

**FINAL REPORT on the  
CHRONIC WASTING DISEASE SURVEILLANCE PROJECT  
IN WILD CERVIDS in CALIFORNIA**

**October 2007-September 2008**

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## **I. INTRODUCTION**

In 1999, due to the growing concern that Chronic Wasting Disease would continue spreading to deer and elk in other states, the California Department of Fish and Game (Department) began developing a CWD Surveillance Program for free-ranging mule deer and elk. Due to the lack of established hunter-check stations, collection of samples was achieved at cooperative meat processing establishments throughout the state during opening weekends of the various hunt seasons. As of September 17, 2008, approximately 3,700 deer/elk samples have been collected from free-ranging cervids, primarily mule deer, since the surveillance project began. All tests have been negative. California is considered a “low risk” state for CWD since the ranching of cervids (except for fallow deer) is not allowed, the importation of elk was banned in 1980, and the importation of any cervid is strictly limited. Few deer have been imported into California during the past 20 years. Approximately 1,500 cervids are held in captivity, primarily fallow deer (approx. 845), and greater than 500 cervids are held by AZA accredited zoos.

## **II. FUNDING**

The funding for California’s Statewide CWD Surveillance Program has been provided by the USDA/APHIS cooperative agreement (#07-9706-1713 CA), and dedicated deer funding through the Department’s Deer Herd Management Plan Implementation Program (DHMPIP).

## **III. COMMUNICATIONS**

### **A. Production of Materials**

Inserts providing CWD information on the Department’s FY2007 sampling procedures and locations of sample collecting sites were updated and posted on the DFG website. The Department produced and updates annually, a CWD brochure that is available on the Department’s website and distributed to regional headquarters and hunter education instructors throughout the state. The Department website is updated on a regular basis to contain the current status of CWD in the country with links to other government agencies and CWD experts.

### **B. Events, Training and Distribution of Information**

In 2007, the Department trained new personnel on CWD sampling techniques. Since 1999, twelve necropsy 1½-day classes have been completed resulting in the training of more than 100 Department personnel to perform basic field necropsy techniques and CWD sampling procedures. The training of additional personnel or volunteers for CWD sampling will continue on an as-needed basis.

#### **IV. DIAGNOSTICS**

The CWD testing has been performed at the USDA-approved California Animal Health and Food Safety Laboratory (CAHFS) using the Bio-Rad ELISA test system. During the 2007-2008 Federal Fiscal Year a total of 516 samples were collected from mule deer (464) and elk (52). The CWD prion was not detected in any of the suitable samples submitted for testing.

#### **V. DISEASE MANAGEMENT/DISEASE PREVENTION**

##### **A. Enforcement**

During the 2007 deer hunt season, Department Law Enforcement Division personnel operated a check point at the Yermo Agricultural Check Station to enforce compliance with State regulations (CCR, Title 14, Section 712) banning the importation of whole cervid carcasses to prevent the introduction of CWD into California by residents hunting out-of-state. Wardens inspected 144 vehicles and had contact with 284 out of state hunters. Twelve citations were issued for CWD importation violations at this checkpoint. Enforcement personnel also issued 55 warnings mostly for possession of skull cap with hair on it. The number of hunters found not complying with California's CWD regulations seemed to be decreasing as a result of hunter awareness and enforcement pressure at these checkpoints; as a result, the Department's Law Enforcement Division will continue emphasizing hunter education and compliance for the 2008 hunt season.

##### **B. Information Exchange**

A method of exchanging information with the Colorado Division of Wildlife, Wyoming Game and Fish, and Utah Division of Wildlife regarding California residents who harvest CWD positive cervids in their states was implemented during the fall of 2003. Ten California residents were reported to have harvested deer/elk during the 2007 hunt season, which later tested positive for CWD in the above-mentioned states. All residents were contacted by the Department to determine whether body parts, other than de-boned meat, were brought into the State, and to offer assistance in disposal of the meat. All hunters brought in processed meat only, and all the potentially contaminated meat was incinerated at either a local animal control facility or at the CAHFS facility in Davis, California.

#### **VI. RESEARCH**

No research activities to report. The Department has provided brain tissue collected from deer and elk to various TSE researchers in the State during previous years.

#### **VII. SURVEILLANCE**

##### **A. Mule Deer Surveillance**

During the 2007-2008 sampling year, hunter-harvested deer carcasses were sampled at cooperative meat processing establishments during the opening weekends of the various hunt zones. This active surveillance has yielded the most diagnostic samples per unit time spent by Department personnel. A more effective method of sampling was instated midway though the year. Through the first half of the season, tissues collected from deer included: tonsils, brain stem, extra brain tissue, and retropharyngeal lymph nodes.

A portion of each tissue was placed in formalin and the remaining tissues were bagged and labeled with a unique number and then frozen. All frozen tissues collected were archived at the Department's Wildlife Investigations Lab (WIL) and will be utilized for future disease research or forensic purposes. Tissues collected from deer and elk under the new sampling protocol included: tonsils, brain stem, and retropharyngeal lymph nodes. A portion of each tissue was bagged and labeled with a unique number and then frozen. The tissues collected were submitted to CAHFS for CWD testing.

California is divided into 11 Deer Assessment Units (DAU) for deer management purposes and data analysis. A DAU is an area with similar vegetation, topography, and precipitation patterns inhabited by a group (or groups of) deer that exhibit similar behaviors, for example being migratory or resident. Merging the pre-existing deer hunt zones formed these DAUs. Ideally, the Department's objective is to sample and test 59 deer from each DAU (based on population within the DAU and that CWD would be detected if present at 5% prevalence rate with 95% confidence). Deer from the southern half of California was only sampled opportunistically due to the low density of deer and few deer tags are issued for that area.

Priority is given to samples collected from the following hunts within Northern California, **Deer zones:** A (Northern portion), C1, C2, C3, C4, X1, X2, X3a, X3b, X4, X5a, X5b, X6a, X6b, X7a, X7b, X8, X9a, X9b, X10, and X12. To fulfill the objective that CWD would be detected if present at a 1% prevalence rate with 95% confidence, 942 samples would need to be collected. However, due to logistical and economical difficulty in obtaining a large number of diagnostic samples from free-ranging deer in California, a more realistic objective of 500 samples was established. A total of 464 deer were tested. Deer sampled and tested included hunter-harvested deer and CWD "suspects." Table 1 summarizes the number of deer and elk tested for CWD in 2007 – 08. Table 2 is a breakdown of the deer sampled and tested in each DAU and hunt zone for FY2007.



## B. Elk Surveillance

The logistics of sampling elk throughout the state of California are difficult due to their relatively small numbers (estimated 9,700) and their distribution in large areas of the state. A total of 52 elk were sampled and tested during FY2007.

**Table 1. Summary of California CWD Surveillance Results for FY 2006-2007**

<b>SPECIES</b>	<b>ACTIVE SURVEILLANCE</b>		<b>TARGET PROFILE</b>		<b>TOTALS</b>	
	<b>TESTED</b>	<b>POSITIVE</b>	<b>TESTED</b>	<b>POSITIVE</b>	<b>TESTED</b>	<b>POSITIVE</b>
White-tailed Deer	0	0	0	0	0	0
Mule Deer	433	0	31	0	464	0
Axis Deer	0	0	0	0	0	0
Fallow Deer	0	0	0	0	0	0
Reindeer	0	0	0	0	0	0
Elk	51	0	1	0	52	0
Antelope	0	0	0	0	0	0
Bighorn Sheep	0	0	0	0	0	0
Pronghorn	0	0	0	0	0	0
<b>TOTAL</b>	<b>484</b>	<b>0</b>	<b>32</b>	<b>0</b>	<b>516</b>	<b>0</b>

**Table 2: Mule Deer Sampled by Deer Hunt Zone and DAU in FY 2007-2008**

DEER ZONE	DEER ZONE POPULATION ESTIMATE*	NUMBER SAMPLED IN ZONE	DAU	TOTAL DAU POPULATION	NUMBER SAMPLED IN DAU	IHC RESULTS
A	117,299	17	1	117,299	17	NEG
A(2)	50,271	1	2	58,744	1	NEG
B4	8,473	0	2			
B1	59,580	7	3	142,097	88	NEG
B2	42,853	49	3			
B3	10,217	14	3			
B5	11,360	13	3			
B6	18,087	5	3			
C1	4,747	6	4	35,260	118	NEG
C2	3,530	6	4			
C3	7,650	22	4			
C4	19,333	84	4			
D3	18,837	29	5	94,860	65	NEG
D4	4,823	2	5			
D5	33,953	27	5			
D6	21,520	6	5			
D7	15,727	1	5			
D8	9440	7	6	16,310	7	
D9	3,277	0	6			
D10	3,593	0	6			
D11	4,190	3	7	10,382	3	NEG
D14	1,933	0	7			
D15	1,133	0	7			
D16	2,213	0	7			
D19	913	0	7			
D12	1,447	0	8	3,732	0	NEG
D17	1,057	0	8			
X9C	1,228	0	8			
X1	6,950	16	9	19,020	52	NEG
X2	810	6	9			
X3A	2,540	2	9			
X3B	4,493	10	9			
X4	2,170	6	9			
X5A	810	8	9			
X5B	1,247	4	9			
X6A	2,517	13	10	7,967	15	NEG
X6B	1,630	2	10			
X7A	1,670	0	10			
X7B	757	0	10			
X8	1,393	0	10			
X9A	4,510	4	11	10,720	98	NEG
X9B	1,787	22	11			
X10	770	0	11			
X12	3,653	72	11			
<b>TOTAL</b>	<b>516,391</b>	<b>464</b>			<b>464</b>	