



# **Volunteer-Led Cactus Wren Surveys**

**Palomar Audubon, SDMMP, SDZWA, USGS**

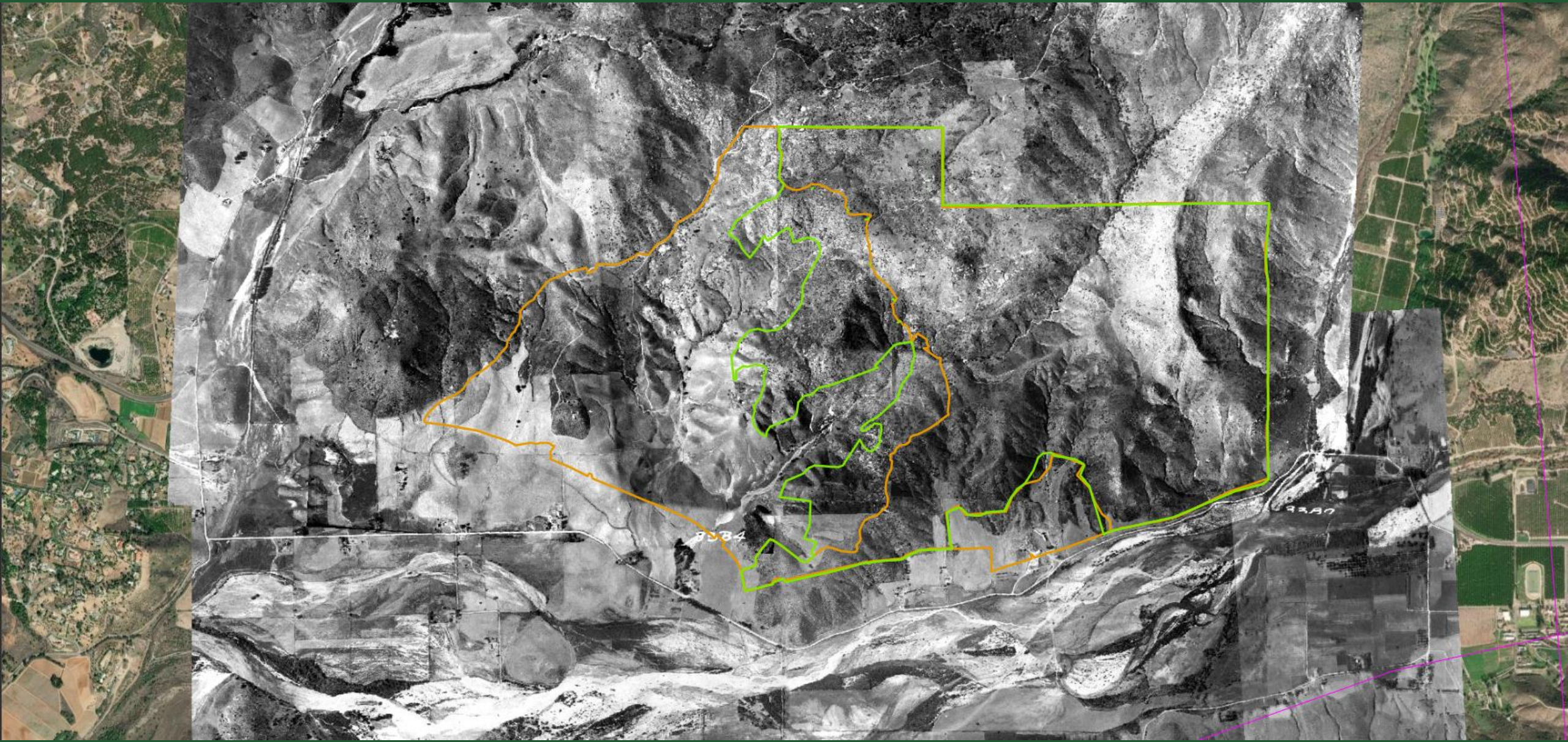
**Madison Wilson, Tsaiwei Olee**

**BIODIVERSITY RESERVE  
900 ACRES**



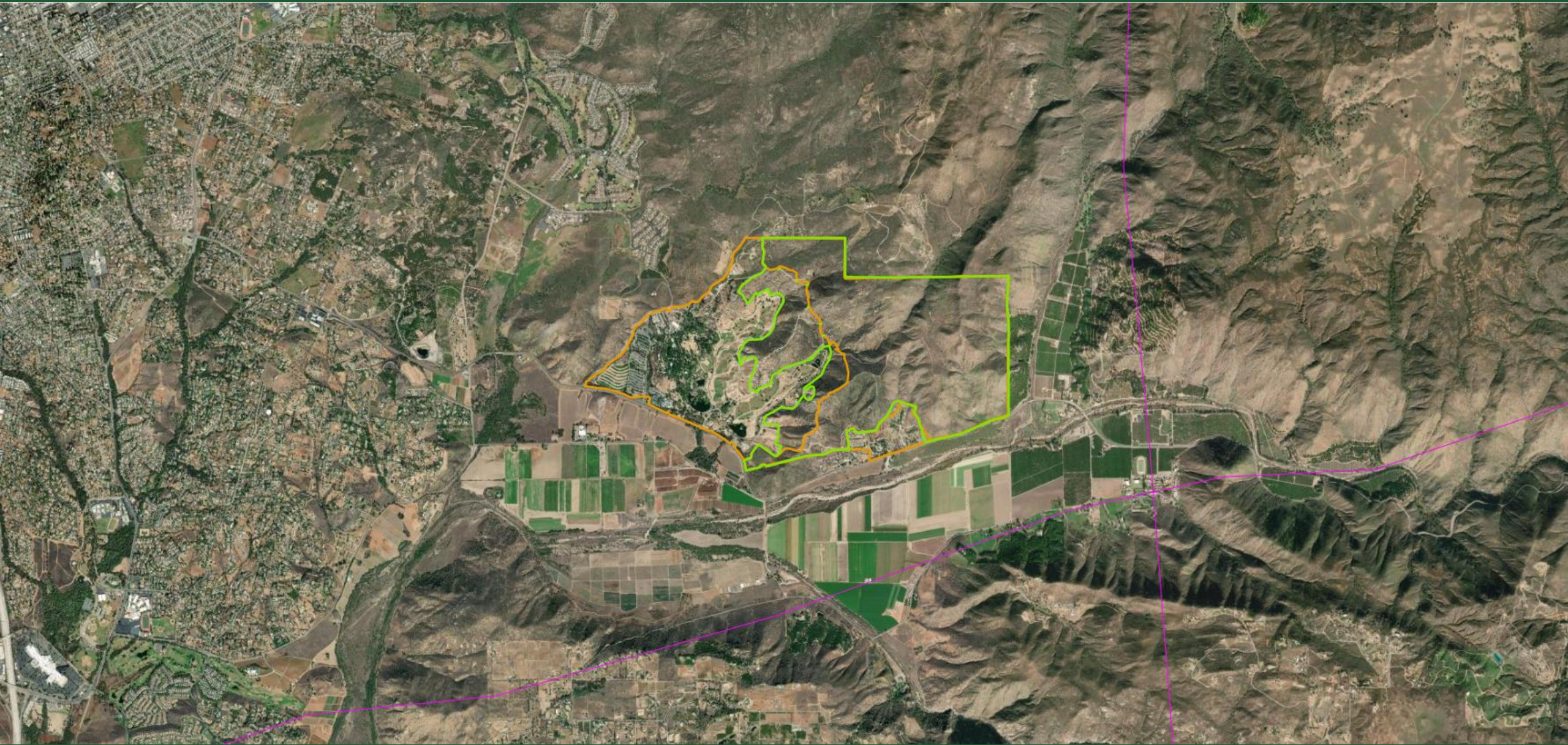
**SAMAGATUMA  
650 ACRES**

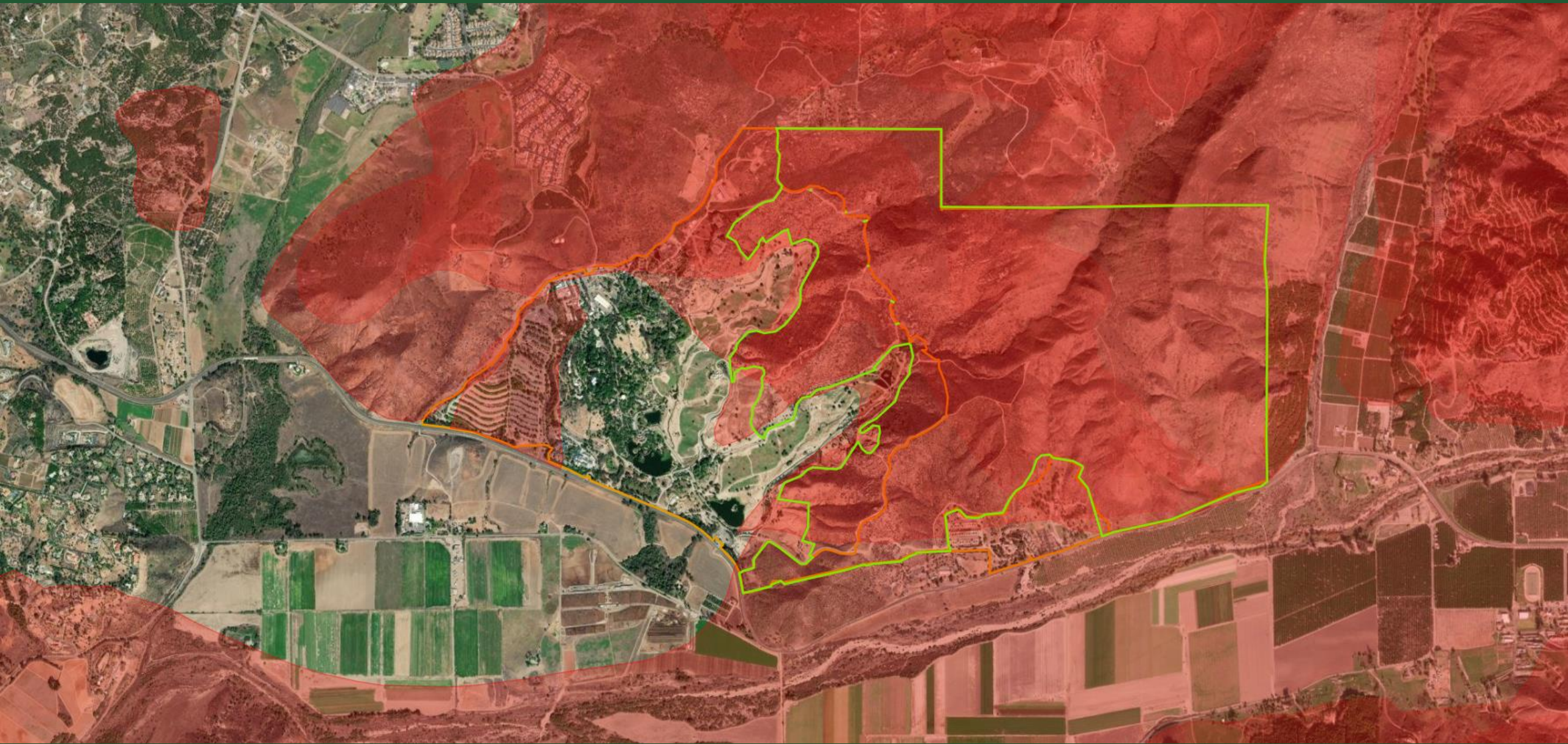




8584

8580



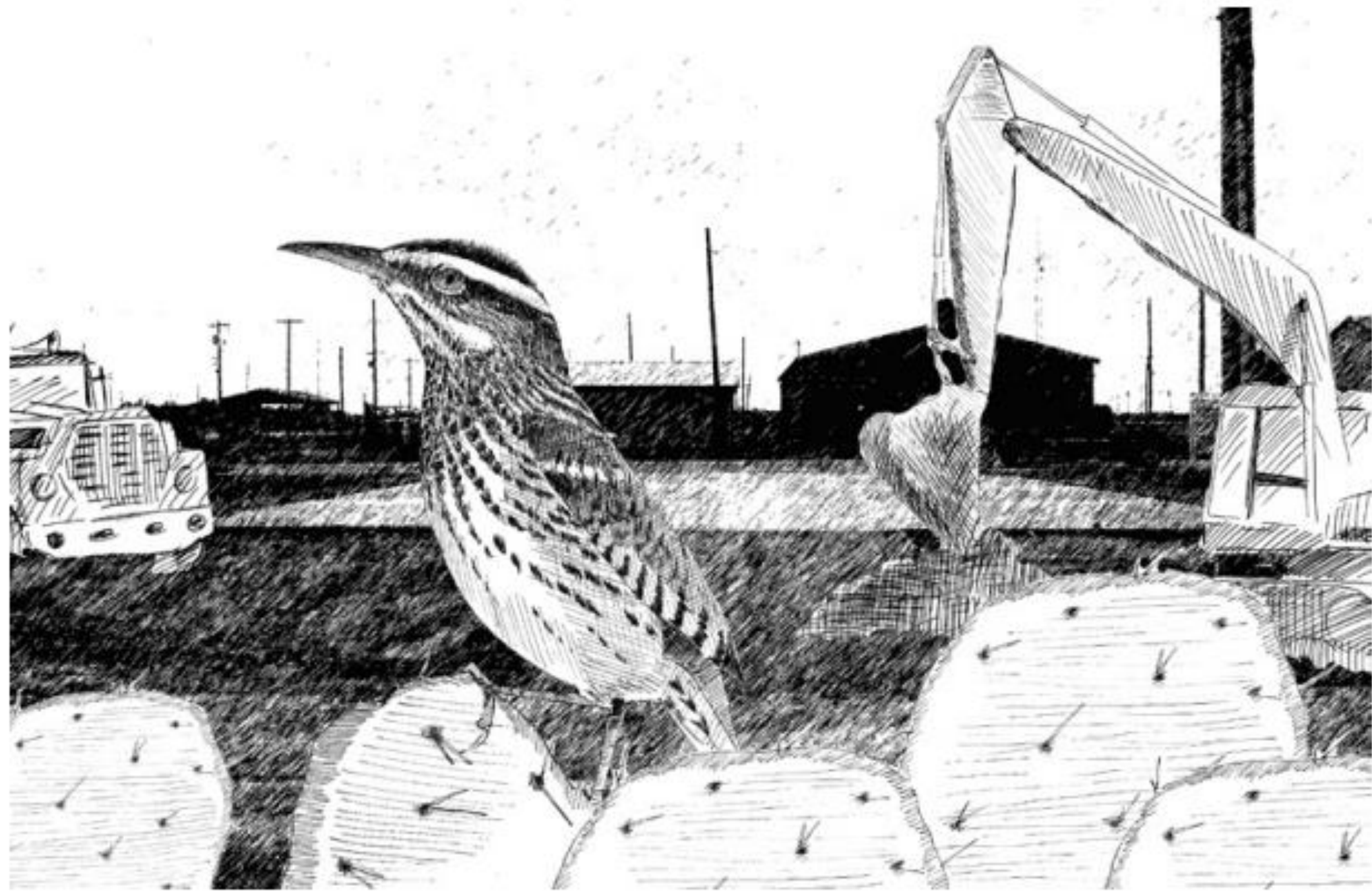




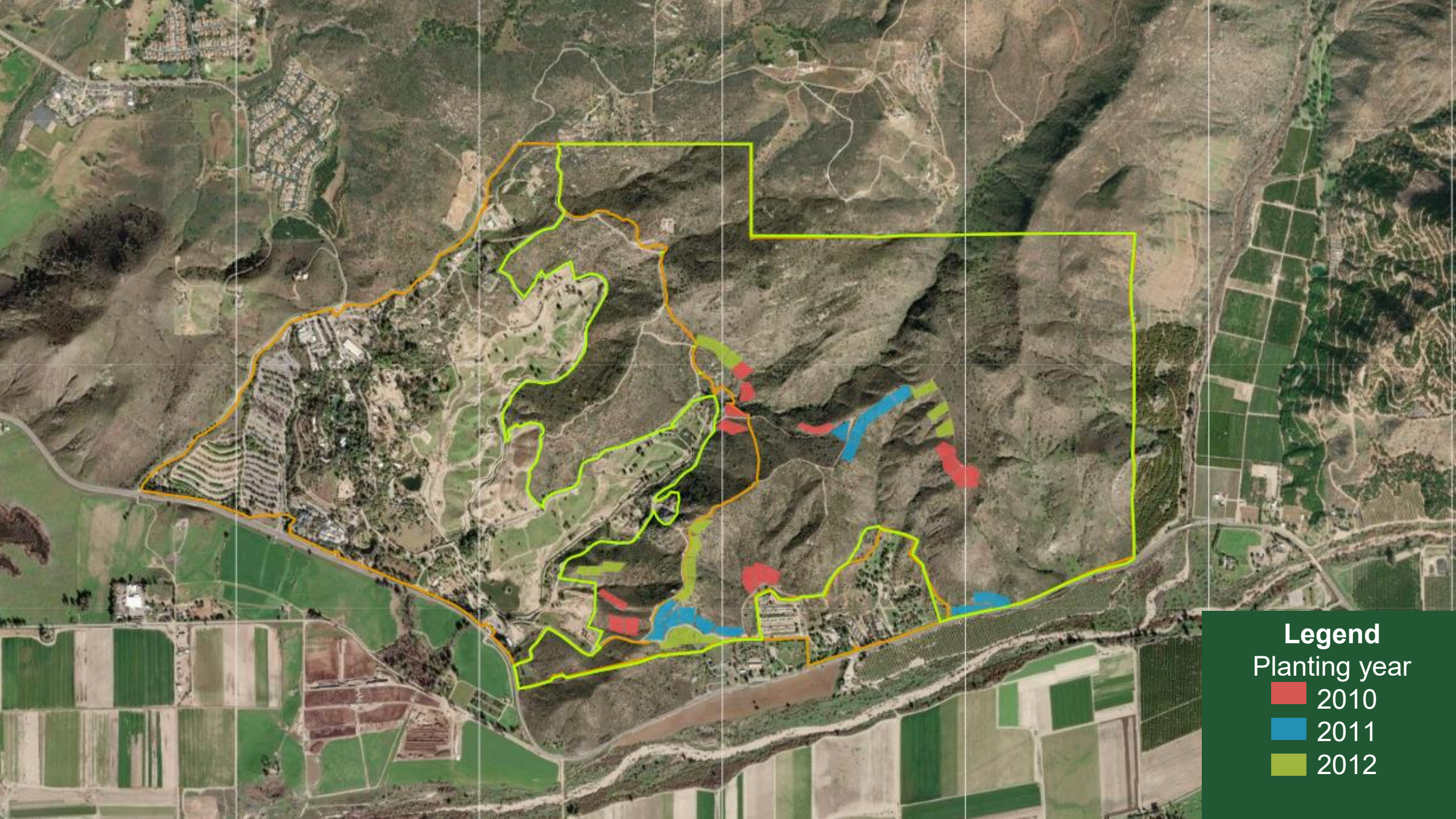


A coastal cactus wren is perched on a cholla cactus. The bird has a brown cap, a white breast with black spots, and a black and white striped tail. The cactus is green with many sharp spines. The background is a soft, out-of-focus grey.

**Coastal cactus wren**  
***Campylorhynchus brunneicapillus sandiegensis***



*Andy Birch*



**Legend**  
Planting year

Red	2010
Blue	2011
Light Green	2012







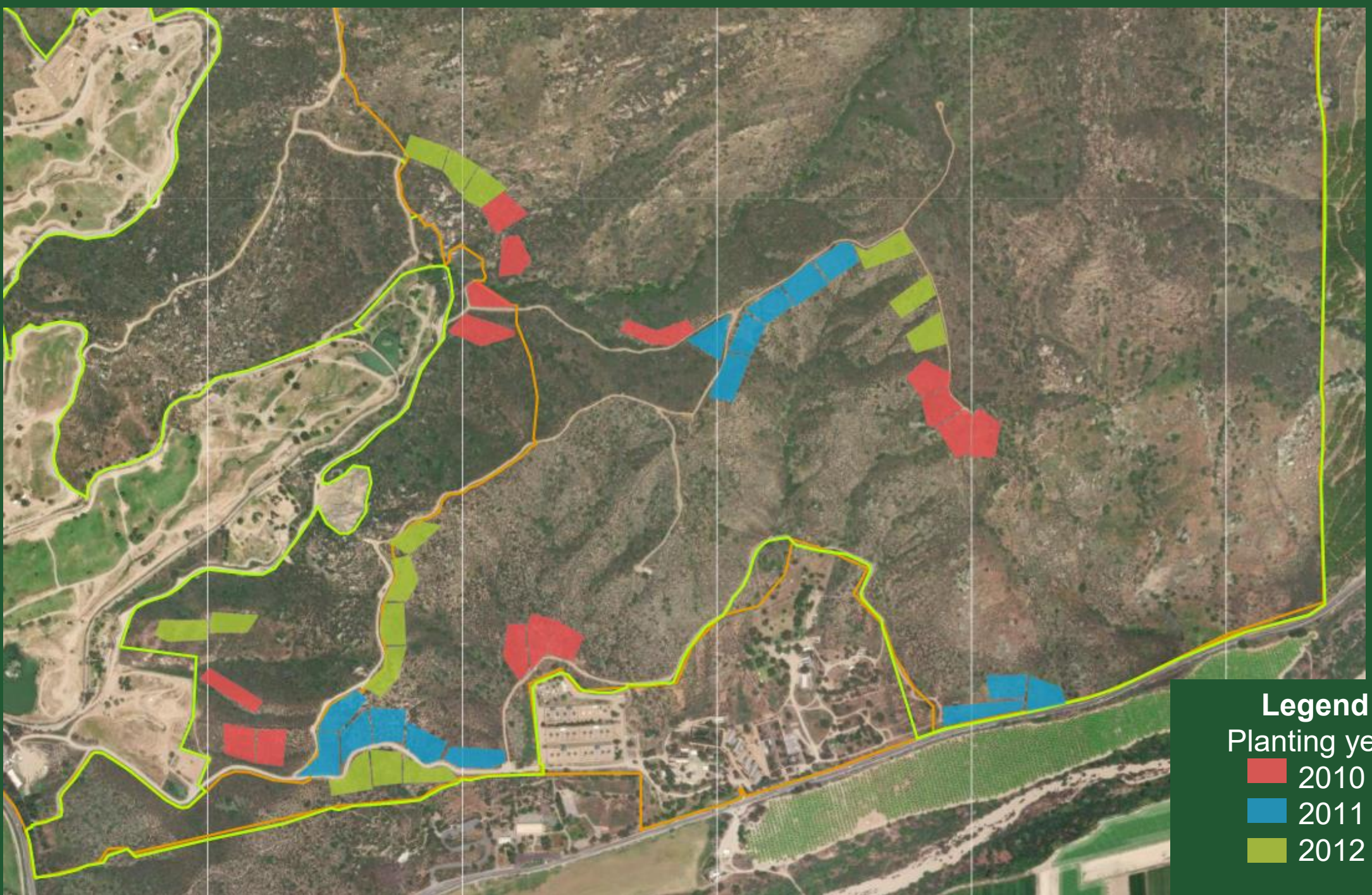


# Cactus Wren Surveys

With Palomar Audobon, USGS, SDMMP







**Legend**  
Planting year

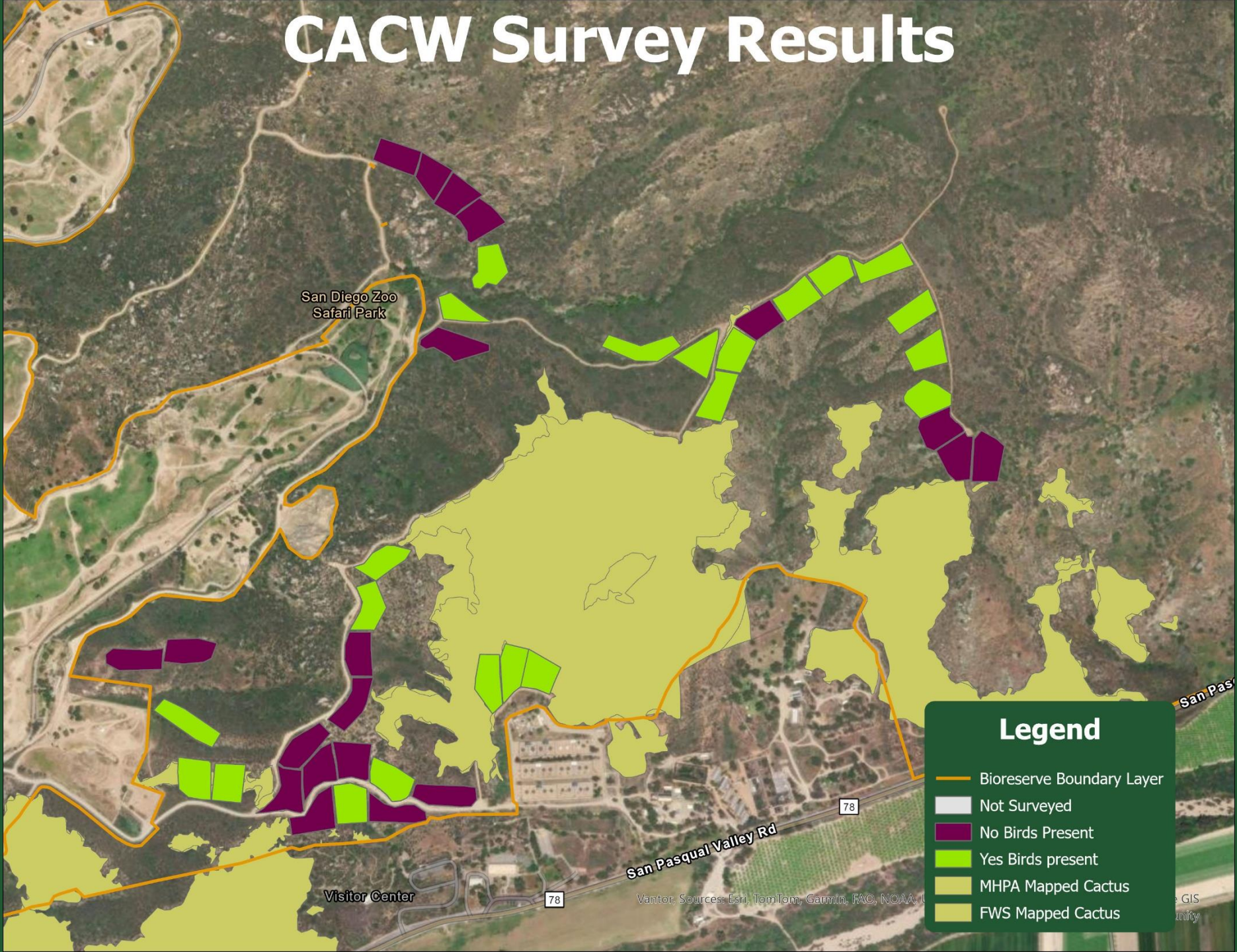
Red	2010
Blue	2011
Green	2012



**Legend**

 Plot Boundary

# CACW Survey Results



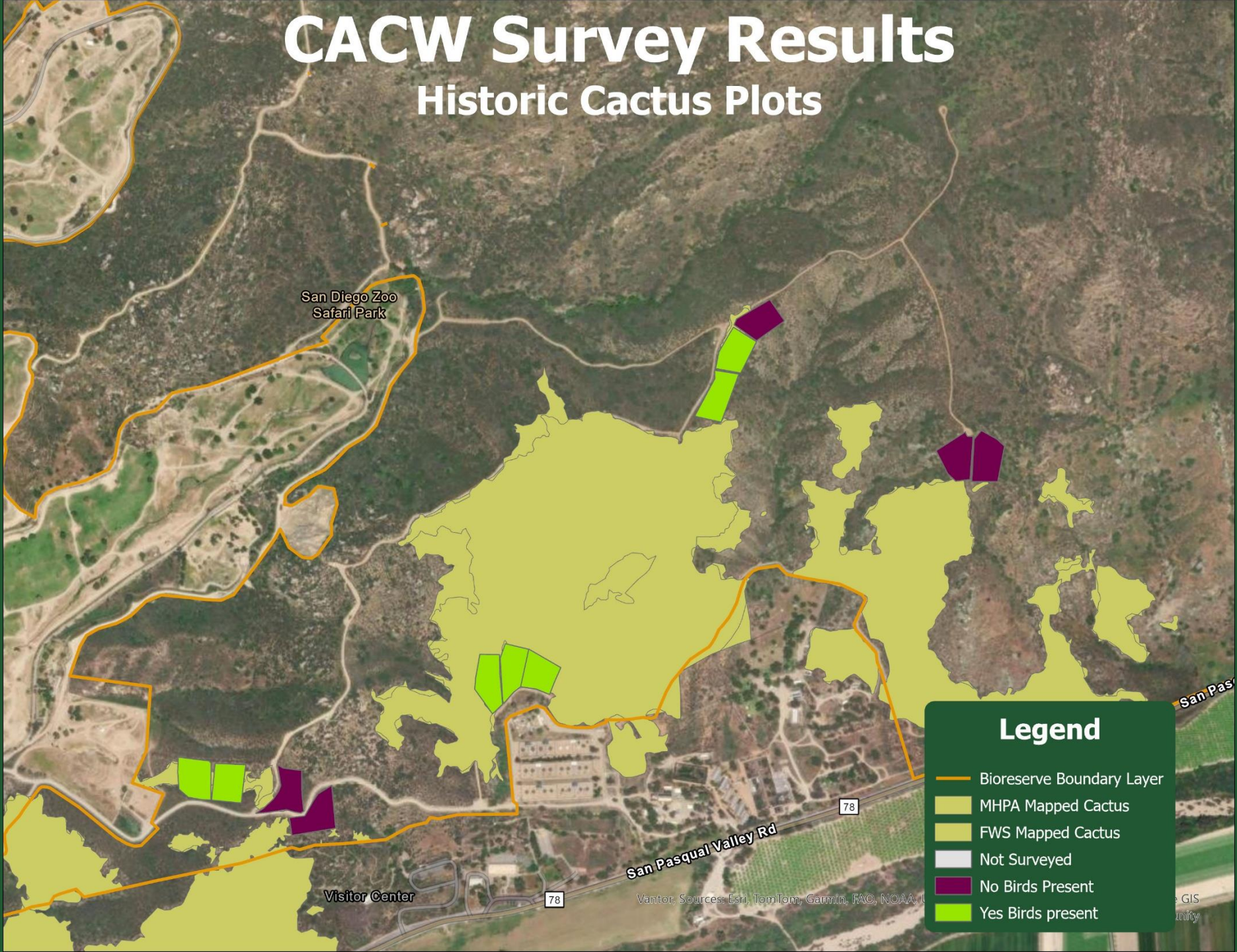
## Legend

- Bioreserve Boundary Layer
- Not Surveyed
- No Birds Present
- Yes Birds present
- MHPA Mapped Cactus
- FWS Mapped Cactus

Vantor. Sources: Esri, TomTom, Garmin, FAG, NOAA, U.S. Fish and Wildlife Service, and the U.S. Geological Survey.

# CACW Survey Results

## Historic Cactus Plots



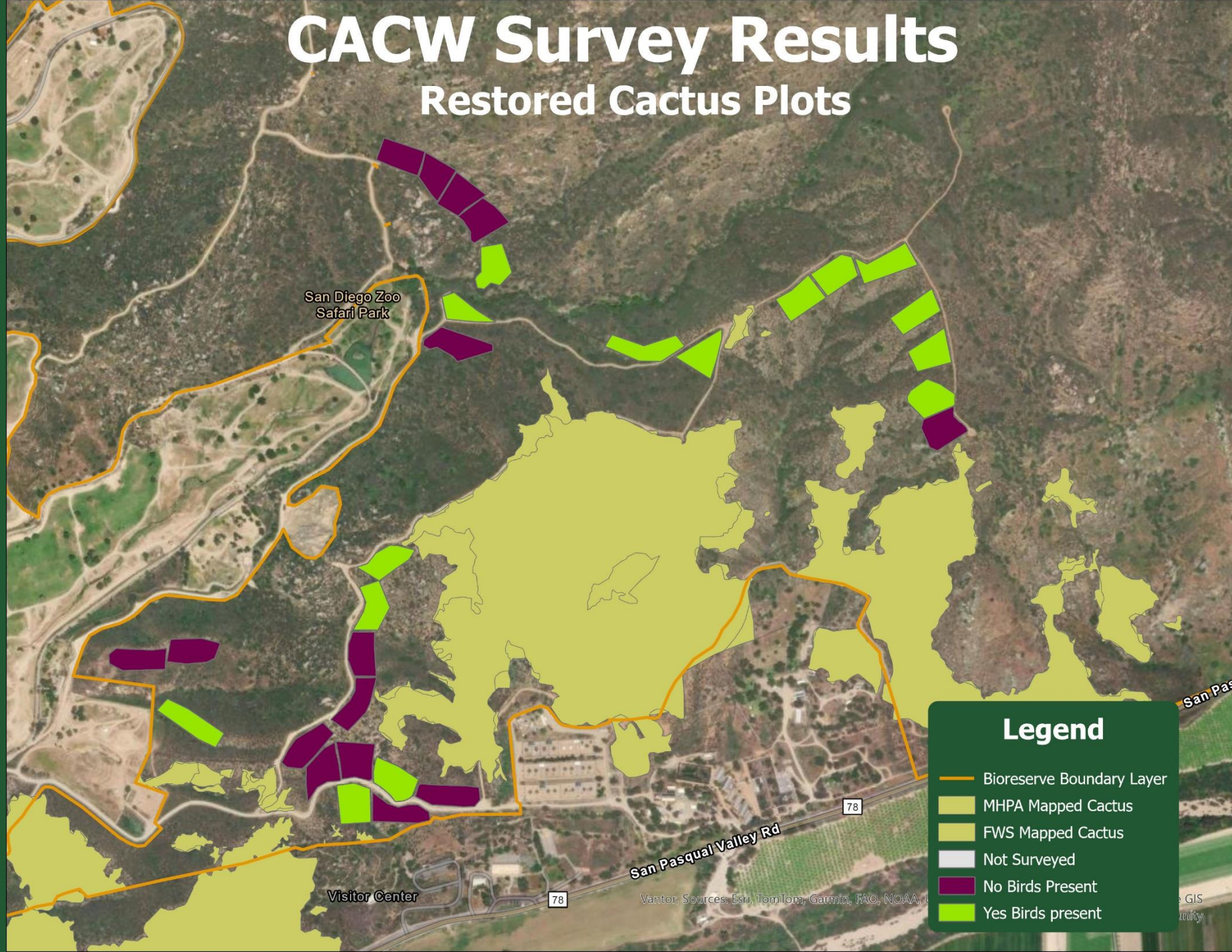
### Legend

- Bioreserve Boundary Layer
- MHPA Mapped Cactus
- FWS Mapped Cactus
- Not Surveyed
- No Birds Present
- Yes Birds present

Vantor. Sources: Esri, TomTom, Garmin, FAG, NOAA, U.S. Fish and Wildlife Service, and the National Wetlands Inventory.

# CACW Survey Results

## Restored Cactus Plots



### Legend

- Bioreserve Boundary Layer
- MHPA Mapped Cactus
- FWS Mapped Cactus
- Not Surveyed
- No Birds Present
- Yes Birds present

# Thank you!

