State of California Department of Fish and Wildlife
DUTY STATEMENT
DFW 242A (REV. 07/18/22)

☒ **PROPOSED**

☐ **CURRENT**

E-WLB 26-012

Department Statement:

California is one of the most biodiverse places on the planet. As such, the Department of Fish and Wildlife (CDFW) values diverse employees working together to protect nature for all Californians. CDFW is committed to fostering an inclusive work environment where all backgrounds, cultures, and personal experiences can thrive and connect others to our critical mission.

INSTRUCTIONS: A duty statement and organizational chart must be submitted with each Request for Personnel Action, Form 242	EFFECTIVE DATE

DFW DIVISION/BRANCH/REGION/OFFICE WFD/Wildlife Branch	POSITION NUMBER (Agency-Unit-Class-Serial) 565-035-5582-905
UNIT NAME AND LOCATION Wildlife Health Laboratory/Rancho Cordova	CLASS TITLE Research Scientist (Limited Term)
INCUMBENT	CURRENT POSITION NUMBER (Agency-Unit-Class-Serial)

BRIEFLY DESCRIBE THE POSITION'S ORGANIZATION SETTING AND MAJOR FUNCTIONS

Under supervision of the Environmental Program Manager I of the Wildlife Health Laboratory, the incumbent will plan, organize, and carry out scientific research studies of limited scientific scope and complexity; may serve as a team member on scientific projects and investigations or act as a technical scientific consultant on a specific phase of a more complex scientific study; make independent decisions in a limited or restricted area of genetics; solve problems using standard principles, procedures, and techniques for genetics when fully trained. This is a full-time, limited-term position for 12 months, with the possibility of a 12-month extension (up to a total of 24 months) that will support time-bound State Wildlife Grant (SWG) grant objectives. Duties include, but are not limited to the following essential functions:

PERCENTAGE OF TIME PERFORMING DUTIES	INDICATE THE DUTIES AND RESPONSIBILITIES ASSIGNED TO THE POSITION AND THE PERCENTAGE OF TIME SPENT ON EACH. GROUP RELATED TASKS UNDER THE SAME PERCENTAGE WITH THE HIGHEST PERCENTAGE FIRST. (USE THE REVERSE SIDE IF NECESSARY.)
45%	**ESSENTIAL FUNCTIONS**: **Core Program Support:** Assist the CDFW Wildlife Genetics Research Unit in the Wildlife Health Laboratory in generating and interpreting genomic data sets suitable for assessing genetic variation among American badger (*Taxidea taxus*) populations statewide and improve genetic management of other wildlife populations in California, as needed. Assist with management of a SWG funded investigation, including implementation of previously designed genetic assays, Illumina sequencing library preparation, bioinformatic processing of Illumina short-read data, and analysis of single nucleotide polymorphism (SNP) variants to determine genomic diversity and landscape genetic differentiation between populations from contrasting natural environments. Driving state vehicles to remote field sites to provide sampling material and tools. Query public deoxyribonucleic (DNA) sequence databases (e.g., Genbank, Dryad, etc.); Perform literature reviews and basic statistical analyses; Generate scholarly outputs, including publications in scientific and departmental journals, give presentations at scientific, internal, or public meetings. Assist with preparation of grant applications in support of this, or closely related projects.
35%	**Genomic Analysis and Bioinformatics Support**: Generate and interpret SNP data sets suitable for regional estimates of kinship and genetic relatedness among mountain lions (*Puma concolor*) in California. Specifically, optimize SNP-based analyses of kinship and infer familial relationships between individual animals using pedigree-based or graph theory methodologies. Interpret results in the context of mountain lion breeding behavior, social interactions, and severity of close inbreeding as it pertains to genetic management.
15%	**General Laboratory Support:** Real-time polymerase chain reaction (PCR) using custom primers and probes; DNA sequencing on an ABI 3500 platform; Optimize restriction site assisted digest sequencing (RAD-Seq) libraries capable of genotyping loci from wildlife samples; Prepare DNA

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	libraries for next generation sequencing using the Illumina platform; Develop single nucleotide polymorphism (SNP) panels suitable for individual identification of large carnivores state-wide; Genotype SNPs using the Fluidigm platform and custom assays; Perform fecal-DNA analysis for species or individual identification. Query public DNA sequence databases (e.g., Genbank, Dryad, etc.); Perform literature reviews and basic statistical analyses; Draft routine reports and internal CDFW correspondence regarding DNA sequencing results. Assist with shipping and transport of samples or carcasses to the Departmental laboratory. Assist with organization of laboratory facilities and equipment. Driving state vehicles to remote field sites, provide sampling material support for field work and research activities of collaborating field biologists. Assists with the cataloguing and long-term storage of new biological samples. **NON-ESSENTIAL FUNCTIONS:**
5%	Provides support for training classes and workshops. Performs administrative tasks including tracking of time worked. Assists with procurement of laboratory equipment and services, assists with sample cataloging and archival.
	WORKING CONDITIONS: Functions will be performed in an office or laboratory setting in-person and virtually in congruence with CDFW telework policies. Driving to meetings and training will be required for this position. This position spends about 75% of the day working in a fixed location at a desk with a computer or conducting laboratory work. Attend occasional Departmental meetings, and scientific meetings, to communicate research results. Workdays may include weekends, odd hours (5%), and be time sensitive. Laboratory bench work involves sitting for several hours a day but may involve walking or standing for brief periods. Ability to lift heavy and irregular items (up to 40 lbs.) required. This is a full-time limited-term position for 12 months, with the possibility of a 12-month extension (up to a total of 24 months).

SUPERVISOR'S STATEMENT: **I HAVE DISCUSSED THE DUTIES OF THE POSITION WITH THE EMPLOYEE.**		
PRINT SUPERVISOR'S NAME	**SUPERVISOR'S SIGNATURE**	**DATE**

EMPLOYEE'S STATEMENT: **I HAVE DISCUSSED WITH MY SUPERVISOR THE DUTIES OF THE POSITION AND HAVE RECEIVED A COPY OF THE DUTY STATEMENT.** **I HAVE READ AND UNDERSTAND THE DUTIES AND ESSENTIAL FUNCTIONS OF THE POSITION AND CAN PERFORM THESE DUTIES WITH OR WITHOUT REASONABLE ACCOMMODATION.**		
PRINT EMPLOYEE'S NAME	**EMPLOYEE'S SIGNATURE**	**DATE**