

The Nature
Conservancy



Las Piletas Ranch

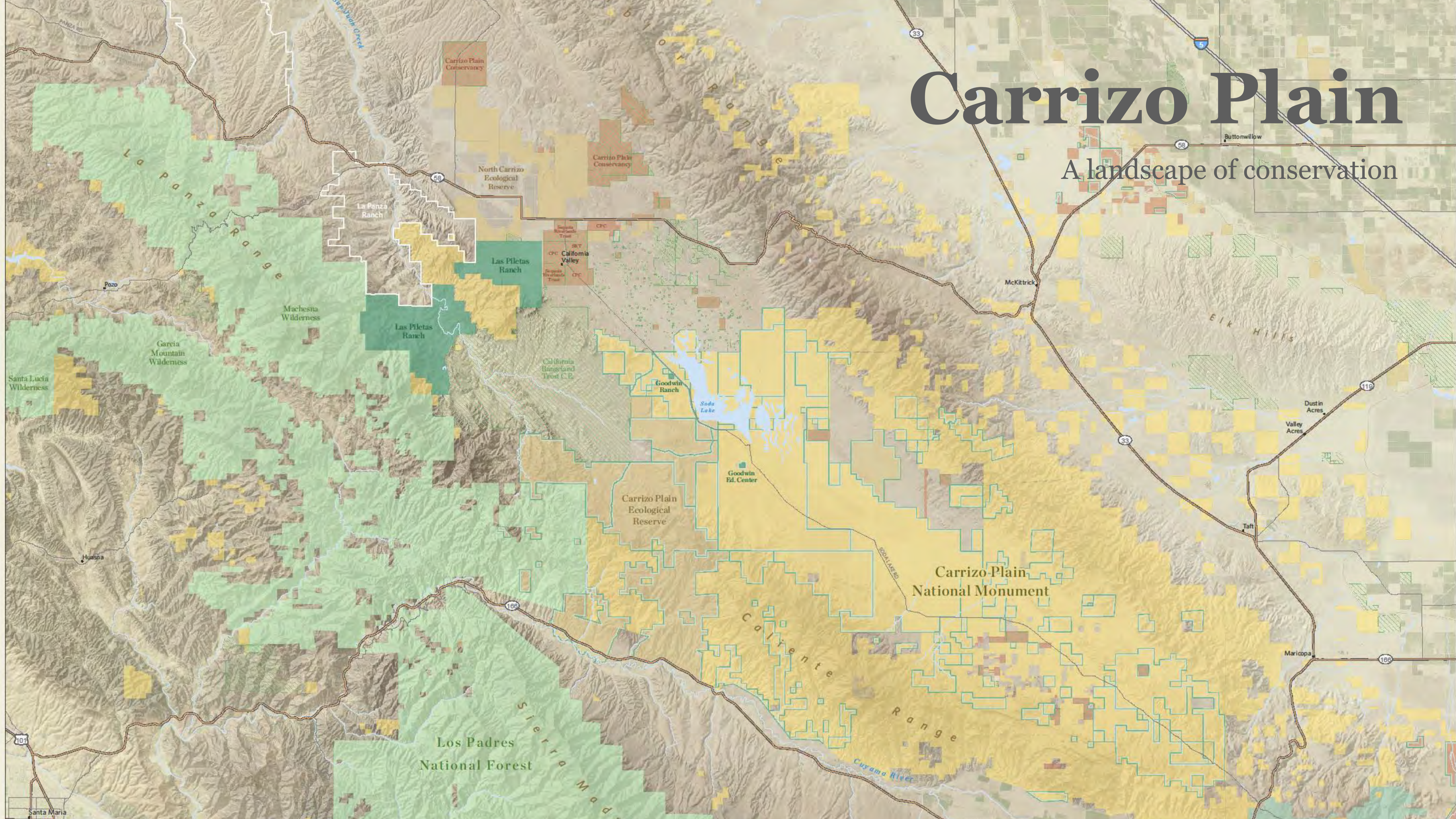
Can Water Help Recover Pronghorn at the Carrizo Plain?

DILLON BROOK
ETHAN INLANDER
H. SCOTT BUTTERFIELD, PH.D.

CARRIZO COLLOQUIUM 2024

Carrizo Plain

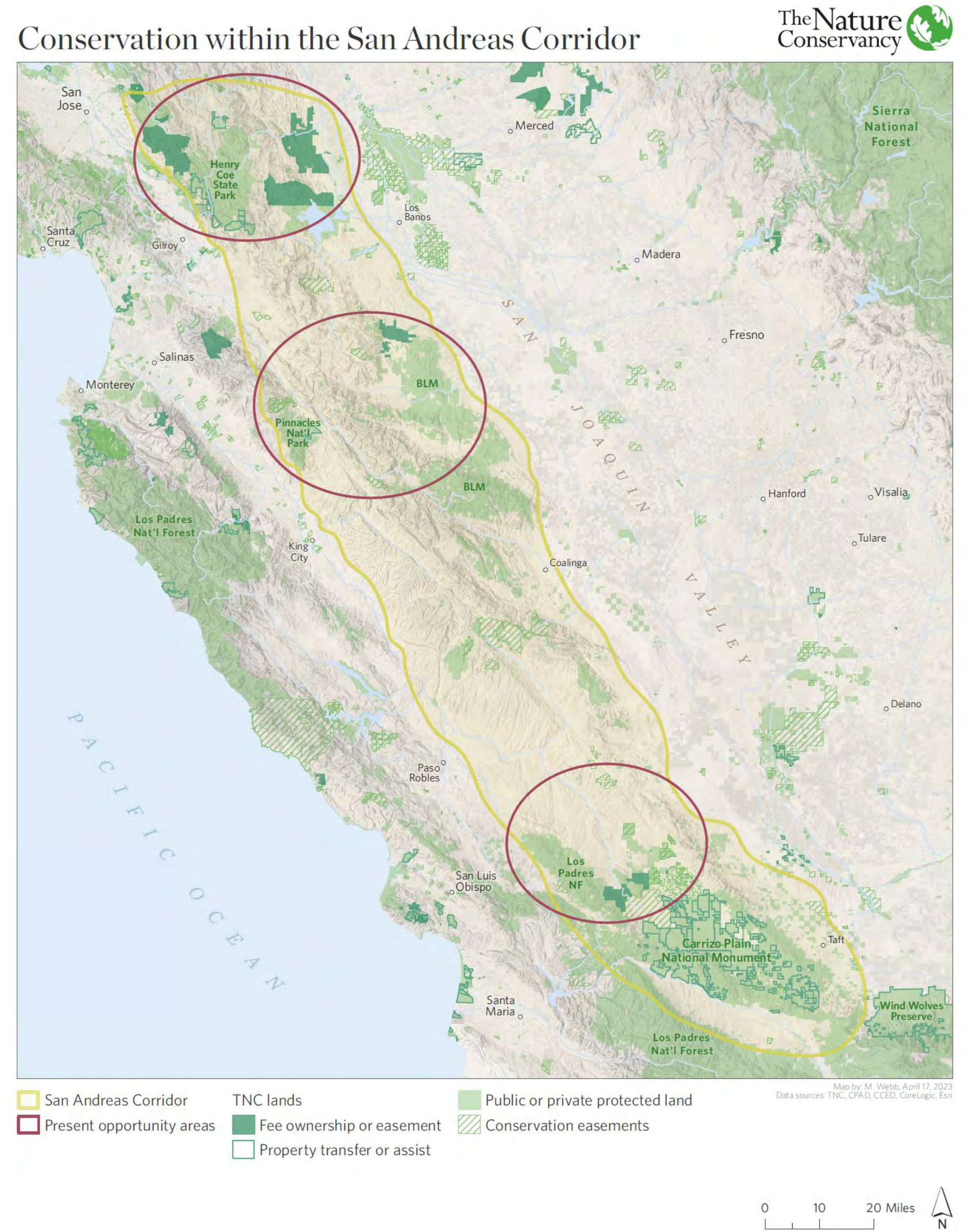
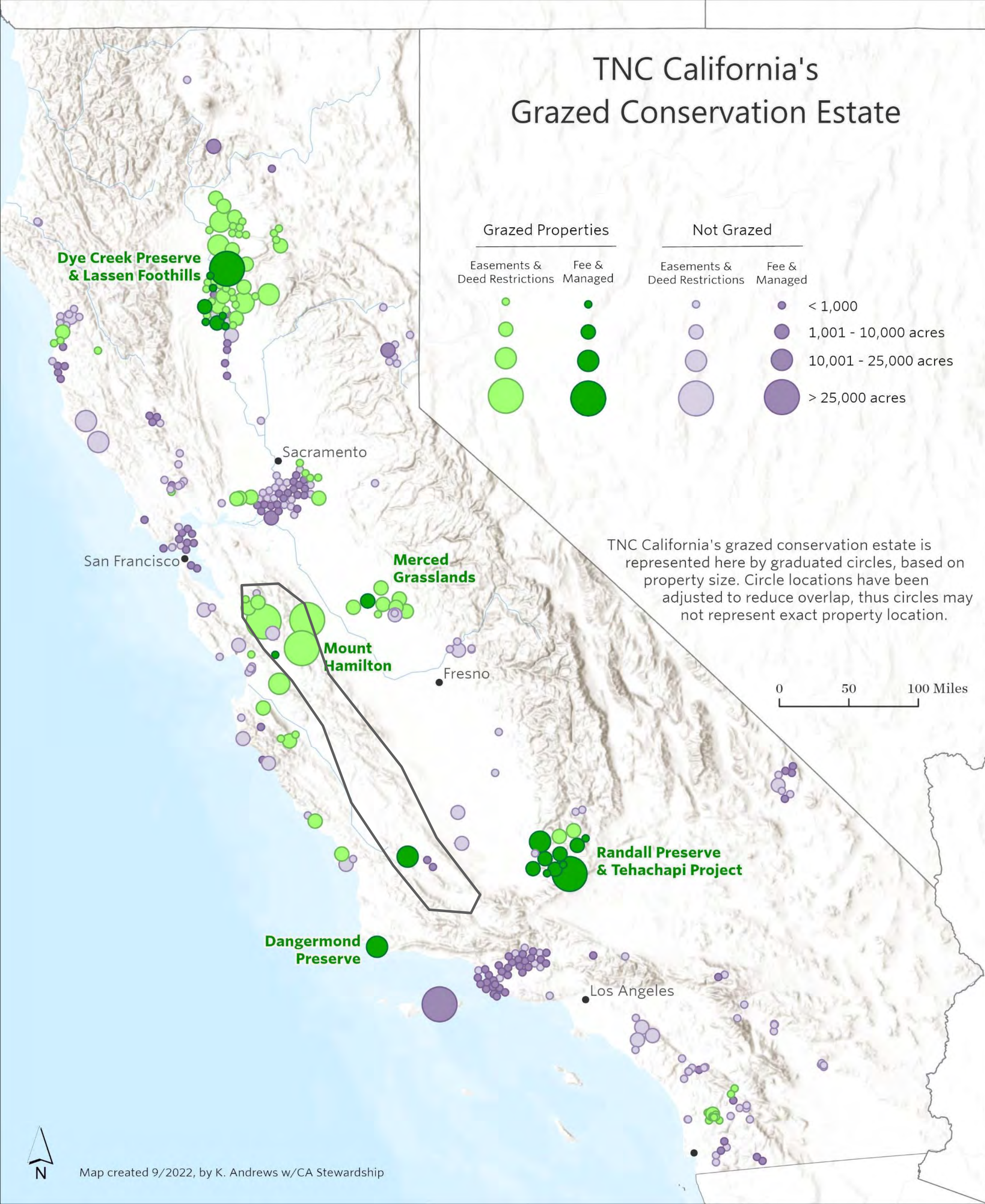
A landscape of conservation



San Andreas Corridor

600,000 acres of reconnected habitat to support a climate-resilient wildlife linkage and provide water resources for native species. It will also prevent further energy development from disrupting and fragmenting ecosystems.





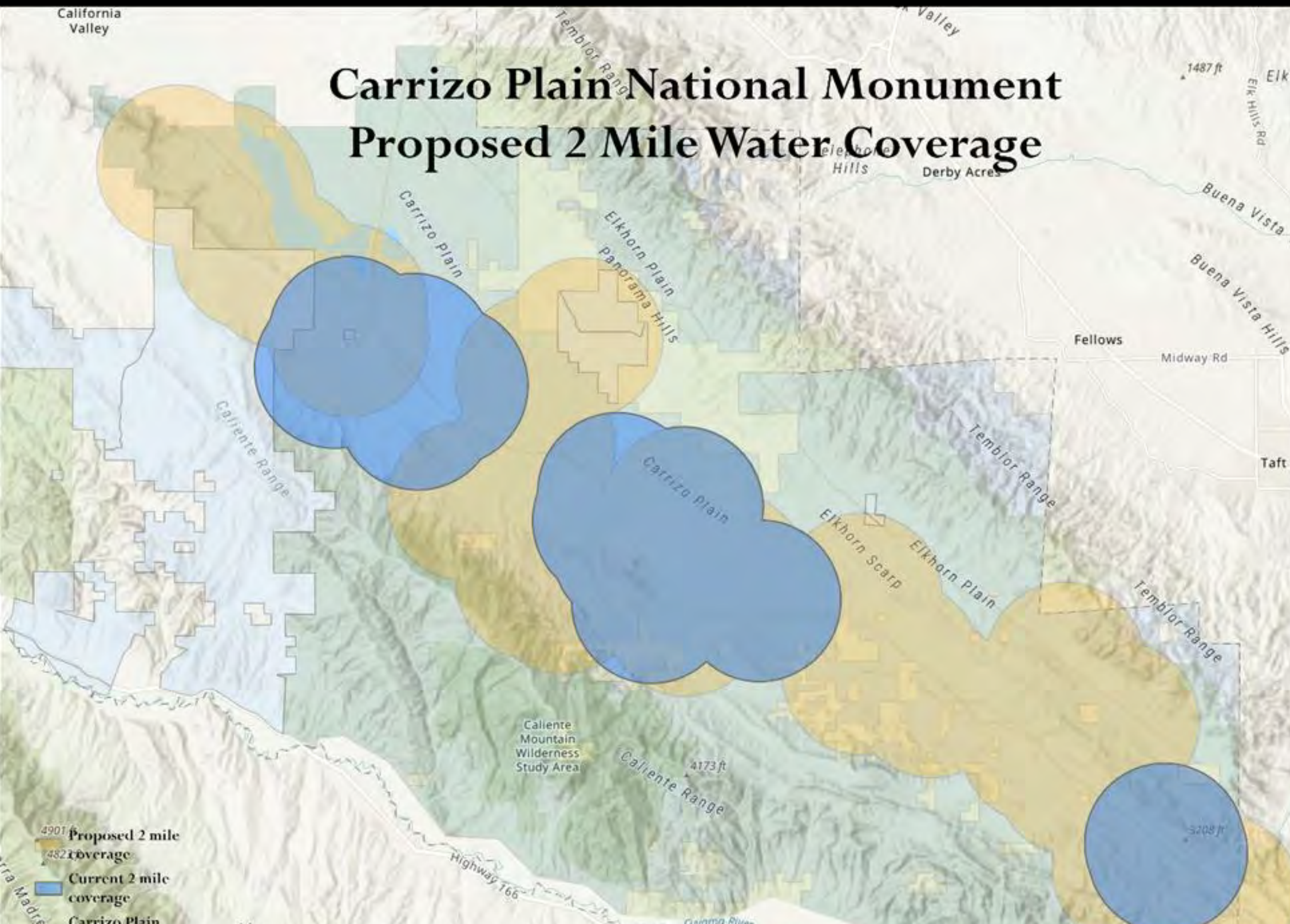
Case Study: Habitat & Resiliency Improvement Project



Water for Wildlife

Some Key Management Factors

- Available Water
- Forage Quality
- Predation
- Anthropogenic Factors (Roads, Fences)



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REVIEW

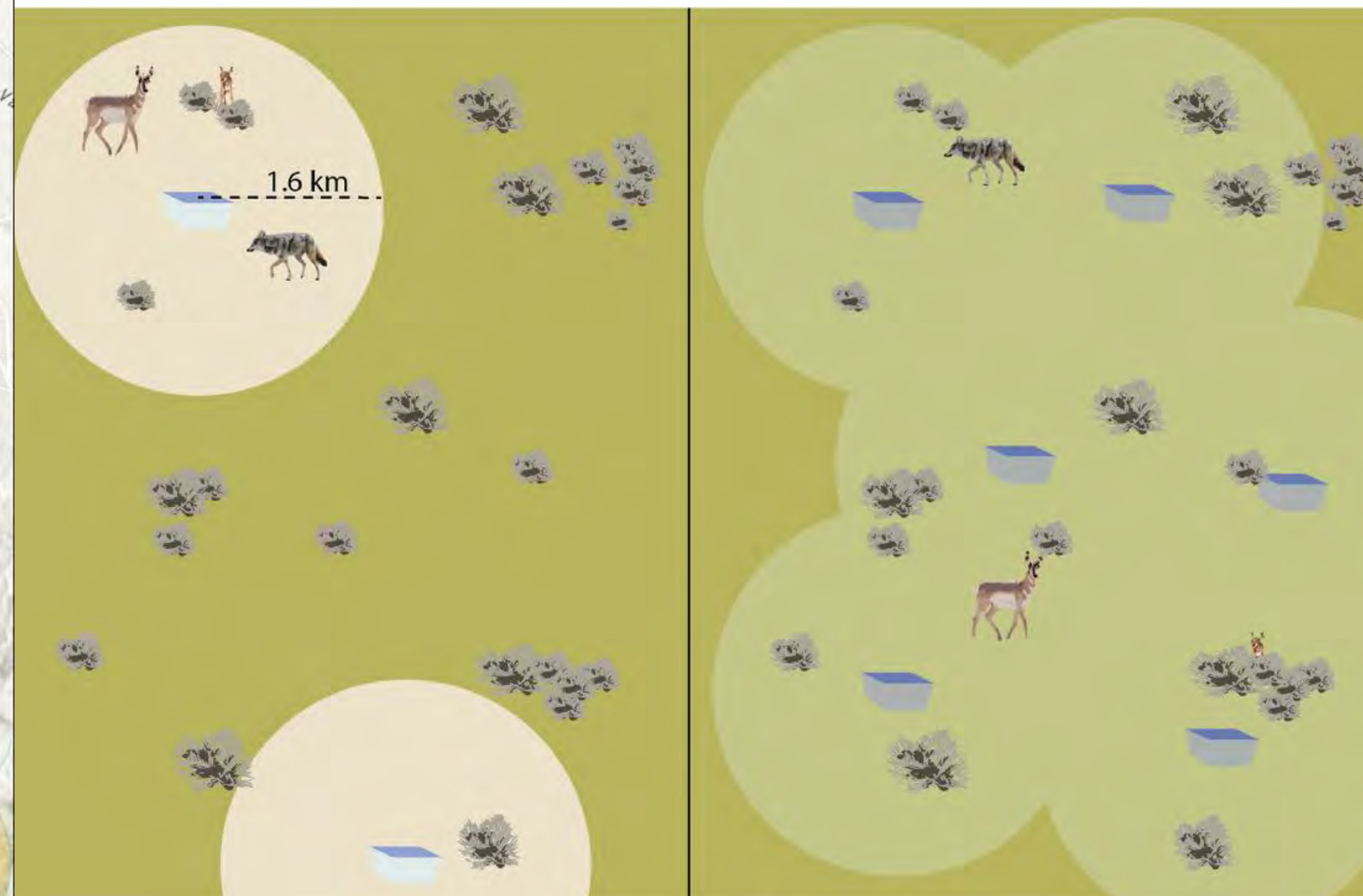
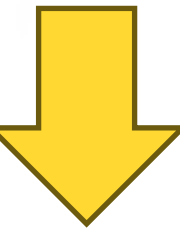
THE JOURNAL OF
WILDLIFE
MANAGEMENT



**THE
WILDLIFE
SOCIETY**

Contrasting management paradigms for pronghorn in the arid Southwest and their northern range: a review

William T. Bean¹  | H. Scott Butterfield² | Craig Fiehler³ |
David Hacker⁴ | Jeanette K. Howard² | Russell Namitz⁵ |
Brandon Swanson⁴ | Thomas J. Batter⁶



CDFW Funded Project

Overview

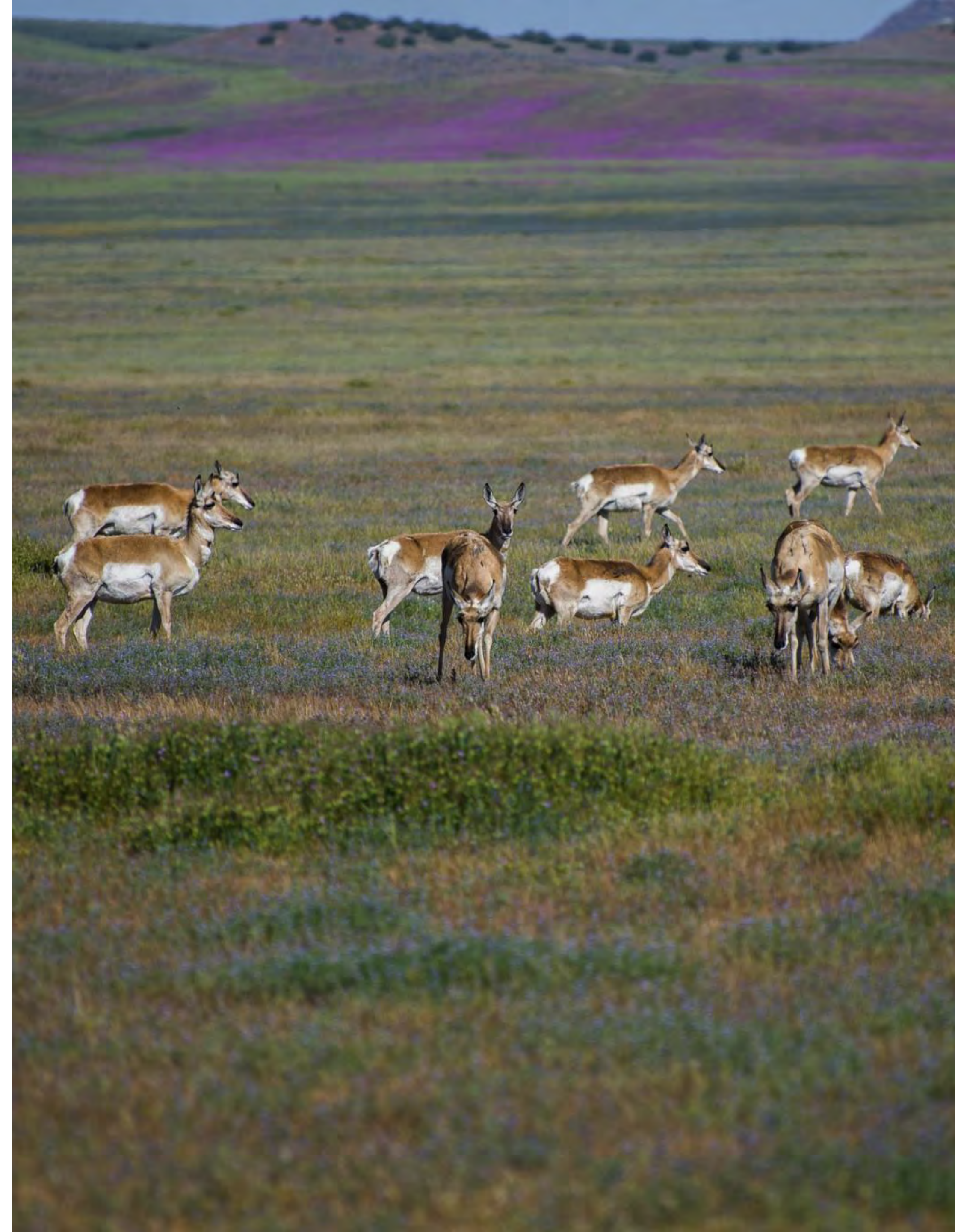
This project improves water availability, limits barriers to movement and increases access to forage, which will enhance habitat conditions for sensitive species in the greater Carrizo Plain area, notably Pronghorn and Tule Elk.

Water

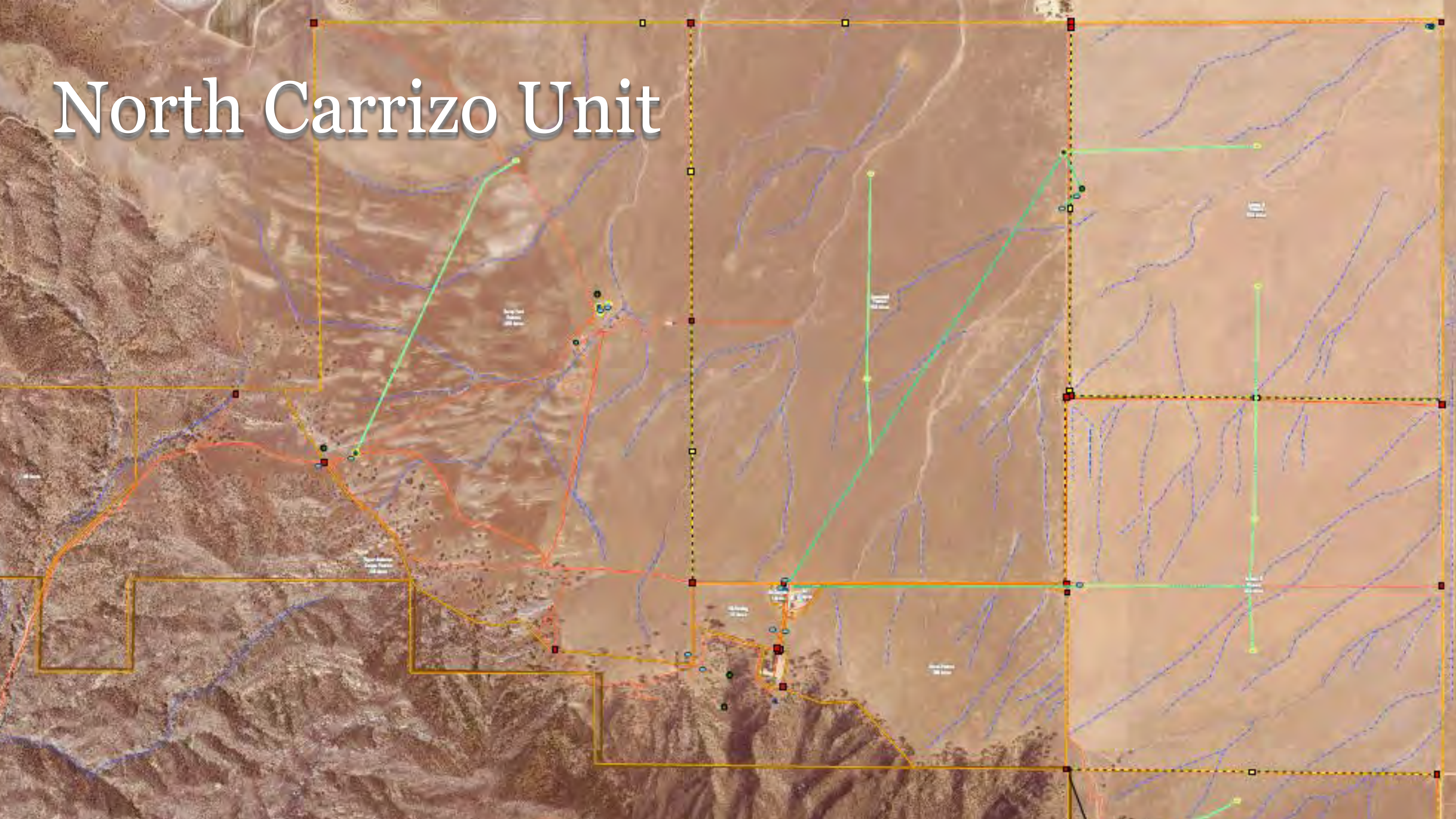
Fence

Cameras

\$594,362 awarded



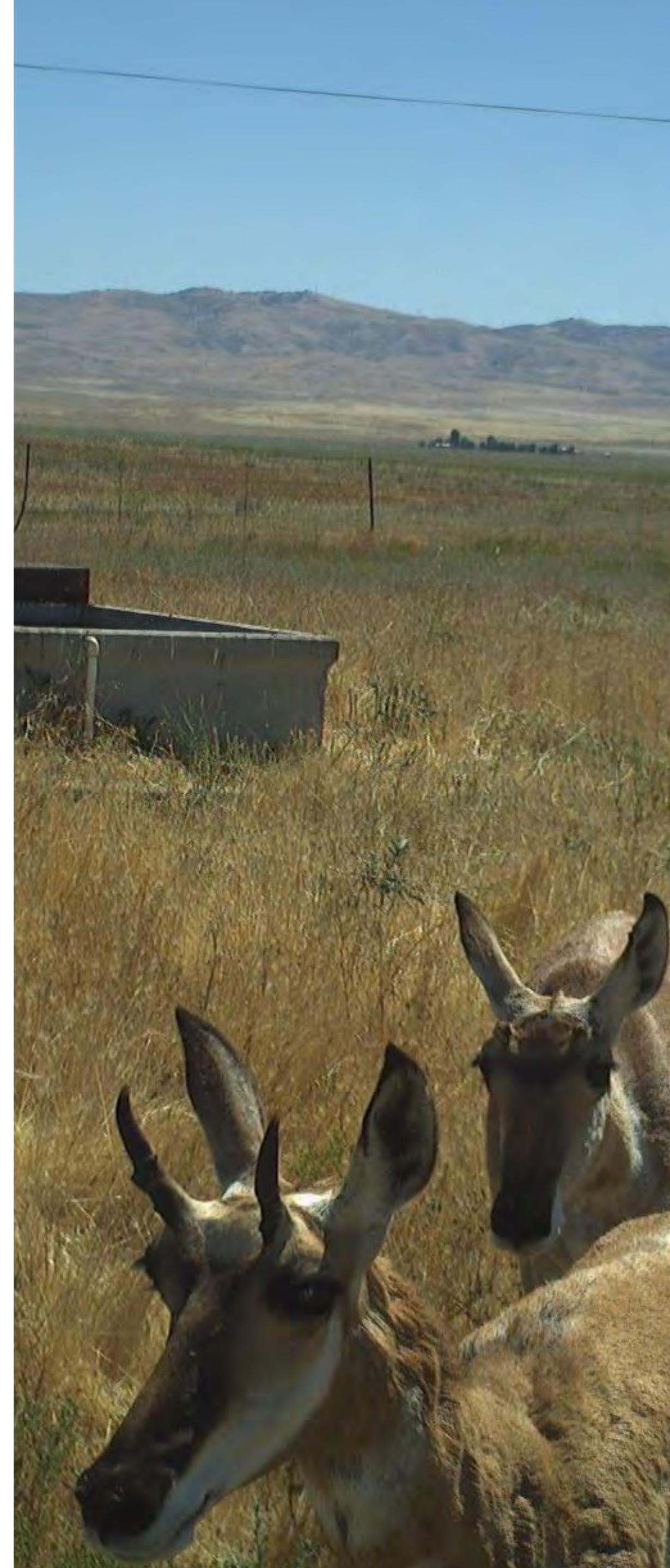
North Carrizo Unit



Water

Addition of Year-round Water Sources

The CDFW funded grant adds 11 new wildlife friendly water troughs and modifies existing troughs (17) on the North Carrizo Unit. Project adds solar panels to existing wells (4) to provide year-round water for wildlife. Additional water storage will be added at well sites to improve resiliency. The completed water system will provide water sources for Pronghorn well under the 1 km spacing studied throughout the region.



Water



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Wildlife Cameras

North Carrizo Unit

- Cell-based Reconyx wildlife cameras were added across the North Carrizo Unit.
- Cameras were placed near current and future water trough sites, along pasture fence lines or at wildlife active property sites.

San Juan Unit

- Mix of SD card and cell-based cameras were added on the San Juan Unit.
- Locations were selected through scouting and wildlife sightings.
- Meant to understand Tule Elk utilization across the property.



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Wildlife Cameras



Fencing

External Property Fencing

- Property fence lines on the North Carrizo Unit are modified to wildlife friendly standards to improve Pronghorn movement.
- Large double-hung gate sections have been added along North Carrizo Ecological Reserve boundary.

Internal Fence Lines

- Most of the internal pasture cross fencing has been removed from the project area.
- Pastures reserved for Virtual Fence training areas are modified to wildlife friendly standards.
- Gate sections added internally.



Original Project Area Fencing



Current Project Area Fencing





Fencing



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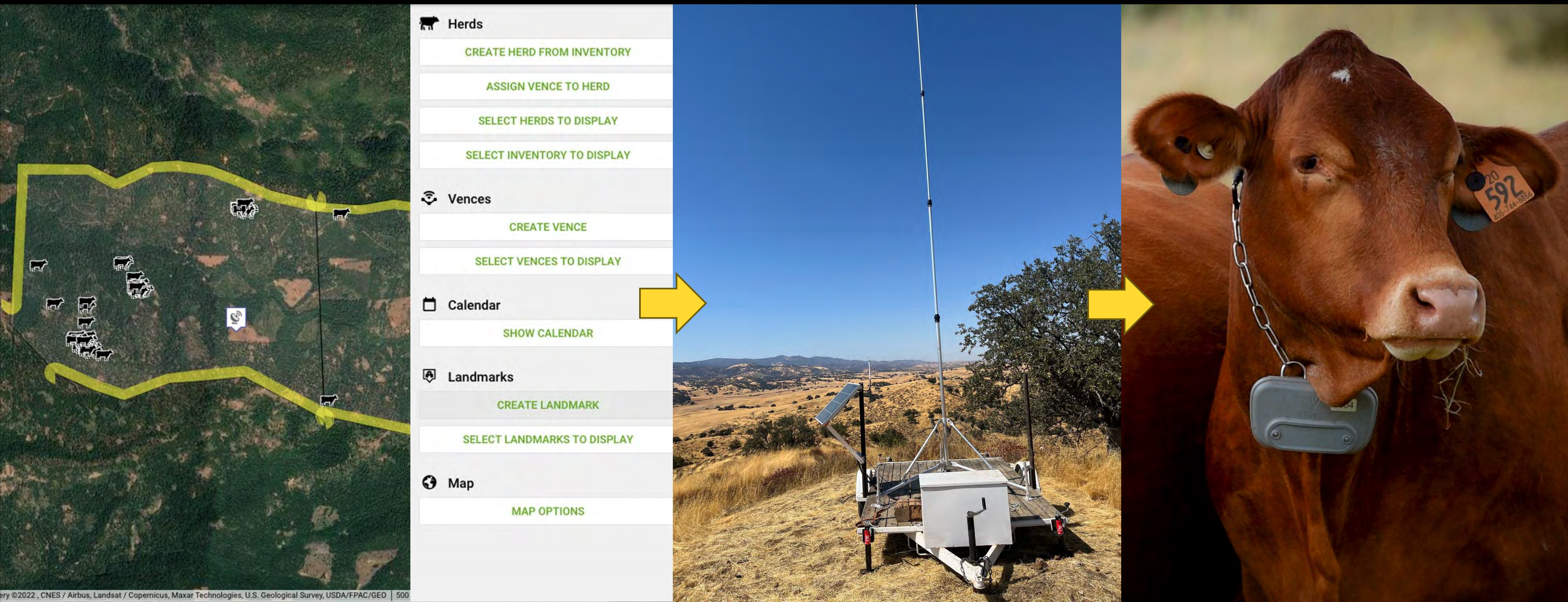


Virtual Fence

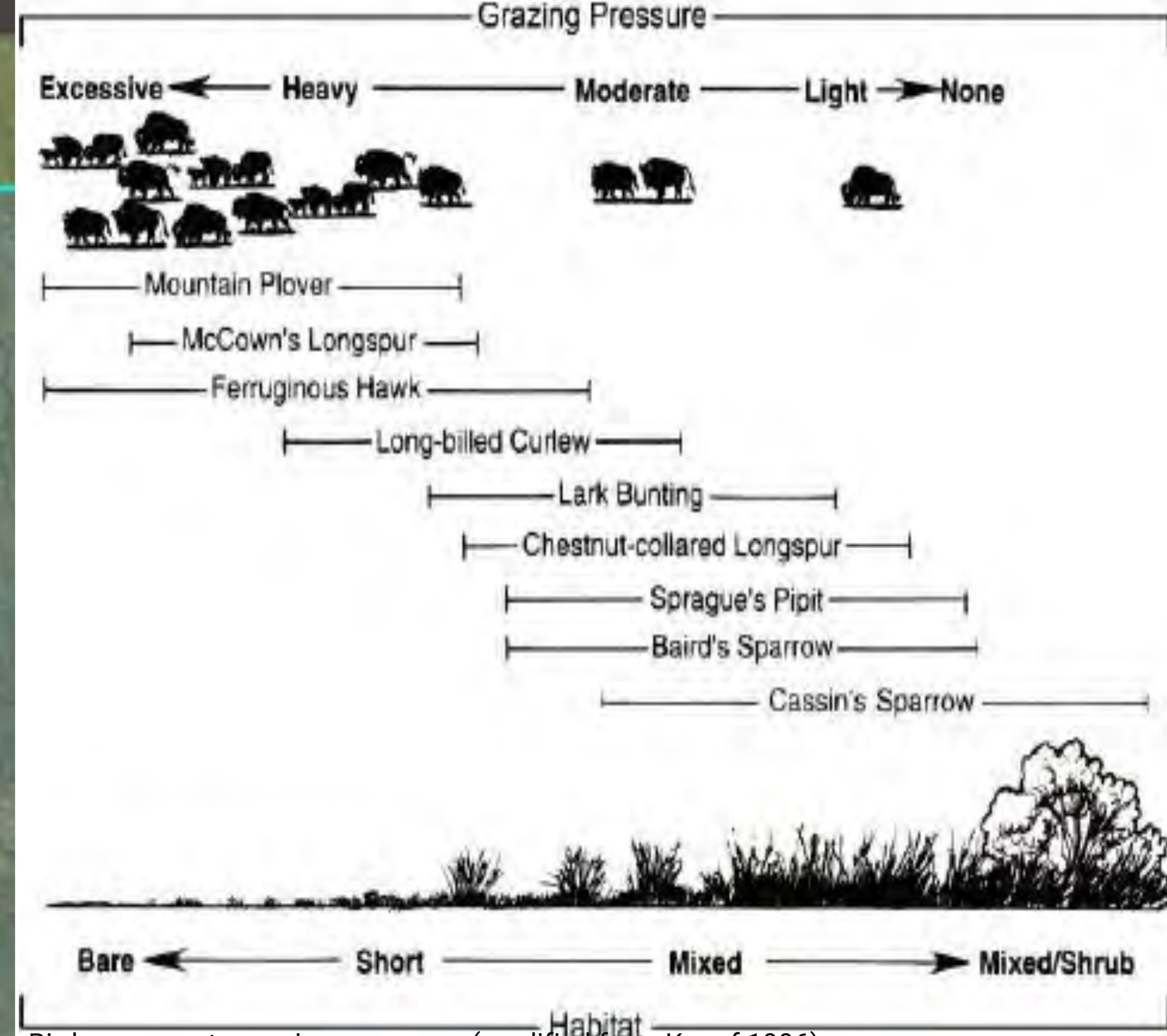
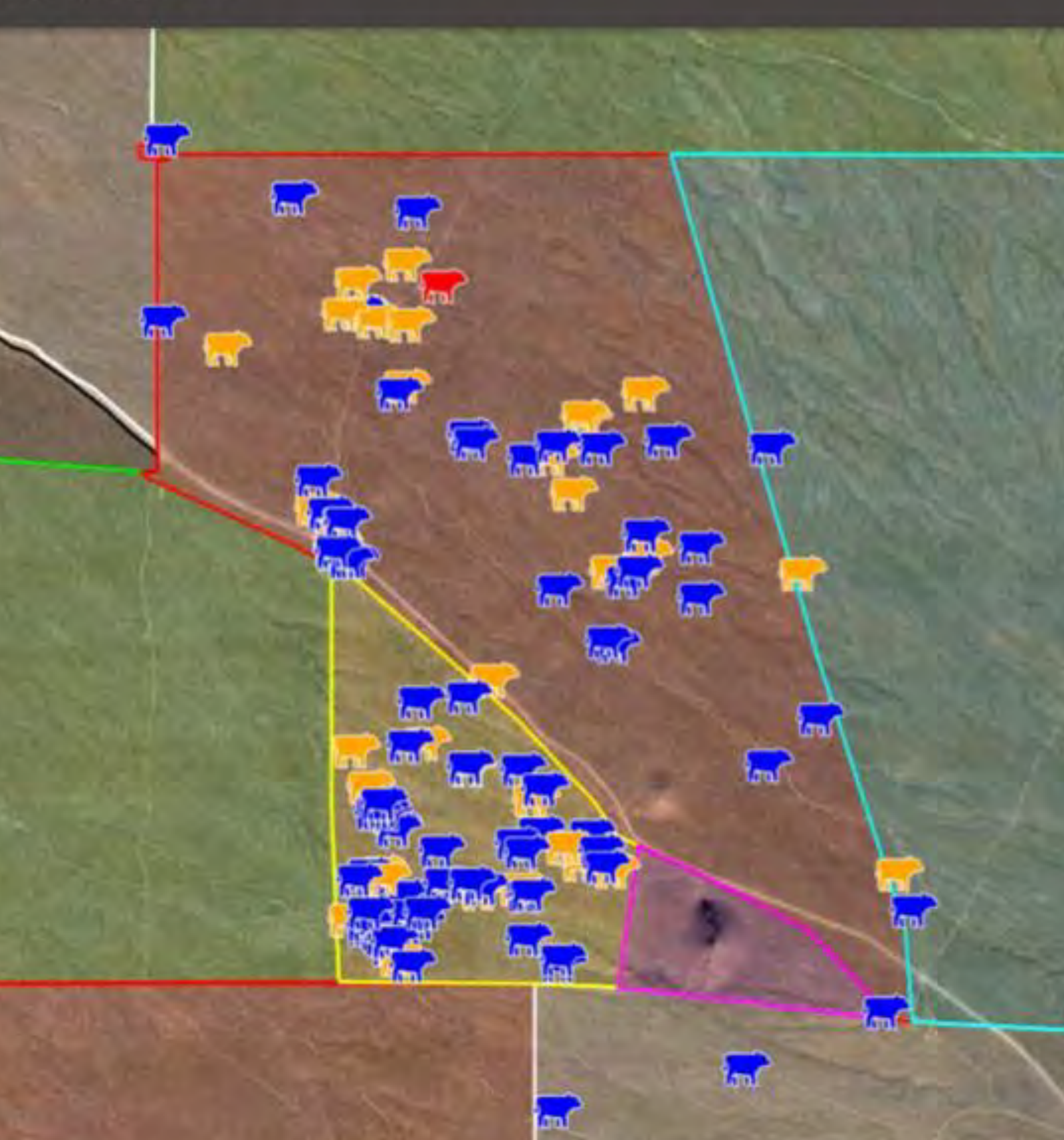


Virtual Fence Overview

- 1) Livestock producers create and modify VF boundaries on a User Interface.
- 2) Instructions are first transmitted to base stations through cell reception.
- 3) Base station transmits instructions to GPS collars via line-of-sight radio signals.









Virtual Fence

At scale, we believe virtual fencing can help land managers better implement management practices that regenerate land health, help address climate change and biodiversity loss, and improve economic outcomes for ranchers

- William Burnidge, TNC

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