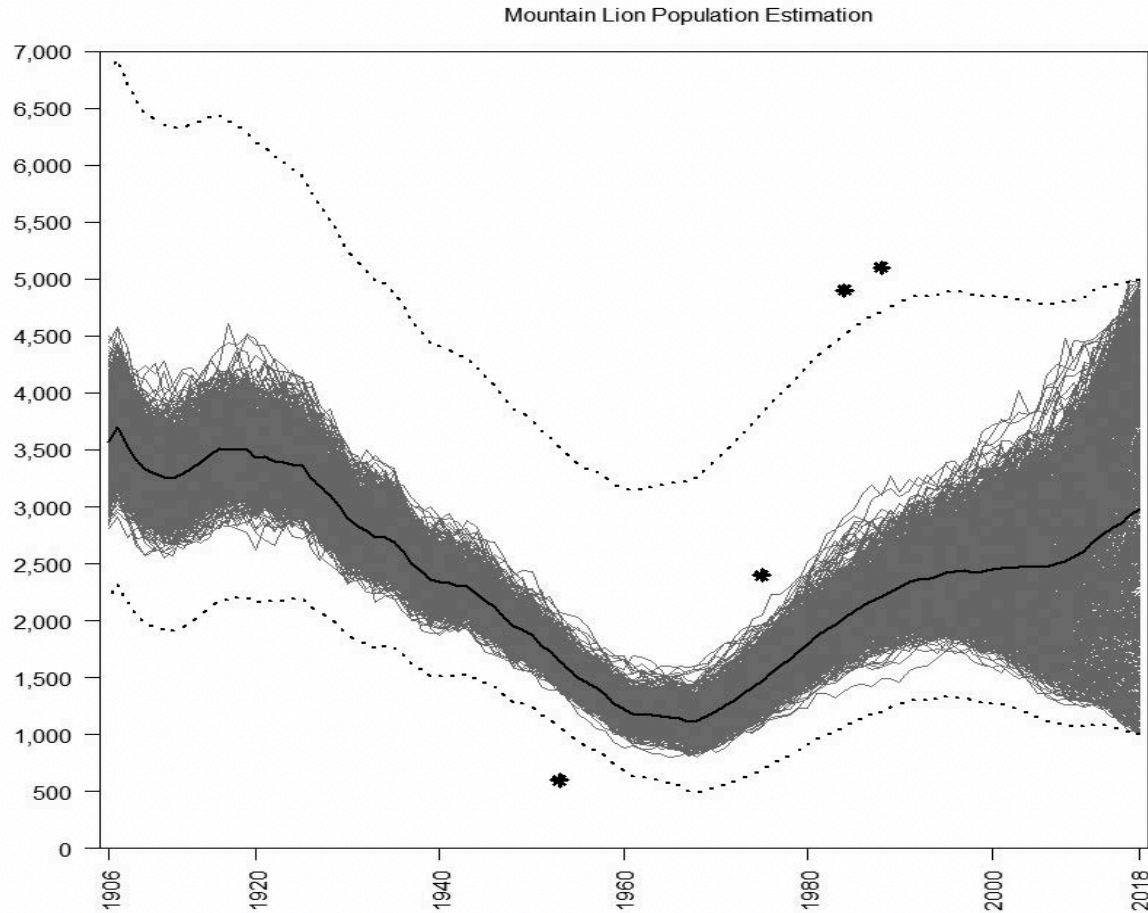


HUMAN/COUGAR CONFLICT IN EL DORADO COUNTY

El Dorado County Fish and Wildlife Commission

September 25, 2024

MOUNTAIN LION POPULATION ESTIMATES IN CALIFORNIA



- **Backcast population estimates From Dellinger and Torres, 2020**

Mountain Lion management has varied widely over the last 100+ years

A bounty system for lions existed between 1906 and 1963. 12,580 lions were taken during that time leading to a population decline.

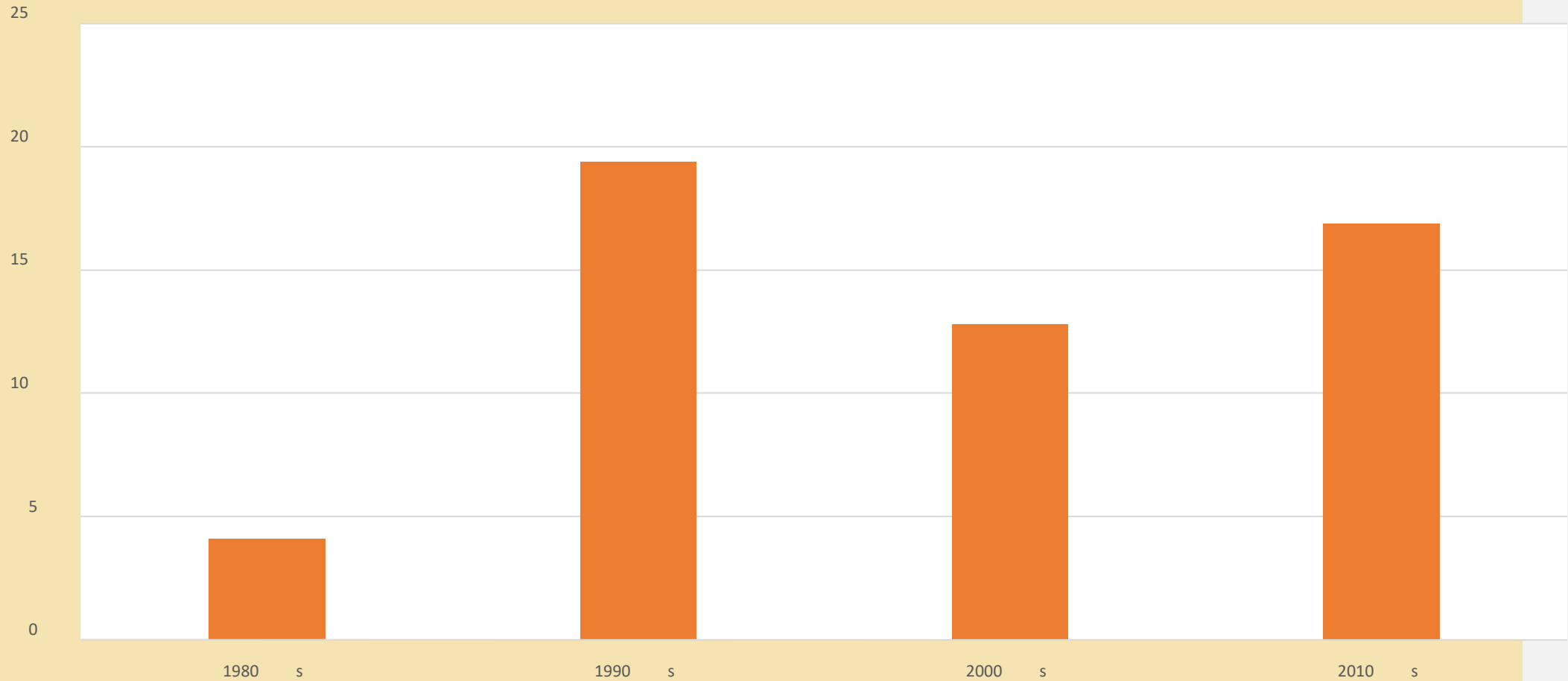
After the bounty system ended hunters could take lions without limit until 1970. The population continued to decline.

A lion hunting moratorium began in 1972 and ended in 1986 wherein the CDFW began to develop regulations for harvest quotas.

Voters passed proposition 117 in 1990 establishing mountain lions as a specially-protected mammal species.

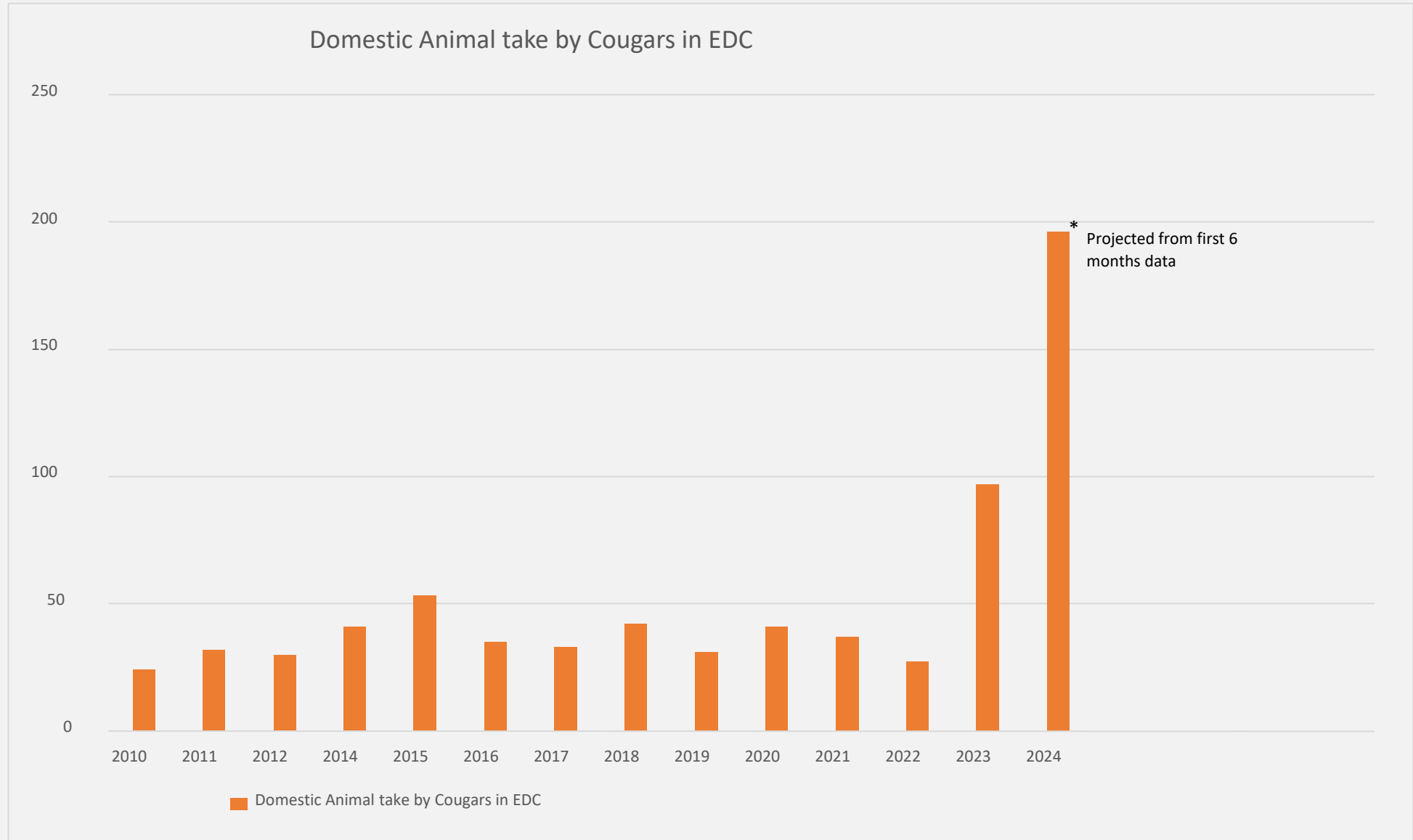
Justin Dellinger has greatest confidence in an estimate of 4500 lions statewide from an as yet unpublished population study.

El Dorado County Average Depredations per year

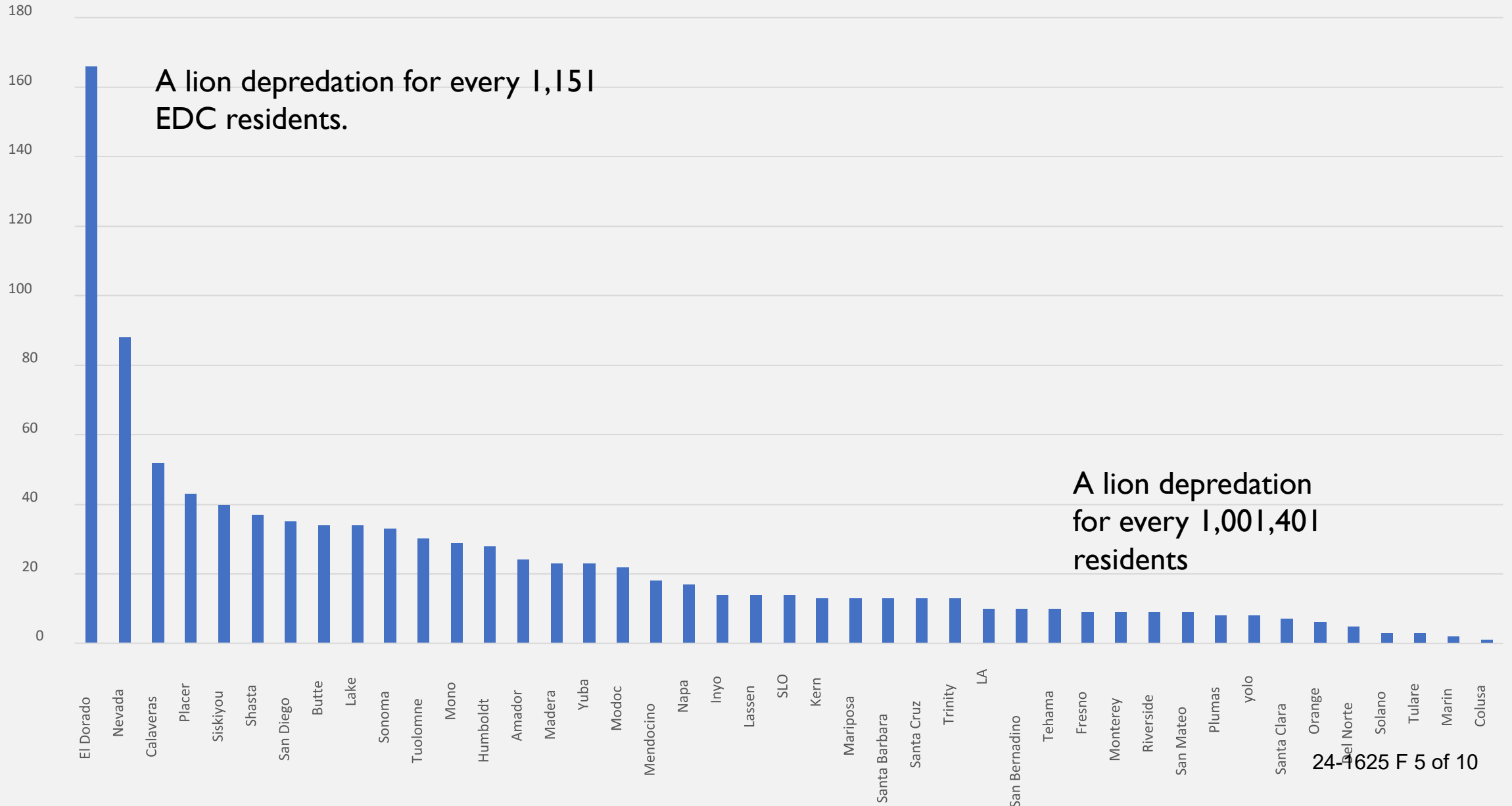


Why are lion depredations spiking in 2023 and 2024?

Figure 1.



Total Lion Depredation permits by county 2019-2023 (CDFW data)



A TALE OF TWO EDC LION POPULATIONS

- Collared 10 Lions on National Forest Lands
- 90 % survival
- 1.6 lions per 100 km²
- No more than 50 lions or so – a mature population
- An old and stable "SOURCE" population
- Collared 10 lions on rural west slope lands
- 40% Survival
- Density estimate not possible
- Likely comprised of younger animals with higher densities and smaller territories
- A young "SINK" population

Data from Justin Dellinger, personal communication

LION REPRODUCTION AND DISPERSAL

- Lions may have between 1 and 6 kittens with an average of 2 to 3 kittens per breeding attempt.
- Lions breed year-round but females typically have kittens every other year
- Juveniles stay with mom and disperse after 12 to 15 months
- Overall reproductive success is related to hunting success.



POSSIBLE EXPLANATION OF 2023/24 SPIKE IN WEST SLOPE DEPREDATIONS BY LIONS

- Caldor fire burned 221,835 acres, in 2021, mostly in El Dorado County and mostly on National Forest Lands, and primarily affecting the SOURCE population of lions.
- The direction of that affect was positive due to the improved habitat and browse for deer in 2022. The drought ended in 2021 and 2022 was a wet year. (If the effect had been negative and adults in the burn scar were displaced westward you would expect to see the spike in 2021 and 2022 not 2023 and 2024).
- A spike in deer habitat improvement and abundance for the source population in 2022 could have led to a spike in lion reproductive success.
- Those juveniles likely migrated downslope in 2023 and the effect continues into 2024.
- A density of 3.7 lions per 100 km² in the foothills would be about 400 lions.

CONCLUSIONS

- Lion depredations of livestock tripled in EDC in 2023 over the previous 12 year average.
- El Dorado County has 17% of all lion depredation permits issued in the state. No other county is even close.
- Changes were made in 2020 to the CDFW depredation policy to require more than one depredation event per parcel before issuing a lethal take permit.
- Scientific literature suggests that lions who have received food rewards are more resistant to hazing.
- California is underinvesting in lion research and human/lion conflict management.
- Research on effective proactive hazing technique is needed and EDC, as the state's epicenter of lion/human conflict is the perfect place to conduct that research.

RECOMMENDATIONS

- The county should appeal to the CDFW to increase and restore the staffing for conflict biologists assigned to the county.
- EDC should combine its voice with other high lion conflict counties to seek changes in CDFW policies on lions.
- EDC in partnership with CDFW should take active measures to end deer feeding by residents on the west slope through both education and law enforcement.
- Investment is needed in research of conflict avoidance measures for high conflict counties. A research program like that being conducted in Washington State using hounds for a “tree and free” hazing program would be useful.
- A zonal program of lion management in California that considers the spikes in conflict now occurring should be implemented, suspending the three strikes rule in high conflict counties.