

**IDAHO DEPARTMENT OF FISH AND GAME**

**Virgil Moore, Director**

**Project W-179-R-9**

**Job Progress Report**



**WILDLIFE HEALTH LABORATORY**

**Study I, Job 1**

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**July 1, 2010 to June 30, 2011**

**September, 2011  
Boise, Idaho**

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**FEDERAL AID IN WILDLIFE RESTORATION  
ANNUAL PROJECT PERFORMANCE REPORT**

1. **State:** Idaho

**Grant number:** W-179-R

**Segment number:** 9

**Grant name:** Wildlife Health Laboratory

2. **Report Period:** July 1, 2010 to June 30, 2011

**Report due date:** September 28, 2011

3. **Location of work:** Statewide

All work was accomplished in all counties statewide.

4. **Objectives:**

- Provide laboratory services and support for the wildlife management and research activities of the Bureau of Wildlife.
- Continually update procedures and techniques for data collection, determination, dissemination, and storage.
- Provide other lab services upon request and as priorities dictate.

5. **If the work in this grant was part of a larger undertaking with other components and funding, present a brief overview of the larger activity and the role of this project.**

- Provide veterinary services for statewide wildlife programs and the Wildlife Health Laboratory.
- Coordinate and facilitate wildlife disease investigations at the Idaho Department of Fish and Game Wildlife Health Laboratory with the University of Idaho Caine Veterinary Teaching Center and cooperating state and federal agencies.
- Lab personnel will aid in development of collecting procedures, take an active part in the actual collection of samples to analyze disease and health-related data, and provide training in sample collection techniques.
- Offer services for carrying out genetic analysis to assist in managing wildlife populations.
- Conduct investigations on diseases of concern for Idaho's wildlife, especially as the diseases impact or are impacted by livestock.

- Wildlife health data collection will be completed and maintained as it relates to wildlife disease and management of populations.
- Necropsies will be performed on various specimens as the need arises.
- Teeth received by the lab will be processed and age data will be reported to regional managers and biologists (black bear, bobcat, river otter, deer, elk, moose, and antelope).
- Provide training for Idaho Department of Fish and Game personnel on immobilization and restraint-required techniques, and supply immobilization drugs.
- Determination of the incidence of exposure of transplanted game birds to Salmonella and Mycoplasma will be completed using the appropriate diagnostic assays.
- Technical assistance will be provided to cooperating agencies, the public, and institutions.
- Data storage and reporting procedures will be revised so that computer entry and analysis will become the primary method of handling age data.
- Collections of literature and reference materials will be maintained.
- Laboratory procedures manual will be updated and maintained.
- Various skulls and skeletal preparations for species identification, aging, and Department collections will be processed.

**6. Describe how the objectives were met.**

Wildlife laboratory services include: analyses of biological samples, clinical diagnosis of wildlife diseases, biological sample collection, packaging and shipping training, and wildlife immobilization training. Disease research and long term disease monitoring provide information about the impact of disease and wildlife health components on wild populations; which is essential for wildlife conservation and management.

The Wildlife Health Laboratory works with other state, federal, and private organizations on wildlife health issues. Strong affiliations are in place with the Idaho State Department of Agriculture, the University of Idaho, Washington State University, Boise State University, and the USGS National Wildlife Health Center. The Wildlife Health Laboratory has also worked cooperatively with the National and Idaho Chapter of the Wild Sheep Foundation.

The Wildlife veterinarian represents IDFG on the Wildlife Health Committee of the Western Association of Fish and Wildlife Agencies and at the U. S. Animal Health Association through membership on the Captive Wildlife and Alternative Livestock, Brucellosis, Tuberculosis and Wildlife Disease Committees.

Annual statewide training offered by the Wildlife Health Lab provides procedural and technique updates and refreshers for biological sample collection related to chronic wasting disease (CWD), brucellosis, biological sample packaging & shipping, wildlife immobilization and wildlife genetic/forensic specimen collections. WHL personnel were responsible for instructing over 300 biologists and conservation officers during 2010-2011 in proper packaging & shipping protocols, wildlife capture techniques using

chemical immobilization, certification for use of controlled substances, and CSI Wildlife –Training for lay people and biologists in Wildlife Forensics (Table 1)

Table 1. FY 2011 Training Provided by WHL

<b>Name of session</b>	<b>Type</b>	<b>Number of Sessions Held</b>	<b>Estimated Attendance</b>	<b>People Attending</b>
Wildlife Chemical Restraint Classes	Training	5	36	IDFG, Nez Perce Tribe Biologists, and Zoo Biologists
ISTS	Information booth – Packaging and shipping biological specimens	1	200	IDFG Personnel
ISTS	CSI Wildlife – Training in Wildlife Forensics	1	50	IDFG Personnel
Idaho Wildlife Brucellosis Plan	Coordination	1	18	State & Federal Veterinarians, USDA & ISDA, WL biologists, ranchers and Governor's Aides.
IDFG Biologists CWD Training	Training	2	6	IDFG Biologists
Veterinary Student Externships	Training	1	1	Veterinary Students

During the 2010-2011 project year WHL personnel processed over 2,700 biological samples collected from different species of wildlife throughout the state for disease, health and forensic purposes (Table 2).

Over 5,000 animal health records were digitally entered and archived in an electronic database for dissemination and reporting on wildlife health. The database receives continuous data quality audits to ensure data accuracy and continuity.

Table 2. FY2011 Biological Samples Processed.

CWD Samples	1192
Brucellosis	319
Live Animal Surveillance	663
DNA Samples	63
Necropsy/Tissue samples	539
Total Samples processed FY 2011(07/01/2010 – 06/30/2011)	2776

Necropsies were performed on 127 animals to determine cause of death and collect biological data in support of wildlife management and research assessments. An additional 168 tissue, blood or swab samples were collected, primarily for disease diagnostics or genetics (Table 3, Table 4).

Table 3. Species Necropsy Log

Bat	21
Black Bear	3
Bighorn sheep	13
Birds	21
Bobcat	1
Chipmunk	1
Cow Domestic	1
Coyote	2
Deer	38
Ducks and Geese	31
Elk	20
Fox	2
Frog	21
Game Birds	121
Goat, mountain	1
Gopher, pocket	1
Hawks	7
Moose	11
Mountain Lion	3
Raccoon	3
Squirrel	5
Turkey	1
Vulture, turkey	1
Wolf	13

Necropsies performed	127
Tissue samples analyzed	168
Total	295

Table 4. DNA samples processed by the Wildlife Health Lab, FY11.

DNA SAMPLES LOG FY 2011	
Bighorn sheep horn shavings	74
Black Bear hair samples	6
Mountain Lion DNA samples	2
Wolf DNA samples	63
	145

Brucellosis and CWD surveillance continued throughout the state. A total 1,192 CWD samples were collected primarily from hunter check stations and focused disease surveillance, with no positive animals detected (Table 5). Brucellosis surveillance efforts were focused through a hunter survey. 2200 hunter sample kits were sent out and 300 (14.5%) samples returned.

Table 5. CWD Samples FY2011

Species Tested	
Elk	170
Moose	40
Mule deer	838
White-tail deer	144
Grand Total	1192

The WHL cooperated on statewide research projects in mule deer ecology, predator ungulate ecology, wolverine, black bear population assessment, and bighorn sheep survival. Animals were radio-collared, ear tagged, measured, evaluated for health status, and sampled depending on the capture protocols. A total of 324 individual animals were sampled (Table 6).

WHL personnel collaborated with private research foundations and BSU to continue investigation of West Nile Virus in raptors in SW Idaho.

Table 6. Biological samples collected and processed by the Wildlife Health Lab from live animal capture efforts throughout the state, FY11.

Species FY2011	
Black Bear	8
Rocky Mountain Bighorn Sheep	23
Mule Deer	4
Rocky Mountain Elk	205
Hawk	66
Mountain Lion	2
Barn Owl	15
Wolf	1
Total	324

**7. Discuss differences between work anticipated in grant proposal and grant agreement and that actually carried out with Federal Aid grant funds.**

There was no significant difference between work anticipated and work accomplished under the grant agreement.

**8. List any publications or in-house reports resulting from this work.**

Drew, Mark L, C. Hay, S. Dauwalter and T. Hebdon. 2011. Wildlife Health Laboratory, Job Prog. Rep. W-179-R-9, Idaho Dep. Fish and Game, Boise.

Drew, Mark L. 2011. IDFG Wildlife Restraint Manual.

Drew, Mark L., 2011, Governor's Brucellosis Plan Annual Report

Miller, D.S., G.C. Weiser, A.C.S. Ward, Mark L. Drew, and P.L. Chapman. 2011. Domestic sheep (*Ovis Aries*) Pasteurellaceae isolates from diagnostic submissions to the Caine Veterinary Teaching Center (1990-2004). *Veterinary Microbiology* 150: 284-288.

Drew, Mark L., K. Rudolph, G.C. Weiser and A.C.S. Ward. Long term monitoring of BHS in contact with domestic livestock. In review.

Drew, Mark L., and G. C. Weiser. Disease survey of domestic goats and their potential relationship to disease in BHS. In preparation.

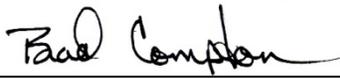
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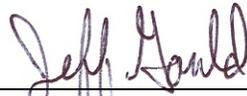


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Approved by:

IDAHO DEPARTMENT OF FISH AND GAME



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