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MONTANA SIXTH JUDICIAL DISTRICT COURT, PARK COUNTY

PARK COUNTY STOCKGROWERS ASSOCIATION, INC., on behalf of its members, Petitioner, and **MONTANA FARM BUREAU FEDERATION,** Petitioner-Intervenor, vs. **MONTANA DEPARTMENT OF LIVESTOCK,** an agency of the State of Montana; **MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS,** an agency of the State of Montana; **STATE OF MONTANA; DR. MARTIN ZALUSKI,** in his capacity as Montana State Veterinarian; and **BRIAN SCHWEITZER,** as Governor of the State of Montana, Respondents, and **BEAR CREEK COUNCIL, GREATER YELLOWSTONE COALITION,** and **NATURAL RESOURCES DEFENSE COUNCIL,** Respondent-Intervenors.	Cause Nos. DV-11-77 DV-11-78 Judge E. Wayne Phillips **FINAL ORDER AND JUDGMENT ON (AMENDED) JOINT PETITION**

PARK COUNTY,

Petitioner, and

MT FARM BUREAU FEDERATION,

Petitioner-Intervenor,

vs.

THE STATE OF MONTANA, FISH WILDLIFE AND PARKS, an agency of The State of Montana; and **THE DEPT OF LIVESTOCK,** an agency of the State of Montana,

Respondents, and

BEAR CREEK COUNCIL, GREATER YELLOWSTONE COALITION, AND NATURAL RESOURCES DEFENSE COUNCIL,

Respondent-Intervenors.

This matter comes before the Court on a Joint Petition For Declaratory and Injunctive Relief filed by the Montana Farm Bureau Federation (MFBF) and the Park County Stockgrowers Association, Inc. (PCSA) (together, the "Petitioners"). The Petitioners seek declaratory relief (Mont. Code Ann. § 27-8-101, *et seq.*) and injunctive relief (Mont. Code Ann. § 27-19-101, *et seq.*) pursuant to the Montana Administrative Procedures Act (MAPA) (Mont. Code Ann. § 2-4-101, *et seq.*), Montana Environmental Policy Act (Mont. Code Ann. § 75-1-101, *et seq.*), and Montana Constitution Article II, Section 3, against the Montana Department of Livestock (DOL), Montana Department of Fish, Wildlife and Parks (FWP), the State of Montana, Dr. Martin Zaluski (Dr. Zaluski), in his capacity as the Montana State Veterinarian, and Governor Brian Schweitzer (Governor), in his capacity as Governor of the State of Montana (herein collectively referred to as "Respondents"). Petitioners bring this action for declaratory and injunctive relief on behalf of its members. This cause of action is based on Respondents' adoption of significant changes to the existing Interagency Bison Management Plan (IBMP) occurring in an April 14, 2011, Adaptive Management

Adjustments (AMA) to the IBMP and a subsequent February 28, 2012, Joint Decision Notice on the AMA. Petr. Jt. Pet. for Decl. and Inj. Relief, 5-6 (Mar. 29, 2012). The Petitioners assert the changes:

> 1) violate Respondents' statutory and regulatory duties to manage brucellosis and bison as set forth by Mont. Code Ann. §§ 81-1-102, 81-2-102, 81-2-103, 81-2-120, 81-2-108, 81-2-703, 87-1-201, 87-2-216, 87-1-301, 87-5-701, 81-4-201, and 81-4-201, and Admin. R. Mont. 32.1.101, 32.3.108, 32.3.109, 32.3.411, 32.3.224A, and 32.3.204;
>
> 2) were not analyzed under an adequate or sufficient environmental review required by the Montana Environmental Policy Act (MEPA), Mont. Code Ann. § 75-5-101, *et seq.*, and regulations implementing DOL's and FWP's MEPA duties, Admin. R. Mont. 32.2.221, *et seq.*, and 12.2.428, *et seq.*; and
>
> 3) violate Petitioners' members' right to a clean and healthful environment as granted by Mont. Const. Art. II, Sec. 3.

Id. Petitioners also allege Respondents' actions in adopting and implementing the AMA were arbitrary and capricious and have resulted in the creation of a public nuisance. *Id.* at 6, 19.

Petitioners seek a declaration that Respondents must:

> [P]ursuant to MEPA, sufficiently evaluate the impacts of the AMA for the Northern Boundary Area of [Yellowstone National Park] (YNP) on the human environment prior to implementation. A legally sufficient analysis would include preparing an environmental impact statement (hereinafter referred to as "EIS") or, at a minimum, a supplemental environmental impact statement (hereinafter referred to as "SEIS") for the proposed modifications. . . . Petitioners also seek an order of this Court enjoining Respondents presently, and into the future, from violating their statutory duties, and from implementing the AMA for the Northern Boundary of YNP until an adequate MEPA review is completed. Finally, Petitioners seek abatement of the public nuisance caused by Respondents' actions.

Id. at 7.

Although Petitioners' original action was founded upon violations which allegedly resulted in the migration of wild bison during the winter of 2010/2011, the recent Joint Petition was filed in March 2012. Petr. Jt. Pet. for Decl. and Inj. Relief (May 6, 2011).

This recent amended complaint encompasses changes and subsequent statutory reform from the 2011 legislative session. The Court therefore utilizes the 2011 Montana Code Annotated in this Order.

BACKGROUND

Wild bison located in Yellowstone National Park (YNP) have been found to host brucellosis, a contagious bacterial disease caused by various species of the genus *Brucella*. Brucellosis can infect domestic animals and other wildlife, such as elk. Infection can cause the host animal to abort its fetus and, in cattle, it can additionally cause decreased milk production, weight loss, infertility, and lameness. United States Department of Agriculture Animal and Plant Health Inspection Service (hereinafter referred to as "USDA-APHIS") Facts About Brucellosis at 1, *http://www.aphis.usda.gov/animal_health/animal_diseases /brucellosis/downloads/bruc-facts.pdf* (accessed Oct. 23, 2012). Brucellosis is transmitted through direct contact with an infected animal or an environment contaminated with fluids from an infected animal. Environments are often contaminated when an infected animal aborts its fetus resulting in "placental membranes or fluids, and other vaginal discharges," being left behind. *Id.* at 1.

Humans can also contact brucellosis where it is known as undulant fever. It can cause severe flu-like symptoms, including fatigue, headache, high fever, chills, sweats, joint and back pain, and loss of weight and appetite. *Id.* at 6. There is no known cure for undulant fever and symptoms can recur throughout an individual's lifetime—and may lead to death. *Id.* at 5. Farmers, ranchers, veterinarians, and packing plant workers are at the highest risk for exposure because they frequently come into contact with infected animals. *Id.* at 6.

In 1934, the USDA-APHIS established an education program to help eradicate brucellosis. The agency created a comprehensive, nation-wide program implementing testing and vaccination in high-risk areas. Since there is no known cure for brucellosis, the program also incorporated slaughter of infected animals to aid in the elimination of brucellosis. In the environs of YNP, federal and state agencies cooperated and established the Interagency Bison Management Plan (IBMP) due to the risk of transmission. The IBMP was created and approved by both the DOL and FWP in 2000 to aid in the management of the YNP bison population and protect domestic cattle in

areas of Montana adjacent to YNP. U.S. Department of Interior, Record of Decision for Final Environmental Impact Statement and Bison Management Plan for the State of Montana and Yellowstone National Park (Dec. 20, 2000) (available at *http://ibmp.info/library.php*).

The IBMP sets forth the management responsibilities for each agency and provides that the agencies: maintain temporal and spatial separation between bison and cattle; manage bison populations; manage bison which migrate beyond YNP boundaries; and, eventually, institute vaccination procedures for YNP bison. *Id.* at 10-11. The IBMP also references Respondents' statutory responsibilities to manage bison. *Id.* at 8-10. The objective of the IBMP is not to eradicate brucellosis, but rather manage bison to prevent the transmission of brucellosis from bison to cattle. *Id.* at 22. The plan's "principle purpose" is to "maintain a wild, free-ranging population of bison and address the risk of brucellosis transmission to protect the economic interest and viability of the livestock industry in Montana." *Id.* The IBMP incorporates three Adaptive Management steps to minimize the risk of transmission, which "when all criteria are met, provide for the tolerance of a limited number of untested bison on public lands and private lands where permitted adjacent to Yellowstone National Park during winter." *Id.* The IBMP continues, stating:

> The management actions set forth in this plan which reflect occurrence of certain actions by an expected date are the agencies anticipated time periods in which certain management steps may commence. The actual change in management from one step to another are dependent upon all criteria being met or obtained prior to the particular step being implemented.

Id.

As noted, the IBMP contains a three step process and designated zones to manage the bison and maintain separation. The plan identifies three steps and three zones for the area known as the Northern Boundary Area, which includes areas such as Eagle Creek and Bear Creek, with Zone 1 being YNP. The zones and actions for each step are described below.

In the Northern Boundary Area three zones are designated for bison management. ROD 29 (Figure 4).

Zone 1 – YNP winter habitat in the Reese Creek vicinity that bison normally occupy. Bison will be subject to hazing in the spring when bison are being moved from Zone 2 back into YNP before May 15. Admin. Rec. 2430.

Zone 2 – United States Forest Service (USFS) winter habitat with some private property which includes the area north of park boundary in the Reese Creek area, west of Yellowstone River, and south of Yankee Jim Canyon. Bison will be managed for: i) spatial and temporal separation; ii) lethal removal for private property concerns; iii) bison tolerance limits (up to 100); and, iv) bison park population size (3,000). Management actions within Zone 2 could include tolerating, hazing, capturing and testing, vaccinating, removing bison to quarantine, removing for use in jointly approved research and lethally removing bison as set forth in this plan. Admin. Rec. 2428, 2430.

Zone 3 - The area where bison that leave Zone 2 would be subject to lethal removal. Admin. Rec. 2428, 2430.

The following three steps were established to manage and monitor the bison in the Northern Boundary Area.

Step 1. After cattle are removed from Zone 2 in the fall, the agencies will haze bison back into YNP. Bison not captured will be hazed back into YNP before May 15. Those remaining are subject to lethal removal. Agencies will perform further research regarding brucellosis and every attempt will be made to capture and test bison that leave YNP. Bison attempting to exit YNP may be subject to hazing, capture, testing and vaccination, or lethal removal. These practices will continue in Step 2 (Expected implementation during the winter of 2002/2003). Admin. Rec. 2426-2427; ROD 11-12 (Dec. 20, 2000).

Step 2. Step 2 will begin when a safe and effective remote delivery mechanism is available, allowing vaccination of eligible bison, and when cattle no longer graze private lands in Zone 2, namely the Royal Teton Ranch situated north of YNP and adjacent to Reese Creek (the northern boundary). The agencies will allow up to 25 seronegative (testing negative for brucellosis) bison outside YNP, increasing to 50, then to 100, when the agencies are confident in their ability to manage these numbers. The agencies may adjust these numbers based on the experience gained during this Step. Bison attempting to exit YNP may be subject to hazing, capture, testing and vaccination, or lethal removal after the number of

seronegative bison released to occupy Zone 2 specified in is reached. Admin. Rec. 2427-2429, 2432.

Step 3. Step 3 is to begin when: (1) studies on bacterial viability allowed agencies to determine an adequate temporal separation period; (2) YNP initiate an in-park vaccination program via a remote delivery system; (3) agencies demonstrate the ability to enforce spatial separation; and (4) agencies demonstrate the ability to control the maximum number of bison in Zone 2. During Step 3, bison attempting to exit the Park may be subject to hazing, capture, testing and vaccination, or lethal removal after the number of untested bison in Zone 2 specified above is reached. (Expected implementation during the winter of 2003/2004). Admin. Rec. 2429.

To meet these responsibilities, IBMP agencies meet periodically to discuss and adopt "adaptive management" changes to the IBMP. In March and April, 2011, IBMP agencies agreed to and signed proposed "Adaptive Management Adjustments to the Interagency Bison Management Plan." *See* AMA (available at: *http://ibmp.info/Library/AMAdjustments_IBMP_2011_All%20signatures.pdf*) (accessed Oct. 23, 2012). The IBMP agencies agreed to three adjustments:

(1) Allow bison on habitat on U.S. Forest Service and other lands north of the park boundary and south of Yankee Jim Canyon. Bison would not be allowed north of the hydrological divide (i.e., mountain ridge-tops) between Dome Mountain/Paradise Valley and the Gardiner Basin on the east side of the Yellowstone River and Tom Miner basin and the Gardiner Basin on the west side of the Yellowstone River.

(2) As necessary, trailer up to 300 female and calf bison testing negative for brucellosis from the Stephens Creek capture facility to a double-fenced quarantine facility in Corwin Springs for holding until release back into the park in spring. The quarantine facility in Corwin Springs is leased by APHIS and the State of Montana and APHIS have collaborated to complete environmental analyses for use of the facility.

(3) Evaluate the effects of these adjustments and modify as necessary to prevent bison from occupying lands north of the hydrological divide and minimize the risk of transmission of brucellosis to livestock.

Id.

It was in response to these "adjustments," that the Park County Stockgrowers Association, Inc., filed on May 6, 2011, a Petition for Declaratory and Injunctive Relief followed on March 29, 2012, by the Petitioners Joint Petition for Declaratory and Injunctive Relief. This second petition is deemed the "Amended Petition," which filing was authorized by this Court. The Amended Petition alleges Respondents' changes to the AMA were significant because they: "(1) Allow brucellosis exposed and infected bison to occupy all lands, both public and private, north of YNP and south of Yankee Jim Canyon, including large expanses of land that were formerly classified as "Zone 3" where bison were not tolerated; (2) Allow agencies to move 300 female and calf bison testing negative for brucellosis from the Stephens Creek capture facility to Corwin Springs until they can be moved back to YNP in the spring; and, (3) Allow agencies to "evaluate the effects of these adjustments and modify as necessary." Petr. Jt. Pet. for Decl. and Inj. Relief, 18.

The Petitioners also allege that the changes to the AMA are arbitrary and capricious because they constitute a challengeable final State agency action in direct violation of Respondents' legal responsibilities and duties to protect cattle and properly manage bison. Petr. Jt. Pet. for Decl. and Inj. Relief, 5-6.

Petitioners request the Court to issue an order enjoining Respondents "presently, and into the future, from violating their statutory duties and from implementing the AMA for the Northern Boundary Area of YNP until an adequate MEPA review is completed." Petr. Jt. Pet. for Decl. and Inj. Relief, 7. They seek a declaration that Respondents must, pursuant to MEPA, sufficiently evaluate the impacts of the AMA for the Northern Boundary Area of YNP on the human environment prior to implementation. Further, Petitioners assert that the proper analysis must include an environmental impact statement (EIS) or, at a minimum, a supplemental environmental impact statement (SEIS) for the proposed modifications. Finally, Petitioners seek an order directing Respondents to abate the public nuisance created by their actions.

FINDINGS OF FACT

1) Bison are indigenous to the Greater Yellowstone Area and were observed there both before and after the creation of Yellowstone National Park in 1872. Admin. Rec. 88.

2) In the 1870s and 1880s, the North American bison were nearly driven to extinction by market and "sport" hunting. *Id.* By 1901, only 25 bison remained in the native Yellowstone herd. Admin. Rec. 317. Supplemented by 21 bison from other remnant herds and protected from poaching, the population of bison in the Yellowstone area have increased substantially. *Id.* Testimony from Mr. John Mundringer indicated a current herd population of approximately 4500 bison.

3) More than 50% of the bison population in the Yellowstone area is infected with *Brucella abortus*, an organism that causes the disease brucellosis. Admin. Rec. 88-89; *See also* Hrg. Transc. 808-809 (Zaluski). The principal North American wildlife hosts for this organism include bison and elk, but brucellosis may also occur in deer, pronghorn, antelope, mountain sheep, and moose. Admin. Rec. 89, 94, 13184; *See also* Hrg. Transc. 807-808 (Zaluski).

4) The record is replete with evidence and testimony at trial which unequivocally affirms that YNP bison migrate out of the Park and into Gardiner Basin (and the West Yellowstone Area) of Montana.

5) Because YNP bison are exposed or infected with brucellosis, they pose a threat to animal and human health (called undulant fever in humans) in Montana, including wildlife. Admin. Rec. 14, 391-392/ 2000 FEIS xiii, 360-361; Admin. Rec. 2417, 2419, 2423/ State ROD 1, 3, State ROD Attachment 1 at 1; Hrg. Transcr. 789:18-790:11, and 839:23-25 (Zaluski); Hrg. Transcr. 376:6-15, 376:19-23 (Hillman).

6) In 2000, Yellowstone National Park, Gallatin National Forest, APHIS of the US Department of Agriculture, several Indian Tribes, and the State of Montana entered a cooperative federal-state agreement for the management of YNP bison, known as the Interagency Bison Management Plan (IBMP). This was in settlement of a 1995 lawsuit related to the management of bison naturally migrating from YNP. *See* Admin. Rec. 2415-2444 (Montana's Record of Decision for the IBMP); Admin. Rec. 2445-2519 (federal Record of Decision); *See also* 2447-2449 (discussion of lawsuit and history of IBMP).

7) The 2000 FEIS provides:

> Yellowstone National Park is not a self-contained ecosystem for bison, and periodic migrations into Montana are natural events. Some bison have brucellosis and may transmit it to cattle outside

> the park boundaries in Montana. Left unchecked, the migration of brucellosis-infected bison from Yellowstone National Park into Montana could have not only direct effects on local livestock operators, but also on the cattle industry statewide. The cooperation of several agencies is required to fully manage the herd and the risk of transmission of brucellosis from bison to Montana domestic cattle.
>
> The purpose of the proposed interagency action is to maintain a wild, free-ranging population of bison and address the risk of brucellosis transmission to protect the economic interest and viability of the livestock industry in the state of Montana.

Admin. Rec. 2/ 2000 FEIS I. Further, the FEIS provides:

> The "economic interest and viability of the livestock industry in the state of Montana" is tied directly to the maintenance of a class-free designation by the Animal and Plant Health Inspection Service (see the section "Economic Impacts of Brucellosis in Cattle" above, the "Environmental Consequences: Impact on Socioeconomics" chapter, and the "Affected Environment: Socioeconomics" chapter).

Admin. Rec. 112/ 2000 FEIS 42.

8) To mitigate the threats associated with YNP bison, the IBMP sets forth management responsibilities for each signing agency. It also provides for: temporal and spatial separation between bison and cattle; protection of private property; management of bison populations; management of bison beyond YNP boundaries; and eventually institutes vaccination procedures for YNP bison. Admin. Rec. 2418/ State ROD 2; State Respondents' Combined Ans. ¶ 4.

9) As the IBMP states, DOL and FWP are to implement bison management in Montana under the terms of the IBMP. Admin. Rec. 2417/ State ROD 1. No one contests the migration of bison out of YNP, particularly during harsh winters. Bison migrating from YNP into the Gardiner Basin are wildlife and are managed as wildlife by the Department of Fish, Wildlife, and Parks (FWP). Hrg. Transc. 486 (Flowers). Bison are, at one and the same time, wildlife and a heavily managed species – such management is not totally unusual as state wildlife agents employ somewhat similar measures to manage other wildlife species, particularly grizzly bears, and wolves and, to a lesser extent, bighorn sheep and mountain lions. Hrg. Transc. 525-27, 557-58 (Flowers).

10) As noted in the FEIS and important as an independent finding of fact, the IBMP's two express, fundamental purposes are to maintain a wild, free-roaming bison population and to address the risk of brucellosis transmission to protect Montana's livestock industry. Admin. Rec. 2423; Hrg. Transc. 442-43 (Flowers); *See also* Admin. Rec. 2466.

11) In addition to the IBMP, the State of Montana has various statutes and rules regulating the management of bison. Mont. Code Ann. Title 81, Parts 1 and 2; Title 87 Parts 1, 2 and 5; and, Admin. Rec. Mont. Ch. 32.1 and Ch. 32.3.

12) According to the IBMP, the target population for bison within YNP is 3,000. Admin Rec. 24/ 2000 FEIS xxiii.

13) The basis for this population limit is manageability of the herd, as YNP lacks enough forage resources to contain a herd above 3,000 during a harsh winter without significant out-migration from YNP. Admin. Rec. 24, 152, 406/ 2000 FEIS xxiii, 84, 377.

14) The studies show that during a harsh winter, if the population is above 3,000, the bison will leave YNP to find forage. Admin. Rec. 24, 152/ 2000 FEIS xxiii, 84.

15) Under the preferred alternative in the 2000 FEIS, and according to the State ROD, a total of 25 bison would be allowed outside of YNP onto the Royal Teton Ranch once a lease agreement was reached with the Ranch. Admin. Rec. 2432/ State ROD 10; Admin. Rec. 23, 243/ 2000 FEIS xxii, 183.

16) If that number was sustainable (i.e. the bison could be kept in that location) then the number would increase in increments. Admin. Rec. 2432/ State ROD 10.

17) Furthermore, the IBMP Partners would attempt to find a way to remotely vaccinate the bison. Admin. Rec. 2432/ State ROD 10; Admin. Rec. 250/ 2000 FEIS 190.

18) The necessary lease agreement was eventually reached with the Royal Teton Ranch. Hrg. Transcr. 271:15-19 (Mundinger).

19) The IBMP anticipated and included a provision for future management changes through "an adaptive management program." *See* Admin. Rec. 2452; *See also* Admin. Rec. 2424, 2438-2439, and 2476. The IBMP provides: "The agencies may

agree to modify elements of this plan based on research and/or adaptive management findings." Admin. Rec. 2438-39 ¶ 29; *See also* Admin. Rec. 2476 ¶ 29. The best definition of Adaptive Management was given by Mr. John Mundinger, former longtime FWP employee and the "manager" of the MEPA process on the IBMP. "Adaptive management is a very deliberative approach to applied research – learning by doing. We do not necessarily have enough information to manage a natural resource so we attempt to adaptively manage around those situations we are not sure of or are uncertain about."

When applied to bison management in the Gardiner Basin Area, the focus of this litigation, the essential goal of the AMA is to gradually increase tolerance of Bison, Mr. Mundringer testified.

20) Acting pursuant to these provisions, the current eight federal, state, and tribal signatory agencies to the IBMP entered into an agreement in principle on a proposal for Adaptive Management Adjustments in 2011, and set them forth in a memorandum signed by representatives of the individual partners between March 31 and April 21, 2011. *See* Admin. Rec. 2618-2620. Among other things, the AMA proposed to address bison migration outside of YNP by expanding the area in the Gardiner Basin in Montana in which bison would be managed and, to some extent, tolerated during certain times of the year throughout the entire Basin. The area of expansion follows hydrological divides separating the Gardiner Basin in southern Park County from the remainder of the county. Admin. Rec. 3120; *See also* Admin. Rec. 3131-3133 (description of the project setting in the EA), 2620 (topographical map depicting boundary of AMA), Hrg. Transc. 890-891 (McCluskey). The enlarged conservation area encompasses the north end of the Gardiner Basin, on both sides of the Yellowstone River, but does not extend any further north than Yankee Jim Canyon, the original northern extent of the conservation area disclosed in the 2009 Federal Environmental Impact Statement (FEIS). The time period during which bison would be tolerated in the Basin remains unchanged under the AMA, and a May 1st haze back date remains in place. Hrg. Transc. 452 (Flowers), 680 (Mackay).

21) One of the factual issues before the Court is whether the AMA were implemented during the winter of 2010/2011. FWP Region 3 Supervisor Pat Flowers (whose region includes Park County, including the Gardiner Basin), DOL Executive

Officer Christian MacKay, and Montana State Veterinarian Martin Zaluski testified that the AMA were not implemented during that winter and to this day have not yet been implemented. *See* Hrg. Transc. 431-35 (Flowers), 678-79, 706 (Mackay); *See also* Hrg. Transc. 806-07, 820-21 (Zaluski). State Veterinarian Martin Zaluski testified that he did not sign the AMA approval document until late October, 2012. He further testified that his signature was holding up adoption of the AMA because such signature was "absolutely" necessary since he is an IBMP partner.

22) However, the IBMP Partners' Annual Report for August 1, 2010, through October 31, 2011, states that the IBMP partners negotiated an area of increased tolerance for bison in mid-March 2011, and, as noted above, completed a proposed adaptive management endorsement by all partners in late April of that year. Two lawsuits were filed against the Respondents, which suits, essentially objected to the increased area of tolerance. The parties involved in the litigation were Park County, Montana Farm Bureau Federation, and the Park County Stockgrowers Association. Mr. Flowers, Hrg. Transcr. 496:24-25, 497:1, 20-25, 498:1-5. Prior to March 31, 2011, the IBMP Partners, along with the Montana Department of Transportation, put in a large "bison guard" on the highway near Yankee Jim Canyon. Hrg. Transcr. 282:5-8 (Mundinger). The purpose of the cattle guard was to stop the bison at the bottleneck naturally created by the canyon, leaving the bison to wander free in the new Zone 2, which included all of the valley, up to the canyon. One factual illustration that the AMA were not implemented is shown when state agencies responding to a massive outmigration of bison did not haze bison into the expanded bison tolerance area but, instead, hazed them back into the existing tolerance area even though they were unwilling to stay there. *See* Hrg. Transc. 437, 468-469 (Flowers), 689-690 (Mackay), 781-783 (Sheppard), 817-823 (Zaluski); *See also* Admin. Rec. 2620 (map depicting both previous and expanded tolerance areas).

23) Formal adoption (as opposed to implementation) occurred on February 28, 2012, when FWP and DOL issued a Joint Decision Notice on the AMA. This followed publication of an Environmental Assessment (EA) in mid-December 2011, conducted under the Montana Environmental Policy Act, and a thirty day public comment period. *See* Admin. Rec. 13800-13820 (Decision Notice, including agency's response to public

comments); Admin. Rec. 3117-3170 (EA). The Joint Decision was the agencies' "final agency decision."

24) The expanded bison tolerance area under the AMA encompasses approximately 70,000 acres, approximately 56,000 of which is public and 14,000 of which is private. This tolerance area is in addition to the 5,800 acres of Zone 2 and 29,000 acres of the Eagle Creek/Bear Creek area in the Gardiner Basin comprising the bison tolerance areas under the IBMP as configured prior to the adoption of AMA. *See* Admin. Rec. 3131-3132.

25) As the previous Finding illustrates, the AMA expands the area which YNP bison can occupy. It also changes significantly the terms under which bison will be managed. The AMA allows diseased, unvaccinated, and untested YNP bison to roam on both public and private lands in a broad geographic area, including lands in Park County and lands of PCSA and Farm Bureau members, reflected on the map attached to the AMA, without landowner permission. Admin. Rec. 2618-2620/ 2011 AMA.

26) Under the AMA, bison may occupy lands directly adjacent to livestock, may briefly occupy the public highways and private property. Admin. Rec. 2618-2620/ 2011 AMA.

27) The approximate population of the Gardiner Basin is 1220, 837 of whom resided in bison tolerance areas existing prior to adoption of the AMA and 363 of whom reside in the expanded tolerance area under the AMA. Admin. Rec. 3132, 3170 (2010 census block information for Gardiner Basin); *See also* Trial Exh. J; Hrg. Transc. 38 (Hamilton). However, witnesses testifying at trial stated they previously saw bison in the expanded tolerance area in years before the AMA were adopted, although not in the same numbers that they observed in the winter of 2010/2011. *See, e.g.*, Hrg. Transc. 118 (Rigler), 215 (Sperano) ("many times"), and 562-63 (Berg); *See also* Admin. Rec. 2725-2729 (2005-2006), 2730-2731 (2006-2007), 2740-2742 (2008-2009), 2774-2777 (2009-2010) (record of bison outside YNP contained in annual reports of IBMP partners and DOL Bison Operations Reports, in both tolerance zones and outside tolerance areas).

28) Since at least the inception of the IBMP in 2000, untested, unvaccinated, and untreated bison have been allowed to migrate into the Eagle Creek area year-round

and onto private residence property in the town of Gardiner. Hrg. Transc. 51 (Malone), 330, 332 (Mundinger), 448, 451 (Flowers); *See also* Admin. Rec. 2620 (map of AMA, identifying Eagle Creek area). Accordingly, since the IBMP was adopted in 2000, the portion of the Gardiner Basin with the highest concentration of residents (the town and environs of Gardiner, Montana) has been located within a bison management area where untested, unvaccinated, and untreated bison are "tolerated" year-round.

29) Also prior to adoption of the challenged AMA, and as anticipated in the 2000 IBMP, the State of Montana acquired the grazing rights to the Royal Teton Ranch (RTR) in the Gardiner Basin (*See* Admin. Rec. 2432, 2472), and in 2008, the IBMP partners approved adaptive management adjustments that authorized a certain number of tested bison to migrate onto the RTR and certain neighboring lands (designated Zone 2) during winter months. Hrg. Transc. 433 (Flowers), 769 (Sheppard); S*ee also* map Admin. Rec. 2620. Petitioners do not challenge this tolerance configuration. They ask the Court to permanently enjoin the AMA at issue, essentially seeking a return to the tolerance areas that were adopted by the IBMP partners in 2008.

30) The IBMP partners did not have the opportunity to see these 2008 adaptive management changes—contemplated in the 2000 IBMP—implemented until the winter of 2010/2011, as that was when the first significant out-migration of bison from YNP occurred following the State's acquisition of the RTR grazing rights. Hrg. Transc. 449 (Flowers).

31) The winter of 2010/2011 was particularly severe in many areas of Montana, including the Gardiner Basin, and in YNP in Wyoming, which experienced heavy snowpack at relatively low elevations. *See* Hrg. Transc. 36 (Hamilton), 435, 456-50 (Flowers), 697 (Mackay), 759 (Sheppard); *See also* Hrg. Transc. 223 (Sperano) (agreeing that on a scale of 1-10, the winter of 2010/2011 was somewhere between 8 and 10 in terms of severity). Consequently, a large number of bison migrated out of the northern Park boundary. Hrg. Transc. 457-59 (Flowers). According to Pat Flowers, an out-migration of this size has been rare since 1999, when he assumed his current position as Regional Administrator. *Id.* It has been estimated that approximately 1,400 bison migrated into the Gardiner Basin in the winter of 2010/2011, Admin. Rec. 3086; however, these total counts include approximately 700 bison held at the YNP Stephens

Creek capture facility, which by and large was filled to capacity from January through April of 2011, as well as approximately 90 bison testing negative for brucellosis in the Stephens Creek capture facility that were hauled to the Corwin Springs capture facility. Hrg. Transc. 698 (Mackay). The number of bison that were roaming freely in the Basin (including *within* the then-existing tolerance areas) on any given day during the winter of 2010-11 was anywhere from approximately 5 to 360 and varied from day to day. Hrg. Transc. 698-699, 740 (Mackay).

32) In 2011, property owners who owned property where bison were not previously authorized by law, had to call Respondents to haze bison from their property, and in some circumstances, were even forced to haze the bison from their property themselves. Admin. Rec. 12936, 13000, 13176-13194/ Comments to the 2011 Draft EA; State Respondents' Combined Ans. ¶ 10.

33) Mr. Hatfield testified that bison on private property can become aggressive towards domestic pets by making fake charges towards kenneled dogs. Hrg. Transc. 70:1-15 (Hatfield).

34) Mr. Hatfield was unable to continue to allow his dogs loose within his yard when bison were within a half mile of his property because it was unsafe. Hrg. Transc. 72:9-21 (Hatfield).

35) Bison also caused physical damage to Mr. Hatfield's private property. Hrg. Transc. 73:16-25, 74:1-2 (Hatfield).

36) Joe Sperano, a resident of Gardiner Basin, testified that bison during the 2010/2011 winter destroyed some of his wheel lines, caused damage to his buildings and satellite dish, and his trailer. Hrg. Transc. 215:20-25, 216:1-2 (Sperano).

37) The bison also caused damage to his house siding by rubbing against it. Hrg. Transc. 217:2-3 (Sperano).

38) The bison would be aggressive with Mr. Sperano's horses in order to eat the horses' hay. Hrg. Transc. 217:11-18 (Sperano). In addition, the bison repeatedly destroyed Mr. Sperano's electric fences. Hrg. Transc. 217:22-25 (Sperano).

39) Peter Schmidt also lives in the Gardiner Basin and has done so for thirty years. Hrg. Transc. 233:12, 3 (Schmidt).

40) Mr. Schmidt is a dispatcher for YNP and is also a member of the PCSG. Hrg. Transc. 234:9, 16 (Schmidt).

41) He also suffered property damage due to the bison in the winter of 2010/2011 including damage to his house, wood pile and other parts of the property. Hrg. Transc. 235:9-13 (Schmidt).

42) Mr. Schmidt testified that bison have caused a number of motor vehicle accidents in YNP. He is concerned that if bison are let out of YNP there will be bison caused motor vehicle accidents in the Gardiner Basin particularly because of the high speeds. Hrg. Transc. 239-11-25 (Schmidt).

43) Mr. Schmidt testified he believed, based on his experience as a dispatcher that this would put further strain on Park County resources to remove bison from the road and deal with bison caused injuries. Hrg. Transc. 240:1-16 (Schmidt).

44) Multiple witnesses testified that attempts by properties owners to remove bison from their private property were unsuccessful because the bison either reentered the property or would not leave. Hrg. Transc. 68:16-25, 69:1-2, 73:6-11 (Hatfield); Hrg. Transc. 216:11-12, 218:18-22 (Sperano); Hrg. Transc. 114:9-17 (Rigler).

45) In 2011, large numbers of bison congregated at school bus stops on occasion, prohibiting the children from getting on or off the school bus. 25:1-12; 26:7-12; Admin. Rec. 13176-13194/Comments to the 2011 Draft EA.

46) Pat Flowers testified that Respondents have now designed and are ready to utilize a corral-like facility for children to wait in at the bus stop to avoid such problems. Hrg. Transc. 550:6-13 (Flowers).

47) Undersheriff Hamilton responded to four separate incidents at school bus stops of which only once were Respondents' personnel present. Hrg. Transc. 27:9-22 (Hamilton).

48) Testimony revealed that drivers in the area have become distracted by viewing bison along Highway 89 South such that they have driven passed a stopped school bus with its red lights flashing. Hrg. Transc. 77:10-19 (Hatfield).

49) Multiple people testified that they do not want bison on their property because they feel they are a danger. Hrg. Transc. 220:2 (Sperano); Hrg. Transc. 236:1-5 (Schmidt).

50) Undersheriff Hamilton has concerns for the safety of Park County deputies who respond to requests to haze bison in order to assist the public health and safety. Hrg. Transc. 28:19-25; 29:1-5 (Hamilton).

51) The response of Park County Sheriff deputies to bison calls takes deputies away from other duties, ability to patrol and where they need to be. Hrg. Transc. 32: 13-17 (Hamilton).

52) Frank Rigler owns land within the bison tolerance zone, some of which he leases to the State for bison quarantine and some land on which he has rental units. Hrg. Transc. 109-140 (Rigler).

53) Mr. Rigler testified that there were many mornings (at least a dozen times) that Undersheriff Hamilton helped him chase bison off of his property and that there was nobody there to help from either Fish, Wildlife and Parks or the Montana Department of Livestock. Hrg. Transc. 114:9-17 (Rigler).

54) Mr. Rigler testified that some of his tenants had trouble getting from their houses to their cars because of the bison. Hrg. Transc. 115:21-23 (Rigler).

55) Mr. Rigler testified that the bison tore down his fence and damaged his trees. Hrg. Transc. 117:14-23 (Rigler).

56) Since the winter of 2010/2011, the State has undertaken fencing projects to mitigate impacts from bison in the Gardiner Basin where they are not wanted. Only two livestock operations operate year-round in the Gardiner Basin when bison might be present under the AMA. Hrg. Transc. 641, 645, 681-684, 747-748 (Mackay); 835-836, 838-839 (Zaluski). The DOL has worked directly with the owners of those two operations to install fencing to prevent commingling of bison and cattle. Hrg. Transc. 691-696, 710 (Mackay); 823-835, 832-833 (Zaluski); *See also* Trial Exh. K (photograph of fencing used at one of the two cattle operations). At one operation, at the request of the operator, the fencing is three-sided (the river side is open), consistent with the landowner's conservation easement that requires a wildlife corridor to be available. Fencing was installed on all but one side of the second cattle operation, but that open side is not expected to present a problem, as bison do not typically use that area and did not typically use that area even in 2011. DOL worked with both landowners in designing

the fences, and those landowners are pleased with the fence. Hrg. Transc. 823-825 (Zaluski); *See also* 691-697, 705, 710 (Mackay).

57) In addition to the DOL fencing of the two cattle operations, FWP began developing a fencing plan for private residences in the Gardiner Basin in an effort to reduce unwanted interaction with bison. Hrg. Transc. 469 (Flowers); 762 (Sheppard); *See also* Trial Exh. M (email from Sam Sheppard to landowners regarding strategic fencing, including map indicating residents' preferences for fencing). Where landowners have expressed a desire for bison occupation of their land, no fencing has been placed. Hrg. Transc. 778-779 (Sheppard).

58) The AMA management prescriptions closely track a recommendation forwarded to the IBMP partners by a Citizens Working Group established in 2010 to provide public perspectives on bison management. *See* Hrg. Transc. 196-98, 203-05 (Grosfield); Trial Exh. C (Citizens Working Group report). The Citizens Working Group involved diverse interests, including three representatives from the cattle industry (rancher Lawrence Grosfield, another rancher, and a representative from the Montana Stockgrowers Association). Hrg. Transc. 196-98 (Grosfield). The group's consensus recommendations to the IBMP partners included a recommendation to establish the Gardiner Basin as "year-round habitat" for bison after discussions with area landowners and installation of strategic fencing. Hrg. Transc. 203-05 (Grosfield); Trial Exh. C.

59) The amended AMA permits the expansion of Zone 2 of the IBMP to allow bison to roam on public and private land where bison where not previously allowed to roam pursuant to the IBMP. Admin. Rec. 2618-2620/2011 AMA.

60) Dr. Zaluski has served as the Montana State Veterinarian since 2007. He has a degree in veterinary medicine and has received post-graduate USDA training in brucellosis in livestock, particularly regarding the epidemiology of the disease. He is responsible for all of the State of Montana's livestock health programs. Dr. Zaluski chairs a subcommittee on brucellosis for the United States Animal Health Association and was the President of the Western States Animal Health Association. Hrg. Transc. 785-789 (Zaluski); *See also* Trial Exh. W.

61) Dr. Zaluski has had extensive experience with brucellosis in livestock, including regularly participating in brucellosis testing of livestock and assessing the risk

factors of brucellosis to the Montana livestock industry. The subject of brucellosis in livestock and wild animals has consumed a major portion of his work as Montana's State Veterinarian. Hrg. Transc. 789-793 (Zaluski).

62) For the last five years, Dr. Zaluski has been a voting partner and member of the IBMP and has exercised the duties designated in the IBMP as those of the Montana State Veterinarian. His role as an IBMP partner is separate and apart from the role of fellow IBMP partner, DOL Executive Officer Christian Mackay. Dr. Zaluski's duties focus on the risk assessment of brucellosis transmission from wild bison and elk to the State's domestic cattle herds and on the management of wild bison as they migrate into Montana from YNP. By casting a negative vote, he has effectively vetoed proposed programs promoted by other IBMP members because he believed the proposals increased the risk of brucellosis to the cattle industry. Hrg. Transc. 806-807, 811-814 (Zaluski); *See also* Hrg. Transc. 673-675 (Mackay).

63) Dr. Brian McCluskey is employed by USDA-APHIS as the Chief Epidemiologist for the western half of the United States. His duties include the study of how livestock diseases are transmitted and how to manage such diseases. He is a Doctor of Veterinary Medicine, has a Master's Degree in Infectious Diseases, and a Doctorate in Epidemiology. As part of his Master's studies, he wrote a paper on the disease brucellosis in wildlife and domestic cattle. In his present position, his office provides technical assistance to states regarding the source of an outbreak of a livestock disease, including brucellosis, and in preventing or managing the spread of the disease. Hrg. Transc. 879-882 (McCluskey); *See also* Trial Exh. X.

64) Dr. McCluskey's previous position with APHIS was as the Regional Director of Veterinary Services for the Western States. Prior to assuming that position, he served as a USDA epidemiology officer and was responsible for the USDA oversight of the brucellosis eradication program in Colorado. When he became Regional Director, he became the chief veterinarian for the western states area of the United States. He had direct responsibility for all APHIS veterinary services and APHIS services directed to and on behalf of all the western states. In such capacity, from November of 2010 to about February of 2012, he served as the APHIS representative on the IBMP partnership group. During that time he gave his approval, on behalf of APHIS, to the AMA that were

adopted in principle in the spring of 2011. At the time the AMA received final approval in 2012, he had moved to his present position. Therefore a different APHIS representative, as a partner, signed off in final approval of the AMA on behalf of APHIS.

65) Both Dr. Zaluski and Dr. McCluskey have read and are familiar with the literature on the IBMP website that concerns brucellosis, and both keep current with the publication of other literature on the disease. In particular, as IBMP partners and veterinarians, both depend on and use the studies written by Keith Aune. Hrg. Transc. 791, 829-830 (Zaluski); 884 (McCluskey).

66) In his capacity as State Veterinarian and IBMP partner – and prior to any initial adoption of the AMA in principal or otherwise – Dr. Zaluski performed a risk assessment as to whether the proposed expansion of the bison tolerance zone in the Gardiner Basin would increase the present risk of transmission of brucellosis from YNP bison to domestic cattle in the Basin and to cattle operations in the State of Montana. Hrg. Transc. 830-843 (Zaluski). Similarly, in 2011, while serving as a voting IBMP partner representative for APHIS, Dr. McCluskey completed a risk assessment of the possibility of the transmission of brucellosis from wild YNP bison to domestic cattle prior to his initial approval of the AMA. Hrg. Transc. 885-886 (McCluskey).

67) Dr. Zaluski and Dr. McCluskey, based on their education, knowledge, and experience and based on their risk assessments, both concluded that the risk of brucellosis transmission to cattle at a minimum would be unchanged, but probably would be somewhat decreased under the AMA proposals. Brucellosis cannot be absolutely prevented, as zero risk is unattainable. However, they opined that all risks in the proposed expanded tolerance area can be reasonably and effectively managed using new bison and cattle management tools available to the DOL and the livestock operators. Hrg. Transc. 830-843 (Zaluski); Hrg. Transc. 900-901 (McCluskey).

68) Keith Aune is a wildlife biologist formerly employed as chief of research for FWP and now serving as a senior conservation scientist for the Wildlife Conservation Society. *See* Trial Ex. I. He is an expert on bison and elk conservation and management, as well as maintenance and transmission of brucellosis by and between these species. *See* Hrg. Transc. 621. This Court is well aware of Mr. Aune's stellar reputation and finds Mr. Aune to be exceptionally credible. Mr. Aune testified about

published, peer-reviewed scientific research he performed concerning the persistence of brucellosis bacteria in the natural environment of the Gardiner Basin. *See* Hrg. Transc. 623-38. This research revealed that brucellosis-infected material decays rapidly in the late spring period due to mechanisms that include freezing, thawing, ultraviolet radiation, and consumption by scavengers, such that if bison were to introduce brucellosis-infected material into the environment during the month of May, there is only a 0.05 percent chance that such material would persist after 30 days. *See* Hrg. Transc. 630. Mr. Aune testified that, in his opinion, so long as bison move back into Yellowstone National Park by early May as provided by the AMA, there would be a negligible risk of brucellosis transmission from bison to cattle when cattle are brought into the Gardiner Basin in June for summer grazing. Hrg. Transc. 632-38. Petitioners presented no contrary expert testimony.

69) In December 2010, APHIS made regulatory changes that protect both the State of Montana from a downgrade in its brucellosis class-free status and any particular rancher from having to depopulate an entire herd due to confirmation of brucellosis in one animal. 9 C.F.R. Part 78; *See also* Hrg. Transc. 797-805, 815-816 (Zaluski). Dr. McCluskey participated in the APHIS decision-making process for the rule changes. He favored the changes as they focus the efforts of APHIS on those geographical areas where the disease exists and targets APHIS resources to where the disease is found, while at the same time not punishing an entire State for an outbreak in a single area of the State. Hrg. Transc. 888-890 (McCluskey).

70) If several herds came down with brucellosis, even though APHIS changed its rules, other states could decide to not accept cattle from Montana. Hrg. Transc. 863:4-7 (Zaluski).

71) If a neighbor's cattle herd tests positive for brucellosis, then those landowners neighboring that herd are classified as an "adjacent herd," and they have to test their herd for brucellosis. Hrg. Transc. 871: 8-15 (Zaluski).

72) The APHIS rule changes, placing the onus of testing on the individual herd and not on the entire industry, is of tremendous financial benefit to the livestock industry in Montana, as it removes the specter of financial disaster for the industry should a Montana cattle herd contract brucellosis. Every year the State avoids statewide

testing requirements, the Montana livestock industry saves from $5 million to $14.5 million. Hrg. Transc. 791-805, 814-815, 826-827 (Zaluski).

73) During Dr. Zaluski's tenure as State Veterinarian there have been five outbreaks of brucellosis in Montana. Three occurred in domestic cattle herds, and two in private bison herds. In all cases, the outbreaks were epidemiologically linked to elk. Hrg. Transc. 797-805, 815-816 (Zaluski). During Dr. Zaluski's tenure as State Veterinarian, there has not been a single case of brucellosis in a domestic cattle herd that was linked to YNP bison. *Id.*

74) Dr. Bob Hillman, PCSA's expert witness, served as State Veterinarian in Idaho when he found brucellosis in elk. As in Montana, Idaho had a brucellosis-infected cattle herd for which the proven source of infection was elk. Hrg. Transc. 373 (Hillman).

75) Dr. Hillman admits that he is not knowledgeable as to the brucellosis rate of infection of elk in the Greater Yellowstone Basin area, but that elk do abort from brucellosis and do so at an even later time of the year than do bison. Hrg. Transc. 404-405 (Hillman). Implicit in this testimony is that elk abortions could occur long after YNP bison are hazed back into YNP by May 1st and, therefore, infected brucellosis material from elk could remain in the environment even after cattle—under seasonal grazing permits beginning on June 1st—are allowed back into the Gardiner Basin area. Hrg. Transc. 747-748 (Mackay).

76) Dr. Hillman is not an IBMP member nor is he an employee of APHIS. Hrg. Transc. 414 (Hillman). While he professes to have a strong interest in the issue of brucellosis in the Yellowstone area, he has never, in the 12 years that the IBMP partners have been meeting (2000-2012), attended an IBMP public meeting. Furthermore, he has never submitted any comments to the partners or voiced any concerns to them regarding the subject of brucellosis. During this time period, he was the State Veterinarian of both Idaho and Texas. Hrg. Transc. 415 (Hillman).

77) Dr. Hillman admits the he knows of no cases in Montana where domestic cattle herds became brucellosis-infected from a transmission of the disease from YNP bison. Hrg. Transc. 405, 413 (Hillman).

78) In order to comply with APHIS requirements, and to manage the risk of transmission of brucellosis where the risk of transmission from wildlife to livestock is

the greatest, in 2010 DOL adopted administrative rules identifying a Designated Surveillance Area (DSA). Hrg. Transc. 794-805 (Zaluski). The DSA program, which covers portions of Madison, Gallatin, Beaverhead, and Park Counties (the area was delimited by DOL's known range of brucellosis positive elk) and which Dr. Zaluski heads, has instituted a testing policy to prevent the transmission of brucellosis from any domestic herd or wild animal in the DSA to a Montana cattle herd outside the DSA. While the testing mandates are rigorous, the greatest portion of the costs of the testing is borne by the DOL and not by the individual herd owner. Montana's DSA program and surveillance area is fully compliant with any and all APHIS requirements regarding herd testing and the assessment of the risks of brucellosis transmission from wild animals in Montana. Hrg. Transc. 794-805 (Zaluski). Most importantly, establishment of the DSA program was a result of brucellosis transmissions from elk to livestock and preceded and exists independently of the AMA challenged in this action. *Id.* at 923 (Zaluski).

79) According to Mr. Aune, whose work frequently has focused on biological and wildlife management issues concerning bison and elk in the Greater Yellowstone area, the majority of the elk that migrate into the Gardiner Basin during the winter share winter and summer ranges with bison in YNP. *See* Hrg. Transc. 638-39, 642-43. These elk have the opportunity to commingle with bison inside YNP in addition to any opportunities they may have to commingle with bison in the Gardiner Basin outside YNP. *See* Hrg. Transc. 642-43. Furthermore, scientific studies have found that brucellosis exposure rates among studied elk that commingled with brucellosis-infected bison were similar to brucellosis exposure rates observed among elk elsewhere in the Greater Yellowstone area that did not contact bison. *See* Hrg. Transc. 639-42. For elk, the most important factors in brucellosis prevalence are the length of time elk spend concentrated during the spring and the density of elk. *See* Hrg. Transc. 644-45. As a result, Mr. Aune testified that, in his opinion, the AMA would have no influence on the prevalence of brucellosis among elk in the Gardiner Basin. *See* Hrg. Transc. 645. Petitioners offered no contrary expert testimony.

80) Dr. Zaluski and Dr. McCluskey agreed with Dr. Hillman that bison, if exposed to a large enough dose of brucellosis bacteria, may become infected and may

transmit the disease to other bison, elk, or domestic cattle. They also agreed that the main means of transmission of brucellosis from bison to another species comes from female bison, generally from infected abortion tissue. Both disagreed with Dr. Hillman's assessment that bull bison pose a real risk of brucellosis transmission. The transmission possibility would only occur through bull semen, and there is such a low level of bacterial concentration in semen that the possibility of transmission from a bison bull coming into sexual contact with a female domestic cow is extremely low—almost to the point of zero. Hrg. Transc. 899 (McCluskey). As opposed to Dr. Hillman's unsupported opinion on that issue, Dr. Zaluski cited a recent USDA study that indicates bull bison present, at best, a minimal risk. Hrg. Transc. 807-809 (Zaluski).

81) Dr. Zaluski and Dr. McCluskey also disagreed with Dr. Hillman's testimony that bison will have unfettered access to cattle under the AMA. The opposite is true. Under the AMA, the expansion of the bison tolerance zone and the use of fencing will actually reduce the opportunity for bison and cattle contact. The fencing – found to be satisfactory by the two year-round livestock operators – will reduce the opportunity for commingling to the point where the odds are low that commingling will occur. Hrg. Transc. 823, 833-834 (Zaluski); 888, 895-96 (McCluskey). In forming their opinions in this matter, in addition to the fencing, both experts found that important factors were the low number of livestock operations in the Gardiner Basin's proposed expanded area and the low number of cattle on those operations. With only two operations and only a few cattle, the chances of contact between bison and cattle will be low. Hrg. Transc. 831-832 (Zaluski); 879, 886-888 (McCluskey); 681-684, 747-748 (Mackay).

82) The IBMP requirement of spatial separation will continue due to the fencing in place and the continued surveillance efforts of the DOL. Testimony revealed that DOL will still work to prevent cattle and potentially infected bison from occupying the same space. Temporal separation will still occur in terms of the haze-back date. Hrg. Transc. 832-833 (Zaluski); *See also* 895-896 (McCluskey); 679-680, 691-697, 707-710, 753-754 (McKay).

83) Dr. Zaluski also opined that with the much larger tolerance zone, it will be easier for DOL to haze bison away from the two livestock operations and out into new bison habitat, which will make hazing less time-consuming than previously. Therefore,

the DOL riders will have more time available to respond to any citizen or law enforcement requests for assistance. Hrg. Transc. 688-691, 700-703 (Mackay); 832-834 (Zaluski); *See also* Hrg. Transc. 890 (McCluskey) (geographic divide separating the tolerance area from non-tolerance area allows for effective control).

84) Dr. Zaluski also concluded that the chances of fence line contact under the AMA, and thus transmission of brucellosis, are extremely small. For such contact to occur, a series of events need to happen, all of which are remote. First, there are only two operations, both of which are fenced with bison deterrent fencing, and both of which have few cattle. Second, there would have to be an infected female bison present at the fence line leaving infected material at the fence line at the same time a cow were present. Third, the cow would have to somehow ingest or contact the infected material over or through the fence. Finally, the fact that all of the cattle in both operations have been vaccinated helps prevent infection. Hrg. Transc. 835-836, 838-839 (Zaluski).

85) Similarly, Dr. McCluskey disagreed with Dr. Hillman's opinion that fence line transmission risks were increased under the AMA. As an epidemiologist, Dr. McCluskey is familiar with both cattle-to-cattle transmissions and wildlife-to-domestic-livestock transmissions, and how the species interact. With cattle, there is a greater density of contact, with multiple cattle congregating at a fence line across from other groups of multiple cattle also congregating at the fence line, thus creating an opportunity for contact. Bison do not congregate in the same manner, nor do cattle congregate in the same immediate area as bison. For virtually the same reasons as were cited by Dr. Zaluski and because of the different behaviors of the species, Dr. McCluskey also concluded that the possibility of fence line transmission is quite remote. Hrg. Transc. 891-894, 897 (McCluskey).

86) Both Dr. McCluskey and Dr. Zaluski provided similar testimony discounting Dr. Hillman's theory as to the possibility of scavengers transporting infected material to the few cattle in the fenced operations. The likelihood of infected material being left near one of the operations is small, the likelihood of scavengers taking it and somehow transporting it to the susceptible cattle is smaller still, and finally the likelihood of the cattle ingesting it is even smaller. Again, the cattle in both operations have been vaccinated, which further reduces the chances of infection. Both Dr. Zaluski and Dr.