



# Habitat Restoration Opportunities

Fairview Park  
Master Plan Update  
*Costa Mesa, California*

Travis Brooks,  
Restoration Ecologist





# Presentation Outline



Historical  
Context



Past & Ongoing  
Restoration  
Projects



Existing  
Vegetation  
Communities



Wildlife Habitat



Habitat  
Restoration  
Opportunities



Other  
Management  
Opportunities

# Acknowledgements

- The Fairview Park Master Plan Update is led by MIG, with contributions from Cogstone, Hamilton Biological, and Land IQ.
- Wildlife photos used with permission by Robb Hamilton, Hamilton Biological.
- Drone photos provided by City of Costa Mesa (Taken March 3, 2023).
- Vegetation Map and Restoration Opportunities prepared by Land IQ.





**City of  
Costa  
Mesa**





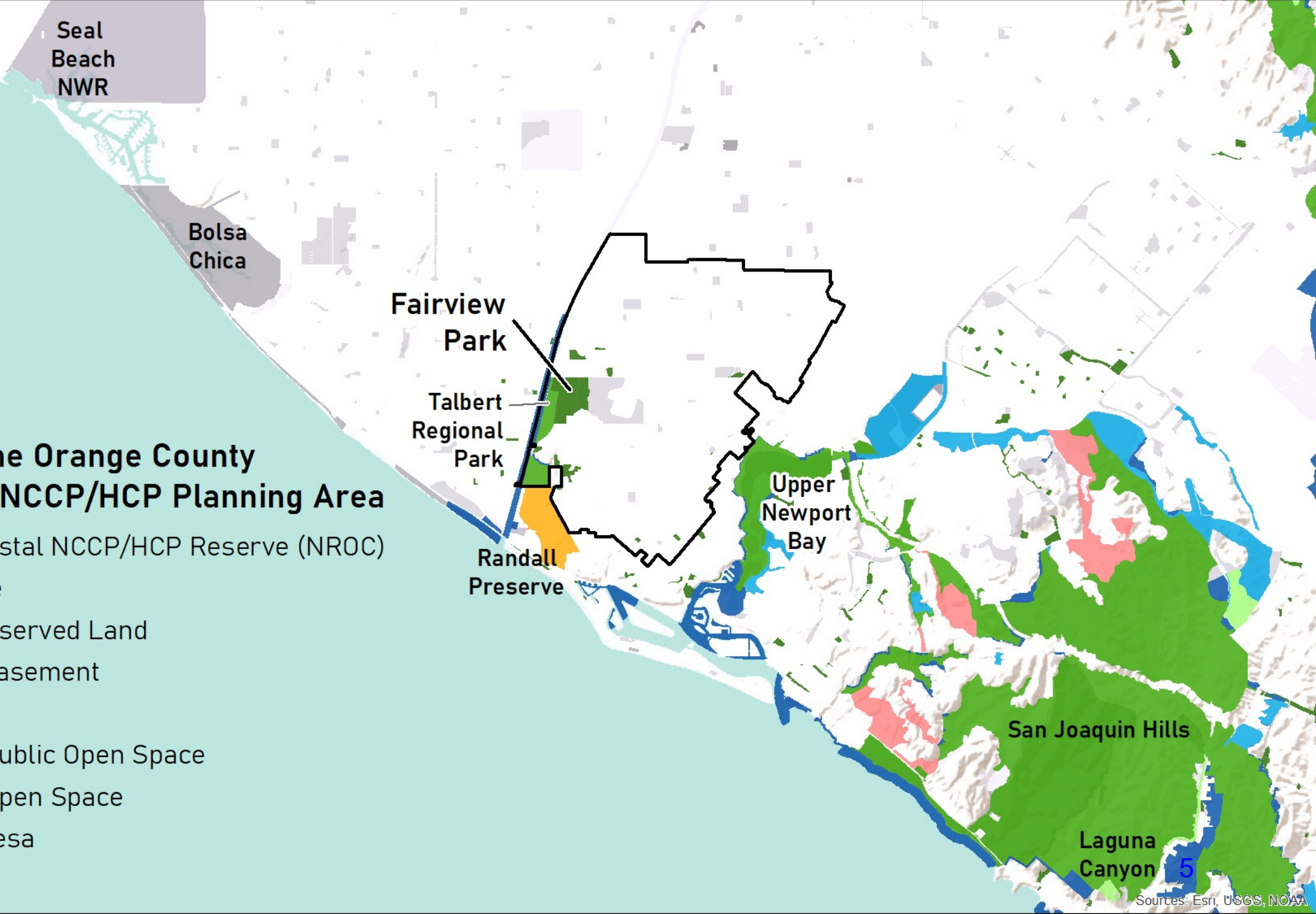
**Fairview Park**

**City of  
Costa  
Mesa**



## Open Space in the Orange County Central/Coastal NCCP/HCP Planning Area

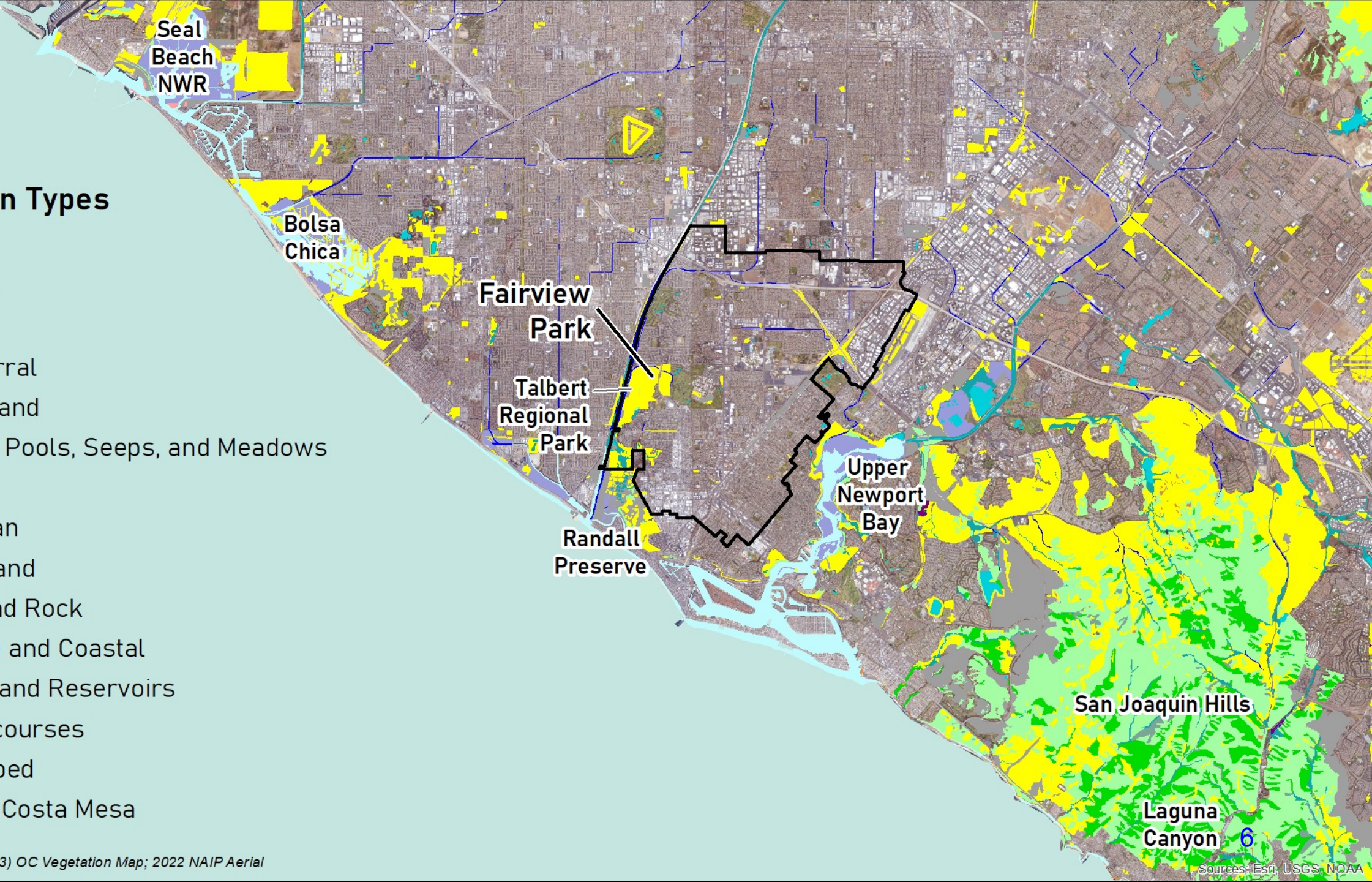
- OC Central/Coastal NCCP/HCP Reserve (NROC)
- Special Linkage
- Non-NROC Conserved Land
- Conservation Easement
- Local Park
- Non-Reserve Public Open Space
- Non-Reserve Open Space
- City of Costa Mesa





## Vegetation Types (1993)

- Dunes
- Scrub
- Chaparral
- Grassland
- Vernal Pools, Seeps, and Meadows
- Marsh
- Riparian
- Woodland
- Cliff and Rock
- Marine and Coastal
- Lakes and Reservoirs
- Watercourses
- Disturbed
- City of Costa Mesa







# 1800s Coastal Ecosystem

## Historical Ecology

Study of past ecosystem function, which provides a template for sustainable and ecologically appropriate habitat restoration.



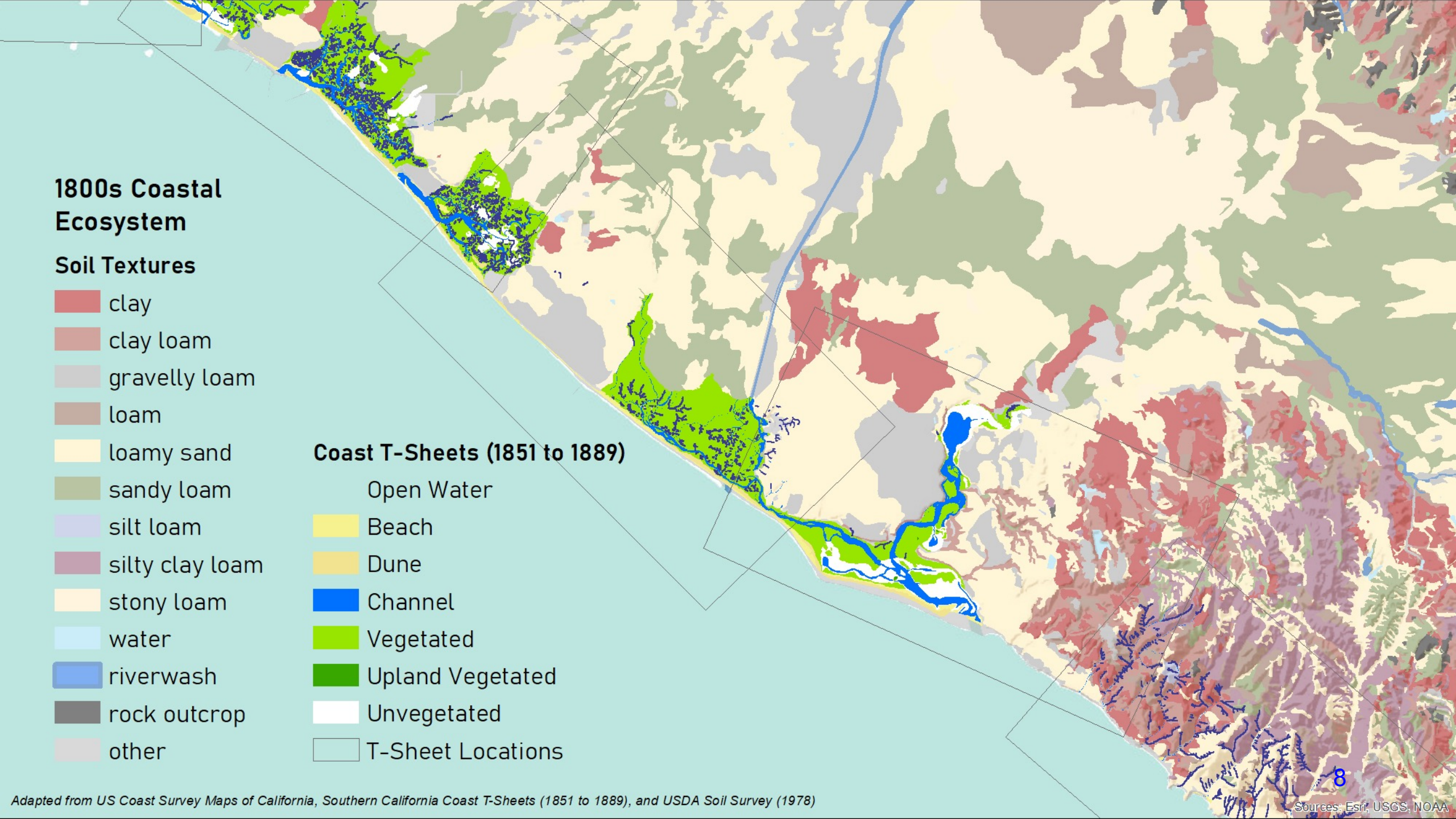
## 1800s Coastal Ecosystem

### Soil Textures

- clay
- clay loam
- gravelly loam
- loam
- loamy sand
- sandy loam
- silt loam
- silty clay loam
- stony loam
- water
- riverwash
- rock outcrop
- other

### Coast T-Sheets (1851 to 1889)

- Open Water
- Beach
- Dune
- Channel
- Vegetated
- Upland Vegetated
- Unvegetated
- T-Sheet Locations





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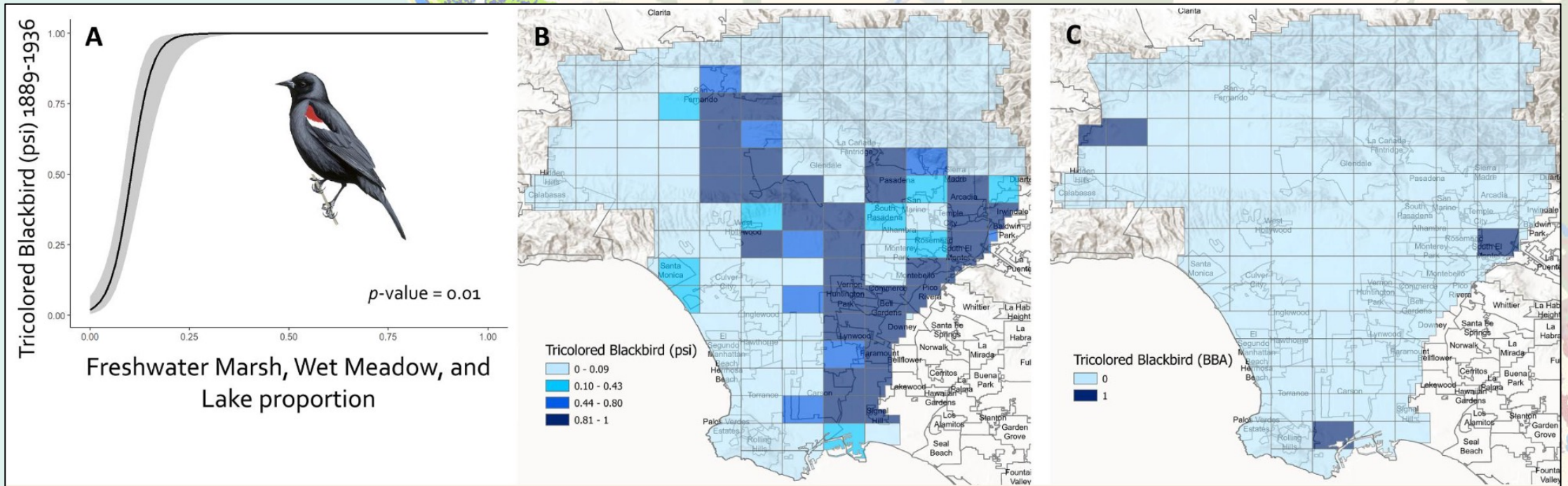
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Fairview Park





Source: LA Landscape History Project | [landscapehistory.org](http://landscapehistory.org)

Longcore, T. and P. J. Ethington, eds. 2023. *Mapping Los Angeles Landscape History: The Indigenous Landscape*.

Report to the John Randolph Haynes and Dora Haynes Foundation. Spatial Sciences Institute, University of Southern California, Los Angeles.



# 1868

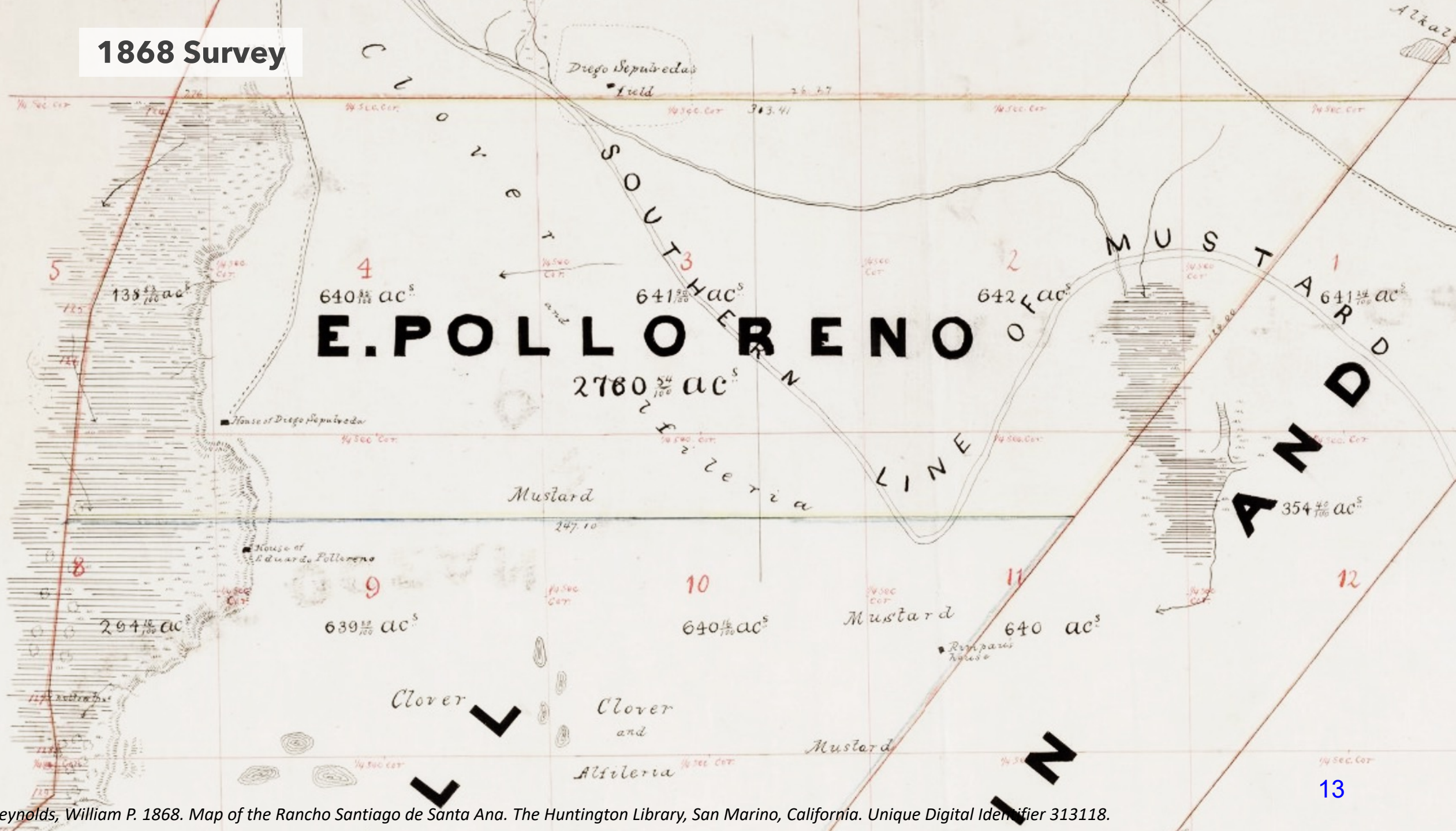
Survey for Subdivision of  
*Rancho Santiago de Santa Ana*

Reynolds, William P. 1868. Map of the  
Rancho Santiago de Santa Ana. The  
Huntington Library, San Marino,  
California. Unique Digital Identifier  
313118.





# 1868 Survey



**E. POLLORENO**

4  
640 <sup>5</sup>/<sub>100</sub> ac<sup>s</sup>

3  
641 <sup>7</sup>/<sub>100</sub> ac<sup>s</sup>

2  
642 <sup>4</sup>/<sub>100</sub> ac<sup>s</sup>

1  
641 <sup>3</sup>/<sub>100</sub> ac<sup>s</sup>

2780 <sup>5</sup>/<sub>100</sub> ac<sup>s</sup>

5  
138 <sup>1</sup>/<sub>2</sub> ac<sup>s</sup>

8  
294 <sup>1</sup>/<sub>2</sub> ac<sup>s</sup>

9  
639 <sup>1</sup>/<sub>2</sub> ac<sup>s</sup>

10  
640 <sup>1</sup>/<sub>2</sub> ac<sup>s</sup>

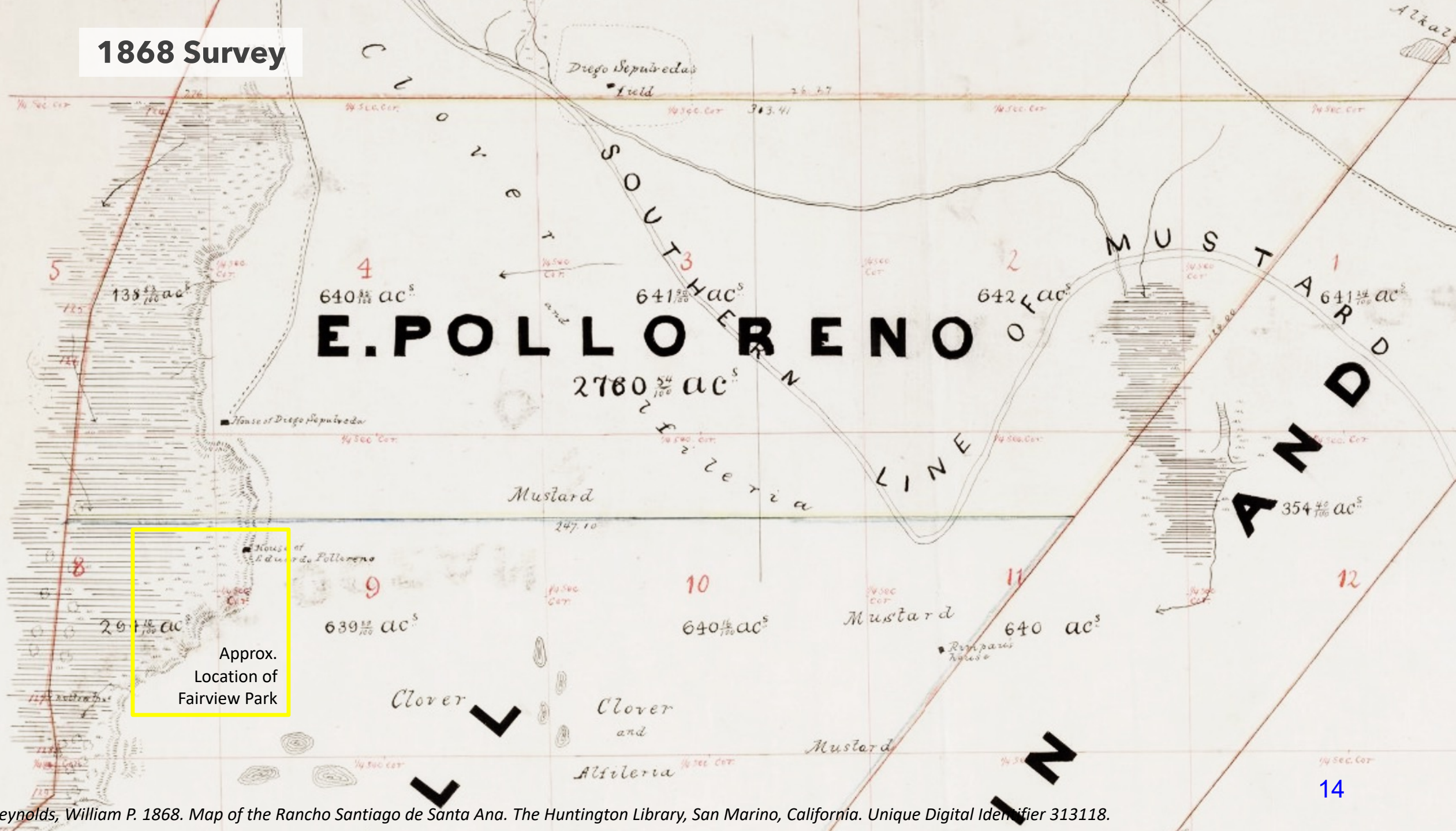
11  
640 ac<sup>s</sup>

12  
354 <sup>4</sup>/<sub>100</sub> ac<sup>s</sup>

13



# 1868 Survey



Approx.  
Location of  
Fairview Park



# 1868 Survey

House of  
Eduardo Pollereno

House of  
Eduardo Pollereno

Approx.  
Location of  
Fairview Park



# 1868 Survey

House of  
Eduardo Pollereno

Approx.  
Location of  
Fairview Park

Clover  
and  
Alfileria

Clover  
and  
Alfileria

O R E N O

LINE

Alfileria

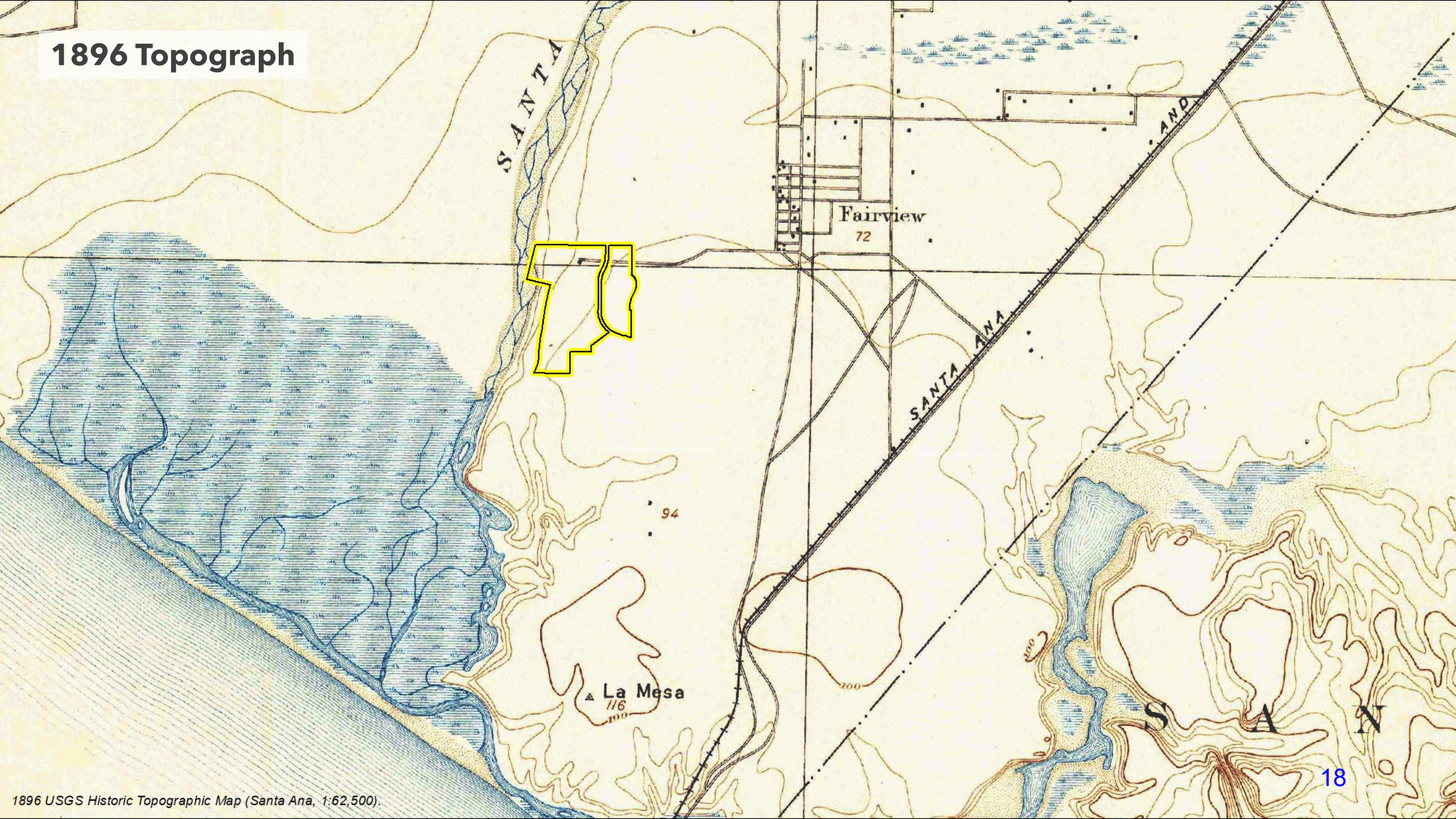
Alfileria





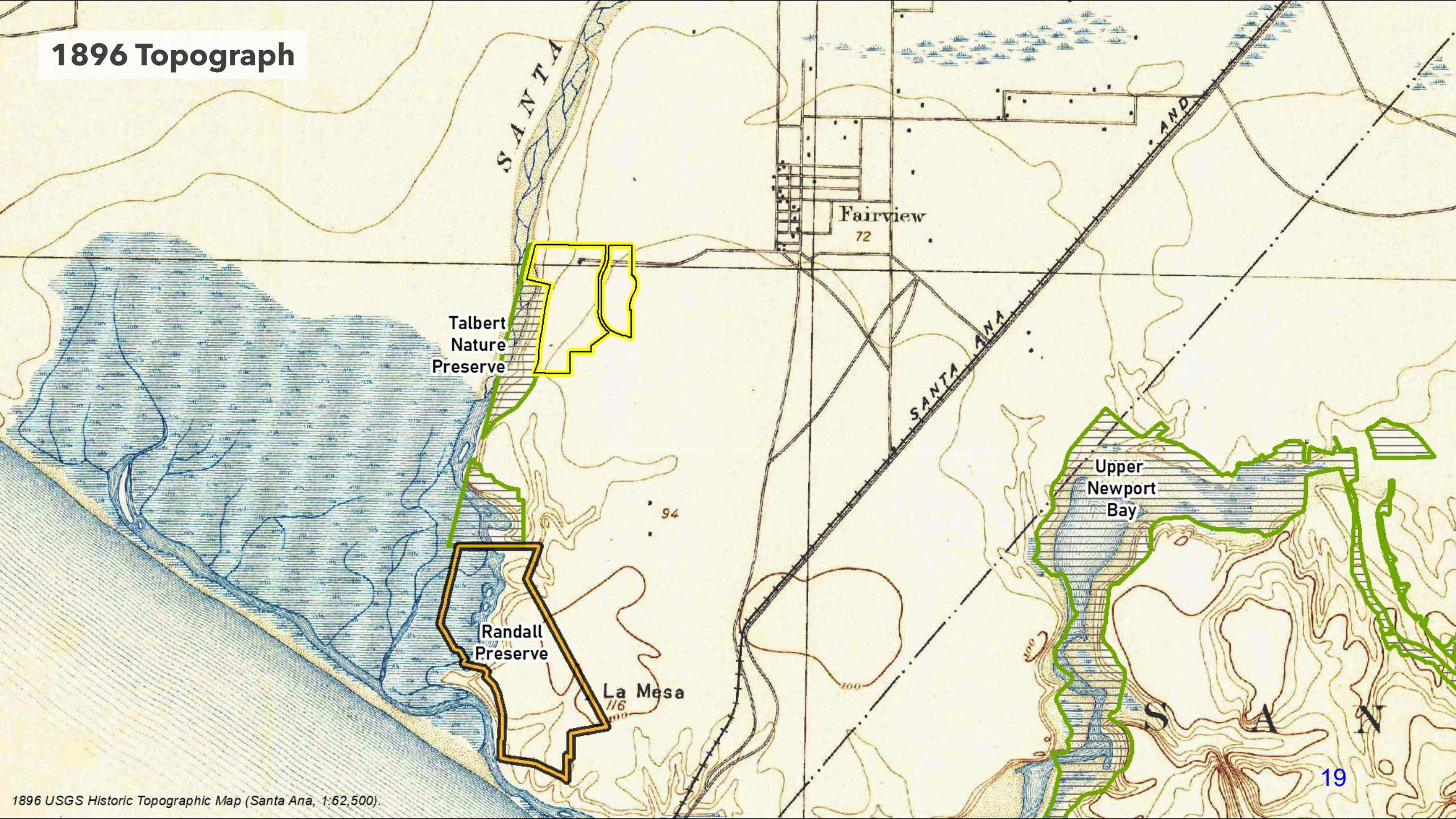


# 1896 Topograph





# 1896 Topograph



Talbert  
Nature  
Preserve

Randall  
Preserve

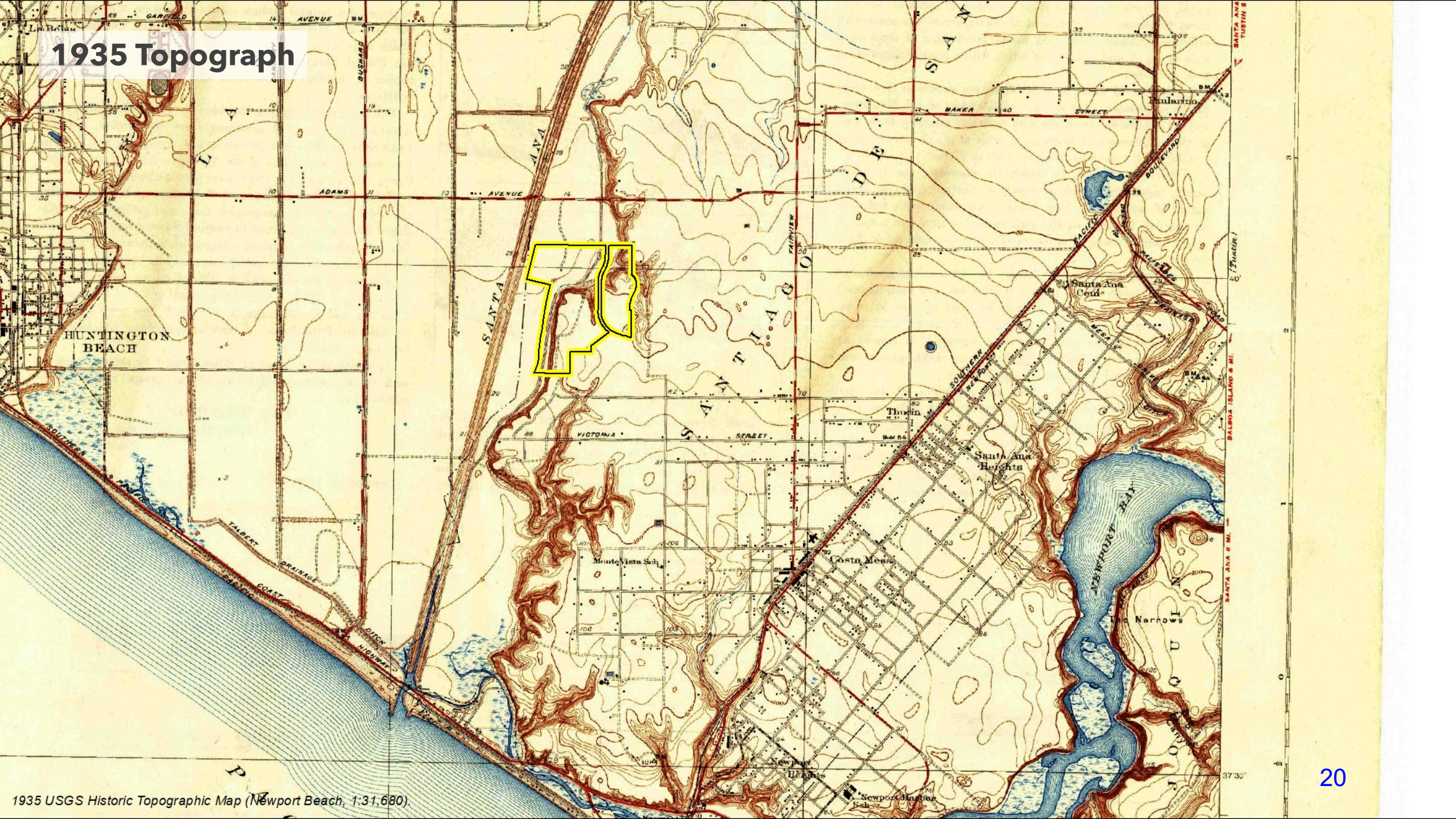
Fairview  
72

La Mesa  
116

Upper  
Newport  
Bay

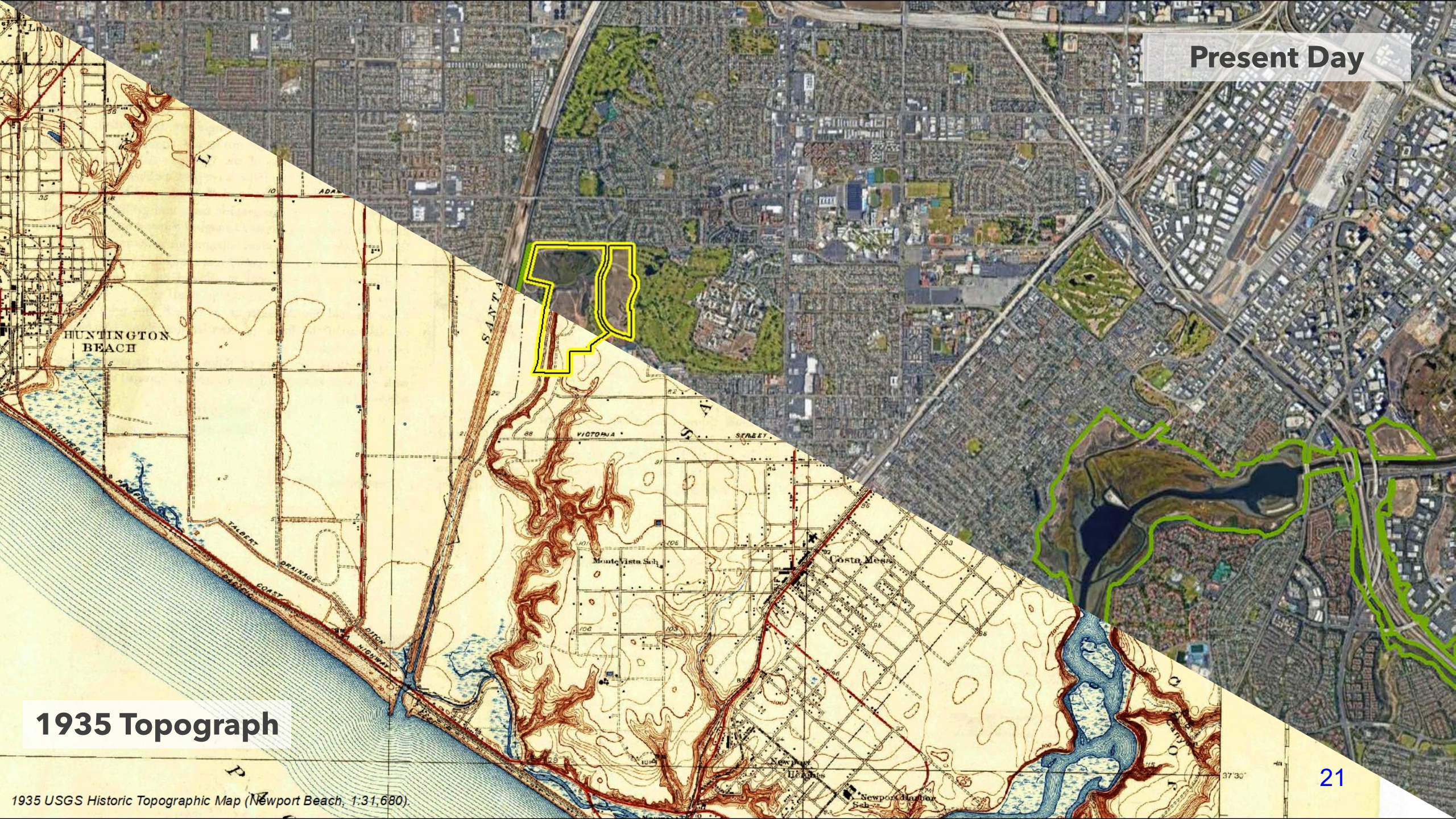


# 1935 Topograph





Present Day



1935 Topograph

1935 USGS Historic Topographic Map (Newport Beach, 1:31,680)



# 2022

 Fairview Park Boundary

2022 NAIP (60-cm resolution)





# 1927

 Fairview Park Boundary

Fairchild Aerial Survey Flight C-135,  
Nov. 3, 1927. Courtesy of UCSB  
Library Geospatial Collection.  
Georeferenced by Land IQ.

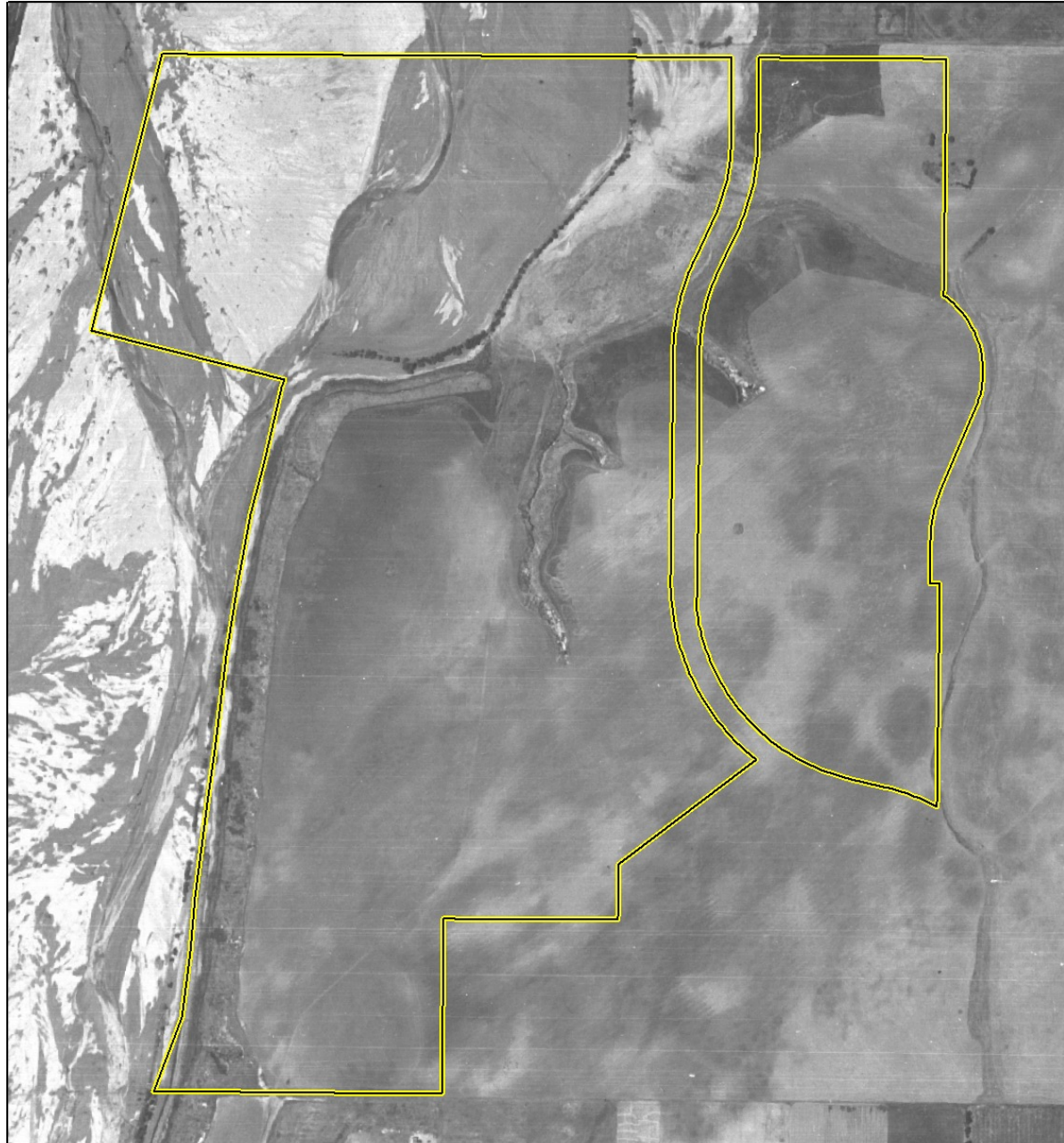




# 1938

 Fairview Park Boundary

Laval Company Inc. Flight AXK-1938,  
May 23, 1938. Courtesy of UCSB  
Library Geospatial Collection.  
Georeferenced by Land IQ.





# 1955

 Fairview Park Boundary

Fairchild Aerial Surveys Flight C-21960, Sep. 4, 1955. Courtesy of UCSB Library Geospatial Collection. Georeferenced by Land IQ.





# 1960

 Fairview Park Boundary

Fairchild Aerial Surveys Flight C-23870, May 7, 1960. Courtesy of UCSB Library Geospatial Collection. Georeferenced by Land IQ.





# 1966

 Fairview Park Boundary

Aerial Map Industries Flight AMI-OC-66, Jan 1966. Courtesy of UCSB Library Geospatial Collection. Georeferenced by Land IQ.

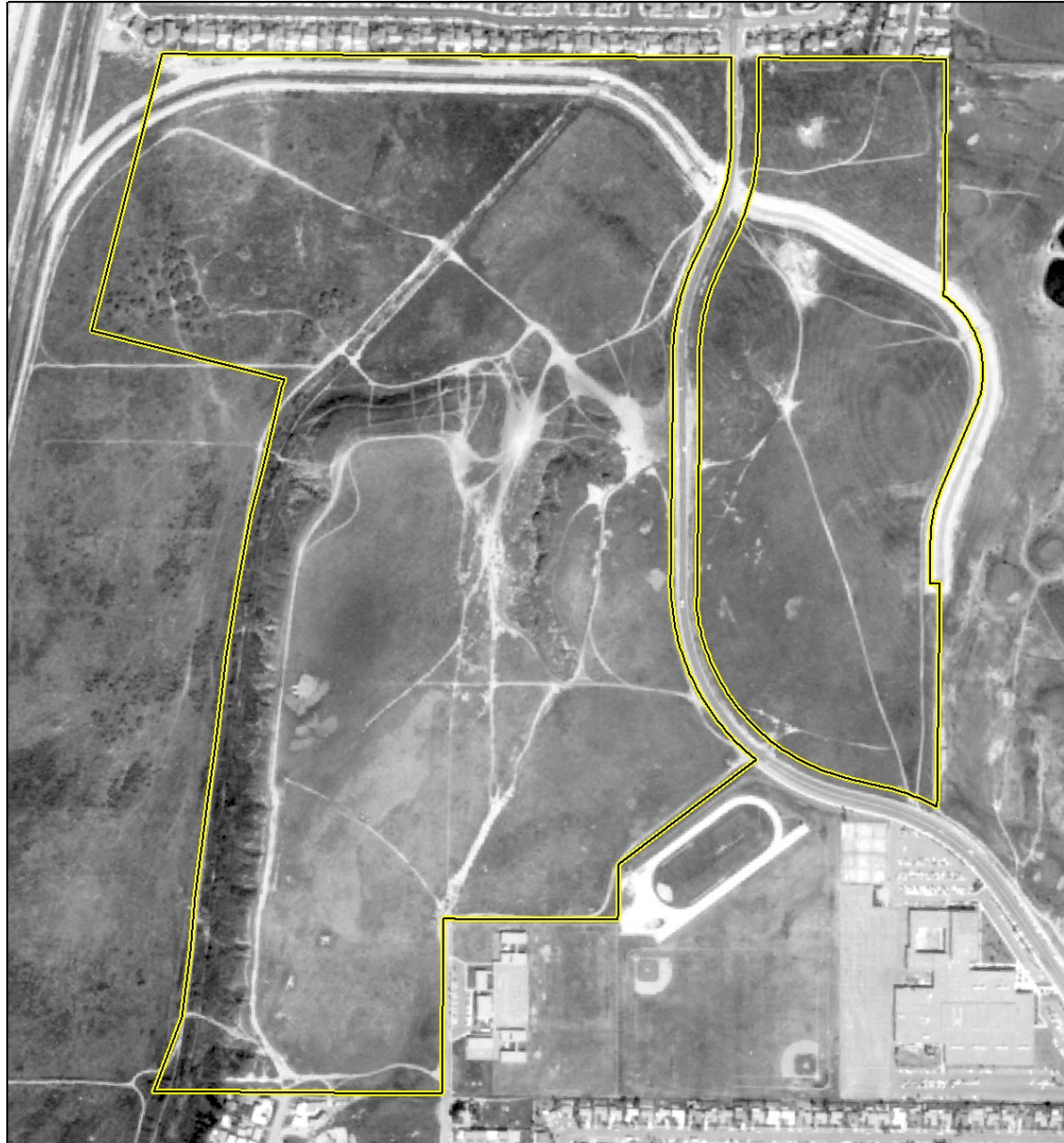




# 1970

 Fairview Park Boundary

Aerial Map Industries Flight AMI-OC-70, 1970. Courtesy of UCSB Library Geospatial Collection.  
Georeferenced by Land IQ.





# 1978

 Fairview Park Boundary

Aerial Map Industries Flight AMI-OC-78, January 1978. Courtesy of UCSB Library Geospatial Collection. Georeferenced by Land IQ.





# 1980

 Fairview Park Boundary

WAC Corp. Flight USDA-Firescope,  
Aug 24, 1980. Courtesy of UCSB  
Library Geospatial Collection.  
Georeferenced by Land IQ.





# 1982

 Fairview Park Boundary

National Ocean Service Flight NOS-82-EC, Mar 20, 1982. Courtesy of UCSB Library Geospatial Collection. Georeferenced by Land IQ.





# 1983

 Fairview Park Boundary

Aerial Map Industries Flight AMI-OC-83, Apr 6, 1983. Courtesy of UCSB Library Geospatial Collection. Georeferenced by Land IQ.

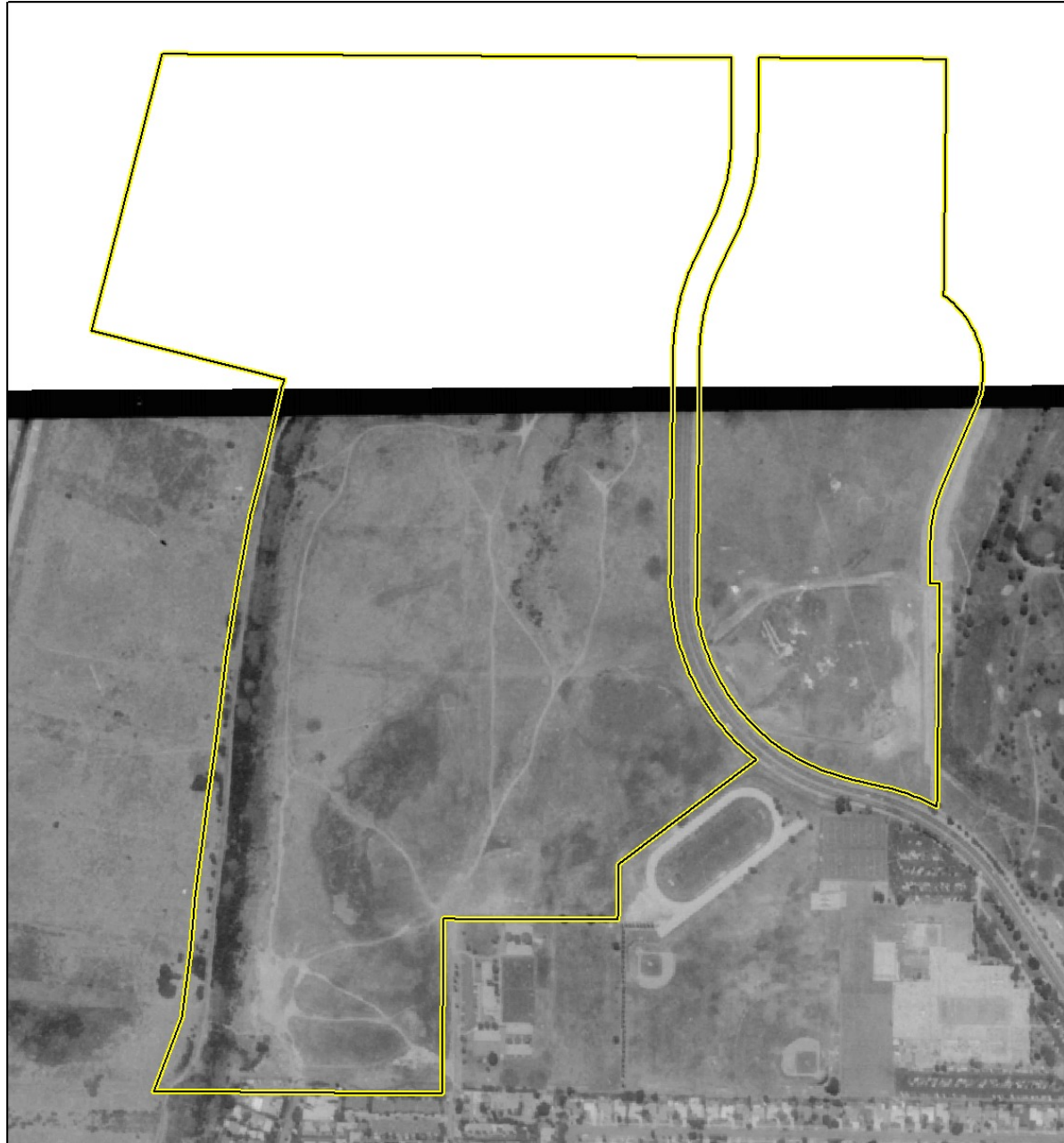




# 1986

 Fairview Park Boundary

Aerial Map Industries Flight AMI-OC-86, May 8, 1986. Courtesy of UCSB Library Geospatial Collection. Georeferenced by Land IQ.





# 1987

 Fairview Park Boundary

NHAP ID NC1NHAP840441140.  
Mar 29, 1987. Accessed from USGS  
Earth Explorer. Georeferenced by  
Land IQ.

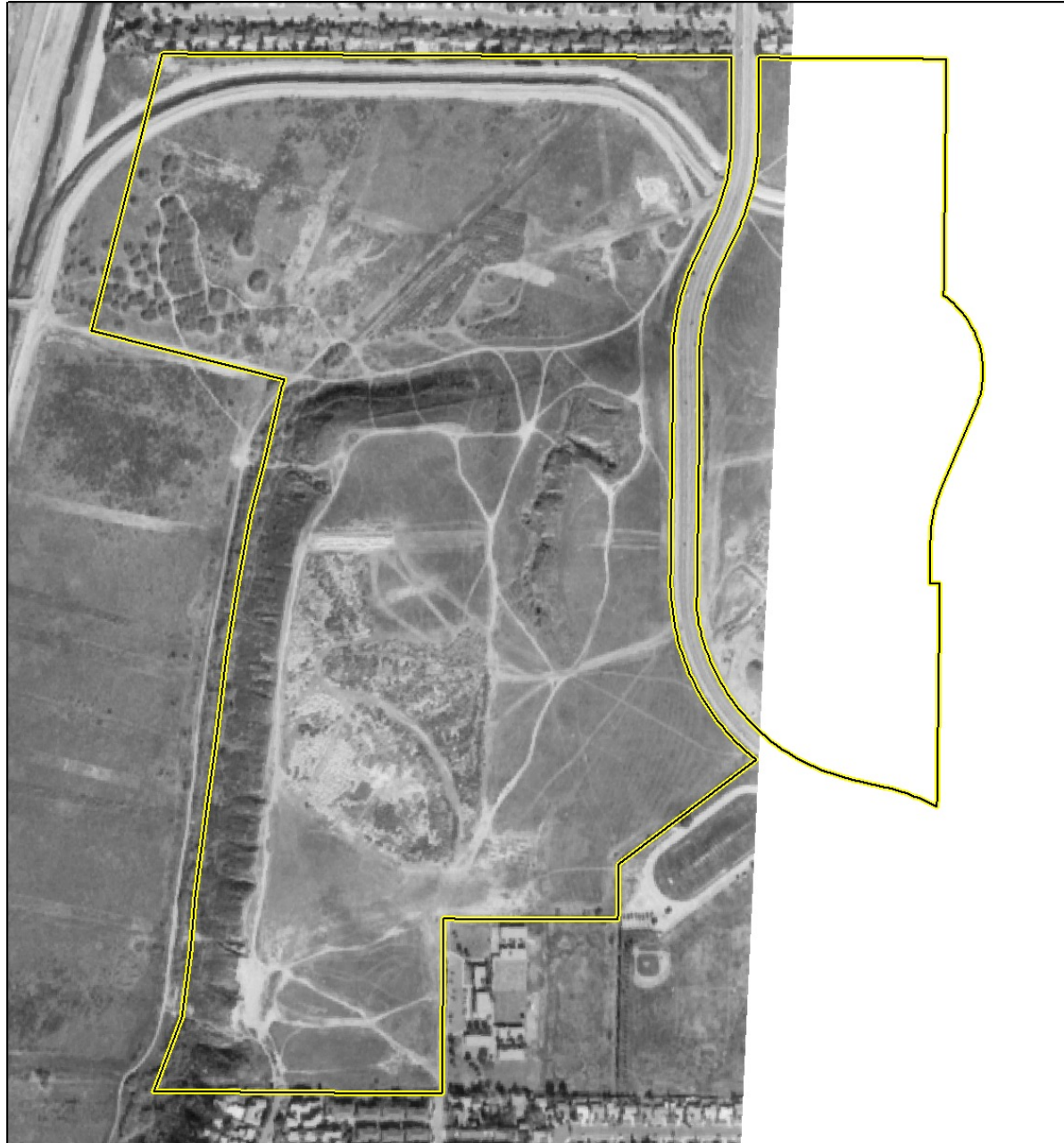




# 1989

 Fairview Park Boundary

Aerial Map Industries Flight AMI-OC-89, Jan 26, 1989. Courtesy of UCSB Library Geospatial Collection. Georeferenced by Land IQ.





# 1990

 Fairview Park Boundary

NAPP Flight 1854-175, Sep 6, 1990.  
Accessed from USGS Earth Explorer.  
Georeferenced by Land IQ.





# 2001

 Fairview Park Boundary

I.K. Curtis Serv., Inc. Flight CCC-BQK-  
C Frame 34-5, Sep 26, 2001.  
Accessed from USGS Earth Explorer.  
Georeferenced by Land IQ.





# 2005

 Fairview Park Boundary

NAIP 2005 (1-meter resolution)





# 2009

 Fairview Park Boundary

NAIP 2009 (1-meter resolution)





# 2012

 Fairview Park Boundary

NAIP 2012 (1-meter resolution)





# 2019

 Fairview Park Boundary

Eagle Aerial 2019 High-Resolution  
Aerial Acquired by County of Orange





# 2022

 Fairview Park Boundary

2022 NAIP (60-cm resolution)





# Past & Present Habitat Restoration Projects



## Status of Existing Restoration Projects

- Complete
- On-going
- Fairview Park Boundary




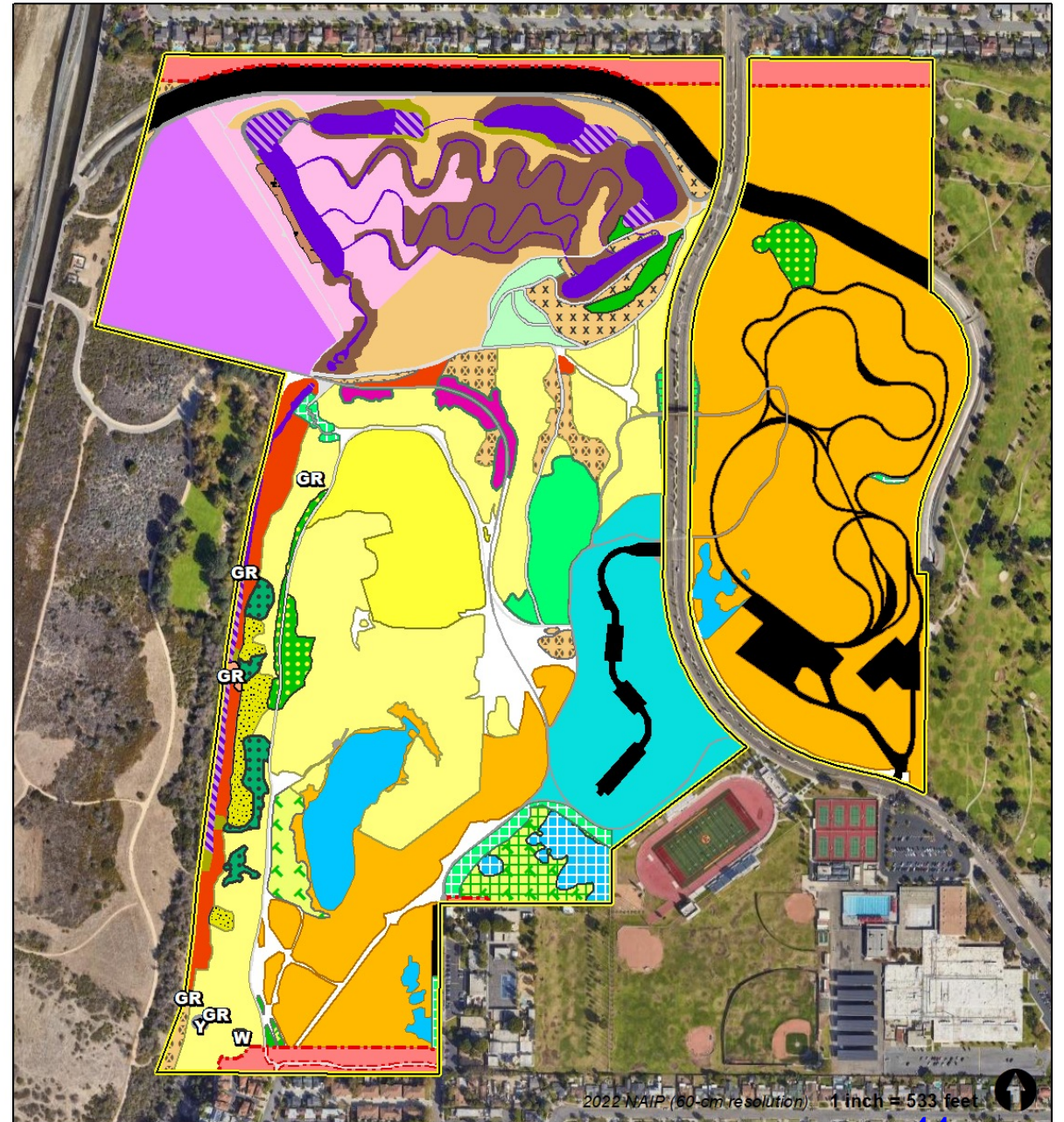
2022 NAIP Aerial 1 inch = 532 feet



# 2023 Vegetation Communities

## Map Code | 2023 Vegetation Map Unit Common Name

	1720   Black Willow - Red Willow Riparian Woodland and Forest		4210   Wild Oats and Annual Brome Grasslands
	1740   Fremont Cottonwood – Red Willow		4250   Upland Black Mustard and Tocalote Fields
	1810   Mulefat Thickets		4255   Upland Shortpod Mustard and Tocalote Fields
	1820   Arroyo Willow Thickets		4270   Poison Hemlock or Fennel Patches
	1830   Southern California Walnut Groves (W)		4310   Fiddleneck – Phacelia Fields
	1840   Sandbar Willow Thickets		6135   California Bulrush – Cattail Marsh
	1845   Sandbar Willow – Blue Elderberry Thicket (Habitat Creation Project)		6500   Clustered Tarplant Fields
	1910   Giant Reed (GR)		6550   Clustered Tarplant Fields (Restoration)
	2310   Coyote Brush Scrub		6600   Pale Spike Rush Vernal Pool Bottoms
	2315   Coyote Brush Scrub (Disturbed)		6650   Pale Spike Rush Vernal Pool Bottoms (Restoration Area)
	3110   California Sagebrush Scrub		8120   Coast Prickly Pear Scrub
	3120   California Sagebrush – California Buckwheat Scrub		9100   Introduced Trees (Y)
	3125   California Sagebrush – California Buckwheat Scrub (Restoration Area)		9150   Irrigated Lawn and Ornamental Landscaping Trees
	3145   California Sunflower Bush – Ashy Buckwheat Scrub (Disturbed)		9300   Urban/Disturbed
	3150   California Buckwheat Scrub		9310   Urban-Sidewalk/Bridge/Trail
	3195   Purple Sage Scrub (Introduced Vegetation Community/Restoration Area)		9315   Natural Soil or Decomposed Granite (DG) Trail
	3330   Coast Goldenbush Scrub		9320   Fuel Modification Zone
	3335   Coast Goldenbush Scrub (Disturbed)		9330   Anthropogenic Areas of Little or No
	Fairview Park Boundary		9800   Water Body
			9810   Rip-rap/Concrete Pond Liner

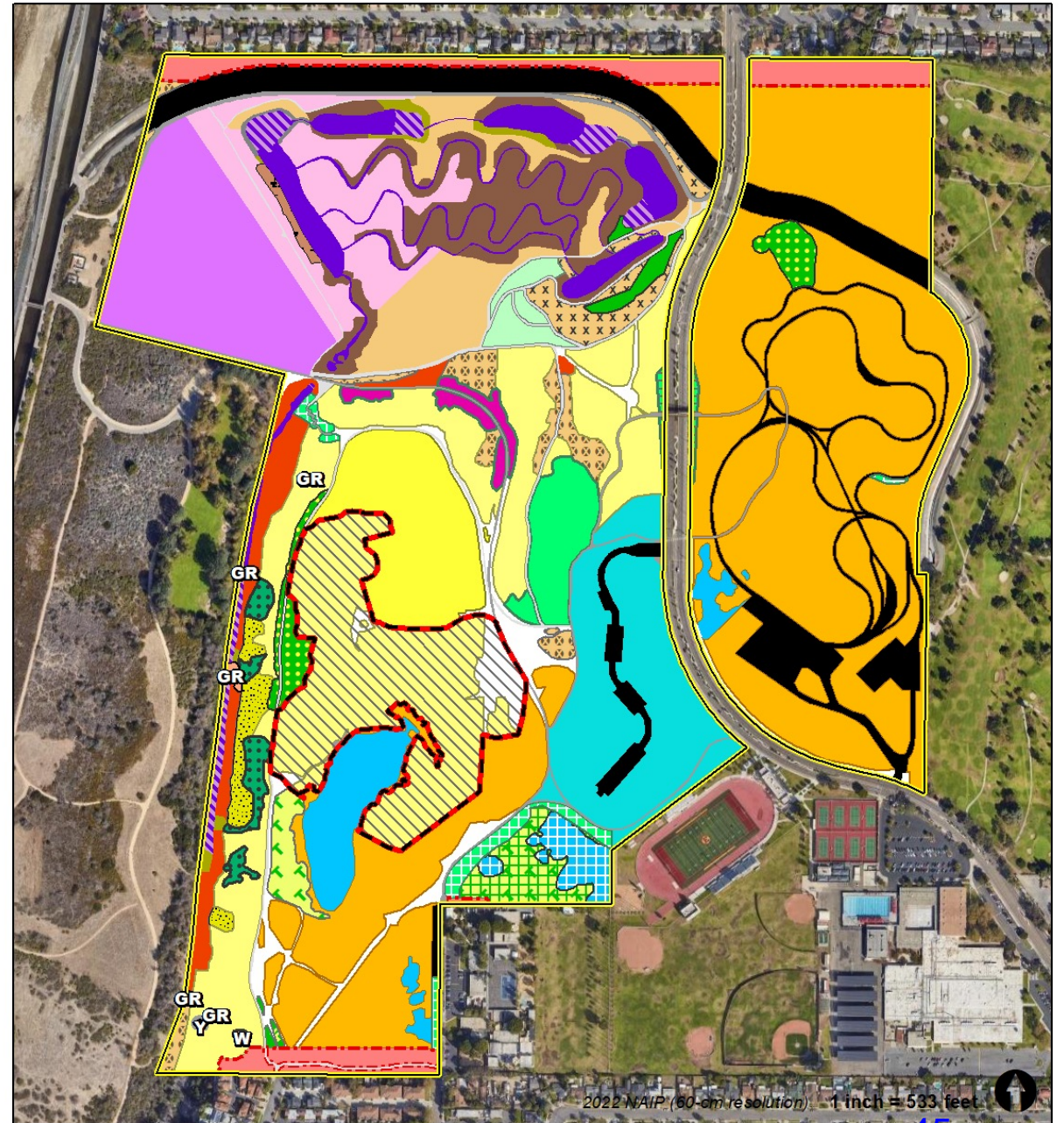




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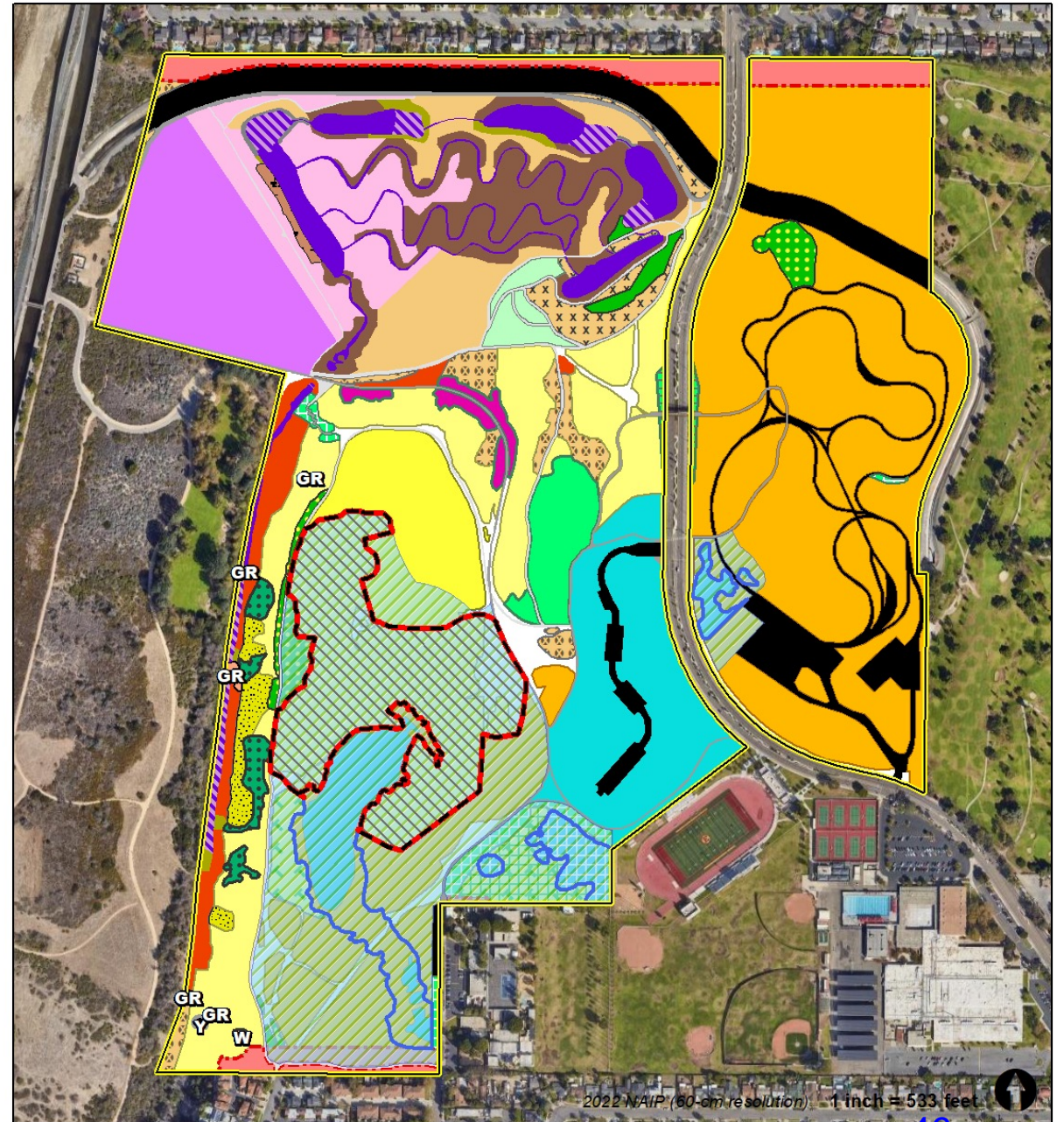




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	Vernal Pool High Estimated High Flood Mark		
	Vernal Pool Watershed (Remaining, Undeveloped Extent)		





# Wildlife Diversity

- **2 Federally Listed Invertebrates**  
(San Diego fairy shrimp and Riverside fairy shrimp) and other invertebrates
- **20 species of butterfly**
- **5 species of amphibians**
- **3 species of snakes**
- **5 species of lizard**
- **220 species of birds**, including year-round residents, seasonal vernal pool waterfowl and shorebird use, foraging raptors, wintering birds, and migratory birds

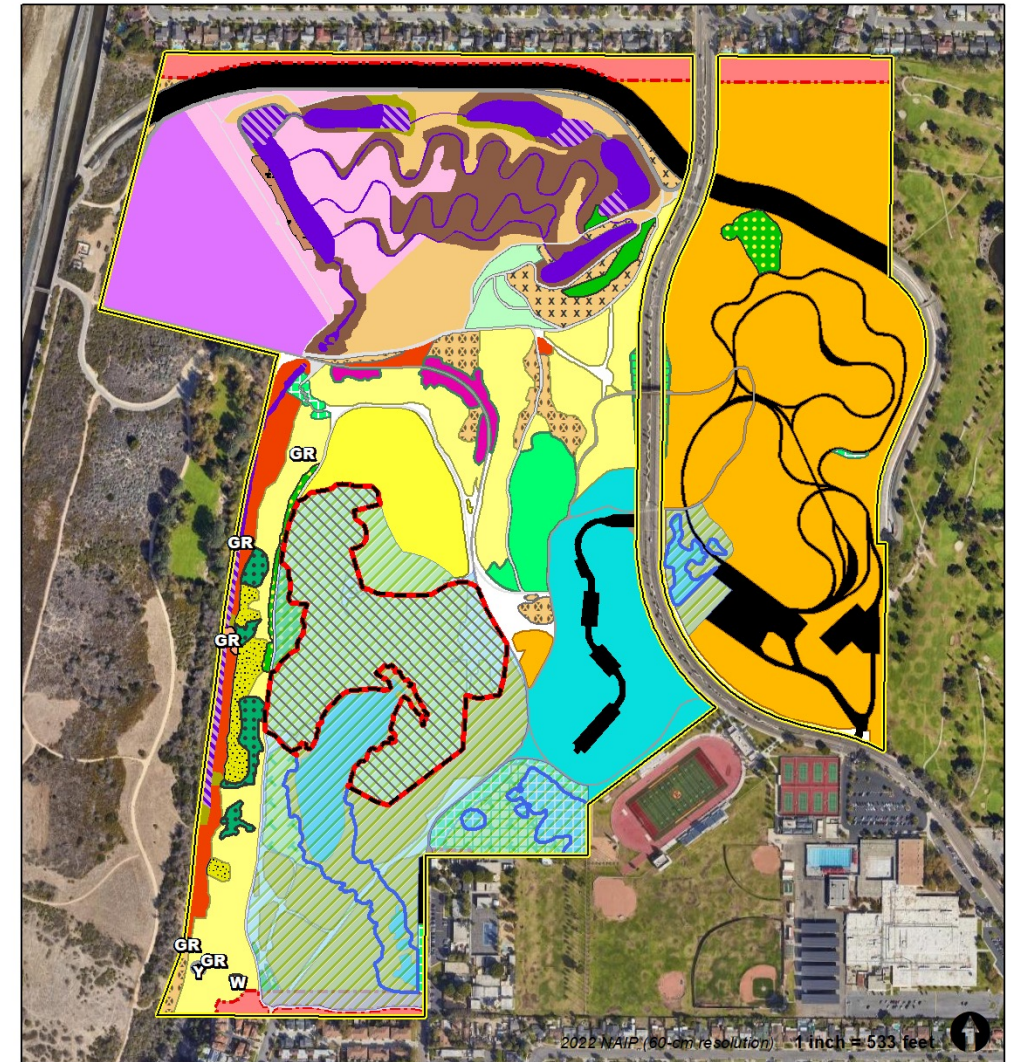


Least Bell's Vireo



# Plant Diversity

- **193 Vascular Plants**
- **10 Special Status Species** (rare or listed species)
  - **2 State and Federal Endangered Plants**  
(San Diego Button-celery and California Orcutt Grass occur in vernal pools)



- Fairview Park Boundary
- ▨ Improper Fill Material (Extent in 2023)
- ▭ Vernal Pool High Estimated High Flood Mark
- ▨ Vernal Pool Watershed (Remaining, Undeveloped Extent)



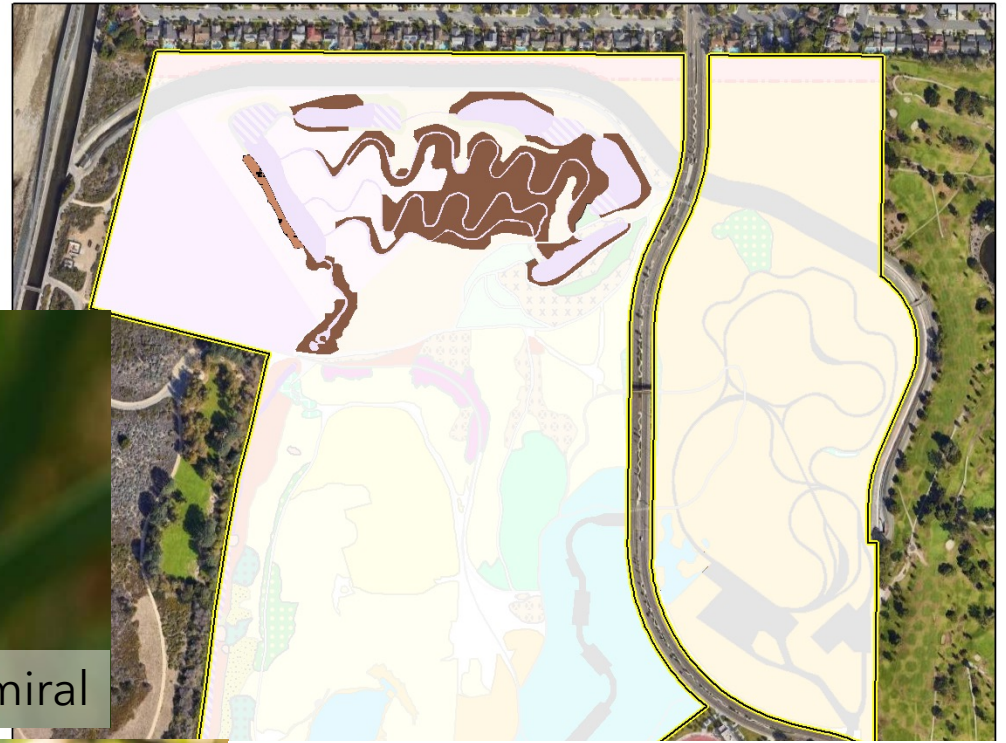
# Willow/Cottonwood Riparian Woodland and Forest



White-tailed Kite



Lorquin's Admiral



Southern Alligator Lizard



Red-shouldered Hawk



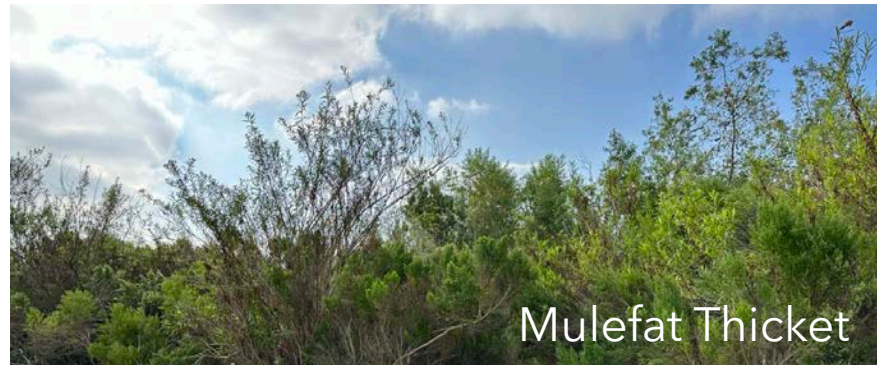
Anna's Hummingbird



# Mulefat/Willow Riparian Thickets



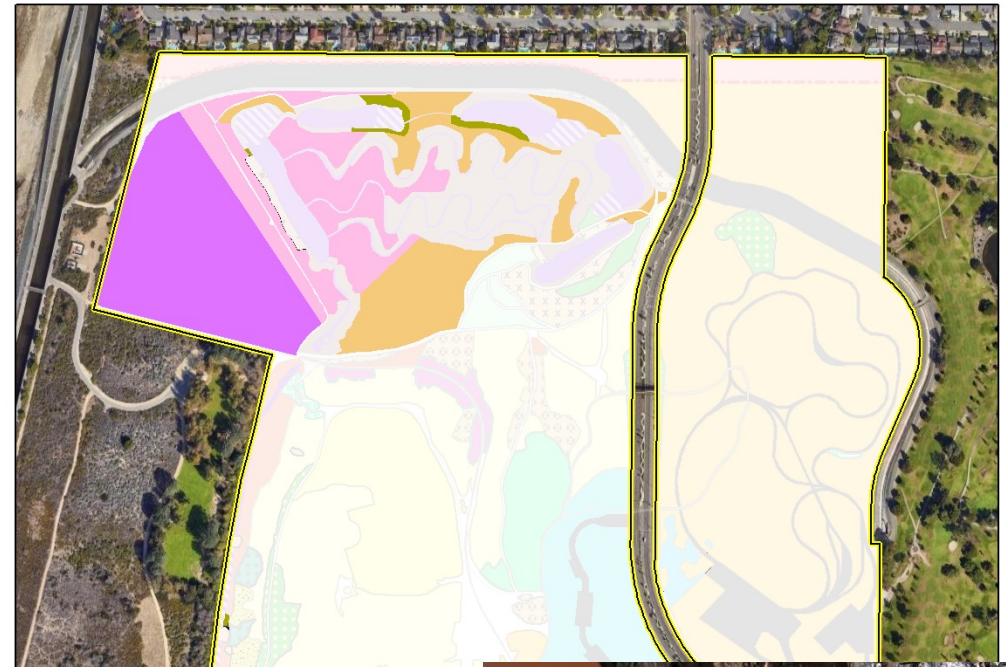
Baja California  
Chorus Frog



Mulefat Thicket



Least Bell's Vireo



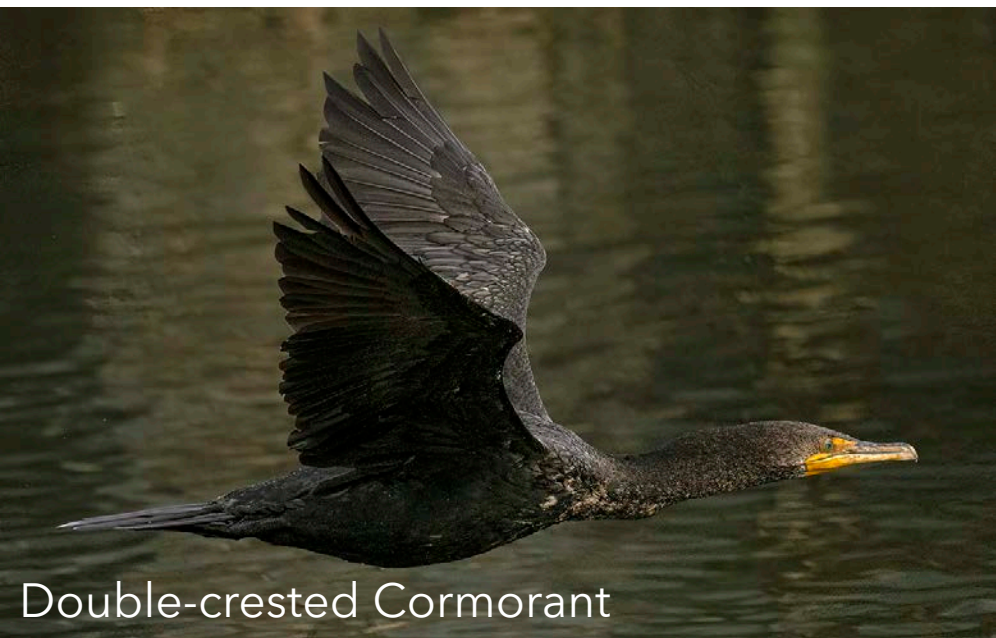
Coyote



Downy Woodpecker



# Water Bodies



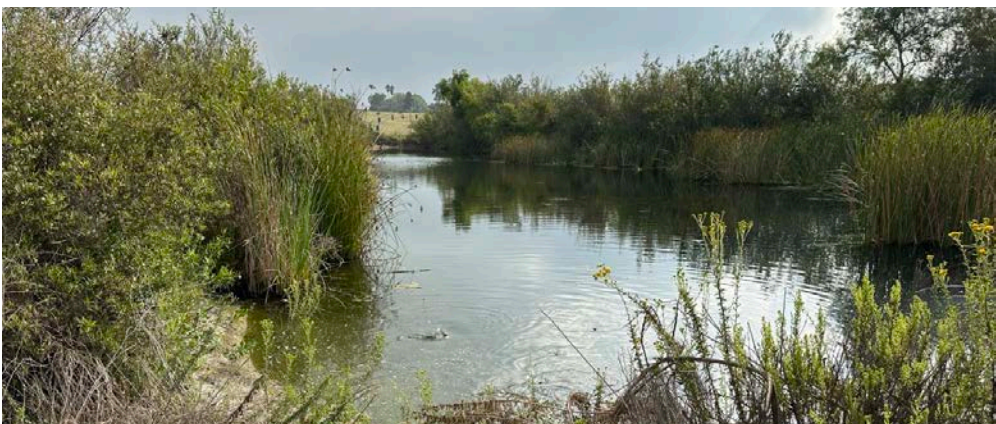
Double-crested Cormorant



Belted Kingfisher



Mexican Amberwing



Great Blue Heron



American Coot



# Coastal Sage Scrub, Cactus Scrub & Coyote Brush Scrub



California Towhee



California Box Thorn



California Gnatcatcher



Cactus Wren  
(locally extirpated)



White-crowned Sparrow



Southern Pacific Rattlesnake



# Nonnative Grasslands, Mustard Fields, and Native Flower Fields



Western Kingbird



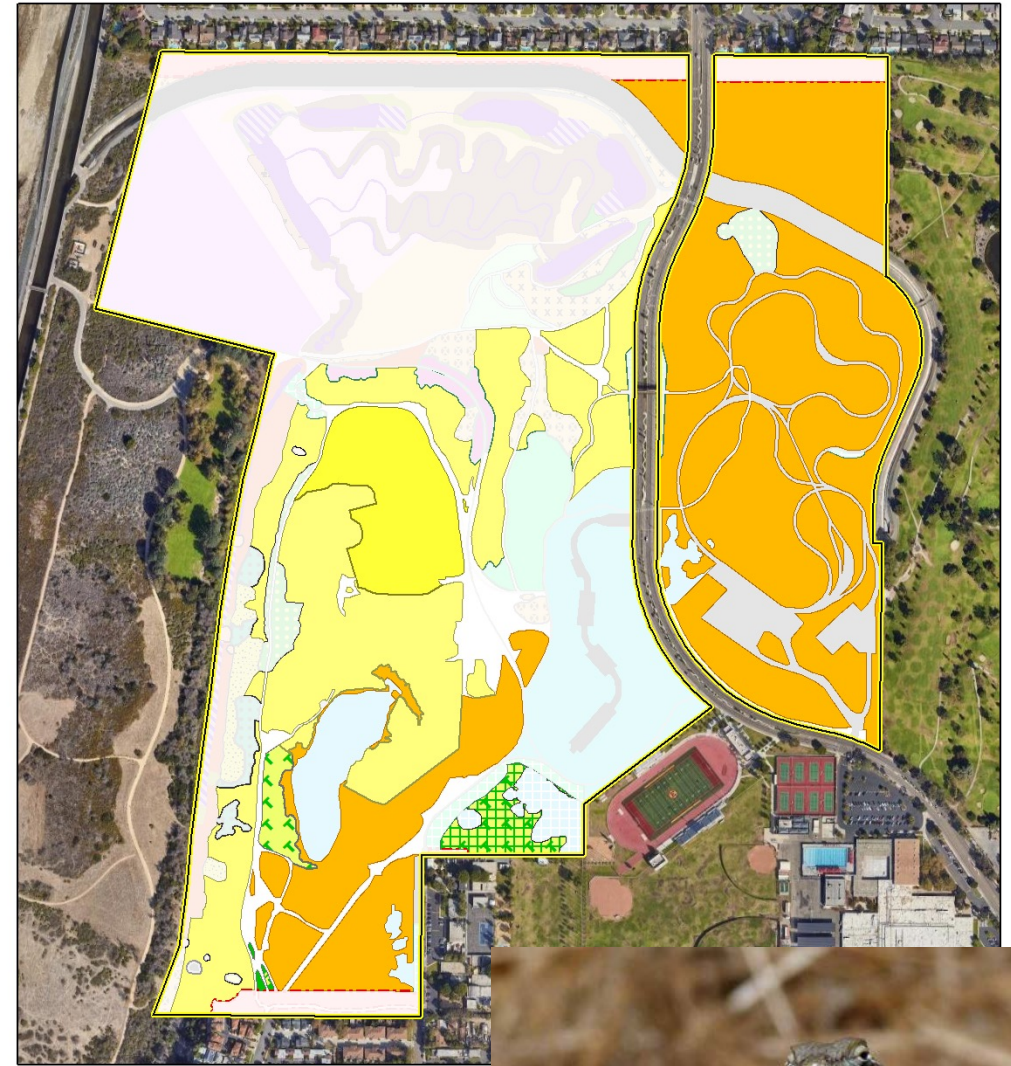
Northern Harrier



Burrowing Owl



Red-winged Blackbird



Say's Phoebe



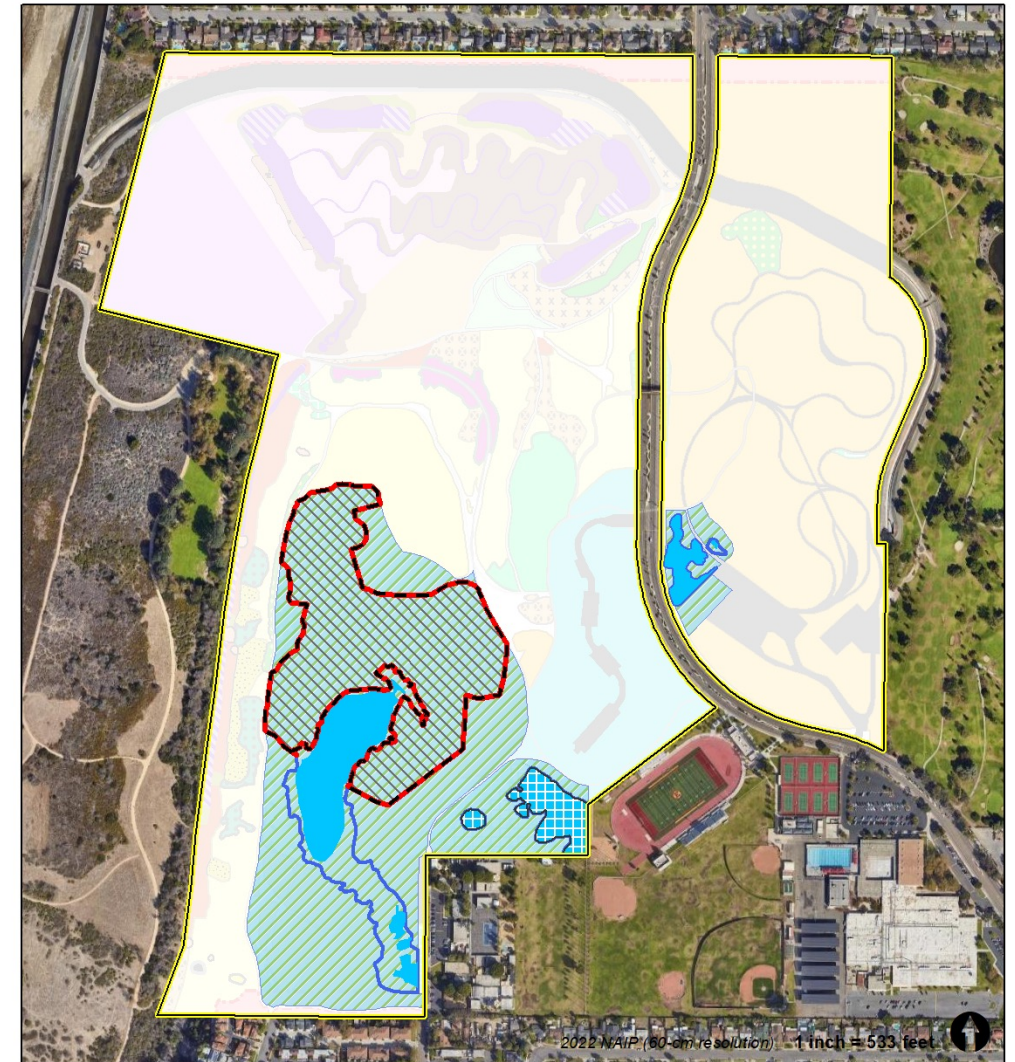
Side-blotched Lizard



# Vernal Pools



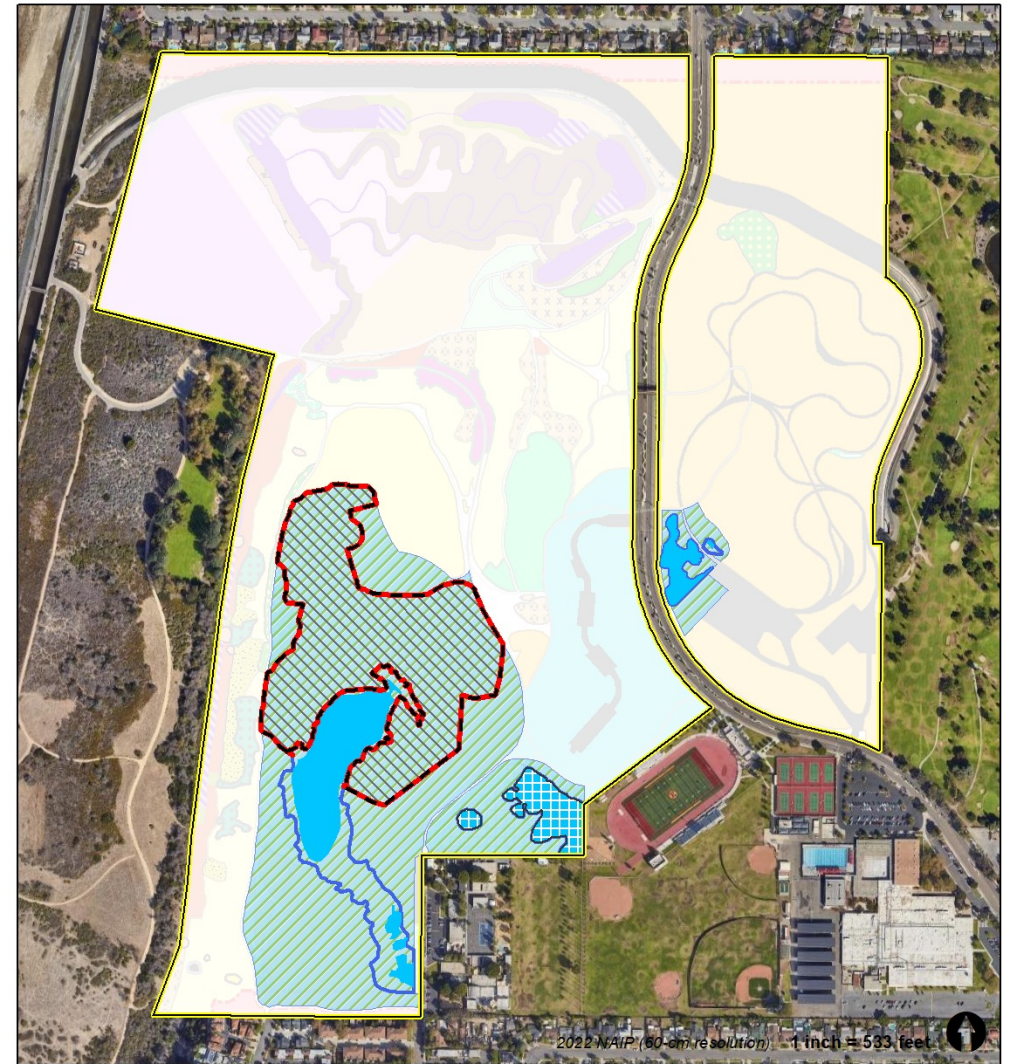
Vernal Pool Features 1, 4, 5, 6 and 7



Map Code	2023 Vegetation Map Unit Common Name	Symbol	Description
6600	Pale Spike Rush Vernal Pool Bottoms	Solid blue	Vernal Pool Bottoms
6650	Pale Spike Rush Vernal Pool Bottoms (Restoration Area)	Blue with grid pattern	Restoration Area
	Vernal Pool High Estimated High Flood Mark	Blue outline	High Flood Mark
	Vernal Pool Watershed (Remaining, Undeveloped Extent)	Green with diagonal lines	Watershed
	Fairview Park Boundary	Yellow outline	Park Boundary
	Improper Fill Material (Extent in 2023)	Red with diagonal lines	Improper Fill Material



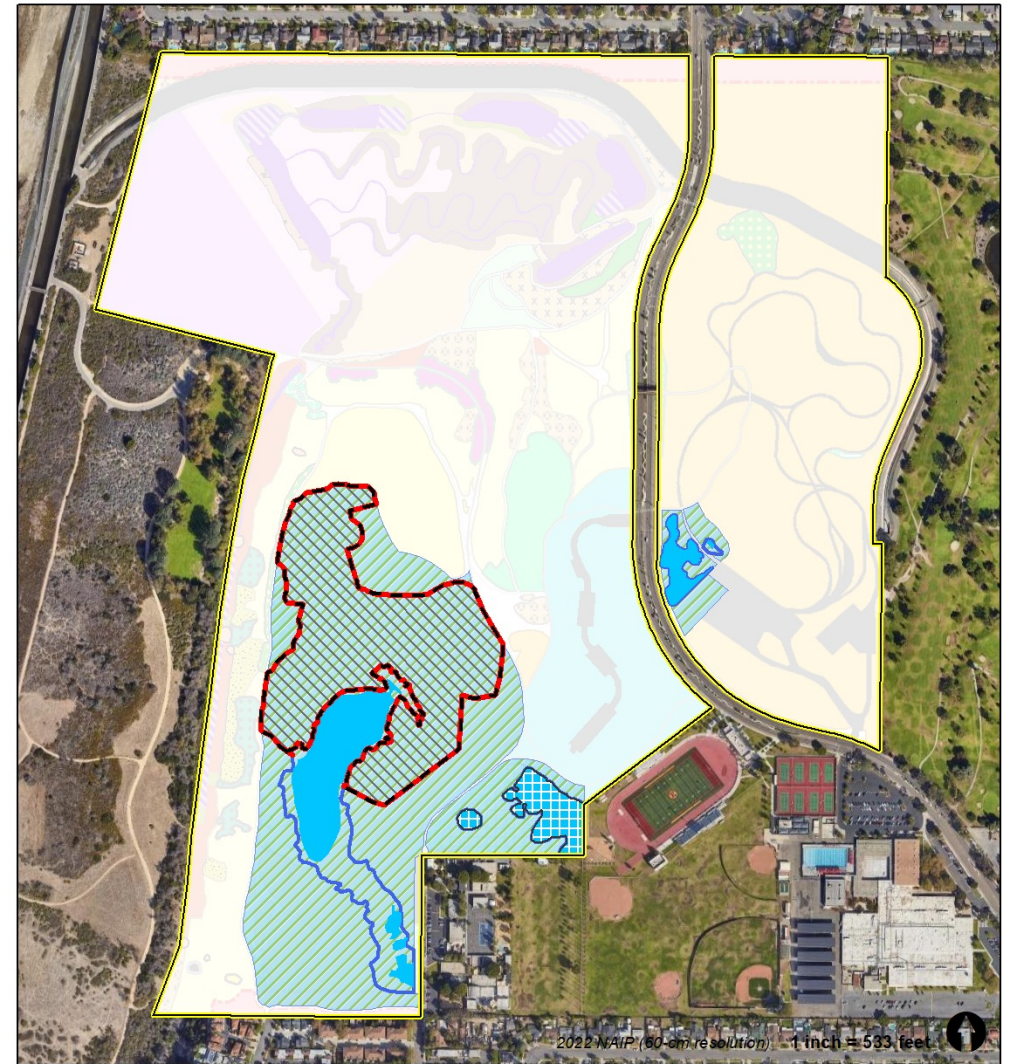
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6650	Pale Spike Rush Vernal Pool Bottoms (Restoration Area)	Blue Grid	
	Vernal Pool High Estimated High Flood Mark	Blue Outline	
	Vernal Pool Watershed (Remaining, Undeveloped Extent)	Green Hatched	
	Fairview Park Boundary	Yellow Outline	
	Improper Fill Material (Extent in 2023)	Red Hatched	



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	Vernal Pool High Estimated High Flood Mark	Blue Line	Flood Mark
	Vernal Pool Watershed (Remaining, Undeveloped Extent)	Green Grid	Watershed
	Fairview Park Boundary	Yellow Outline	Park Boundary
	Improper Fill Material (Extent in 2023)	Red Hatched	Fill Material







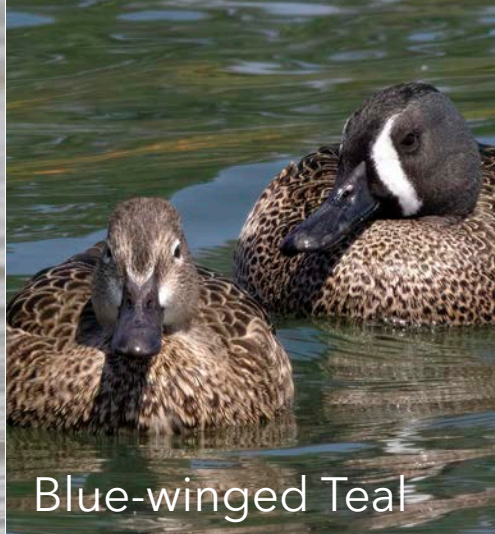
# Vernal Pools







Barn Swallow



Blue-winged Teal



Cliff Swallow



Greater Yellowlegs

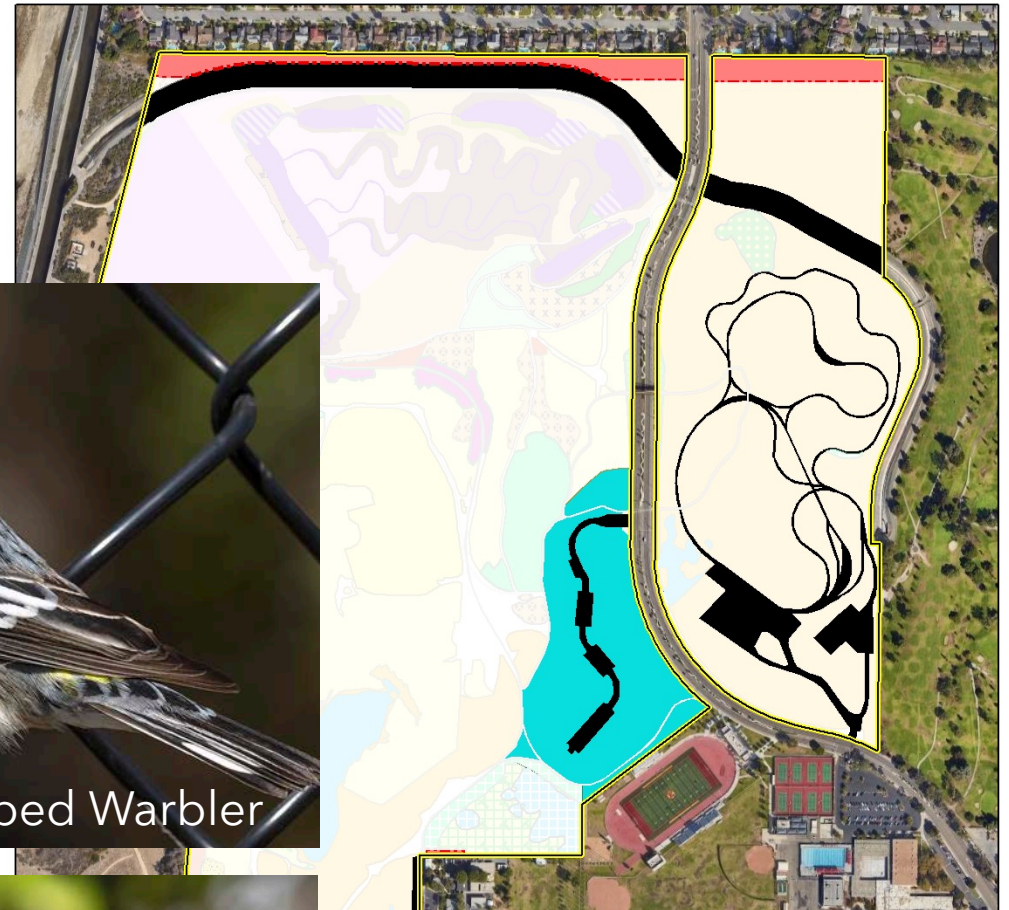


Snowy Egret



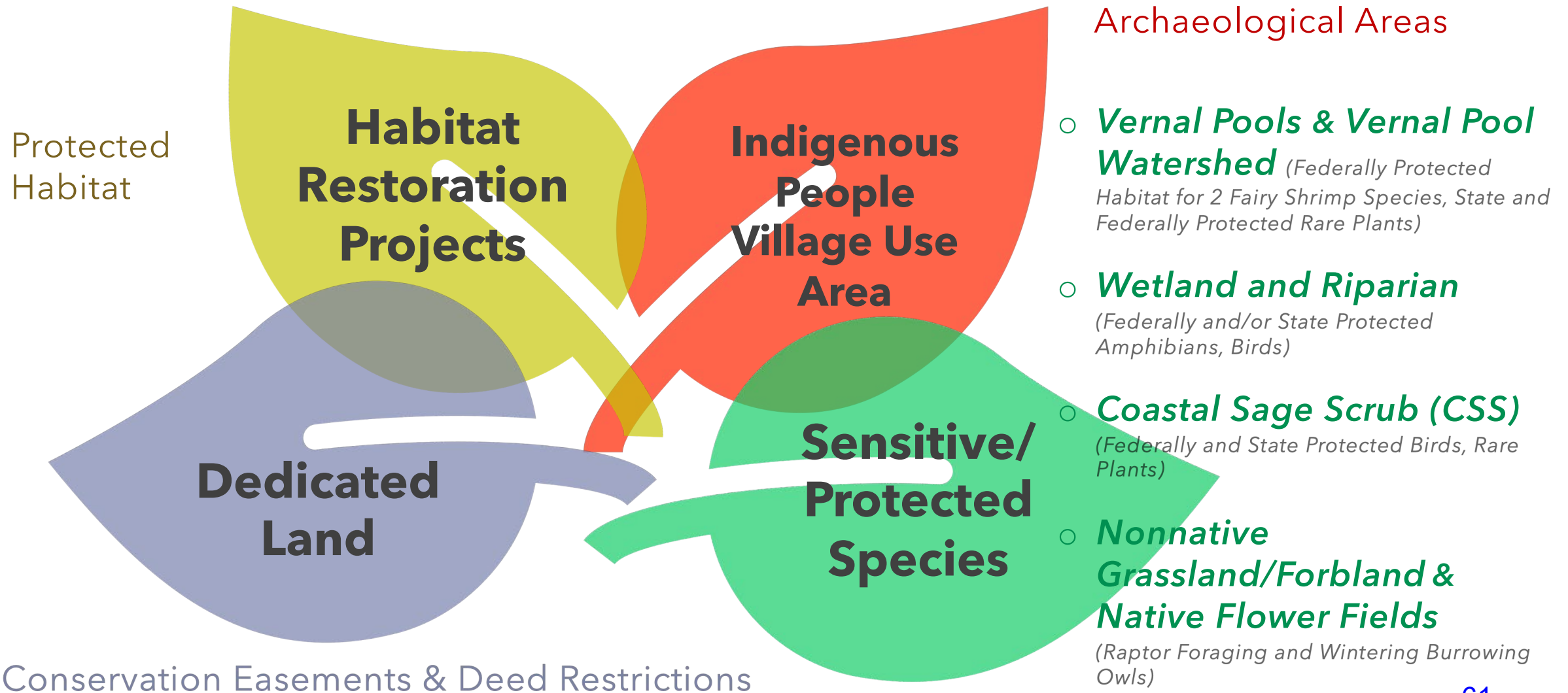


# Developed Areas





# Environmentally Sensitive Areas







# Habitat Restoration Opportunities

## Map Code | Habitat Restoration Targets (Common Veg Name)

-  1810 | Mulefat Thickets
-  1830 | Southern California Walnut Groves (W)
-  3120 | California Sagebrush – California Buckwheat Scrub
-  3140 | California Sunflower Bush – Ashy Buckwheat Scrub
-  3190 | California Sagebrush – Coast Prickly Pear Scrub
-  3210 | Black Sage Scrub
-  4310 | Fiddleneck – Phacelia Fields
-  6500 | Clustered Tarplant Fields

-  Fairview Park Boundary
-  Improper Fill Material (Extent in 2023)













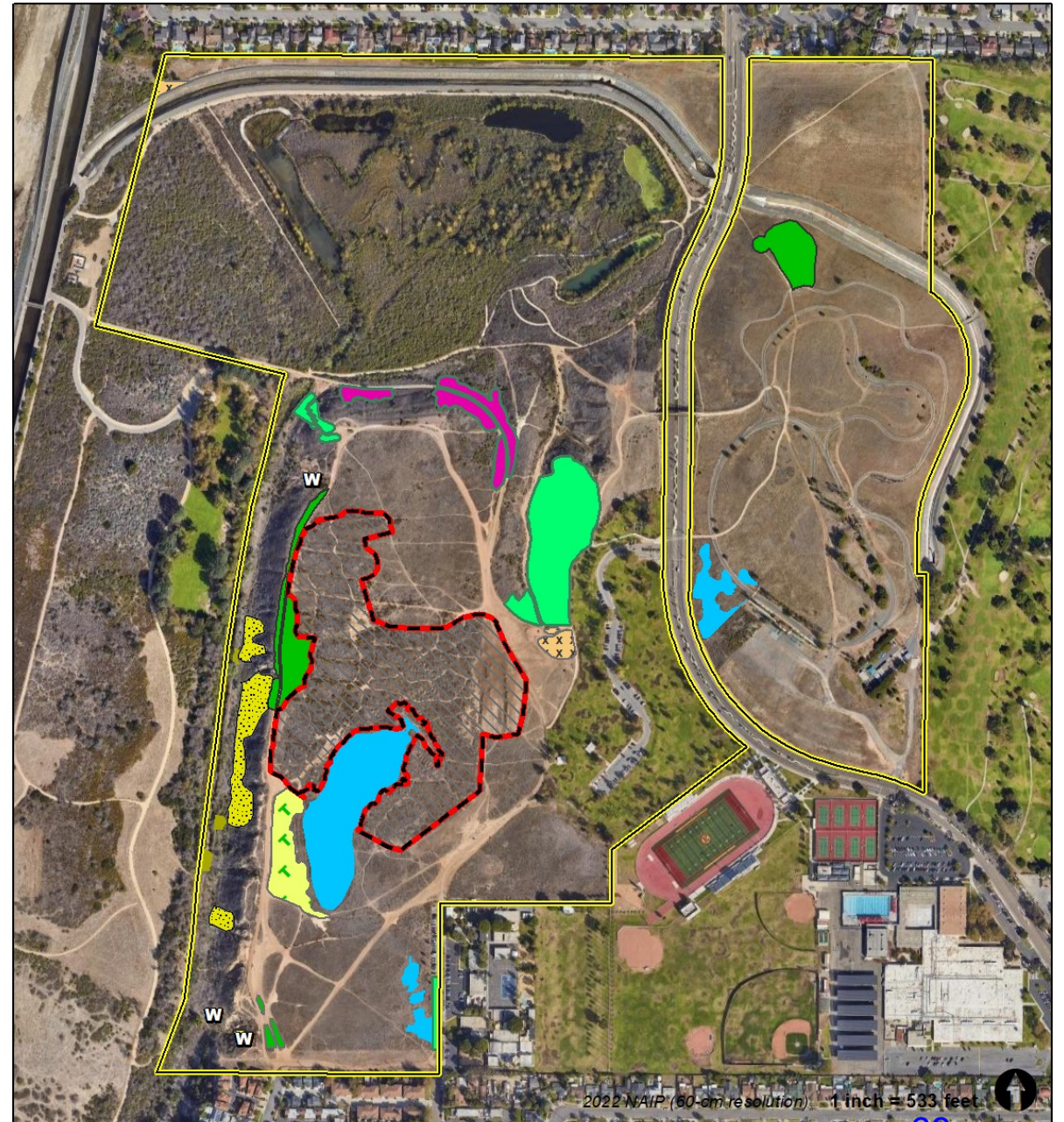
2022 NAIP (60-cm resolution) 1 inch = 533 feet



# Habitat Enhancement Opportunities

## Map Code | Habitat Enhancement Targets (Common Veg Name)






-  1820 | Arroyo Willow Thickets
-  1830 | Southern California Walnut Groves (W)
-  2310 | Coyote Brush Scrub
-  3120 | California Sagebrush – California Buckwheat Scrub
-  3195 | Purple Sage Scrub (Introduced Vegetation Community/Restoration Area)
-  3330 | Coast Goldenbush Scrub
-  4310 | Fiddleneck – Phacelia Fields
-  6500 | Clustered Tarplant Fields
-  6600 | Pale Spike Rush Vernal Pool Bottoms
-  8120 | Coast Prickly Pear Scrub
-  Fairview Park Boundary
-  Improper Fill Material (Extent in 2023)







# Other Management Opportunities

## Map Code | Other Management Options

-  1 | Invasive Plant Management
-  2 | Long-Term Management Plan (LTMP) Required for Vernal Pool Restoration Area (Features 5, 6 & 7)
-  3 | Fuel Management Plan that Anticipates Native Plant Palette Tolerant of Annual Summer Mowing
-  4 | Native Vegetation Enhancement, Including Wintering Burrowing Owl Habitat
-  5 | New Public Use Programming for Portions of the Manicured Lawn

-  Fairview Park Boundary
-  Improper Fill Material (Extent in 2023)

