

A photograph of a San Joaquin kit fox standing in a field of dry, golden-brown grass. The fox is facing slightly to the left but looking towards the camera. It has a slender build, large ears, and a mix of grey, tan, and white fur. The background is a soft-focus field of similar grass. The text is overlaid on the right side of the image.

# **CALIFORNIA DEPT. OF FISH AND WILDLIFE LONG-TERM SAN JOAQUIN KIT FOX SPOTLIGHT SURVEYS**

Brandon Swanson CDFW





# **SJKF SPOTLIGHTING**

Listed under ESA 1967

Spotlighting on the Carrizo  
began 1970 Elkhorn

Soda Lake 1990

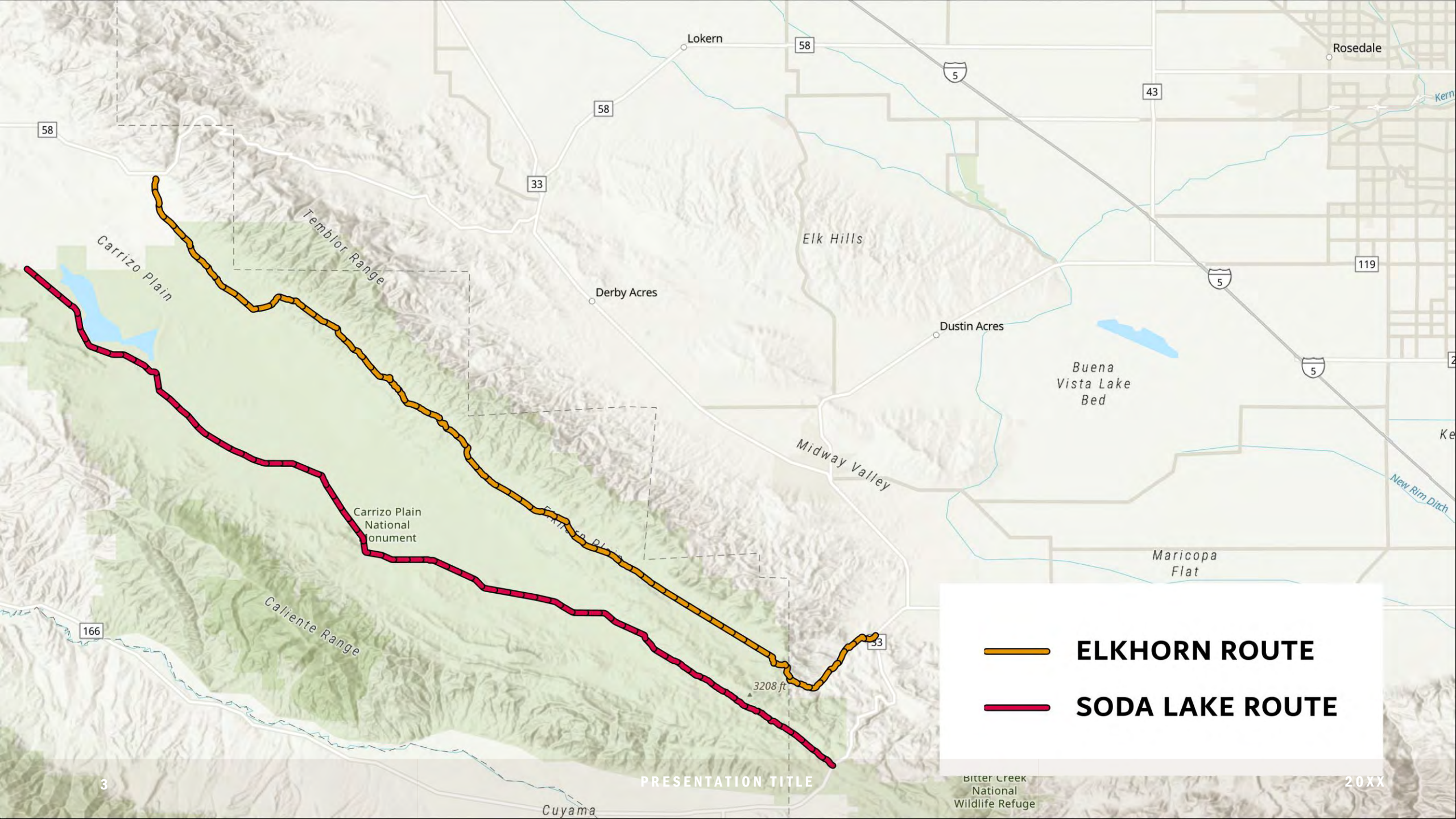
Distance sampling 2000

All carnivores and  
lagomorphs counted

GKR locations added 2023

Using QuickCapture





-  **ELKHORN ROUTE**
-  **SODA LAKE ROUTE**



# SAN JOAQUIN KIT FOX

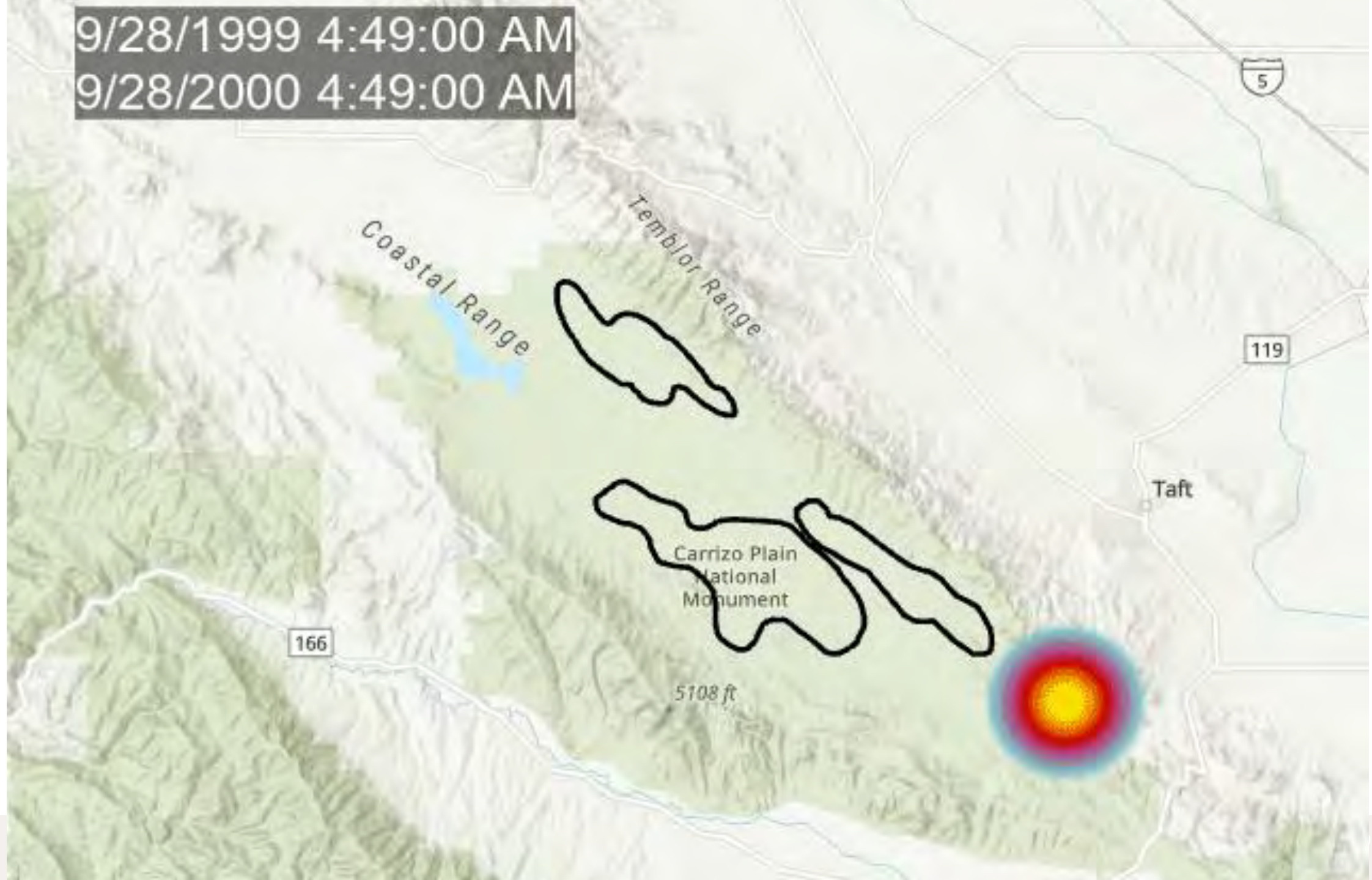
(*Vulpes macrotis mutica*)

Beginning in 2000, perpendicular distance and side of detection were added to in form a distance sampling model.

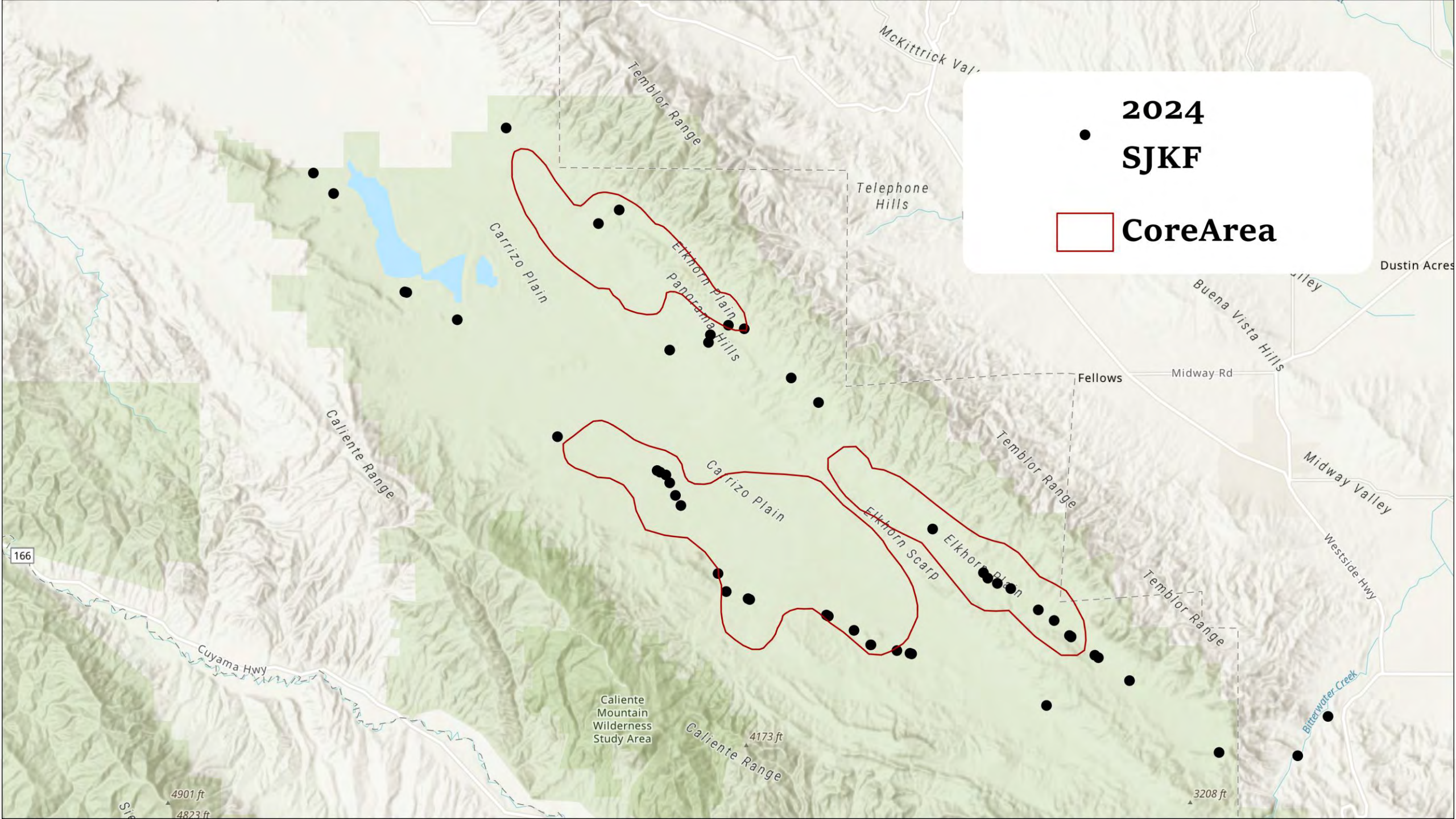
| Year | 2007 | 2016 |
|------|------|------|
| 2000 | 2008 | 2017 |
| 2001 | 2009 | 2019 |
| 2002 | 2010 | 2020 |
| 2003 | 2011 | 2021 |
| 2004 | 2012 | 2022 |
| 2005 | 2013 | 2023 |
| 2006 | 2015 |      |



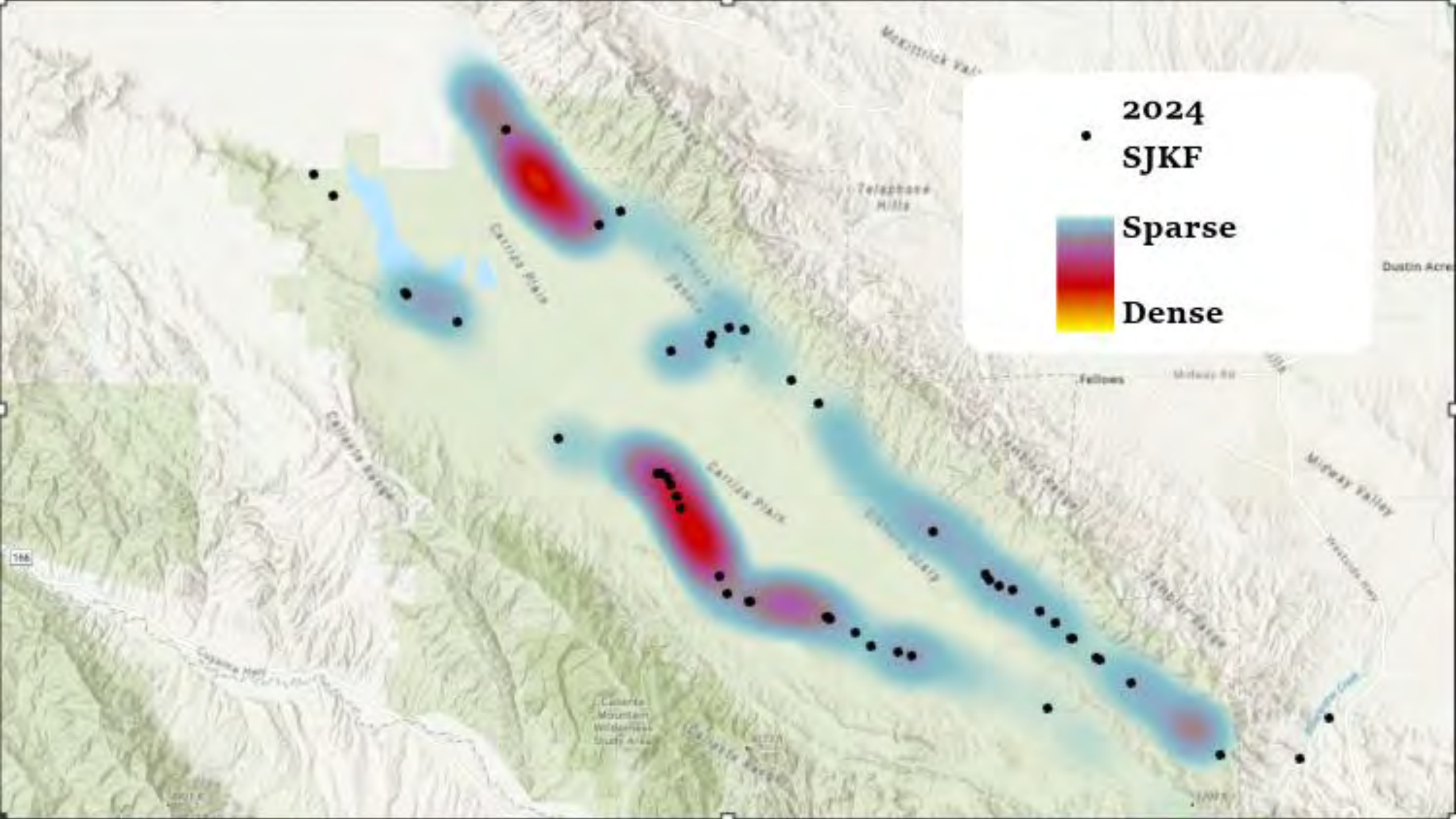
9/28/1999 4:49:00 AM  
9/28/2000 4:49:00 AM











| Route     | SJKF | GKR  | UNKNOWN | BLACK-TAILED JACKRABBIT | SHORT-EARED OWL | BARN OWL | BURROWING OWL | DESERT COTTONTAIL | KANGAROO RAT SPECIES |
|-----------|------|------|---------|-------------------------|-----------------|----------|---------------|-------------------|----------------------|
|           |      |      |         |                         |                 |          |               |                   |                      |
| ELKHORN   | 23   | 1036 | 3       | 8                       | 2               | 3        | 6             | 5                 | 4                    |
| SODA LAKE | 30   | 986  | 2       | 51                      | 10              | 41       | 14            | 5                 | 45                   |
| TOTAL     | 53   | 2079 | 5       | 53                      | 12              | 44       | 16            | 10                | 49                   |

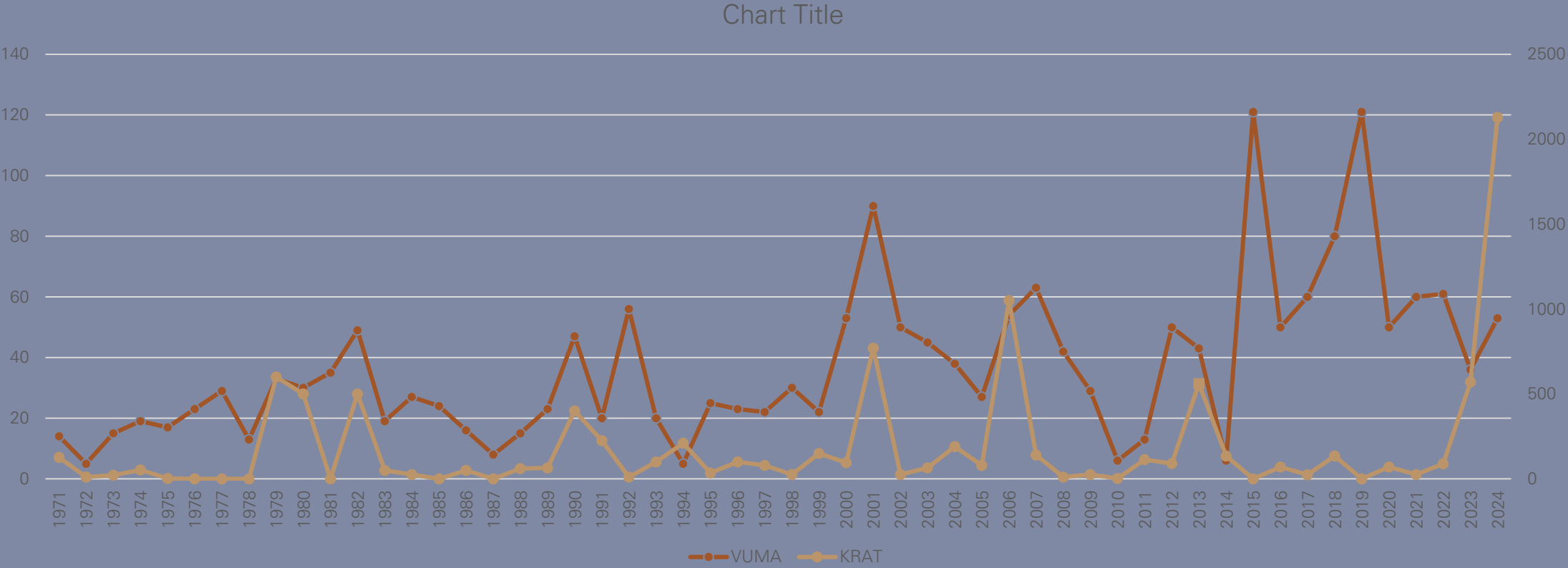
8

PRESENTATION TITLE

20XX

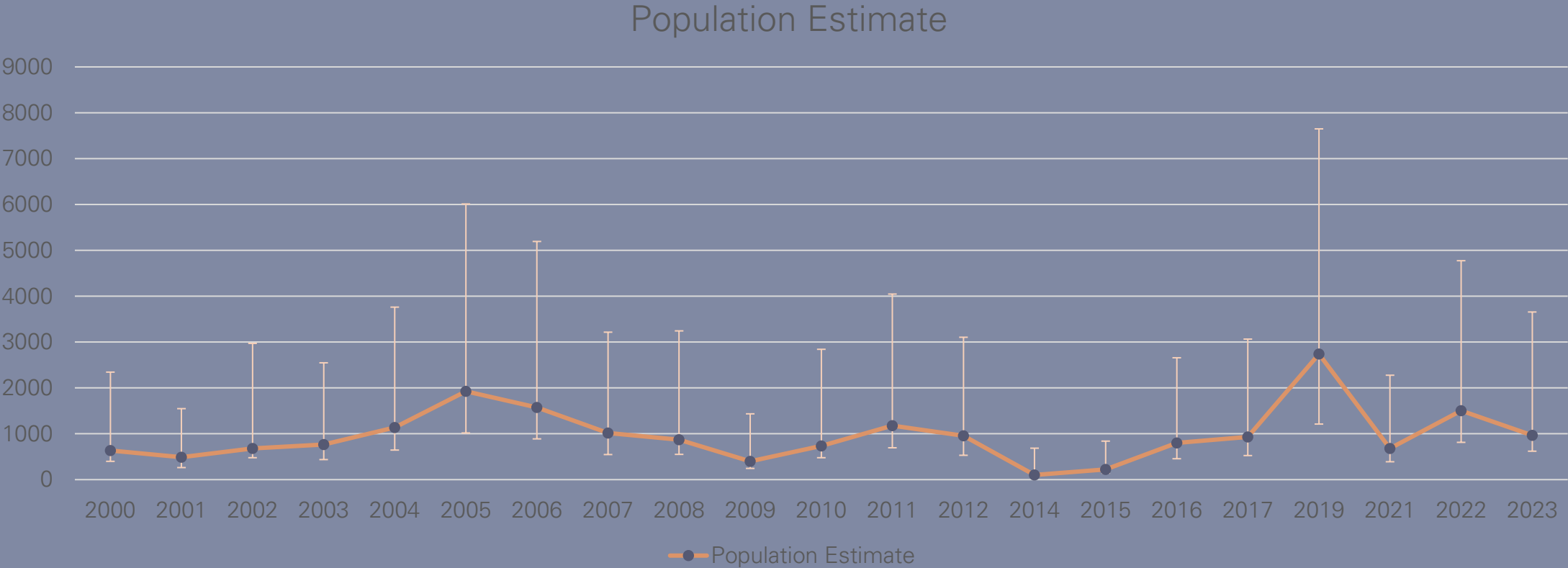


# 1970-2024





# 2000-2023 DISTANCE SAMPLING MODELING





A photograph of a coyote sitting in a field of tall, dry grass. The coyote is looking towards the right. In the background, two smaller coyote pups are visible, also looking towards the right. The lighting is warm, suggesting late afternoon or early morning.

# FUTURE EFFORTS

- Continue refining distance sampling model
- Thermal Camera flights
- Continue spotlight effort















