



State of California - Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Wildlife Branch
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



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Public Notice of Intent to Issue a Permit for Mountain Lion Research in California

Legislation passed in 2012 requires the Department of Fish and Wildlife (CDFW) to notify the public at least 30 days prior to the issuance of a Scientific Collecting Permit (SCP) to qualified researchers desiring to conduct research on mountain lions.

The legislation is described in Section [4810 of the Fish and Game Code](#), and [Title 14, Section 650\(e\)\(3\)\(C\) of the California Code of Regulations](#).

A summary of the proposed research is below. Copies of the DRAFT permit are available upon request to CDFW. Please contact the California Department of Fish and Wildlife, Wildlife Branch- MOUNTAIN LION SCP at 1701 Nimbus Road, Rancho Cordova, CA 95670.

Prospective Scientific Collecting Permit Renewal Issued to:

Dr. Thomas W. Vickers, DVM, MPVM (Individual) – Principal Investigator

Wildlife Health Center at the University of California, Davis, in collaboration with
Institute for Wildlife Studies

Executive Summary:

UC Davis Wildlife Health Center Mountain Lion (*Puma concolor*) Research Project

California mountain lions have recently been characterized genetically as being divided into ten subpopulations, predominantly by highways and development. Populations in southern California, where we've conducted research for 20 years, are at risk of decline due to: 1) low annual survival secondary to interactions with humans (vehicles, depredation-related deaths, illegal killings), habitat loss, and genetic restriction, and 2) inbreeding secondary to habitat fragmentation. These risks dictate continued study into all the aforementioned factors that are affecting those subpopulations. Additionally, we know from recent publications that restoring connectivity is the primary way to ensure long-term viability of isolated populations in southern California and the Bay Area. We have secured long-term funding to assess connectivity, for informing habitat conservation and transportation construction efforts, in the Tehachapi Mountains and the Central Coast. Specifically, this work will involve looking at habitat use, gene flow, and dispersal along Highway 58 and Interstate 5 in the Tehachapi Mountains, Highway 101 in the

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Gabilan Range between Gilroy and Salinas, and Highway 101 in the Santa Margarita area if requested by Region 4 staff, as well as Highway 152 in the Pacheco Pass area between Gilroy and Los Banos in the Central Coast. In our northeastern California study area, potential impacts of mountain lion on pronghorn antelope, and a lack of knowledge about basic population characteristics such as dispersal patterns, genetics, home range sizes, diet and maternal behavior are all being studied in order to have baseline knowledge about mountain lions in this region prior to likely colonization by wolves in the future. We apply for this Scientific Collecting Permit (SCP) in order that we may continue our long-term (20 year) mountain lion research project and expand efforts to areas where peer-reviewed research indicates further data collection efforts are needed. Long-term studies of mountain lions are rare, and the work in southern California is one of the longest running in the nation and has resulted in or contributed to more than 50 peer reviewed publications and technical reports. Our findings and analyses have contributed significantly to the body of knowledge for mountain lion conservation in California, but more remains to be done. We hope that our track record of producing sound scientific results demonstrates that continuation of current research, and expansion into other geographic areas, will bear useful scientific insight for informing mountain conservation and management in California.

Specifically, the focus of our current and expanded research is in areas relating to:

- increasing connectivity across barriers such as roads, and better understanding the impacts of sound and light from roads and development on mountain lion behavior (current and expanded research in southern California and the Central Coast);
- monitoring genetic status and inbreeding depression in at-risk populations, especially in the Santa Ana Mountains (current research in southern California);
- contributing to genomics assessment of mountain lion subpopulations in California (current and expanded research in southern California, the Central Coast, and northeastern California);
- monitoring sources of mortality and helping to develop and assess methods of mortality reduction (current and expanded research in southern California, the Central Coast, and northeastern California);
- investigating different methods for estimating population density and abundance and determining the best methods for monitoring populations long term, as well as creating a specific monitoring and management plan for San Diego County (current research in southern California);

- understanding mountain lion impacts on pronghorn antelope and other prey species, and establishing dietary baselines for mountain lions in northeastern California prior to expected colonization by wolves (current research in northeastern California);
- investigating mountain lion-human interactions in peri-urban wilderness parks that are heavily used by both humans and mountain lions (current research in southern California);
- reducing mountain lion depredation of livestock (current research in southern California);
- increasing understanding of the impacts of habitat and development on disease and toxin exposure and health (current research in southern California);
- investigating home range sizes, maternal behavior, and dispersal patterns in different landscape types (current and expanded research in southern California, the Central Coast, and northeastern California).

We believe that the outcome of these efforts will continue to be, as in the past, enhancement of the sound information that is needed for good decisions relating to long-term mountain lion conservation in California. Past work in southern California was permitted for San Diego, Imperial, Orange, Riverside, and San Bernardino counties. In addition to these counties, work will also be occurring in Los Angeles and Kern counties. The additional two new counties are for work related to mountain lion habitat use, gene flow, and connectivity in the Tehachapi Mountains. Additionally, this same kind of work (i.e., habitat use, gene flow, and connectivity) will take place in the Central Coast in Monterey County and the Gabilan Range/Pacheo Pass area which includes San Benito, Santa Clara, and Merced counties, as well as the Santa Margarita and Atascadero areas in San Luis Obispo County at the request of Region 4 biologists. Past work in northeastern California was permitted for Siskiyou, Modoc, and Lassen counties. We anticipate continued work in these same counties with no additional counties needed for this effort in northeastern California.