SENATE FINANCE & CLAIMS
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State of Montana
Brucellosis Action Plan
January 13, 2009

NOTE: Numerous changes have been made from the initial DRAFT of the Brucellosis Action Plan. These include:

1. Added plan objectives.
2. Added table of Contents.
3. Simplified plan to include fewer requirements and reduced 3 management areas to 2.
4. Added Action Plan sun setting information.
5. Removed Official Calfhood Brucellosis Vaccination (OCV) requirement as not critical to regaining Class Free Status (this issue to be addressed separately from Action Plan).
6. Included estimated budget as well as funding process.
7. Included language for MT Fish Wildlife & Parks (MT FWP) to commit to risk mitigation activities (Appendix E).
8. Added agency roles to Background section.
9. Added list of abbreviations and acronyms (Appendix F).

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BACKGROUND

The State of Montana achieved brucellosis Class Free status in 1985. From 1985 until May 17, 2007, there were no cases of brucellosis detected in Montana's livestock. On May 18, 2007, brucellosis was detected in one Montana cattle herd (Carbon County). Subsequently, on June 9, 2008, brucellosis was detected in a second Montana cattle herd (Park County). On September 3, 2008, because of these two infected herds within a two-year period, the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services (USDA-APHIS-VS) officially downgraded Montana's brucellosis status from Class Free to Class A.

At this time, the only known reservoirs of *Brucella abortus* in Montana are Yellowstone National Park (YNP) bison and free-ranging elk in the Montana greater Yellowstone area (GYA). The State of Montana intends to continue statewide brucellosis detection efforts as well as to enhance brucellosis prevention and detection efforts in areas where interactions between livestock and brucellosis-infected elk or bison may occur.

The purpose of this Brucellosis Action Plan (BAP) is to outline actions that will provide the means for the most expedient recovery and continued maintenance of Montana's brucellosis Class Free status. The actions to regain statewide brucellosis Class Free status include (see Summary Table in **Appendix A**):

1) Statewide active and passive brucellosis surveillance.
2) Risk-related or "targeted" brucellosis surveillance.
3) Risk-related brucellosis mitigation measures.
4) Implementation of effective and efficient oversight/enforcement.
5) Implementation of improved animal traceability.

This BAP is a short-term plan and all actions and strategies outlined in the BAP will continue, at a minimum, until Montana regains brucellosis Class Free status. Many of the actions and strategies outlined in the plan will cease 180 days following regaining brucellosis Class Free status. However, it is anticipated that longer-term surveillance and mitigation activities and strategies will continue in areas where known brucellosis-infected or exposed elk or bison may interact or share landscape with livestock. Funding to implement the BAP through calendar year 2009 will be sought, as a one-time-only budget item, through State of Montana General Funds. (See **Appendix B** for budget).

The Montana Department of Livestock (MDOL) will be the lead agency regarding public education and outreach, coordination, implementation, enforcement, and oversight regarding the BAP. Additionally, the MDOL will be developing and submitting, to USDA-APHIS-VS, an application for reinstatement of Montana's brucellosis Class Free status.

USDA-APHIS-VS will be providing support and personnel for the implementation of the BAP. Additionally, USDA-APHIS-VS will be responsible for conducting a brucellosis program review, providing recommendations related to the BAP, and assessing and acting upon Montana's application for reinstatement of brucellosis Class Free status.

Montana Fish, Wildlife and Parks (MT FWP) will be the lead agency regarding brucellosis surveillance activities in elk. Additionally, MT FWP will be providing support and personnel for conducting operation or region-specific risk mitigation activities.

This BAP will not replace or change ongoing State and Federal efforts regarding bison management in Montana. Implementation of the Interagency Bison Management Plan (IBMP) will continue as per the IBMP Record of Decision and the current IBMP Operating Procedures (www.ibmp.info).

For the purposes of this BAP, Areas within Montana will be categorized as follows:

1) Area of elevated or unknown exposure potential (Area 1) – Special Focus Area / Assurance Area
2) Area of no/unlikely exposure potential (Area 2)

The level of surveillance and extent of mitigation strategies employed will correspond with the brucellosis exposure potential in the respective Areas. If additional cases of brucellosis are found in Area 2 during the implementation of the Brucellosis Action Plan, an epidemiological investigation will be carried out to determine the source of infection. If the source cannot be linked directly to an infected herd in Area 1, a regional approach will likely be implemented consistent with the principles described in the Progressive Management Area (PMA) template.

Area 1 - Special Focus Area / Assurance Area: (see Appendix C for map)

1) Carbon County
2) Stillwater County
3) Sweetgrass County
4) Park County
5) Gallatin County
6) Madison County
7) Beaverhead County

Area 2 – Areas within Montana where GYA-associated elk and YNP bison are not known to range and where seropositive elk have not been detected (the remainder of the State of Montana).

AREA 1 STRATEGIES (Special Focus Area / Assurance Area)

MDOL will attempt to identify all livestock operations within Area 1 whose livestock may interact with or share landscape with YNP bison or suspected brucellosis-exposed elk. MDOL and MT FWP will work with livestock producers in performing operation or region-specific brucellosis risk mitigation pursuant to developed risk evaluations or individual *Brucellosis Prevention and Surveillance Herd Management Plans (Herd Plans)*, if requested by the producers. Livestock producers within Area 1 will be subject to all Area 1 provisions and requirements until a risk evaluation is completed. Any variances or exceptions to the Area 1 requirements must be approved by the Montana State Veterinarian and will only be considered after performance of an operation-specific risk evaluation. *Herd Plans,* if developed by the individual producers, will be reviewed and subject to revision on an annual basis. Additionally, *the Herd Plans* will be reviewed and subject to revision or termination following the recovery of Montana's Class Free status. Surveillance and mitigation measures for livestock operations within Area 1 will include the following:

Testing:

A) Entire herd testing – Required

1) All operations where the primary ranching operation (calving/feeding/breeding) is within Area1 and their livestock may interact with or share common landscape with brucellosis-exposed elk or bison.
2) All operations that graze livestock seasonally in areas where known brucellosis-infected or exposed elk have over-wintered or calved on the shared landscape.

3) Test-eligible - All sexually intact cattle or domestic bison 12 months of age and older. Continues until entire herd testing completed in all herds in Area 1 (target completion date is December 31, 2009).
4) Herds conducting entire herd tests in 2008 are not required to conduct additional herd test in 2009.
5) Exceptions/variances:
   a) Must be approved by the Montana State Veterinarian and will only be considered after performance of operation-specific risk evaluation .

B) Movement testing - Required

1) Test-eligible - All sexually intact cattle or domestic bison 12 months of age and older moving from Area 1 to location outside Area 1.
2) Testing within 30 days prior to movement outside of Area 1.
3) Testing to continue for a period of 6 months following the recovery of Montana's brucellosis Class Free status.
4) Exceptions/variances:
   a) Steers and spayed heifers exempt from testing requirement.
   b) Testing within 30 days of movement or change of ownership is not required if the animal(s) are included in an entire herd test (Area 1) and the animal(s) are moved or sold within 30 days of the entire herd test.
   c) Testing within 30 days of movement or change of ownership is not required if the animal(s) are included in an entire herd test conducted between July 15 and January 15 and the animal(s) remain in Montana.
   d) Other variances/exceptions must be approved by the Montana State Veterinarian and will only be considered after performance of an operation-specific risk evaluation.

C) Change of ownership / cull cattle testing – Required

1) Test-eligible - All sexually intact cattle or domestic bison 12 months of age and older changing ownership.
2) Testing within 30 days prior to sale / change of ownership.
3) Testing to be performed on-farm/ranch or at the first point of concentration (livestock markets).
4) Testing to continue for a period of 6 months following the recovery of Montana's brucellosis Class Free status.
5) Exceptions/variances:
   a) See exceptions Section B.4 above.

D) Aborted Fetus Testing – Area 1 - Recommended as Best Management Practice (BMP) – (See **Appendix D** for Best Management Practices)

1) Bacteriological testing of fetuses/tissues/membranes/fluids from aborted cattle, bison, or elk fetuses.

E) Syndromic Testing – Area 1- Recommended as BMP

1) Serological and/or bacteriological testing of cattle and domestic bison exhibiting signs consistent with brucellosis (e.g. - open, dry, late-bred, or known to have aborted).

Vaccination:

F) Official calfhood vaccination (OCV) – Recommended as BMP – Animal ID not mandatory

G) Adult vaccination (AV) – Recommended as BMP

1) Entire herd AV – all sexually intact cattle or domestic bison 18 months of age and older.
2) AV booster recommended every 2-3 years thereafter.

Fencing:

H) Game-proof fencing of stack yard/feed storage areas – Recommended as BMP.

1) If stack yards or feed storage areas are attractant to elk.

Traceability/Animal Identification (ID):

I) Individual animal identification – Area 1 - Required

1) Official ID of all sexually intact cattle or domestic bison 12 months of age and older.
2) Identified prior to sale/change of ownership/permanent movement outside Area 1.
3) Identification options –
   a) OCV eartags (orange metal)
   b) USDA, or USDA approved eartags (metal clips or RFID)
   c) MT-approved eartags (similar to green metal tags utilized in Wyoming – issued to and applied by livestock producer).

AREA 2 STRATEGIES

Testing:

A) Change of ownership / cull cattle testing

1) Only as required by Class A Status
   a. All sexually intact cattle or domestic bison 18 months of age and older exported from Montana – As per USDA-APHIS-VS Brucellosis Class A State requirements.

Vaccination:

B) Official calfhood vaccination (OCV) – Recommended as BMP

Traceability/Animal ID:

C) Individual animal identification – Recommended as BMP

1) See Section I above.

APPENDIX A: Summary Table for Areas 1 and 2

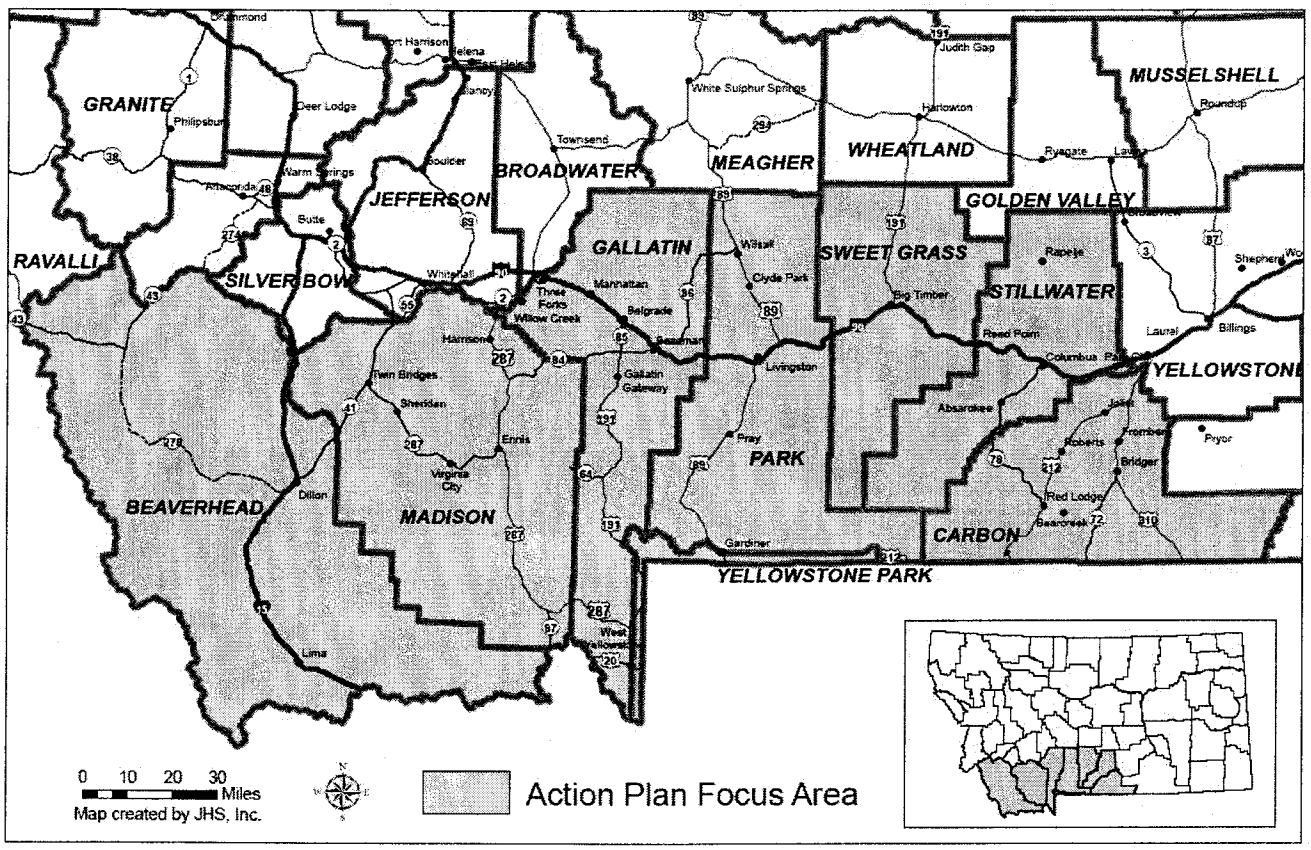
SUMMARY - MT BRUCELLOSIS ACTION PLAN			
	Area 1	**Area 2**	**Comments**
RISK EVALUATION	*BMP	--	*Herds without Risk Evaluation subject to all Area 1 requirements.
TESTING			
Entire Herd Test / Test-eligible age	*YES / ≥ 12 mo.	--	* All herds in Area 1 with interaction potential in areas with seropositive elk, especially between January 15 and June 15. To be completed by December 31, 2009. Variances addressed via Risk Evaluation and/or Herd Plan.
Change of ownership & cull testing/ Test-eligible age (Animals remaining in MT)	*YES / ≥ 12 mo.	-- **	* If sold prior to entire herd test. Variances addressed via Risk Evaluation and/or Herd Plan. **Testing required if sold out-of-state. Test-eligible age as required by destination state.
Movement testing / Test-eligible age (Animal movement out of Area 1)	*YES / ≥ 12 mo.	-- **	* If moved out of Area 1 prior to entire herd test. Seasonal grazing and other movement variances addressed via Risk Evaluation and/or Herd Plan. **Testing required if sold out-of-state. Test-eligible age as required by destination state.
Aborted Fetus Testing	BMP	--	
Syndromic Testing (Open, dry, late, known abortions)	BMP	--	
VACCINATION			
Official Calfhood Vaccination (OCV)	BMP	BMP	
Adult Vaccination (booster or initial if not OCV)	*BMP	--	* Recommended for herds with interaction potential in areas with seropositive elk, especially between January 15 and June 15. Determined via Risk Evaluation and/or Herd Plan.
FENCING			
Hay stacks/feed storage areas – Game-proof fencing	*BMP	--	* If attractant to GYA elk or YNP bison
TRACEABILITY / ANIMAL ID			
Official ID for sale / ID-eligible age	YES / ≥ 12 mo.	*BMP / ≥ 12 mo.	* Those sold to out-of-state destinations will be officially ID'd as required by destination state.

APPENDIX B: Estimated costs* for Brucellosis Action Plan

Herd Testing	Estimated # Animals	Cost / animal	Cost
Area 1	87,644	$ 12.00	$ 1,051,729
Change of ownership testing			
Area 1	???	$ 12.00	???
Cull cow/export Testing	**Estimated # Animals**	**Cost / animal**	**Cost**
Area 1 and Area 2	58,669	$ 7.50	$ 440,017
Movement Testing	**Estimated # Animals**	**Cost / animal**	**Cost**
Area 1	7,390	$ 12.00	$ 88,677
Adult Vaccination (AV)	**Estimated # Animals**	**Cost / animal**	**Cost**
Area 1	73,897	$ 7.50	$ 554,230
Personnel	**Hourly Rate**	**Salary**	**Cost w/ Benefits**
Veterinarians (2)	$ 31.00	$ 128,960.00	$ 158,621
Program Specialist	$ 14.00	$ 29,120.00	$ 35,817
Lab Tech	$ 16.68	$ 34,694.40	$ 42,674
Operations (Travel, equip, etc.)			
Supplies and materials			$ 14,863
Communications			$ 2,350
Travel			$ 11,727
Equipment			$ 26,000
Total First Year Cost			**$ 2,426,705**

***It is understood that there will be additional costs associated with testing, but not included in the budget. These may be paid based on available funding.**

APPENDIX C: Map of Montana Brucellosis Action Plan Boundaries



APPENDIX D: Best Management Practices

- Make reasonable / practical attempts to avert elk and cattle commingling, especially during the period of January 15 thru June 15 each year.
- Make reasonable / practical attempts to avert elk from accessing / utilizing feed storage areas and cattle feeding areas.
- Contact one of agencies (MDOL, MT FWP or USDA-APHIS-VS) if commingling problem exists or if elk are accessing or utilizing stored feeds or cattle feeding areas, especially during the period of January 15 thru June 15 each year.
- Work with agencies (MDOL, MT FWP, and/or USDA-APHIS-VS) to: 1) remove elk as rapidly as possible when commingling occurs or if elk are near or utilizing cattle feeding areas or feed storage areas and (2) prevent future events (elk-cattle commingling, elk access to stored feeds or cattle feeding areas), especially during the period of January 15 thru June 15 each year.
- Keep your cattle separate and apart from other cattle herds until calving is completed.
- Brucellosis vaccinate (official calfhood vaccination – "OCV") all heifers (natural additions and purchased replacements).
- Contact MT FWP, MDOL, or USDA-APHIS-VS if any evidence of an elk abortion is found close to your cattle, feed storage area(s), or cattle feeding area(s).
- Submit aborted fetuses (through attending veterinarian) for bacteriological testing.
- Submit blood and tissue samples (through attending veterinarian) from cows exhibiting signs consistent with brucellosis (known to have aborted or delivered still-borne calf).
- Ensure all sexually intact cattle 12 months of age and older that are sold are officially identified prior to sale.
- Register premises in National Animal ID database to enhance traceability in the event of a disease introduction.
- Adhere to Animal Health regulations when buying, selling, importing, and exporting cattle.

APPENDIX E: Participation by Montana Fish, Wildlife & Parks (MT FWP)

A) It will be critical to the success of this Brucellosis Action Plan to have active participation by MT FWP in assisting MDOL and livestock producers in attempting to maintain temporal and spatial separation between cattle and GYA-associated elk. (MT FWP is already a cooperating partner regarding YNP bison management – jointly implementing Interagency Bison Management Plan). MT FWP should submit proposed solutions to brucellosis-related issues identified in risk evaluations or *Herd Plans* within Area 1, upon the request of MDOL or livestock producers. In order to assist in the risk mitigation actions included in a risk evaluation or Herd Plan, MT FWP participation should include:

1) Providing personnel to haze/assist in hazing of elk in close proximity to cattle feeding/calving areas.
   a) Especially in Area 1 – highest priority.
   b) Especially during the period of January 15 thru June 15.
2) Providing personnel and game-proof fencing materials for fencing haystacks/feed storage areas/cattle feeding areas.
   a) Especially in Area 1 – highest priority.
3) Providing personnel or other resources for additional mitigation efforts to ensure separation between elk and cattle or elk and cattle feeding/calving areas.
   a) Especially in Area 1 – highest priority.
   b) Especially during the period of January 15 thru June 15.

B) It will also be critical for MT FWP to work cooperatively with livestock producers (and vice versa) to improve and sustain elk brucellosis surveillance efforts, especially in Area 1.

C) It will also be critical for MT FWP to continue elk brucellosis surveillance efforts long-term in Area 1 and to enhance long-term statewide elk brucellosis surveillance efforts.

APPENDIX F: Abbreviations, Acronyms & Definitions

- **Area 1** – Areas in Montana with elevated or unknown brucellosis exposure potential. (Special Focus Area and Assurance Area)
- **Area 2** - Areas within Montana where GYA-associated elk or bison are not known to range and where seropositive elk have not been detected (the remainder of the State of Montana).
- **AV** – Adult vaccination (with *Brucella abortus* strain RB51 vaccine)
- **BAP** – Brucellosis Action Plan
- **GYA** – Greater Yellowstone Area
- **IBMP** – Interagency Bison Management Plan
- **MDOL** – Montana Department of Livestock
- **MT FWP** – Montana Fish, Wildlife and Parks
- **MCI** – Market cattle identification program. Cooperative USDA-APHIS-VS / State program for brucellosis testing of cattle at livestock markets and at State or Federal slaughter facilities.
- **OCV** - Official calfhood vaccination (with *Brucella abortus* strain RB51 vaccine).
- **RFID** - Radio-frequency identification device. Identification tags or implants with transponders for remote retrieval of animal identification numbers.
- **USDA-APHIS-VS** – United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services