

# **SESSION 1 – WILD NATURE**

- **Values – San Diego’s Special Wild Nature**
- **Threats to San Diego Wild Nature**
- **Solutions to Preserve San Diego Wild Nature**

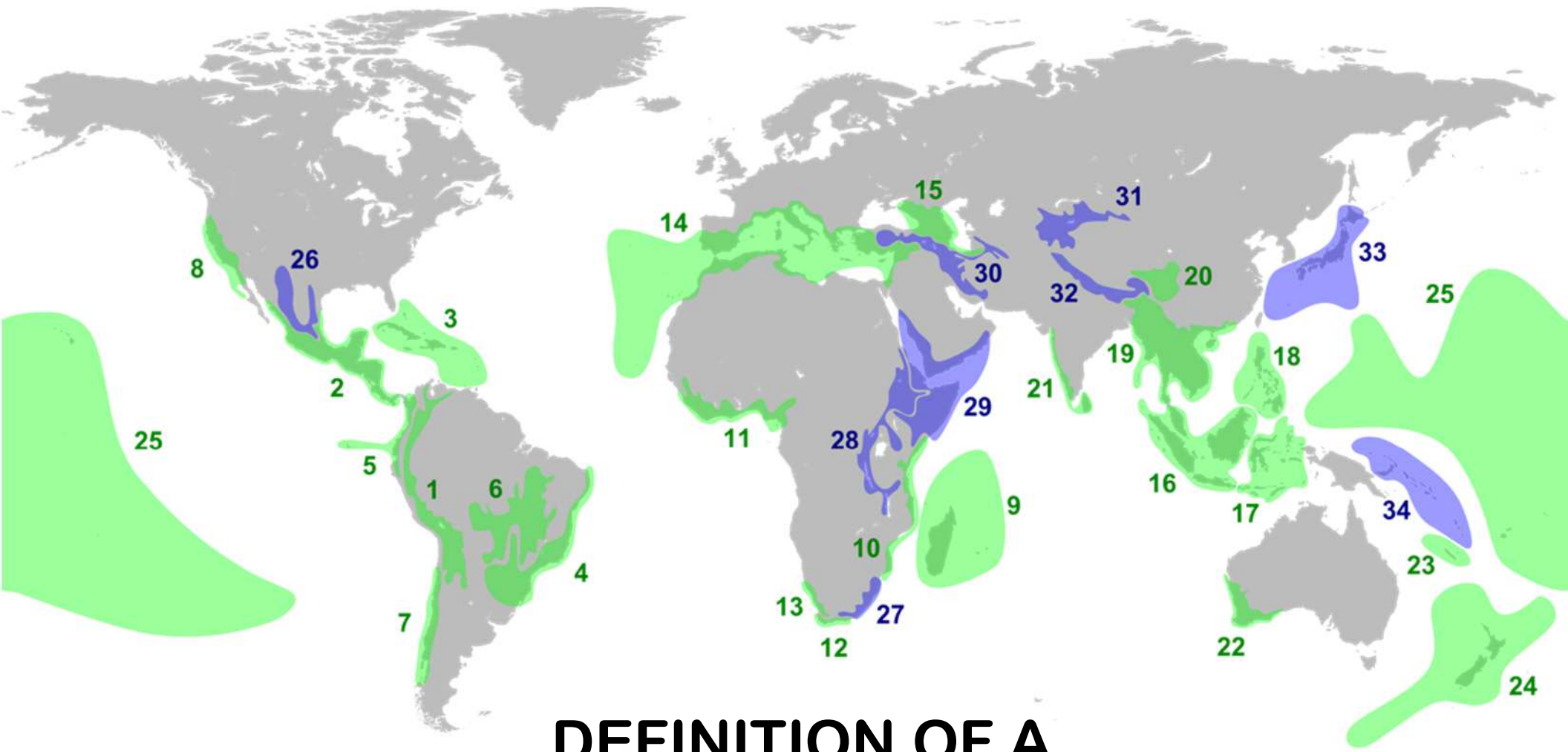
# **INTRODUCTION TO GLOBAL & LOCAL BIOLOGICAL DIVERSITY**



**IS BIOLOGICAL DIVERSITY  
("BIODIVERSITY")?**

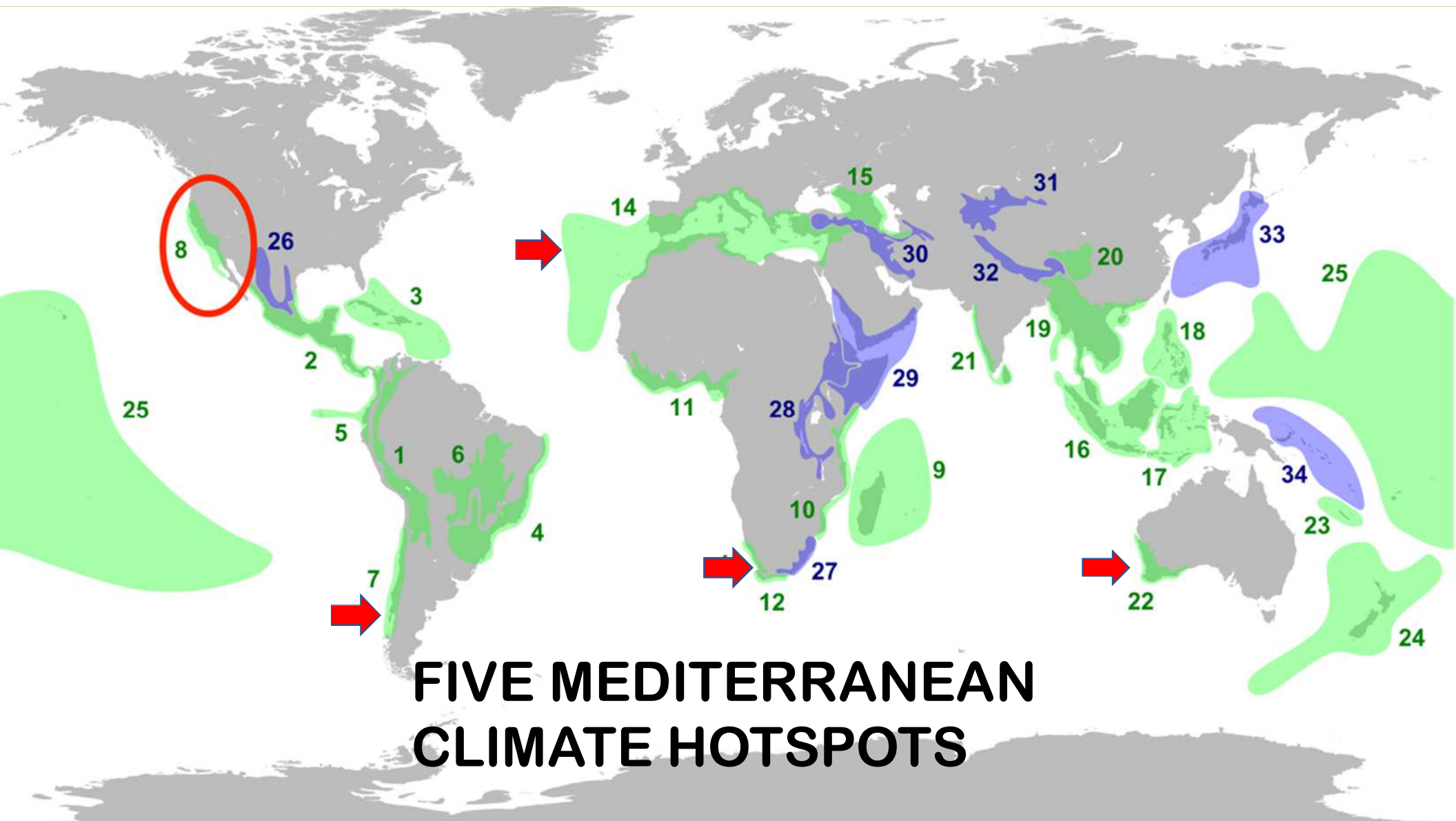
**total variety of life on Earth**

# GLOBAL BIODIVERSITY HOTSPOTS



**DEFINITION OF A  
BIODIVERSITY HOTSPOT**





# FIVE MEDITERRANEAN CLIMATE HOTSPOTS

# CALIFORNIA FLORISTIC PROVINCE

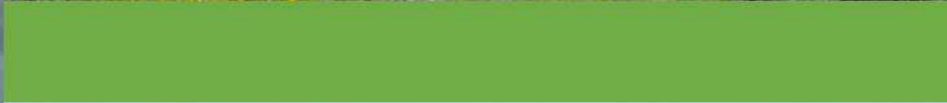






# SAN DIEGO COUNTY BIODIVERSITY











# VALUES – SAN DIEGO'S SPECIAL WILD NATURE

- **Michael Wall**, Vice President of Science and Conservation and Curator of Entomology, San Diego Natural History Museum
- **Pete Bloom**, Vice President of Bloom Biological and President of the non-profit Bloom Research







# THREATS TO SAN DIEGO WILD NATURE

# **GLOBAL & LOCAL BIODIVERSITY CRISIS**

# CONTEXT FOR GLOBAL & LOCAL BIODIVERSITY CRISIS

- Six major extinction events in history of life on Earth
- Permian-Triassic extinction 252 million years ago was largest with loss of 96% of marine species and 70% of land animals

# CONTEXT FOR GLOBAL & LOCAL BIODIVERSITY CRISIS

- **United Nations study in May – 20% decline of land-based species, 40% decline of amphibian species, 33% decline of marine mammals and corals**
- **New study in *Science* – North American Bird population decline by 3 billion**

**VIDEO –**  
**Global drivers of loss of  
biodiversity & wild nature**



# CONTEXT FOR GLOBAL & LOCAL BIODIVERSITY CRISIS

- Most global extinction events have taken place over millions of years
- Current “Anthropocene” extinction event over just 10,000 years with most extinctions in last 100 years is predicted to eliminate at least 50% of all species and has been caused by a single species.



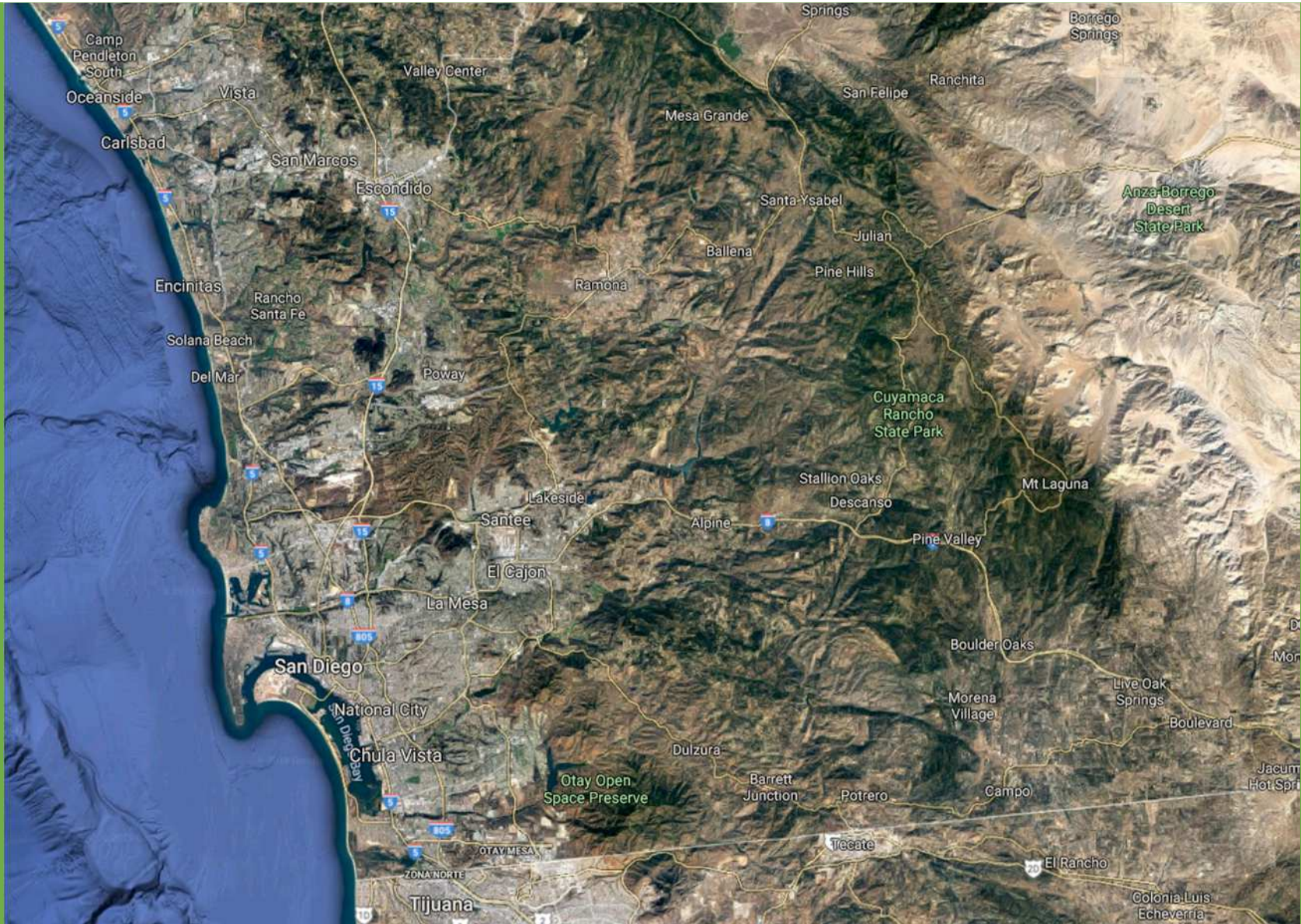


# LOCAL DRIVERS OF LOSS OF SAN DIEGO BIODIVERSITY

- **Habitat destruction & fragmentation**
- **Edge effects (overly frequent fire, invasive species, harmful recreation)**
- **Pollution**
- **Climate destruction**

# LOCAL DRIVERS OF LOSS OF SAN DIEGO BIODIVERSITY

- **HABITAT DESTRUCTION & FRAGMENTATION**
- Edge effects (overly frequent fire, invasive species, harmful recreation)
- Pollution
- Climate destruction









Guillermo Arias / AP

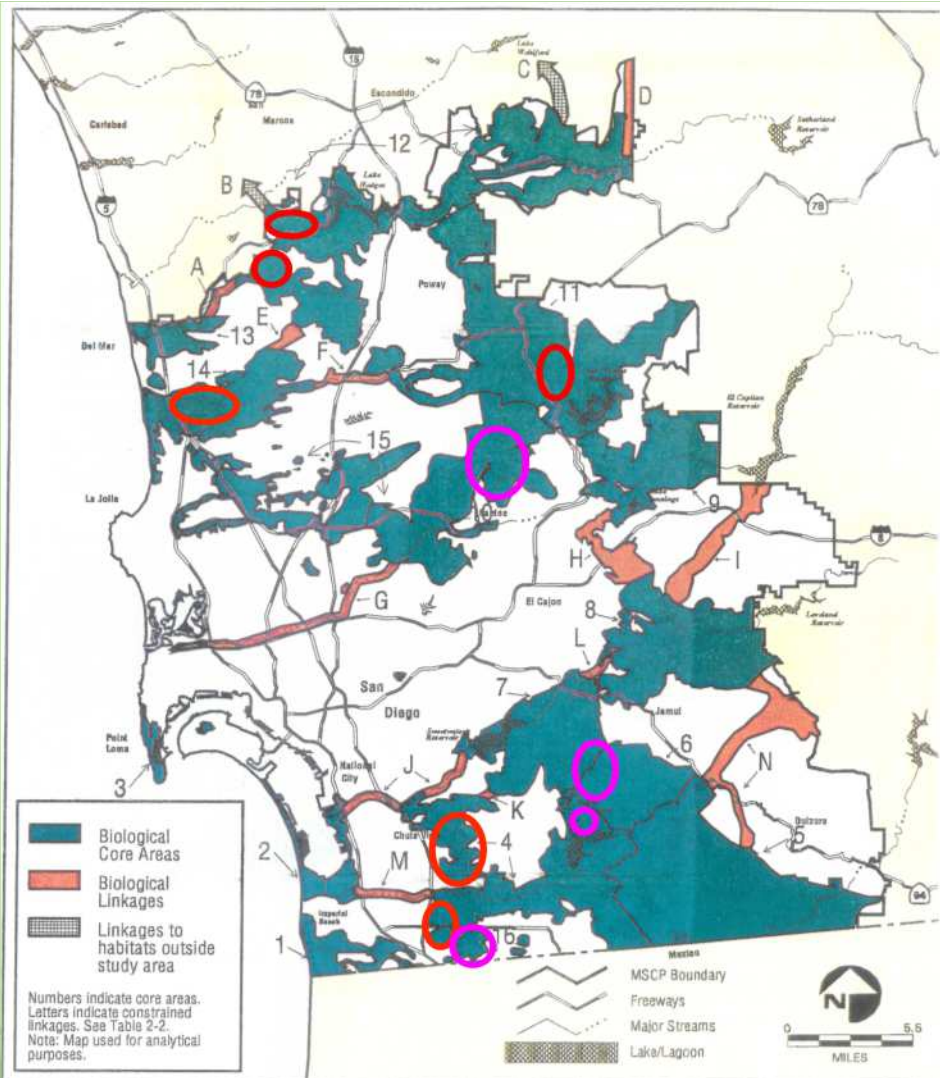












**EPICENTER OF SAN  
DIEGO COUNTY  
BIODIVERSITY LOSS –  
VERNAL POOLS**

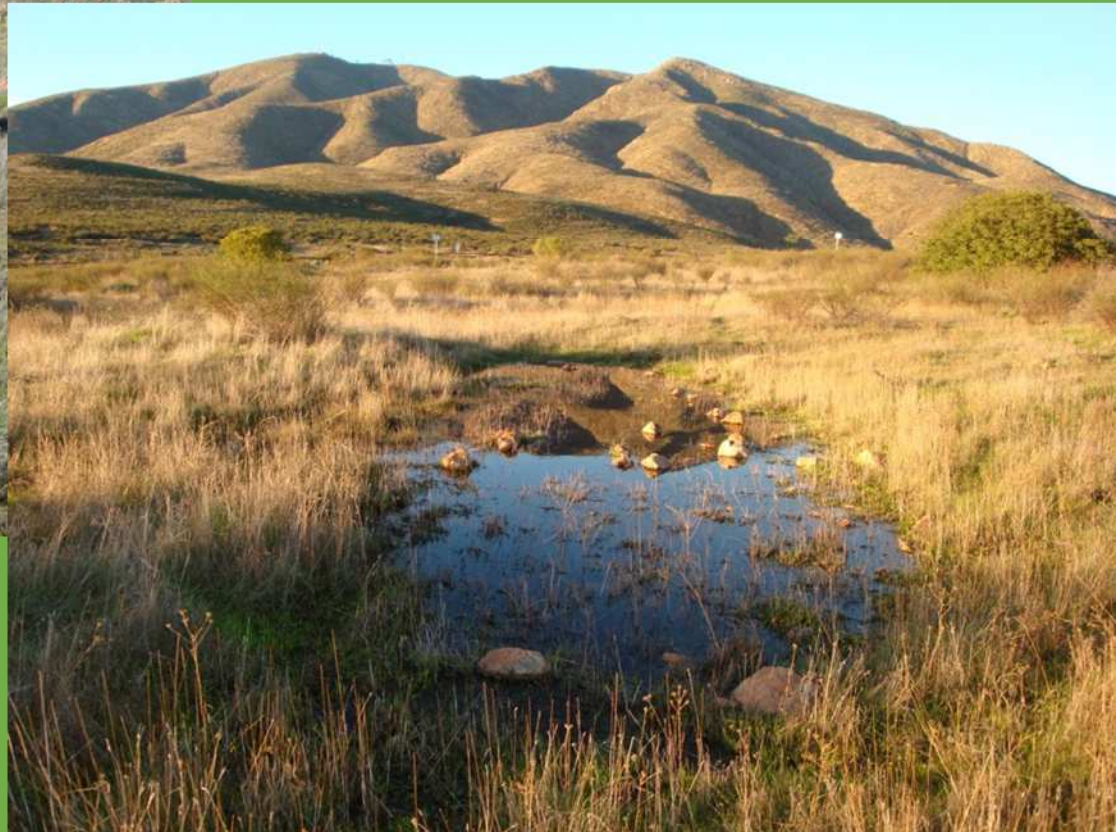




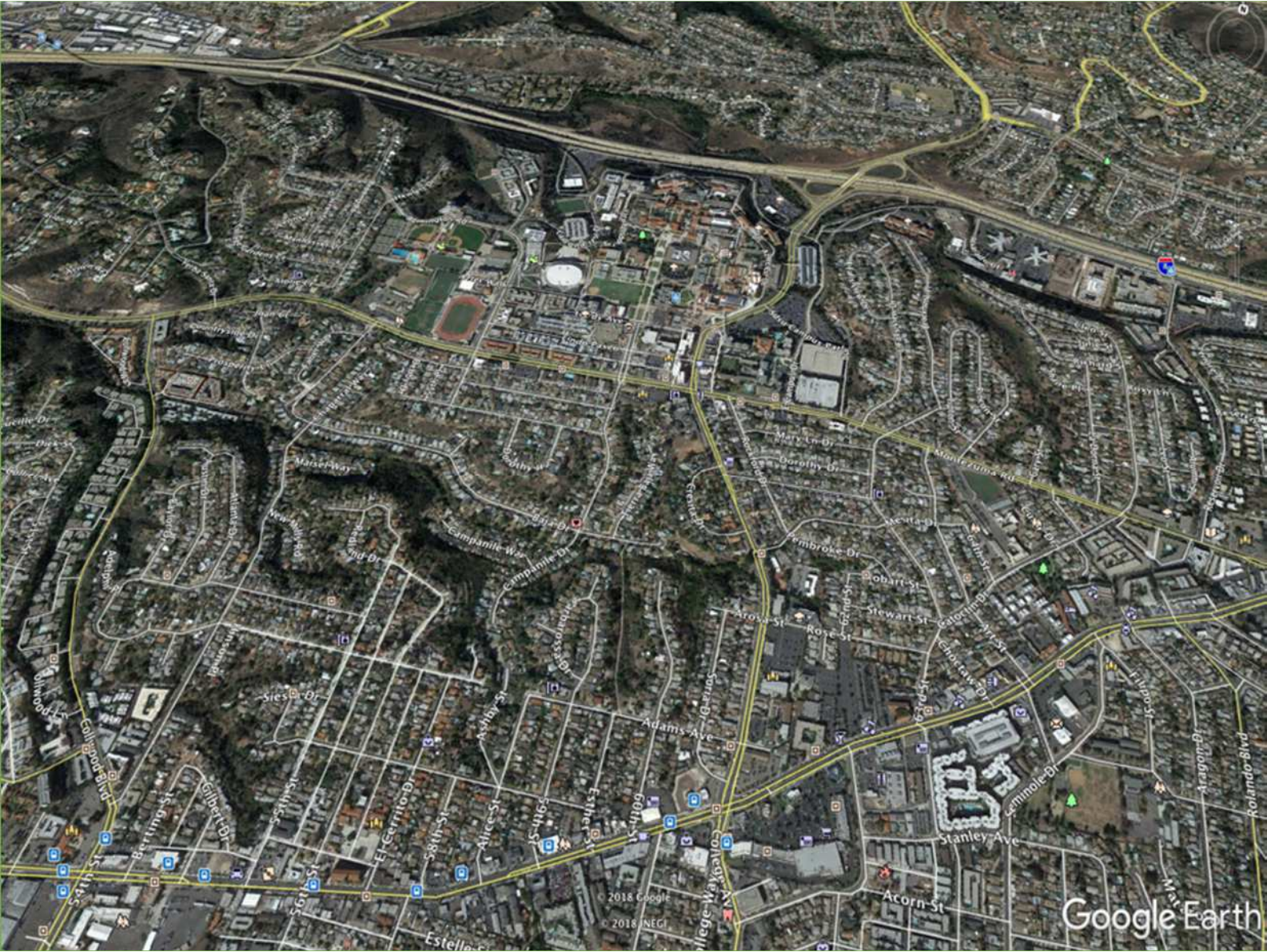








FIGURE 2. Aerial photograph taken in 1928 of the area now occupied by San Diego State University.

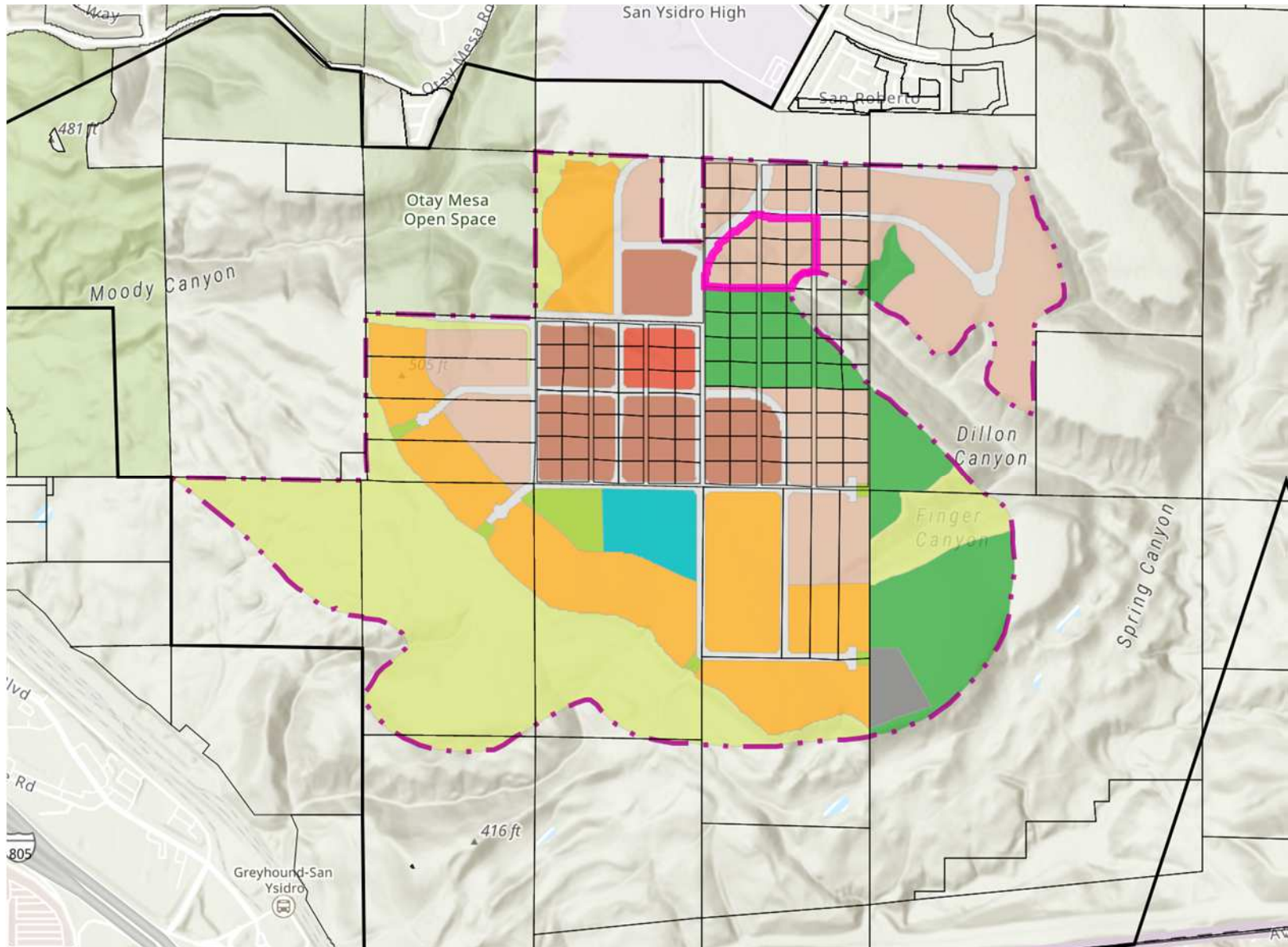


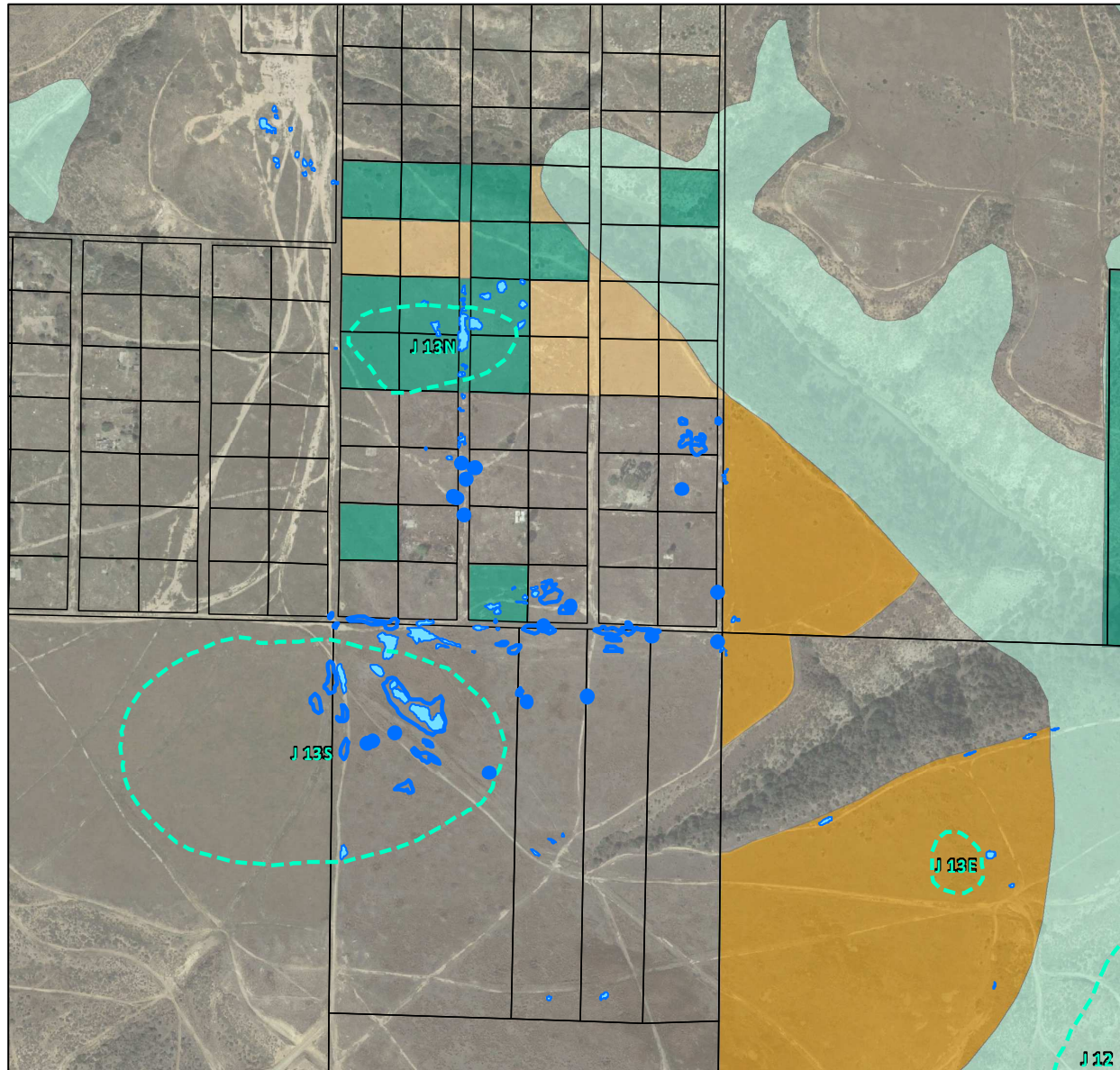
Google Earth

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**Specific Plan Area**





**EPICENTER OF SAN  
DIEGO COUNTY  
BIODIVERSITY LOSS –  
COASTAL SAGE  
SCRUB**

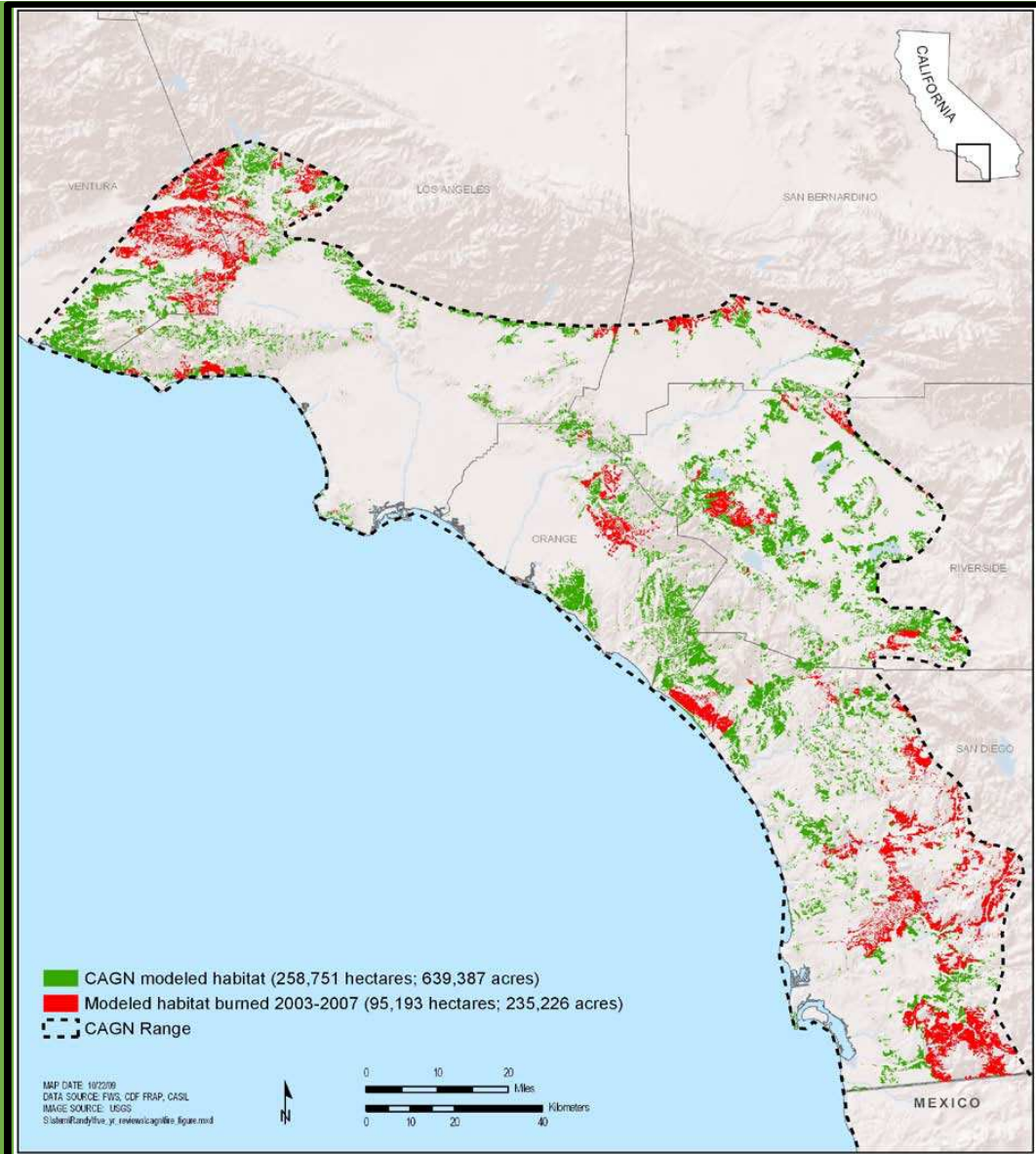






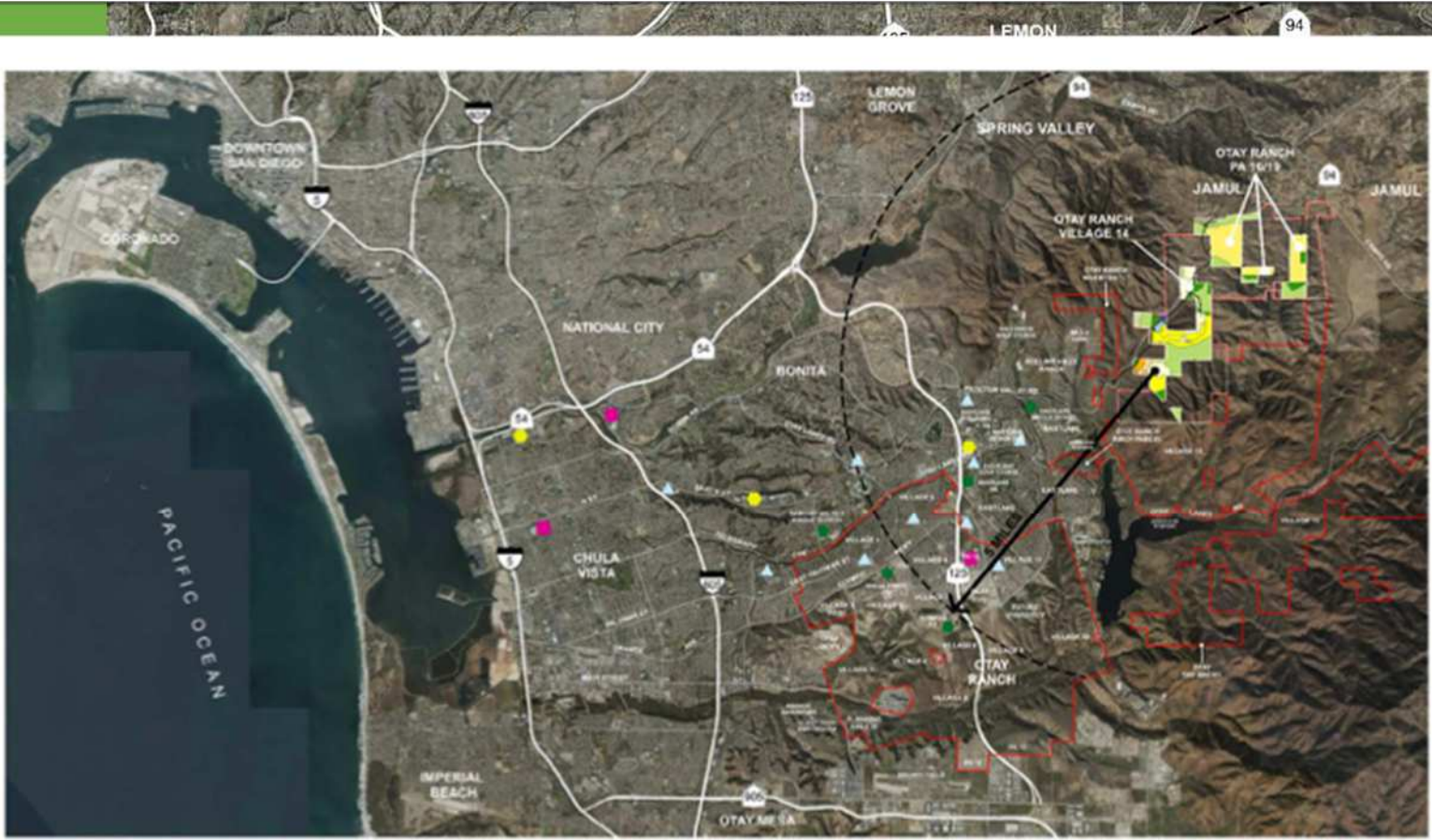












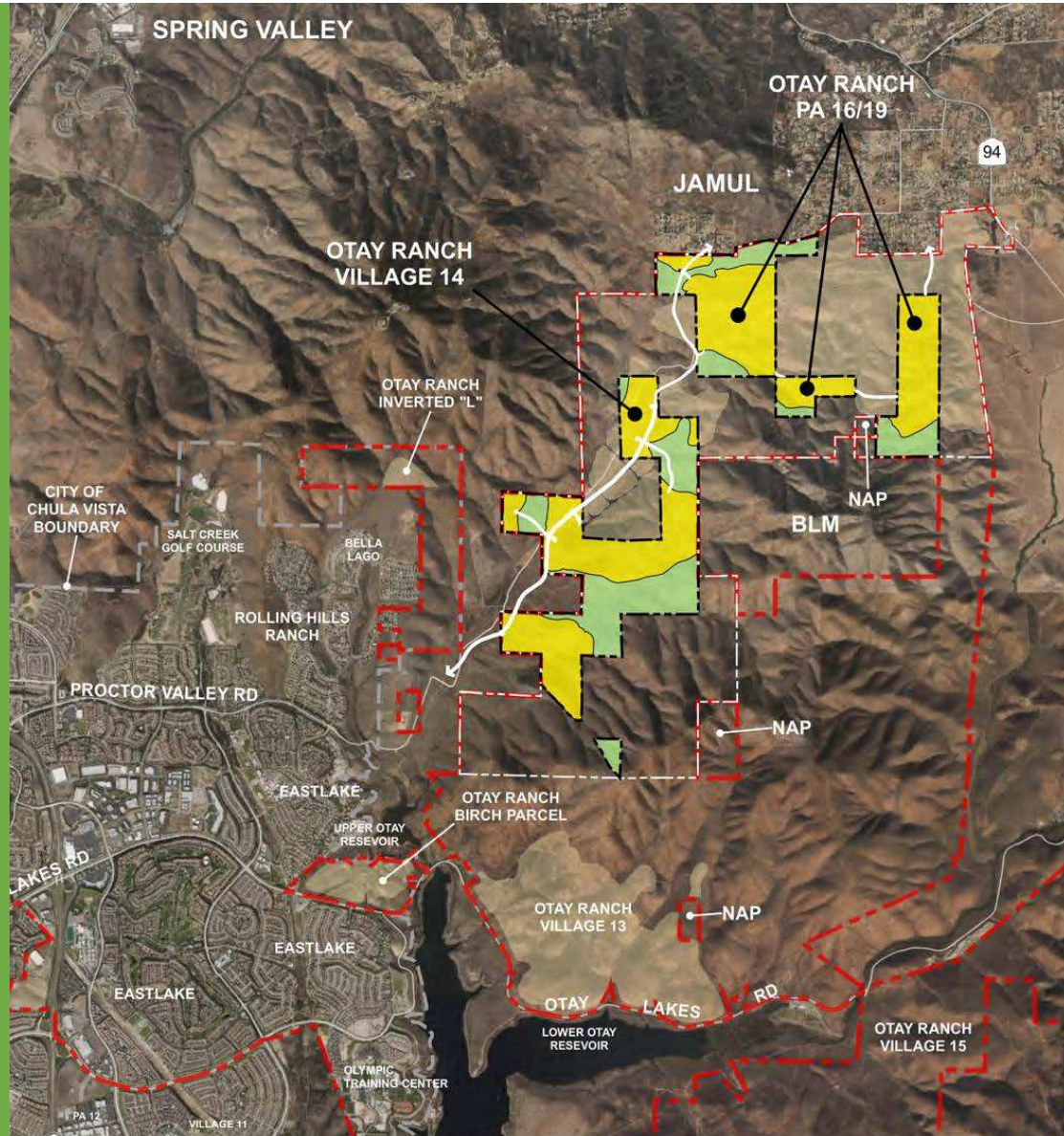
**LEGEND**

- RETAIL**
- REGIONAL MALL
  - BIG BOX (COSTCO, TARGET, WALMART, ETC.)
  - ▲ LOCAL (STRIP MALL, W/GROCERY AND/OR PHARMACY)
  - SECONDARY SCHOOL (7-12)
  - OTAY SIRP BOUNDARY



SOURCE: 2019 ACS DATA, GOOGLE EARTH, AND WORLD AERIALS





JACKSON PENDO

# THE ADARA VILLAGE CORE



Elementary School

Retail & Community Center

Village Green Park



# LOCAL DRIVERS OF LOSS OF SAN DIEGO BIODIVERSITY

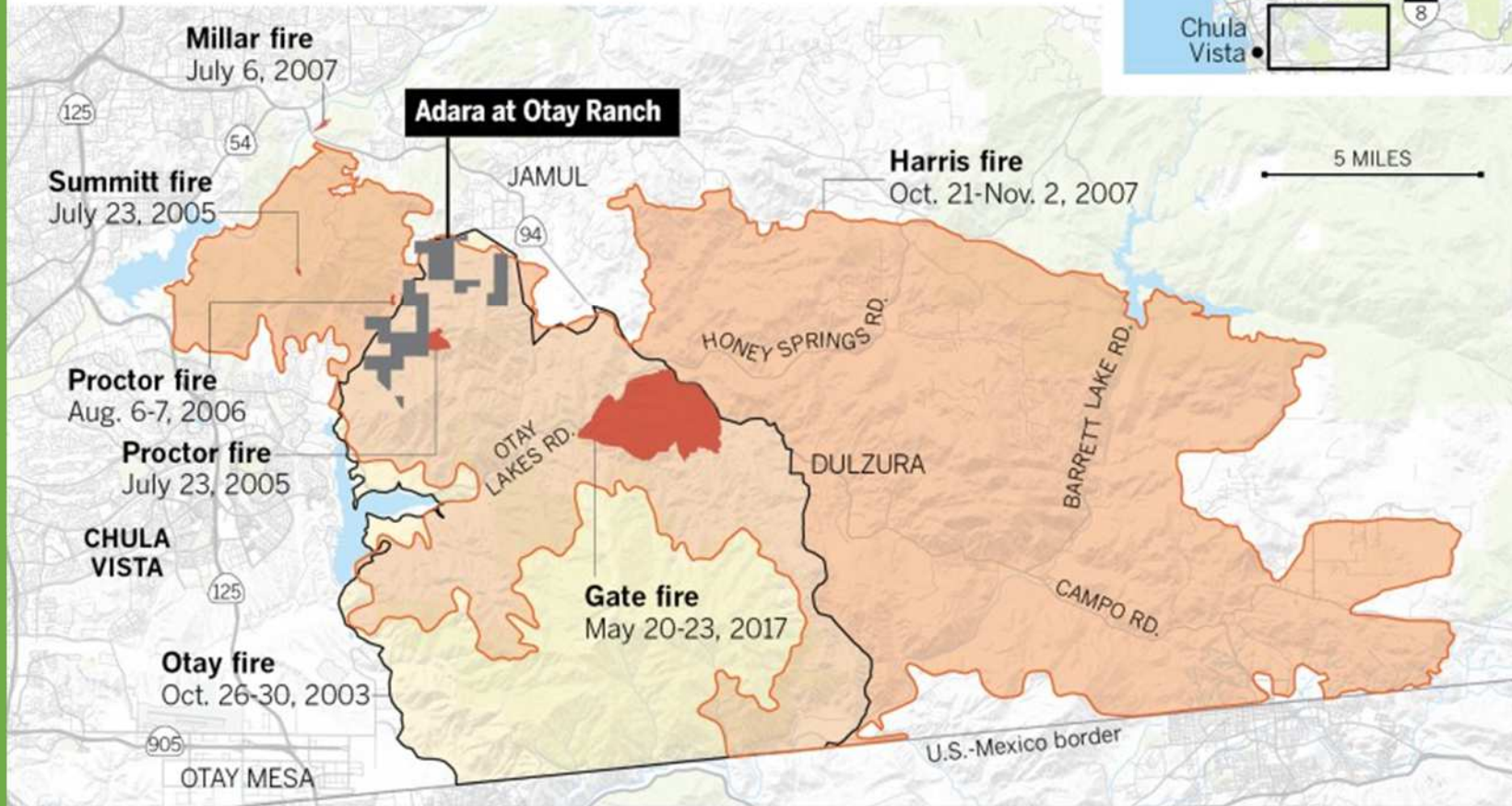
- Habitat destruction & fragmentation
- **EDGE EFFECTS (OVERLY FREQUENT FIRE, INVASIVE SPECIES, HARMFUL RECREATION)**
- Pollution
- Climate destruction

# EDGE EFFECTS



## Fires in Adara at Otay Ranch development area

Since 2003, there have been seven fires that have burned more than 130,000 acres in the area of the proposed Adara at Otay Ranch development, according to Cal Fire. The largest was the Harris fire in 2007 and the most recent was the Gate fire in 2017.



Sources: Nextzen; OpenStreetMap; Esri; Cal Fire; Dudek

MICHELLE GILCHRIST U-T

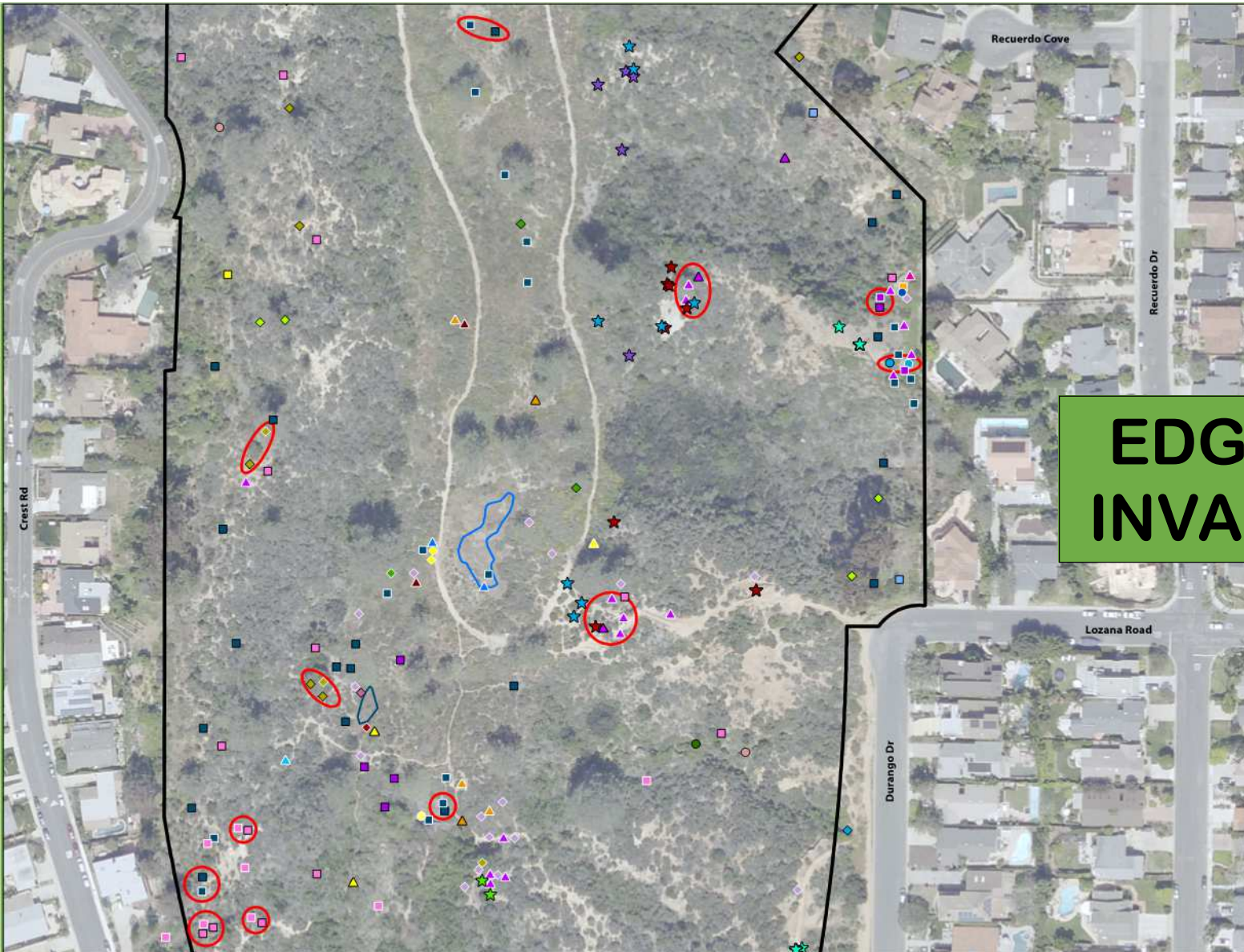
# EDGE EFFECTS – INVASIVE INSECTS





**EDGE EFFECTS –  
INVASIVE INSECTS**





# EDGE EFFECTS – INVASIVE PLANTS







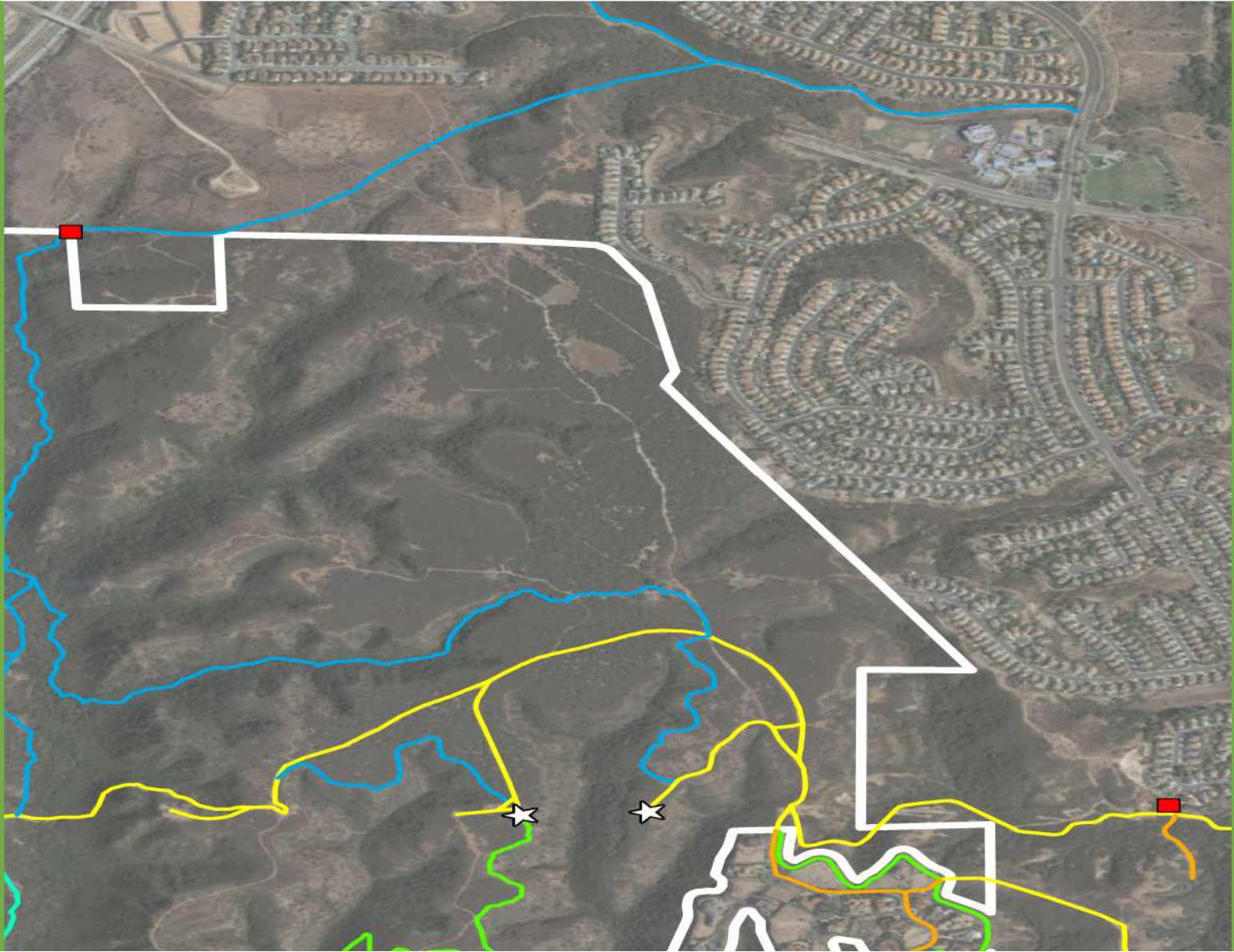


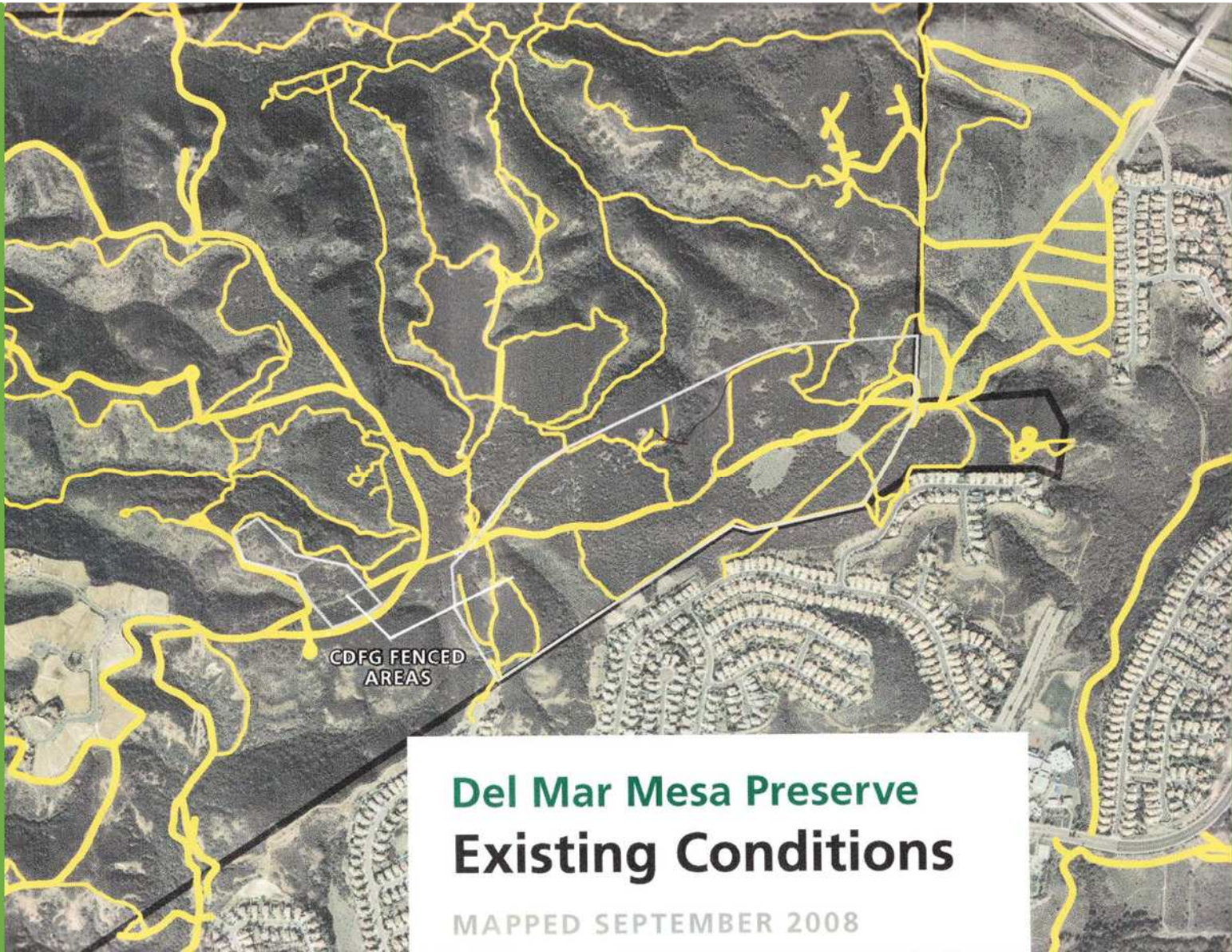




## **EDGE EFFECTS – HARMFUL RECREATION**







CDFG FENCED  
AREAS

# Del Mar Mesa Preserve Existing Conditions

MAPPED SEPTEMBER 2008









# LOCAL DRIVERS OF LOSS OF SAN DIEGO BIODIVERSITY

- Habitat destruction & fragmentation
- Edge effects (invasive species, harmful recreation)
- **POLLUTION**
- **CLIMATE DESTRUCTION**



# SOLUTIONS TO PRESERVE SAN DIEGO WILD NATURE

- **Bill Tippets**, Southwest Wetlands Interpretive Association
- **Susan Baldwin**, Safeguard our San Diego (SOS) Countryside
- **Mendel Stewart**, San Diego End Extinction Campaign

# WHY DOES BIODIVERSITY MATTER?

- Practical
- Spiritual
- Philosophical