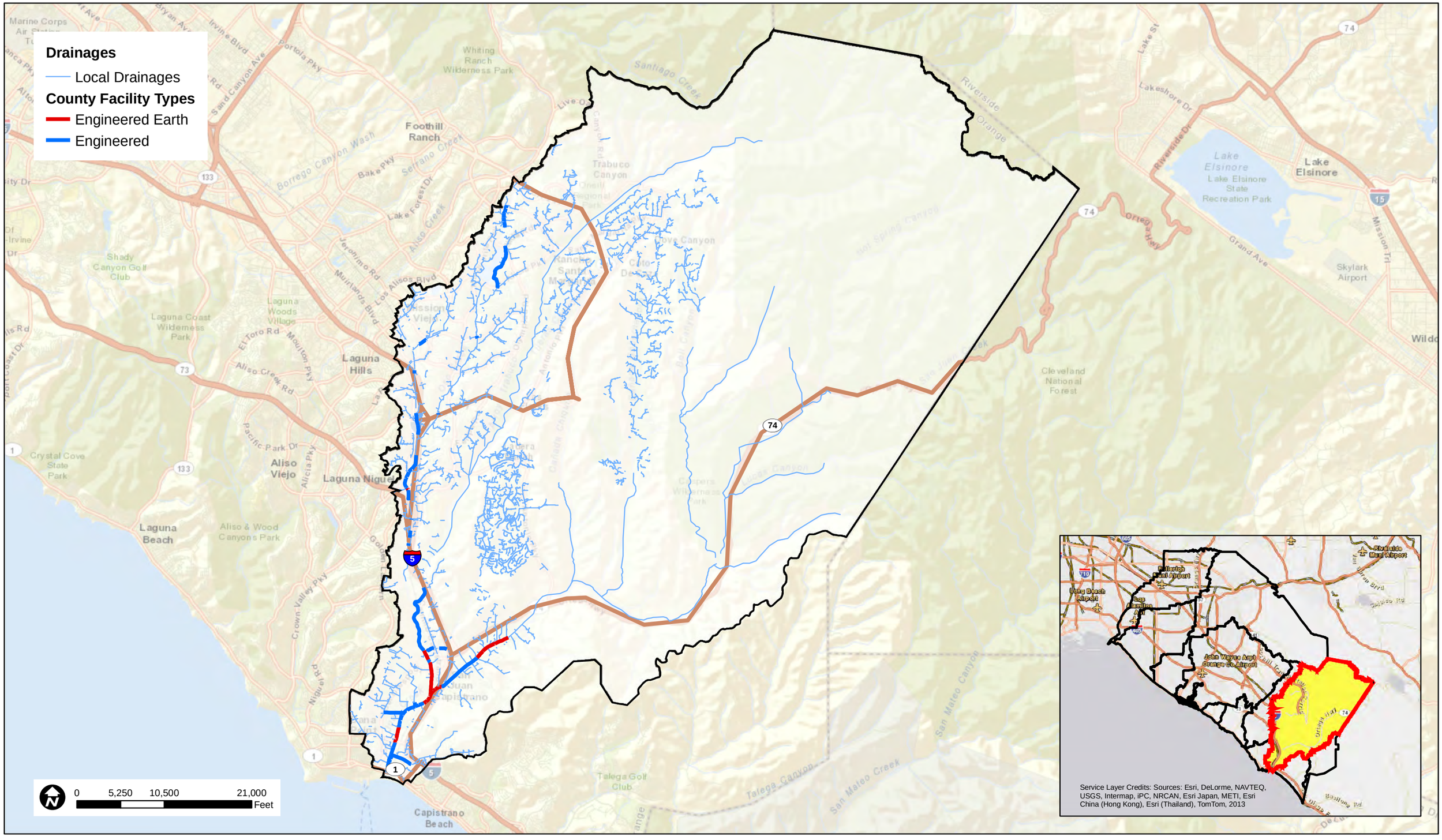
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 9.2b

SLOPE

SAN JUAN CREEK WATERSHED



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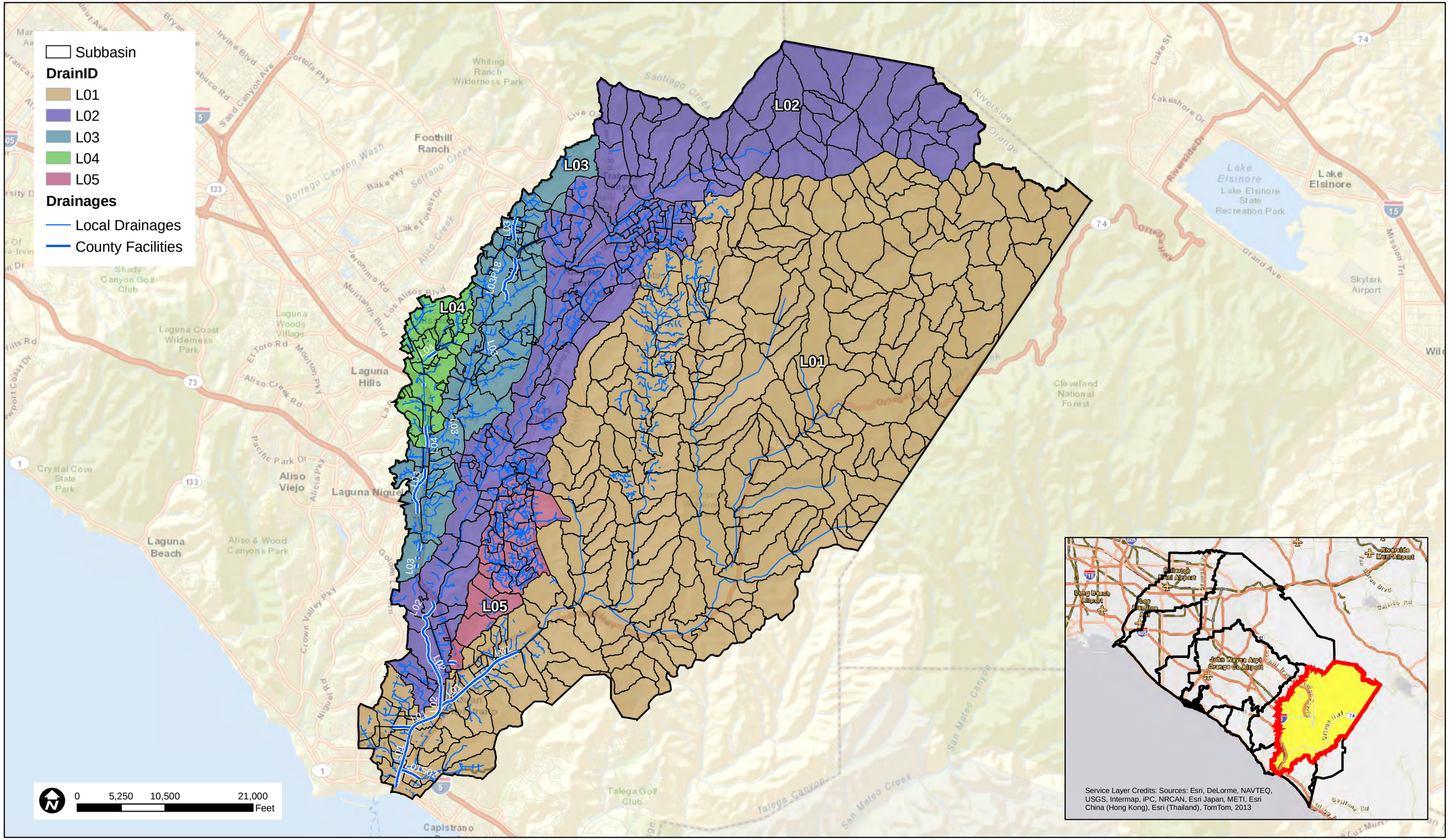
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 9.3
COUNTY DRAINAGE FACILITIES
SAN JUAN CREEK WATERSHED



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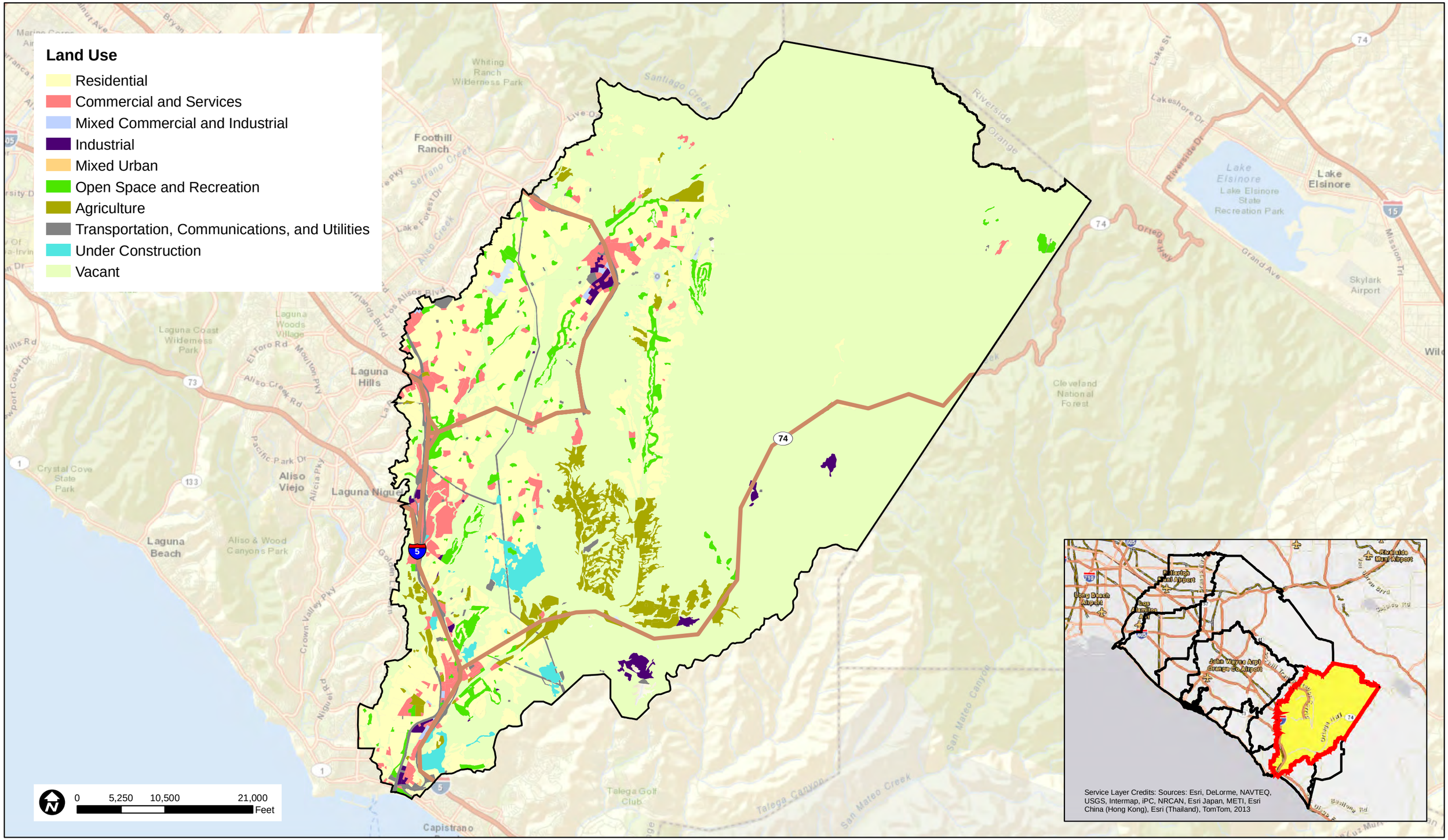
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 9.4

COUNTY SUBBASINS & FACILITY WATERSHED DELINEATION
SAN JUAN CREEK WATERSHED



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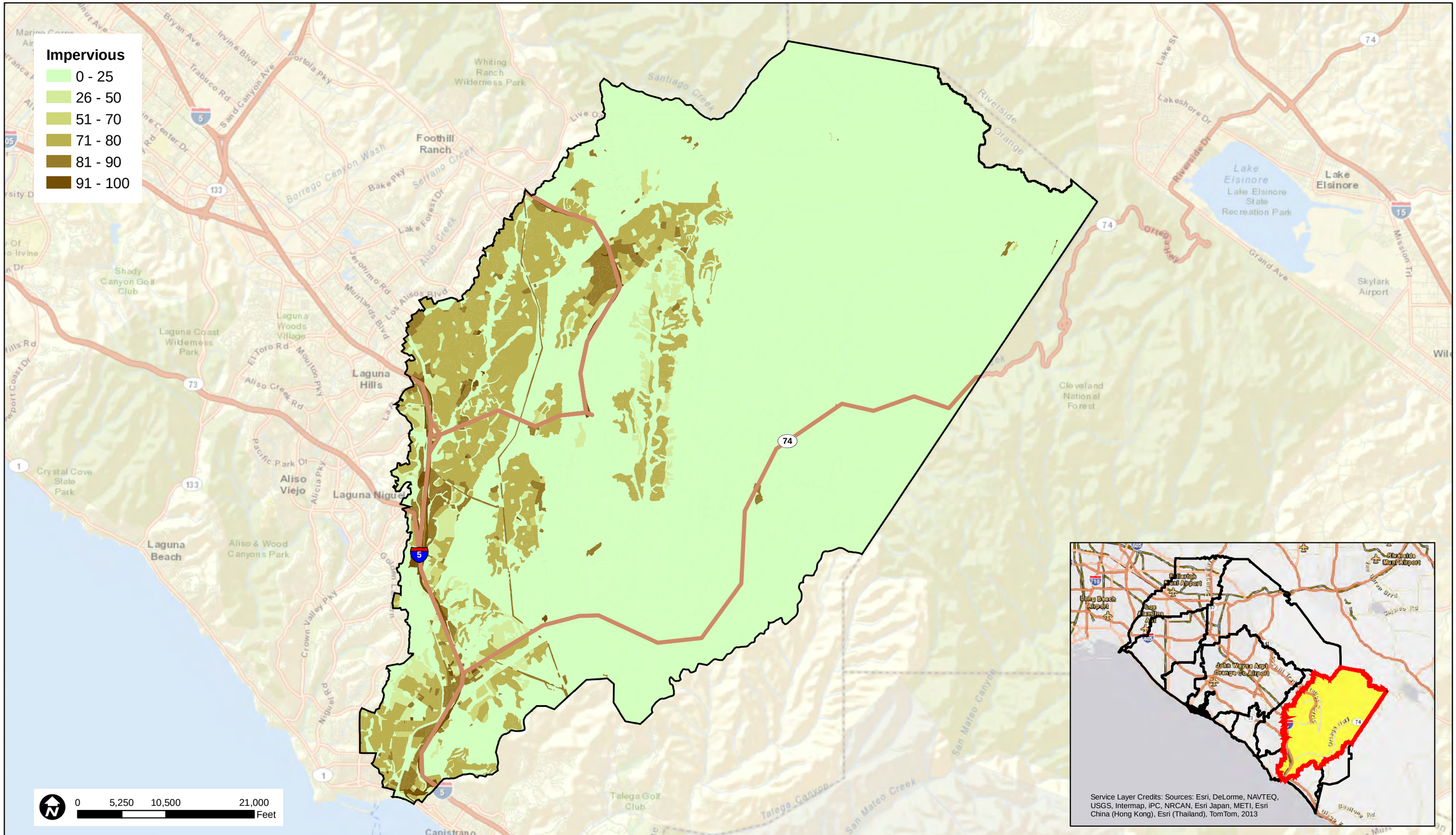
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 9.5

LAND USE
SAN JUAN CREEK WATERSHED



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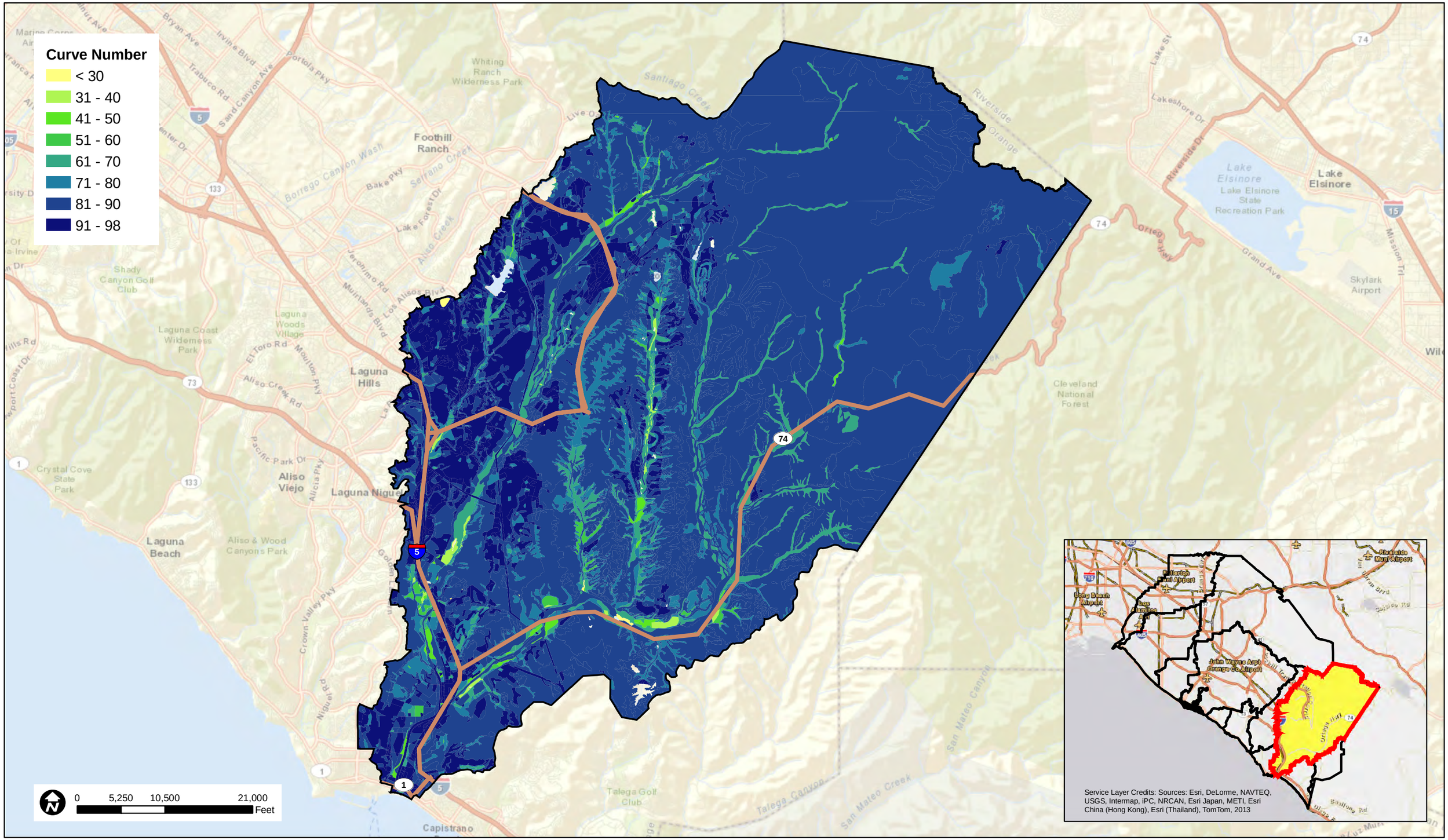
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 9.6
EXISTING IMPERVIOUSNESS SAN JUAN CREEK WATERSHED



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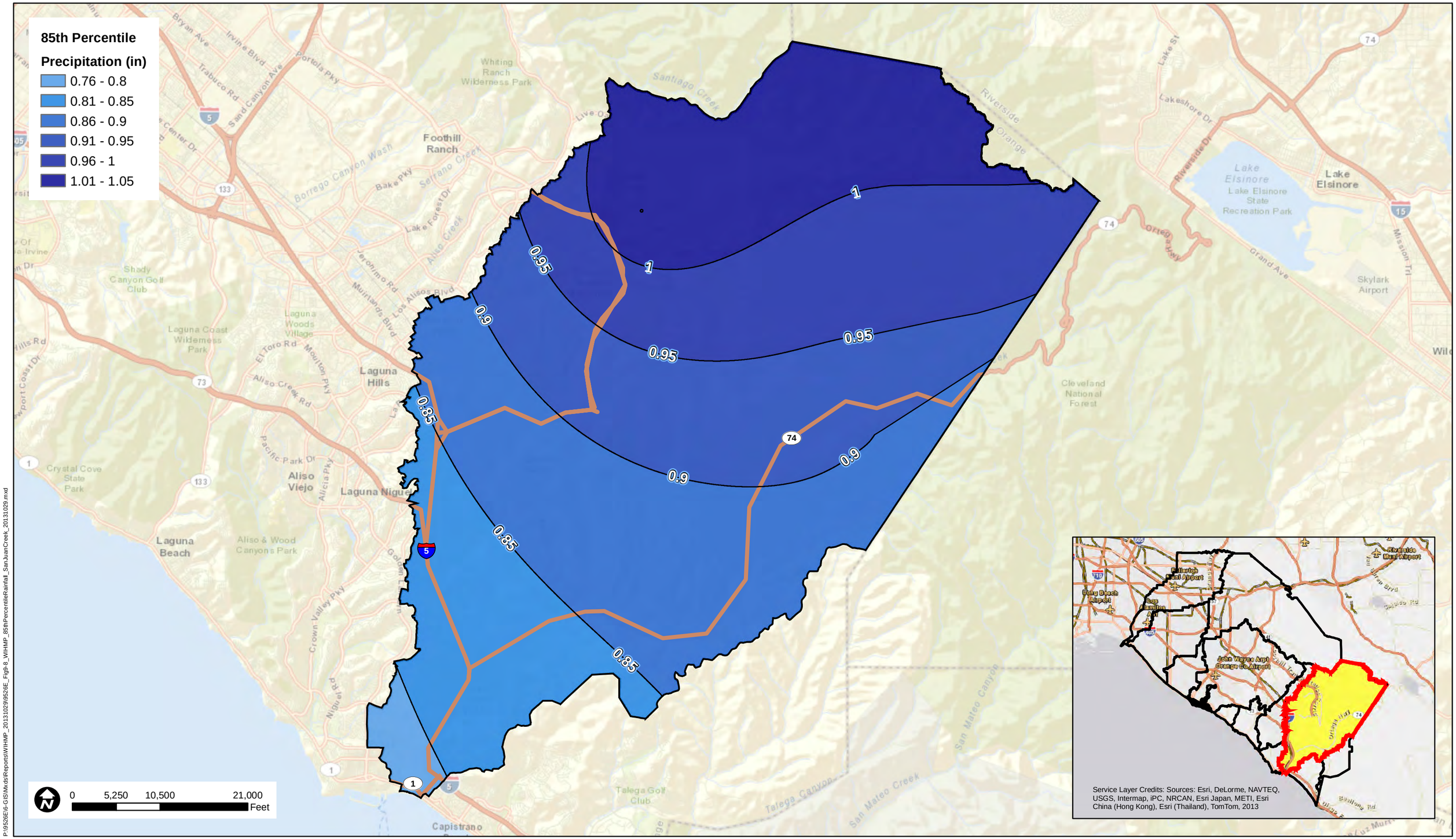
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 9.7
EXISTING CURVE NUMBER ANALYSIS
SAN JUAN CREEK WATERSHED



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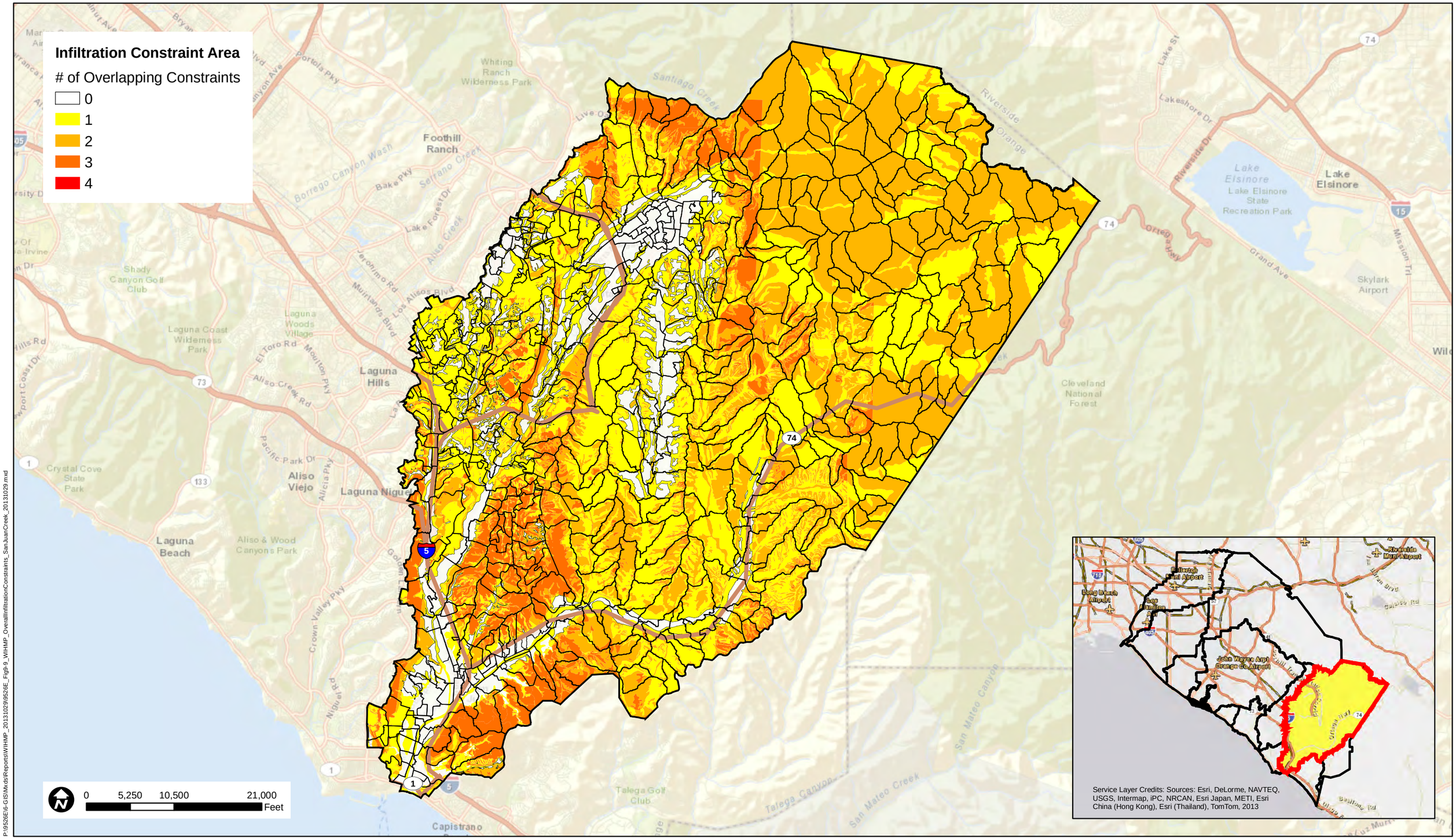
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 9.8

PRECIPITATION - 85TH PERCENTILE
SAN JUAN CREEK WATERSHED



P:\9526E\6-GIS\Mxds\Reports\WIHMP_20131029\9526E_Fig9-9_WIHMP_OverallInfiltrationConstraints_SanJuanCreek_20131029.mxd

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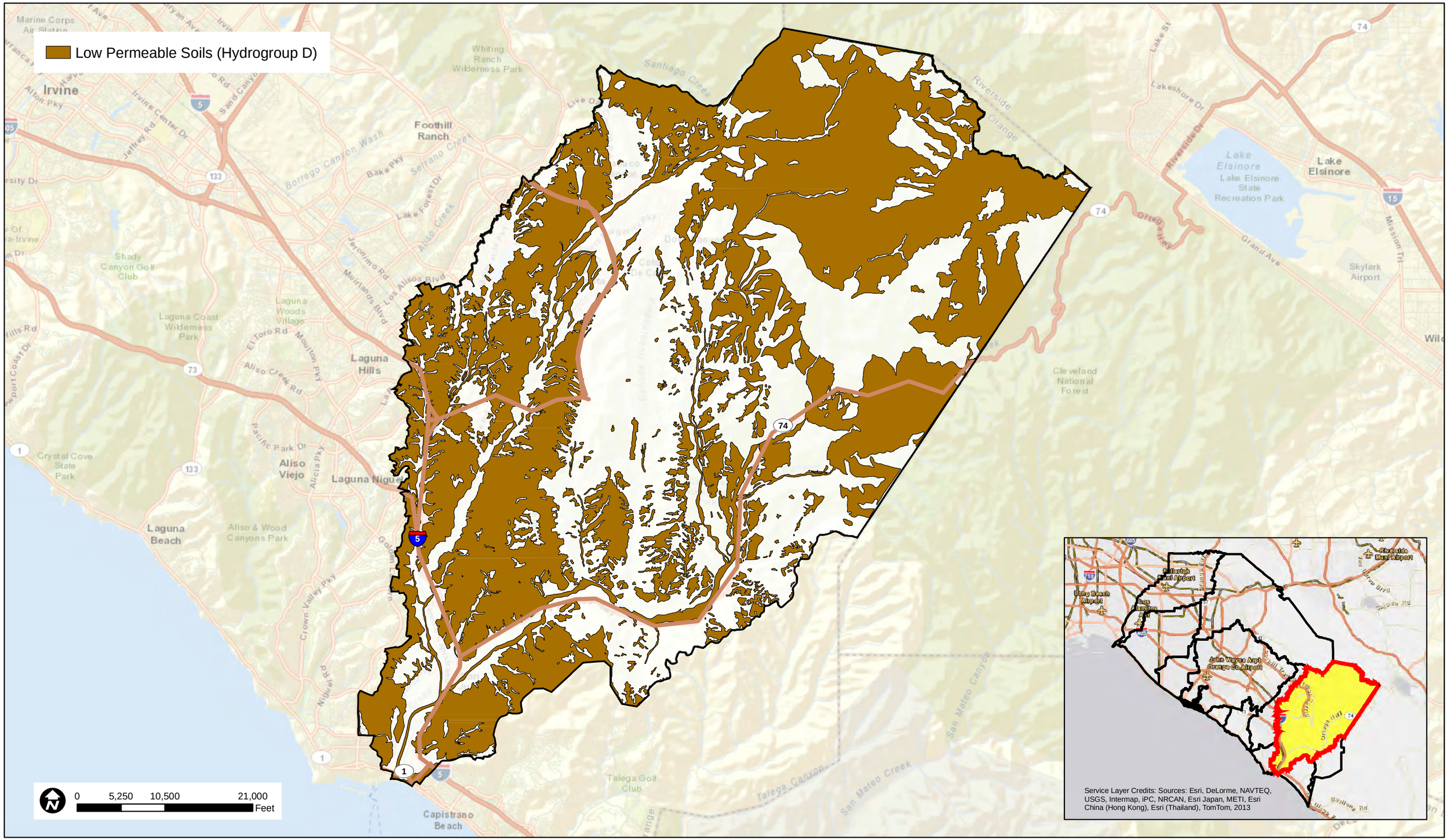
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 9.9

INFILTRATION CONSTRAINT - OVERALL CONSTRAINTS
SAN JUAN CREEK WATERSHED



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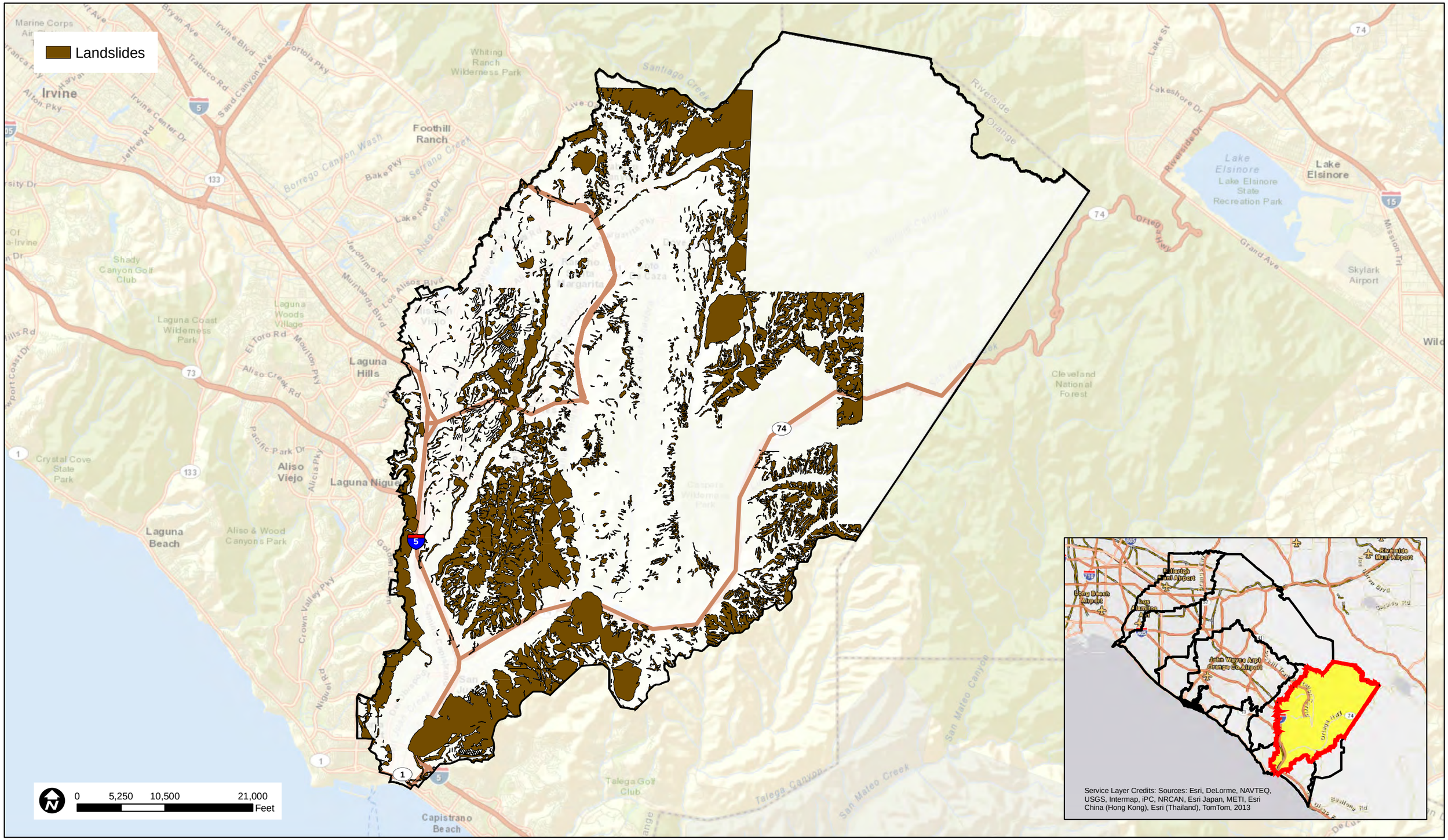
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 9.9a

INFILTRATION CONSTRAINT - D SOILS (LOW PERMEABLITY)
SAN JUAN CREEK WATERSHED



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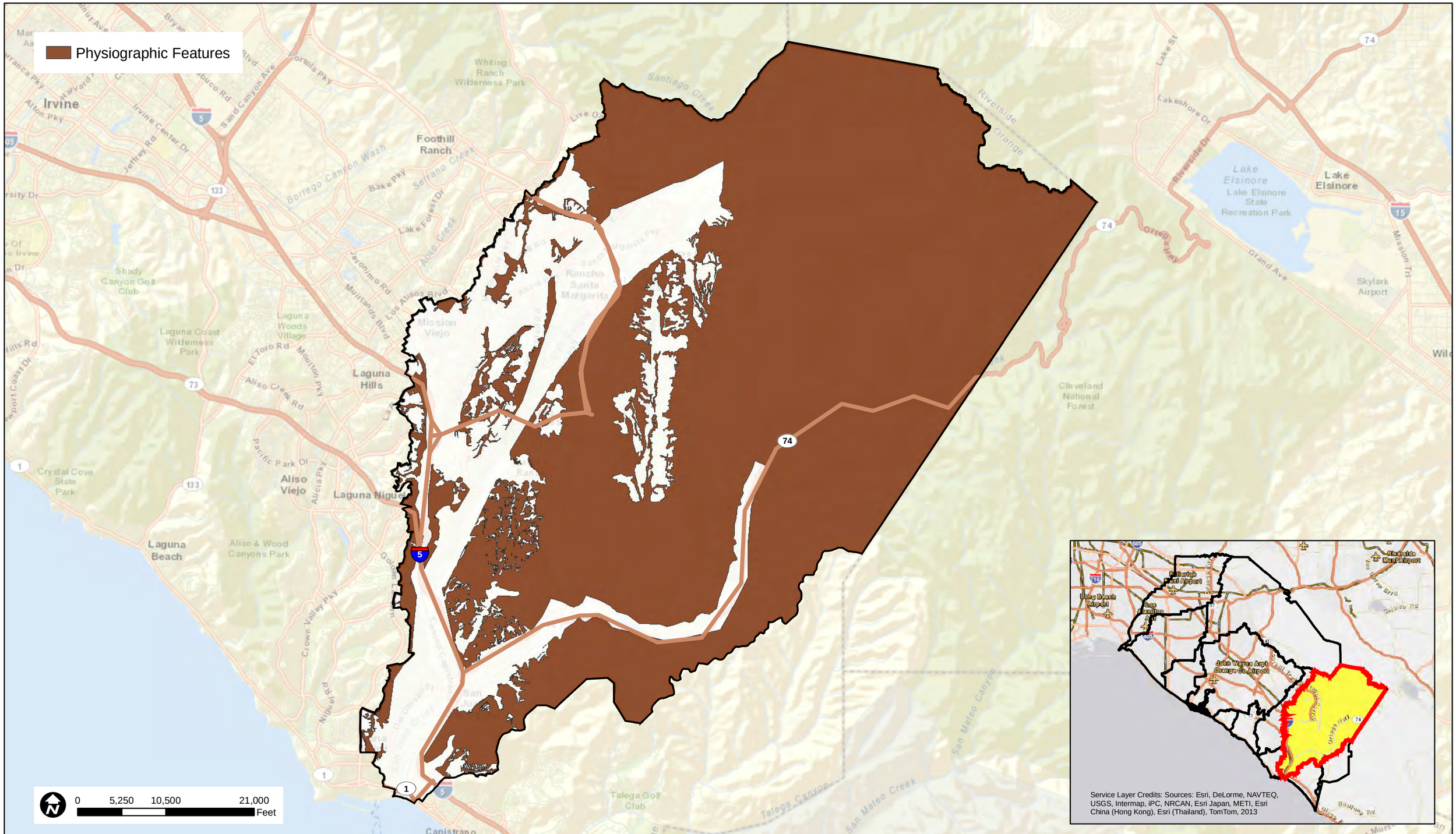
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 9.9b

INFILTRATION CONSTRAINT - LANDSLIDES
SAN JUAN CREEK WATERSHED



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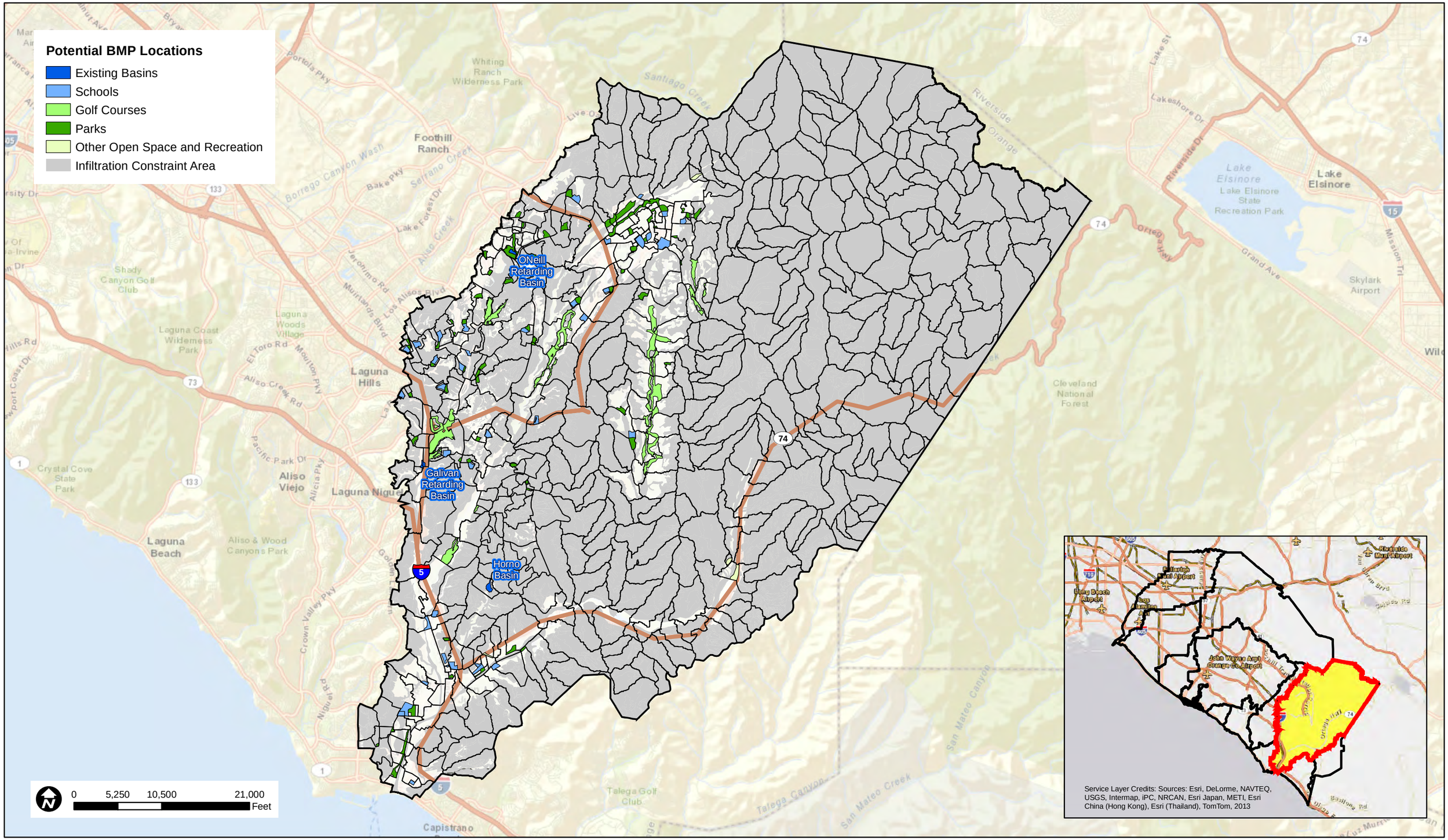
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 9.9c

INFILTRATION CONSTRAINT - PHYSIOGRAPHIC FEATURES
SAN JUAN CREEK WATERSHED



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COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 9.11

EXISTING AND POTENTIAL BMP LOCATIONS SAN JUAN CREEK WATERSHED

Total Watershed	Total BMP Contributing Area	Percent of Total Watershed	Total Urban Land Use	BMP Contributing Areas in Urban Land Use	Percent of Total Urban Land Use
100,637.8 ac	23,656.3 ac	24%	27,707.6 ac	14,401.9 ac	52%

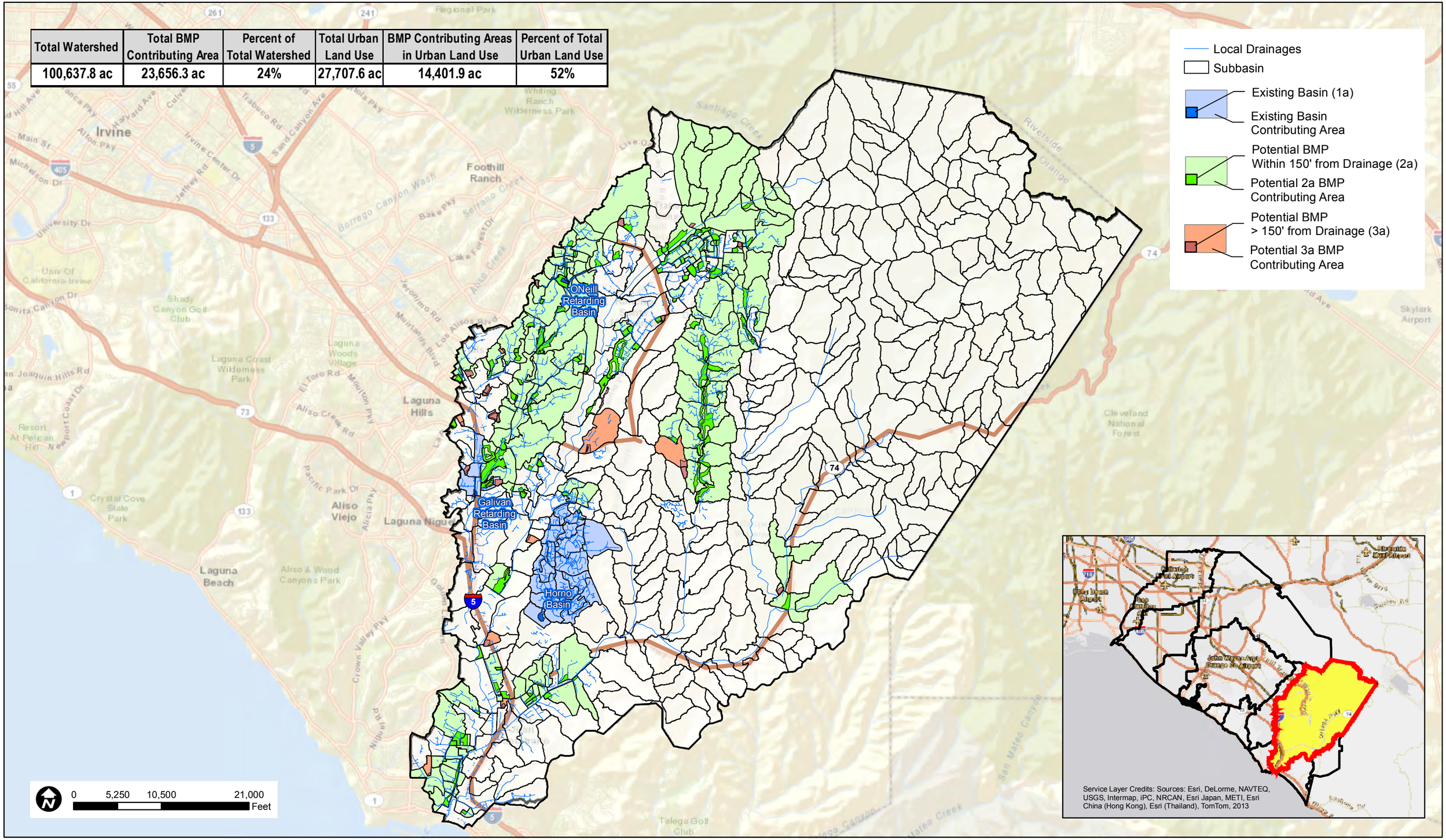

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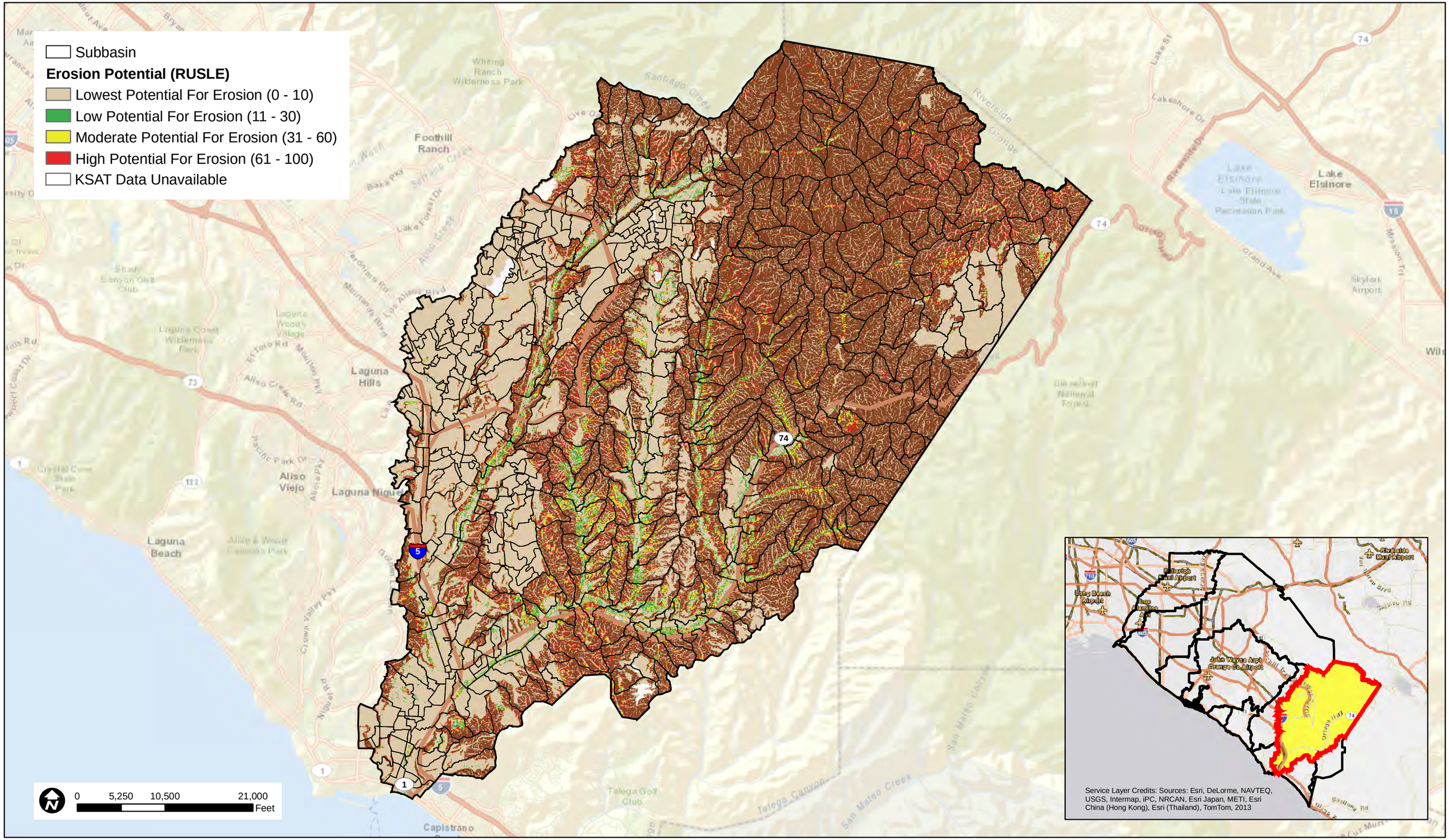
FIGURE 9.12

EXISTING AND POTENTIAL BMP CONTRIBUTING AREAS
SAN JUAN CREEK WATERSHED

COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)



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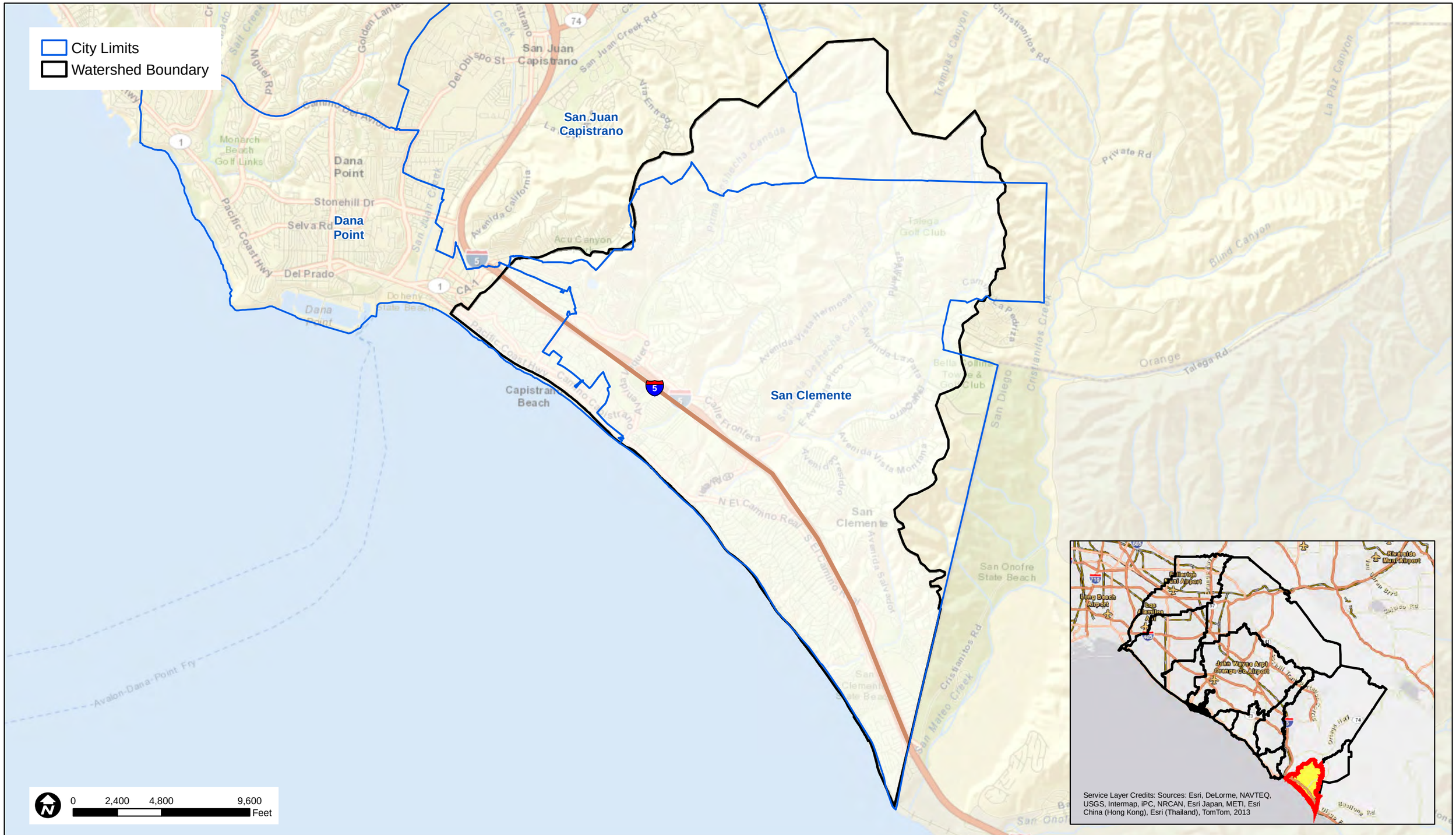
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 9.14
ERODIBILITY (RUSLE)
SAN JUAN CREEK WATERSHED



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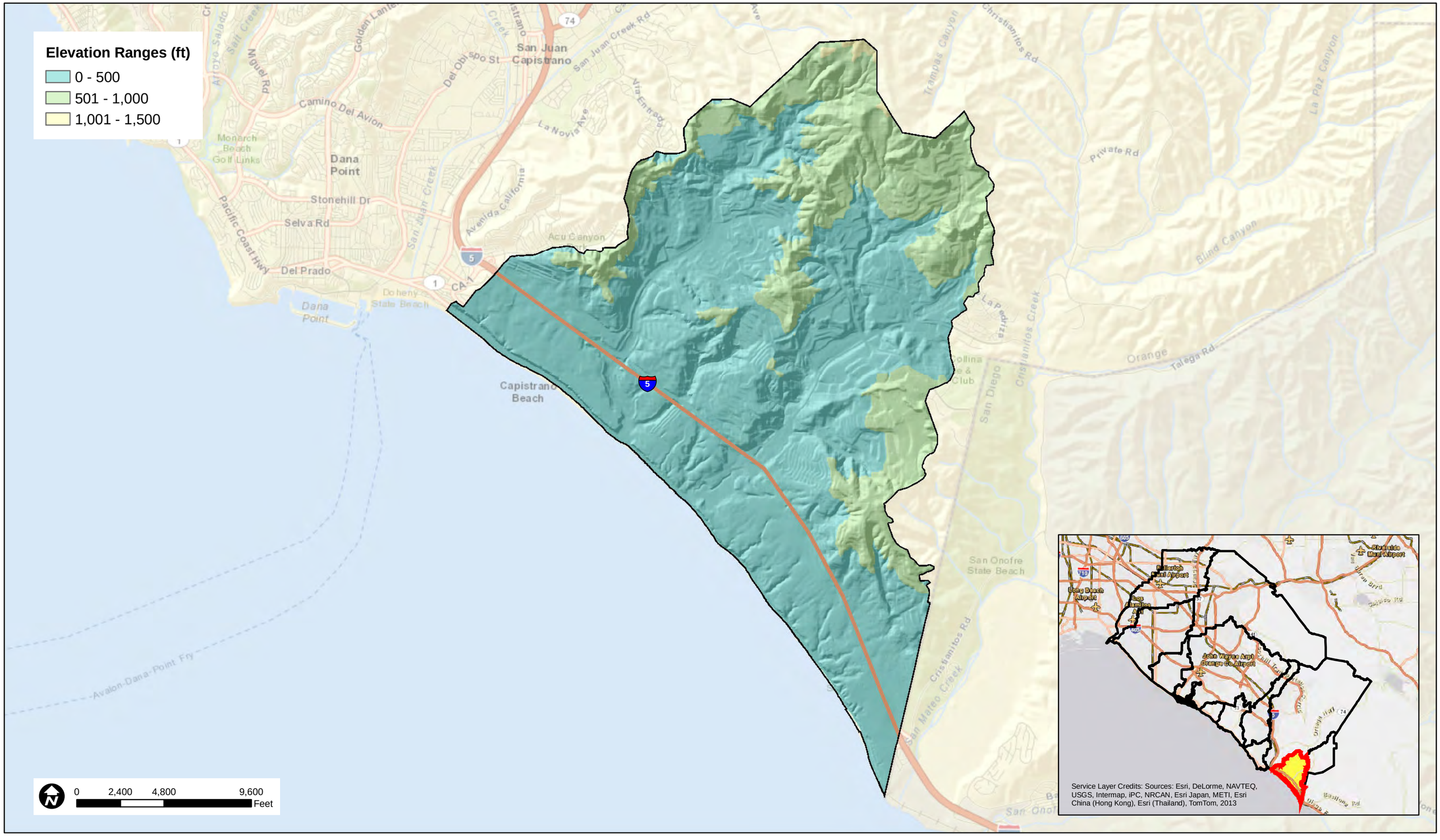
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 10.1
WATERSHED EXTENT
SAN CLEMENTE CREEK WATERSHED



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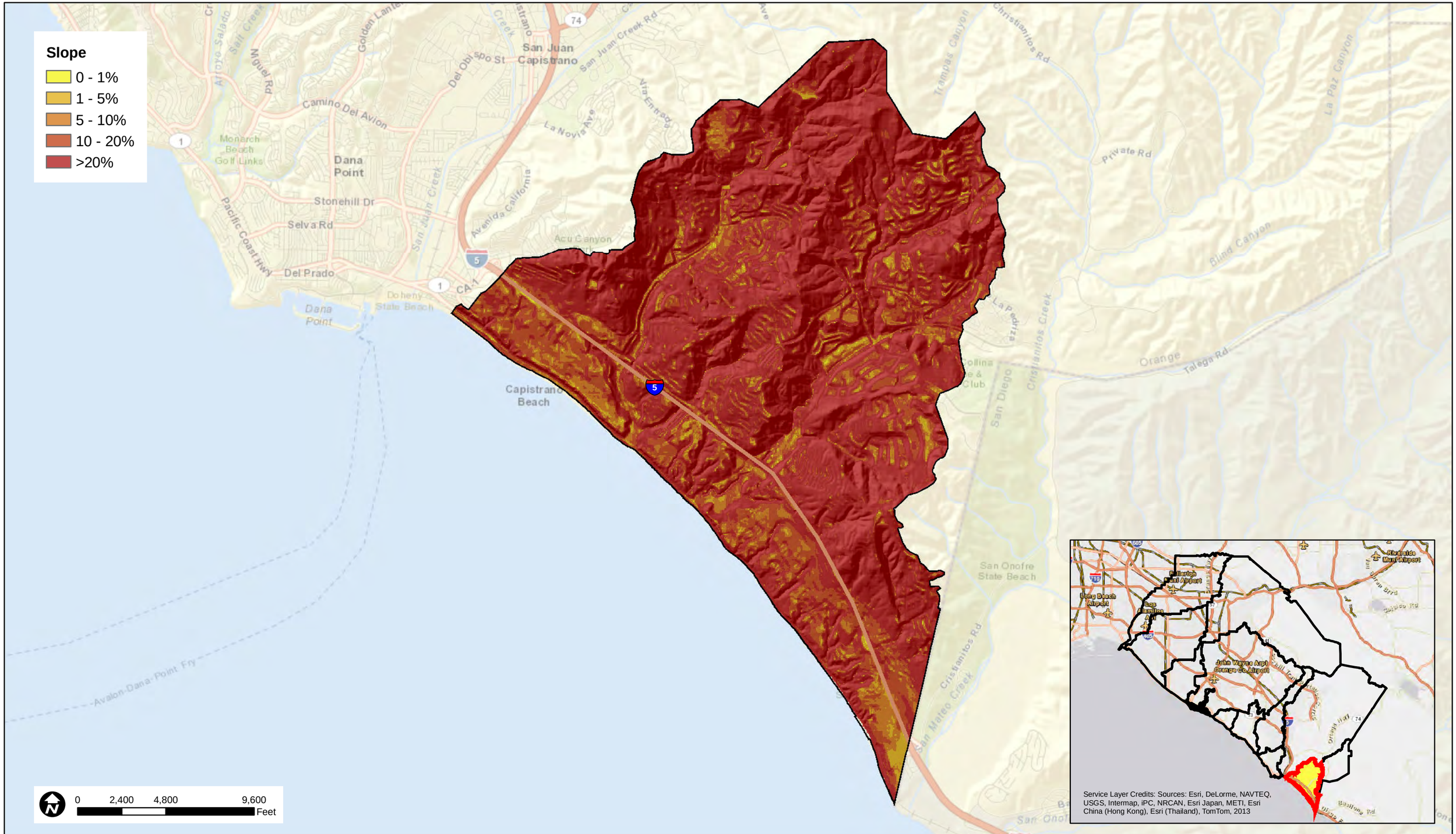
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.2a

ELEVATION DATA
SAN CLEMENTE CREEK WATERSHED



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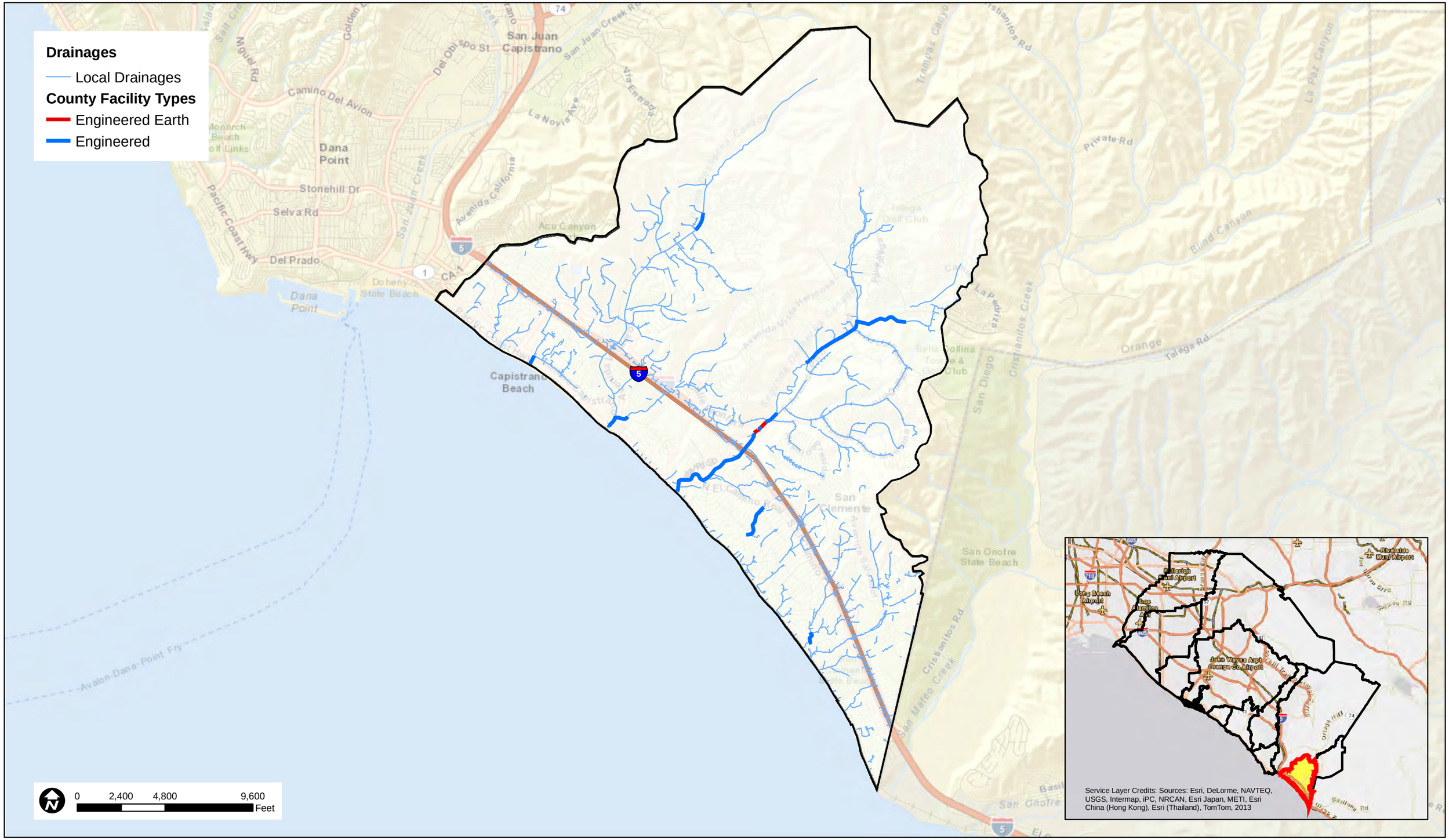
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.2b

SLOPE

SAN CLEMENTE CREEK WATERSHED



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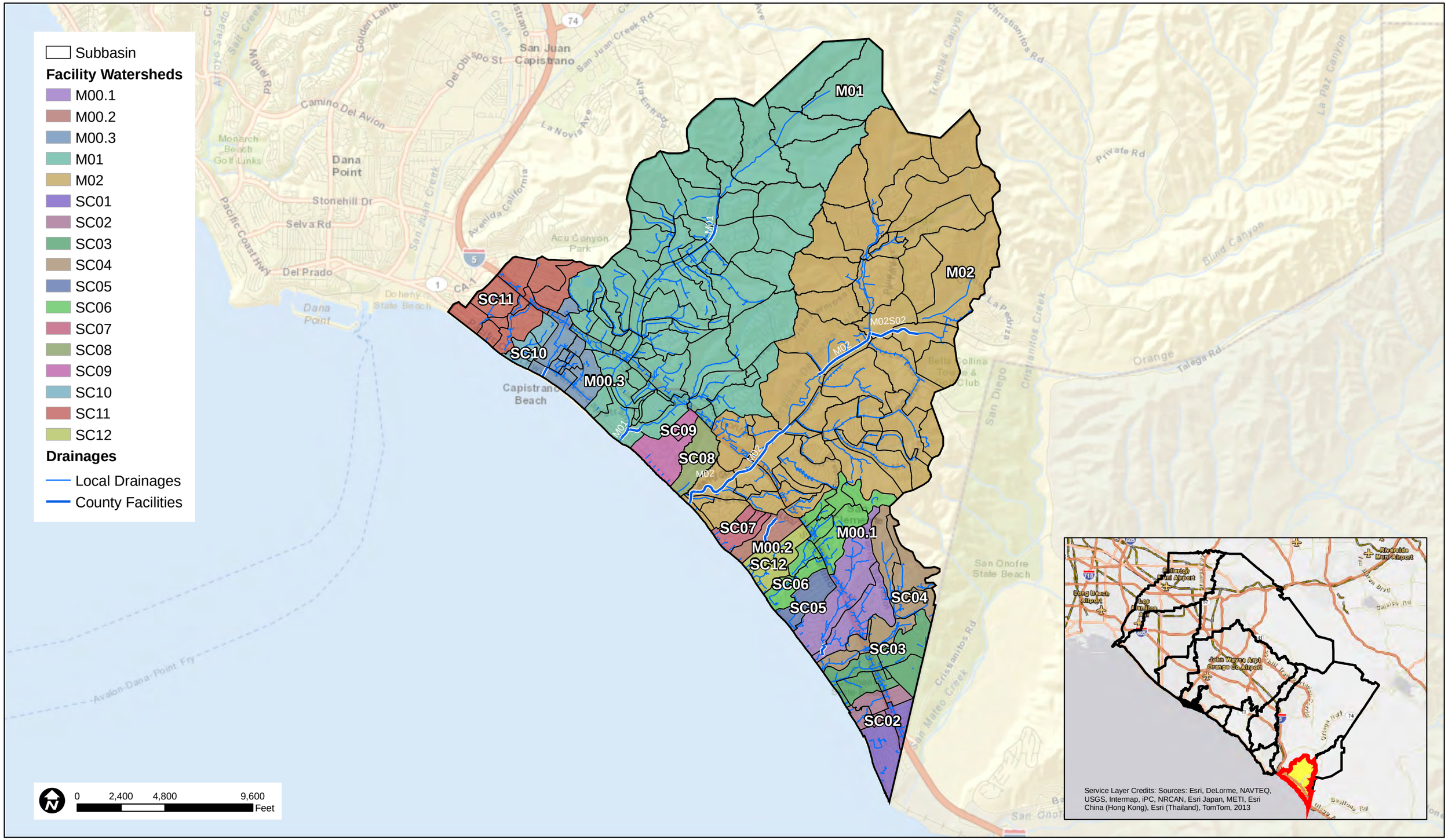
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 10.3

COUNTY DRAINAGE FACILITIES
SAN CLEMENTE CREEK WATERSHED



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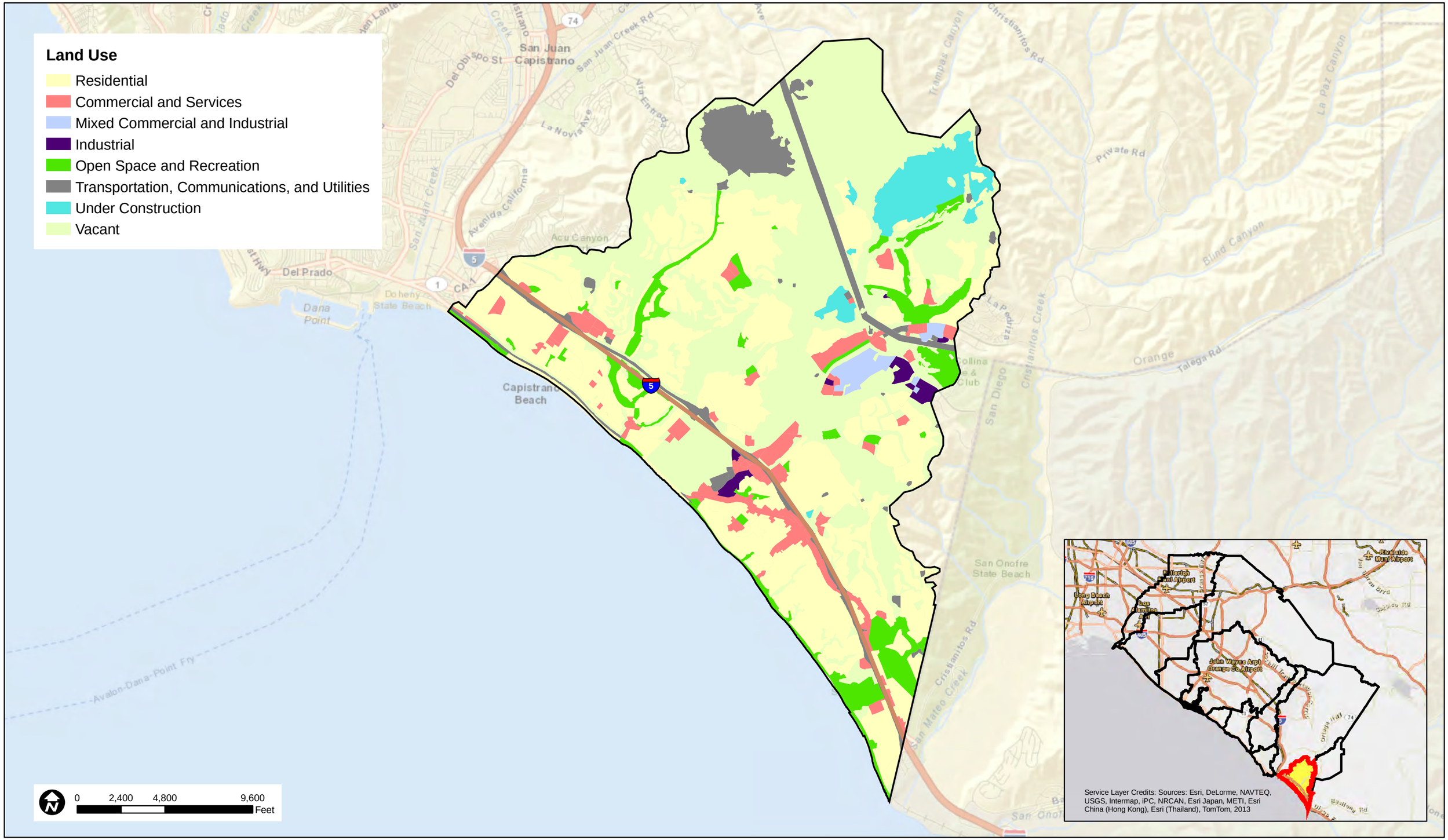
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 10.4

COUNTY SUBBASINS & FACILITY WATERSHED DELINEATION
SAN CLEMENTE CREEK WATERSHED



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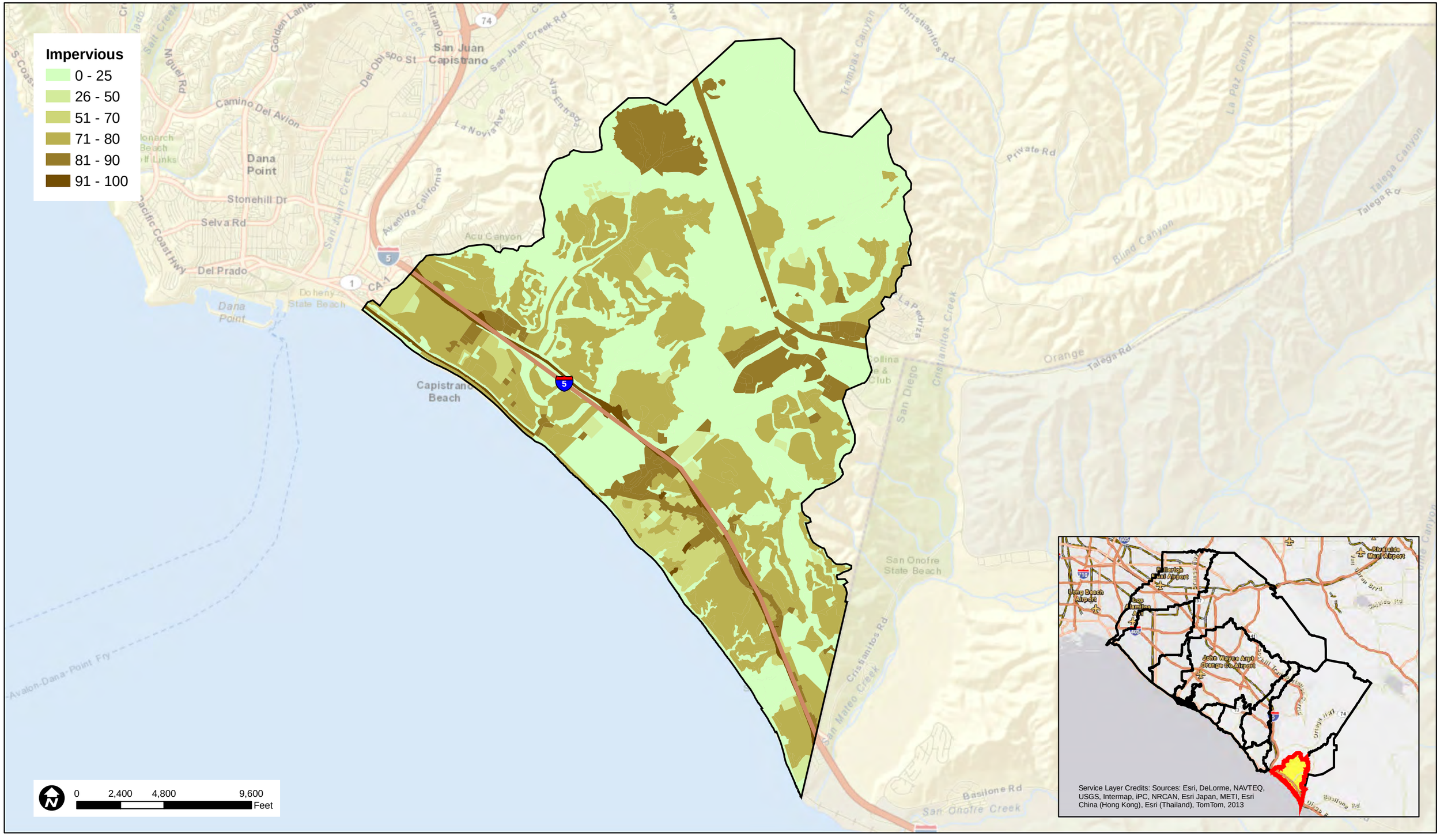
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.5

LAND USE
SAN CLEMENTE CREEK WATERSHED



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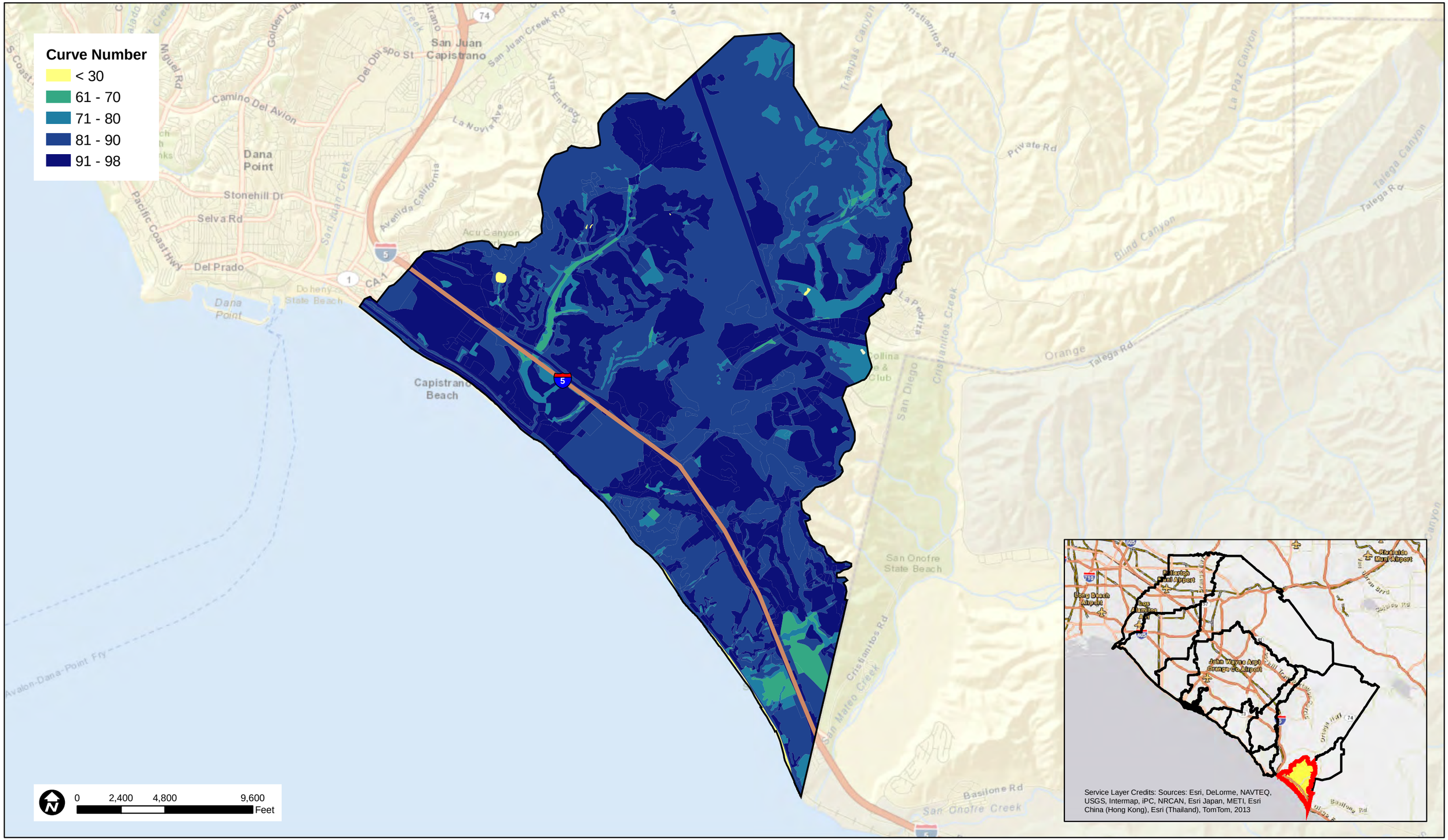
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.6
EXISTING IMPERVIOUSNESS
SAN CLEMENTE CREEK WATERSHED



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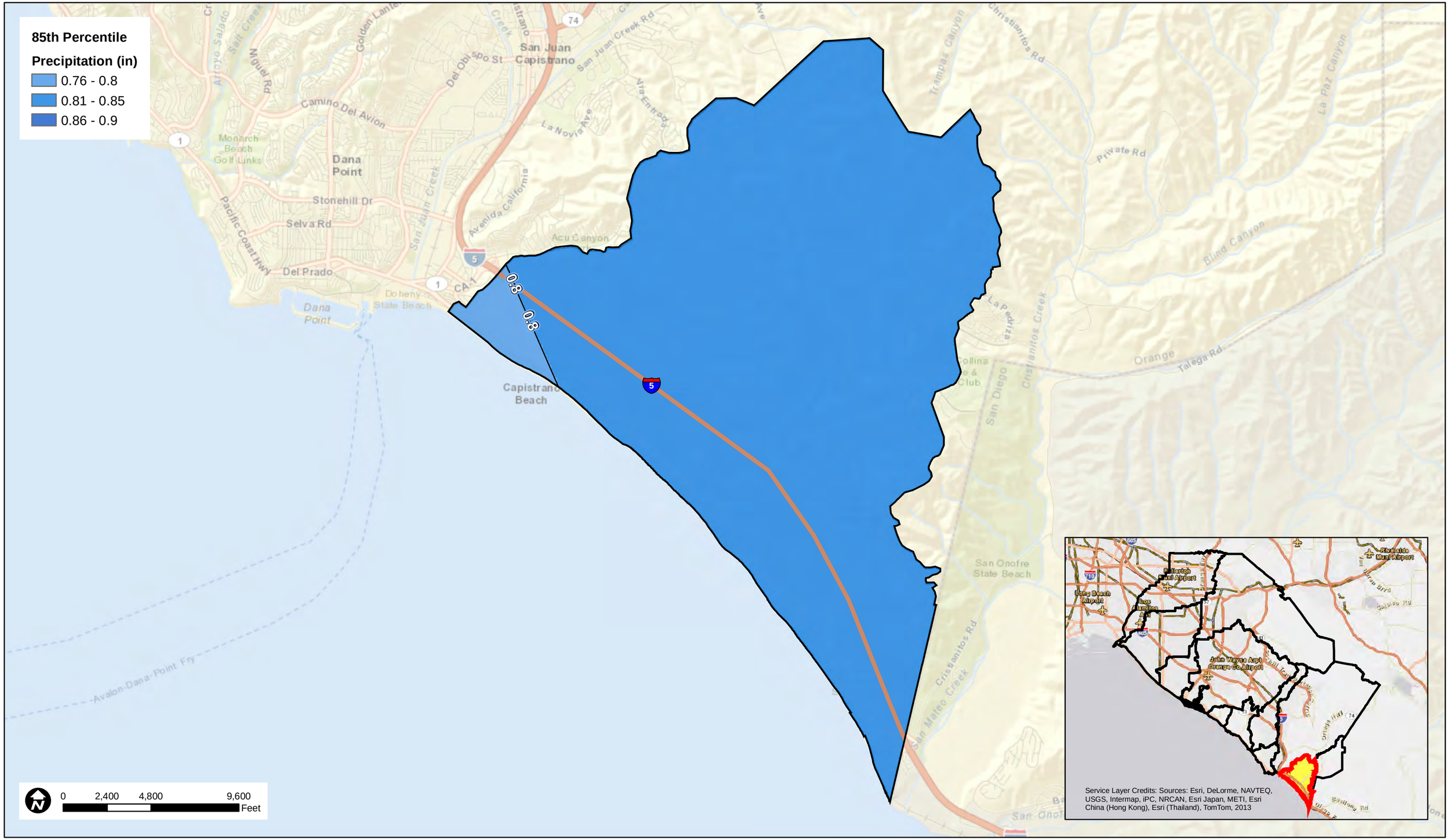
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.7

EXISTING CURVE NUMBER ANALYSIS SAN CLEMENTE CREEK WATERSHED



P:\9526E\6-GIS\Mxds\Reports\WIHMP_20131029\9526E_Fig10-8_WIHMP_85thPercentileRainfall_SanClementeCreek_20131029.mxd

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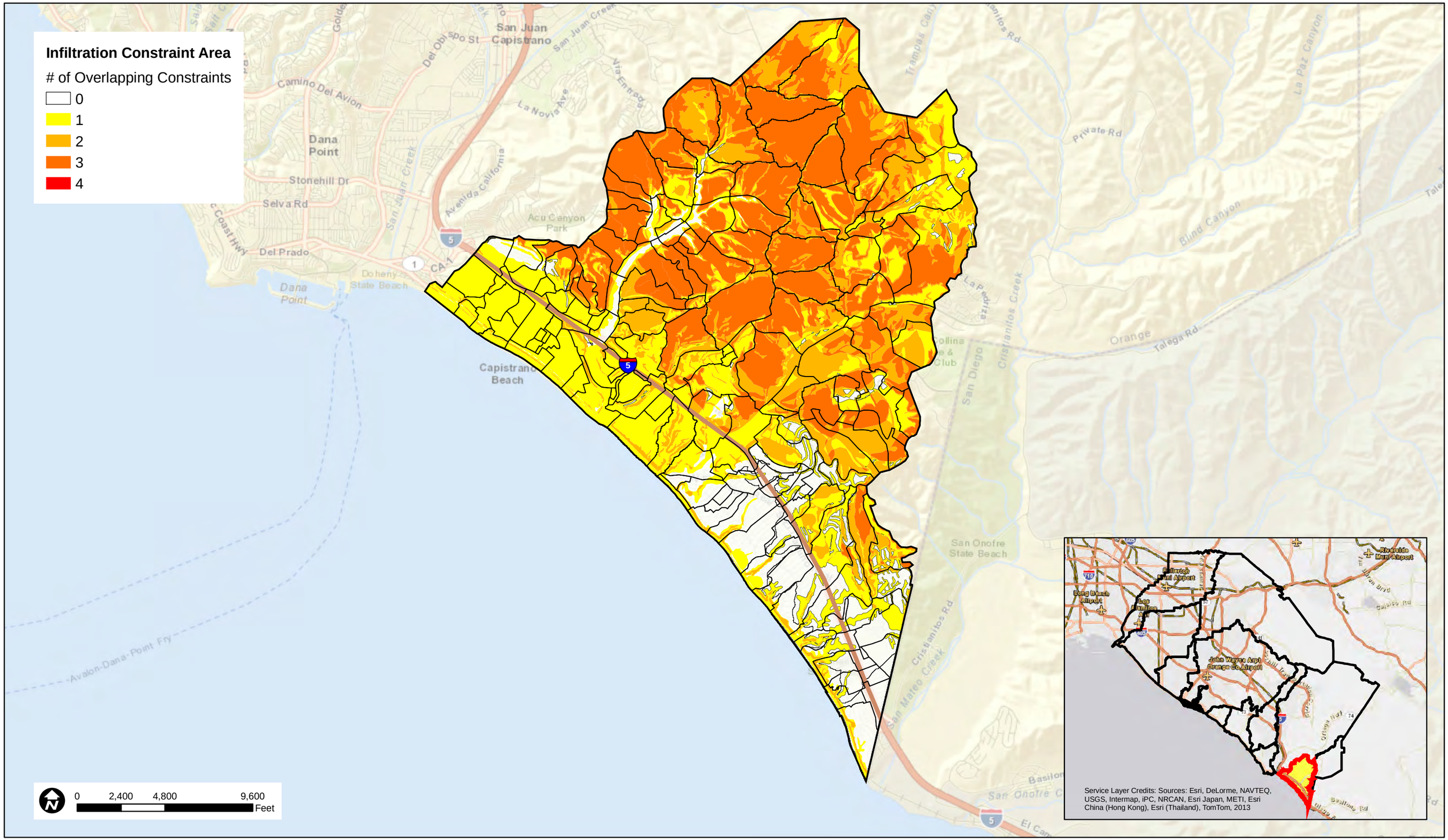
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 10.8

PRECIPITATION - 85TH PERCENTILE
SAN CLEMENTE CREEK WATERSHED



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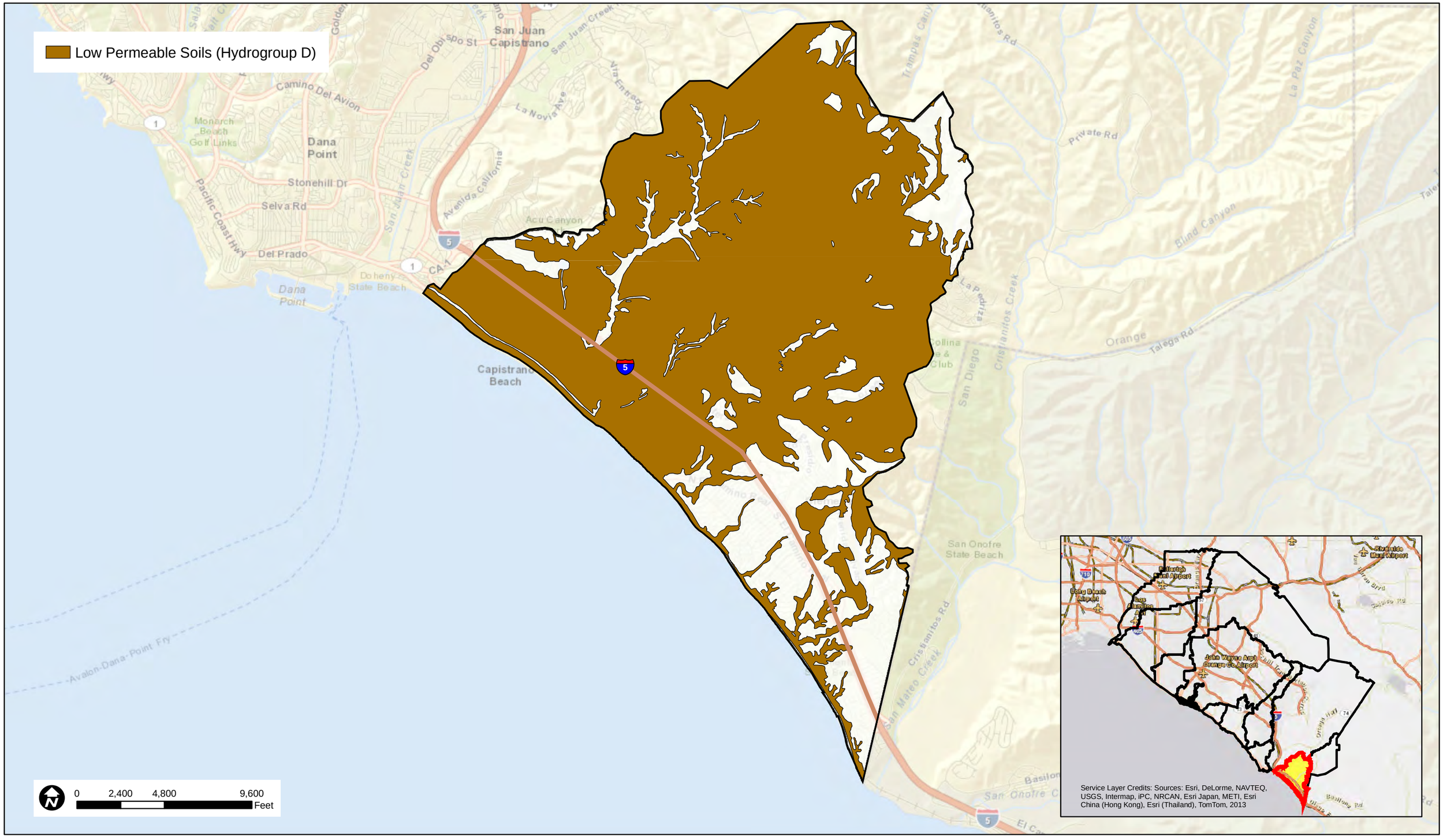
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.9

INFILTRATION CONSTRAINT - OVERALL CONSTRAINTS
SAN CLEMENTE CREEK WATERSHED



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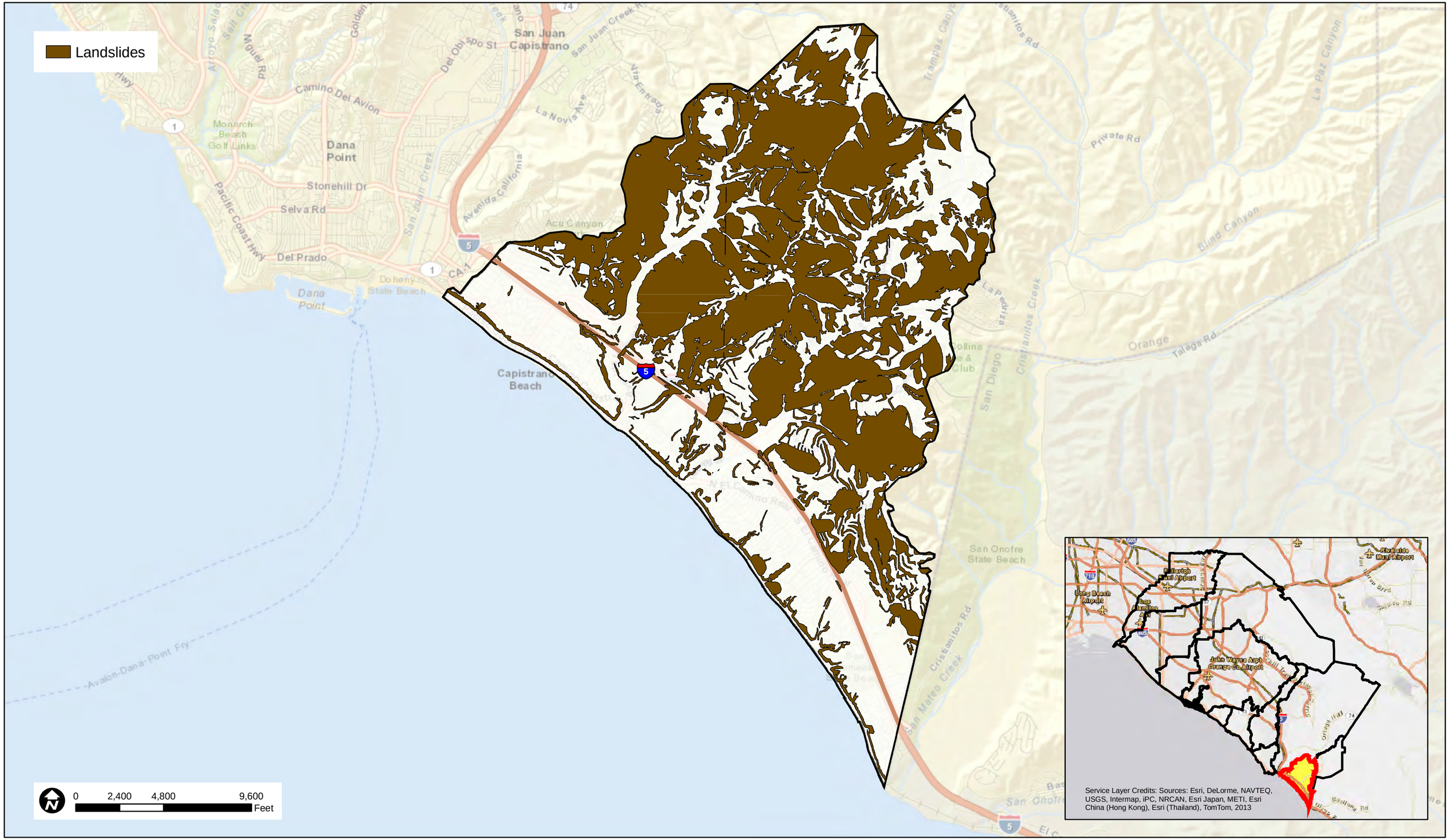
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.9a

INFILTRATION CONSTRAINT - D SOILS (LOW PERMEABLITY)
SAN CLEMENTE CREEK WATERSHED



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COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION
MANAGEMENT PLAN (WIHMP)

FIGURE 10.9b

INFILTRATION CONSTRAINT - LANDSLIDES
SAN CLEMENTE CREEK WATERSHED

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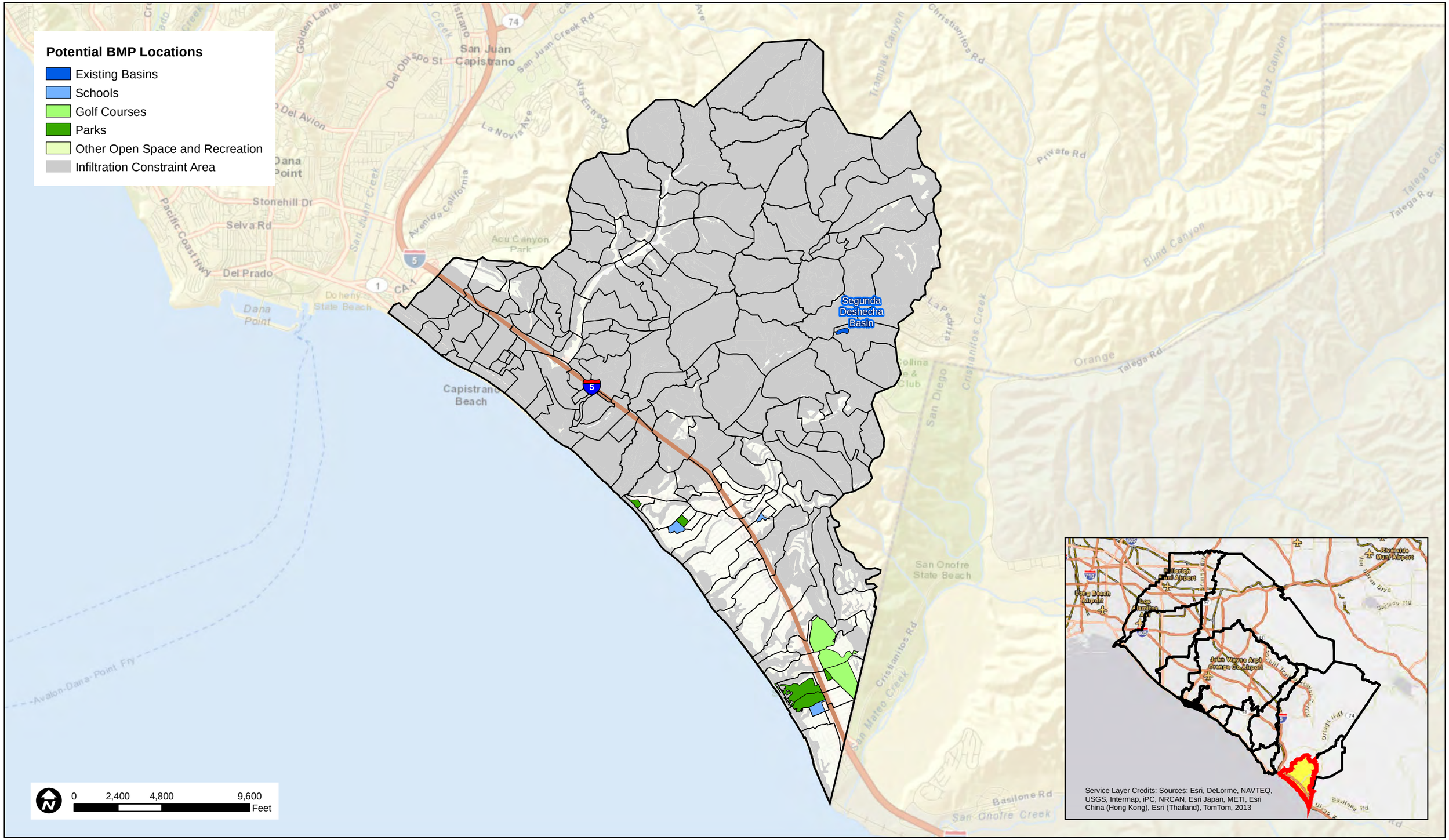
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.9c

INFILTRATION CONSTRAINT - PHYSIOGRAPHIC FEATURES
SAN CLEMENTE CREEK WATERSHED



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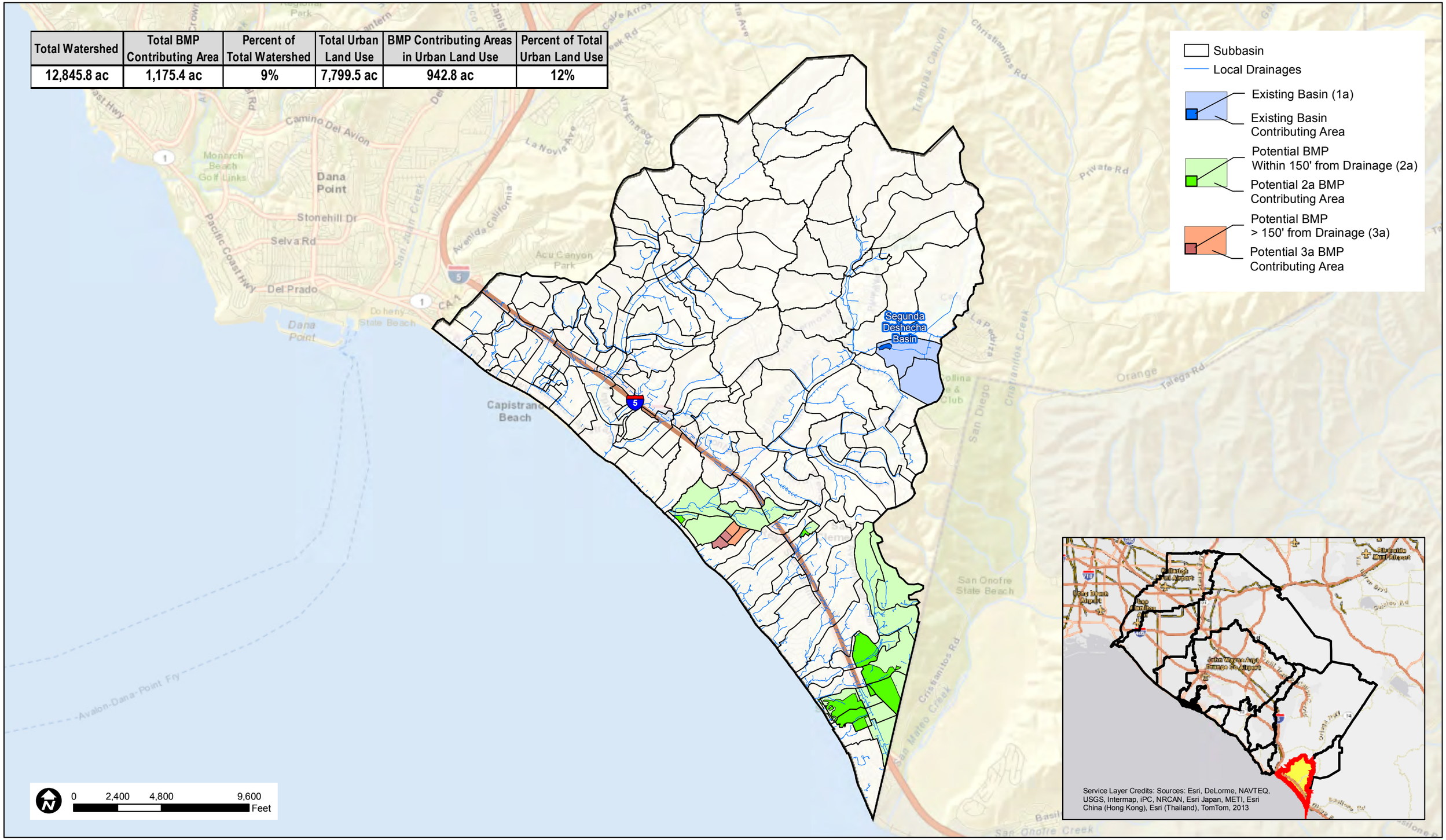
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.11
EXISTING AND POTENTIAL BMP LOCATIONS
SAN CLEMENTE CREEK WATERSHED

Total Watershed	Total BMP Contributing Area	Percent of Total Watershed	Total Urban Land Use	BMP Contributing Areas in Urban Land Use	Percent of Total Urban Land Use
12,845.8 ac	1,175.4 ac	9%	7,799.5 ac	942.8 ac	12%



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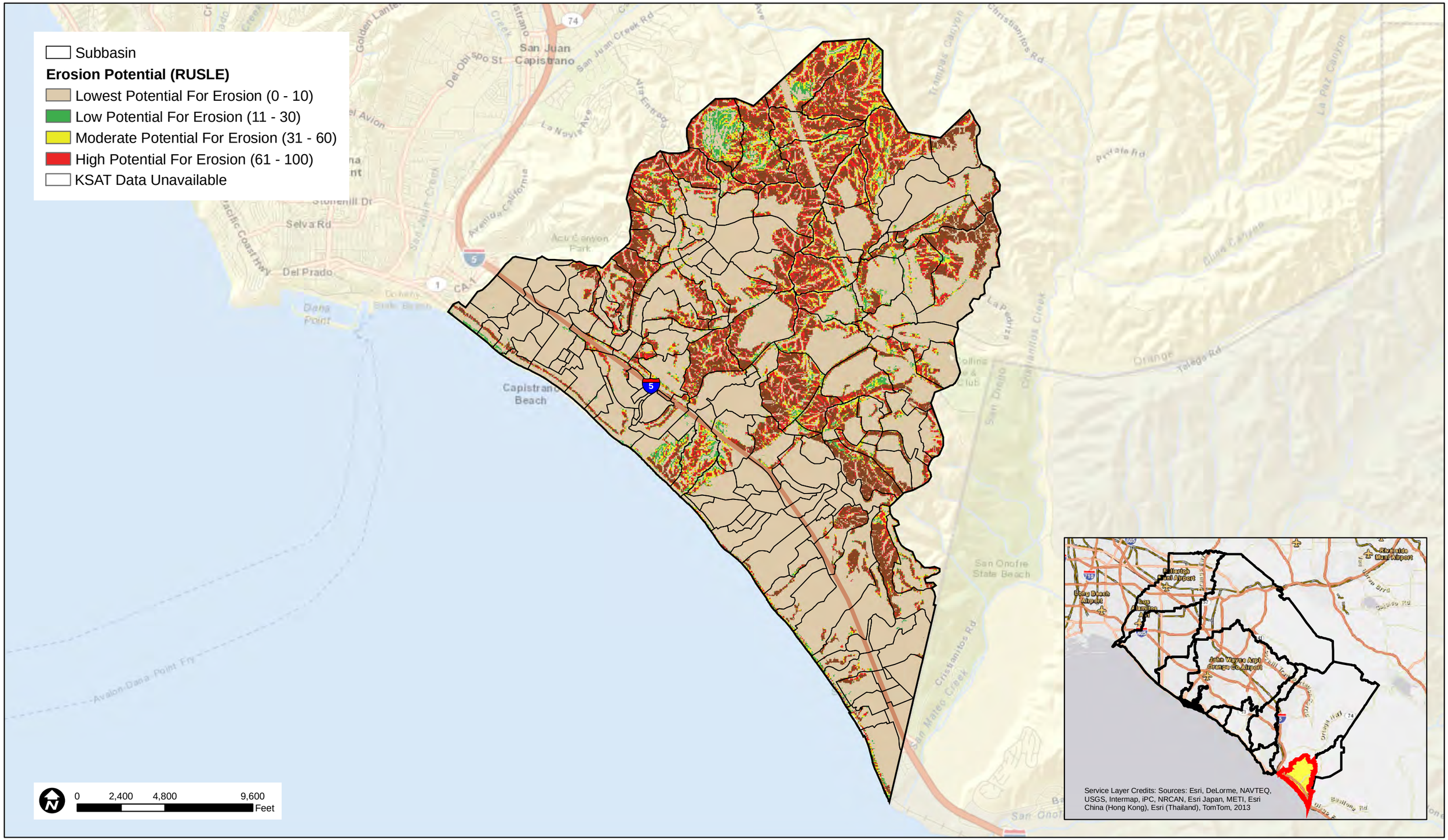
COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.12

EXISTING AND POTENTIAL BMP CONTRIBUTING AREAS SAN CLEMENTE CREEK WATERSHED



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COUNTY OF ORANGE
WATERSHED INFILTRATION HYDROMODIFICATION MANAGEMENT PLAN (WIHMP)

FIGURE 10.14

ERODIBILITY (RUSLE)
SAN CLEMENTE CREEK WATERSHED