

# LA Ecotopes

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A Spatial Framework and Database for Urban Biodiversity Stewardship

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NATIONAL WILDLIFE FEDERATION  
CERTIFIED WILDLIFE HABITAT  
THIS PROPERTY IS RECOGNIZED FOR ITS COMMITMENT  
TO SUSTAINABLY PROVIDE ESSENTIAL ELEMENTS OF  
WILDLIFE HABITAT: FOOD, WATER, COVER AND  
PLACES TO RAISE YOUNG



# All wildlife need four things to survive

**Food**

**Water**

**Cover**

**Places to Raise Young**



**GARDEN  
FOR WILDLIFE™**

[NWF.ORG/GARDEN](https://www.nwf.org/GARDEN)

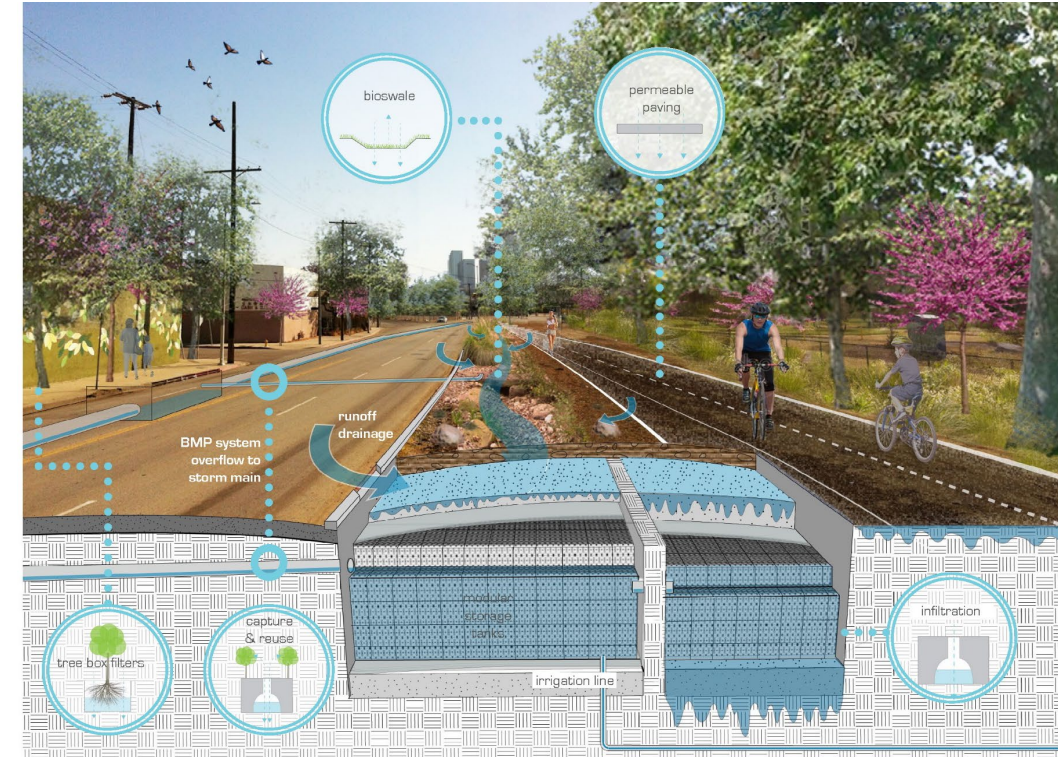
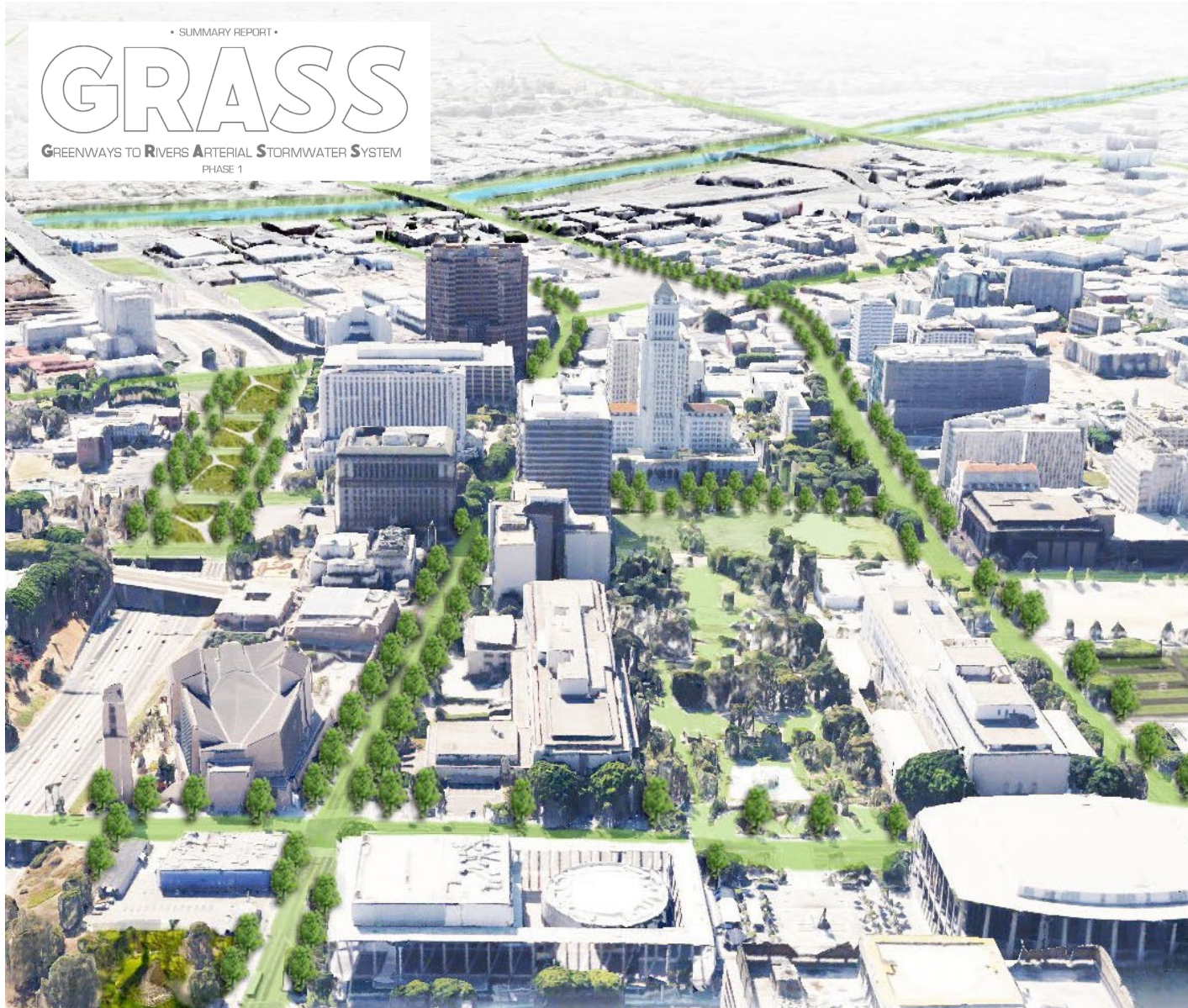


**GARDEN**  
**FOR WILDLIFE™**

- Adapted to local soils
- Adapted to regional precipitation
- Resilient and hardy once established
- Support wildlife

[NWF.ORG/GARDEN](https://www.nwf.org/garden)

# Enriches & sustains communities...



## SAMPLE PLANTS



*Achillea millefolium* /  
Yarrow



*Ceanothus griseus* "Santa Ana" /  
Santa Ana Ceanothus



*Platanus racemosa* /  
Western Sycamore



*Populus fremontii* /  
Western Cottonwood

## BIORETENTION



*Eleocharis macrostachya* /  
Pale Spikerush



*Juncus patens* /  
California Gray Rush



*Juncus phaeocephalus* /  
Brown Headed Rush



*Schoenoplectus maritimus* /  
Cosmopolitan Bulrush

## PHYTOREMEDIATION

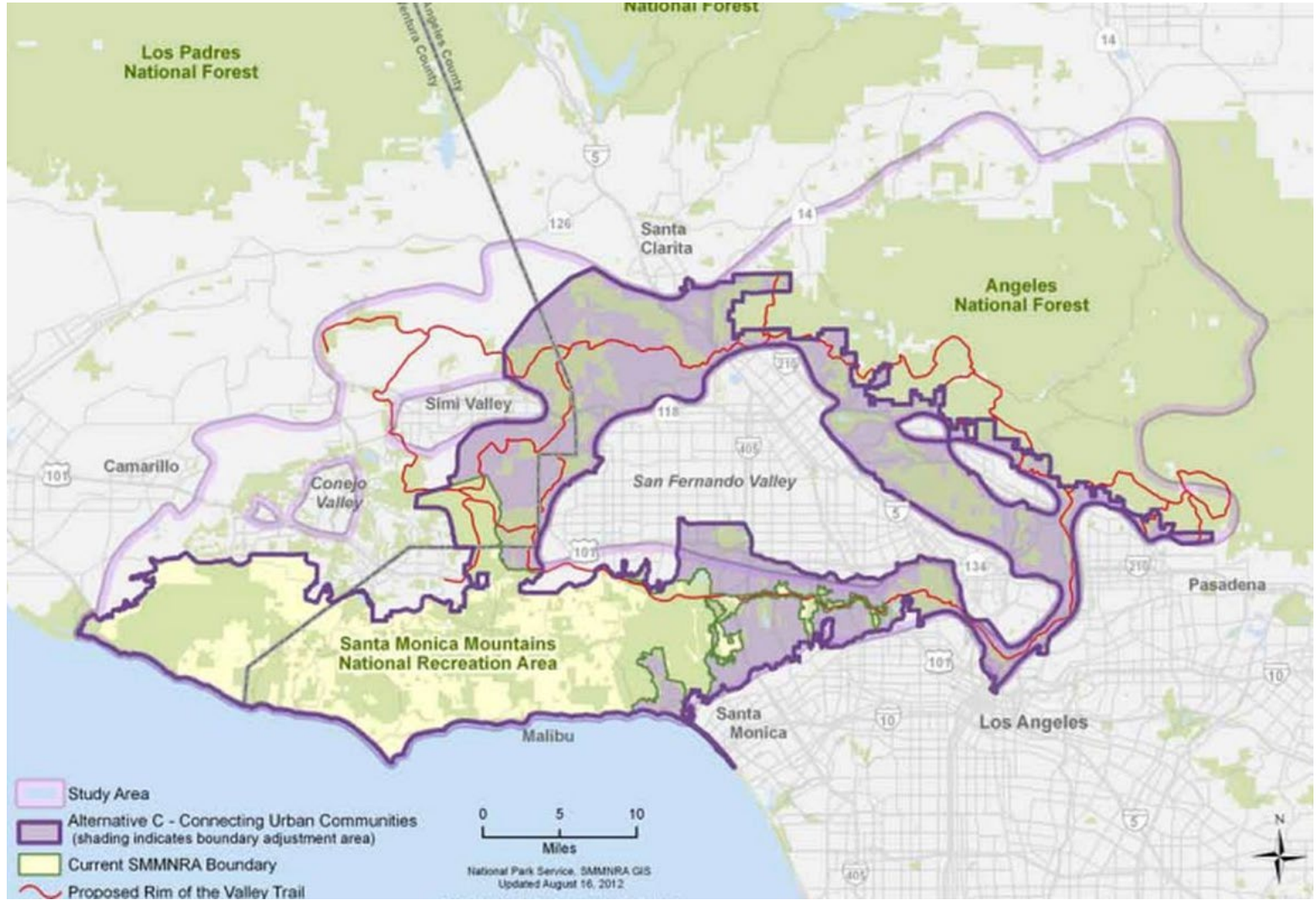
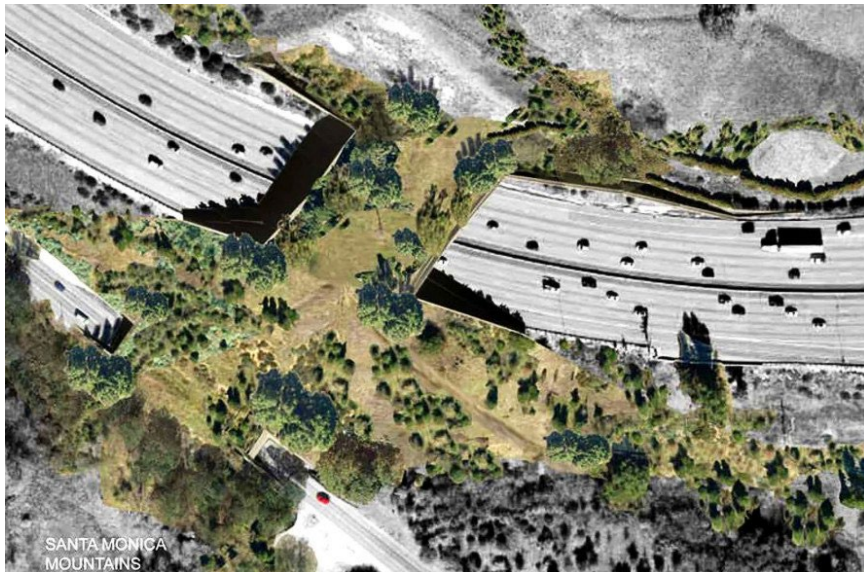
## STORMWATER HARVESTING

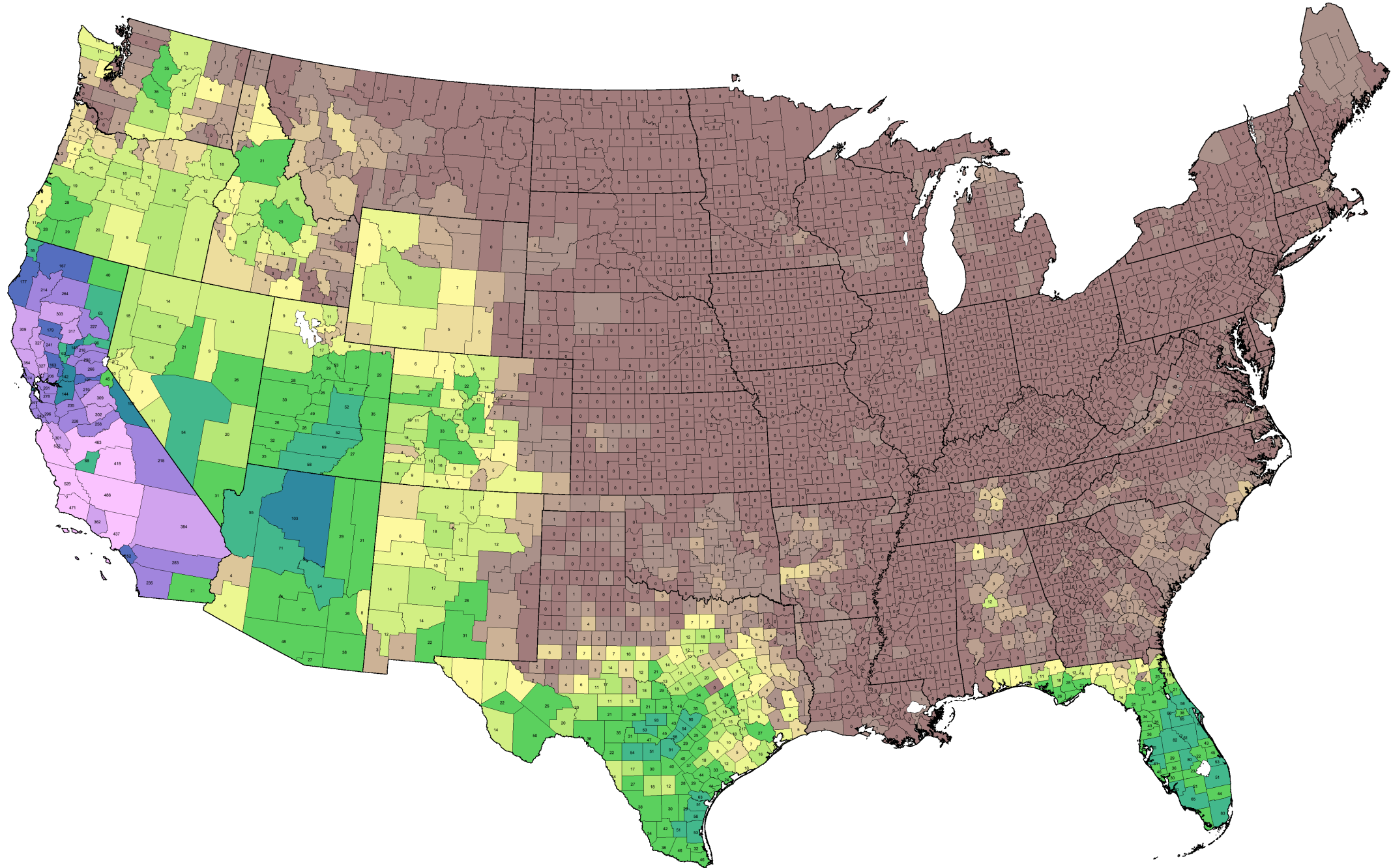
Following the protocols of the rain garden, street-side bioswales can filter street catchment and its adjacencies. Runoff then percolates through various levels of bio-filtration before reaching an underground storage system. Modular tanks create versatile storage volume capacities, accommodating the strictest excavation restrictions. Stored water irrigates local trees, with excess runoff draining to an infiltration chamber. This system reduces pressure on potable water supply by recharging groundwater supplies, decreases demand on existing stormwater infrastructure, and introduces an economically viable alternative water source that is up to 75% less expensive than traditional stormwater management techniques (Sydney Metropolitan Catchment).

# Enriches & sustains communities...



# Sustains nature...



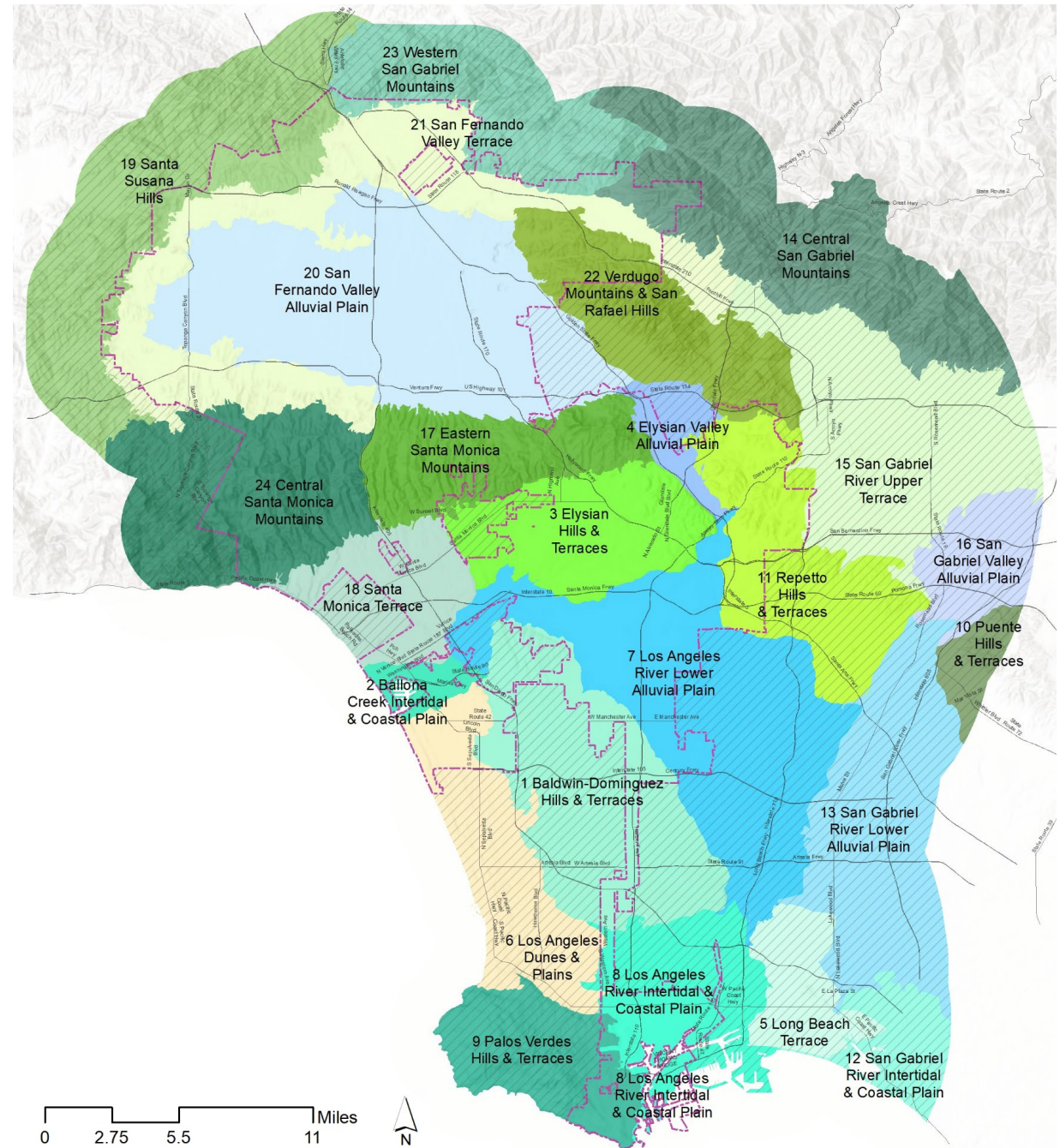


Number of US State Endemic vascular flora taxa recorded from each county (data 2011).

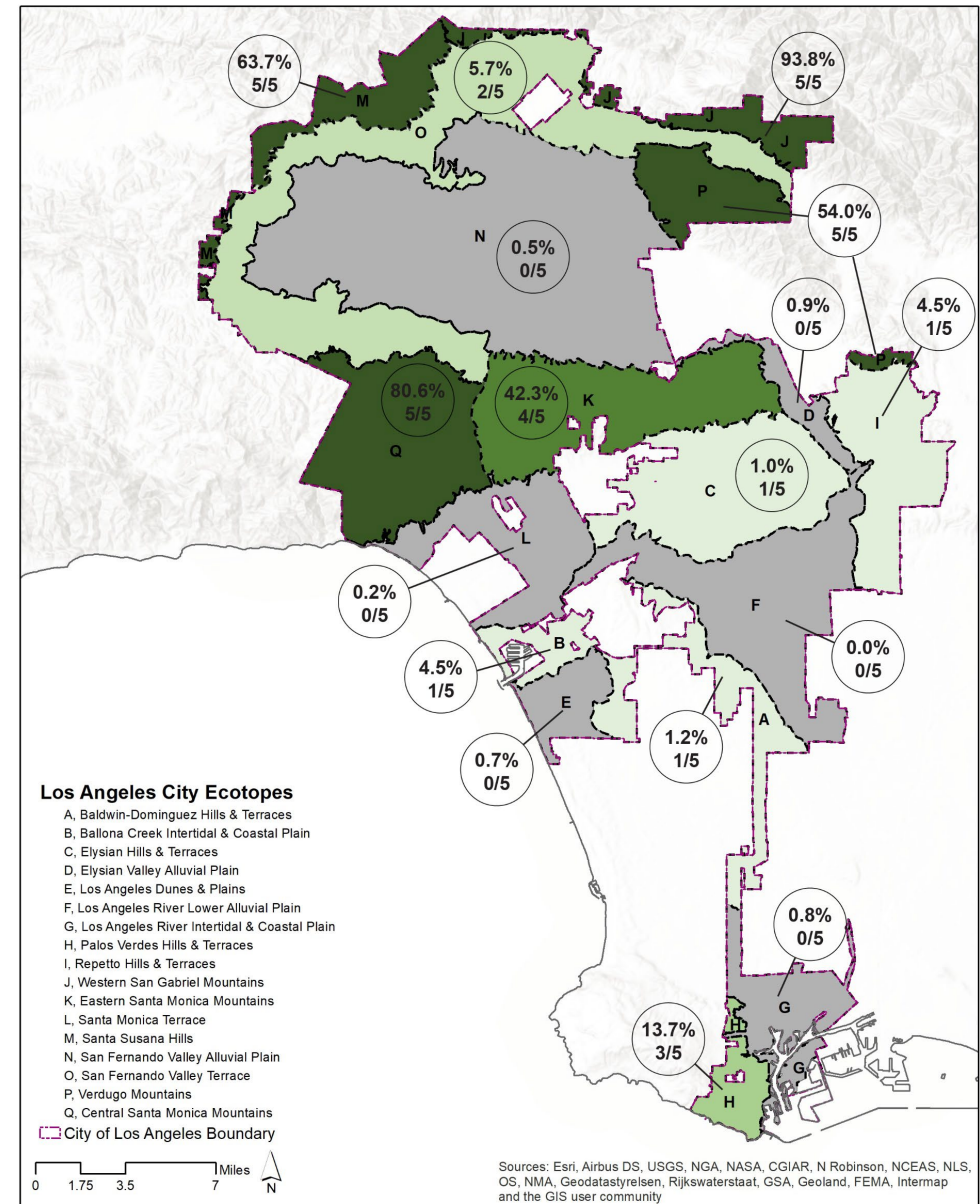
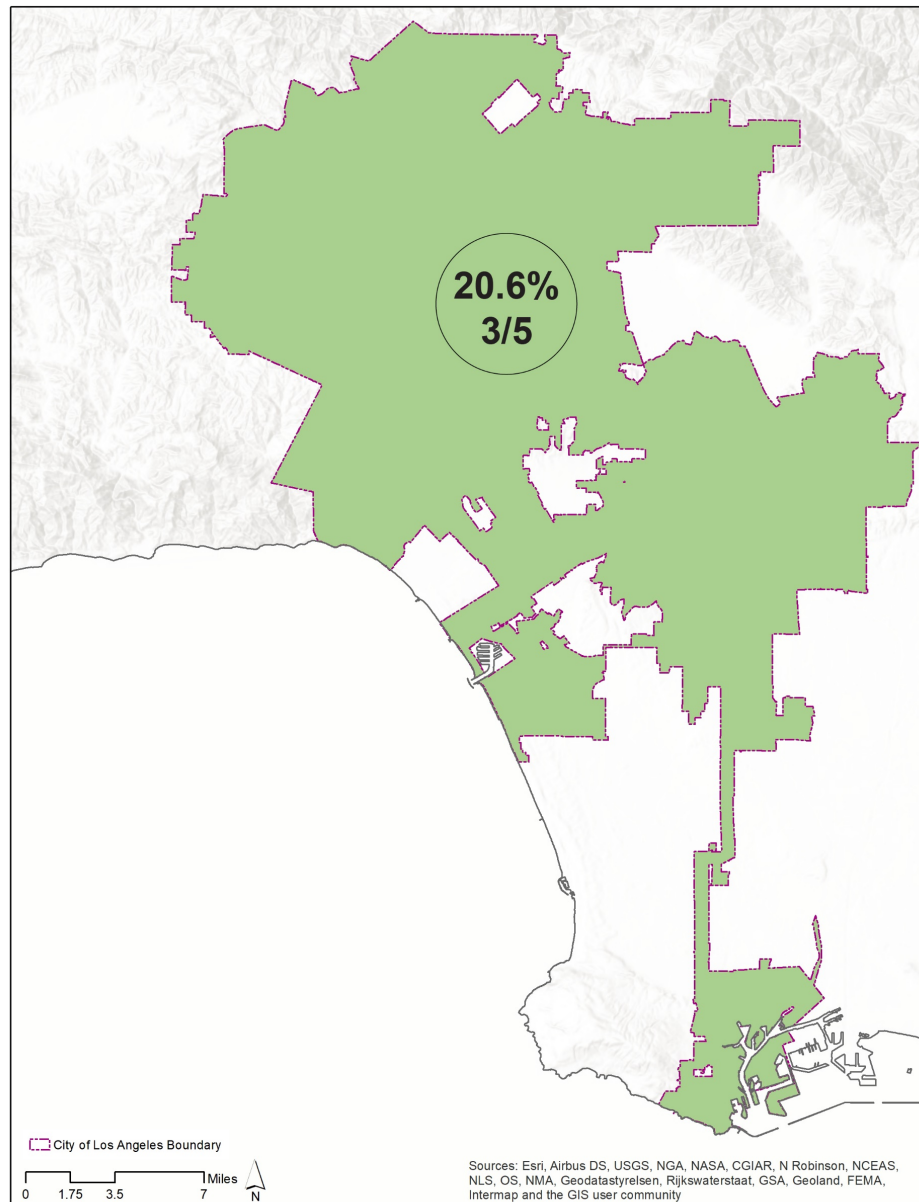
BONAP <http://www.bonap.org/>

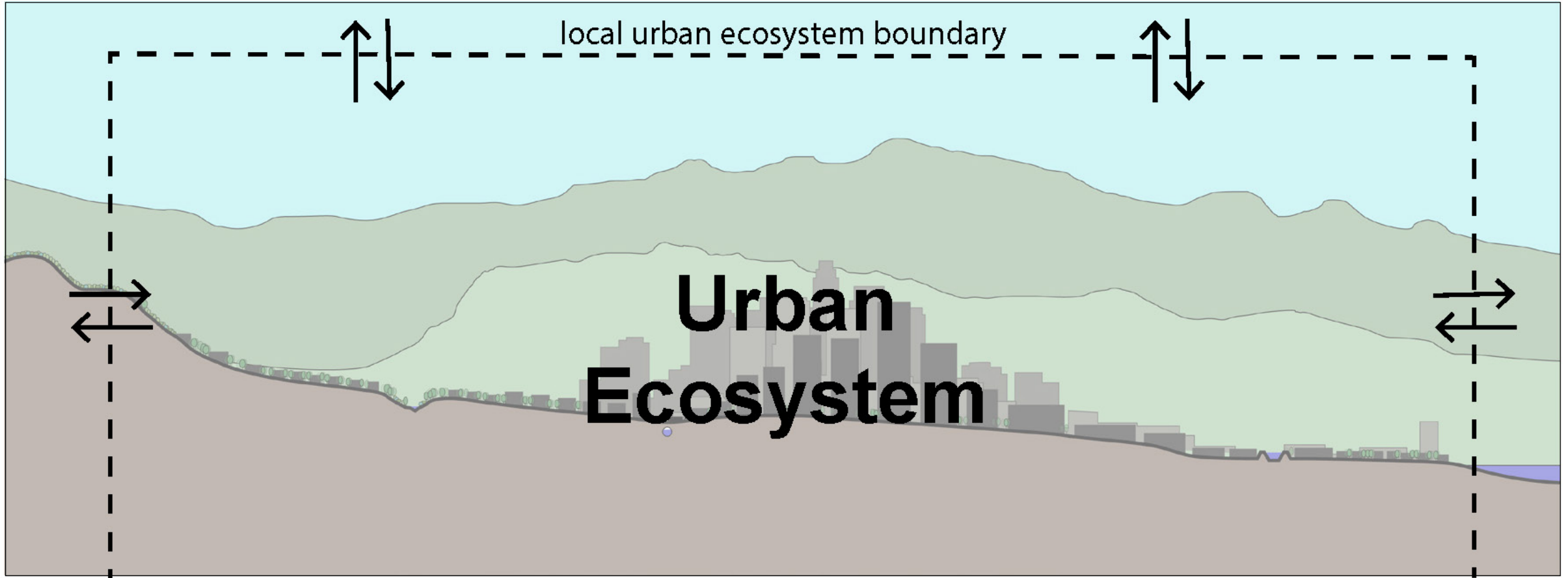
# Los Angeles Ecotopes

- 1 Baldwin-Dominguez Hills & Terraces
- 2 Ballona Creek Intertidal & Coastal Plain
- 3 Elysian Hills & Terraces
- 4 Elysian Valley Alluvial Plain
- 5 Long Beach Terrace
- 6 Los Angeles Dunes & Plains
- 7 Los Angeles River Lower Alluvial Plain
- 8 Los Angeles River Intertidal & Coastal Plain
- 9 Palos Verdes Hills & Terraces
- 10 Puente Hills & Terraces
- 11 Repetto Hills & Terraces
- 12 San Gabriel River Intertidal & Coastal Plain
- 13 San Gabriel River Lower Alluvial Plain
- 14 Central San Gabriel Mountains
- 15 San Gabriel River Upper Terrace
- 16 San Gabriel Valley Alluvial Plain
- 17 Eastern Santa Monica Mountains
- 18 Santa Monica Terrace
- 19 Santa Susana Hills
- 20 San Fernando Valley Alluvial Plain
- 21 San Fernando Valley Terrace
- 22 Verdugo Mountains & San Rafael Hills
- 23 Western San Gabriel Mountains
- 24 Central Santa Monica Mountains
- City of Los Angeles Boundary
- Outside City of Los Angeles

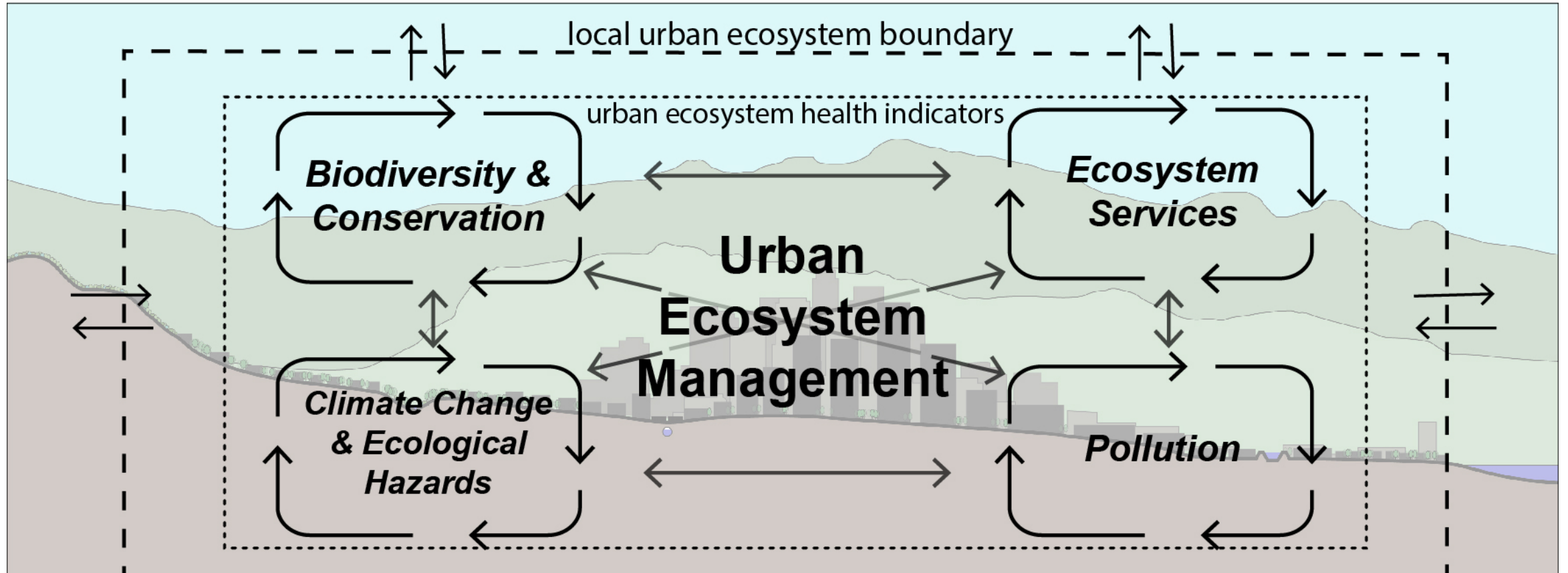


# Application: Singapore Index vs. LA City Index for Indicator 1

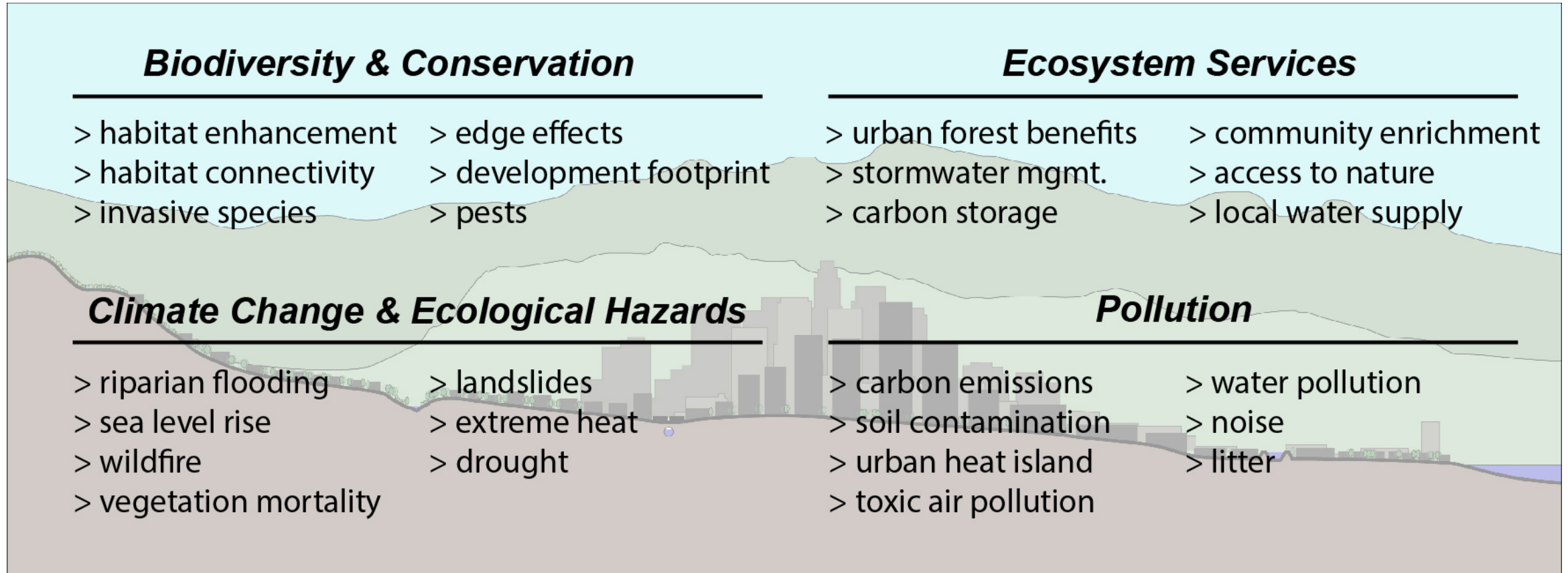




# Urban Ecosystem Management Framework

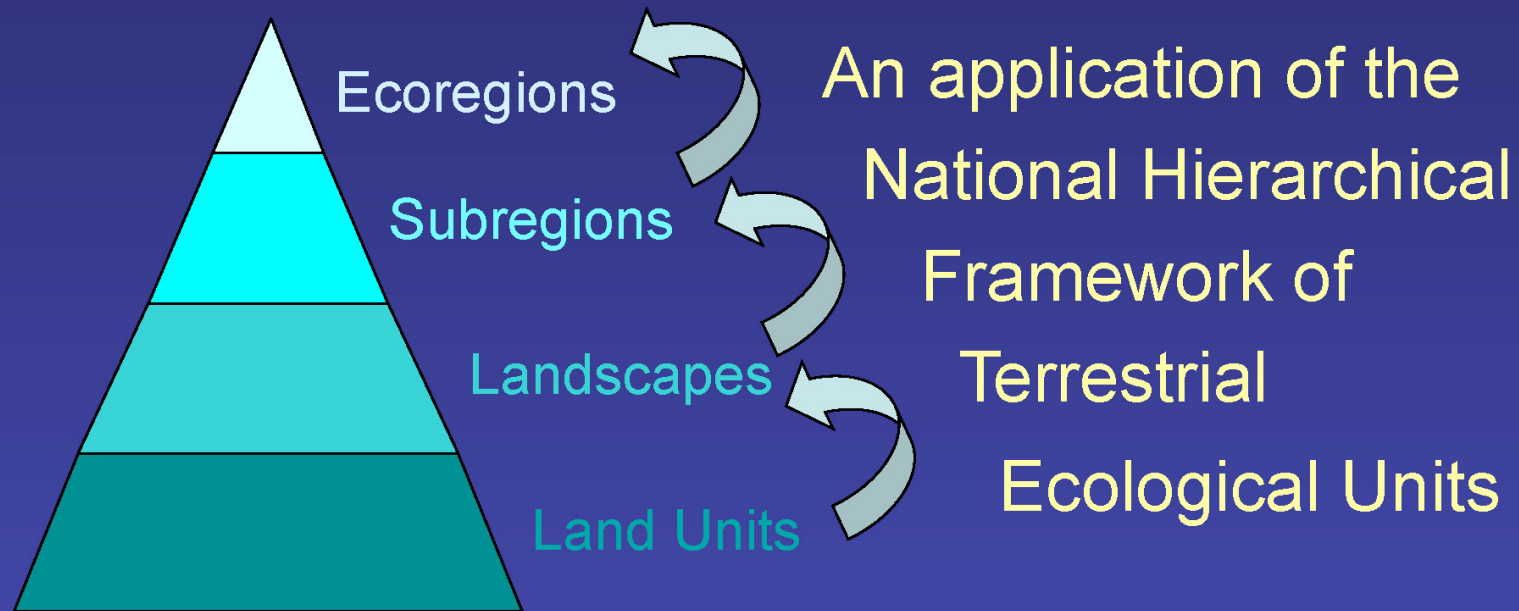


# Urban Ecosystem Management Themes



# Delineation of Ecological Subregions of the Conterminous United States

David Cleland, James Keys,  
and Henry McNab  
U.S. Forest Service

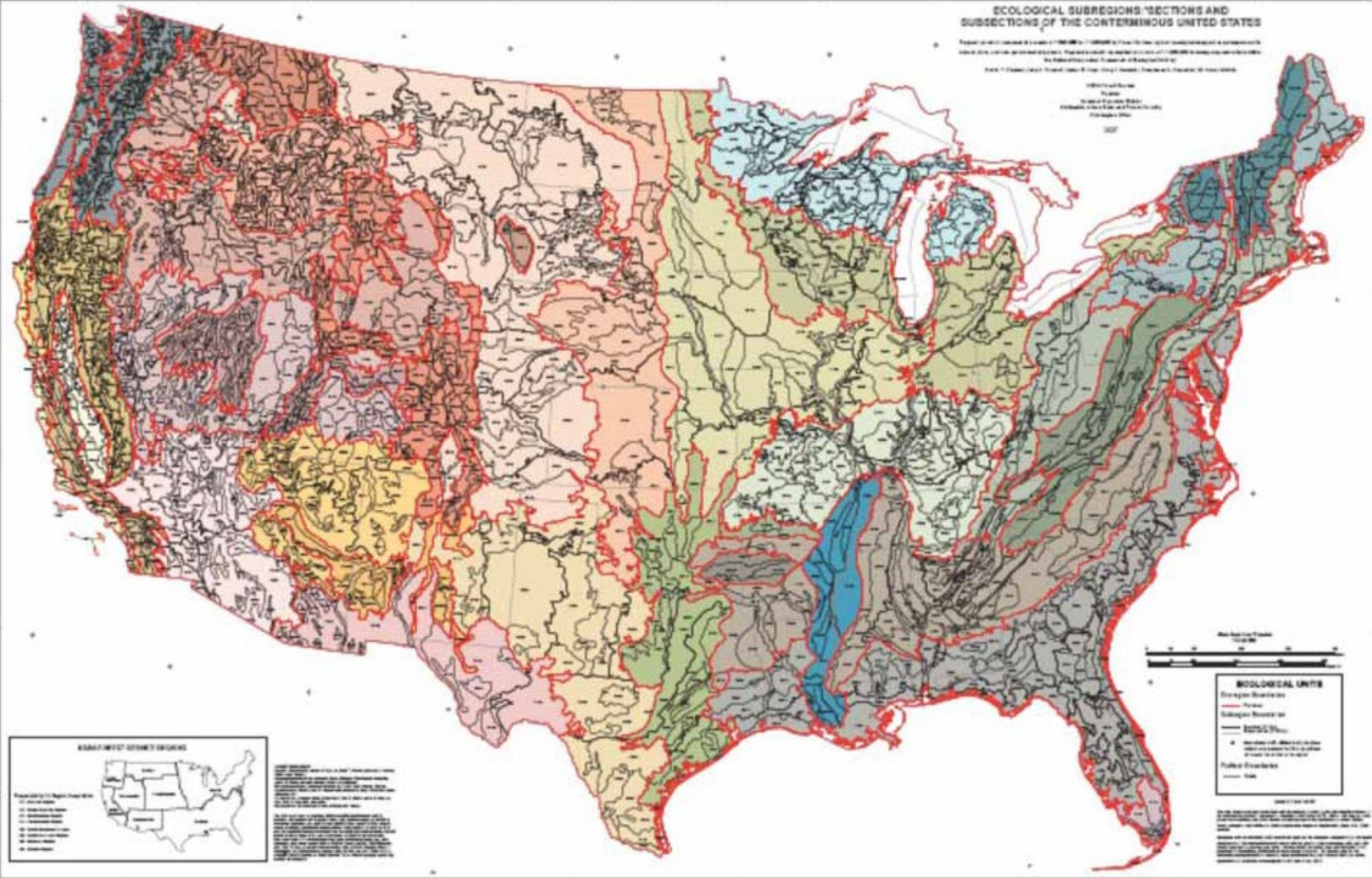


GJN '02

# ECOLOGICAL SUBREGIONS, SECTIONS AND SUBSECTIONS OF THE CONTINENTAL UNITED STATES

Prepared and published by the U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20540. This map is a revision of the 1966 map of the same title, published by the U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20540. It is based on the 1966 map of the same title, published by the U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20540.

UNITED STATES  
FISH AND WILDLIFE SERVICE  
DEPARTMENT OF THE INTERIOR  
WASHINGTON, D.C. 20540



ALPHABETICALLY ORDERED STATES  
AK Alaska  
HI Hawaii  
AZ Arizona  
CA California  
CO Colorado  
CT Connecticut  
DE Delaware  
DC District of Columbia  
FL Florida  
GA Georgia  
IA Iowa  
IL Illinois  
IN Indiana  
KS Kansas  
KY Kentucky  
LA Louisiana  
MA Massachusetts  
MD Maryland  
ME Maine  
MI Michigan  
MN Minnesota  
MO Missouri  
MS Mississippi  
MT Montana  
NE Nebraska  
NH New Hampshire  
NJ New Jersey  
NY New York  
NC North Carolina  
ND North Dakota  
OH Ohio  
OK Oklahoma  
OR Oregon  
PA Pennsylvania  
RI Rhode Island  
SC South Carolina  
SD South Dakota  
TN Tennessee  
TX Texas  
UT Utah  
VT Vermont  
WA Washington  
WI Wisconsin  
WY Wyoming



**BIOLOGICAL UNITS**

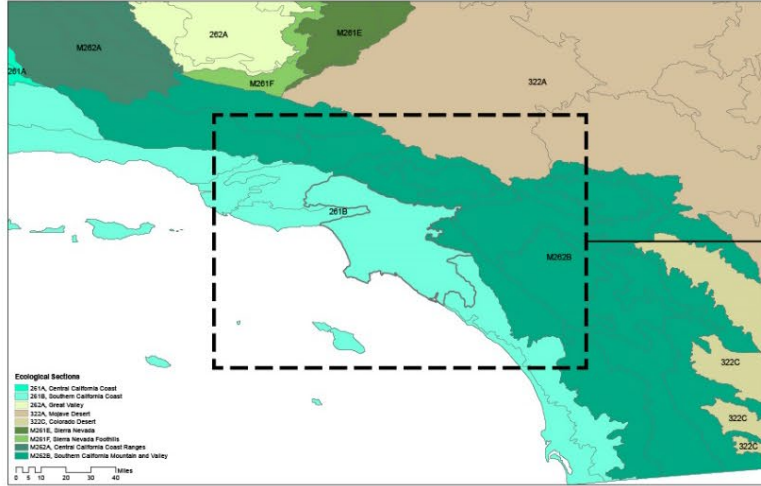
- Ecological Subregion
- Section
- Subsection
- State
- County
- Water
- Public Lands
- Indian Reservations

U.S. Fish and Wildlife Service  
Department of the Interior  
Washington, D.C. 20540

# US Forest Service: Ecological Sections of the United States

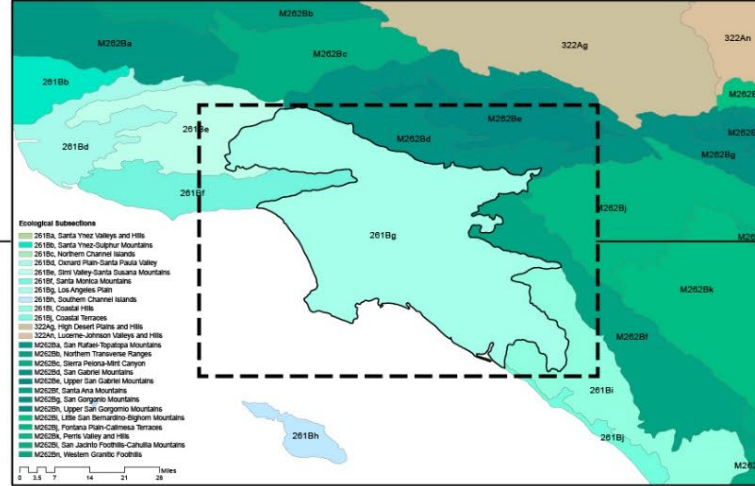
## Ecological Sections

1,000,000's to 10,000,000's of acres



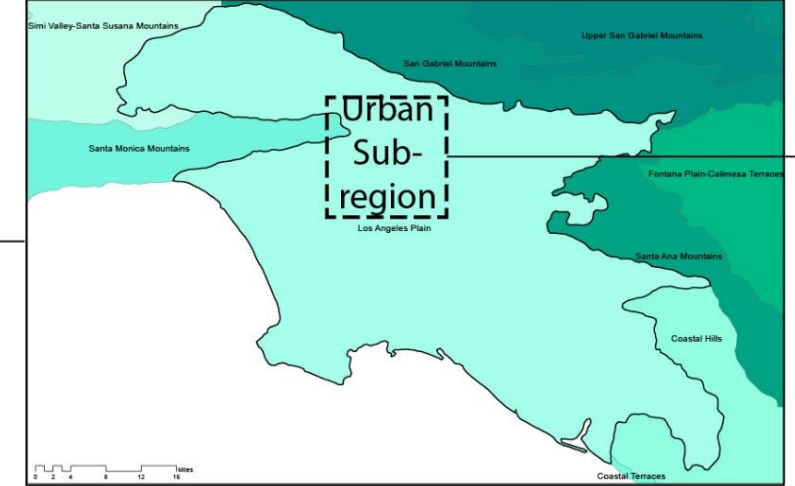
## Ecological Subsections

100,000's to 1,000,000's of acres



## Los Angeles Plain Subsection

906,000 acres



## Subsection 261Bg Los Angeles Plain

**Climate.** The mean annual precipitation is about 12 to 20 inches; it is practically all rain. Summer fog is common. Mean annual temperature is about 58° to 64° F. The mean freeze-free period is about 300 to 350 days.

**Surface Water.** The Los Angeles River is the largest stream on the Plain. It drains the San Fernando Valley and much of the San Gabriel Mountains. Most of the streams are dry through the summer. There are no lakes or ponds, other than temporary ponding behind dunes.

**Geomorphology.** This is a subsection of nearly level floodplains and terraces and very gently to gently sloping alluvial fans. There are small areas of marine terraces, but they are relatively inextensive compared to fluvial terraces. Steep mountains and moderately steep hills are small but important parts of the subsection. Dunes are present along the coast north of the Palos Verdes Hills and sand has spread across Quaternary terraces behind those dunes. The subsection elevation range is from sea-level to about 1000 feet on the Los Angeles Plain, slightly higher in the San Fernando Valley, and up to 3077 feet in the Verdugo Mountains. Fluvial erosion and deposition are the main geomorphic processes. Mass wasting is important in the mountains, and wind is an important geomorphic agent along the coast.

**Vegetation.** The predominant natural plant communities are California sagebrush - California buckwheat series and Mixed sage series. Coast live oak series and California walnut series are common, but not extensive. Chamise series and Mixed chaparral shrublands are common in the Verdugo Mountains and San Rafael Hills. California sycamore series occurs in riparian areas and there is some Pickleweed series around San Pedro Bay.

### Characteristic series by lifeform include:

**Dunelands:** Sand-verbena - beach bursage series, Dune lupine-goldenbush series.

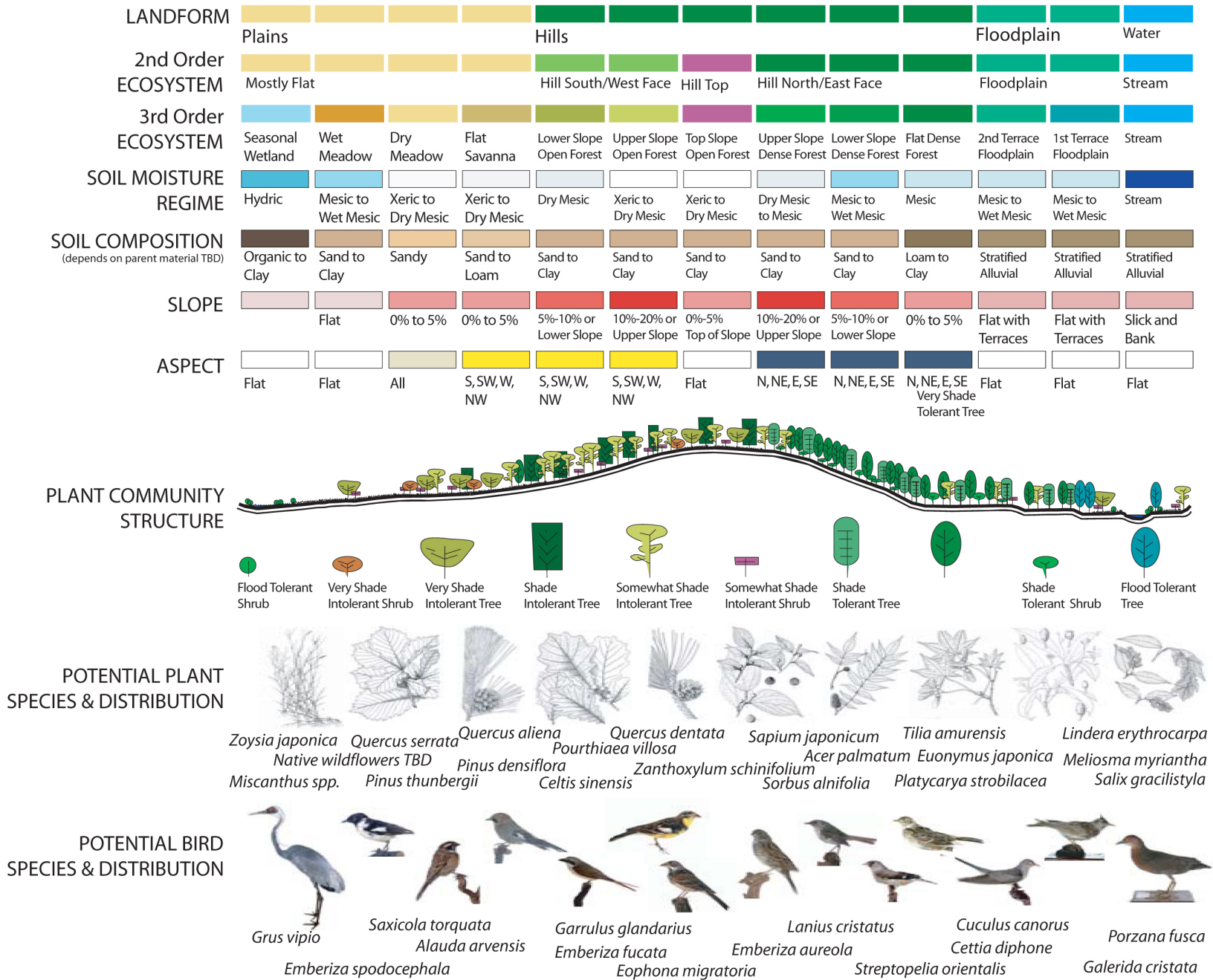
**Saltmarshes:** Cordgrass series, Ditch-grass series, Pickleweed series.

**Grasslands:** California annual grassland series.

**Shrublands:** Black sage series, California buckwheat series, California buckwheat - white sage series, California encelia series, California sagebrush series, California sagebrush - black sage series, California sagebrush series - California buckwheat series, Chamise series, Chamise - black sage series, Coast pickle-pear series, Coyote brush series, Mixed sage series, Sumac series, White sage series.

**Forests and woodlands:** California sycamore series, California walnut series, Coast live oak series.

# Ecosystem Attributes



**USFS Ecological Sections Framework**

Principal Environmental Factors			Ecological Unit Hierarchy
Climate	Physiography		<i>Domains, Divisions, Provinces (millions to 10,000's of sq. miles)</i>
		Geology & Surficial Deposits	<i>Sections, Subsections (10,000's to 100,000's of acres)</i>
		Landform	<i>Landtype Associations (1,000's to 10,000's of acres)</i>
		Vegetation	<i>Landtypes, Landtype Phases (&lt;10 to 100's of acres)</i>
		Soils	

**LA Ecotopes Proposed Framework Modifications**

Principal Environmental Factors			Ecological Unit Hierarchy
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		Landform	<b><i>Urban Subregion Types (1,000's to 10,000's of acres)</i></b>
		Vegetation	
		Microclimate	<b><i>Neighborhood Types, Parcel Types (&lt;10 to 100's of acres)</i></b>
		Soils	
		Land Use	
		Ecosystem Services & Hazards	
		Biota	

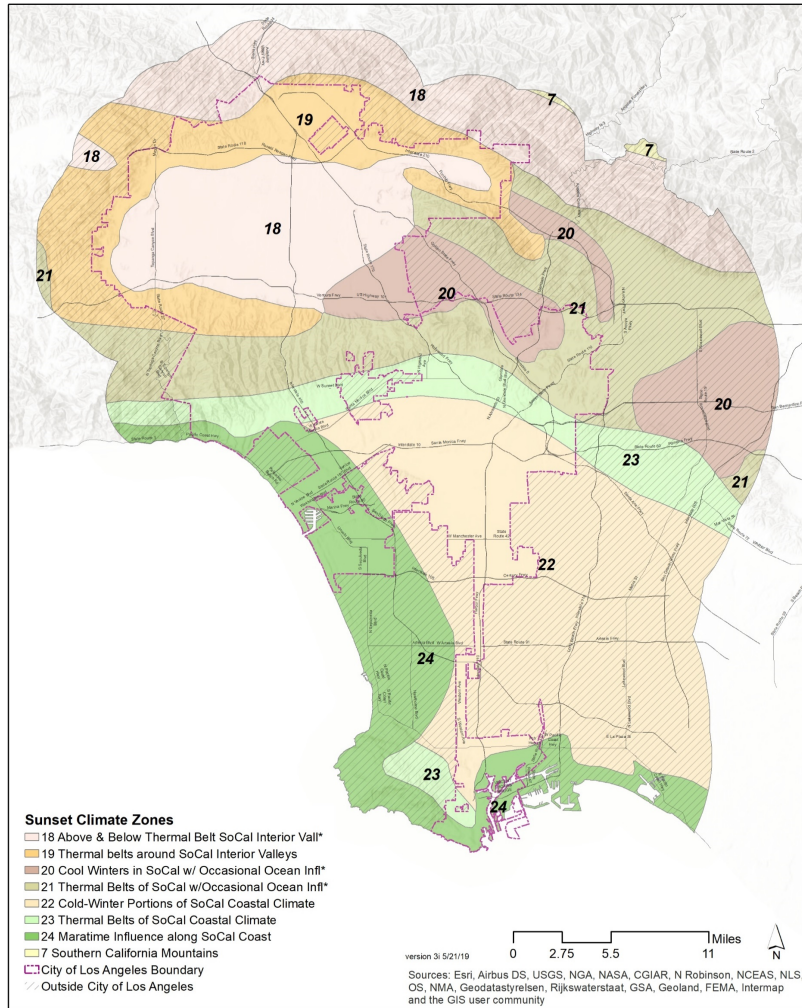
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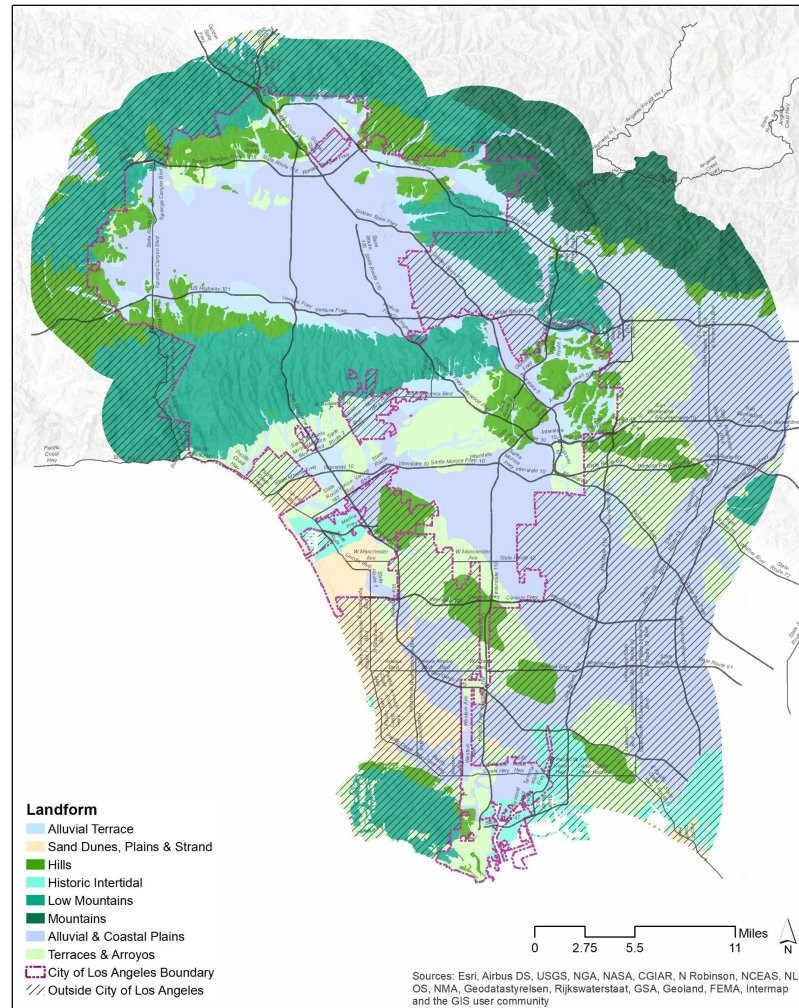
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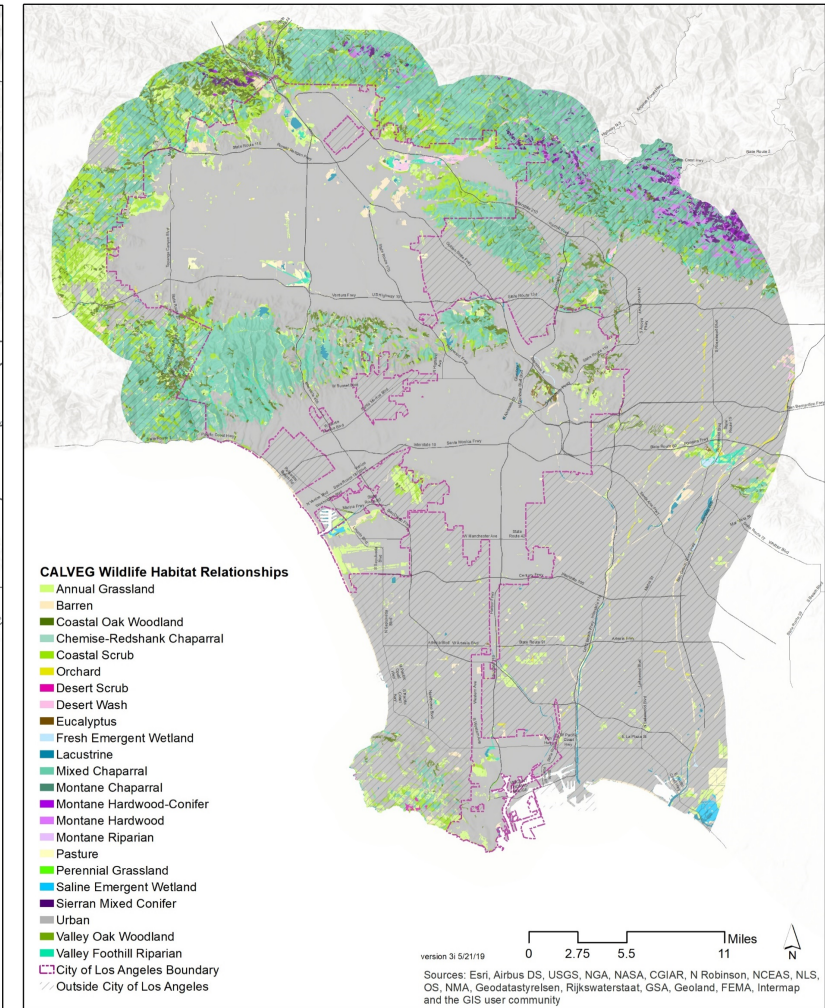
# Principal Environmental Factors



1. Climate from  
(Sunset Climate Zones)

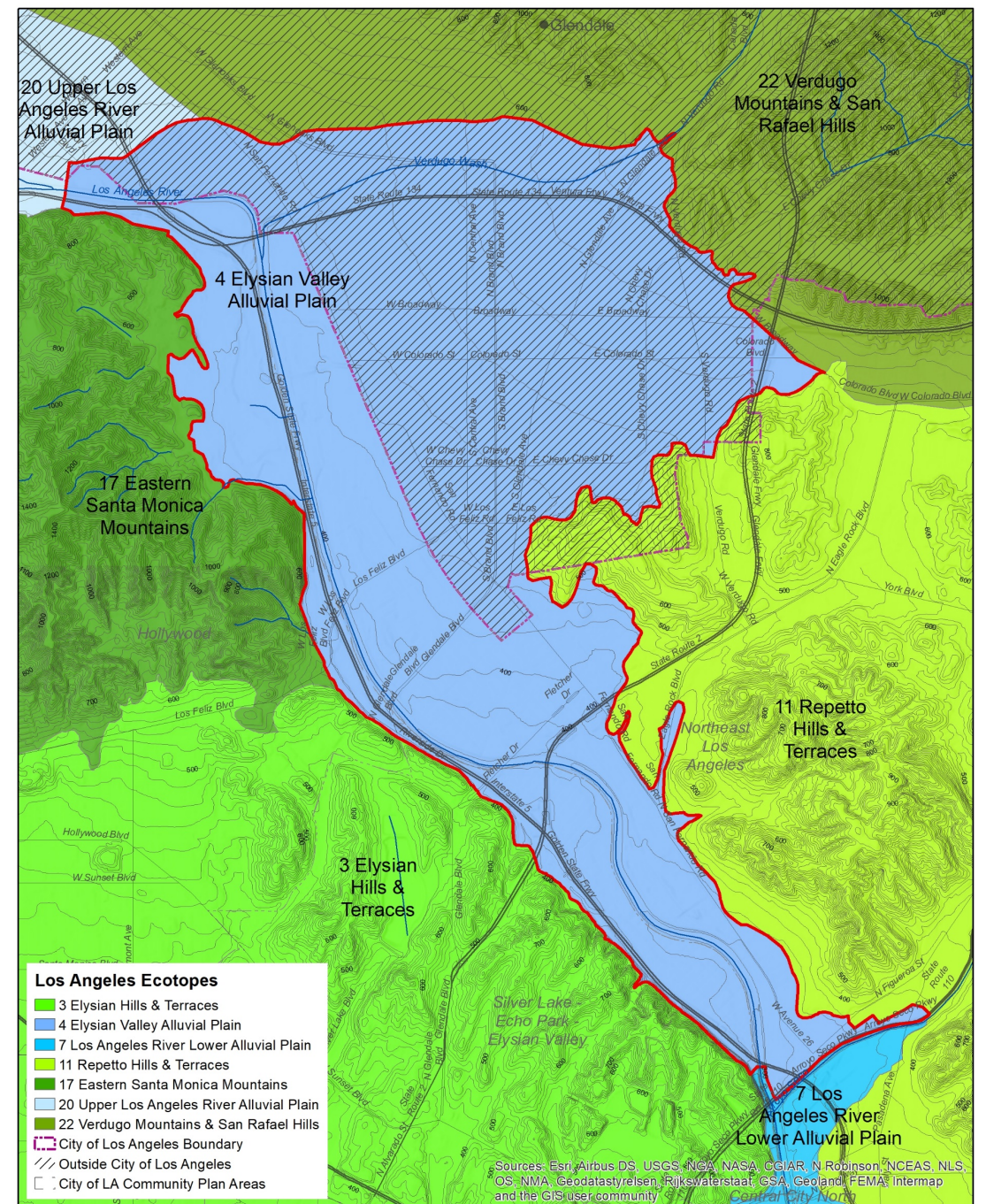
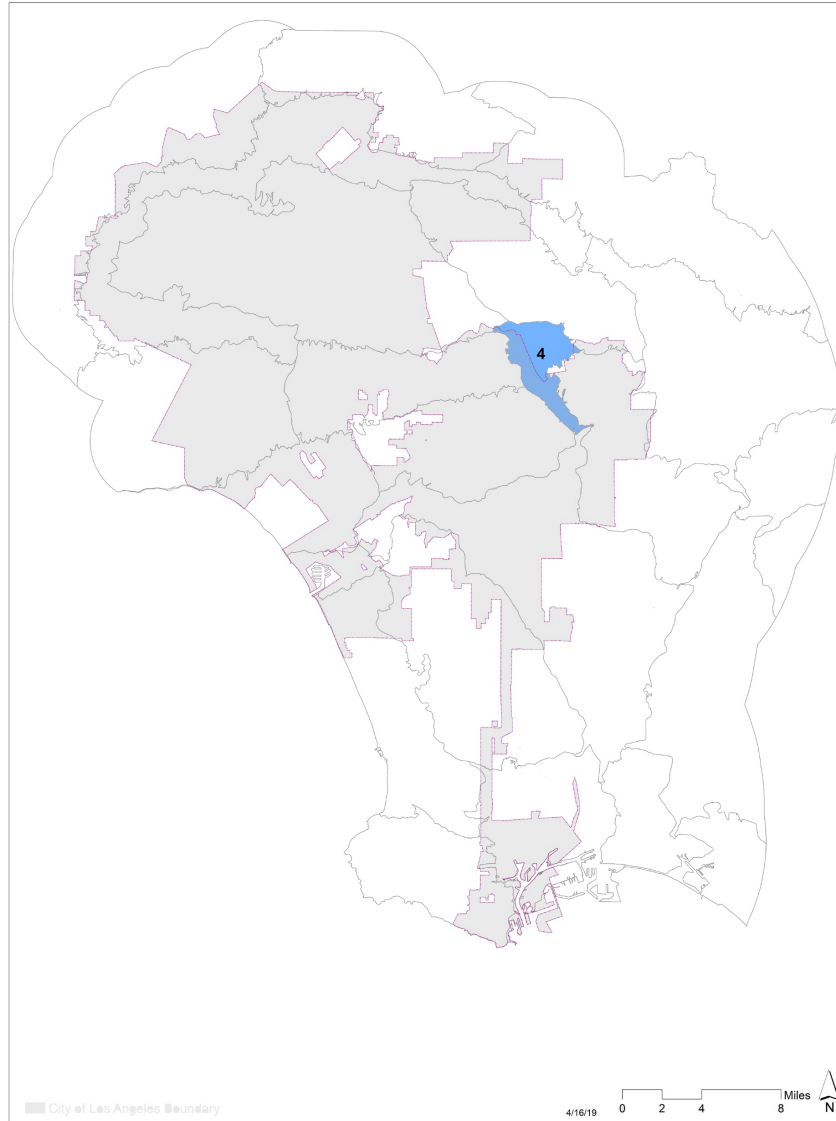


2. Landform (constructed)  
(based on SSURGO, topography)



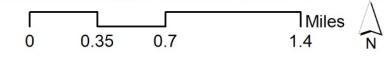
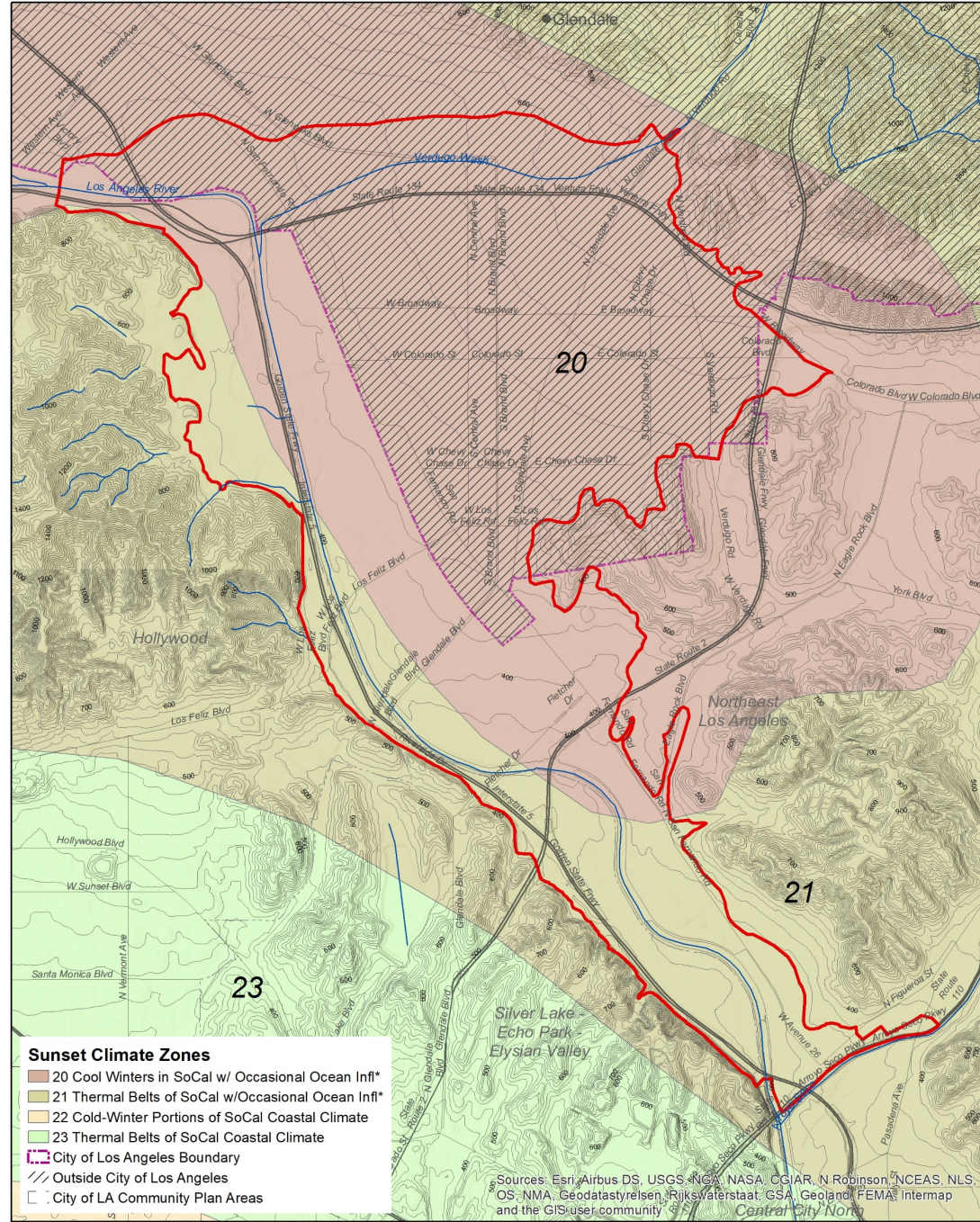
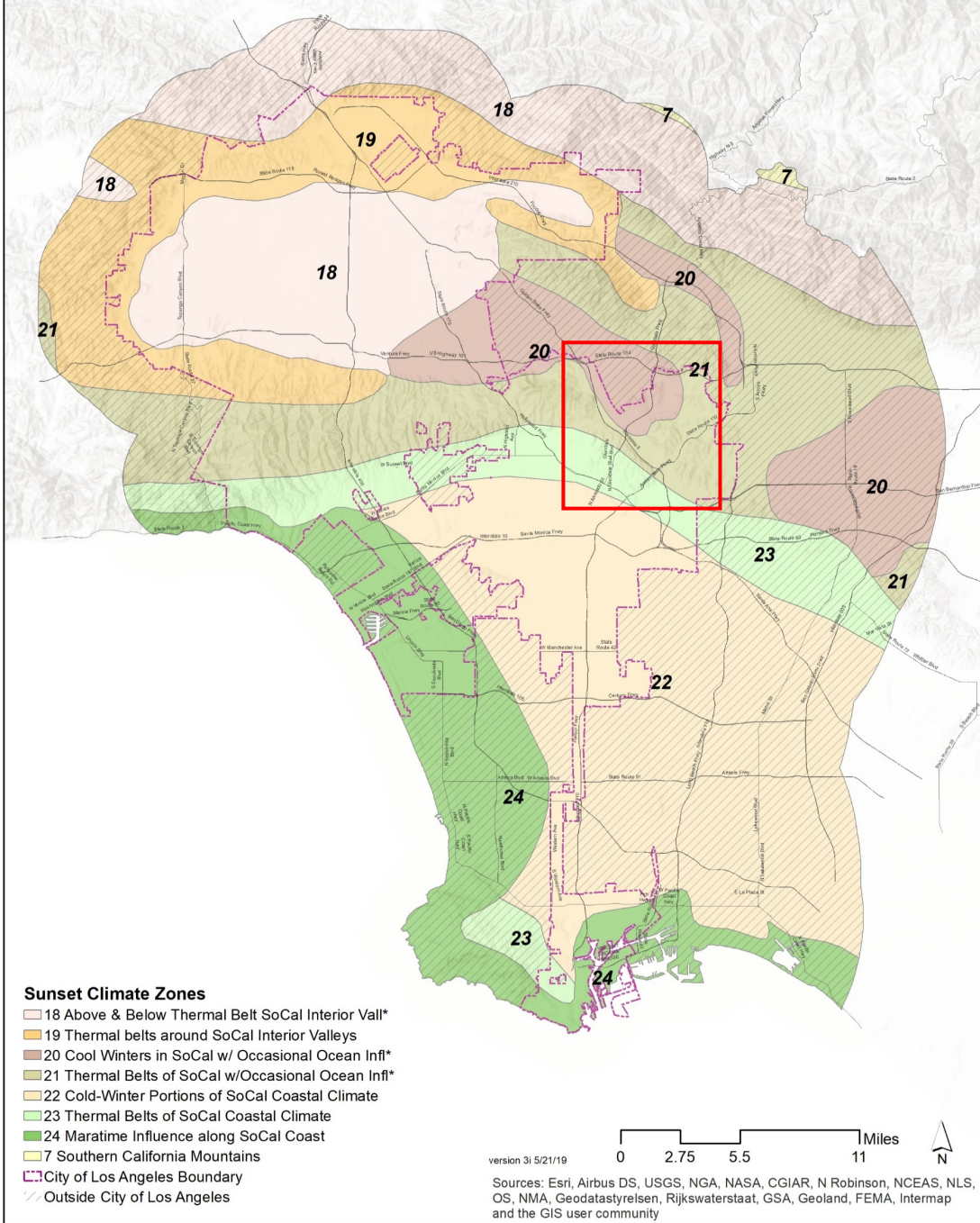
3. Wildlife Habitat Relationships &  
Vegetation Alliances (CALVEG)

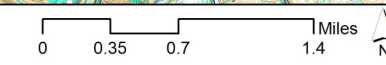
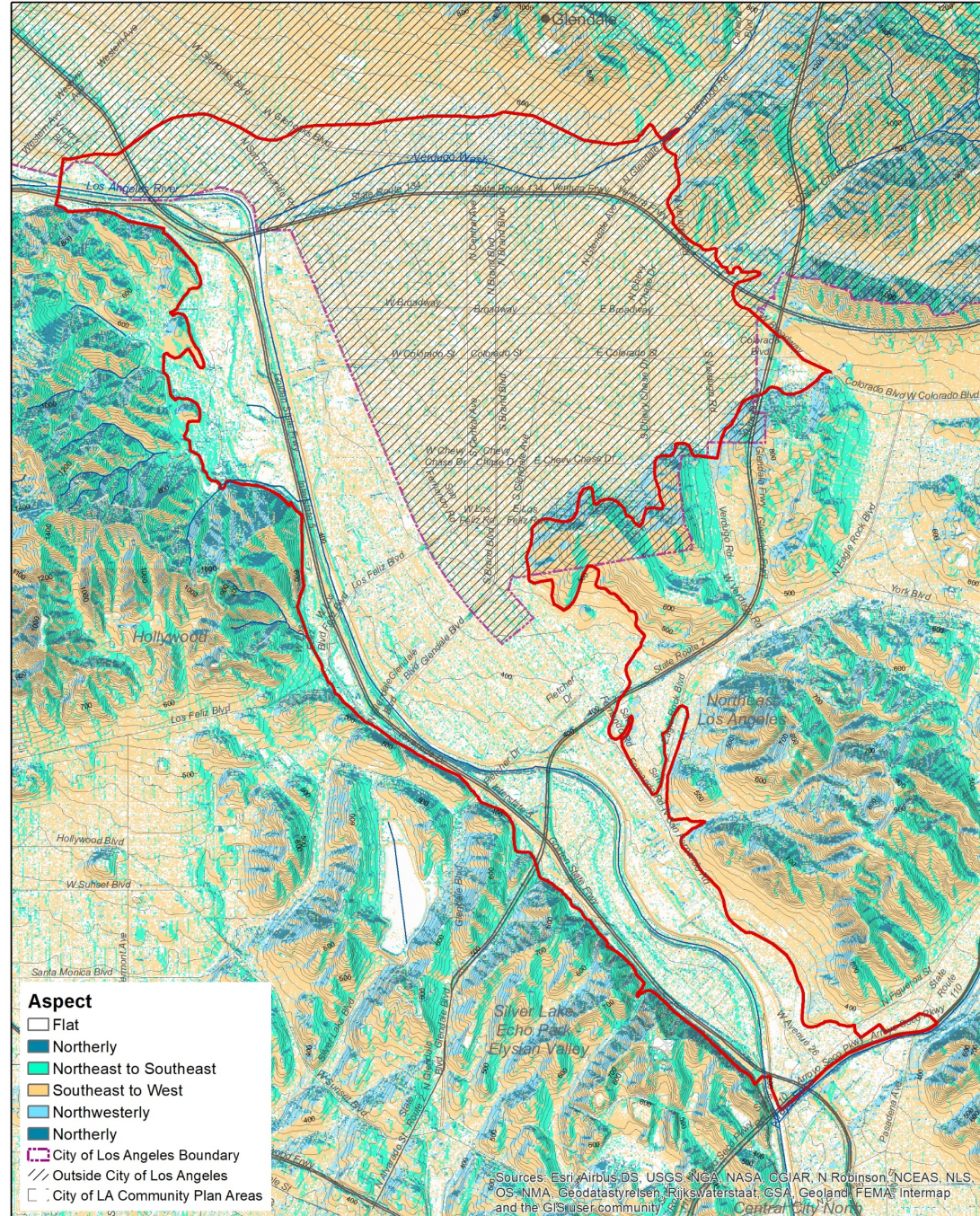
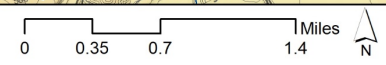
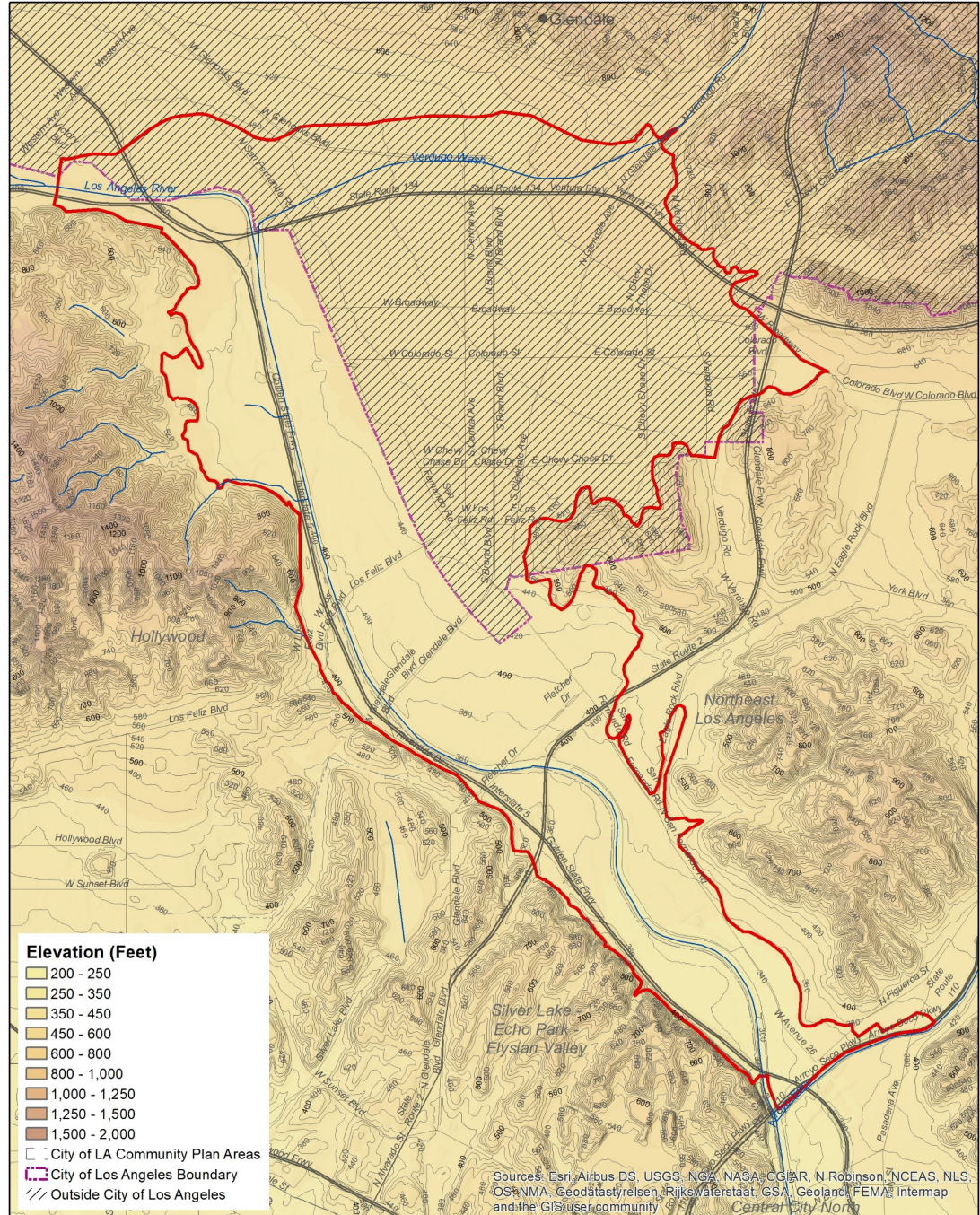
# Ecotope 4: Elysian Valley Alluvial Plain



# Air

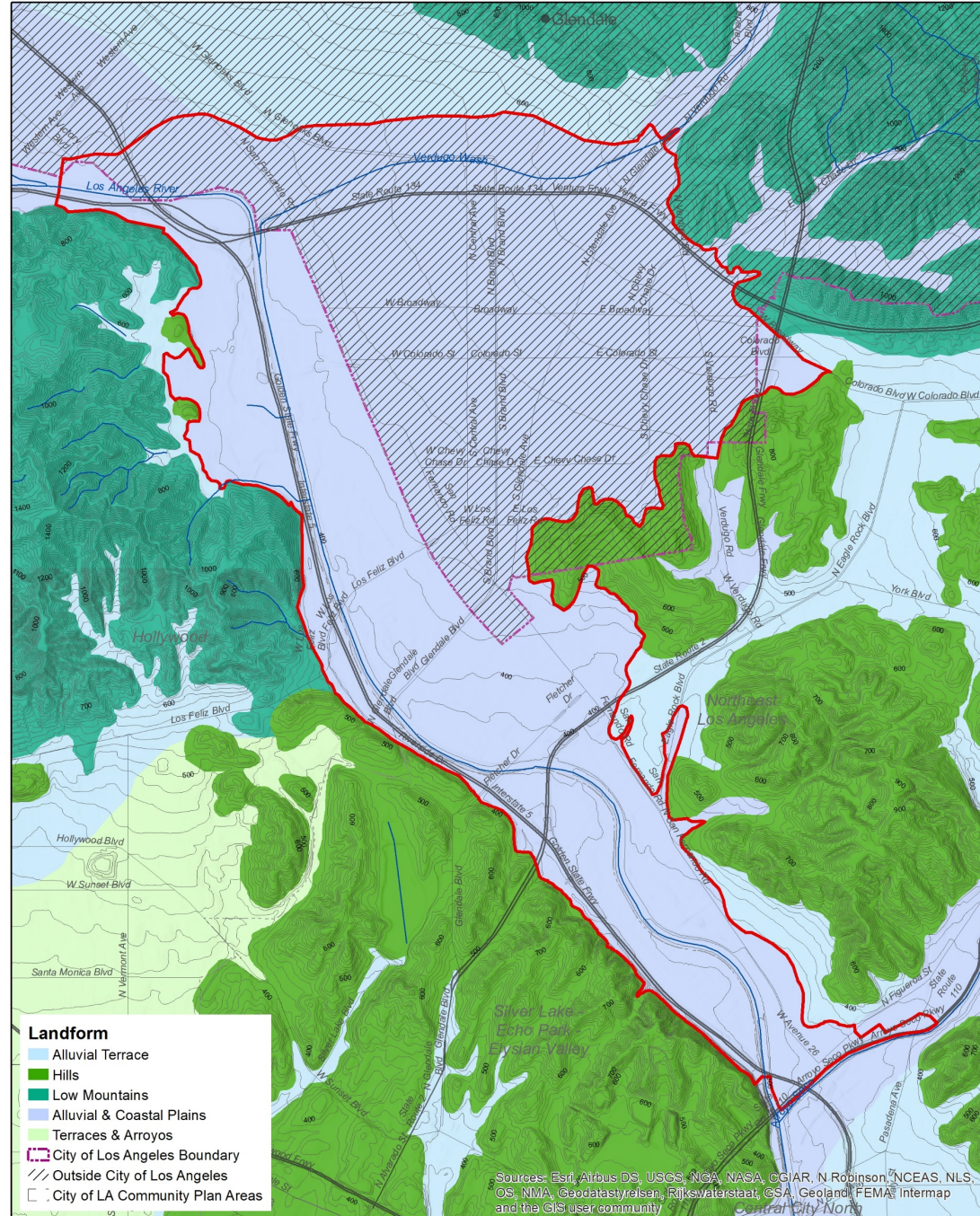
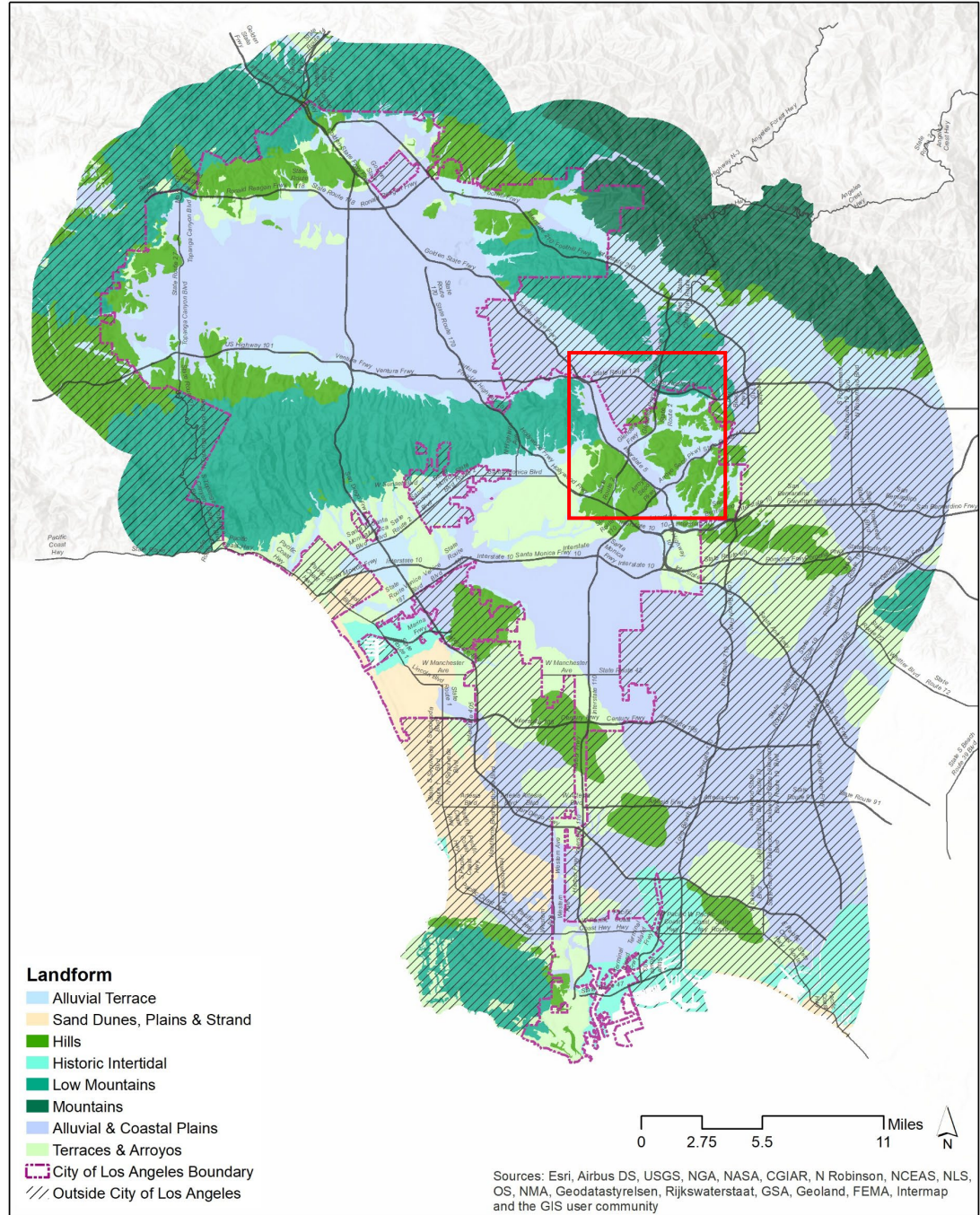
Ecotopes Database

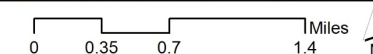
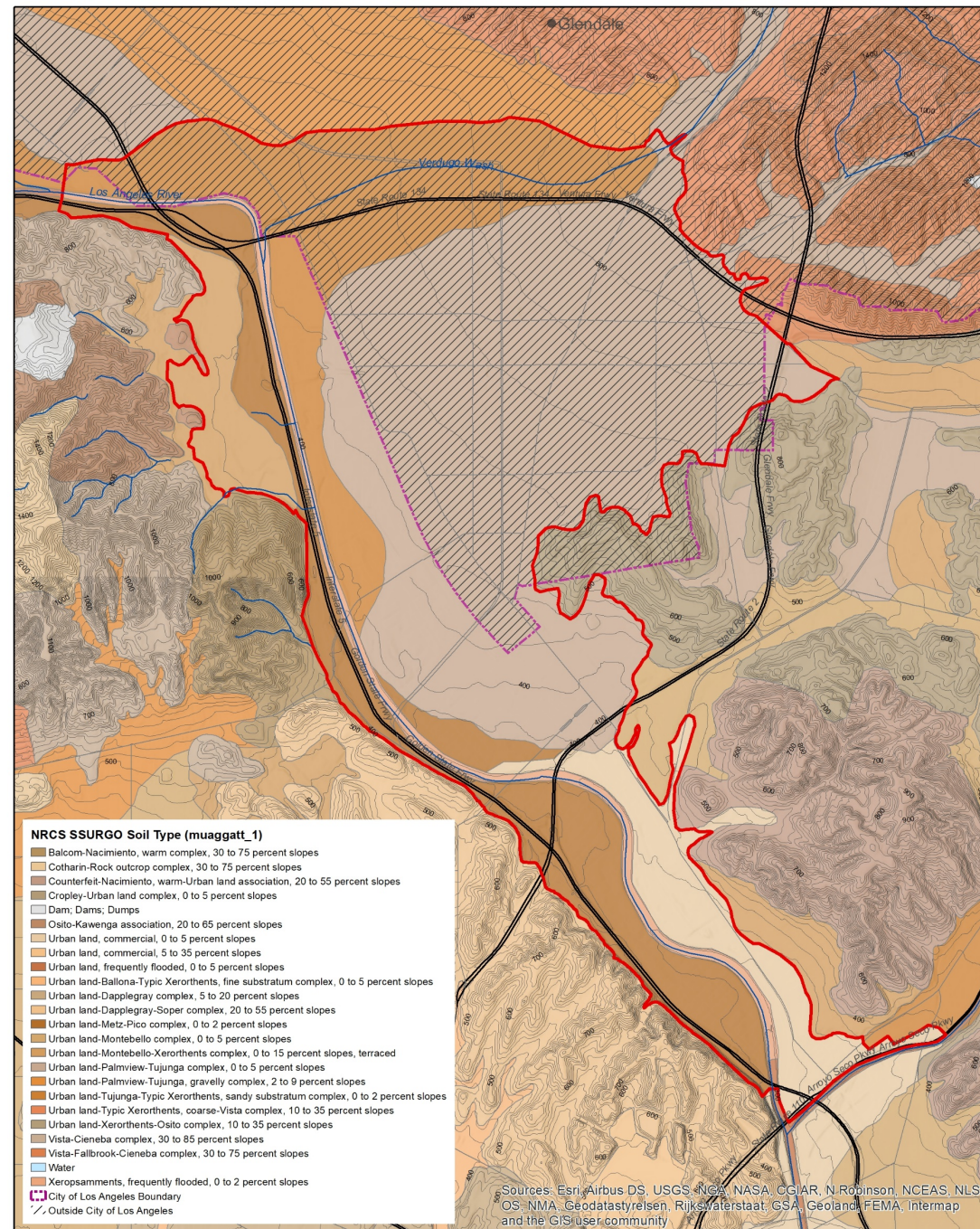
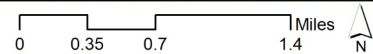
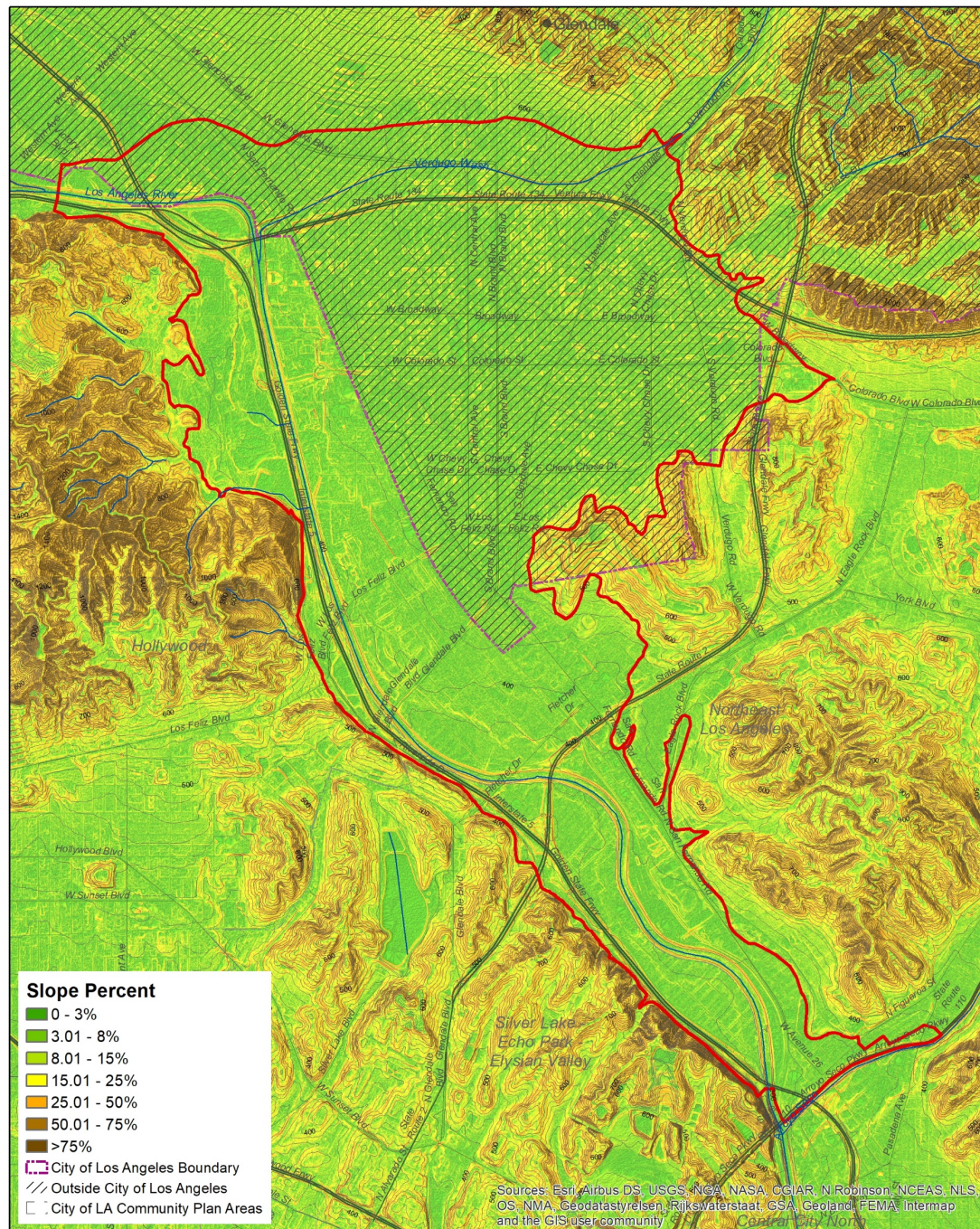




# Earth

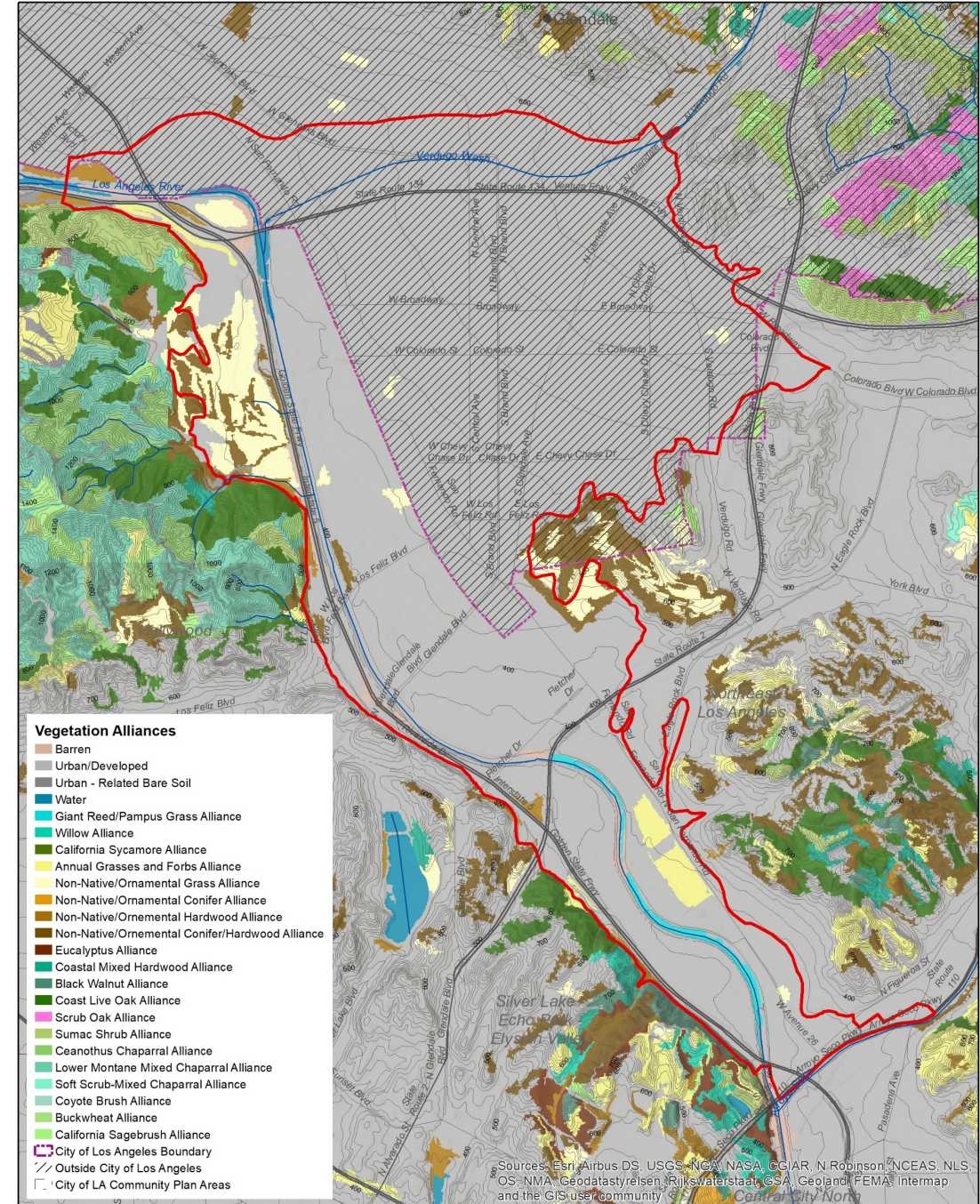
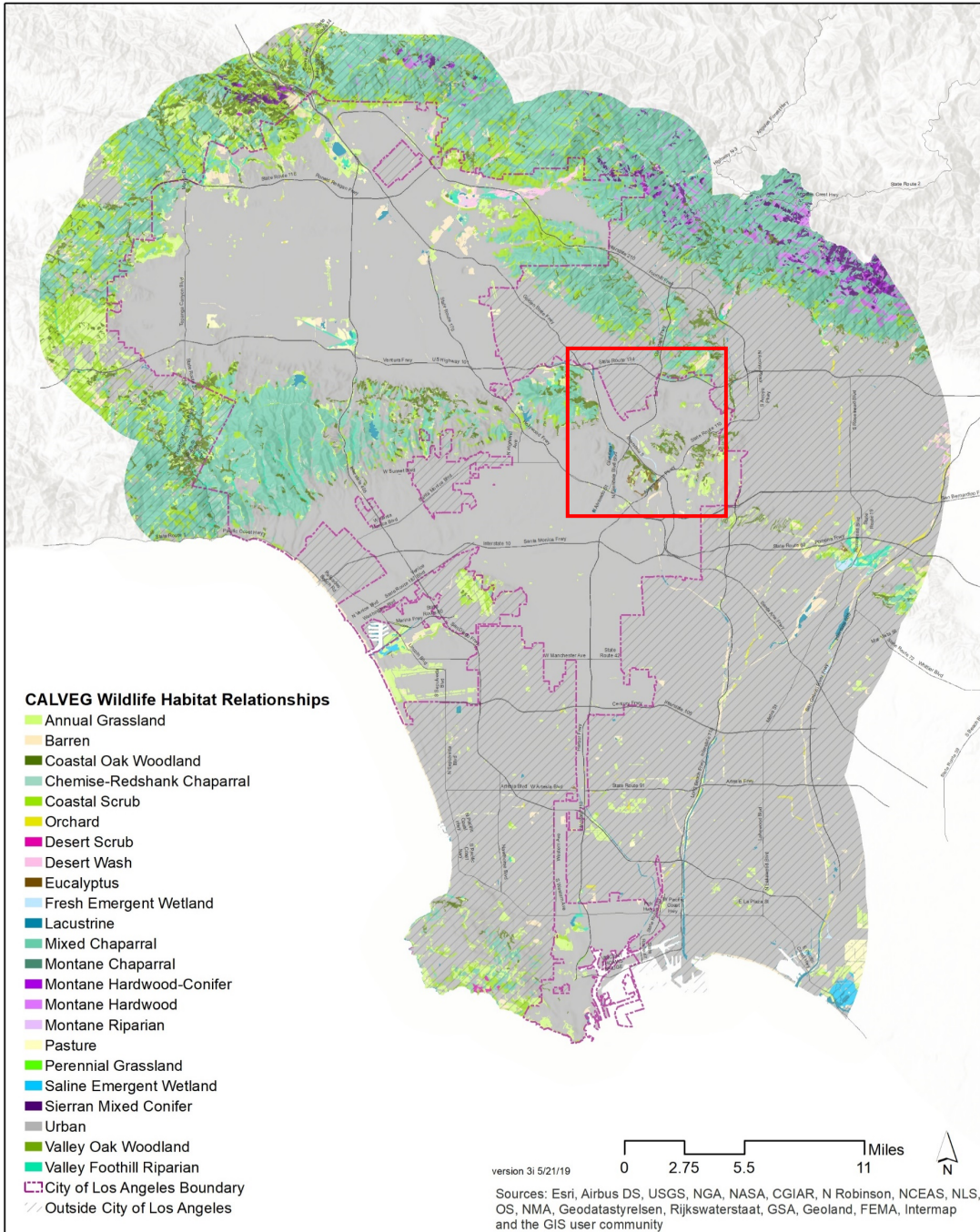
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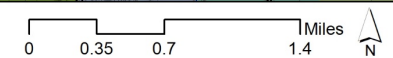
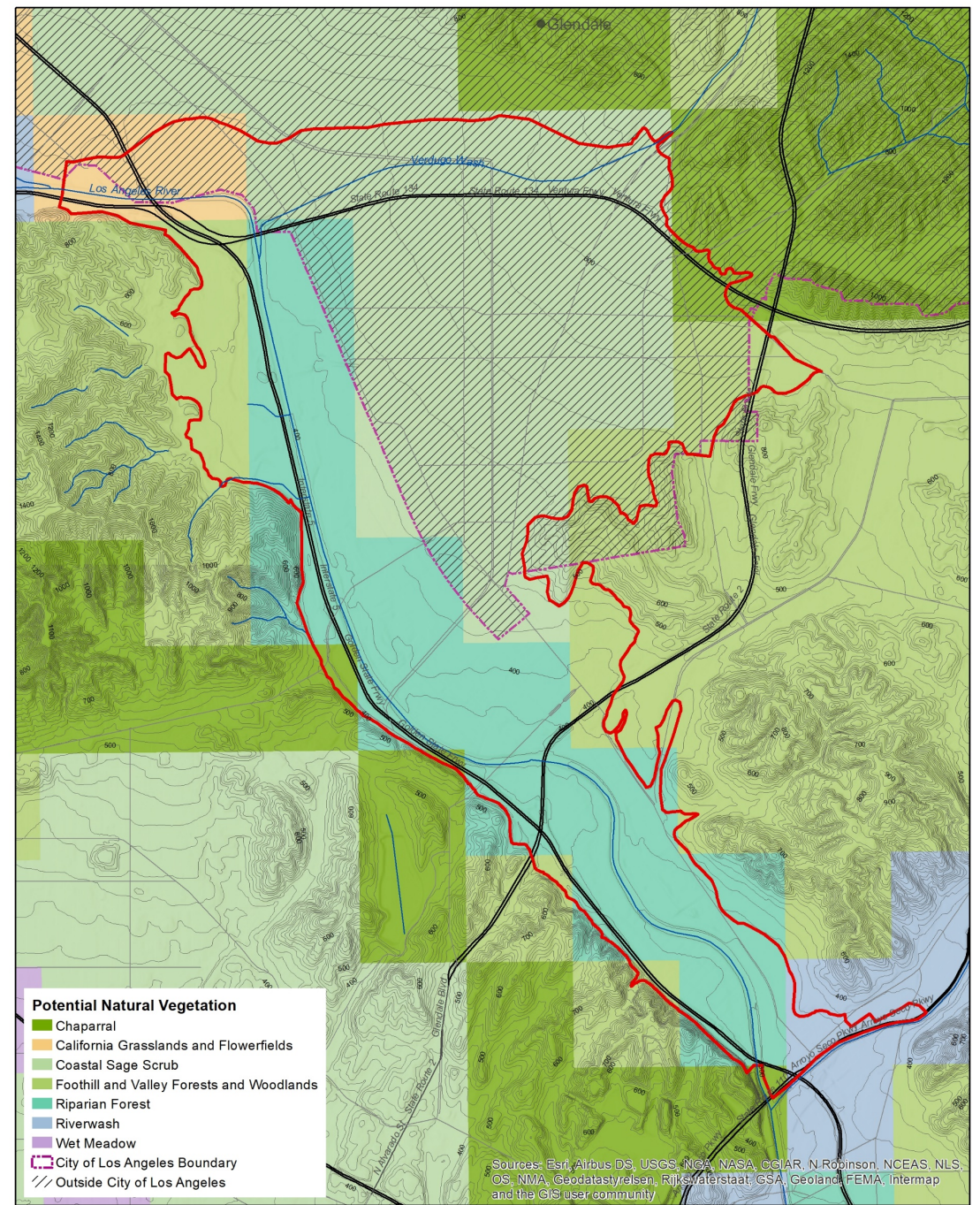
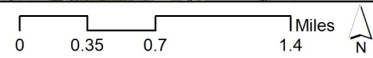
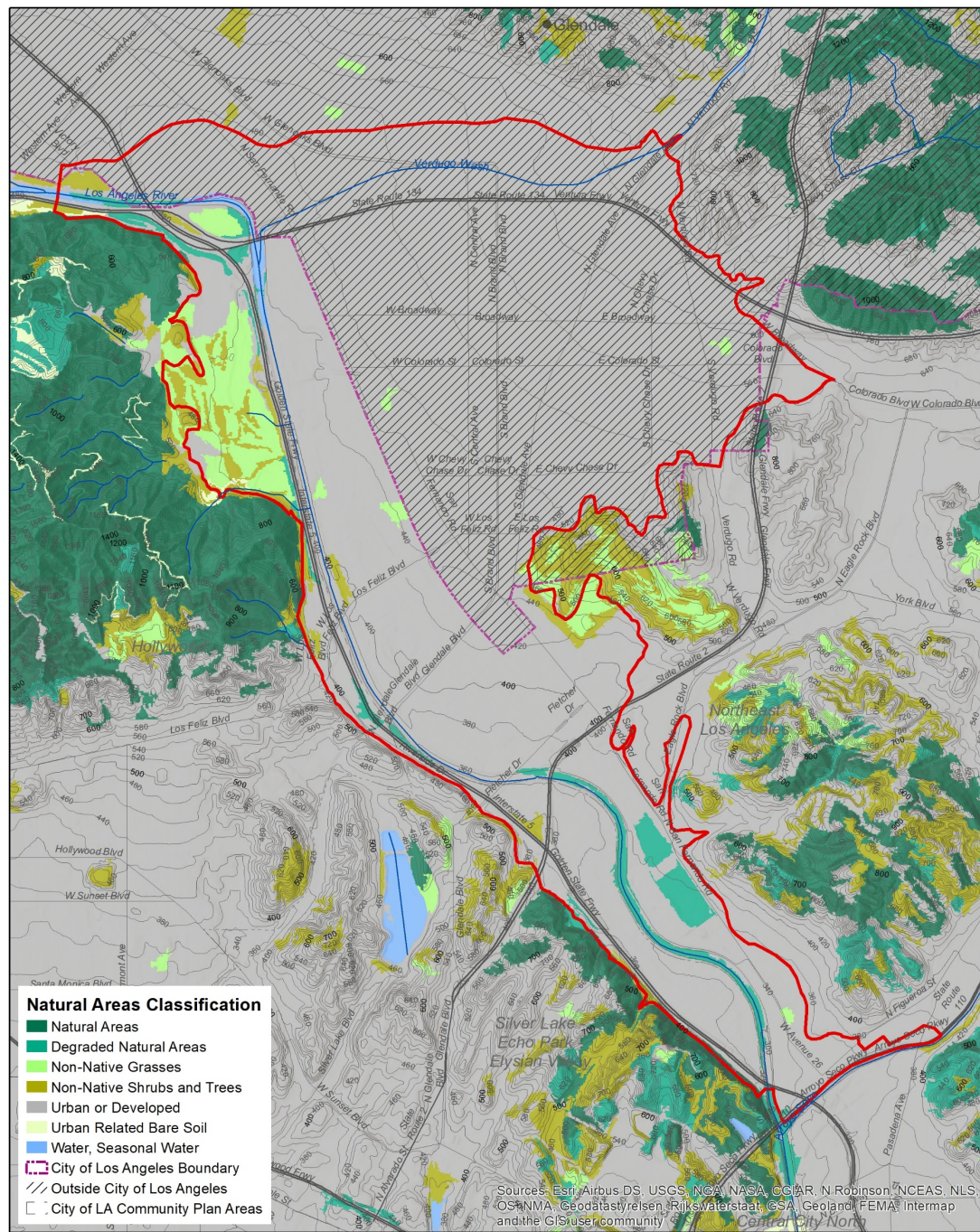


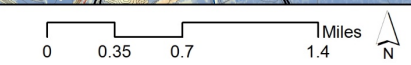
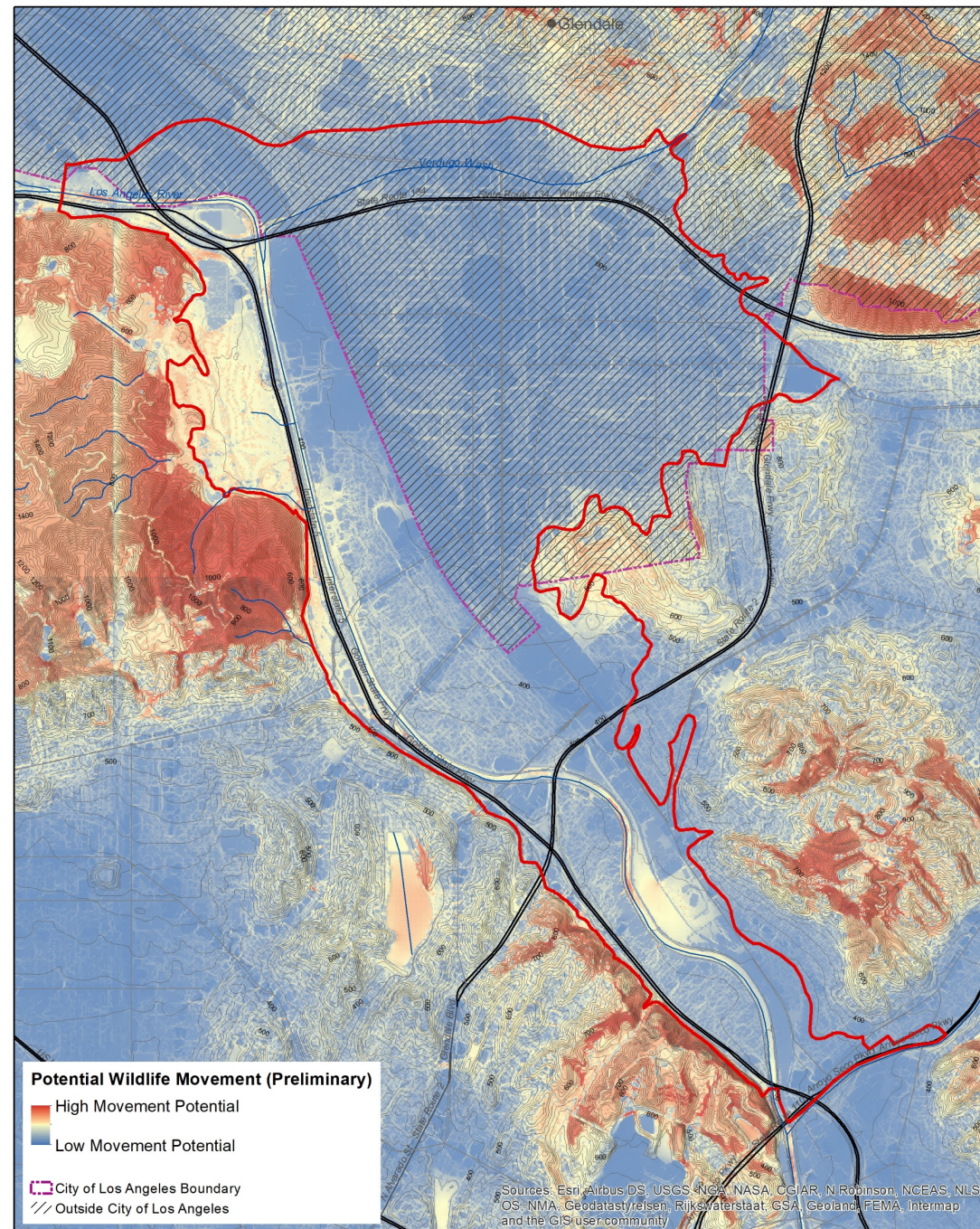
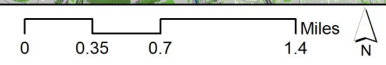
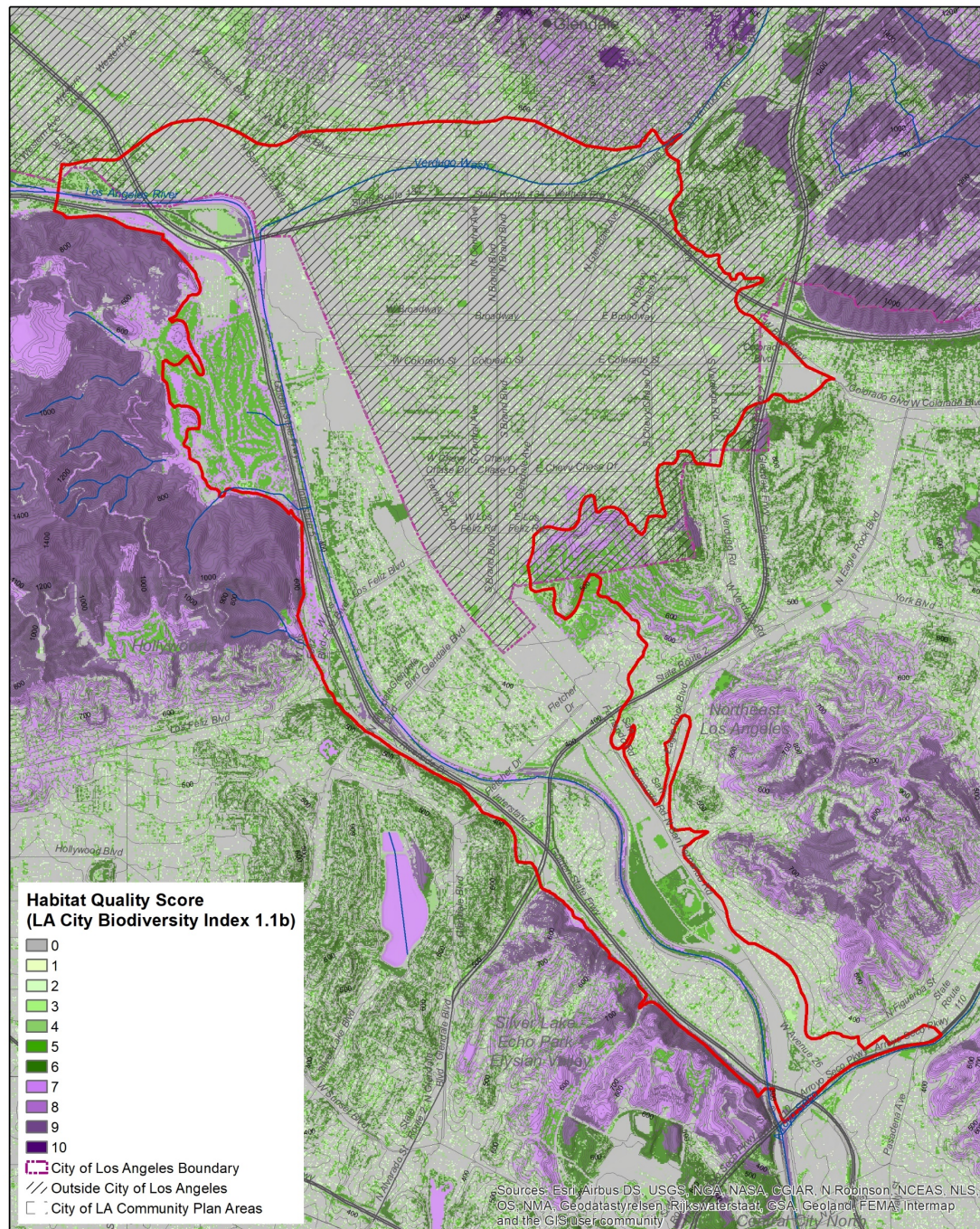


# Biota

Ecotopes Database

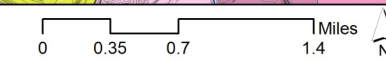
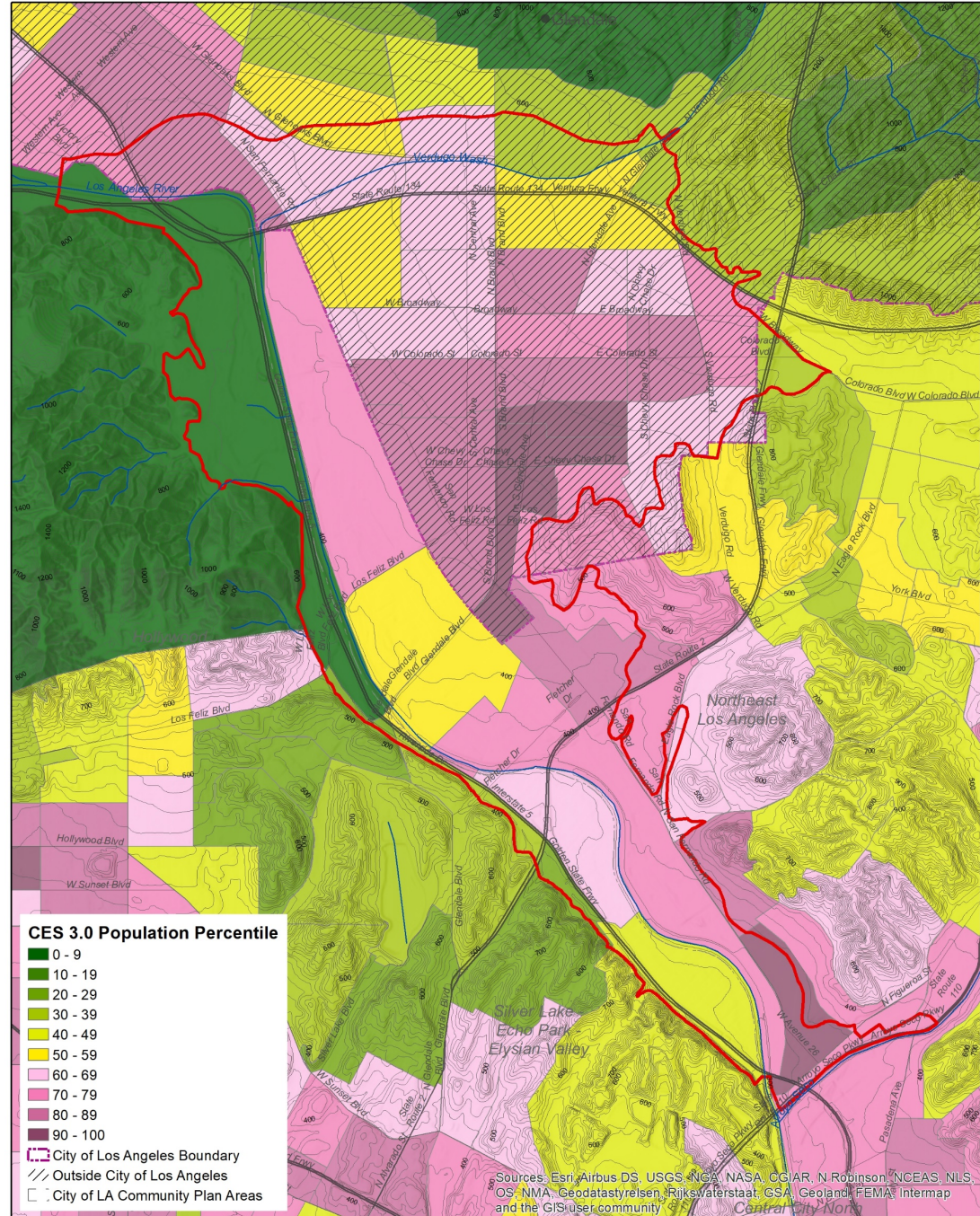
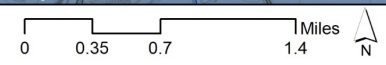
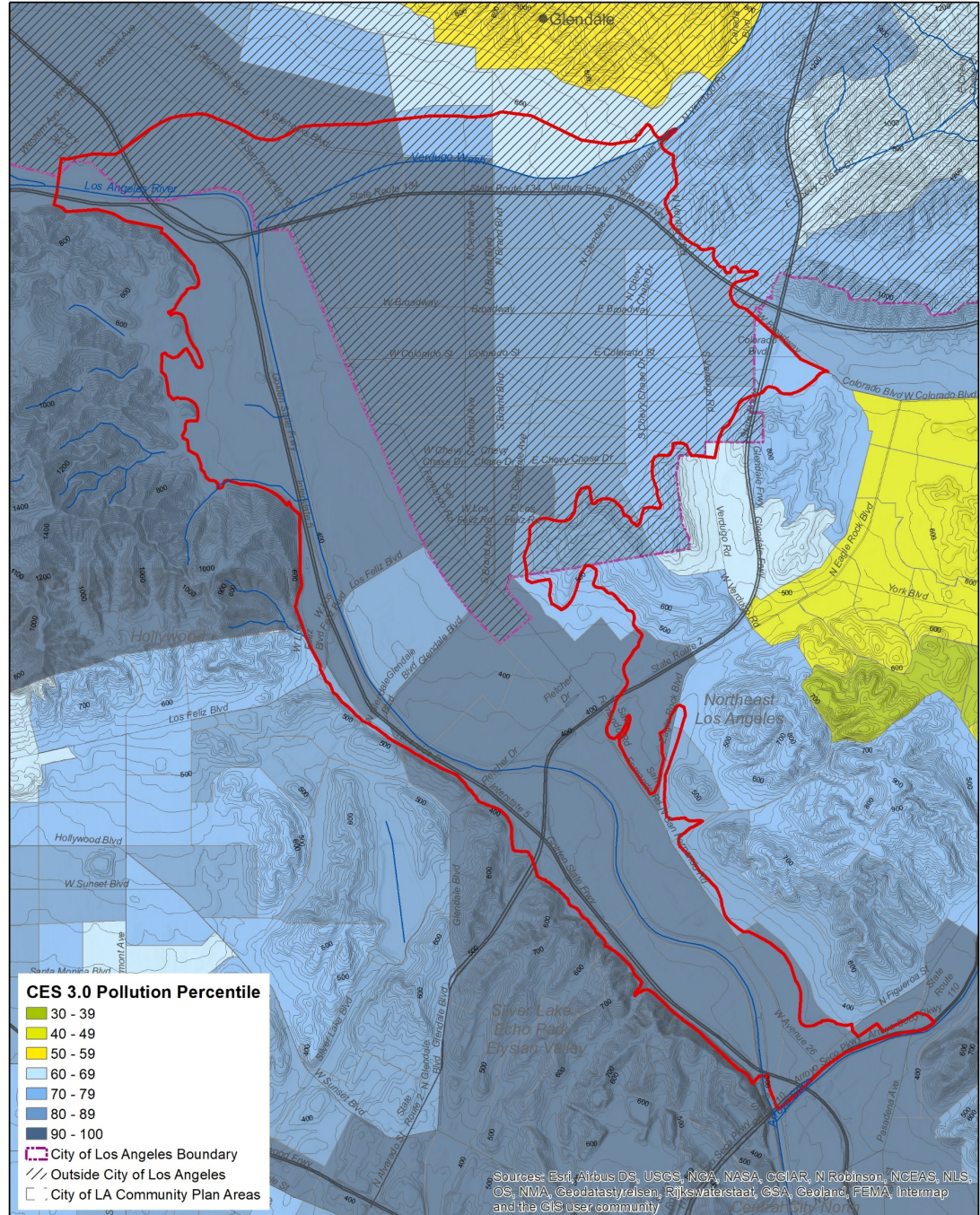


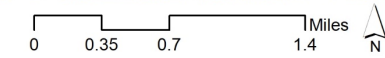
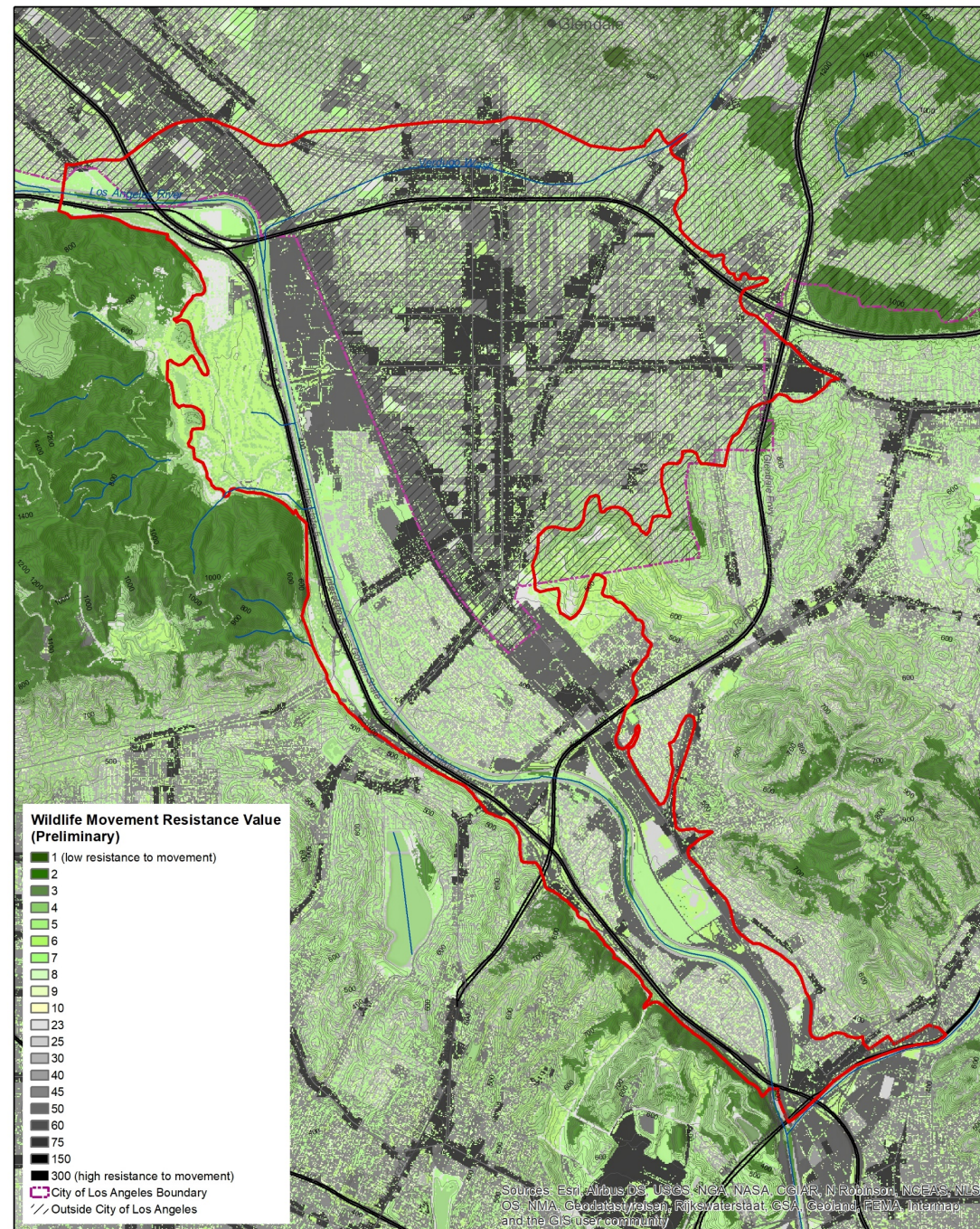
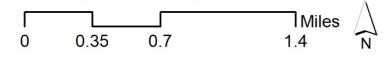
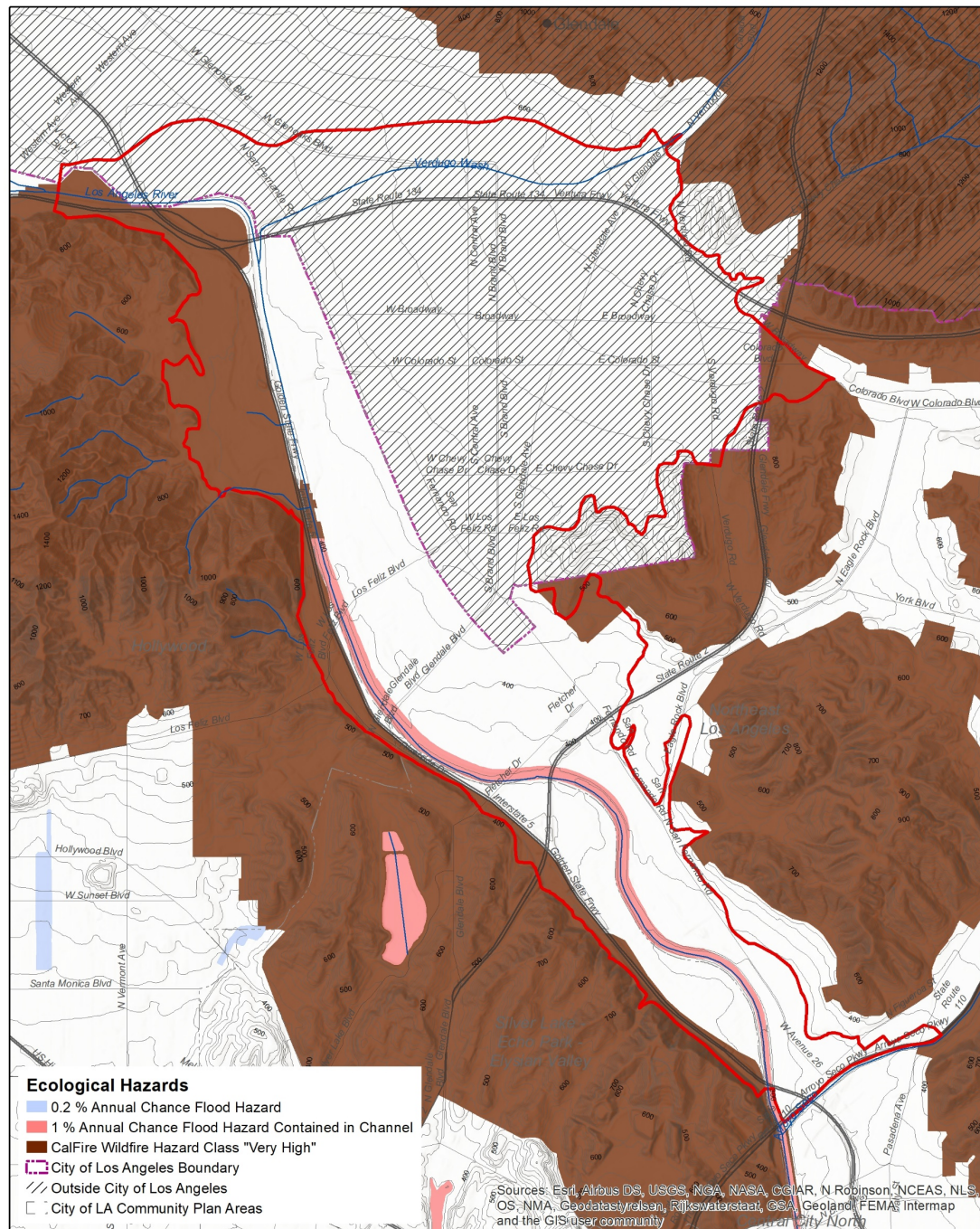




# Social & Built

Ecotopes Database





# Ongoing Refinements

Enhancing decision support at the site-scale

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Climate	Physiography		<i>Domains, Divisions, Provinces (millions to 10,000's of sq. miles)</i>
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		Vegetation	
		Microclimate	<i>Neighborhood Types, Parcel Types (&lt;10 to 100's of acres)</i>
		Biota	
		Soils	
		Land Use	
		Ecosystem Services & Hazards	

- e.g. indicator species
- e.g. shade
- e.g. clay
- e.g. commercial, disadvantaged
- e.g. wildfire

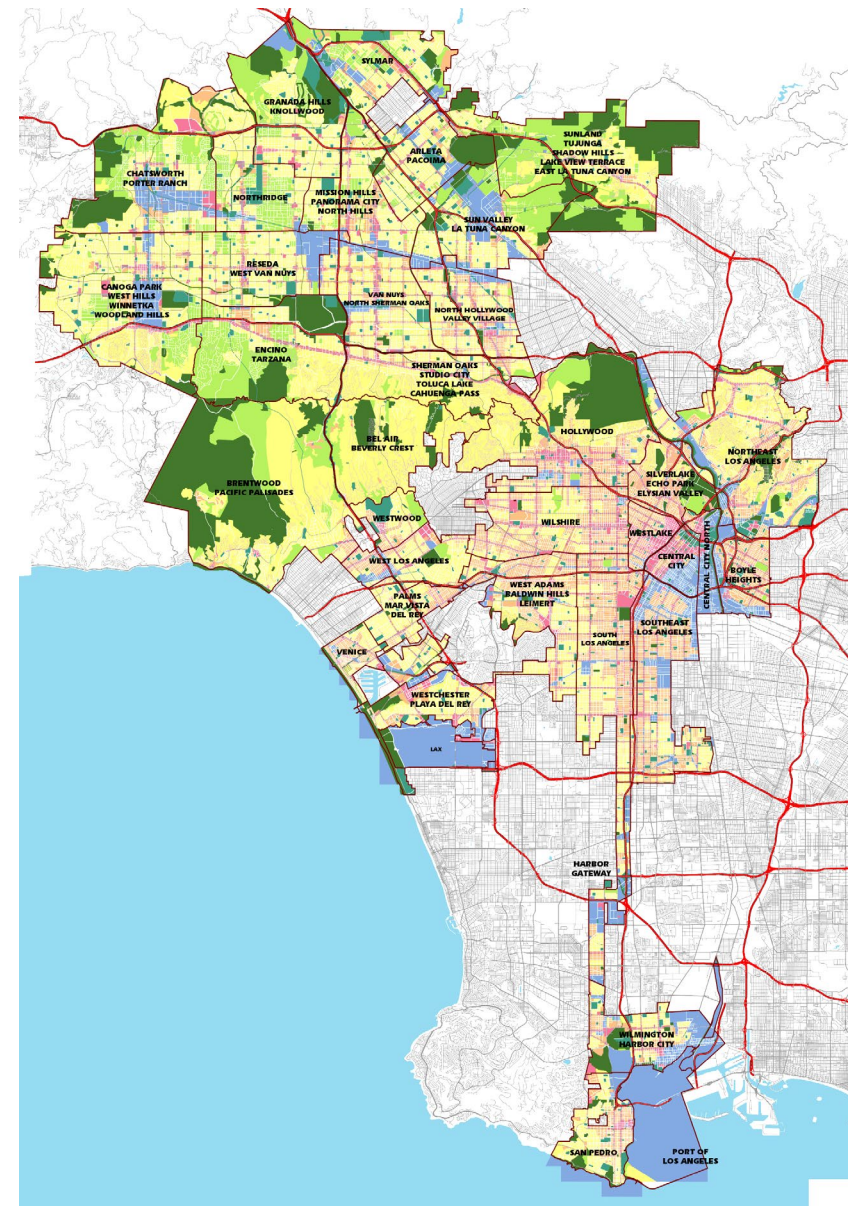
Urban Ecosystem Types  
Neighborhood Scale

Transition Alluvial Plain Subregion

- riparian urban industrial barren, high exposure
- riparian dense urban mixed use savanna, high exposure
- urban industrial barren, alluvial plain, high exposure
- urban industrial barren, alluvial plain, low exposure
- dense urban mixed use savanna, high exposure
- dense urban mixed use savanna, mod. exposure
- dense urban mixed use savanna, low exposure
- urban mixed use savanna, low exposure

Coastal Terrace Subregion

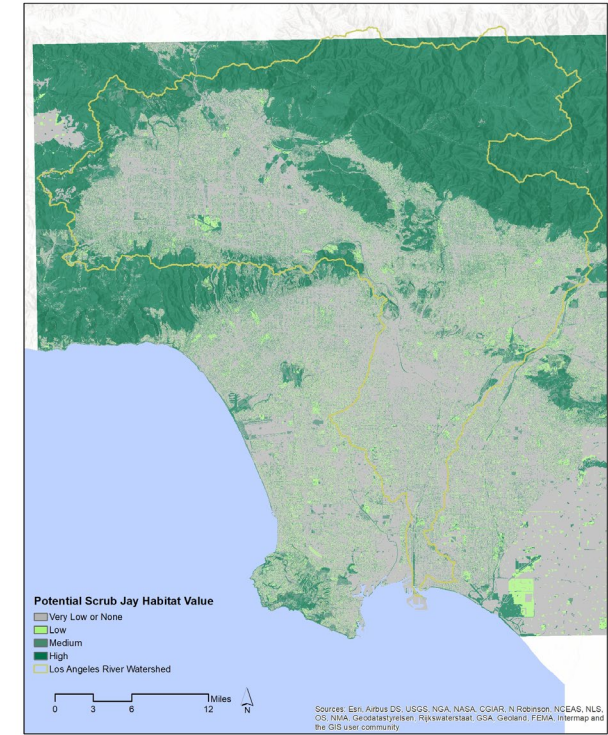
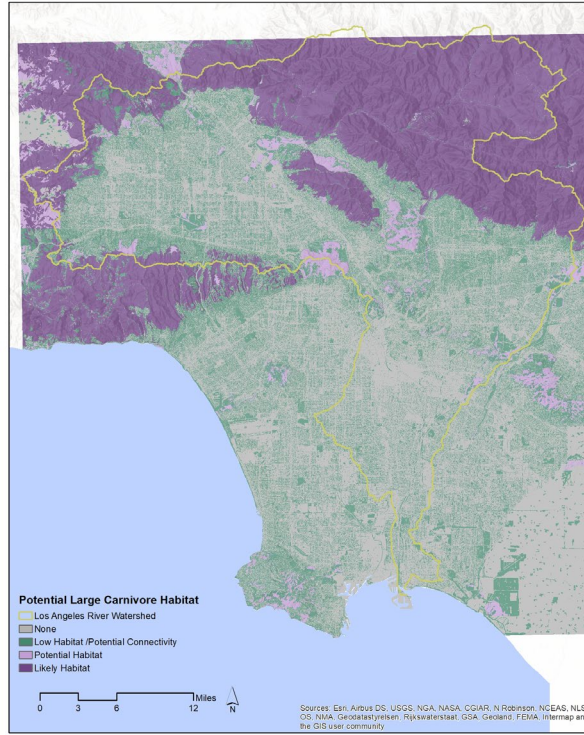
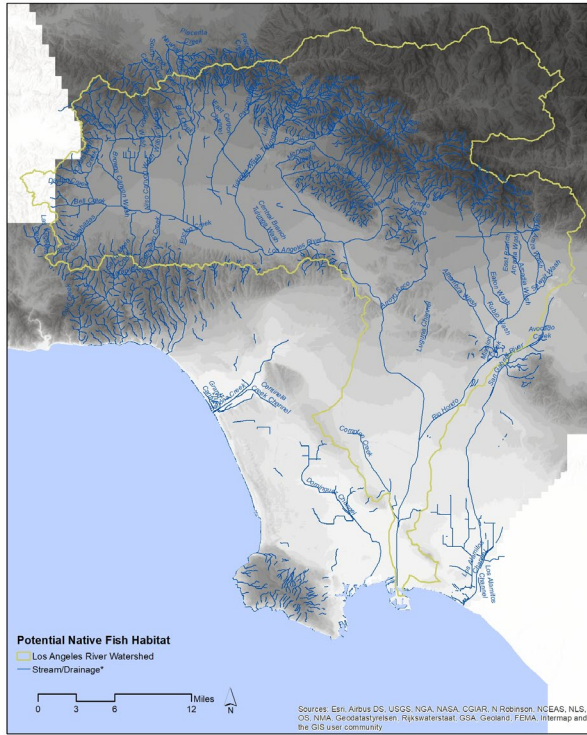
- urban mixed use savanna, low exposure



Next Steps: District & Local-Scale Urban Ecosystem Concept (applicable in General Plan, Zoning)

# 3) Target species or ecosystems can provide a strong basis for design at multiple scales.

## Charismatic Umbrella Species Distribution – LA City Biodiversity Index Indicator 1.2a



Southern California Steelhead



Mountain Lion



El Segundo Blue Butterfly



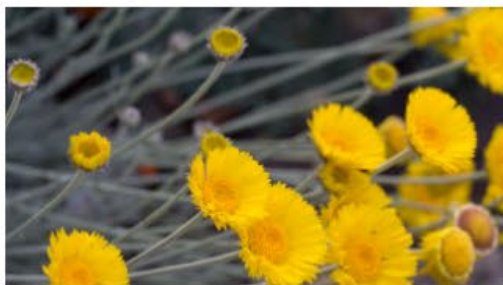
California Scrub Jay



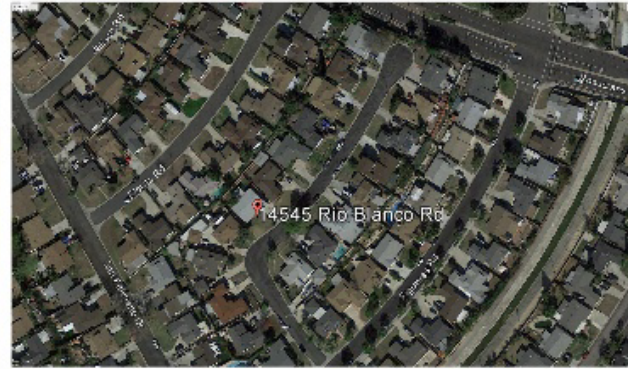
*Video courtesy of Aerial Inspired Reality*

*Theodore Payne Foundation inspires and educates Southern Californians about the beauty and ecological benefits of California native plant landscapes.*

Open Thursday – Saturday 8:30 AM – 4:30 PM. Closed Sunday – Wednesday.

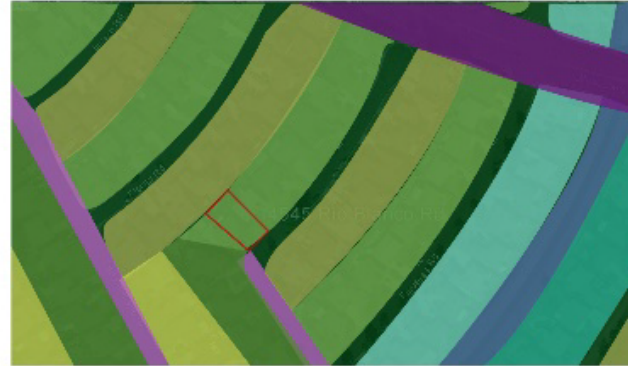


## Residential Parcel: Parcel ID, Address



### Site Ecosystem Map

- Residential Parcels- Southeast Orientation
- Residential Parcels- Northwest Orientation
- Residential Parcels - Northeast Orientation
- Residential Parcels - Southwest Orientation
- Arterial ROW with Median - North/South Oriented
- Residential ROW- Northwest/Southwest Oriented
- Residential ROW - Northeast/Southeast Oriented
- Residential Parcels - Riparian Edge Northwest Orientation
- Residential Parcels - Riparian Edge Southeast Orientation
- Channelized and Sealed Urban Stream



## Urban Ecosystem Description

### Subregional Ecosystem Description

*Coastal Transition Valleys & Terraces:* moderately hot summers, moderate marine influence, high priority habitat connectivity zone, air pollution receiving zone, moderate urban heat island.

### Local Ecosystem Description

*Suburban Savanna Terrace, Medium Low Density:* South to Southeast Aspect, Gentle Slopes, Intact Native Soils, Single Story Structures, >50% landscape, <10% canopy, Moderately Poor Air Quality, Low Heat Island Contribution, Coastal Sage Scrub/Riparian Savanna Historic Ecosystem Types.

### Site Ecosystem Description

*Southeast Oriented Residential Parcel, Intact Soils:* 0.15 acres, Loamy Clay Soils, Southeast Aspect, Frost Pocket (1 to 3 frosts per year), 2-9% slopes, 25% shaded, 90% turf/10% mixed shrubs, 2.5 miles to nearest major habitat patch, 0.7 miles to park, moderately poor air quality, high runoff.

## Urban Ecosystem Health Enhancement Opportunities & Constraints

Indicator Category	Enhancement Measures	Priority Level
Hydrology/Water Quality	Provide bioswales	High Priority
Urban Heat Island/Climate Control	Low albedo roof materials	Low Priority
Native Biodiversity	Coastal Sage Scrub highly suitable	High Priority
Habitat Connectivity	Include habitat stepping stone	High Priority
Invasive Species	Minimal threat to natural areas	Low Priority
Landscape Carbon Cycling	Large, long lived, low maintenance trees	Low Priority
Ecological Hazards	Minor street flooding	Low Priority
Toxic Contamination	1.1 miles to toxic emitter	Low Priority
Air Quality	High receiving location for criteria pollutants	Low Priority
Parks/Open Space Accessibility	0.7 miles to nearest park	NA
Aesthetics/Community Enrichment	Promote alternative landscapes to lawn	High Priority

# Case Study 1

MacArthur Park Lake Rehabilitation

# MacArthur Park Ecosystem Intercollegiate and Professional Design Charrette

You are cordially invited to attend our  
design charrettes

Friday  
Dec 14th, 2018  
7:30am - Noon

## MacArthur Park

2230 W 6th St, Los Angeles, CA 90057  
Refreshments will be served

Friday  
Dec 21st, 2018  
8:30am - Noon

## Environmental Learning Center

12000 Vista del Mar, Playa del Rey, CA 90293  
Refreshments and Light Lunch will be served

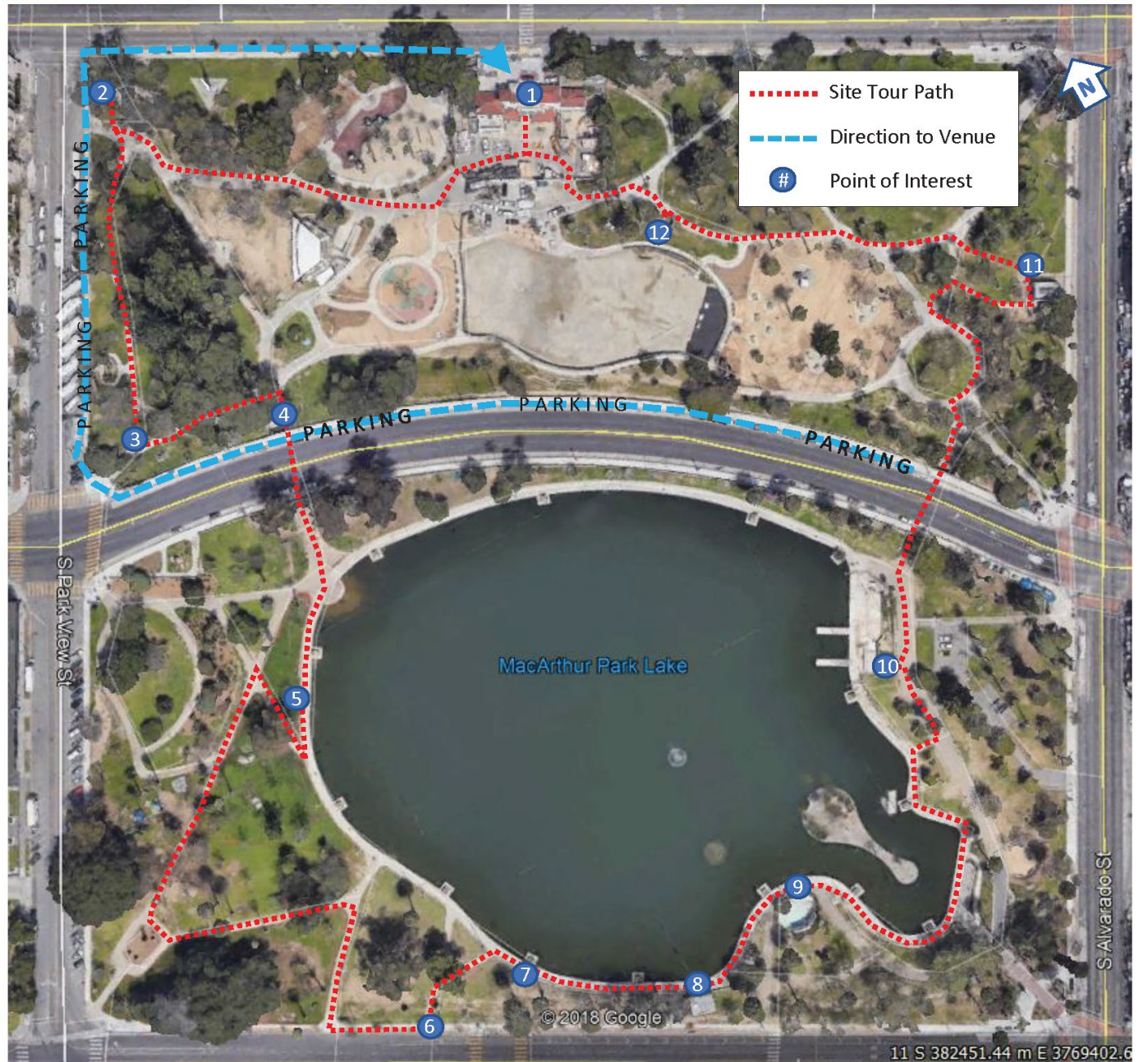
Friday  
Jan 11th, 2019  
8:30am - 1:00pm

## Environmental Learning Center

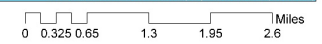
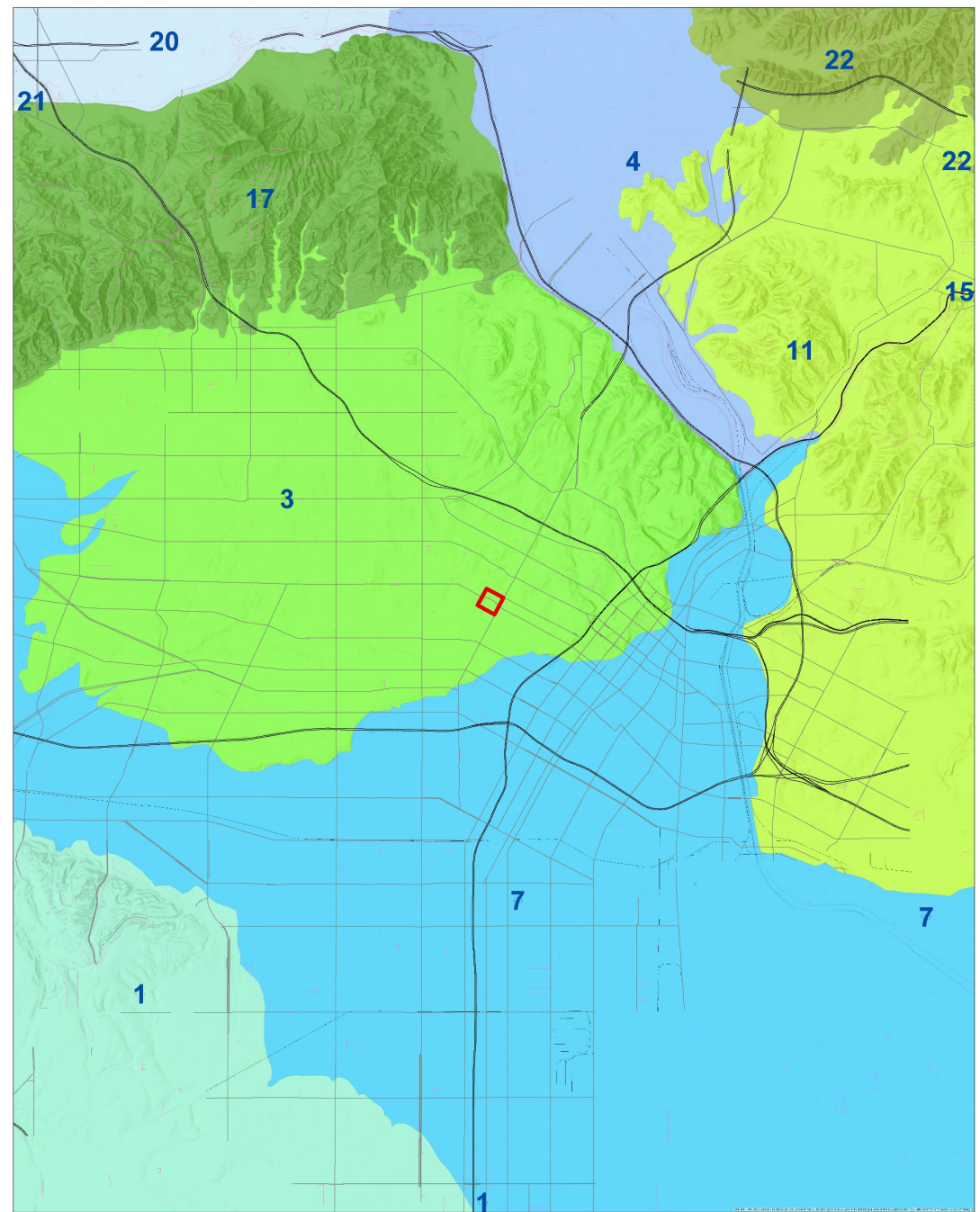
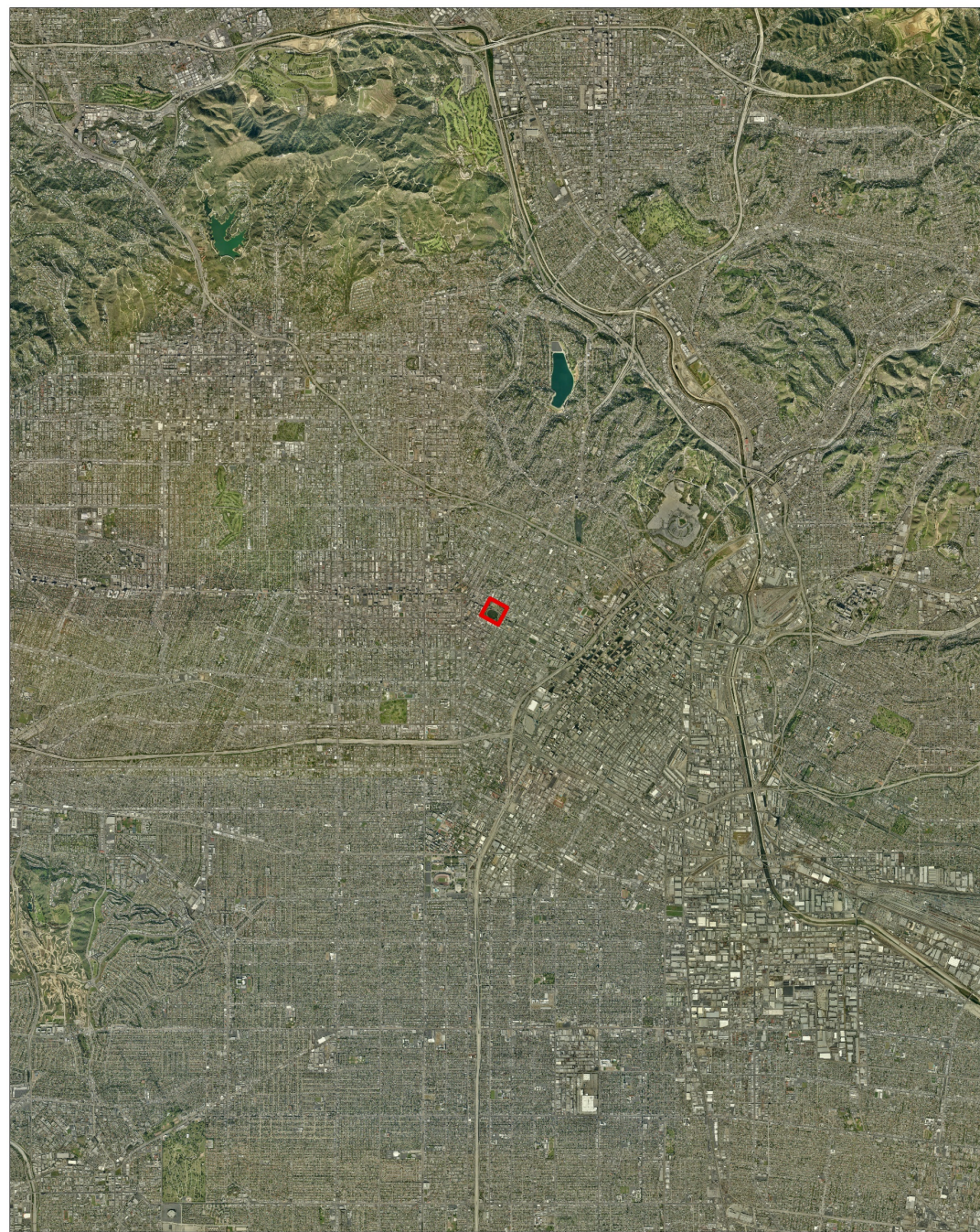
12000 Vista del Mar, Playa del Rey, CA 90293  
Lunch will be served at noon

Participating universities will be given the challenge of  
designing a water centric approach and restoring a  
historical jewel of Los Angeles.

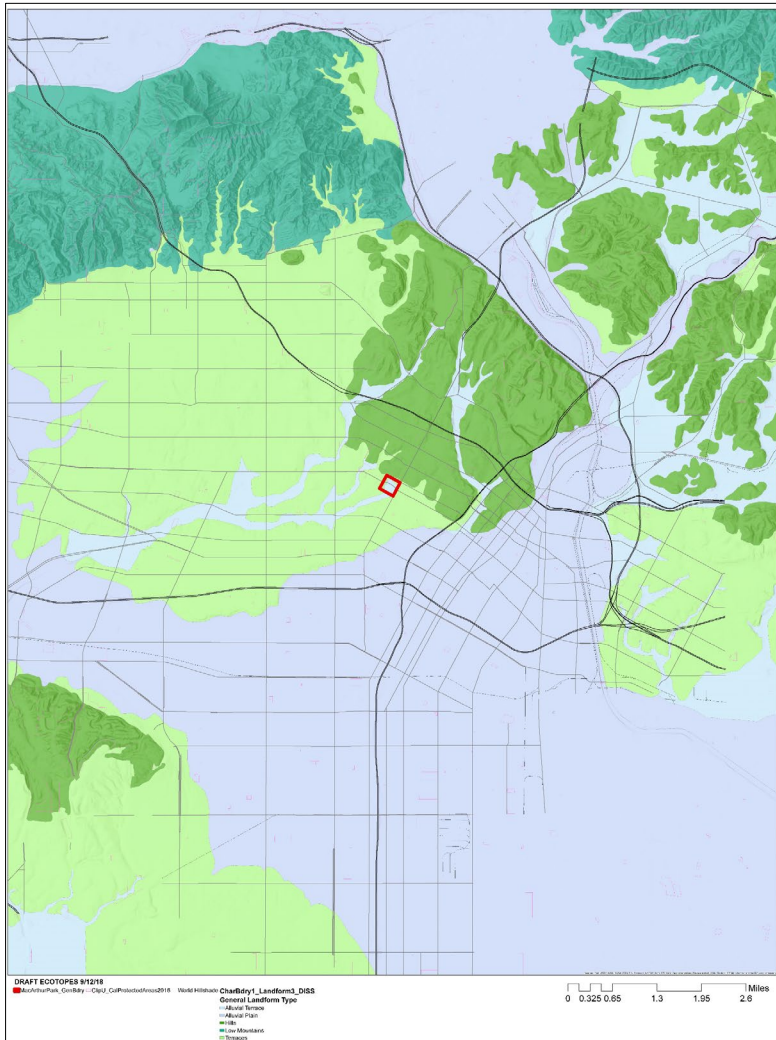
PLEASE RSVP two days prior to event via email to [LChavez@carollo.com](mailto:LChavez@carollo.com)



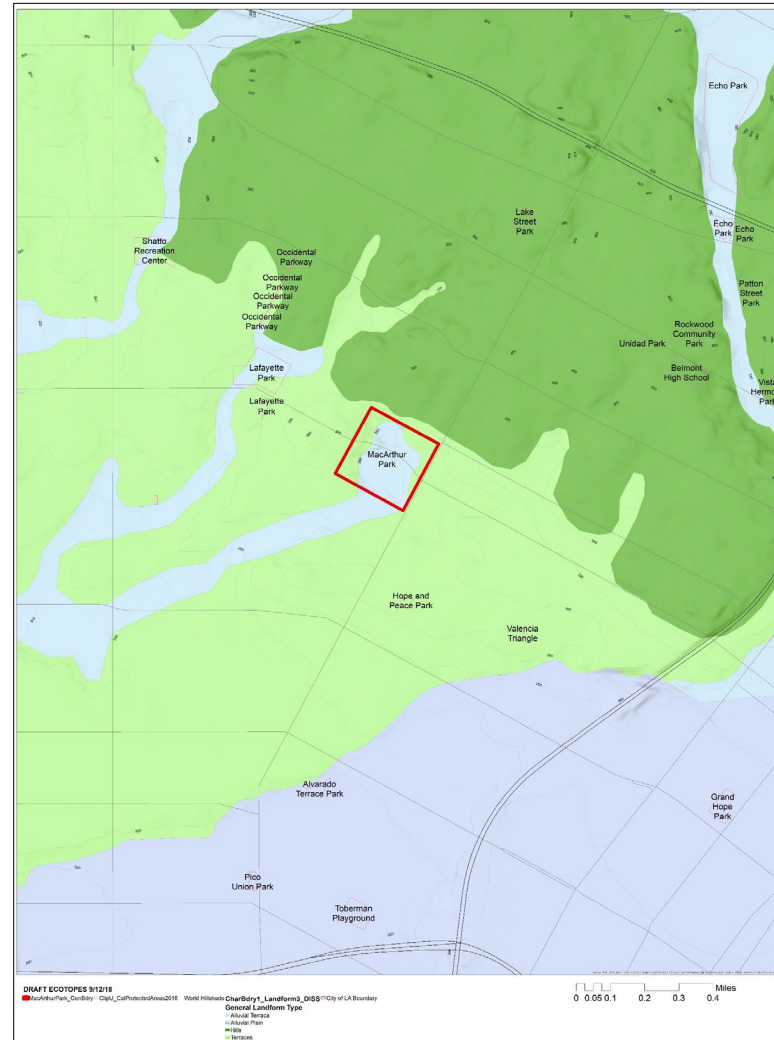
11 S 382451.44 m E 3769402.6



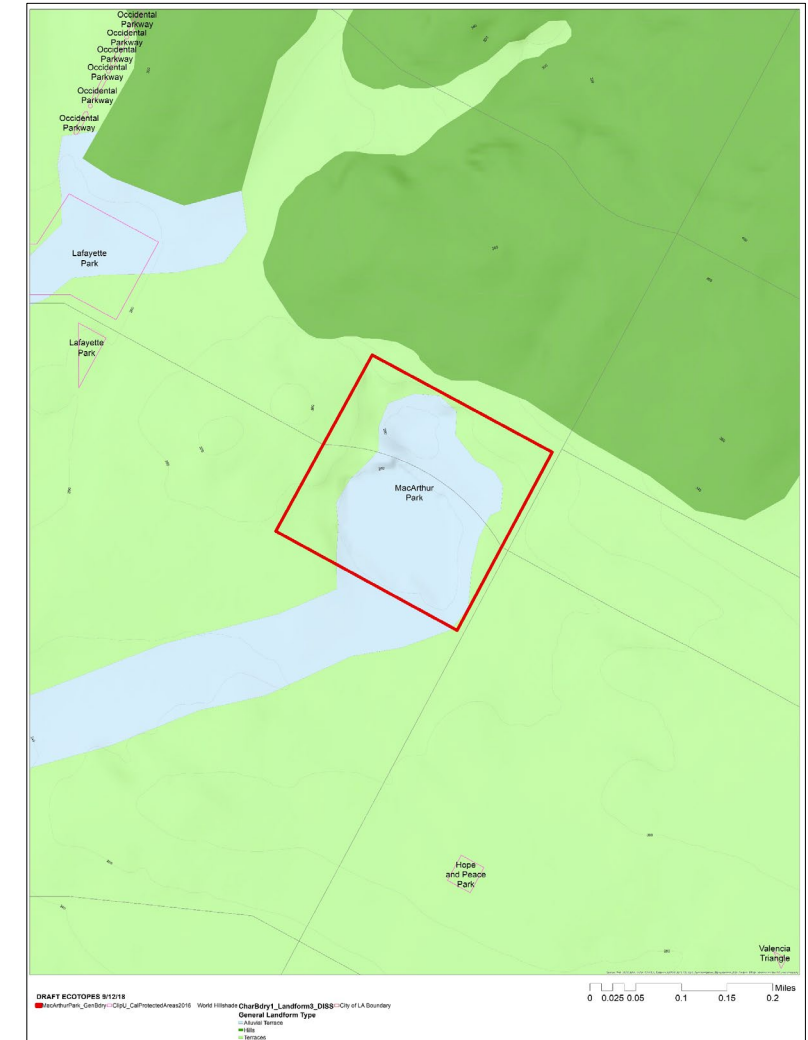
# Step 1) Ecosystem Context Analysis: Landform



Subregional



Local



Neighborhood

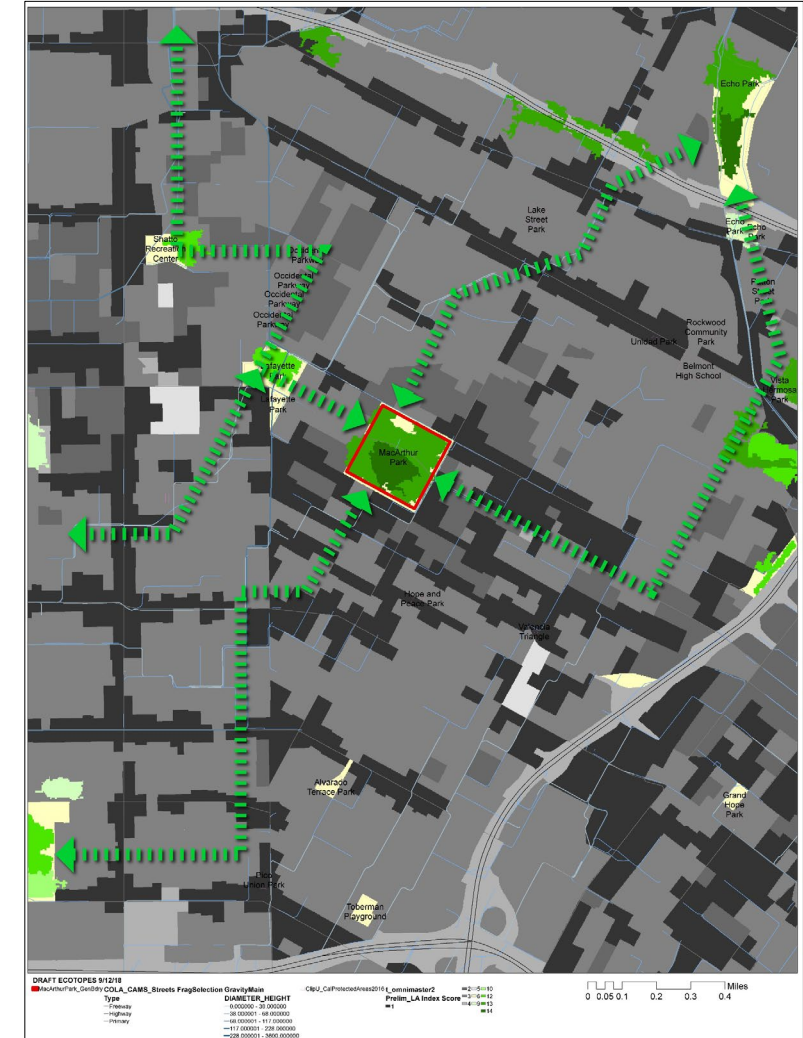
# Step 1) Ecosystem Context Analysis: Habitat Scales



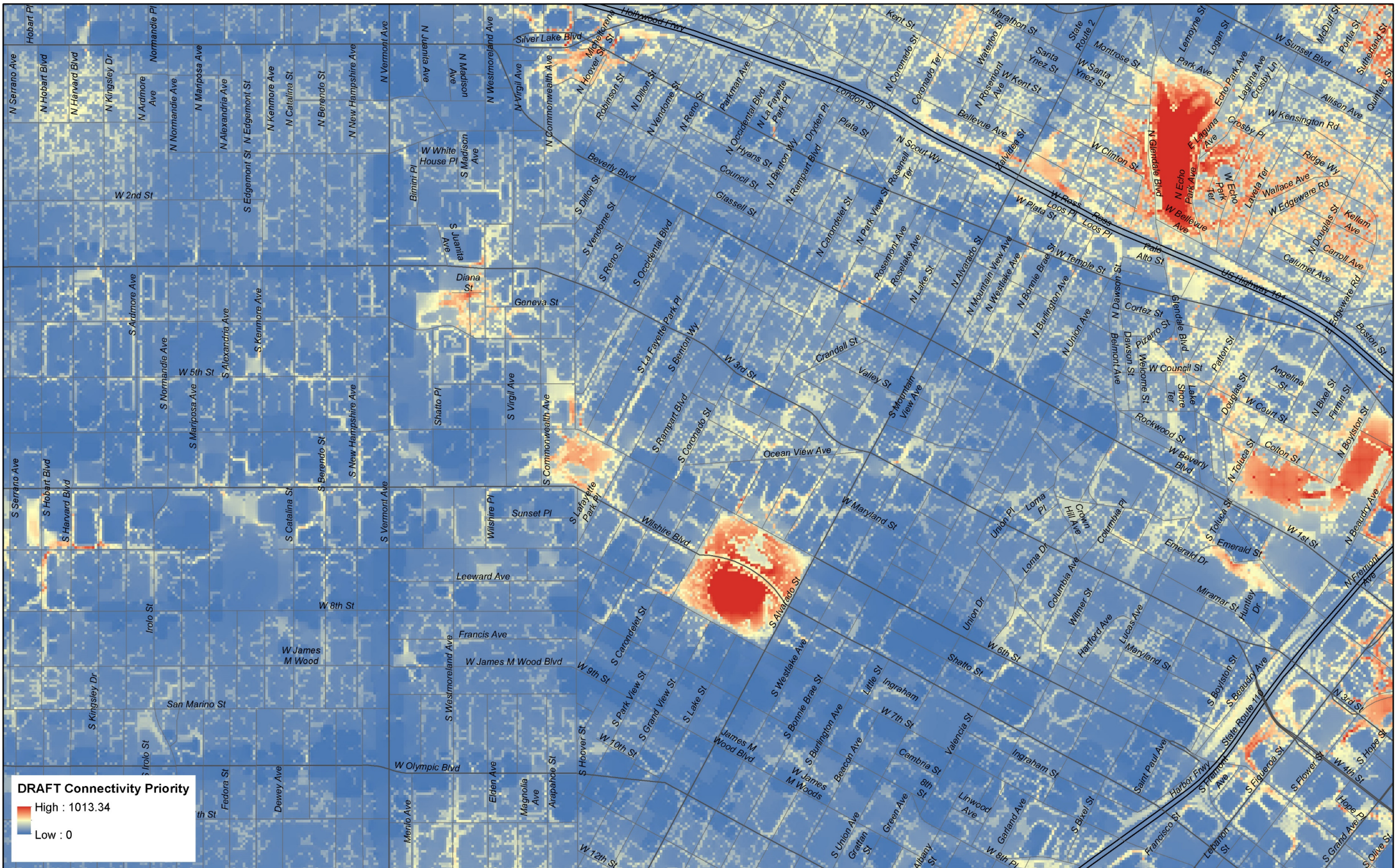
Subregional



Local



Neighborhood



**DRAFT Connectivity Priority**  
 High : 1013.34  
 Low : 0

1 inch = 1,000 feet  
 0 450 900 1,800 Feet  
 N

# Macarthur Park Charrette Products: USC/Salt/SWA/NHM Scheme



- 01 Blue Dasher Dragonfly  
*Zachryptax longipennis*
- 02 Black-fringed forestfly dragonfly  
*Ischnura denticollis*
- 03 Bold Jumping Spider  
*Hiridopos sacax*
- 04 Mining Bee  
*Andrena anaustriacata*
- 05 Cabbage White  
*Pieris rapae*
- 06 Fiery Skipper  
*Hylophila phyciae*
- 07 Paracha  
*Dacnusa plexippus*
- 08 Painted Lady  
*Lepidochryx nymphalidae*
- 09 Western Tiger Swallowtail  
*Papilio tulius*
- 10 Red Admiral  
*Vanessa atalanta*
- 11 Ultra Green Sweatbee  
*Agapostemon texanus*
- 12 Baja Co. Tree Frog  
*Pseudisbris hypochondriaca hypochondriaca*

- 13 Western Hecate Lizard  
*Sceloporus occidentalis*
- 14 Sonoran Salamander  
*Pseudisbris major*
- 15 CA Alligator Lizard  
*Eublepharis macrinii*



- 23 Coast Live Oak  
*Quercus agrifolia*
- 24 San Diego Sedge  
*Carex spisa*
- 25 Broadleaf Cattail  
*Typha latifolia*
- 26 Hummingbird Sage  
*Salvia spathacea*
- 27 California buckwheat  
*Eriogonum fasciculatum*
- 28 Tommy Pineweed  
*Pinus torreyana*
- 29 Spike Bush  
*Calycanthus olinianus occidentalis*
- 30 Coffee berry  
*Rhamnus californica*

- 25 Matilija Poppy  
*Romneya coulteri*
- 26 Ashleaf buckwheat  
*Eriogonum cinereum*
- 27 Red stem dogwood  
*Cornus sericea*
- 28 Coyote Brush  
*Baccharis pilularis*

- 29 California Lilac  
*Ceanothus*
- 30 White Alder  
*Alnus rhombifolia*
- 31 California Hedge-nettle  
*Stachys bulbata*
- 32 Fragrant Pitcher Sage  
*Lepechinia fragrans*

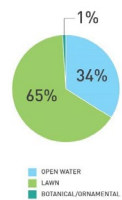
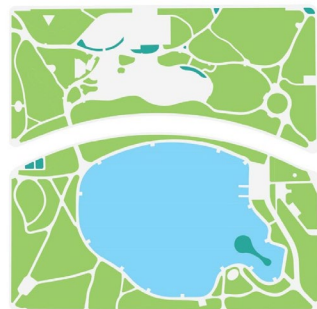
# Macarthur Park Charrette Products: USC/Salt/SWA/NHM Scheme

MacARTHUR PARK | PROGRAM + ACTIVITY

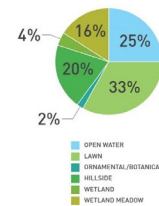


MacArthur Park - USC CONCEPT DESIGN STRATEGY

EXISTING HABITAT



PROPOSED HABITAT



# Case Study 2

Taylor Yard Biodiversity Metrics

# ISLAND | PROPOSED SITE FEATURES AND PROGRAM ELEMENTS

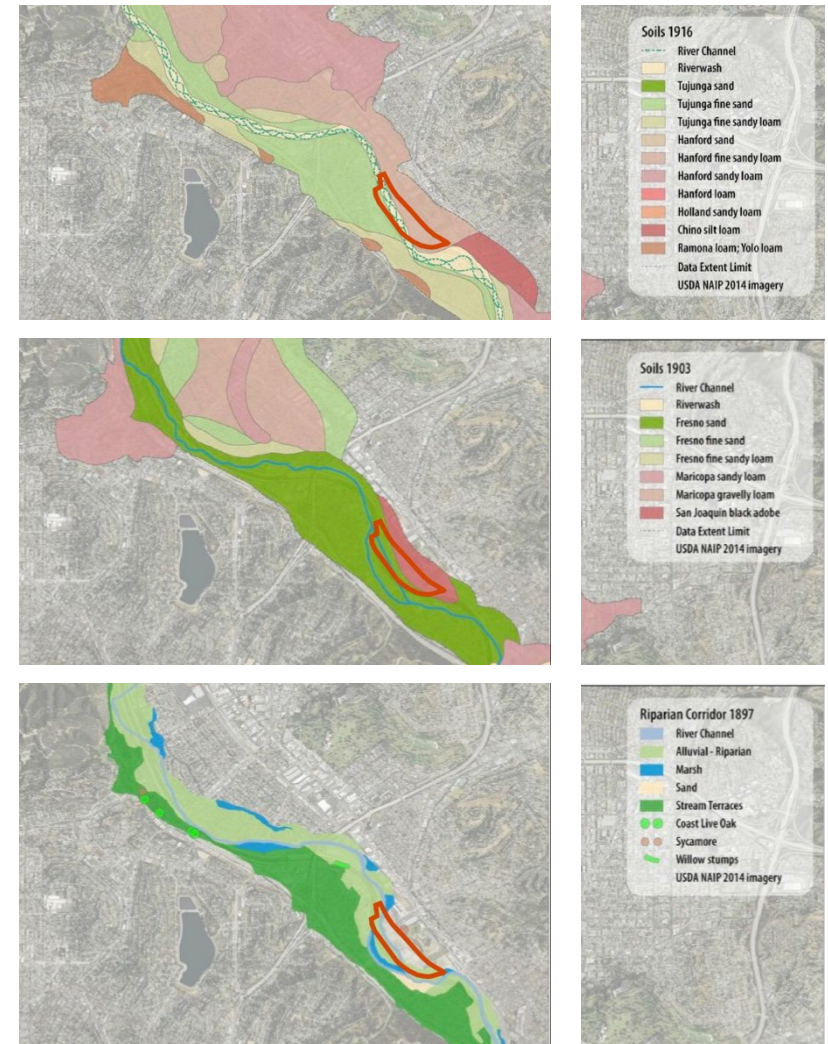
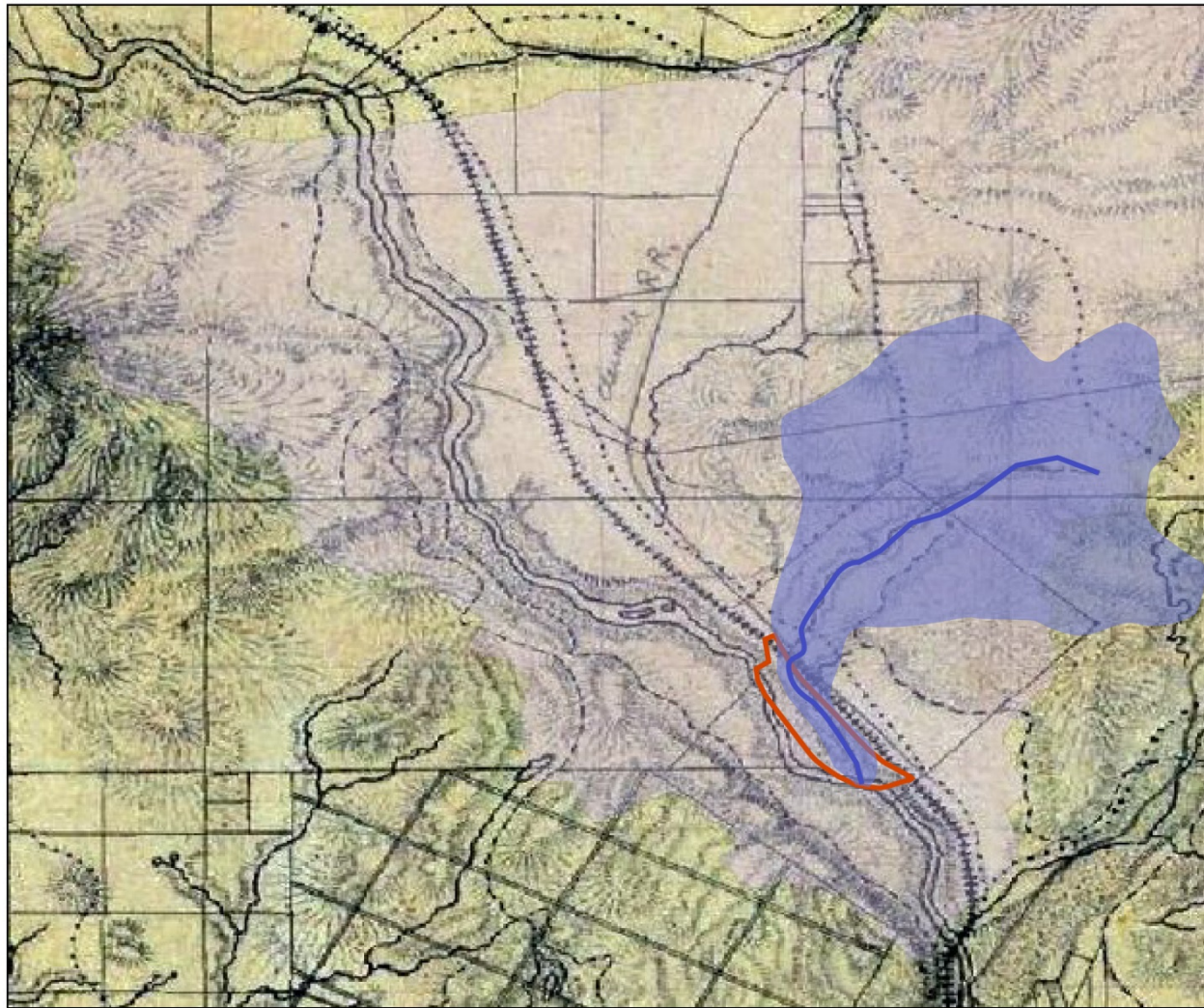
**SITE FEATURE**

- ① SYCAMORE GROVE
- ② DISCOVERY PLAY
- ③ MEADOW
- ④ WILLOW UPLAND
- ⑤ LOW FLOW WALKWAY
- ⑥ THE ISLAND ECO RESERVE/LAB
- ⑦ RIVER EXHIBITION PAVILION
- ⑧ GRAND CANAL
- ⑨ RIVER DECK
- ⑩ THE COLLECTIONS
- ⑪ THE CROSSING
- ⑫ SCULPTURE GARDEN
- ⑬ AMPHITHEATER
- ⑭ LA COLINA
- ⑮ THE VISTA
- ⑯ PARKING
- ⑰ TAYLOR YARD BICYCLE AND PEDESTRIAN BRIDGE

**4.5 ACRES OF PROPOSED BUILDING FOOTPRINT**  
 \*2 STORY BUILDING  
 \*\*3 STORY BUILDING

- ① PARK OFFICE/ RANGER STATION\*
- ② KAYAK LAUNCH/ CAFE
- ③ RECREATIONAL CAMPING + RESTROOM
- ④ YOUTH ENRICHMENT CENTER
- ⑤ CAFE
- ⑥ RESEARCH BUILDING\*
- ⑦ MUSEUM/CULTURAL CENTER\*
- ⑧ PUBLIC FACILITY (PARKING BELOW)\*\*
- ⑨ RESTAURANT
- ⑩ KAYAK LANDING / CAFE / KIOSK





**Figure 2-4** Elysian Valley from 1880 draft irrigation map by William Hall

*Water Supply and Habitat Resiliency for a Future Los Angeles River – Los Feliz to Taylor Yard: Site-Specific Natural Enhancement Opportunities Informed by River Flow and Watershed-Wide Action, 2016 – TNC/Longcore*

Island



Soft Edge



The Yards



### Preliminary SBI Metrics

Metric	Weight	Purpose
<b>Habitat Quality</b>	4	Assesses the ability of landscapes to provide habitat
<b>Habitat Variety</b>	3	Suitability of habitat for target species or ecosystem
<b>Edge Effects</b>	2	Influence of noise, light, human activity, etc.
<b>Offsite Connectivity</b>	1	Locations for species movement between adjacent parcels

# Island



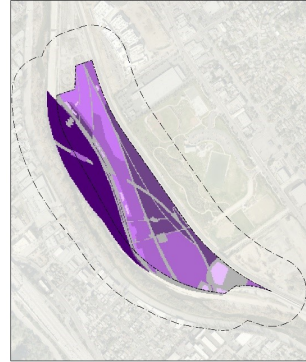
# Soft Edge



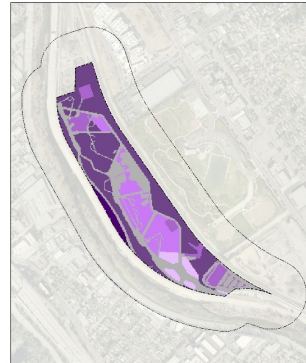
# The Yards



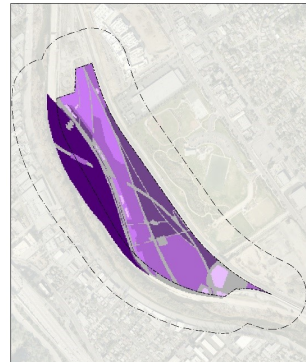
# Habitat Quality



ISLAND: Habitat Quality Score  
 -0 to -4  
 -1 to -5

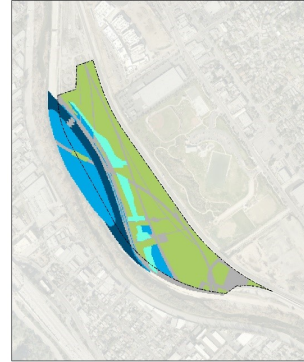


SOFT EDGE: Habitat Quality Score  
 -0 to -4  
 -1 to -5

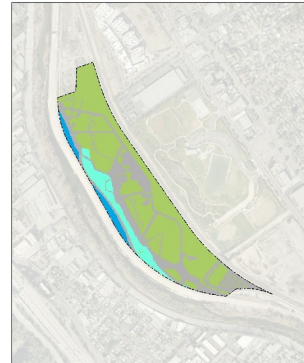


ISLAND: Habitat Quality Score  
 -0 to -4  
 -1 to -5

# Habitat Variety



ISLAND: Habitat Variety  
 -0 to -4  
 -1 to -5

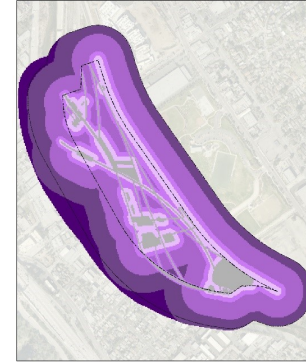


SOFT EDGE: Habitat Variety  
 -Hardscape/Built  
 -Riparian  
 -Marsh  
 -Upland



YARDS: Habitat Variety  
 -Hardscape/Built  
 -Marsh  
 -Upland

# Edge Effects



ISLAND: Edge Effects Score  
 -0 to -4  
 -1 to -5



SOFT EDGE: Edge Effects Score  
 -0 to -4  
 -1 to -5



YARDS: Edge Effects Score  
 -0 to -4  
 -1 to -5

# Connections



ISLAND: Offsite Connectivity Score  
 -0 to -4  
 -1 to -5

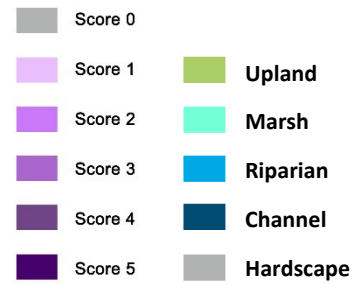


SOFT EDGE: Offsite Connectivity Score  
 -0 to -4  
 -1 to -5



YARDS: Offsite Connectivity Score  
 -0 to -4  
 -1 to -5

# Score



**Island**



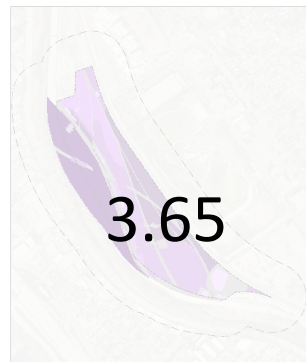
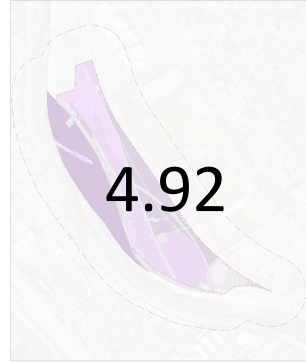
**Soft Edge**



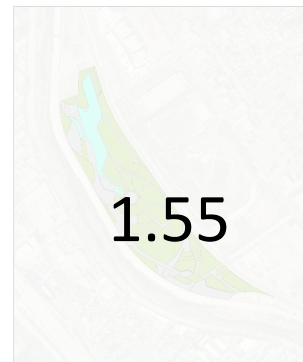
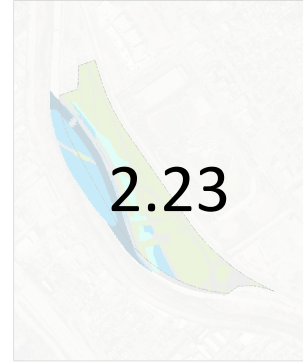
**The Yards**



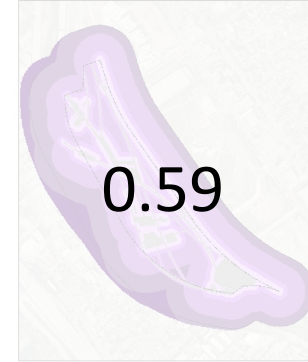
**Habitat Quality**



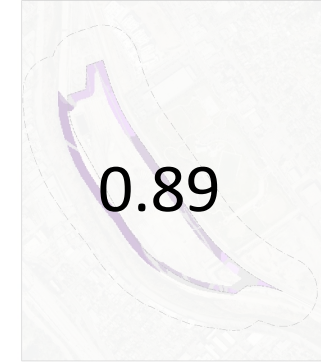
**Habitat Variety**



**Edge Effects**



**Connections**

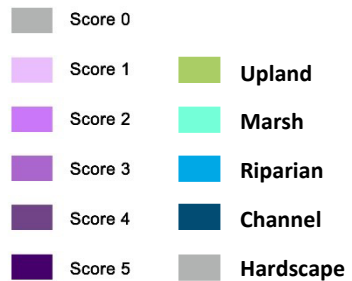


**Score**

**2.16**

**1.71**

**1.53**



# Links

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- City of LA Biodiversity Report PDF
- LA County NHM (<https://www.youtube.com/watch?v=jz6cRzd29WM>)
- iNaturalist (<https://www.inaturalist.org/>)
- NWF Plant Finder  
<https://www.nwf.org/nativeplantfinder>
- Theodore Payne Foundation Plant Database  
[http://www.theodorepayne.org/mediawiki/index.php?title=California\\_Native\\_Plant\\_Library](http://www.theodorepayne.org/mediawiki/index.php?title=California_Native_Plant_Library)
- Calscape  
[http://calscape.org/Eriogonum-parvifolium-\(Sea-Cliff-Buckwheat\)?srchcr=sc5a7b717f5ba55](http://calscape.org/Eriogonum-parvifolium-(Sea-Cliff-Buckwheat)?srchcr=sc5a7b717f5ba55)
- Tree of Life Nursery Monthly Garden Tips  
<https://californianativeplants.com/resources/monthly-garden-tips/>

The background features a stylized illustration of a city skyline with various grey buildings of different heights. Behind the city is a range of light green mountains with soft, rounded peaks. The sky is a solid light blue color. The foreground is a solid light brown color, suggesting a ground surface.

Contact information:

Dr. Isaac Brown

Senior Scientist, Stillwater Sciences, [ibrown@stillwatersci.com](mailto:ibrown@stillwatersci.com)