

# Gaviota Pass Wildlife Connectivity Assessment

## Draft Study Findings Update



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4/26/2023



# Agenda

- Gaviota Wildlife Connectivity Assessment Overview
- Study Findings
  - Wildlife Passage Assessments
  - Wildlife Camera Monitoring
  - Roadkill Monitoring
  - Landscape Connectivity Assessment
- Connectivity Toolbox
  - Connectivity Enhancement Opportunities
  - Next Steps





# Study Area Regions

## Study Area

U.S. 101 from south of Nojoqui Pass to the Mariposa Reina Overcrossing: Post Mile 45 to 51 and 0.25-mile buffer

## Southern Study Area Region

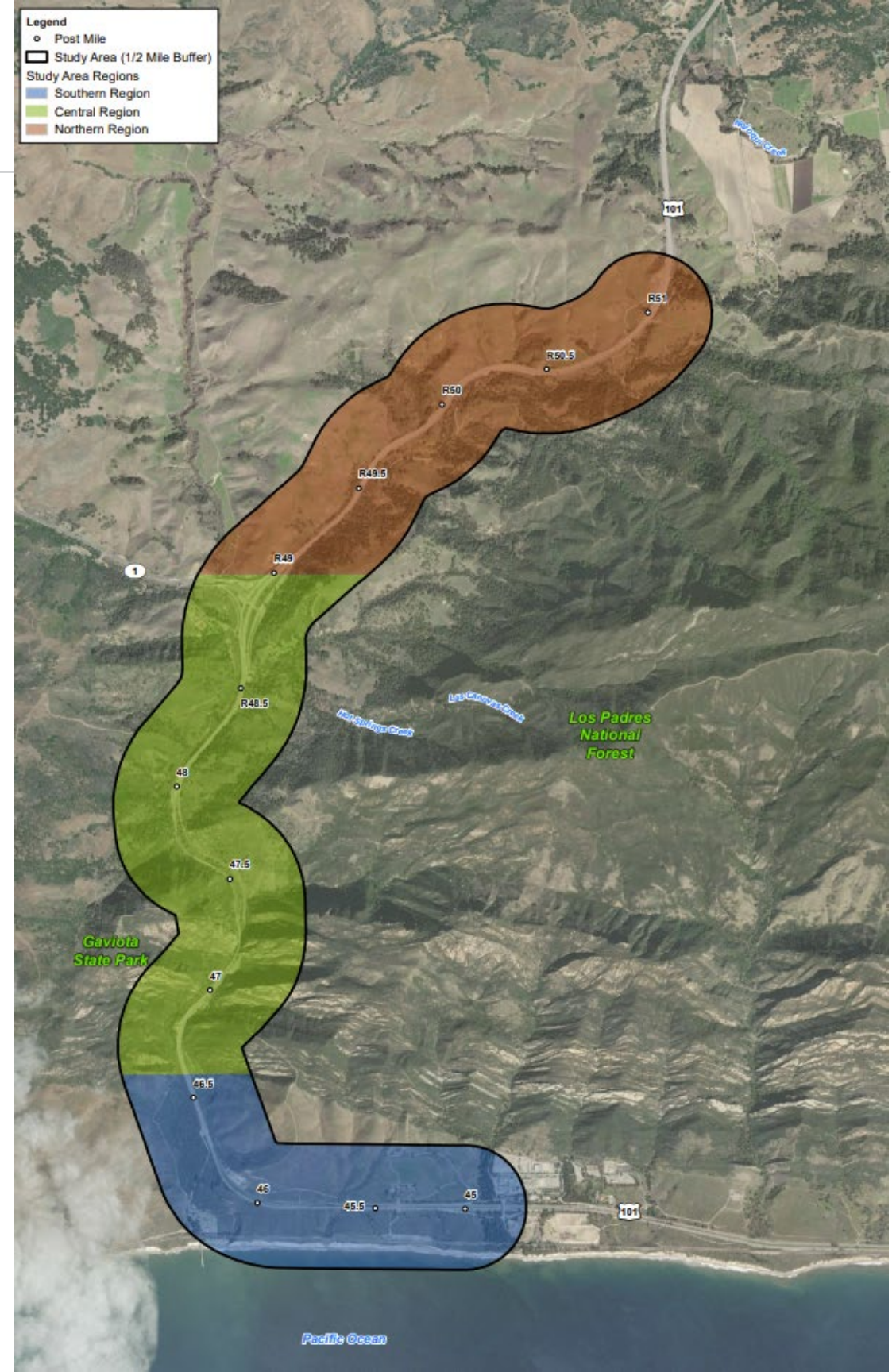
Southern extent of Study Area, along the coast to just south of Gaviota tunnel

## Central Study Area Region

Gaviota tunnel to just north of SR-1 and U.S. 101 interchange

## Northern Study Area Region

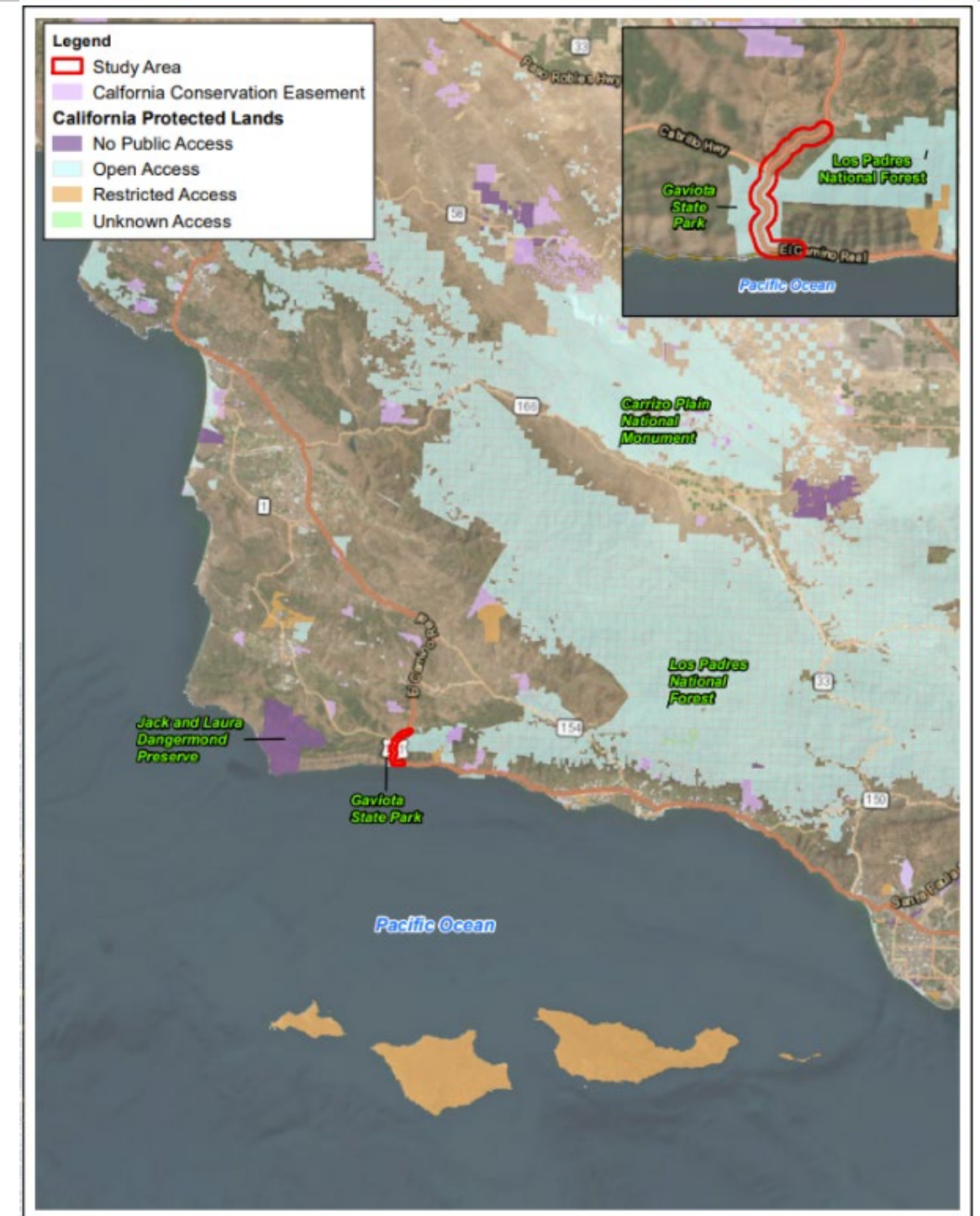
Northern extent of Study Area, north of interchange towards Nojoqui Pass





# Wildlife Connectivity Assessment Study Area

- Located within California Floristic Province, at the convergence of the South Coast, Central Coast, Transverse Ranges, and Coast Ranges Ecoregions
- Multiple connectivity linkages, corridors, and habitat blocks overlapping Study Area
- Diverse landscape encompassing various habitat types, varied topography, upland and riparian areas, supporting a wide variety of species (over 273 native vertebrates and 112 migratory birds)
- Critical Habitat for California red-legged frog, southern California steelhead trout, tidewater goby, and Gaviota tarplant
- Numerous landowners and land use types, primarily composed of undeveloped lands, open space and protected lands in the Central and Southern Study Area





# Wildlife Connectivity Assessment Study Components & Results

- Background Information and Data Gathering and Review
- Wildlife Passage Assessments
- Wildlife Camera Monitoring
- Roadkill Monitoring
- Landscape Connectivity Assessment
- Connectivity Enhancement Opportunities Review





# Target Species

- Focus on medium and large mammals
- Target species include American black bear, American badger, bobcat, coyote, gray fox, mountain lion, mule deer, opossum, raccoon, ringtail, red fox, spotted skunk, striped skunk, and feral pig
- Data also collected for small species (amphibians, other mammals, reptiles), domestic species, and humans





# Wildlife Passage Assessment Results

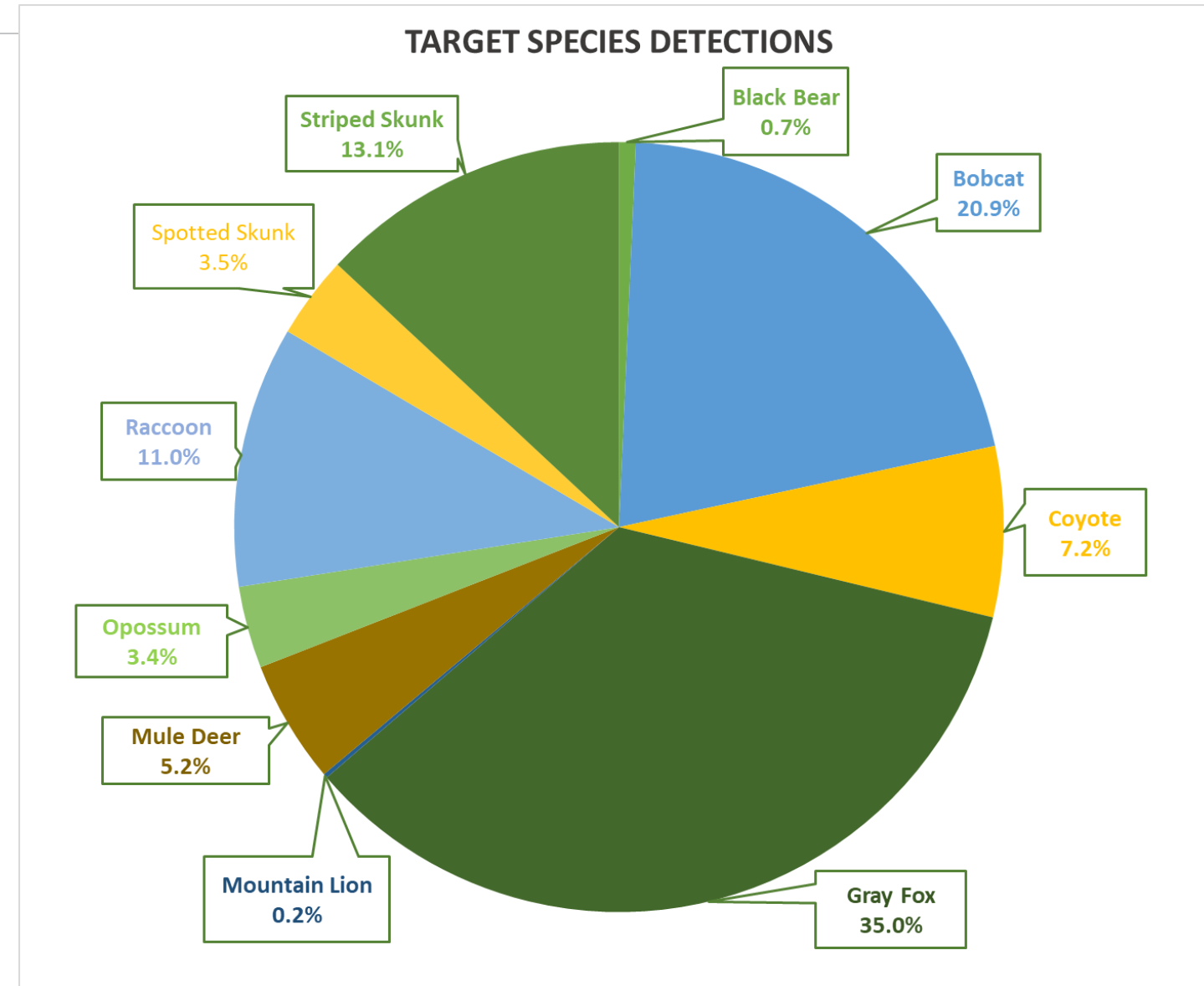
- 26 structures assessed across all Study Area regions
- No structure or combination of structures currently suitable for all target species to pass across U.S. 101 or between surrounding habitats
- No structure currently suitable for mule deer passage
- Most structures suitable for other target species
  - Most structures need enhancements via modification or retrofit to improve approaches and passage functionality
  - Several small pipes not functional





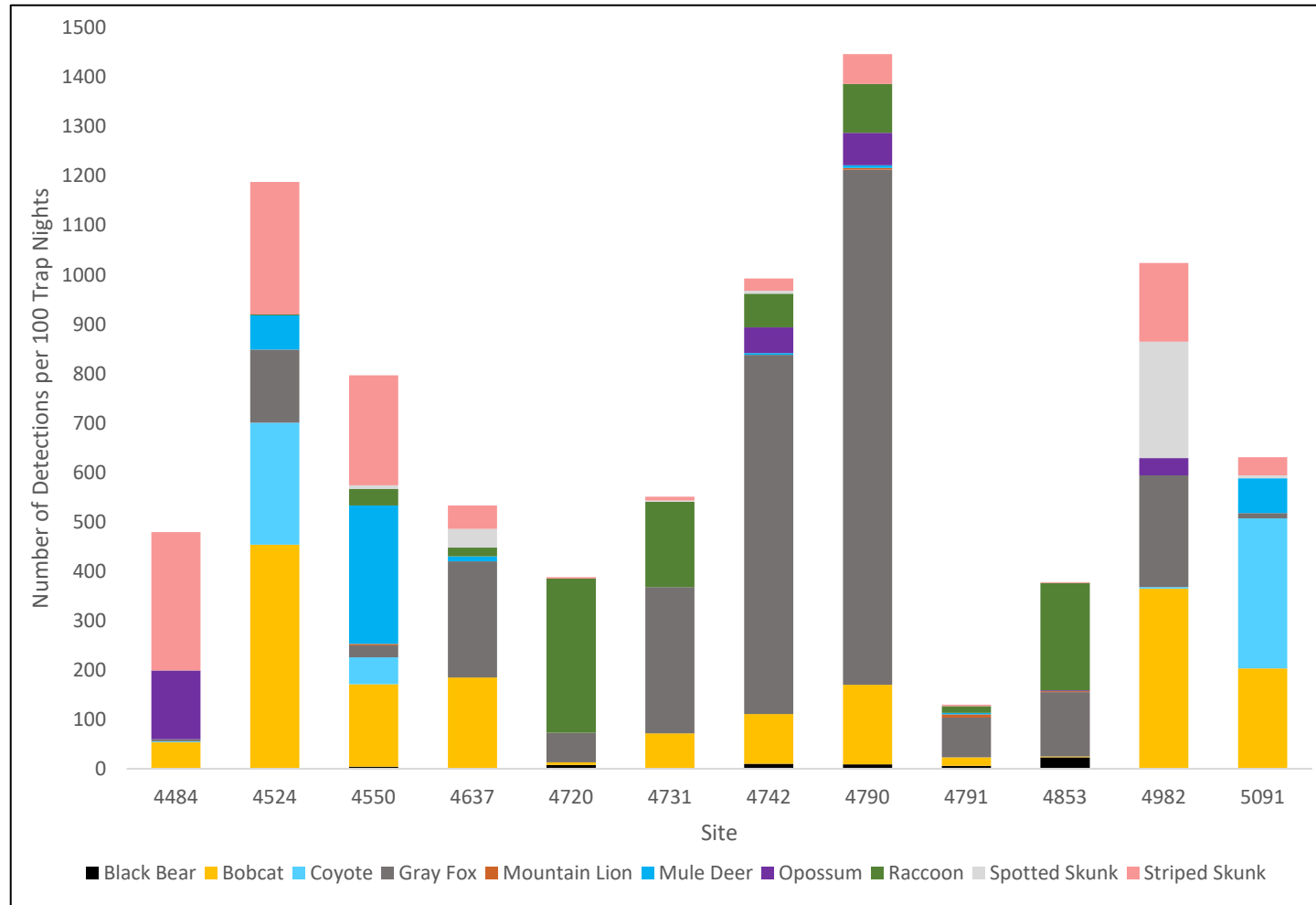
# Wildlife Camera Monitoring Results

- Insights on wildlife presence and passage metrics (i.e., use of culverts and bridges)
- Cameras deployed at 12 structures
- Data standardized to 100 trap nights (cameras operational for varying amounts of time because of high-water events, theft, equipment malfunction, and deployment duration)
- 10 out of 14 target species detected on cameras (no American badger, feral pig, \*red fox, or ringtail)
  - Bobcat, gray fox, and striped skunk detected at every structure monitored





# Wildlife Camera Monitoring Results



Total Number of Passages, Repels, Parallels, Unknowns/Insufficient Data Captures, and Total Approaches per 100 Trap Nights from each Site

Post Mile	Passages	Repels	Parallels	Unknown/Insufficient Captures	Total Approaches
44.84	24	6	284	169	483
45.24	529	55	386	381	1,351
45.50	19	65	885	88	1,057
46.37	211	23	122	306	662
47.20	228	11	45	266	550
47.31	409	41	63	186	699
47.42	515	37	125	448	1,125
47.90	1,270	73	142	1,829	3,314
47.91	1,175	5	64	111	1,355
48.53	67	74	281	243	665
49.82	376	201	780	1,540	2,897
50.91	440	35	350	487	1,312
<b>Total</b>	<b>5,263</b>	<b>626</b>	<b>3,527</b>	<b>6,054</b>	<b>15,470</b>

Total Number of Target Species Detected per 100 Trap Nights by Site



# Wildlife Camera Monitoring Results

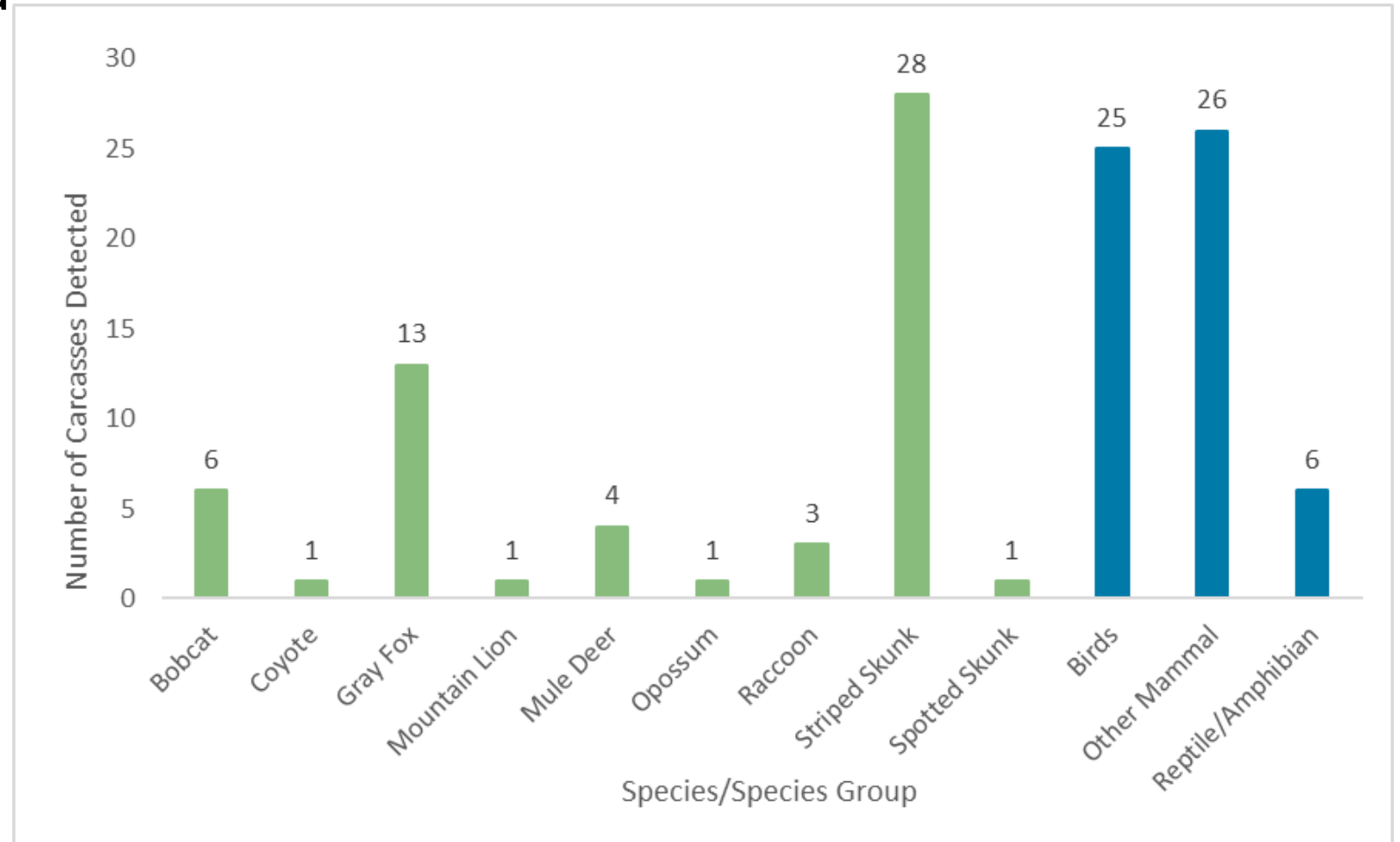
- Target species detected crossing through structures along U.S. 101 in the Study Area include American black bear, bobcat, coyote, gray fox, mountain lion, opossum, raccoon, spotted skunk, and striped skunk
  - Gray fox had the highest rate of passage
  - No species was detected crossing through all structures within the Study Area
  - Passages were highest at the northern bridge spanning Gaviota Creek (Gaviota State Park Underpass Trail area)
- No mule deer were detected crossing through any structure (all attempts repelled–failed)
- Humans detected at all but one structure





# Roadkill Monitoring Results

- Data provides insights into magnitude, spatial, and temporal distribution of roadkill in the Study Area
- Targeted medium and large mammals; other species also documented
- Data collected weekly for approximately 1 year, beginning March 31, 2022
- Target and non-Target species wildlife-vehicle collisions highest in Central Study Area Region, followed by Northern and Southern Study Area Regions
- 10 out of 14 target species detected

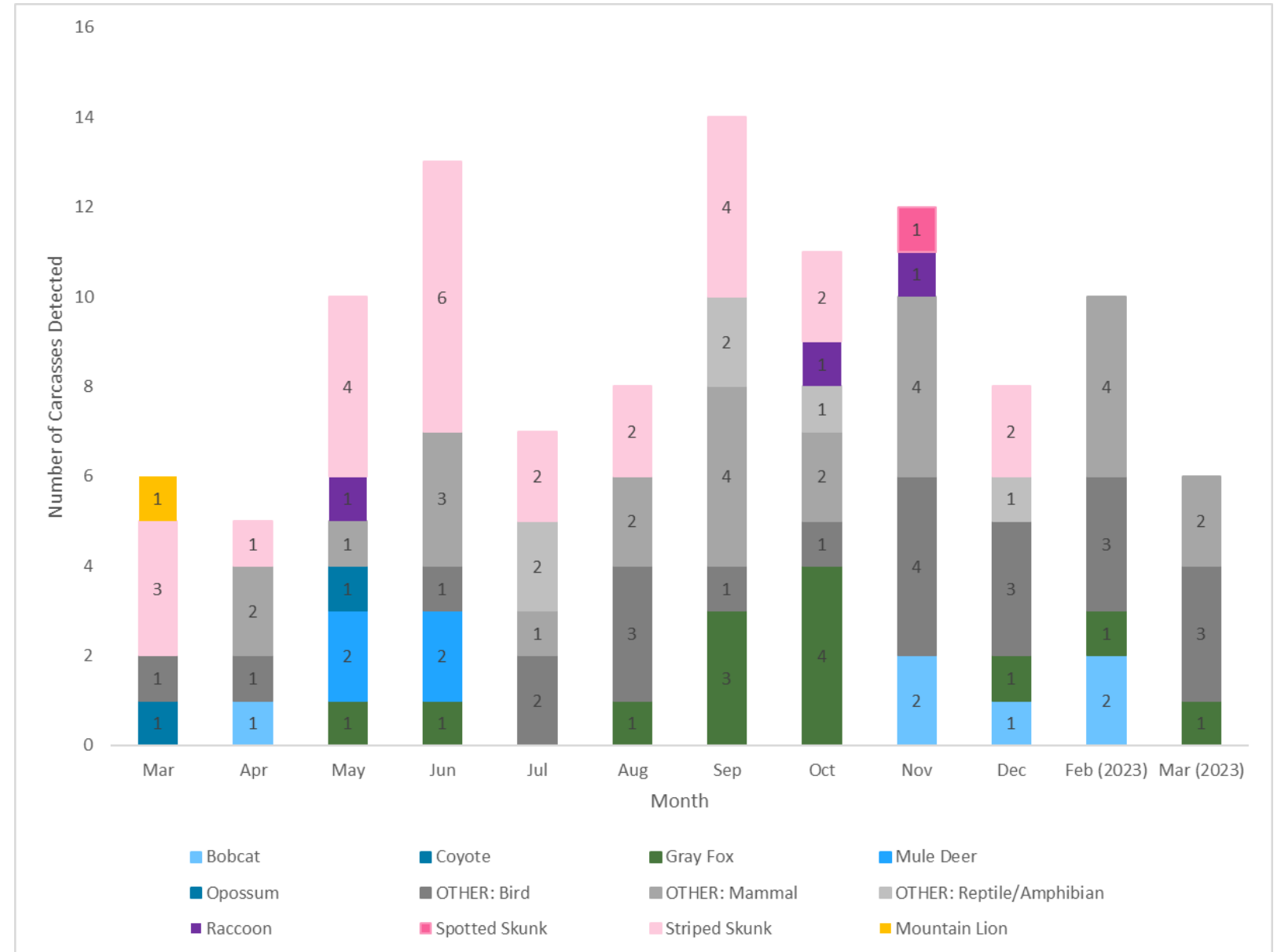




# Roadkill Monitoring Results

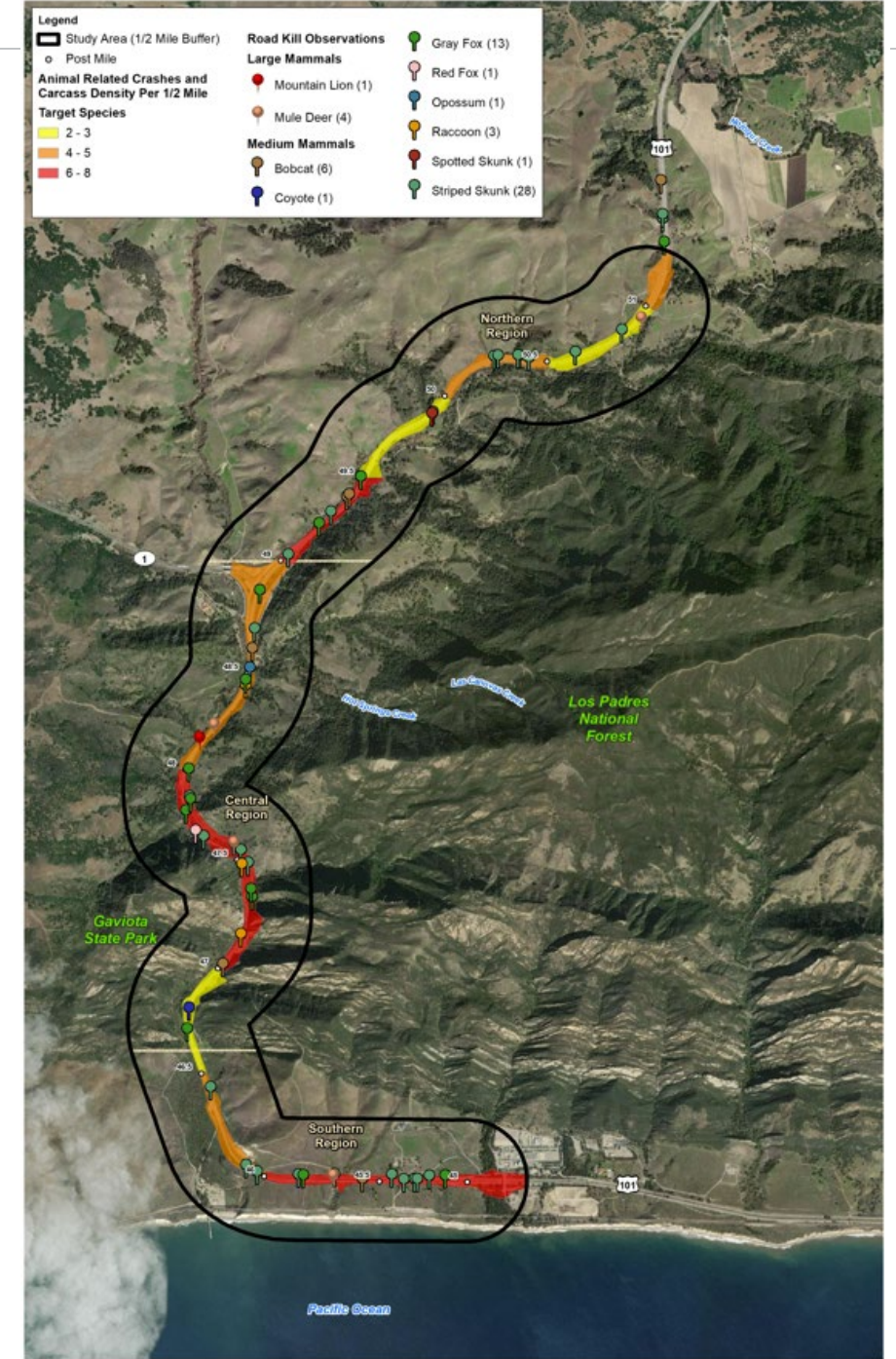
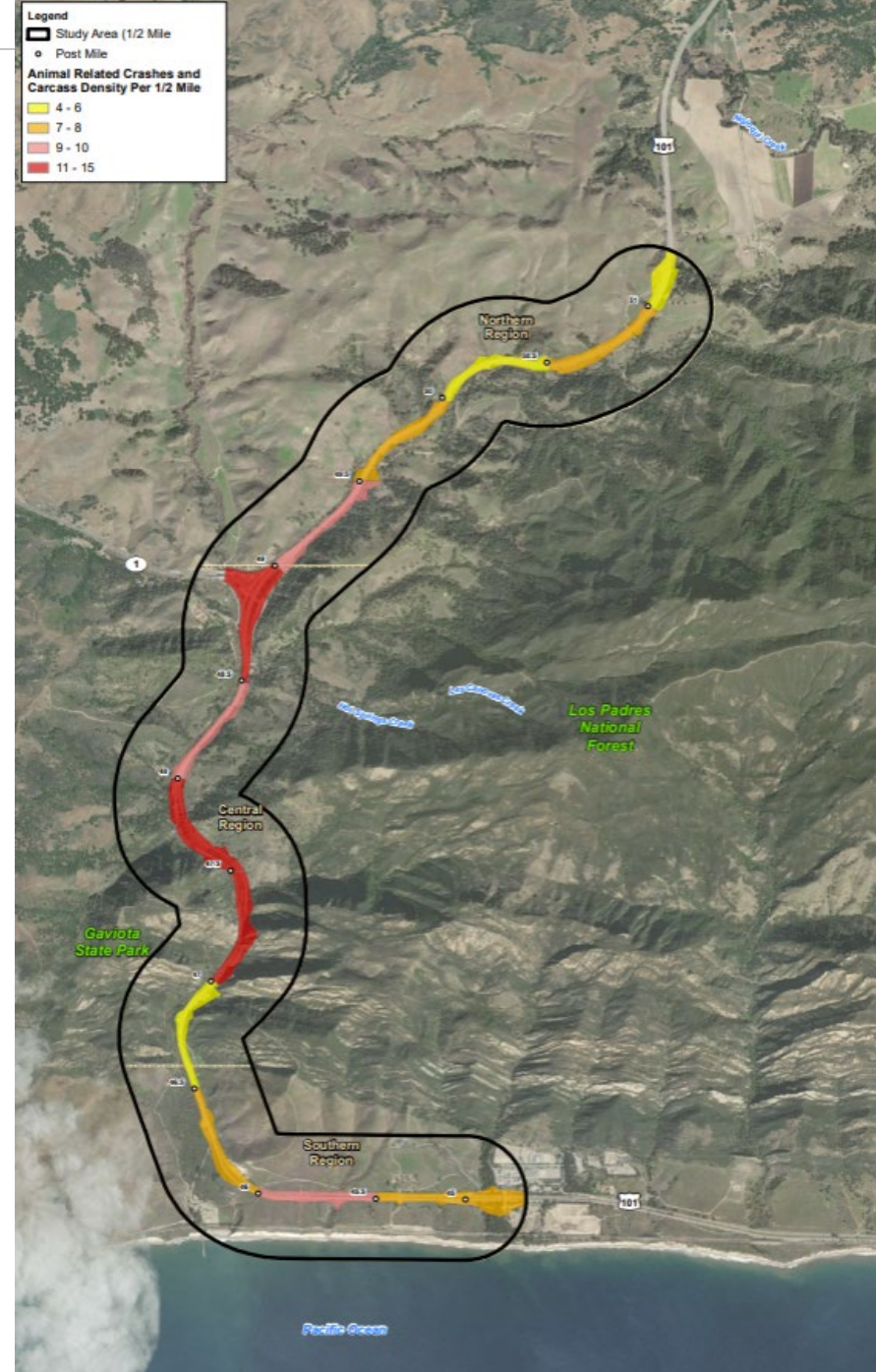
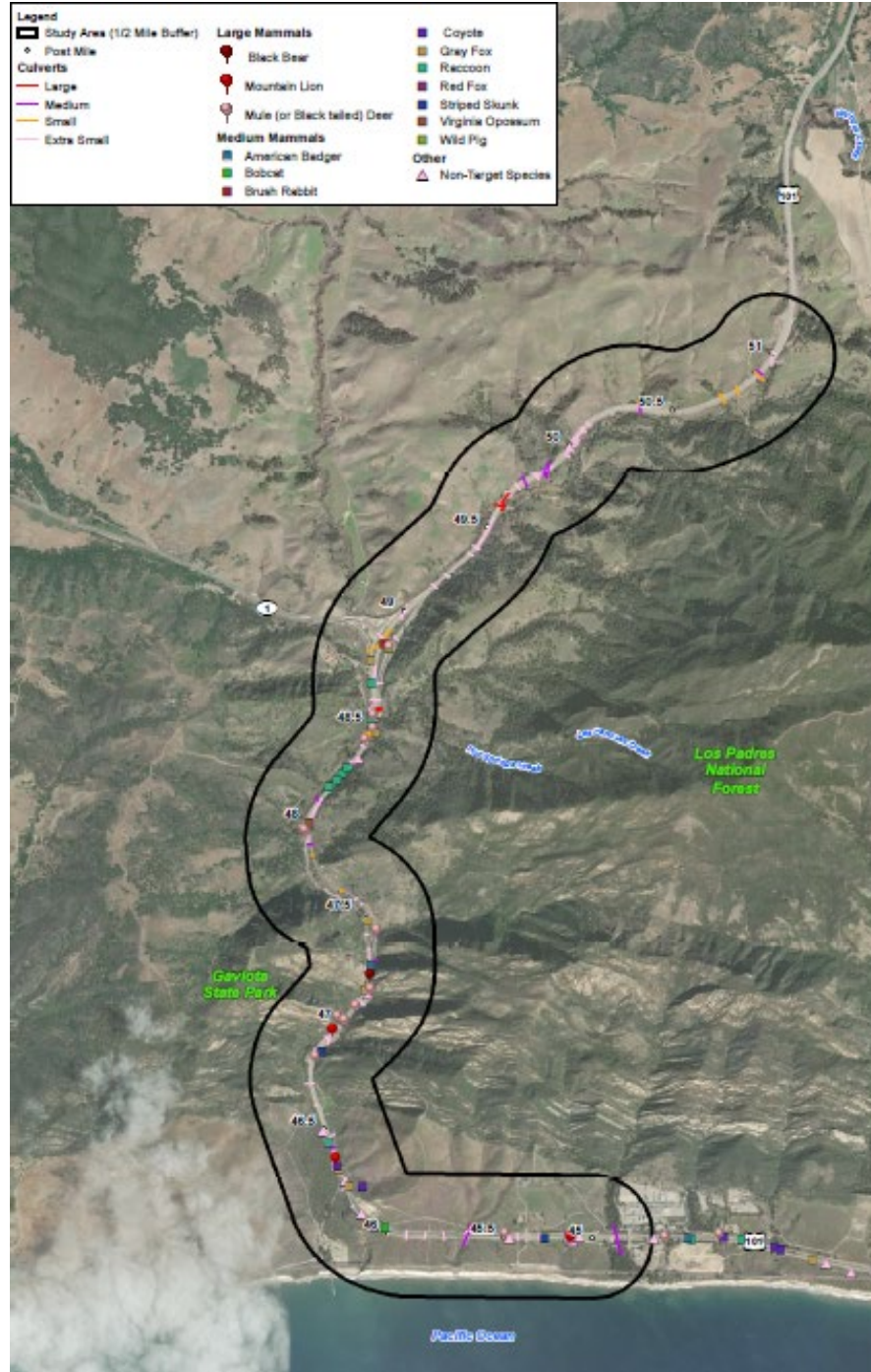


- Striped skunk was detected most often
- One mountain lion carcass was found opportunistically, during camera station setup
- Roadkill highest in September 2022
- No roadkill data collected between January 9, 2023, and January 30, 2023, due to severe storms and crew safety concerns





# Roadkill Monitoring Results

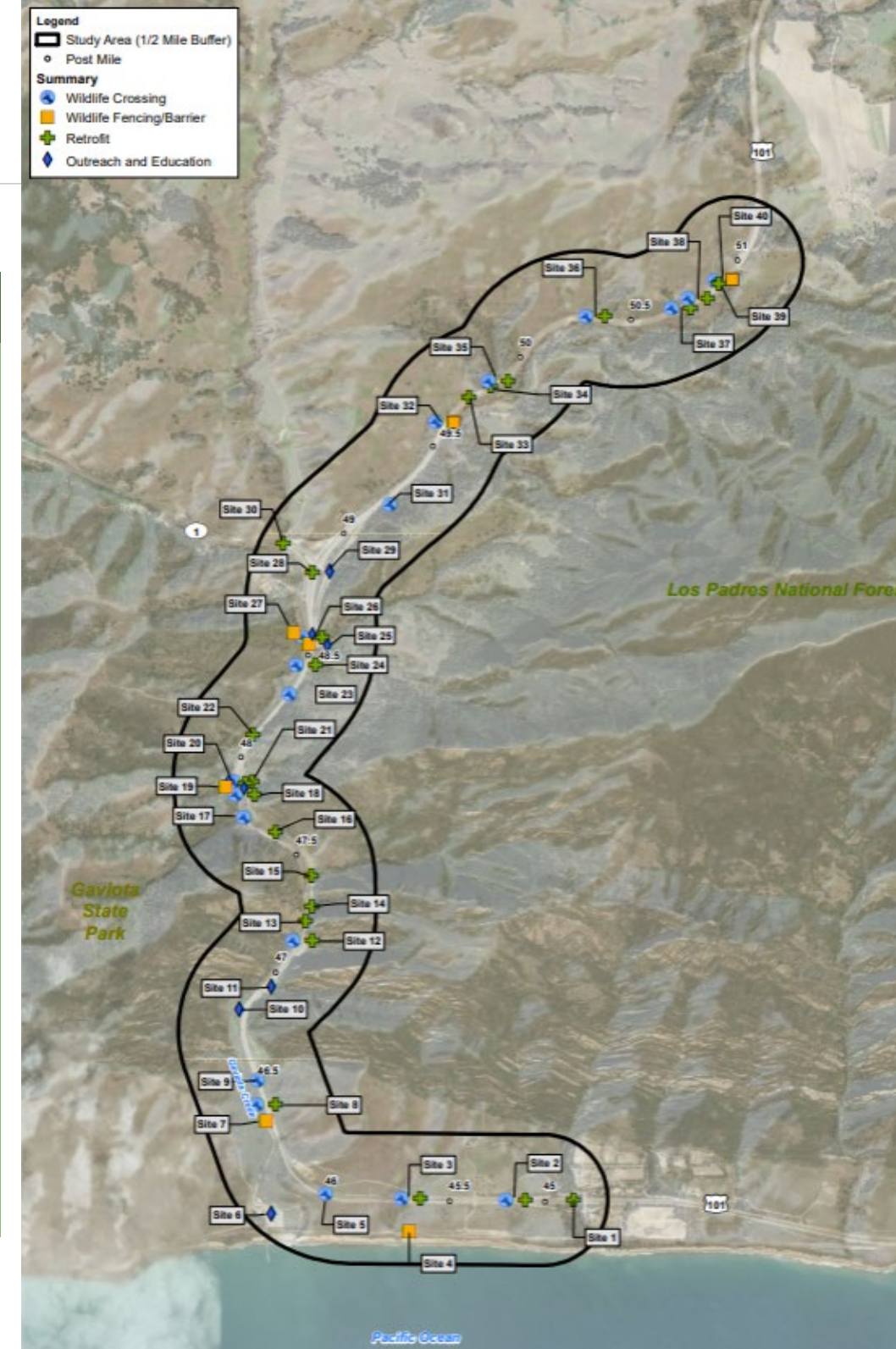




# Connectivity Enhancement Opportunities – Key Findings

- Integrated background and existing conditions information and results from passage assessments, camera monitoring, and roadkill monitoring
- Identified Study Area-wide and site-specific opportunities at 40 sites throughout the Study Area to:
  - Decrease wildlife-vehicle collisions
  - Improve wildlife connectivity
  - Perform outreach and education
- Next steps include prioritization of tools and opportunities

Symbol	Meaning	Applicable in Study Area?	Application Approach
	Wildlife Crossing	✓	Site-Specific
	Wildlife Fencing and Barrier	✓	Study Area-Wide and Site-Specific
	Retrofit	✓	Site-Specific
	Reduce Roadside Value	✓	Study Area-Wide
	Outreach and Education	✓	Study Area-Wide and Site-Specific
	Roadway Signage	✓	Study Area-Wide Strategic
	Traffic Control	?	Study Area-Wide Strategic
	Habitat Enhancement	✓	Study Area-Wide Strategic and Site-Specific
	Experimental Technique	?	Site Specific Strategic



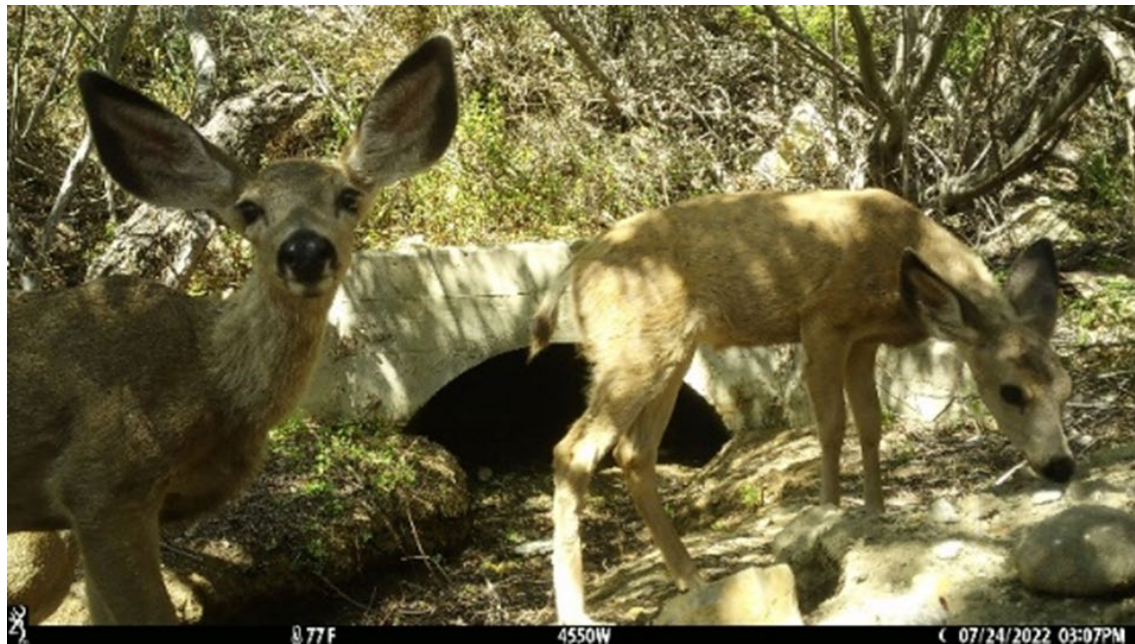


# Next Steps



## Next Steps

- Begin planning connectivity enhancement opportunities





Thank you!

Time for Q&A

The End





