



A REPORT  
TO THE  
MONTANA  
LEGISLATURE

PERFORMANCE AUDIT

# *Brucellosis Management in the State of Montana*

*Department of Livestock  
Department of Fish, Wildlife & Parks*

JANUARY 2017

LEGISLATIVE AUDIT  
DIVISION

16P-06

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Performance audits conducted by the Legislative Audit Division are designed to assess state government operations. From the audit work, a determination is made as to whether agencies and programs are accomplishing their purposes, and whether they can do so with greater efficiency and economy.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Members of the performance audit staff hold degrees in disciplines appropriate to the audit process.

Performance audits are conducted at the request of the Legislative Audit Committee, which is a bicameral and bipartisan standing committee of the Montana Legislature. The committee consists of six members of the Senate and six members of the House of Representatives.

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January 2017

The Legislative Audit Committee  
of the Montana State Legislature:

This is our performance audit of brucellosis management activities carried out by the Department of Livestock and the Department of Fish, Wildlife & Parks. Brucellosis is a bacterial disease that can be transmitted between wildlife and livestock, potentially causing livestock to abort their calves.

This report provides the Legislature information about the various activities undertaken by state agencies for preventing and detecting the transmission of brucellosis between wildlife and livestock in Montana. It includes recommendations for improving oversight of programs at the Department of Livestock and clarifying the role and responsibilities of the Department of Fish, Wildlife & Parks. Written responses from both departments are included at the end of the report.

We wish to express our appreciation to personnel from the Department of Livestock and the Department of Fish, Wildlife & Parks for their cooperation and assistance during the audit.

Respectfully submitted,

*/s/ Angus Maciver*

Angus Maciver  
Legislative Auditor



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# MONTANA LEGISLATIVE AUDIT DIVISION

## PERFORMANCE AUDIT

# Brucellosis Management in the State of Montana

Department of Livestock

Department of Fish, Wildlife & Parks

JANUARY 2017

16P-06

REPORT SUMMARY

The Department of Livestock needs to improve oversight of livestock brucellosis testing to ensure all potentially infected livestock are tested. The Department of Fish, Wildlife & Parks' role and responsibilities relative to preventing brucellosis transmission between wildlife and livestock should be better defined.

## Context

Brucellosis is a regulated infectious disease that affects certain livestock and wildlife populations within the states that contain the "Greater Yellowstone Area"- Montana, Wyoming, and Idaho. The Montana Departments of Livestock (DOL) and of Fish, Wildlife & Parks (FWP) have management authority over livestock and wildlife. These state agencies spent over \$7.5 million of federal and state funds in efforts to prevent the transmission of brucellosis between wildlife and livestock since fiscal year 2011. DOL requires increased brucellosis testing to be performed on livestock in parts of southwestern Montana through its Designated Surveillance Area program, while FWP conducts activities for monitoring and responding to the disease in elk. Both agencies are signatories to an Interagency Bison Management Plan that details responsibilities for a large range of management activities over Yellowstone bison. These responsibilities are shared among the state of Montana and federal agencies.

## Results

We conducted a performance audit of multiple programs across the two state agencies that protect livestock populations from brucellosis infection. Our performance

audit found that both departments should make improvements to these programs. DOL is accurately issuing payments to veterinarians for brucellosis testing, but needs to enhance its oversight of various elements of its Designated Surveillance Area program for brucellosis. The department should improve its process for ensuring that all required brucellosis testing is carried out, and consistently respond to noncompliance with brucellosis testing requirements. DOL also needs to better document bison management, and increase coordination with FWP on concerns related to the presence of bison. While FWP is managing the presence of brucellosis in some Montana elk populations through an adapted form of game damage mitigation, its responsibilities could be better defined. This process lacks clear, defined eligibility criteria for landowners requesting assistance.

Our recommendations to DOL include:

- ♦ Improving oversight of brucellosis testing requirements.
- ♦ Expanding documentation of certain brucellosis vaccination payments.
- ♦ Using the Interagency Bison Management Plan adaptive

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management guidelines when lethally removing bison and clearly documenting the need for lethal removals.

Our recommendations to FWP include:

- ♦ Clarifying its role and responsibilities in responding to brucellosis through legislation.
- ♦ Defining its brucellosis response program through administrative rules and program policies.

#### Recommendation Concurrence

Concur	4
Partially Concur	1
Do Not Concur	0

**Source: Agency audit response included in final report.**

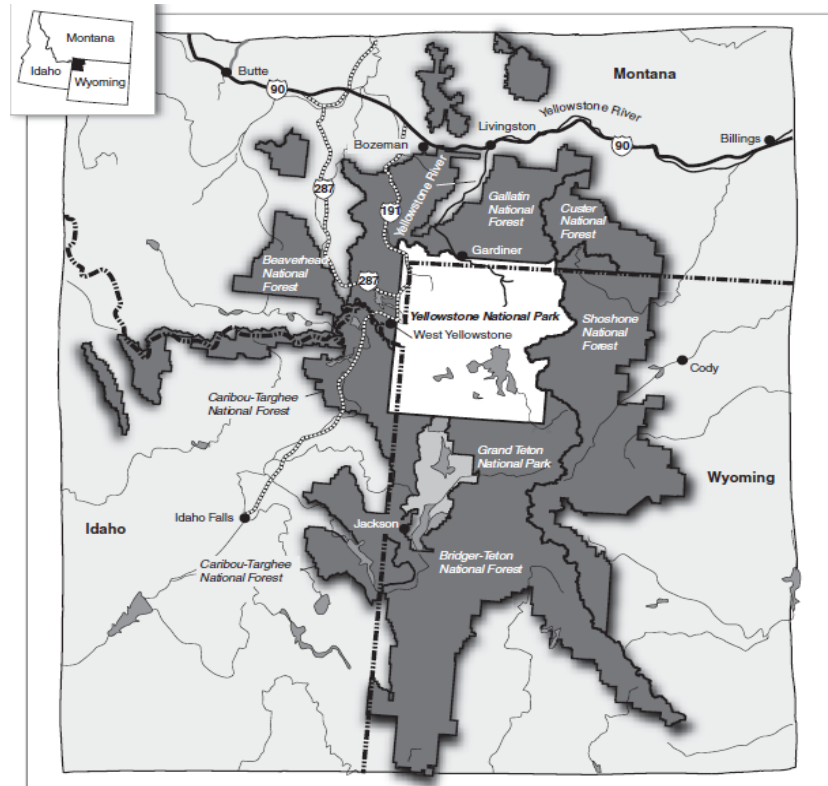
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# Chapter I – Introduction

## Introduction

Brucellosis refers to a contagious disease of certain species of livestock and wildlife caused by the bacterium *Brucella abortus* (hereafter referred to simply as brucellosis). The Montana Departments of Livestock (DOL) and of Fish, Wildlife & Parks (FWP) have management responsibility over the species of livestock and wildlife that can carry the disease. These include cattle, domestic bison, wild bison, and elk. This disease represents a concern for government animal health officials due to its potential for causing pregnant livestock to abort their calves and has been regulated by the USDA since the 1930s. Brucellosis is, in particular, a prominent concern for Montana stockgrowers and animal health officials. This is because the Greater Yellowstone Area (GYA) is the nation's last known area where the disease is present in the wild. Portions of the elk and bison populations in the area are infected with brucellosis. Yellowstone National Park and surrounding lands represent the area in which the disease is present in wildlife populations. The following map shows the geographic extent of the Greater Yellowstone Area.

Figure 1  
**Greater Yellowstone Area Map**



Source: U.S. Government Accountability Office.

In 2014 and 2015, the Legislative Audit Committee received requests for a performance audit of the state's activities to prevent the transmission of brucellosis between wildlife and livestock. These requests included a number of concerns related to the role of various state agencies in the management of brucellosis and oversight responsibilities for brucellosis management. Following the request received in 2015, the audit committee prioritized this topic for fiscal year 2016. The remainder of this chapter provides an overview of audit objectives, scope, and the contents of the report.

## **Audit Objectives and Scope**

Following the prioritization of this topic by the Legislative Audit Committee, we performed audit assessment work to determine the necessity of an audit and help make scoping decisions. Assessment work determined that DOL's role in overseeing the health of Montana livestock is subject to federal and state requirements, while FWP's role in preventing the disease in livestock is more recent and less well defined. This work helped us develop our two audit objectives:

1. Evaluate DOL's process for ensuring it meets its responsibilities for managing the risk of brucellosis transmission to livestock, as conferred by state law, administrative rules, and the Interagency Bison Management Plan.
2. Determine the role of FWP in responding to the presence of brucellosis in wildlife, and if the resulting responsibilities are carried out according to a defined, documented process.

In order to answer the questions posed by audit objectives, our work reviewed the current brucellosis management activities in Montana. In doing so, the scope of this audit varied between the two audited agencies, which is discussed further in the following sections.

## **DOL**

For audit work at DOL, we focused our attention on the two most recent years of completed operations, for the two programs that deal with brucellosis in cattle and wildlife. These programs are the Designated Surveillance Area program and the Bison Program, both organized under DOL's Animal Health Division. The Designated Surveillance Area program is a response to federal animal health regulations pertaining to brucellosis. Our audit work on the bison program focused on how DOL complies with the goals and objectives of the Interagency Bison Management Plan. The programs reviewed at DOL are administered out of the Animal Health Division offices in Helena. Audit work reviewed fiscal years 2014 and 2015 for activities under the DSA program, and calendar years 2014 and 2015 for the Bison Program. Department financial data from 2011 to present is also included in the report.

## FWP

Recent increases in elk exposure to brucellosis have led FWP to take action to prevent the disease being transmitted to livestock. FWP is managing brucellosis in elk under work plans adopted by the Fish & Wildlife Commission since 2013, carried out by regional wildlife biologists. This management is designed to keep elk and cattle separated at certain high-risk times. Our audit work at FWP focused on the years in which the department has been carrying out actions to prevent elk from transmitting the disease to livestock, which began in calendar year 2013. These activities are administered out of the Helena office and the Region 3 (Bozeman) office, with some activity in the Region 5 (Billings) office as well.

## Audit Methodologies

To address the audit objectives, audit staff conducted the following work:

- ♦ Reviewed state laws and administrative rules relevant to brucellosis and to the management of livestock, elk, and bison within the state of Montana.
- ♦ Conducted interviews with DOL personnel and management in the Animal Health Division and Brands Enforcement Division in order to gather information on department oversight of at-risk livestock populations.
- ♦ Conducted interviews with DOL Centralized Services Division personnel in order to gather information on department oversight and controls on payments issued for brucellosis testing.
- ♦ Reviewed a sample of payments for brucellosis testing issued by DOL, including payments to livestock producers and to veterinarians, to test department controls over payments.
- ♦ Reviewed a sample of herd management agreements for southwestern Montana livestock producers to determine the purpose and role of these agreements.
- ♦ Reviewed processes in place at DOL designed to ensure that producers operating in the Designated Surveillance Area comply with brucellosis testing requirements.
- ♦ Attended a meeting of the Interagency Bison Management Plan partner agencies and reviewed recent Adaptive Management Plans adopted by these agencies in order to determine what guidelines exist for bison management in Montana.
- ♦ Reviewed annual reports produced by the Interagency Bison Management Plan partner agencies to gather information on bison management.
- ♦ Interviewed FWP Wildlife Division management and staff, in order to gain an understanding of how the department monitors and responds to brucellosis in elk.

- ♦ Interviewed wildlife management and animal health officials in other Greater Yellowstone Area states to gather information on brucellosis management throughout the region.
- ♦ Reviewed files and documentation for FWP brucellosis management actions conducted on elk, in order to determine how the department monitors and documents its management responses.
- ♦ Conducted surveys of livestock producers operating within the Designated Surveillance Area for brucellosis to better understand stakeholder perspectives on the management of the disease.
- ♦ Gathered geospatial data to produce maps and visual aids regarding the presence of bison and livestock on the landscape around Yellowstone National Park.

## **Report Contents**

The remainder of this report contains chapters providing information on the management activities for brucellosis and our audit findings, conclusions, and recommendations.

- ♦ Chapter II provides an overview of the full scope of brucellosis management activities carried out by DOL and FWP.
- ♦ Chapter III provides recommendations to DOL regarding its Designated Surveillance Area for brucellosis. These recommendations address process improvement and the department's compliance with administrative rules.
- ♦ Chapter IV addresses the current management of bison, focusing on the activities of DOL under the Interagency Bison Management Plan.
- ♦ Chapter V provides recommendations to the FWP for improving the accountability of its brucellosis response process for elk, in terms of legal authority, program policies, and documentation of the process.

## Chapter II – Statewide Brucellosis Management

### **Introduction**

Regulations on brucellosis primarily focus on preventing the re-emergence of the disease in livestock. In this context, “livestock” refers to both cattle and herds of domesticated bison. In recent decades, the disease has become a controversial topic, this due in large part to increased prevalence of the disease in wildlife populations and concerns of subsequent transmission of the disease to livestock. Managing brucellosis in Montana involves the Department of Livestock (DOL), Department of Fish, Wildlife & Parks (FWP) and various federal agencies. This chapter describes the role each plays in this process.

### **USDA Regulations Guide State Brucellosis Management**

Brucellosis is regulated at the federal and state level. The United States Department of Agriculture’s (USDA) Animal-Plant Health Inspection Service (APHIS) is responsible for enforcing nationwide regulations designed to prevent the disease in domestic livestock. APHIS operates the State-Federal Cooperative Brucellosis Eradication Program as defined in the Code of Federal Regulations, in Title 9, Part 78 (9 CFR 78). These federal regulations lay out a series of brucellosis classifications based on standards that include how long livestock in that state have been tested without brucellosis detection, what testing protocols are in place, and which animal health programs that state participates in. The USDA describes these classifications as Class Free, Class A, Class B and Class C. Restrictions on the interstate movement of livestock become less stringent as a state approaches or achieves Class Free status. The Class C designation is for states or areas with the highest rate of brucellosis. States or areas that do not meet the minimum standards for Class C are required to be placed under federal quarantine. Montana is currently recognized as a brucellosis Class Free state. In addition to Class Free status, state animal health officials should monitor brucellosis in order to maintain the marketability of livestock.

A brucellosis Class Free state or area is officially recognized as being free of brucellosis in cattle and domestic bison. A state’s brucellosis Class Free status ensures animal health officials in other jurisdictions that livestock purchased from a brucellosis Class Free state are not a threat to animal health. Due to the presence of brucellosis in wildlife in Montana, the state’s livestock health officials are subject to additional requirements under federal regulations in order to maintain this brucellosis Class Free status. Specifically, federal regulations provide that states with brucellosis present in wildlife populations must have a brucellosis management plan in place in order



to maintain brucellosis Class Free status. These brucellosis management plans must include defined surveillance and epidemiological activities over the geographic area of a state in which the disease exists in wildlife. In practice, this has resulted in the “Designated Surveillance Area” programs (DSA) in Montana, Wyoming, and Idaho. Montana’s DSA is discussed in detail later in this report.

## **Interagency Plan Guides Federal and State Management of Bison**

In addition to overseeing the regulation of livestock for purposes of monitoring and eradicating brucellosis, the federal government has been a major driver in the management of wildlife potentially infected with brucellosis through the Interagency Bison Management Plan (IBMP). In this report, bison will refer to Yellowstone bison, unless specifically noted otherwise. The IBMP is a collaborative document that defines goals and objectives for the management of wild bison, both those inhabiting Yellowstone National Park and those migrating out of the park into Montana. This plan is the result of a court-ordered mediation process between a number of federal agencies, tribal governments, and the State of Montana. The nearly decade-long planning and negotiation effort resulted in a federal Record of Decision signed in 2000. Both FWP and DOL are signatories to the Interagency Bison Management Plan. Increased bison numbers and resultant changes to the migratory patterns of the bison created concerns regarding bison potentially infected with brucellosis commingling with livestock. The IBMP guides the management of bison migrating out of Yellowstone National Park. A significant portion of that management is directly concerned with preventing the transmission of brucellosis between bison and livestock. The National Park Service and state of Montana are in the early stages of a revised Yellowstone Bison Management Plan that will eventually replace the IBMP.

## **Department of Livestock Implements Federal Brucellosis Regulations**

Controlling diseases of livestock is the duty of DOL’s Animal Health Division, under the supervision of the state veterinarian. There are two programs administered by the Animal Health Division for preventing or rapidly detecting the transmission of brucellosis from wildlife to livestock. These are the Designated Surveillance Area program (DSA) and the Bison Program. The following sections describe each of these programs in further detail.



## Designated Surveillance Area Program Maintains Brucellosis Class Free Status

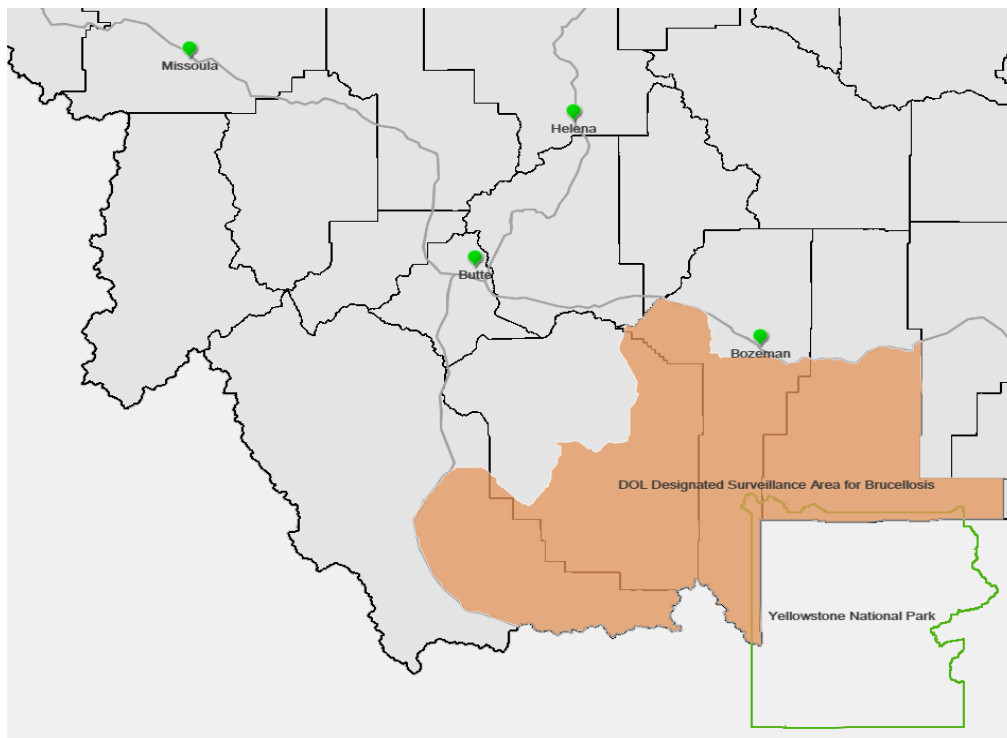
The DOL Animal Health Division administers the Designated Surveillance Area program in order to meet federal animal health requirements. The origins of the DSA program lie in a USDA interim rule published in 2010, finalized in 2014, requiring the creation of a brucellosis management plan, approved by USDA, for any state that has brucellosis in wildlife populations. In practice, this means the states of the Greater Yellowstone Area: Montana, Wyoming, and Idaho. The DSA program is the state's response to this requirement, and similar programs arose in Wyoming and Idaho as well. This program consists of two primary elements:

- ♦ **Designated Surveillance Area Boundary:** There is a boundary defined in administrative rules as representing the area of the state with potentially brucellosis-infected wildlife. (See Figure 2, page 8)
- ♦ **Brucellosis Test Requirements:** A set of enhanced brucellosis test requirements and management tools for livestock living or grazing within the DSA boundary are defined in administrative rules. The requirements of the DSA apply to livestock defined in ARM 32.3.401-433, as: sexually intact cattle or domestic bison twelve months of age or older grazing or living within the DSA boundary. DOL oversees livestock producer compliance with these rules, and provides payments to veterinarians for performing the brucellosis tests and submitting them to the Montana Veterinary Diagnostic Lab.

DOL issues reimbursement payments to the veterinarians performing the brucellosis testing and vaccination. The department additionally issues payments to producers having brucellosis testing performed on ranch premises.

The regulations that comprise the DSA program impact approximately 78,500 head of livestock that graze or live within the DSA boundary on either a seasonal or a year-round basis, and this number represents approximately 5.2 percent of the livestock in the state as a whole, according to Department of Livestock records. The map in Figure 2 (see page 8) displays the current boundaries of the DSA, which incorporates parts of Beaverhead, Madison, Gallatin, and Park counties.

Figure 2  
**Designated Surveillance Area Map**



Source: Compiled by Legislative Audit Division staff from FWP GIS data.

## DSA Producers Have Mixed Opinions on Program Impacts

As part of audit work we conducted a survey of livestock producers operating in the Designated Surveillance Area either full-time or for part of every year. We received responses for 104 of 406 deliverable surveys, or a response rate of approximately 26 percent. Survey work conducted by audit staff indicated that most producers in the DSA have a bulk of their brucellosis testing done on ranch premises (64 percent). These producers are generally of the opinion that there is a degree of increased workload associated with greater amounts of brucellosis testing and vaccination, but opinions were mixed with respect to costs created by the increased testing requirements. Approximately half (48 percent) of respondents regularly requested reimbursement payments from DOL, this trend generally seen among larger livestock operations. Further information from the survey will be discussed as appropriate in Chapter III of the audit report.

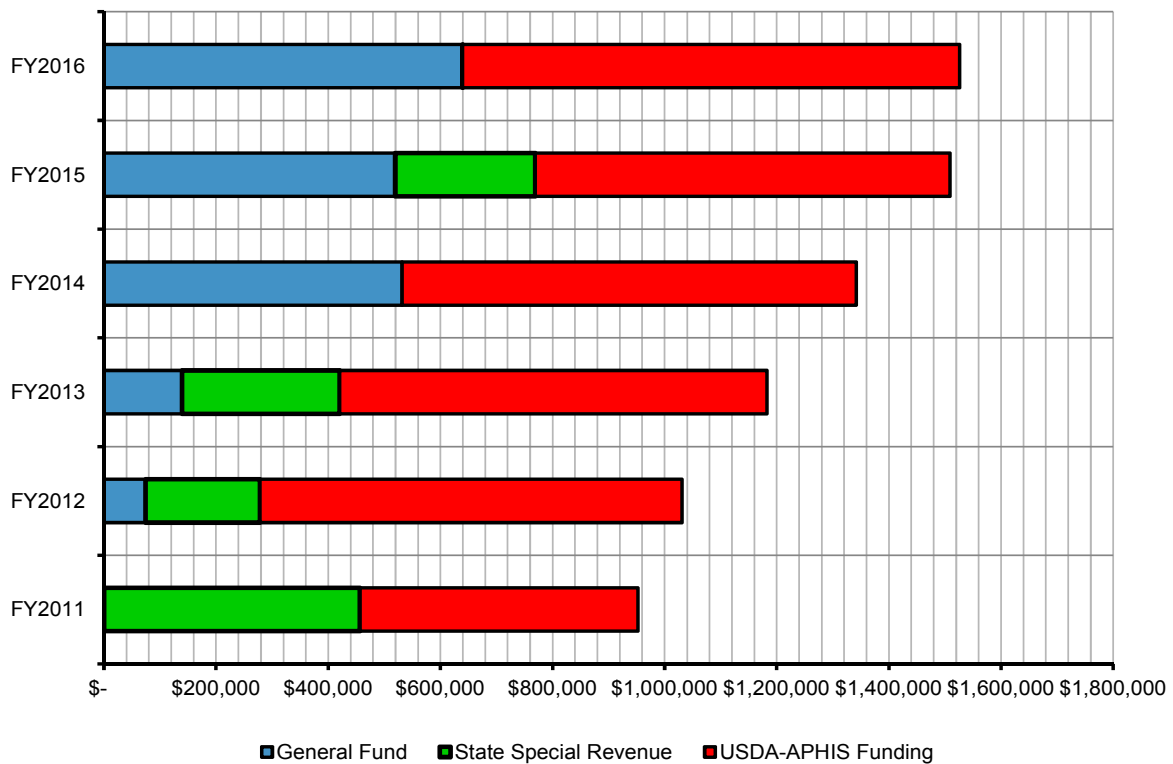
## **DOL Bison Program Implements IBMP Goals and Objectives**

The Bison Program under the Animal Health Division responds when wild bison enter the state of Montana from Yellowstone National Park, as these bison are exposed to *Brucella abortus* bacteria at a rate of approximately 50 percent based on testing done at slaughter. Per 81-2-120, MCA, bison exposed to brucellosis are to be managed by DOL under a plan approved by the governor, and implemented by the state veterinarian. Thus, the primary role of the DOL Bison Program is containing bison to certain areas adjacent to or within the park, in an effort to keep bison away from Montana livestock. This authority drives the responsibilities that are delineated for DOL as a participant in the IBMP, addressed in detail later in the report. Audit work focused on the processes in place at DOL for meeting its responsibilities as an IBMP partner agency. The IBMP plays a critical role in determining how management is applied to bison in Montana for the purposes of preventing brucellosis transmission. According to Department of Livestock records, the Bison Program typically conducts several dozen hazing and herding operations annually to contain bison to management areas designated by the IBMP. DOL additionally conducts periodic lethal removals of bison entering the state of Montana.

The following sections provide a brief overview of DOL expenditures and impacts of brucellosis management in recent fiscal years, followed by detailed background on the activities of the Bison and DSA Programs.

Since fiscal year 2011, DOL has spent approximately seven million dollars on brucellosis-related management activities. This includes the Bison Program, DSA program, as well as interagency transfers to FWP in order to fund elk brucellosis surveillance. Approximately 27 percent of total spending has come from state general fund revenue, 17 percent from state special revenue, and 55 percent from federal cooperative agreement revenue. Expenditures rise in years in which the department has to place a producer under quarantine due to the detection of brucellosis in their herd. Since calendar year 2010, herd quarantine plans provided by the department indicate six instances of confirmed brucellosis infections in livestock. These typically involved the disease being detected in a single animal. As a result, at least 4,243 head of cattle were placed under quarantine across these incidents, per federal regulations.

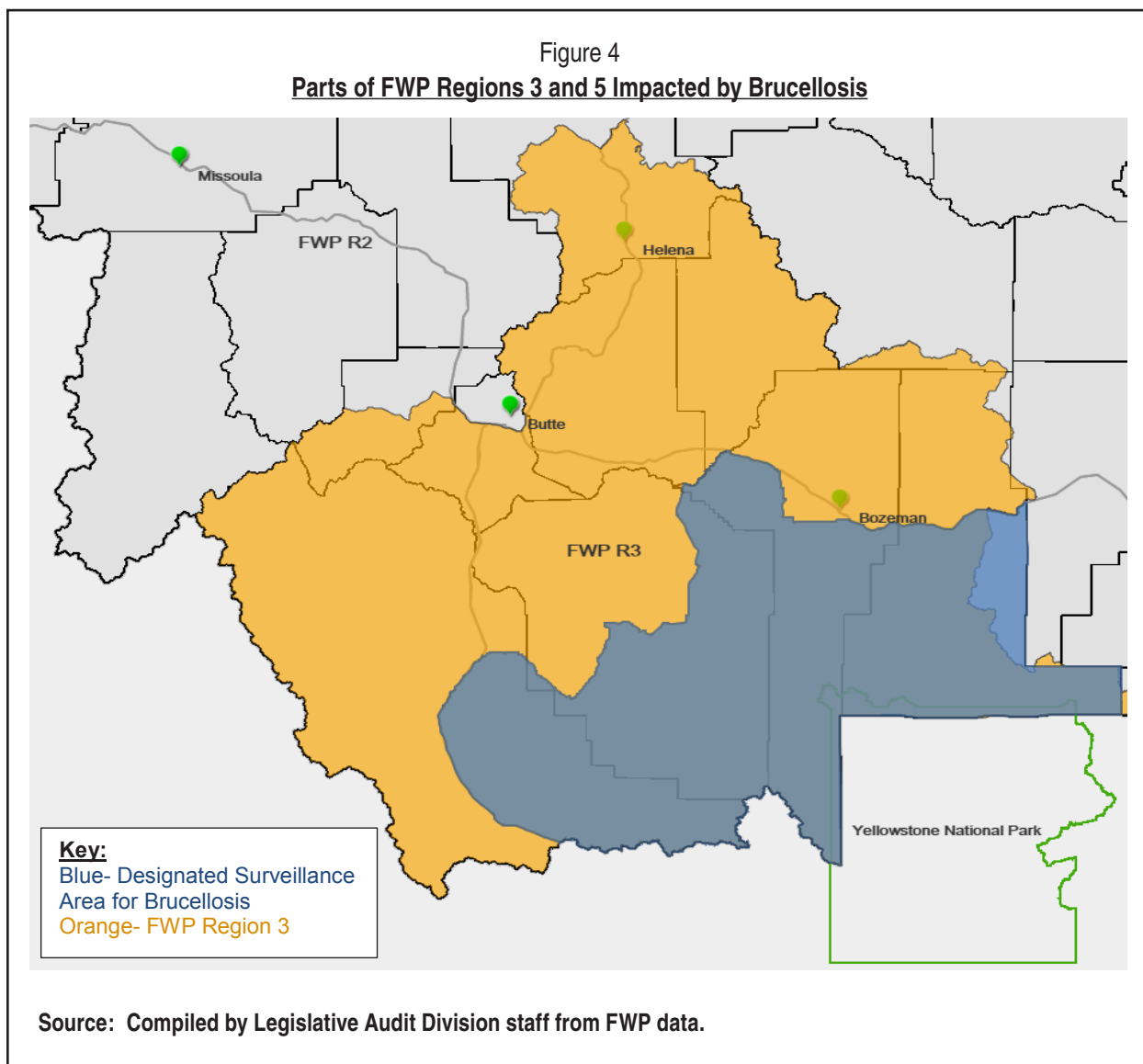
Figure 3  
**DOL Brucellosis Spending**



Source: Compiled by Legislative Audit Division staff from SABHRS records.

## **FWP Has Recently Begun Managing Brucellosis in Elk**

The role of FWP is focused on the brucellosis transmission risk represented by elk. In recent years the rate of elk exposed to brucellosis has risen considerably. FWP's Wildlife Division carries out two sets of management activities in addressing elk brucellosis. These are the "Targeted Elk Brucellosis Surveillance Project," and "wildlife disease risk management." The FWP regions administer these activities under the supervision of the Helena office and the Fish & Wildlife Commission. Figure 4 (see page 11) displays the FWP administrative region where elk brucellosis is prevalent. Region 3 encompasses the majority of the area where brucellosis is found in elk. Within Region 3, brucellosis is primarily located in herds in the southern part of the region.

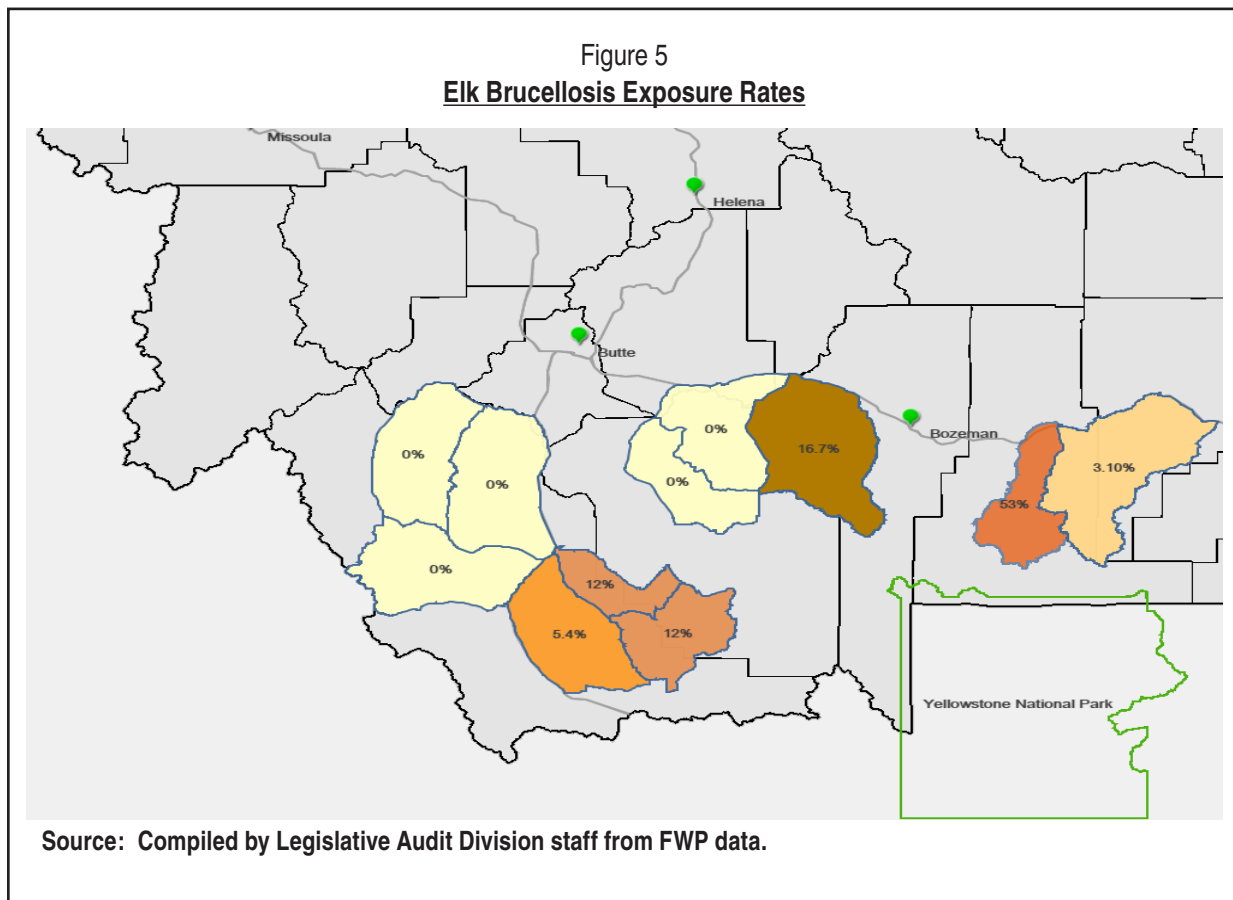


## Targeted Elk Brucellosis Surveillance Monitors the Disease in Elk

“Targeted Elk Brucellosis Surveillance Project” refers to a study of the occurrence of brucellosis in elk in southwestern Montana. In 2011, FWP began a 5-year project to study the presence and movement of brucellosis in Montana elk herds. This study was based on the capture, test, and tracking of a sample of elk from herds where elk testing positive for brucellosis have been found. The goals of the project were to delineate the geographical distribution and level of elk exposure to brucellosis, assess the risk posed by elk exposed to brucellosis to livestock and other elk populations, and identify the potential movement pathways for brucellosis between elk populations. The data

produced by this project has served as a guide to the DSA boundary maintained by DOL. Audit work did not evaluate the scientific activities conducted in this program.

FWP personnel indicated that increased rates of brucellosis in some Montana elk have resulted in landowner concerns about the role of elk in carrying the disease. The map below provides an overview of the hunting districts in which FWP has conducted this surveillance. The estimated percentage of elk, in select herds, exposed to brucellosis has ranged between 0 percent in some border areas of the DSA up to 53 percent in the Paradise Valley.



As this map demonstrates, elk in several herds located within hunting districts in southwestern Montana have been exposed to brucellosis-causing bacteria. This compares to 2004, where FWP's elk management plan estimated the rate to be 1.3 percent.

## Wildlife Disease Risk Management Responds to Brucellosis Concerns

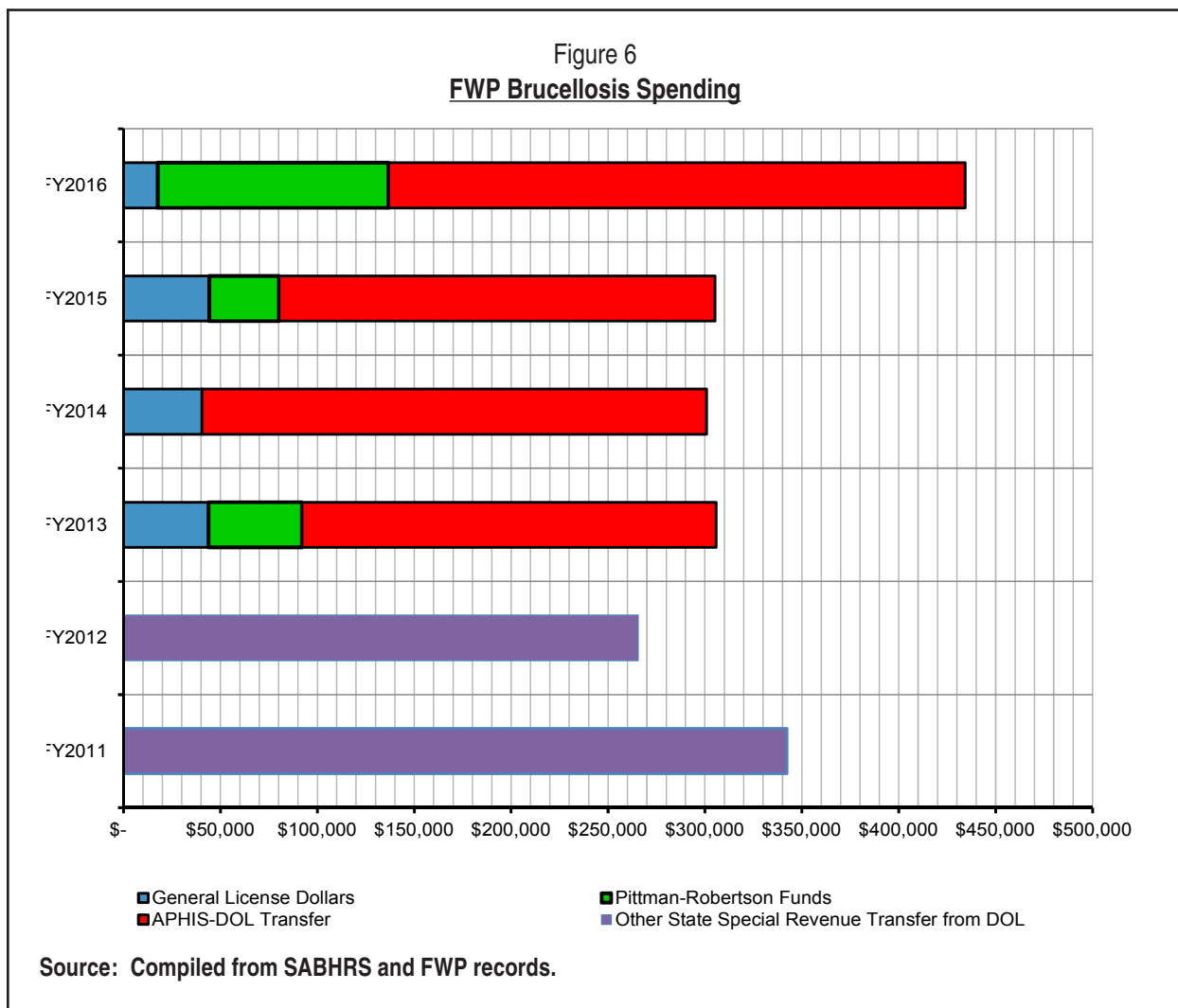
Wildlife disease risk management activities are defined in annual “Work Plans for Elk in Areas with Brucellosis” that have been adopted by the Fish & Wildlife Commission. These work plans detail actions adapted from FWP’s game damage mitigation program that allow livestock producers in areas where brucellosis is a risk to request assistance from the department in order to remove elk from livestock pastures. These brucellosis response actions formed the focus of audit work at FWP.

The work plans include the following actions:

- ♦ **Hazing and Herding:** The department has contracted short-term FWP employees that can be used to chase elk off properties where they could co-mingle with livestock.
- ♦ **Stackyard Fencing:** FWP can provide materials used to create a barrier between elk and livestock grazing on winter range. This is done with FWP supplying fencing materials to landowners and the landowners being responsible for installation and maintenance of a fence.
- ♦ **Habitat Adjustments/Manipulations:** These include actions relating to habitat and forage on public or private lands to lure elk into areas away from livestock or to remove habitat attraction near livestock.
- ♦ **Small Scale Lethal Removals:** These are akin to game damage hunts. The department contacts available hunters drawn from game damage rosters and allows the removal of a set number of elk in order to disperse elk from a property where the landowner is concerned with a brucellosis risk posed to livestock.
- ♦ **Kill Permits Issued to Landowners:** In addition to game damage hunts, kill permits may be issued to landowners authorizing them harvest a set number and type of animals. As with “elk management removals” this is done to disperse elk from a property where the landowner is concerned with a brucellosis risk posed to livestock.

The nonlethal actions can be carried out in any order, and the department can progress to the lethal management actions if the nonlethal management actions prove ineffective. The process by which the brucellosis management response is carried out follows these steps. FWP typically receives a complaint from a livestock producer or landowner. Personnel in the relevant FWP region (typically Region 3) determine if there is a risk of elk coming into contact with livestock, with this risk evaluation being based on a number of criteria. Regional FWP personnel determine an appropriate response and initiate response actions. Regional FWP personnel take some steps to document actions taken and the results of these actions are shared in annual presentations to the Fish & Wildlife Commission.

FWP has spent approximately two million dollars on brucellosis-related management in elk since fiscal year 2011. Over 80 percent of this figure represents expenditures on brucellosis surveillance efforts that were used to identify the prevalence of brucellosis in elk herds within the DSA. This work was funded through federal cooperative agreement dollars transferred by the Department of Livestock. The remainder of the approximate two million spent by FWP since 2011—approximately \$300,000—represents spending on management of elk funded from FWP General License dollars and federal Pittman-Robertson funding. Personnel in FWP Region 3 have conducted the vast majority (93 percent) of the brucellosis response activities that this audit focused on. The figure below demonstrates, by fiscal year, the amount that FWP has spent on brucellosis management and the sources of those funds. Note in the figure below, the funding from DOL for brucellosis surveillance was initially classified as a state special revenue transfer in SABHRS.





## Chapter III – Preventing and Detecting Brucellosis in Livestock

### Introduction

Our first objective sought to evaluate the processes in place at the Department of Livestock (DOL) for preventing and detecting the transmission of brucellosis between wildlife and livestock. Title 81 of the Montana Code Annotated assigns responsibility for monitoring and eradicating diseases of livestock to the department. The Animal Health Division under the supervision of the State Veterinarian carries out these responsibilities. The DSA program implements federal requirements necessary to maintain brucellosis Class Free status despite the presence of the disease in Montana wildlife. This chapter details audit work and recommendations on DOL's process for ensuring livestock producers comply with brucellosis testing requirements under the program, oversight of payments to private individuals for brucellosis testing, and herd management agreements.

### DOL Can Improve Oversight of Brucellosis Testing Requirements

ARM 32.3.401 through 437 define the boundary of the Designated Surveillance Area and the brucellosis testing requirements that apply to producers with livestock within this boundary. These requirements are delineated below.

Within the DSA boundary:

- ♦ There is a risk period defined as spanning from February 15th through July 16th of a given year. After July 16th, a brucellosis test is considered valid until February 15th of the following year.
- ♦ During the February 15th - July 16th time period, any eligible livestock must be tested for brucellosis within 30 days prior to the following conditions:
  - ◇ **Change of Ownership:** defined as a sale from one producer to another.
  - ◇ **Movement:** defined as a situation where livestock are taken from an area within the DSA boundary to an area outside of the DSA to a pasture, grazing allotment, or holding area, but excluding livestock markets.

We reviewed brucellosis testing data maintained by the department for fiscal years 2014 and 2015, with preliminary review of data produced for fiscal year 2016 in order to note changes being put in place for monitoring producer compliance with brucellosis testing requirements. Our review determined that the estimates of livestock producer testing compliance with brucellosis testing requirements do not address all of the requirements put forth in administrative rule. The department currently determines

producer compliance with administrative rules by creating summaries of brucellosis testing performed on test-eligible livestock within the DSA every fiscal year. These summaries state that any herd in the DSA that had 5 percent or more of its eligible livestock tested for brucellosis is “in compliance” with DSA regulations. However, prior to 2016, these estimates do not track compliance with certain testing activities, i.e. testing for movement, testing for sale, and testing at markets.

The brucellosis testing requirements in administrative rule do not require that producers test 5 percent or more of their herd. Rather, administrative rules specifies that testing is to occur within a 30-day window prior to sales, and within the same period for livestock moving to areas outside of the DSA. Audit work found DOL’s process to monitor compliance with brucellosis testing in livestock is lacking in two key areas. The current compliance estimates do not systematically monitor whether or not brucellosis testing is occurring within that 30-day window, nor do they include information on brucellosis testing that should occur with the movement of DSA livestock between in-state areas that are not within the DSA boundary, though DOL indicated that fiscal year 2016 estimates of compliance are attempting to take this into account.

Review of preliminary data from 2016 indicated that the department is in the process of improving its process of tracking compliance with brucellosis testing requirements. Data from 2016, in particular, is more closely tracking the testing of cattle sold at markets and private sales. However, testing for movement out of the DSA is still not addressed by this information.

### **Brands Inspection Functions as Oversight of Livestock Movements**

DOL’s Brands Enforcement Division functions as the department’s oversight of livestock movements. Audit work reviewed brands inspection data from fiscal year 2015 to further review what DOL is doing to ensure that livestock moving to areas outside of the DSA are tested for brucellosis as required by ARM 32.3.435. When livestock are moving to areas outside of the DSA, they are likely either moving between pastures or to an approved livestock market. If they are moving to a market, they are to be tested there. If they are moving to areas that are outside of a market, they are to be tested before they are moved.

### **Market Sales of DSA Livestock Are More Closely Monitored**

We first reviewed data from livestock markets in order to determine how the department monitors cattle moved to these locations from the DSA. Prior review of the DSA program by the USDA Animal-Plant Health Inspection Service (APHIS)

noted that DOL had recently implemented electronic brand identification devices that give brand inspectors the ability to automatically flag livestock originating in the DSA. Review of brands inspection data indicated that this function is in place, giving the department the ability to monitor DSA-origin livestock at markets and ensure that the required testing takes place. This improved data allows the department to assess if DSA livestock sold through the market are tested. For instance, fiscal year 2016 estimates of producer compliance with DSA requirements are specifically monitoring if test-eligible livestock sold at markets are tested.

### **Brands Does Not Provide Real-Time Data on Brucellosis Testing**

However, outside of these livestock markets, current processes in place at the department do not specifically note if livestock being moved out of the DSA require testing or if that testing has taken place prior to movement out of the DSA. Review of brands inspection data from fiscal year 2015 indicated that there were at least 225 movements of livestock requiring brucellosis testing from a DSA location to a non-DSA location, excluding livestock markets. Of these, only 40 movements (17 percent) had documented “health requirements” in the data and none of these health requirements listed in the brands documents provided data directly relating to whether or not required brucellosis tests had occurred. These movements, based on the same data, involved at least 10,000 head of livestock. These represent a subset of livestock where DOL currently does not conduct real-time surveillance of DSA testing.

### **DOL Has Not Consistently Addressed Noncompliance**

Review of documentation produced by the Animal Health Division additionally demonstrated a number of inconsistencies in the processes by which the department has made determinations as to whether or not producers are complying with brucellosis testing requirements. The department has variously defined levels of compliance that include designations such as “full compliance,” “no compliance,” and “some compliance” without having based these designations on consistent criteria.

Audit work also reviewed what actions DOL took in cases where producers appeared to be out of compliance with the DSA brucellosis testing regulations. In fiscal year 2015, DOL data indicated that 107 producers in the DSA did not meet that 5 percent threshold by which they determined compliance. DOL does not have a consistent approach for notifying producers they do not comply with DSA requirements. The department also could not demonstrate consistent enforcement actions taken in response to cases of noncompliance. The department not conducting consistent follow-up on cases of apparent noncompliance leads to a potentially increased risk of brucellosis testing requirements going unaddressed.

## **Other States Use Brands Inspections to Establish Proof of Brucellosis Testing**

During the course of audit work we conducted interviews with animal health officials in the other states of the Greater Yellowstone Area, Idaho and Wyoming, as well as review of administrative rules and agency policies for their DSA programs. In Wyoming, animal health officials and agency administrative rules that apply to the Wyoming Board of Livestock's Animal Health Program indicated that brands inspections for livestock moving out of the DSA require copies of official brucellosis test charts as a part of the brand inspection process. This enables more direct oversight of DSA livestock at the time of movement.

## **Verification of Compliance Is Improving, but Current Process Does Not Address All Elements of Administrative Rules**

Our review indicated that DOL is in the process of defining more precise criteria to form the basis of how it determines whether or not a given livestock producer is complying with DSA brucellosis testing requirements. However, the brucellosis testing compliance process as reviewed during audit work has not led to determinations of compliance based on consistent criteria. These past estimates of producer compliance have provided department leadership and the Board of Livestock with information on amounts of brucellosis testing occurring in the DSA, but have not provided information on all aspects of the brucellosis testing requirements conferred in administrative rules. DOL can take additional steps to ensure that brucellosis testing required for livestock movements is taking place, potentially creating a liability in the risk of untested livestock moving outside of the DSA boundary. This is because the department's current compliance and oversight process does not directly monitor testing related to these movements of livestock outside of the DSA and verify that brucellosis testing is occurring.

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### **RECOMMENDATION #1**

*We recommend the Department of Livestock improve its oversight of brucellosis testing compliance by:*

- A. *Using the brand inspection process to better monitor movements and testing of DSA livestock, and incorporating this information into DSA compliance monitoring.*
  - B. *Developing and implementing a consistent response to cases of noncompliance with DSA program requirements.*
-

## **Herd Management Plans Provide Variations to Testing Requirements**

DOL maintains plans detailing management strategies and obligations worked out between producers in the DSA and the department. These are referred to as “herd management plans.” Herd management plans are defined in ARM 32.3.401(7)(a) as a mutually agreed upon plan, between the producer and DOL, that may outline variances to some testing requirements. Administrative rules establish that variances or exemptions to DSA testing requirements must be based on herd plans. DOL Animal Health officials indicated that variances typically have to do with the timing of testing, often permitting producers who are seasonal users of the DSA to test after moving their livestock out of the DSA, as opposed to testing prior to movement under the default program regulations. Exemptions allow producers to not test certain livestock that might otherwise be subject to DSA requirements. Herd management plans are also required in the DSA if a producer has a confirmed case of brucellosis within a herd and must go under quarantine per federal regulation. Audit work focused on how the department establishes and manages the variances to brucellosis testing requirements granted by some herd management plans, as well as department oversight of these herd plans.

In order to assess the role played by these herd management plans in preventing the transmission of brucellosis to cattle, we defined a sample of herd management plans to review and compare against requirements for these documents put forth in administrative rule and federal reviews of the DSA program. This sample reviewed 50 of 160 herd management plans that DOL currently has with DSA livestock producers. This work indicated that annual review of herd management plans has not been taking place. These plans were created between calendar years 2010 and 2015. We reviewed these plans in order to understand any variances or exemptions to testing requirements they contain, as well as the basis of various elements found in the herd management plans. Our sample identified issues with the manner in which DOL documents the variances granted to testing requirements granted by some herd plans, as well as issues with the regular review of these plans. These are discussed further below.

## **Herd Plans Lack Clear Documented Basis for Variances**

Based on audit work, it is not clear why some of these herd plans grant variances to testing requirements and others do not. According to a 2012 review of the Montana DSA by the United States Department of Agriculture, herd management agreements should be based on a risk assessment process carried out by the department.

DOL staff indicated that herd management plans are based on risk assessments performed by department staff. However, the documents themselves do not provide descriptive rationale as to why they contain the provisions that they do. DOL is not documenting herd management plan risk assessments, making it potentially difficult to determine the basis for provisions in a given herd management plan, including the basis for exceptions or variances to DSA brucellosis testing requirements. In the sample of herd management plans reviewed during audit work, there were no documented risk assessments attached to or explained within the plans.

There are also herd management plans created for unclear purposes, meaning that they are not required by state law, administrative rule, or federal regulation. These represented 58 percent of our sample, or 29 of the 50 plans reviewed. In these situations, the department currently lacks the ability to demonstrate the necessity or justification for a herd management plan, and we could not determine distinct purposes or requirements underlying these herd management plans.

### **Other Animal Health Agencies Document Risk Assessments**

In other DSA programs as run by Wyoming and Idaho, the basis of herd plans is a risk assessment that incorporates standard criteria in the form of a questionnaire. These questionnaires are and are used to collect and document information on herd composition, wildlife movements, grazing habits, and more in order to provide a basis for given elements of a herd management plan.

Current processes in place at DOL do not tie specific requirements of a herd plan to specific circumstances, such as why some herd plans grant variances and others do not, and this is what should be documented by a risk assessment.

### **Annual Review of Herd Plans Has Not Been Regularly Carried Out**

ARM 32.3.401(b) states that herd management plans should be reviewed annually. In order to assess department oversight of herd management plans, audit work incorporated a review of a sample of herd management documents currently on file alongside interviews with DOL officials responsible for creating and monitoring herd management plans. Though 42 percent of the plans reviewed in our sample, or 21 out of the 50, included some sort of variance or exemption to DSA testing brucellosis requirements, few had been reviewed or renewed within the time period as required in administrative rule. Of the plans identified as granting variances within our sample, 78 percent had gone two or more years without renewal or review at the time of the audit.



## **Department Staff Indicate Issues with Annual Review Period**

Department staff indicated that the review period described in administrative rules was created when the administrative rules describing the DSA program were first promulgated, and has not been revised since. DOL personnel indicated that the annual review of the management plans may be both unnecessary and unrealistic, given that livestock producers often do not change their grazing practices annually. However, they have not taken steps to update the associated administrative rules to reflect this.

DOL not reviewing herd management plans on a regular or annual basis as recommended in administrative rules could lead to out-of-date information providing the basis for exceptions or variances to DSA brucellosis testing requirements. Allowing certain DSA livestock to not be subject to brucellosis testing requirements creates risks. The department is not reviewing information to determine if the basis for granting variances and exemptions to brucellosis testing requirements is documented and regularly reviewed.

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### **RECOMMENDATION #2**

*We recommend the Department of Livestock improve the oversight and accountability of DSA herd management plans through the following steps:*

- A. *Develop criteria that provide the basis for herd management plans and use these criteria as the basis of documented risk assessments for the creation of herd management plans.*
  - B. *Comply with administrative rule regarding the review of herd management plans on an annual basis, or seek changes to administrative rules in order to modify the review period for herd management plans.*
  - C. *Document review and update of DSA herd plans when completed.*
- 

## **DOL Should Improve Documentation for Brucellosis Testing Payments**

The Department of Livestock issues payments to veterinarians and livestock producers for costs associated with the increased brucellosis testing requirements required under the DSA. In order to determine if payments were made in an accurate and timely manner, we reviewed a sample of 140 payments made in fiscal years 2014 and 2015. In our sample, 86 percent of these payments were made out of general fund dollars, with the remainder coming from federal funding. Veterinarians performing this testing in

Montana do not charge livestock producers, but rather are responsible for collecting and submitting blood samples to the Montana Veterinary Diagnostic Lab, after which DOL will pay them for their services. Veterinarians performing the brucellosis tests or vaccinations on DSA livestock will send reimbursement request forms to DOL with details about the number of livestock tested or vaccinated at a given time. Based on this documentation, DOL determines the amount of payment to be issued after verifying the request against lab records. The following table provides a listing of the rates paid by DOL in Montana and the rates paid by DSA programs in Wyoming and Idaho. In each case, payment is made per head of livestock tested or vaccinated. Montana pays for testing at variable rates (except at livestock markets) whereas Wyoming and Idaho pay at a flat rate.

Table 1  
**DSA Reimbursement Rates**

State	Payment Rates to Veterinarians	Payment Rates to Producers
Montana	\$12.00 each for 1-10 head \$10.00 each for 11-50 head \$7.50 each for 51 + head \$8.50 per head at Livestock Markets	\$2.00 per head
Wyoming	\$5.00 per head \$5.50 per head at Livestock Markets \$3.50 per head on Adult Vaccinations	N/A
Idaho	\$5.00 per head \$7.00 per head at Livestock Markets	N/A

**Source: Compiled by Legislative Audit Division staff from DOL records.**

\*All rates per head of cattle tested.

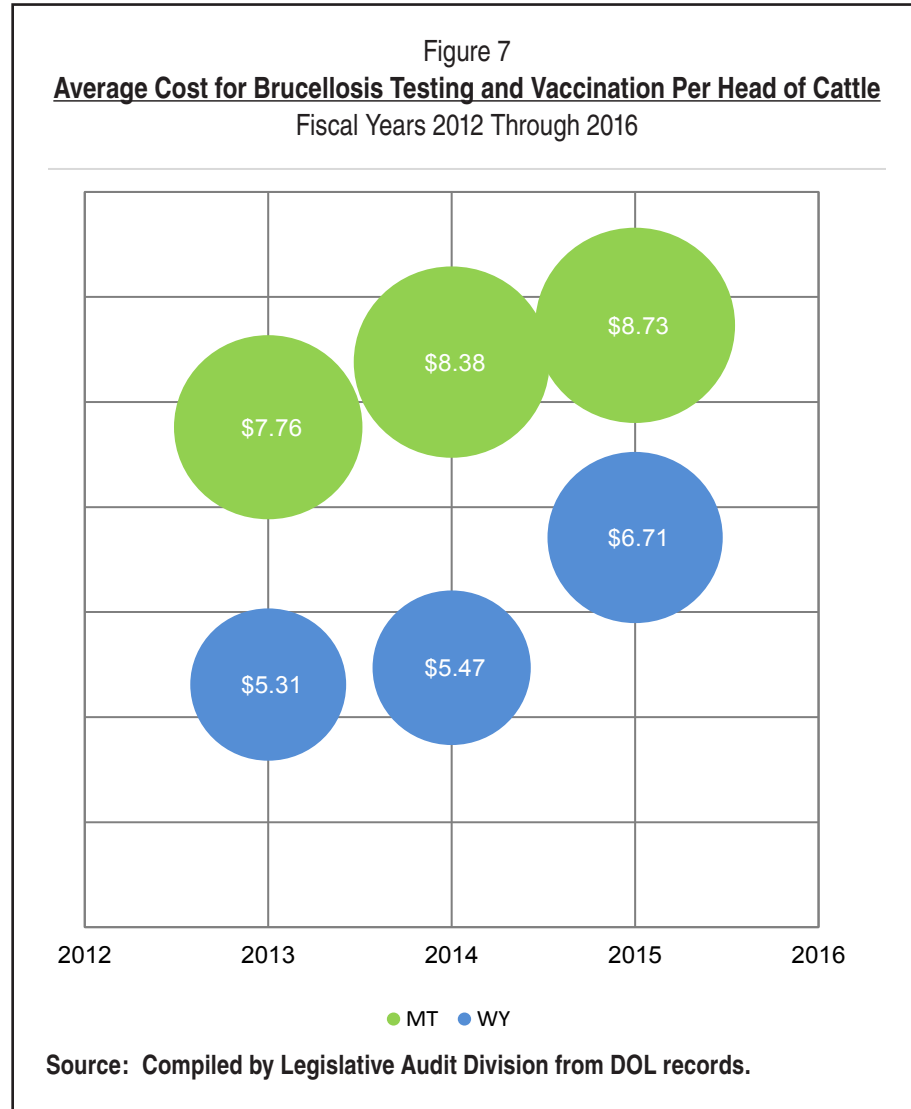
Audit work reviewed the processes by which DOL is overseeing and issuing reimbursement payments for brucellosis testing, as well as related practices in DSA programs in Wyoming and Idaho.

## **DOL Pays Higher Rates for Brucellosis Testing**

Audit work included interviews and correspondence with animal health officials in the other GYA states. DSA programs in Wyoming and Idaho generally operate in a similar manner to the Montana program. These programs, like Montana's, issue reimbursements to veterinarians for brucellosis testing performed on DSA livestock. Figure 7 (see page 23) details the average costs per head for DSA livestock brucellosis testing and vaccination. These costs are based on the total amount spent by the respective state on reimbursements paid for the brucellosis testing and vaccination of livestock in a fiscal year averaged against the number of livestock tested or vaccinated in



that fiscal year. Only Wyoming is included in the comparison due to data limitations in information provided by the Idaho State Department of Agriculture (ISDA), though the data provided suggested that the reimbursements paid for their DSA program cost ISDA between \$5.19 and \$5.27 per head of livestock tested.



As demonstrated in the table, the Montana DSA program spends more per animal to test and vaccinate against brucellosis than DSA programs in neighboring states. A primary difference here is that other state DSA programs do not pay producers for brucellosis testing, while Montana's program will pay both the veterinarian performing the testing as well as the owner of the animal being tested. Interviews with DOL staff indicated that payments to producers are primarily intended to encourage compliance with the additional brucellosis testing requirements within the DSA.

## **Survey Data Indicates Unclear Impacts on Producers from DSA Program**

As part of our audit work, we conducted a survey of livestock producers operating in the DSA. We received responses for 104 of 406 surveys, or a response rate of approximately 26 percent. Survey work indicated that a majority of respondents incorporate testing into existing herd management practices, such as seasonal checks for pregnancy. Thirty-eight percent of producers responding to the survey did not believe the program created significant additional costs and an additional 10 percent were not certain about the financial impacts of the program. Additionally, 51 percent of respondents to the survey either did not request payment from the department or do so regularly. The reimbursements paid to producers are more often claimed by medium and larger livestock operations (50 or more animals) than by smaller operations.

There is limited criteria available for determining what payments to producers should be, and survey data indicated diverse opinions on this subject as well. There were no clear trends as to whether or not producers consistently filed for reimbursement or found that the DSA program created increased costs for their business. Our sample determined that in fiscal years 2014 and 2015, payments to producers represented between 7 and 14 percent of the total costs associated with reimbursements. The department spent an average of approximately \$368,000 per year on reimbursements, with considerable rises in recent fiscal years versus the first years of the program in fiscal years 2011 and 2012. Table 2 demonstrates the percentages of reimbursements paid to producers versus veterinarians.

Table 2  
**DSA Reimbursements—Payments to Producers  
and Veterinarians**  
Fiscal Years 2011 Through 2015

Fiscal Year	% to Vets	% to Producers
2011	90%	10%
2012	93%	7%
2013	86%	14%
2014	91%	9%
2015	93%	7%

**Source: Compiled by Legislative Audit Division staff  
from DOL records.**

The department indicated that it is issuing payments to producers to offset costs associated with increased DSA testing requirements and the inconvenience of the additional testing. However, the direct costs associated with brucellosis testing are already paid through the reimbursements to veterinarians.

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### **CONCLUSION**

*Montana is paying higher rates per head to test and vaccinate cattle against brucellosis infection. This is in part due to the fact that Montana is the only state that reimburses livestock producers for brucellosis testing. Audit work was not able to determine what direct costs the reimbursements to producers are intended to offset.*

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## **Documentation for DSA Reimbursement Payments Should Be Improved**

The Department of Livestock has a process for catching and correcting errors in brucellosis testing reimbursement requests. However, a lack of complete documentation exists with respect to the department's documentation of adult livestock vaccination payments and large reimbursement payments.

Audit work reviewed a sample of 140 payments from fiscal years 2014 and 2015 issued to producers and veterinarians. We evaluated DOL oversight of the payments through review of supporting documentation including test records from the Montana Veterinary Diagnostic Lab and vaccination records supplied by veterinarians. Payments were issued at the established rates and the department was able to detect and correct mistakes in reimbursement request forms.

However, audit work noted that two subsets of payments issued under the DSA program are not consistently or completely documented. One of these is payments issued to veterinarians providing adult livestock with vaccinations against brucellosis. These are typically referred to simply as adult vaccinations (AV). DOL issues payment to veterinarians for these at a rate of \$4 per vaccination. The reimbursement requests for vaccinations are cross referenced with adult vaccination certificates, instead of lab tests charts. We determined that the department is not consistently maintaining these certifications as documentation for adult vaccinations, despite issuing payments for those vaccinations. The reimbursement forms and requests submitted by the veterinarians often lacked attached certificates serving as documentation supporting the payments.

Review of all payments made by DOL to veterinarians for adult vaccinations in fiscal years 2014 and 2015 indicated the following:

- ◆ 73 percent of AV payments did not have full supporting documentation, such as an official record of all vaccinations being reimbursed.
- ◆ 27 percent had full supporting documentation.

- ◆ This results in approximately \$24,000 in payments issued in fiscal years 2014 and 2015 for which DOL did not request or maintain supporting documentation.

In addition to the missing or inconsistent supporting documentation specific to the adult vaccination reimbursement payments, we determined that there were some issues with documentation for large payments issued to veterinarians or producers as reimbursements. Specifically, there were 11 payments, or approximately 8 percent of the sample, that totaled in excess of \$5,000 each. Payments over \$5,000 are subject to additional approval from the administrator of the department's Centralized Services Division, per DOL policies. Four of these payment forms for brucellosis testing that exceeded the \$5,000 threshold lacked documented sign-off. This resulted in approximately \$40,000 in payments made without required approval documented on the associated forms.

### **DOL Lacks a Defined Policy for Reimbursements**

Review of reimbursement request forms indicated that DOL has not consistently requested the full supporting documentation from veterinarians. Audit work further determined that the Animal Health Division does not have a written policy or procedure for fully documenting vaccination payments. The lack of a standard policy here caused the payment weaknesses observed during audit work.

Department of Livestock policies specify that the department should maintain full supporting documentation for transactions and payments. However, our audit found that the department's policies do not address the review and approval and reimbursement payments.

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#### **RECOMMENDATION #3**

*We recommend the Department of Livestock maintain full supporting documentation for oversight and approval of brucellosis vaccination reimbursement payments.*

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## Chapter IV – Following the Interagency Bison Management Plan

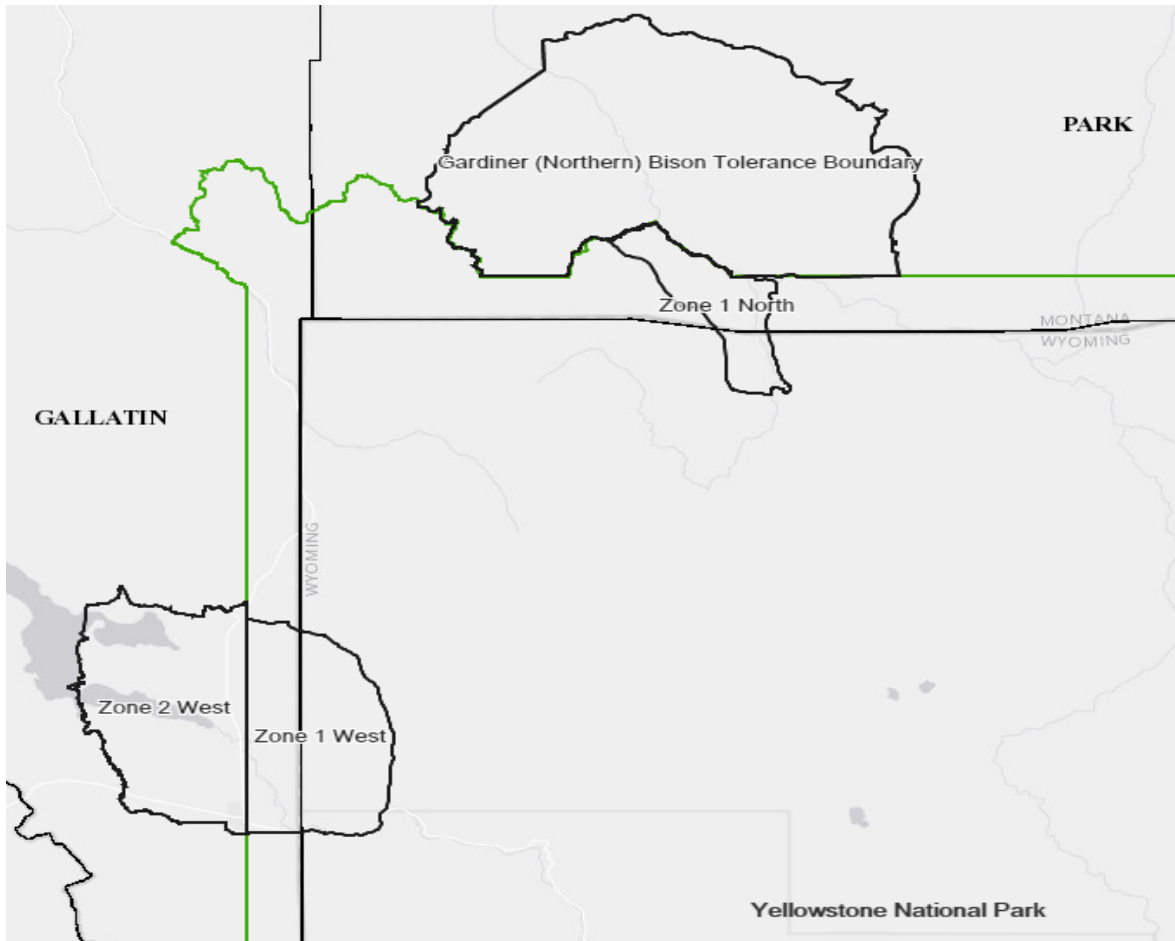
### Introduction

This chapter presents additional work done to answer questions from our first objective, which was to evaluate the process in place at the Department of Livestock (DOL) for meeting its responsibilities for preventing brucellosis in Montana livestock. In addition to working to prevent and detect brucellosis in livestock, per §81-2-120 MCA, the DOL is given responsibility for keeping wild bison separate from livestock due to concerns regarding the presence of brucellosis in wild bison. In practice, this refers to bison moving into Montana from Yellowstone National Park in the winter. As part of its statutory responsibilities, the department may physically remove bison through aversion tactics (hazing), capture, or through lethal removal. Thus in-state brucellosis prevention responsibilities, such as regular hazing of bison, are managed by DOL. The Department of Fish, Wildlife & Parks (FWP) has limited responsibility related to managing bison to help prevent potential transmission of brucellosis. FWP's role related to bison management is not related to disease. FWP manages hunting of bison within Montana, and responds to concerns of potential private property damage and public safety when bison move onto private lands.

Actions to manage wild bison to prevent the transmission of brucellosis to livestock are further specified in the Interagency Bison Management Plan (IBMP). In order to maintain separation of bison away from livestock and mitigate the risk of brucellosis transmission, the IBMP describes activities to restrict bison movement to or through bison management zones within or just beyond the park's northern boundary near Gardiner, Montana, and the western boundary near West Yellowstone, Montana. IBMP Partner agencies include the Montana Departments of Livestock and Fish, Wildlife & Parks, as well as the National Park Service, U.S. Forest Service, USDA Animal-Plant Health Inspection Service, the Confederated Salish and Kootenai Tribes, Nez Perce Tribe, and Intertribal Buffalo Council. The other states bordering Yellowstone National Park do not face issues with keeping bison away from livestock on the same scale as the state of Montana does. This is primarily due to the migratory patterns of bison around the northern half of the Park.

The following map in Figure 8 (see page 28) demonstrates the current boundaries for management areas created by the IBMP. The management areas represent spaces where bison are allowed to roam outside of Yellowstone National Park during portions of their annual migrations. These areas are adjacent to the Park's northern and western entrances.

Figure 8  
Interagency Bison Management Plan Zones  
 2014-2015



Source: Compiled by Legislative Audit Division staff from DOL records.

## IBMP Adaptive Management Plans Are Intended to Guide Bison Management

A 2008 report from the U.S. Government Accountability Office called for greater accountability and a more detailed approach to bison management on the part of the IBMP partner agencies. In response, the IBMP partner agencies began adopting “Adaptive Management” and “Winter Operations” plans that detail roles and delineate responsibilities for the partner agencies. The roles of Montana executive branch agencies relative to the goals of the IBMP are addressed in detail in these plan documents. Adaptive Management plans establish goals, objectives, and management actions, as

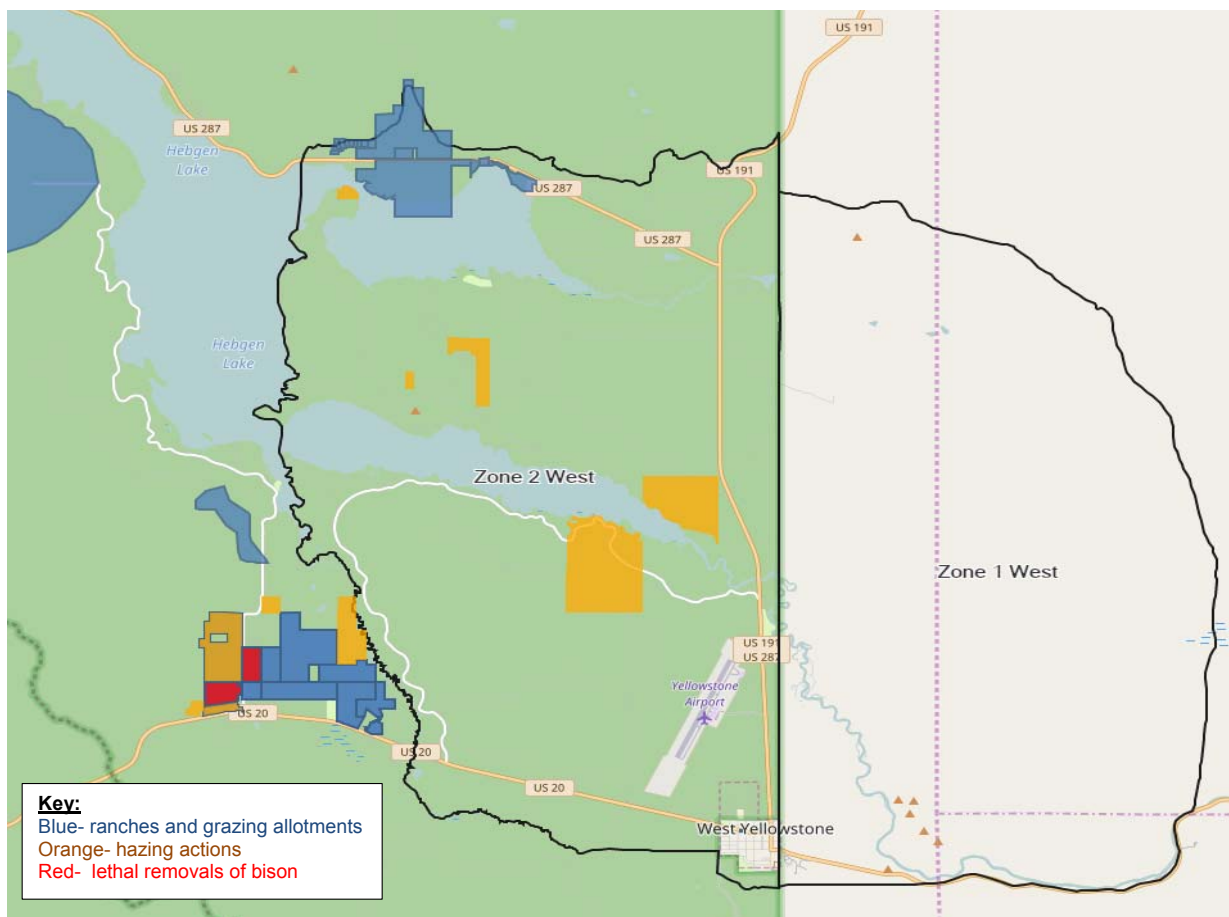
well as how the adaptive management plans inform each winter's operational activities and how these activities are reported annually to the IBMP partner agencies.

DOL personnel produce reports on hazing and lethal removal of bison in order to document agency activities on bison management. Audit work reviewed all 65 reports produced by field personnel of the bison program in the 2014 and 2015 operational seasons. These operational reports were reviewed to determine if the DOL bison program is complying with the IBMP as well as the manner in which program personnel are documenting and communicating this work with program management. The 2014 and 2015 IBMP annual reports also provided information on how DOL has communicated outcomes of its bison management with partner agencies. Audit work used information in this documentation in addition to geospatial information to determine approximate locations of the hazing actions and lethal removals of bison in these years.

The management areas represent boundaries that bison are allowed within during their annual migrations outside of Yellowstone National Park. The boundaries of "Zone 2 West" and "Gardiner (Northern) Tolerance Boundary" represent the outermost limits within which wild bison were allowed into Montana during the years within the scope of audit work.

The map provided in Figure 9 (see page 30) illustrates estimated locations where DOL hazed groups of bison back toward the west entrance of Yellowstone National Park. Active ranches and grazing allotments highlighted here are defined through publicly available information from the annual reports of the IBMP partner agencies as well as correspondence with DOL and FWP, cross-referenced with Montana State Library Cadastral records and US Forest Service grazing allotment information. The locations at which hazing actions and lethal removals took place are estimates based on reports provided by the DOL bison program.

Figure 9  
2015 Western Management Area



Source: Location estimates compiled by Legislative Audit Division Staff from DOL records.

## **DOL Lethal Removals of Bison Should Follow Adaptive Management Guidelines**

IBMP Adaptive Management Plan(s) establish that agencies should avoid hazing or removing bull bison unless they are outside of the Zone 2 boundary or pose an imminent threat of coming into contact with livestock, or causing property damage. For instance the plans provide specific guidance on how to escalate management actions in response to the presence of bull bison outside of Yellowstone National Park. Management actions are triggered if there is a threat of livestock contact, human safety, property damage, or a group of bull bison that attempt to travel beyond the perimeter of Zone 2. Initially, the bull bison are to be hazed from the area of conflict. Per the IBMP, lethal removal of bull bison is to occur when the animals in question are actually coming into contact with livestock.



There were no lethal removals of bison directly conducted by DOL Bison Program personnel in the 2014 operational season. According to the 2015 annual report, the IBMP partners were not aware of any incidents of bison actually in contact with livestock in the northern or western management areas. However, in 2015, DOL personnel conducted two lethal removals of bison. DOL responded to two reports of bison adjacent to cattle in the western management area, each of which resulted in the lethal removal of a single bull bison. Though these bison were outside of the IBMP management zones, documentation of these incidents did not establish that the bison poses an imminent threat of coming into contact with livestock that necessitated lethal removal of the bison, nor were there initial attempts to haze the bison from the conflict area. The IBMP Adaptive Management Plan specifies that bison in conflict areas are initially to be hazed from the area. DOL lethally removed bison that may not have represented a brucellosis threat, and operational documentation did not provide a clear rationale as to why lethal removal was necessary in these cases.

### **DOL Could Improve Documentation Surrounding Lethal Removal Actions**

Based on the rationales for lethal removals reviewed in operational documentation, it is unclear whether the removal was because of a disease threat or a private property concern. DOL management was not certain that all relevant factors in the lethal removal incidents in 2015 were documented. It was indicated that DOL staff may have attempted alternative actions prior to lethally removing the bison, but these actions were not captured in the operational reports. Neither DOL management nor the associated documentation made it clear why the IBMP adaptive management guidelines were not followed in these particular cases.

### **Recent IBMP Changes Emphasize Use of Public Hunting to Manage Bison**

The 2016 Adaptive Management Plan adopted by the IBMP partner agencies specifically establishes public hunting as the “preferred wildlife management tool” for bison in cases where lethal removal is considered necessary. DOL indicated that the department has changed its approach to emphasize coordination with FWP on contacting public hunters to lethally remove bison outside of the management area. Prior to these changes, the lethal removals described in the documentation reviewed during audit work were conducted solely by DOL staff.

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**RECOMMENDATION #4**

*We recommend that the Department of Livestock, when dealing with bison that have breached the tolerance boundaries:*

- A. *Use IBMP adaptive management documents as the guidelines for determining when to conduct hazing and lethal removals, or*
  - B. *Document circumstances that require department staff to conduct hazing and lethal removals in cases that deviate from IBMP adaptive management guidelines, and*
  - C. *Emphasize cooperation with FWP through the use of public hunters to remove bison in nontolerance areas.*
-

## Chapter V – FWP Brucellosis Response Efforts

### **Introduction**

The second objective for our audit focused on the role of the Department of Fish, Wildlife & Parks (FWP) in responding to the presence of brucellosis in elk populations within the state of Montana. This chapter details audit work and findings relating to that objective. From 2011 through 2015, FWP determined that the percentage of elk exposed to brucellosis in Montana has risen considerably since the 2004 Elk Management Plan put the estimated rate at 1.3 percent. Current estimates range between 3 and 53 percent in hunting districts encompassed by the DSA boundary. We found that FWP's role in managing brucellosis to prevent the transmission of the disease between elk and livestock could be better defined. This chapter discusses FWP's current role in managing brucellosis in elk and our findings and recommendations related to this area.

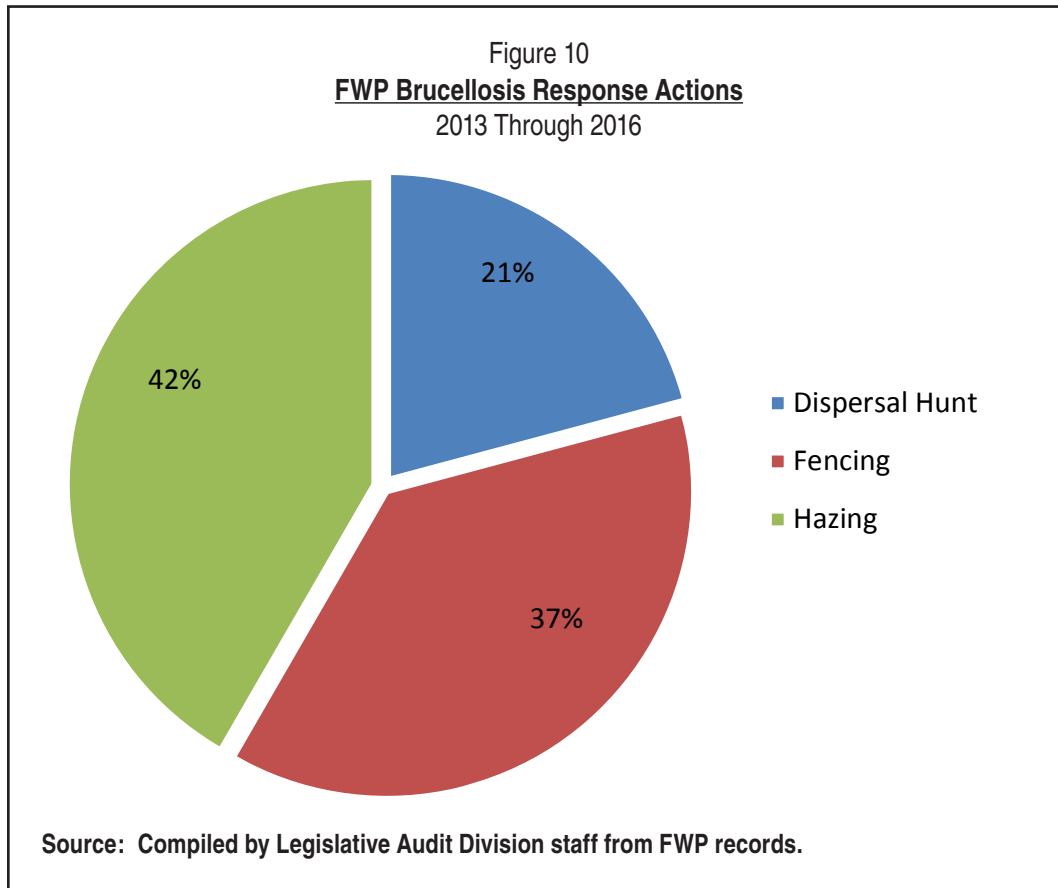
### **FWP Disease Management Activities Could Be Better Defined**

Title 87, MCA, defines the role of FWP in wildlife management. Title 87 clearly grants management authority for wildlife and big game species to FWP. Title 87 also authorizes the Fish & Wildlife Commission to set policy for the fulfillment of all other responsibilities of the department related to fish and wildlife as provided by law. However, there is no specific delineation of brucellosis prevention in livestock as a responsibility of FWP. The management authority provided by Title 87 is largely focused on maintaining suitable populations of wildlife and administering hunting regulations.

### **FWP Disease Management Typically Concerns Wildlife Populations**

Interviews with FWP personnel indicated the department does manage wildlife diseases, despite no specific mandate that it does so. FWP personnel typically tied the department's general mandate to manage wildlife to their responsibility to manage diseases in wildlife, including elk brucellosis. However, the other cases of FWP engaging in wildlife disease management are cases where the disease in question posed a threat to the wildlife population. For example, FWP has lethally removed bighorn sheep from certain herds that were infected with pneumonia. This helped mitigate the risk of pneumonia spreading to healthy members of the bighorn sheep population. Interviews with FWP personnel indicated that brucellosis does not have any similar known impact on elk populations, with the exception of issues of landowner tolerance for elk populations. Due to the lack of major impact that brucellosis has on elk

populations, management of brucellosis lies outside the scope of typical wildlife disease management activities conducted by the department. Rather, the concern with brucellosis in elk is best characterized as a concern that the elk will transmit the disease to cattle, as opposed to the disease itself posing a risk to elk. FWP has conducted 26 management actions on elk potentially exposed to brucellosis since 2013. The following figure shows a breakdown of the types of management actions FWP has conducted in that time.



### **FWP Process for Responding to Brucellosis** **Is Similar to Game Damage**

Review of department documentation indicated that FWP's brucellosis response activities are comparable to the department's Game Damage program under work plans reviewed annually by the Fish & Game Commission. The Game Damage program is defined as a response to address damage to crops or real property cause by big-game animals. Private landowners meeting certain criteria, such as allowing public hunting access, can submit complaints to FWP if big game animals are causing

damage to their crops or property. FWP wardens and wildlife biologists respond to these complaints. These personnel determine what actions, if any, are necessary to alter the habits or distribution of the animals and end the damaging behavior.

Interviews with FWP personnel indicated that the department actions taken to respond to brucellosis concerns related to elk are intended to function in a similar way to game damage. During the audit, we reviewed all 26 of the brucellosis response actions conducted by FWP since 2013, as well as annual work plans for elk brucellosis. The types of actions allowed under Game Damage policy are identical to those allowed under FWP's current annual work plans for responding to brucellosis in elk. Department personnel indicated that, due to this, there is something of a "gray area" between game damage response and brucellosis response.

Audit work indicated that the discovery of higher prevalence of brucellosis in Montana elk was the driving factor in the FWP's decision to adapt game damage response to manage brucellosis in elk.

### **FWP Brucellosis Response Actions Lack Clear Eligibility Requirements**

Despite the similarities to the Game Damage program, FWP does not have defined eligibility criteria for landowners receiving department assistance related to brucellosis concerns. In the Game Damage program, the policies define a number of eligibility criteria for landowners seeking FWP assistance. These are based on state statute and administrative rules. Based on interviews during our audit, FWP has informal criteria for landowners seeking department assistance on brucellosis concerns stemming from the presence of wildlife. As demonstrated earlier, the majority of the funding for FWP brucellosis management comes from federal revenue transferred to the department for brucellosis surveillance. However, the department is assisting landowners using general license dollars and Pittman-Robertson dollars. This assistance to landowners is provided without having defined eligibility criteria for receiving brucellosis assistance. For example, in our stakeholder interviews, concern was consistently expressed regarding the department assisting landowners who do not allow public access to hunters, and using general licensing dollars to provide this assistance. FWP personnel and stakeholders alike expressed concerns about the fact that landowners may benefit from brucellosis response actions as currently carried out by FWP to receive assistance while not meeting defined eligibility criteria.

Below, a list of examples of areas of interest and potential issues identified regarding landowner eligibility for assistance from FWP.

- ♦ 35 percent of the brucellosis response actions were carried out on land that either allowed no public hunting access or limited access to public hunters.
- ♦ 31 percent of the management actions lacked associated documentation of public hunting access status of the land the action was carried out on.
- ♦ There is a date range defined by Department of Livestock as constituting the “brucellosis risk period” for livestock. FWP incorporates this risk period in its work plans, but 12 percent of the brucellosis complaint forms attached to management actions were filed outside of this time period.

The lack of clear eligibility requirements for a landowner seeking FWP brucellosis response assistance has also resulted in situations where it is unclear if the department is responding to a game damage concern or a brucellosis transmission concern. In our review of documentation associated with FWP brucellosis management, there were five cases where documentation of a landowner complaint reviewed during audit work appeared to be describing a game damage complaint, without a clear connection to a direct brucellosis threat to the complainant’s livestock.

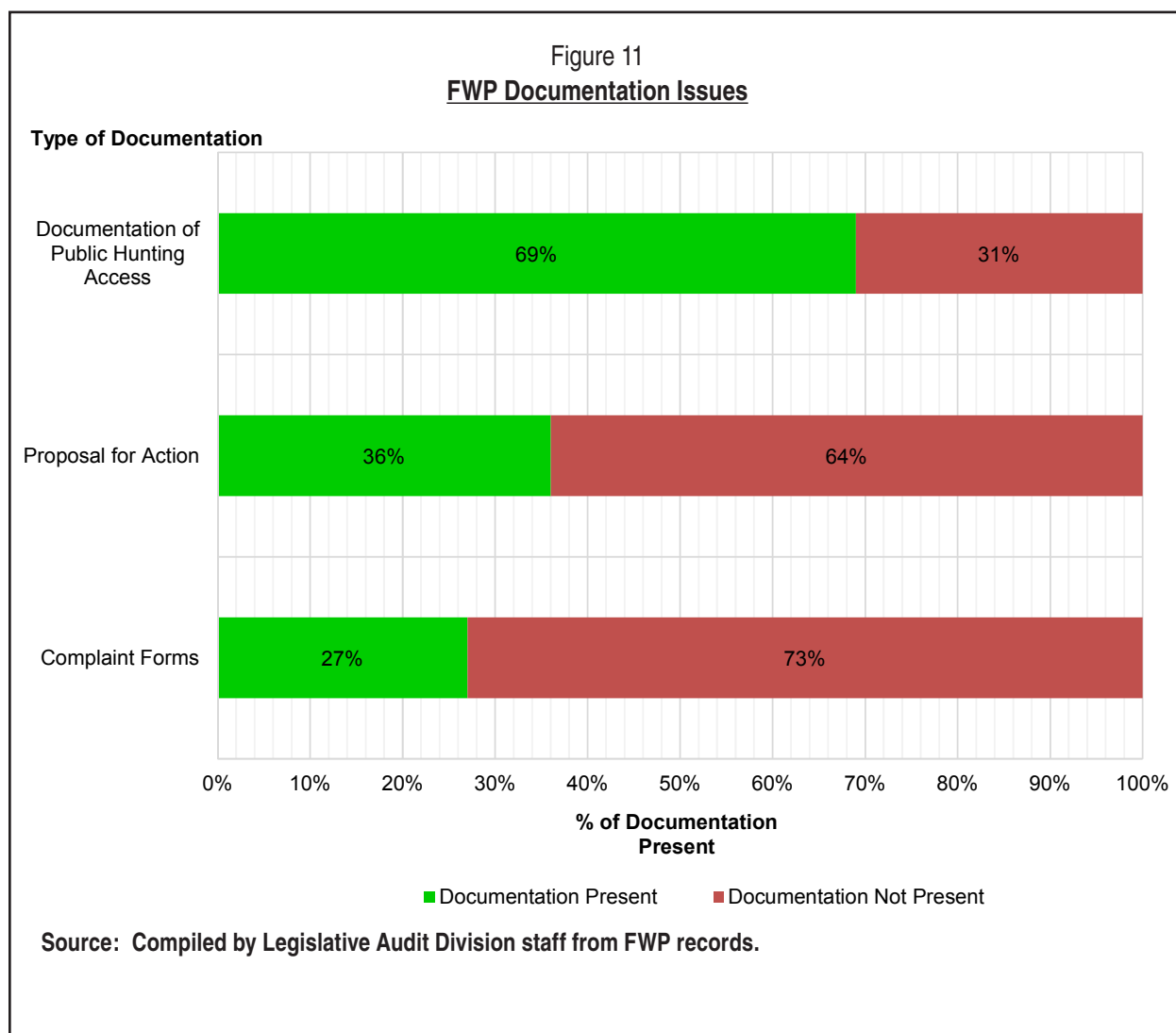
### **Other FWP Landowner Assistance Programs Are Defined in Statute and Administrative Rule**

Section 87-1-225, MCA, defines FWP’s statutory authority and responsibilities with respect to its game damage program. The same section of statute defines certain eligibility criteria for landowners to receive assistance from FWP as well. These statutes are implemented in administrative rules promulgated by FWP in title 12, chapter 9 of the Administrative Rules of Montana. Current brucellosis response actions as applied to elk are generally the same actions taken by the department for game damage mitigation. Further, the associated documentation reviewed during audit work makes it clear that the FWP response to a brucellosis-related complaint from a landowner is dependent on the same response mechanisms as the Game Damage program.

### **FWP Needs to Clarify Role**

Responding to brucellosis in elk is a relatively new management area for FWP, the first actions being conducted in late 2012 and early 2013. FWP has sought guidance from the Fish & Wildlife Commission regarding its response to brucellosis in elk. In approving annual work plans, the commissioners have indicated they wish to follow a policy of responding to elk in areas with brucellosis in order to prevent the disease being transmitted to livestock. However, this leads to FWP conducting activities—and providing services—without any guidance in statute or administrative rule regarding its responsibility or authority for managing brucellosis.

Our review of all documentation associated with FWP brucellosis response actions noted widespread inconsistency in the way that FWP has documented its brucellosis management actions. We reviewed 12 FWP brucellosis management responses from 2013, 6 from 2014, 4 from 2015, and 4 from 2016. Our audit work identified a number of documentation weaknesses resulting in a lack of support for department decisions on how and why it responded to complaints regarding brucellosis in elk. For example, we found 27 percent of the management actions lacked documentation that a complaint was actually submitted and 88 percent of proposed management actions lacked any evidence of receiving management review and approval.



Based on the above information, the current FWP brucellosis response process often lacks pieces of evidence for supporting and describing the action. A number of the brucellosis management actions are lacking an associated proposal for a management

action and a majority of proposed management actions lacked any clear evidence of supervisory review. The lack of program definition, policies, and expectations have resulted in FWP's adoption of an approach to responding to brucellosis concerns in a piecemeal manner.

FWP management and review of associated documentation indicated that the department has made an ongoing effort to respond to the issue presented by brucellosis in elk. However, the role of the department in responding to a disease that poses a risk to livestock as opposed to wildlife is not currently addressed in Title 87, MCA. In order for the department to continue to address the risk to livestock posed by a species under their management authority, further clarifications of authority and program policies and procedures should be defined and implemented.

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**RECOMMENDATION #5**

*We recommend the Department of Fish, Wildlife & Parks seek legislation and adopt administrative rules that:*

- A. *Clearly define the responsibilities of the department for providing brucellosis mitigation assistance to landowners and the eligibility criteria landowners must meet to receive assistance.*
  - B. *Define and implement specific program policies that provide guidance on consistently carrying out and documenting brucellosis response actions.*
-



DEPARTMENT OF  
LIVESTOCK  
DEPARTMENT OF FISH,  
WILDLIFE & PARKS

DEPARTMENT RESPONSES



## STATE OF MONTANA

STEVE BULLOCK, GOVERNOR

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January 24, 2017

Angus Maciver  
Legislative Auditor  
Montana State Legislature

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JAN 24 2017

LEGISLATIVE AUDIT DIV.

Mr. Maciver,

On behalf of the Board of Livestock, myself and all of our staff I would like to thank the Legislative Audit Division for the many hours of work that has been dedicated to studying the various brucellosis management programs within the state of Montana. We have studied your report and recommendations and have provided a table of responses to each recommendation provided by the auditor in the final report. As you know this disease has the potential to do great harm to the economy of Montana and poses a risk to human health. We look forward to working on the implementation of these recommendations in an effort to continually improve the effectiveness of our management of the Designated Surveillance Area (DSA) and improved compliance in deterring further spread of the disease to livestock or the human population.

Respectfully Submitted

Michael S. Honeycutt  
Executive Officer  
Montana Department of Livestock

### Montana Department of Livestock Response to Recommendations

	Recommendation	Concurrence	Comments
<p>Recommendation #1 – We recommend that the Department of Livestock improve its oversight of brucellosis testing compliance by:</p>	<p>A. Using the brand inspection process to better monitor movements and testing of DSA livestock, and incorporating this information into DSA compliance monitoring</p>	<p>Concur</p>	<p>The Department of Livestock (DOL) understands the serious implications of brucellosis to both human health and commerce. The Animal Health Division will continue to work with the Brands Division to monitor compliance. In response to the audit text supporting this recommendation:</p> <ul style="list-style-type: none"> <li>• The narrative does not recognize that the DOL FY16 compliance report indeed analyzed movements of cattle out of the DSA.</li> <li>• The audit narrative suggests that brand inspectors checking the “animal health requirements” box corresponds to compliance with DSA requirements. This check box is primarily used to indicate animals have interstate health papers and is independent from testing compliance.</li> <li>• Brand inspections are currently used to confirm ownership of cattle that are sold or moved across county lines. Adding monitoring of animal health requirements to the brand inspection process would reduce the speed of commerce, require a significant financial investment in technology, and necessitate an increase in personnel. Further, it would require a change in Montana Code Annotated.</li> </ul>
	<p>B. Developing and implementing a consistent response to cases of noncompliance with DSA program requirements</p>	<p>Concur</p>	<p>A consistent protocol for noncompliance with DSA requirements is in development. In DOL's FY16 compliance report DOL followed up with all herds that did not meet a 15% testing cutoff and found that of 337 total herds in the DSA, 26 herds (7.7%) had some compliance violation.</p>

## Montana Department of Livestock Response to Recommendations

		Recommendation Concurrence	Comments
<p><b>Recommendation #2 – We recommend the Department of Livestock improve the oversight and accountability of DSA herd management plans through the following steps:</b></p>	A. Develop criteria that provide the basis for herd management plans and use these criteria as the basis of documented risk assessments for the creation of herd management plans	Concur	<p>Based on the audit recommendations, DOL has established criteria for development of herd management agreements:</p> <ul style="list-style-type: none"> <li>• A producer whose animals utilize ground within the DSA requests a plan;</li> <li>• A producer requests a variance to DSA regulations based on unique circumstances</li> </ul>
	B. Comply with administrative rule regarding the review of herd management plans on an annual basis, or seek changes to administrative rules in order to modify the review period for herd management plans	Concur	DOL will review administrative rule. 32.3.401 and anticipates changes to reflect this recommendation.
	C. Document review and update of DSA herd plans when completed	Concur	DOL will document renewal and updates of management agreements.

### Montana Department of Livestock Response to Recommendations

	Recommendation Concurrence	Comments
Recommendation #3 – We recommend that the Department of Livestock maintain full supporting documentation for oversight and approval of brucellosis vaccination reimbursement payments	Concur	<p>In FY16, vaccination reimbursements accounted for 4.4% of total dollars reimbursed. Testing reimbursements accounted for the remainder.</p> <p>All test charts and vaccination certificates are maintained by the Department of Livestock in their official form based on the records retention schedule.</p> <ul style="list-style-type: none"> <li>• DOL has access to all vaccination certificates.</li> <li>• The first page of all vaccination certificates contains the required information for reimbursement, and a copy of this first page is maintained with reimbursement requests.</li> </ul> <p>While the audit narrative states that, “the Animal Health Division does not have a written policy or procedure for fully documenting payments,” DOL presented written SOPs to the audit team.</p> <p>The audit narrative compares Montana’s brucellosis program to those of the other DSA states of Wyoming and Idaho. It is important to note:</p> <ul style="list-style-type: none"> <li>• Direct comparisons with other states is inappropriate without a thorough audit of each program.</li> <li>• Reimbursement in Montana is comparable to other states because Montana veterinarians pay a laboratory fee while veterinarians in other states do not.</li> <li>• An analysis conducted by United States Department of Agriculture in December 2014 determined that Montana is 2.7 times more effective at mitigating risk on a per animal basis than other states.</li> </ul>

### Montana Department of Livestock Response to Recommendations

		Recommendation Concurrency	Comments
<p>Recommendation #4 – We recommend that the Department of Livestock, when dealing with bison that have breached tolerance boundaries:</p>	<p>A. Use the IBMP adaptive management documents as the guidelines for determining when to conduct hazing and lethal removals, OR</p>	Concur	This audit recommendation reflects a policy of the DOL that has been in place since the adoption of the IBMP.
	<p>B. Document circumstances that require department staff to conduct lethal removals in cases that deviate from IBMP adaptive management guidelines, AND</p>	Concur	In the two cases of lethal removal cited in this audit report, DOL did NOT deviate from IBMP adaptive management guidelines. The DOL responded to land owner requests when the bison bulls were in a no tolerance area adjacent to cattle. DOL will continue to document cases of lethal removal.
	<p>C. Emphasize cooperation with FWP through the use of public hunters to remove bison in non-tolerance areas</p>	Concur	Hunting has long been the preferred tool to manage Yellowstone Bison that enter Montana. It is a standing policy of DOL to coordinate with FWP.







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January 24, 2017

JAN 24 2017

LEGISLATIVE AUDIT DIV.

Angus Maciver, Legislative Auditor  
Legislative Audit Division  
P.O. Box 201705  
Helena, MT 59620-1705

Dear Mr. Maciver:

Montana Fish, Wildlife & Parks ("FWP" or "Department") has received the Performance Audit for Brucellosis Management in the State of Montana. The various comments and recommendations reflect a great deal of work expended by your staff in trying to understand and evaluate agency response to brucellosis. Thank you for your efforts.

The current FWP response to brucellosis in elk was first implemented in 2013 and is largely the product of a diverse citizen work group charged by the FWP director in 2012 to explore and recommend potential agency responses. The work group ultimately recommended risk management, which it defined as minimizing the comingling of elk and livestock in areas with brucellosis during the high-risk period (currently defined by Montana Department of Livestock as February 15 through July 15). Subsequent Fish and Wildlife Commission ("Commission") adoptions and Department actions reflect that focus with relatively few annual adjustments since 2013.

In short, the Department's response to brucellosis in elk is to manage the risk of infection between elk and cattle. This includes the use of hazing, stackyard fencing, and hunters to move elk away from cattle during the high-risk period. The intent is to reduce the risk of brucellosis transmission from elk to cattle in a manner that maintains elk on the landscape. Objectives include reduced transmissions, increased public tolerance for management, and cost effectiveness. There is no objective or effort to extirpate elk, test and slaughter exposed elk, or eradicate the disease itself. While brucellosis is not currently recognized as having significant biological impacts on elk populations, the disease does impact tolerance by private landowners for elk on their lands. Landowners are critical partners representing essential wildlife habitat and tolerance at crucial times of the year. This tolerance is a necessary and critical component of elk conservation and management in Montana.

The Department believes the current response is within current statutory authority, effective,

reasoned, and appropriately sensitive to both livestock and wildlife concerns and values. Out of this belief, the Department responds to the single audit recommendation directed to FWP below.

**Recommendation #5 (first and only recommendation directed to FWP)**

*We recommend the Department of Fish, Wildlife, & Parks seek legislation and adopt administrative rules that:*

- A. Clearly define the responsibilities of the department for providing brucellosis mitigation assistance to landowners and the eligibility criteria landowners must meet to receive assistance.*
- B. Define and implement specific program policies that provide guidance on consistently carrying out and documenting brucellosis response actions.*

**FWP partially concurs with this recommendation.**

FWP does not agree that legislation is required to define Department responsibilities for providing brucellosis mitigation assistance. FWP does concur that additional clarification on program guidance for consistent implementation and documentation would be helpful. Such guidance could be implemented through administrative rule making and continued annual rule-making by the Commission.

FWP and the Commission currently have the authority and responsibility to implement brucellosis risk management actions. That authority is manifest in MCA § 87-1-201 (“the department shall supervise all the wildlife....”) and § 87-1-301 (“the commission shall set the policies for the protection, preservation, management, and propagation of the wildlife....”).

FWP’s role in implementing brucellosis risk management actions is highlighted in part by the significant efforts by the Department of Livestock, the livestock industry in Montana, and individual livestock producers to maintain brucellosis-free cattle in Montana. Appropriately, their efforts are directed at cattle but elk are part of the risk and thus also are part of risk management. Because landowner tolerance is critical to the Department’s responsibility to manage elk, FWP and the Commission manifest their wildlife-oriented authority to appropriately compliment livestock-oriented efforts and authorities. These brucellosis risk management responses are similar to long-established, proven, and publicly familiar methods used to mitigate game damage.

The Department currently reviews every year’s completed risk management efforts and the next year’s annual work plan through the Commission’s public process to define and adopt annual rule. This annual review process with the Commission has generated relatively few public comments. A human dimension public survey and the citizen work group further reinforce the Department’s belief that this program is largely within public tolerances and expectations. While FWP believes existing products and process already provide considerable guidance relative to landowner eligibility and consistent implementation and reporting, the Department recognizes the value of additional clarification. That additional clarity can be established through a combination of administrative rule making and the existing annual review process and Commission annual rule.

Such clarification would first appear at the conclusion of the next annual review by the Commission in fall 2017.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul C. Sihler". The signature is fluid and cursive, with a large initial "P" and a distinct "Sihler" at the end.

Paul Sihler  
Interim Director

c: Governor's Office  
Ken McDonald, FWP  
Zach Zipfel, FWP  
Quentin Kujala, FWP