

2014 ANNUAL REPORT OF THE INTERAGENCY BISON MANAGEMENT PLAN

1 November 2013 - 31 October 2014



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ANNUAL REPORT OVERVIEW

This report summarizes annual progress under the Adaptive Management Plan of the Interagency Bison Management Plan (IBMP). The report covers November 1, 2013 to October 31, 2014, plus provides some updates on important end-of-2014 topics. The report initially describes events leading up to the creation of the IBMP, next presents highlights for the past year, then details specific activities under the current IBMP adaptive management plan. Monitoring data and/or narrative summaries are provided for each management action taken under the adaptive management plan, using the framework of that plan¹ as the outline for this report. Additionally, the report includes summaries of work started under Partner-accepted recommendations made by a Citizens' Working Group in November 2011.

Agencies involved with the IBMP include the Animal and Plant Health Inspection Service (APHIS); Confederated Salish and Kootenai Tribes (CSKT); InterTribal Buffalo Council (ITBC); Montana Fish, Wildlife, and Parks (MFWP); Montana Department of Livestock (MDOL); National Park Service (NPS); Nez Perce Tribe (NPT); and U.S. Forest Service (USFS).

Annual reports are used by the IBMP agencies to (a) document the effects and effectiveness of management actions taken to meet IBMP goals, and (b) adjust management actions for the following year, as appropriate, to better meet those goals. The annual report is *not* intended to provide a summary of all actions of the IBMP agencies for the preceding year. Instead, the website <http://ibmp.info/index.php> is the agencies' repository for meeting notes, key science reports, and other relevant activities.

¹ The Annual Report is based on the 2014 IBMP Adaptive Management Plan (see <http://ibmp.info/adaptivemgmt.php>).

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LIST OF ABBREVIATIONS

- AM—Adaptive management
- APHIS—Animal and Plant Health Inspection Service
- BFC—Buffalo Field Campaign
- BQFS—Bison Quarantine Feasibility Study
- CSKT—Confederated Salish and Kootenai Tribes
- CWG—Citizens' Working Group
- DSA—Designated Surveillance Zone
- EA—Environmental Assessment
- EIS—Environmental Impact Statement
- GAO—Government Accountability Office
- GNF—Gallatin National Forest
- IBMP—Interagency Bison Management Plan
- ITBC—InterTribal Buffalo Council
- MDOL—Montana Department of Livestock
- MDOT—Montana Department of Transportation
- MEPA—Montana Environmental Policy Act
- MFWP—Montana Fish Wildlife and Parks
- MOU—Memorandum of Understanding
- MSU—Montana State University
- NEPA—National Environmental Policy Act
- NGO—Non-governmental organizations
- NPT—Nez Perce Tribe
- NPS—National Park Service
- Park—Yellowstone National Park
- ROD—Record of Decision
- SWE—snow water equivalent
- USDA—United States Department of Agriculture
- USDI—United States Department of Interior
- USFWS—United States Fish and Wildlife Service
- YELL—Yellowstone National Park
- YNP—Yellowstone National Park

BACKGROUND

Since the mid-1980s, increasing numbers of bison have moved to low-elevation winter ranges outside the northern and western parts of Yellowstone National Park (YELL) in response to accumulating snow pack (Gates et al. 2005) and increased population size. These movements led to an enduring series of societal conflicts among various public and management entities regarding bison abundance and the potential transmission of brucellosis to domestic cattle with widespread economic repercussions (Cheville et al. 1998). Thus, the federal government and State of Montana agreed to an Interagency Bison Management Plan that established guidelines for managing the risk of brucellosis transmission from bison to cattle by implementing hazing, test-and-slaughter, hunting, and other actions near the park boundary (USDI and USDA 2000a). This plan identified the need to conserve bison and established conservation zones encompassing approximately 250,000 acres of the northern two-thirds of YELL and a small portion of the adjacent Gallatin National Forest.

Since the Record of Decision (ROD) was signed for the IBMP in 2000 (USDI and USDA 2000b), the signatories continue to collect new information regarding bison, brucellosis, and the management of disease risk and suppression. However, progress has been slow in completing the plan's three adaptive management steps. As a result, the federal government and State of Montana were criticized for (1) not clearly defining measurable objectives to express desired outcomes; and (2) not systematically applying adaptive management principles, including defining specific scientific and management questions to be answered, conducting specific activities to answer them, and incorporating findings into the IBMP (U.S. Government Accountability Office 2008). Thus, there was a need to develop specific management objectives, conduct surveillance to evaluate the effects and effectiveness of management actions, and develop methods for informing stakeholders and adjusting the IBMP based on these assessments.

To address these needs, the IBMP agencies met several times in public venues during August-December 2008 to deliberate on recommendations by the U.S. Government Accountability Office, assess the effectiveness and outcomes of IBMP management activities, and, considering prevailing conditions, develop and incorporate short- and long-term adaptive management adjustments to the IBMP for the winter of 2008-2009 and beyond (USDI et al. 2008). These adjustments were based on the adaptive management framework and principles outlined in the U.S. Department of Interior's Technical Guide on Adaptive Management (Williams et al. 2007).

2013/2014 HIGHLIGHTS

- **Meetings.**—The IBMP agencies met three times in Montana between November 1, 2013 and October 31, 2014: November 21, 2013 in Pray; April 10, 2014 in Bozeman; and July 30, 2014 in Polson MT. (This report will also touch on relevant information from a November 20, 2014 meeting in Pray MT.) Links to full reports summarizing each meeting can be found at <http://ibmp.info/meetings.php>.
- **Field trip.**—A field trip held on November 20th, 2013 was reported on in the 2013 IBMP Annual Report. Another field trip was held July 29th, 2014 on the shores of, and then on a boat out in, Flathead Lake. The purpose of the field trip was to highlight several CSKT related conservation programs: (1) habitat restoration efforts at Salish Point Park (site of the initial gathering); (2) the Tribe's efforts to stem the increase of Lake trout in Flathead Lake; and (3) exploration of Flathead Lake with interpretive information (e.g., past bison inhabitation of Wild Horse Island, patterns of land ownership within the reservation, the geologic history of the Mission Mountains, lake bathymetry, and name places).
- **Adaptive management changes.**—The IBMP agencies signed no new adaptive management (AM) changes during this reporting period. However, they did consolidate all changes made since 2011 into a single plan, called the 2014 IBMP Adaptive Management Plan. That plan, both in a clean version and a version showing the history of markup, is available at <http://www.ibmp.info/adaptivemgmt.php>. This 2014 IBMP Annual Report is built on the 2014 IBMP Adaptive Management Plan.
 - **Considering—Possible new tolerance area for bison west of YELL:** Based in part on the recommendation from a Citizens' Working Group, two IBMP Partners (MDOL, MFWP) are considering an adaptive management change to allow an area of increased tolerance for Yellowstone bison in the Hebgen Basin and to the west and northwest of YELL. A State of Montana environmental assessment (EA) was underway as of the last IBMP Annual Report. Roughly 115,000 comments were received on this West Side EA. Of those, ~3,600 were unique comments, while the rest were presented petition style. The decision on the EA is to be made by the MFWP Region 3 Director and the Montana Board of Livestock (MBOL). The former

recommended approving the increased tolerance area. MBOL tabled or did not address the EA during its meetings in January, March, and May 2014.

- **Habitat Improvement Subcommittee.**—This subcommittee, made up of staff as assigned by the IBMP Partners, met to make a first assessment of possible habitat improvement opportunities on the North Side. The group provided four conclusions from their deliberations: (1) The root question is how bison will utilize the newly available North Side habitats; most thought the time is not ripe to propose habitat enhancements specifically for bison and that treatment of weeds is likely the only short term recommendation that can be implemented without a NEPA/MEPA planning process; (2) Alternatively, management of hunting pressure to include periods of time where hunters refrain from killing bison could result in bison venturing out further from YNP and learning the landscape; (3) Additional travel access for hunters and/or encouraging/educating hunters to venture off main roads and to use non-motorized means to hunt and transport harvested bison could also help distribute both bison and hunting opportunity; and (4) Additional conservation easements and/or land exchanges that expand the available habitat base (for bison and hunting) would be supported by all parties.
- **Quarantined bison.**—
 - Disposition of quarantined bison held by Turner Enterprises: Proposals for taking brucellosis-free Yellowstone bison—as determined under APHIS sanctioned quarantine requirements—were received in early 2014. The 145 bison have been held at a Turner Enterprise Ranch west of Bozeman for roughly five years. Turner agreed to keep the bison in return for a portion of the offspring and with the understanding that the remainder of the bison would be moved by the end of 2014. The Montana Fish and Wildlife Commission met in October 2014 and upon consideration of the proposals received elected to send all 145 bison to the Fort Peck Indian Reservation. The transfer of bison occurred in November of 2014.
 - NPS/tribal interactions: In 2012, Secretary of the Interior Salazar directed his staff to begin consultations with American Indian Tribes to identify and evaluate opportunities for relocations of brucellosis-free bison to tribal lands. In addition, he directed the NPS to explore developing and operating quarantine facilities for Yellowstone bison. The NPS worked with APHIS, ITBC, the Montana State Veterinarian, and the other IBMP members to adapt the protocols developed during the quarantine feasibility study to allow live Yellowstone bison to be transferred from the NPS to Tribes associated with YNP or other interested parties. These protocols identify the requirements, roles, and responsibilities that would apply when live Yellowstone bison are transferred from the NPS to Tribes or other recipients to be transported to slaughter facilities or quarantine facilities. The protocols are under review by the IBMP members.
 - Possible operational quarantine facility: As of the end of 2014, there is no operational quarantine facility or terminal pasture. NPS is, however, in the process of scoping and environmental assessment for such a facility, as announced in a press release on July 30, 2014. That EA was in part spurred by two events that occurred in 2014: (1) a peer-reviewed paper on quarantine procedures was released that showed that by following a prescribed protocol, bison can be proven brucellosis-free; and (2) a translocation process is now in place to move bison to Native American tribes and that the 26 traditional Tribes working with the Park are seeking disease-free bison.
- **Winter Operations Plan.**—The Partners signed, and then operated under, a new 2014 Winter Operations (“Ops”) Plan (in some years they have not done so). The goal of the Winter Ops Plan was to remove 300 animals via hunting, 300 through management culling. Those goals were met. Winter operations highlights from 2013/2014 include:
 - Transparent reporting: The state of Montana, CSKT, NPT, as well as treaty hunting tribes the Confederated Tribes of the Umatilla Indian Reservation and Shoshone-Bannock Tribes, reported on the outcome of their hunting seasons. These reports came in public forum during the April 2014 IBMP meeting and included issues of season, hunter education, regulation violation and methods of handling, issues to be addressed (e.g., public perception, bison gut piles with inherent issues of smell and grizzly bear attraction).
 - Hunter harvest: As detailed in the body of this report (see Management Action 1.4a), tribal and state hunters harvested a combined 258 bison on the North Side (Gardiner Basin), and 70 bison on the West Side (Hebgen Basin)
 - Ship and slaughter: NPS reporting the removal of 318 bison during this management season.

At their July 2014 meeting, the Partners received a proposed plan from NPS that included a goal of removing 900 animals from the population during the winter of 2014/15. During the November IBMP meeting,

- Partners agreed to have the 2014/2015 Winter Operations Plan signed by December 31, 2014, as described in their Partner Protocols. The agreed upon Winter Ops Plan includes a goal of removing 800-900 bison from the Yellowstone herds. Specifics can be found in the 2015 IBMP Winter Operations Plan at <http://ibmp.info/library.php>.
- **Partner Protocols.**—The Partners continued to operate under a set of “Partner Protocols”, which they agreed to in November 2012. The Protocols govern their business interactions (e.g., document editing, document signing, teleconferences, adapting AM changes, and decision making), and thus improve the overall efficiency and transparency of their interactions. The Partner Protocols, recognized as a living document modifiable to meet Partner needs, can be found at <http://ibmp.info/library.php>.
 - **On-going Partner, staff, and public education.**—IBMP meetings included numerous educational presentations in science, culture, and/or public policy realms, including (1) Dr. Pete Coppolillo, of Working Dogs for Conservation, gave an overview of conservation detection dogs and their possible application to disease management, including for brucellosis detection and management; (2) Leroy Little Bear, Paulette Fox, Sheldon Carlson, and Helen Carlson introduced a Blackfoot Nation grassroots program called the “Iinnii Initiative”. The goal of the initiative is to restore buffalo to the landscape as a key basis for Blackfoot culture, spirituality, and social interactions; (3) Dr. Elizabeth Metcalf, of the University of Montana, described her team’s study of the human dimensions of bison, including trying to answer the question—How do YNP’s goals fit within gateway communities attitudes/values?
 - **Communication with the public.**—The IBMP Partners continued their commitment to transparency with the public, including:
 - **On-going maintenance of IBMP.info:** IBMP information portal, www.ibmp.info, continues to serve as a data repository for IBMP-related materials such as historical reports, environmental evaluations, meeting agendas, educational brochures, and summary reports on IBMP meetings, with links to agency websites that have additional data and reports about Yellowstone bison conservation and prevention of brucellosis transfer to cattle. A new page highlighting IBMP Partner, staff, and public field trips has been added. The adaptive management page on the website had a full overhaul in 2013, and now provides an informative timeline regarding the adaptive management history of the IBMP. That history was further improved in 2014 via the creation of a single, consolidated 2014 IBMP Adaptive Management Plan. For several years IBMP adaptive management efforts had been dictated by a hodgepodge of documents (i.e., the last consolidated AM Plan, plus a number of new AM adjustments that existed as stand-alone, Partner-signed documents).
 - **On-going focus on Citizens’ Working Group (CWG) recommendations:** The CWG did not actively meet in 2014, as they considered their work done after delivery of their recommendations to the Partners in November 2011. A report on Partner progress toward achieving those recommendations is provided as the final section of this annual report. Also, CWG members from non-governmental organizations (NGOs; Defenders of Wildlife, Greater Yellowstone Coalition, Natural Resource Defense Council, Sierra Club, and the Horse Butte Neighbors of Buffalo), reported that their Bison Coexistence Project, paid for by the NGOs and implemented with MFWP staff support, continues with great success. The project helps landowners purchase and install fencing to manage wild bison coming adjacent to or onto their property.
 - **On-going public input:** The Partners continued in 2014, as they have since at least 2008, to host citizen testimony sessions at each IBMP Partner meeting.
 - **Continued work on creation of a public education program about bison.**—Based on a CWG recommendation, MFWP and CSKT, with help review input from ITBC, NPT, and other Partners, created a third educational brochure, this one titled “Bison and Tribal People”. This brochure is in addition to two already created: “Bison Basics: Biology, Behavior, and a Brief History”, and “Staying Safe in Bison Country”. This series of brochures seeks to provide factual (i.e., non-political) information about bison. They are available in printed form for free to the public, or can be downloaded on line at <http://ibmp.info/bisoneducation.php>. The brochures have received positive feedback from members of the public in gateway communities, including requests to create workshops based on the content of the brochures.
 - **Remote vaccination rejected.**—A final environmental impact statement (EIS) regarding whether to vaccinate free-ranging bison inside YELL for brucellosis using a rifle-delivered bullet with a vaccine payload was prepared by the NPS and released in early 2014. The NPS regional director signed a Record of Decision to not implement a remote vaccination program. The decision continues the currently authorized syringe vaccination of bison calves and yearlings periodically captured at the northern boundary of the park.

- ***Vaccination research trials.***—Through the period of this report, APHIS researchers continued work on a trial to test GonaCon as a contraceptive vaccine in bison. While undertaken by an IBMP Partner, this work is not an action of the IBMP. The trial, being carried out at APHIS facilities in the Gardner Basin, continues as of the end of 2014.
- ***New EIS to evaluate bison management.***—At the April 2014 IBMP Partner meeting, NPS announced that NPS, MDOL, and MFWP had signed a Memorandum of Understanding to develop a new environmental impact statement for bison management. This agreement is expected to require MEPA analysis by the State and NEPA analysis by NPS. The underlying reason for the new EIS is the on-the-ground changes that have occurred in bison management since the signing of the last EIS in 2000.

MANAGEMENT ACTIONS FOR THE IBMP

[Note: The 2014 IBMP Annual Report is built on the 2014 IBMP Adaptive Management (AM) Plan. The goals, objectives, management actions, monitoring metrics, and management responses shown come directly from the AM Plan. Reporting for 2014 for each management action is shown following the pertinent monitoring metric.]

GOAL #1.—INCREASE TOLERANCE FOR BISON IN ZONE 2 OUTSIDE THE NORTH AND WEST BOUNDARIES OF YELLOWSTONE NATIONAL PARK (YNP) WITH NO UNACCEPTABLE CONSEQUENCES (E.G., TRANSMISSION OF BRUCELLOSIS FROM BISON TO CATTLE, UNACCEPTABLE IMPACTS ON PUBLIC SAFETY AND PRIVATE PROPERTY).

OBJECTIVE 1.1—Within timing and geographical considerations, allow bison within Zone 2 of the Hebgen and Gardiner basins to manage the risk of brucellosis transmission from bison to livestock and enhance wild bison conservation and hunting.

Specific guidance regarding the management of bachelor groups of bull bison is provided in Objective 1.2.

Management action 1.1.a—Consistent with the management responses outlined below, allow untested female bison (or mixed groups of males and females) to migrate onto and occupy the Horse Butte peninsula (between the Madison Arm of Hebgen Lake and Grayling Creek) and the Flats (the area east of South Fork Madison River, south of the Madison Arm, and west of Highway 191) each winter and spring in Zone 2 (subject to end-of-winter hazing described in Objective 3.2.c; see map in Appendix A).

Monitoring metrics:

- Weekly surveys of the number and distribution of bison on Horse Butte, the Flats, crossing the Narrows, and going beyond the Madison Resort (Lead = Montana Department of Livestock (MDOL)).

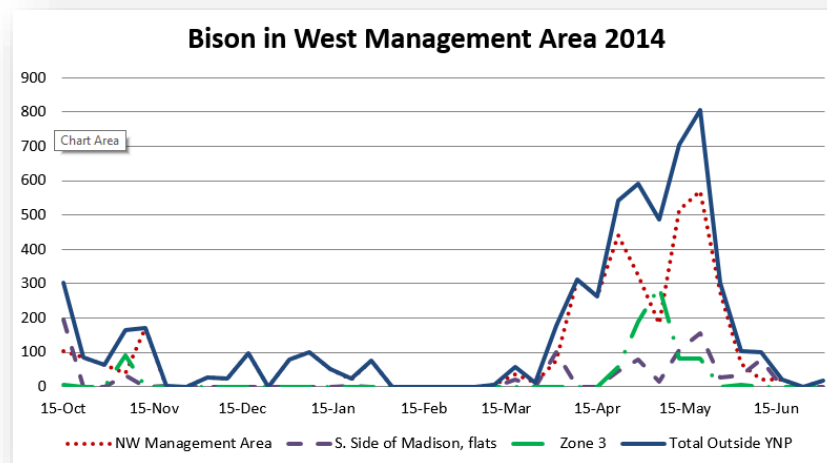


Figure 1.—Peak bison abundance by week in various portions of the Western Management Area during the 2014 management season. As the bison abundance in the northwest management area increased beyond 350 bison in 2014, significant Zone 3 breaches began. A maximum of 290 bison were observed in Zone 3 on May 12.

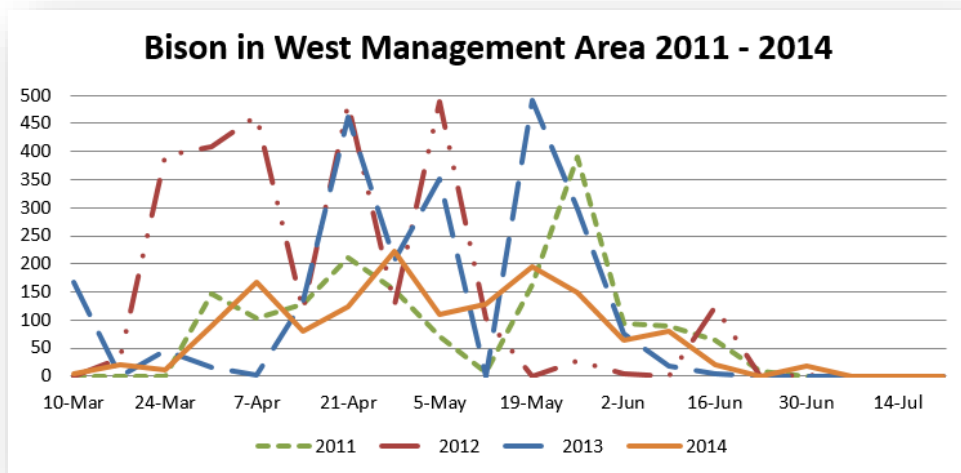


Figure 2.—Comparison of bison abundance in the Western Management Area during the 2011 – 2014 management seasons.

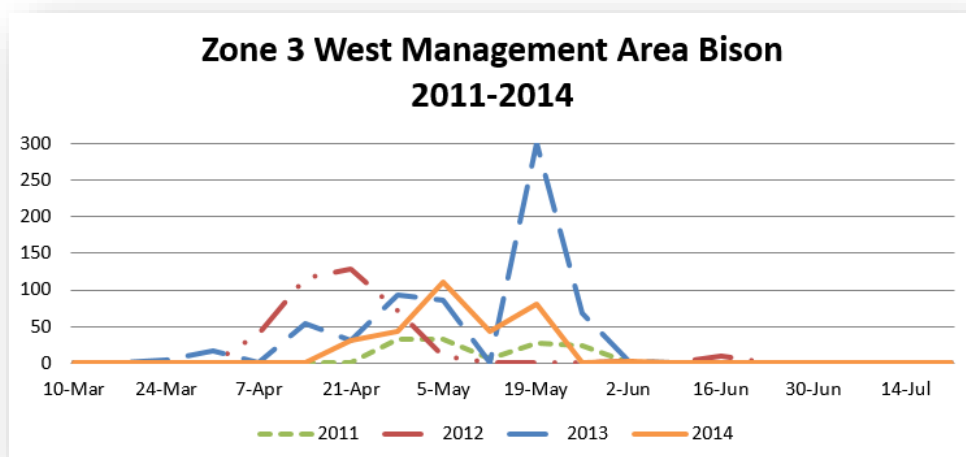


Figure 3.—Comparison of bison abundance in Zone 3 of the Western Management Area during the 2011 – 2014 management seasons. Movement of bison into Zone 3 was higher than average in 2014, but not as large as 2013.

- Annually document the number of bison in the west boundary management area and the number and type of management activities needed to manage bison distribution (Leads = MDOL and NPS).

MDOL report

Twenty operations were conducted during the 2014 operational season, including seven after May 15. The last operation was conducted on July 2. Please see Appendix B, Table B1 for a complete list of bison numbers and hazing operations in the Western Management Area as provided by MDOL.

NPS report

Table 1.—Number of bison observed during aerial counts conducted over the western management area during October 2013 to August 2014.

Location	Number of Bison Observed				
	Oct 22	Jan 19	Mar 22	May 14	Jun 20
IBMP Zone 1	91	32	88	293	28
IBMP Zone 2	19	26	55	80	95
West of Madison Junction to 7-mile Bridge	145	4	33	69	
Total	255	62	176	442	123

- Create a density curve of the threshold number of bison on Horse Butte that results in movements of bison to the South Fork Madison area. Use this information to modify or verify the limits set for bison counts at Madison Arm Resort that trigger management responses (Lead = MDOL).

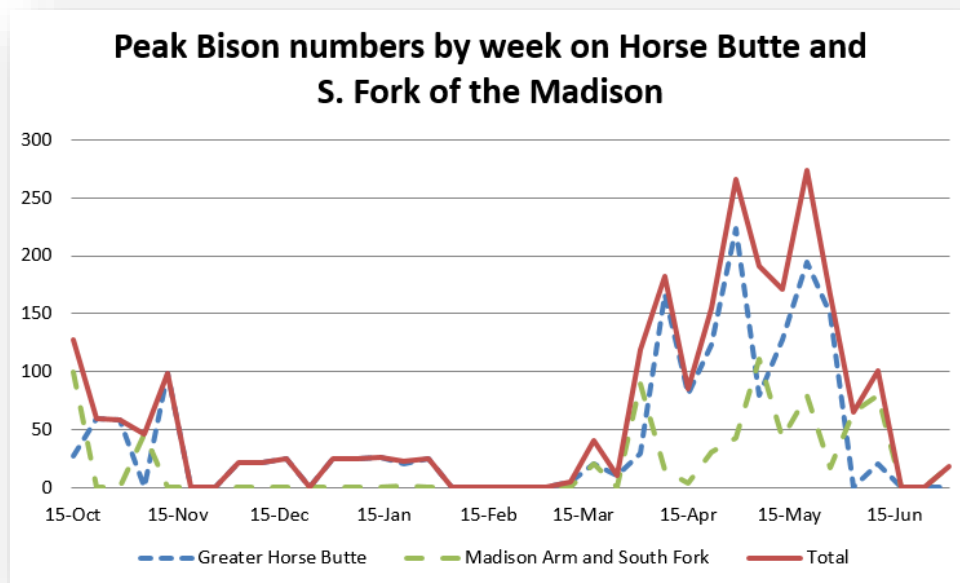


Figure 4.—Comparison of bison abundance by week on Horse Butte and the South Fork of the Madison area for the 2013-2014 management season.

- Determine natural routes and timeframes (in the absence of hazing) for bison migration back into the park (Lead = National Park Service (NPS)). Use this information to evaluate the effectiveness of management responses for bison tolerance in Zone 2 (Lead = MDOL).

NPS report

The natural routes for bison migration have been reported in previous annual reports (IBMP 2012). The timeframe for natural migration in the absence of hazing is difficult to identify because the agencies have hazed bison every year since the Adaptive Management Plan has been in place. However, an analysis of

observations over the past 6 to 8 years was conducted and determined that the natural time for expecting 80 percent of the bison to migrate back eastward into the park is between 24 May and 7 June (IBMP 2013, Table 2) .

Table 2.—Update to summary of annual hazing efforts originally presented in 2013 annual report.

Year	Total # of bison in West management area (Hebgen Basin)	Hazing Ops Season	Date >80% @ or past Cougar/ 7-mile
2007	500	10 Apr - 20 Jun	28-May
2008	600	14 May - 16 Jun	29-May
2009	600	27 Apr - 12 Jun	1-Jun
2010	550	4 May - 29 Jul	4-Jun
2011	600	1 May - 29 Jun	14-Jun
2012	400	19 Apr - 20 Jun	20-Jun*
2013	540	?? Apr – 5 Jun	27-May
2014	450	12 May – 3 Jul	5 Jun

* Virtually all of the bison were moved back in to the park by the first week of June 2012. There were groups totaling about 130 that moved back out of the park for a short time in the 3rd week of June prior to moving on to Hayden Valley for the breeding season. Radio marked bison in that group were migrants from the Northern Range that Left the Blacktail Deer Plateau in early June.

Most bison appear ready to migrate into the park from the west boundary area when green-up conditions in the Hayden Valley are just getting started. A simple correlate for the return migration is the accumulated maximum temperature recorded at the West Yellowstone SNO-TEL monitoring station beginning on 15 April. The target accumulation appears to be 600 to 800 degree-days (Figure 5).

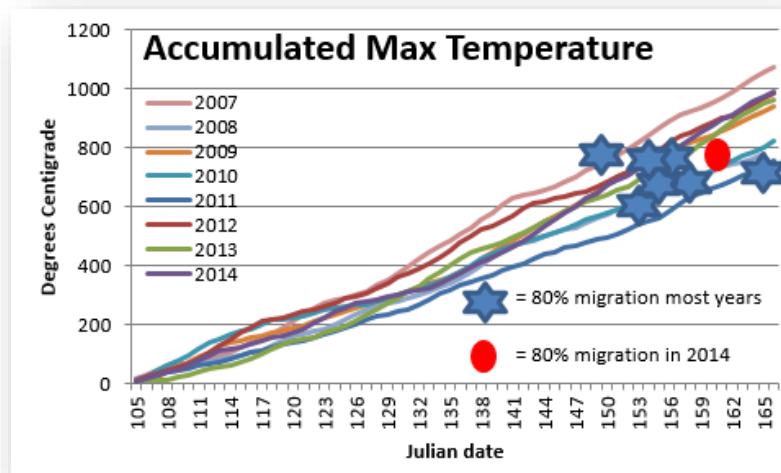


Figure 5.—Accumulated maximum temperature at West Yellowstone as a predictor of spring bison migration back into YNP.

MDOL report

Bison were tolerated in Zone 2 in accordance with the Adaptive Management Plan for this management season. Hazing operations were initiated in mid-April and continued until all bison returned to the park at the end of the management season. (MDOL comment: Bison moving past Cougar Creek, 7-mile Bridge are highly dependent on human management activities. On numerous occasions, herding operations were halted short of Cougar Meadows, and at other times, permission was not provided by NPS to move bison from Cougar Meadows to the Madison River corridor. Therefore, this measure (80% at or past Cougar Meadows/7-mile Bridge) is less an indicator of “natural migration” or accumulated maximum temperature, and more an influence of the management pressure.)

Management responses:

- Groups (≥ 1 animal) of female/mixed bison will not be allowed in the following areas at any time of year: north of the Narrows; west of Corey Springs; or south and west of the Zone 2 boundary. Bison attempting to enter these areas will be hazed to the Horse Butte peninsula, other available habitat, captured, or if necessary, lethally removed.
- During the period from November 15 through April 15, up to 30 female bison (or a mixed group of 30 males and females) will be allowed in Zone 2 on the Madison Arm. After April 15, up to 30 female/mixed group bison will be allowed east of the Madison Arm Resort. After May 15, no female/mixed group bison will be allowed on the Madison Arm.
 - If female/mixed group bison exceed 30 animals or breach the Zone 2 perimeter on the South Fork two or more times before April 15, then this will trigger management actions to reduce risk that may include hazing, capture, testing, or lethal removal at the discretion of the State Veterinarian.
 - If female/mixed group bison exceed 30 animals or breach the Madison Arm Resort two or more times between April 15 and May 15, then this will trigger management actions to reduce risk that may include hazing, capture, testing, or lethal removal at the discretion of the State Veterinarian.
- Allow up to 40 female bison (or a mixed group of 40 males and females) north of Duck Creek and east of Corey Springs during November 15 through May 15 before management actions are instituted. The number of bison tolerated in this area may be adjusted at the discretion of the State Veterinarian based on bison behavior, environmental conditions, and other considerations.
 - If female/mixed group bison breach the perimeter described above two or more times before May 15, then this will trigger management actions to reduce risk that may include hazing, testing, or lethal removal at the discretion of the State Veterinarian.
- If female/mixed group bison cross the Narrows two or more times before May 1, then this will trigger management actions to reduce risk that may include hazing, testing, or lethal removal at the discretion of the State Veterinarian. After May 1, any crossing may trigger management action.
- Allow bison to remain on Horse Butte, where there are no cattle, until May 15 or the agreed-upon haze-back date and plot the movement patterns and migration routes (without hazing) of bison with GPS collars.

Management action 1.1.b—Consistent with the management responses outlined below, allow bison on habitat on U.S. Forest Service and other lands north of the park boundary and south of Yankee Jim Canyon (see map in Appendix A). 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.

Monitoring metrics:

- Weekly survey of the number and distribution of bison in the Eagle Creek/Bear Creek area and the Gardiner basin (Lead inside YNP = NPS; Lead outside YNP = MDOL with Montana Fish, Wildlife, and Parks (MFWP)).

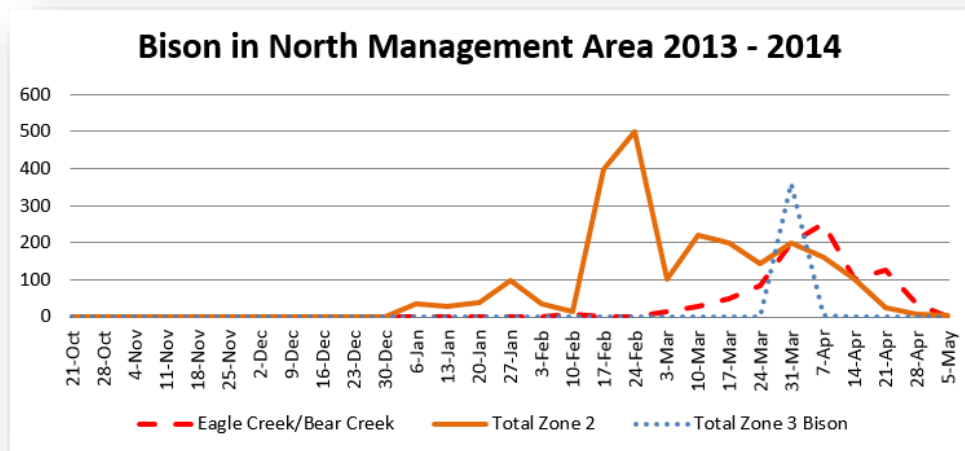


Figure 6.—Bison abundance in various portions of the Northern Management Area during the 2013-2014 management season.

Table 3.—Number of bison and locations in the Northern Management Area for the 2013-2014 management season.

Date	Number of Bison	Location	Operation
10/21/2013	1	Gardiner Basin Zone 2	No
10/28/2013	2	Eagle Creek	No
11/18/2013	1	Gardiner Basin Zone 2	No
11/22/2013	1	Gardiner Basin Zone 2	No
1/10/2014	35	Gardiner Basin Zone 2	No
1/13/2014	29	Gardiner Basin Zone 2	No
1/13/2014	4	Zone 2 Private Property	No
1/14/2014	32	Gardiner Basin Zone 2	No
1/15/2014	3	Gardiner Basin Zone 2	No
1/22/2014	40	Gardiner Basin Zone 2	No
1/23/2014	11	Gardiner Basin Zone 2	No
1/27/2014	110	Gardiner Basin Zone 2	No
1/27/2014	19	Mammoth to Gardiner	No
1/29/2014	1	Eagle Creek	No
1/30/2014	14	Steven's Creek to Boundary	No
2/4/2014	15	Gardiner Basin Zone 2	No
2/4/2014	39	Zone 2 Private Property	No
2/5/2014	44	Zone 2 Private Property	No
2/6/2014	28	Gardiner Basin Zone 2	No
2/7/2014	27	Steven's Creek to Boundary	No
2/7/2014	13	Zone 2 Private Property	No

Table 3.—Number of bison and locations in the Northern Management Area for the 2013-2014 management season.

Date	Number of Bison	Location	Operation
2/13/2014	8	Eagle Creek	No
2/14/2014	10	Eagle Creek	No
2/14/2014	16	Gardiner Basin Zone 2	No
2/14/2014	15	Zone 2 Private Property	No
2/18/2014	404	Gardiner Basin Zone 2	No
2/18/2014	200	Steven's Creek to Boundary	No
2/18/2014	52	Zone 2 Private Property	No
2/20/2014	51	Gardiner Basin Zone 2	No
2/22/2014	100	Gardiner Basin Zone 2	No
2/22/2014	225	Mammoth to Gardiner	No
2/23/2014	320	Gardiner Basin Zone 2	No
2/24/2014	22	Gardiner Basin Zone 2	No
2/24/2014	150	Steven's Creek to Boundary	No
2/24/2014	22	Zone 2 Private Property	No
2/25/2014	38	Gardiner Basin Zone 2	No
2/25/2014	17	N of Trail Creek/E of River	No
2/25/2014	22	Zone 2 Private Property	No
2/28/2014	30	Gardiner Basin Zone 2	No
2/28/2014	500	Mammoth to Gardiner	No
3/3/2014	14	Eagle Creek	No
3/3/2014	130	Gardiner Basin Zone 2	No
3/3/2014	49	Zone 2 Private Property	No
3/4/2014	40	Gardiner Basin Zone 2	No
3/4/2014	154	Steven's Creek to Boundary	No
3/4/2014	70	Zone 2 Private Property	No
3/5/2014	30	Steven's Creek to Boundary	No
3/5/2014	115	Zone 2 Private Property	No
3/10/2014	7	Eagle Creek	No
3/10/2014	15	Gardiner Basin Zone 2	No
3/11/2014	2	Eagle Creek	No
3/11/2014	55	Gardiner Basin Zone 2	No
3/11/2014	16	Zone 2 Private Property	No
3/12/2014	30	Gardiner Basin Zone 2	No
3/12/2014	12	Zone 2 Private Property	No
3/13/2014	60	Zone 2 Private Property	No
3/14/2014	30	Eagle Creek	No
3/14/2014	220	Zone 2 Private Property	No
3/15/2014	1	Eagle Creek	No
3/15/2014	8	Gardiner Basin Zone 2	No
3/15/2014	173	Zone 2 Private Property	No

Table 3.—Number of bison and locations in the Northern Management Area for the 2013-2014 management season.

Date	Number of Bison	Location	Operation
3/16/2014	25	Gardiner Basin Zone 2	No
3/16/2014	66	Zone 2 Private Property	No
3/17/2014	30	Eagle Creek	No
3/17/2014	16	Gardiner Basin Zone 2	No
3/17/2014	41	Zone 2 Private Property	No
3/18/2014	40	Eagle Creek	No
3/18/2014	24	Gardiner Basin Zone 2	No
3/18/2014	158	Zone 2 Private Property	No
3/19/2014	61	Gardiner Basin Zone 2	No
3/19/2014	64	Zone 2 Private Property	No
3/20/2014	50	Eagle Creek	No
3/20/2014	210	Gardiner Basin Zone 2	No
3/20/2014	63	Zone 2 Private Property	No
3/21/2014	50	Eagle Creek	No
3/21/2014	178	Gardiner Basin Zone 2	No
3/21/2014	179	Zone 2 Private Property	No
3/22/2014	105	Gardiner Basin Zone 2	No
3/22/2014	100	Zone 2 Private Property	No
3/22/2014	40	Zone 2 Private Property	Yes
3/23/2014	263	Gardiner Basin Zone 2	No
3/23/2014	28	Zone 2 Private Property	No
3/24/2014	83	Eagle Creek	No
3/24/2014	152	Gardiner Basin Zone 2	No
3/24/2014	107	Zone 2 Private Property	No
3/25/2014	70	N of Trail Creek/E of River	Yes
3/26/2014	202	Gardiner Basin Zone 2	No
3/26/2014	30	Zone 2 Private Property	No
3/27/2014	16	N of Trail Creek/E of River	Yes
3/28/2014	15	Gardiner Basin Zone 2	No
3/28/2014	7	N of Trail Creek/E of River	No
3/29/2014	174	Gardiner Basin Zone 2	No
3/29/2014	42	N of Trail Creek/E of River	No
3/29/2014	28	Zone 2 Private Property	No
3/31/2014	4	Eagle Creek	No
3/31/2014	217	Gardiner Basin Zone 2	No
3/31/2014	80	N of Trail Creek/E of River	No
3/31/2014	201	Zone 2 Private Property	No
4/2/2014	238	Gardiner Basin Zone 2	Yes
4/2/2014	149	Mammoth to Gardiner	Yes
4/2/2014	327	Zone 2 Private Property	Yes

Table 3.—Number of bison and locations in the Northern Management Area for the 2013-2014 management season.

Date	Number of Bison	Location	Operation
4/3/2014	136	Gardiner Basin Zone 2	No
4/3/2014	136	Yankee Jim Canyon Zone 3	Yes
4/4/2014	35	Gardiner Basin Zone 2	Yes
4/4/2014	65	Yankee Jim Canyon Zone 3	Yes
4/5/2014	200	Eagle Creek	No
4/5/2014	85	Gardiner Basin Zone 2	Yes
4/5/2014	20	Gardiner Basin Zone 2	No
4/5/2014	71	N of Trail Creek/E of River	No
4/5/2014	365	Yankee Jim Canyon Zone 3	Yes
4/6/2014	116	Zone 2 Private Property	Yes
4/7/2014	160	Gardiner Basin Zone 2	Yes
4/7/2014	3	Yankee Jim Canyon Zone 3	Yes
4/8/2014	250	Eagle Creek	No
4/8/2014	111	Gardiner Basin Zone 2	No
4/8/2014	29	N of Trail Creek/E of River	No
4/8/2014	9	Steven's Creek to Boundary	No
4/8/2014	108	Zone 2 Private Property	No
4/8/2014	10	Zone 2 Private Property	Yes
4/10/2014	31	Zone 2 Private Property	Yes
4/11/2014	93	N of Trail Creek/E of River	Yes
4/11/2014	33	Zone 2 Private Property	Yes
4/12/2014	21	N of Trail Creek/E of River	Yes
4/12/2014	14	Zone 2 Private Property	Yes
4/13/2014	1	Gardiner Basin Zone 2	No
4/13/2014	27	Zone 2 Private Property	Yes
4/14/2014	116	Eagle Creek	No
4/14/2014	43	Gardiner Basin Zone 2	No
4/14/2014	35	Gardiner Basin Zone 2	Yes
4/14/2014	94	Zone 2 Private Property	Yes
4/14/2014	19	Zone 2 Private Property	No
4/15/2014	6	Gardiner Basin Zone 2	No
4/15/2014	31	Zone 2 Private Property	Yes
4/15/2014	8	Zone 2 Private Property	No
4/16/2014	74	Gardiner Basin Zone 2	No
4/16/2014	106	Zone 2 Private Property	No
4/16/2014	39	Zone 2 Private Property	Yes
4/17/2014	43	Gardiner Basin Zone 2	Yes
4/17/2014	1	Gardiner Basin Zone 2	No
4/17/2014	43	N of Trail Creek/E of River	Yes
4/17/2014	145	Zone 2 Private Property	Yes

Table 3.—Number of bison and locations in the Northern Management Area for the 2013-2014 management season.

Date	Number of Bison	Location	Operation
4/18/2014	148	Zone 2 Private Property	Yes
4/19/2014	9	Gardiner Basin Zone 2	Yes
4/19/2014	24	Zone 2 Private Property	Yes
4/21/2014	125	Eagle Creek	Yes
4/21/2014	12	Gardiner Basin Zone 2	No
4/21/2014	19	Zone 2 Private Property	Yes
4/21/2014	16	Zone 2 Private Property	No
4/22/2014	13	Zone 2 Private Property	Yes
4/22/2014	8	Zone 2 Private Property	No
4/23/2014	25	Gardiner Basin Zone 2	No
4/23/2014	2	Zone 2 Private Property	Yes
4/25/2014	1	N of Trail Creek/E of River	Yes
4/28/2014	47	Eagle Creek	No
4/28/2014	6	Gardiner Basin Zone 2	No
4/28/2014	4	Zone 2 Private Property	No
4/29/2014	11	Zone 2 Private Property	Yes
5/2/2014	4	Gardiner Basin Zone 2	Yes
5/2/2014	1	N of Trail Creek/E of River	Yes
5/2/2014	7	Steven's Creek to Boundary	Yes
5/2/2014	5	Zone 2 Private Property	Yes
5/8/2014	6	Zone 2 Private Property	No
5/9/2014	5	Gardiner Basin Zone 2	Yes
5/13/2014	12	Eagle Creek	No
5/29/2014	3	Zone 2 Private Property	Yes

NPS report

Table 4.—Summary of the abundance of Yellowstone bison in the Northern Management area based on aerial surveys between October 2013 and June 2014.

Location	Numbers of Bison Observed				
	Oct 22	Jan 19	Mar 21	May 13	Jun 20
IBMP Zone 1	18	132	564	50	0
IBMP Zone 2	0	0	628	0	0
Eagle Creek, Gallatin National Forest	2	0	43	28	0
Hellroaring Slope	124	121	189	119	12
Blacktail Deer Plateau	800	1,143	131	780	164
Swan Lake, Gardiner Hole	33	108	0	14	8
Total	977	1,504	1555	991	184

Table 5.—Numbers of bison counted in the Gardiner basin by ground observers during winter 2014.

Date	Mammoth to Gardiner	North Entrance Station to Stephens Creek Facility	Stephens Creek Facility to Park Boundary	North of Park Boundary	Eagle Creek SMA	Trap	Total
1/7/2014	0	0	0	0	0	0	0
1/27/2014	72	19	45	8	0	0	144
1/29/2014	56	84	0	0	0	0	140
2/3/2014	219	107	0	49	10	0	385
2/10/2014	185	48	0	4	0	25	262
2/16/2014	124	56	30	58	20	74	362
2/20/2014	171	152	58	34	8	81	504
2/22/2014	93	81	56	281	12	120	643
2/24/2014	136	147	0	40	4	158	485
3/3/2014	93	218	52	123	26	127	639
3/10/2014	235	419	101	13	2	0	770
3/17/2014	60	368	141	25	27	0	621
3/24/2014	171	340	45	252	83	0	891
3/31/2014	277	353	144	370	20	0	1164
4/3/2014	58	84	44	702	30	0	918
4/7/2014	242	204	90	471	96	0	1103
4/14/2014	85	282	13	173	98	0	651
4/21/2014	45	225	82	53	103	0	508
4/28/2014	74	67	0	10	35	0	186

- Annually document the numbers and dates that bison attempt to move north of Yankee Jim Canyon into Tom Miner basin or the Paradise Valley (Leads = MDOL and MFWP).

Bison crossed the hydrological divide and moved into Tom Miner basin on several occasions in early April. Four operations took place to return the bison to Zone 2 (Table 6). This breach into Zone 3 seems to have been caused by dispersal of animals when the total abundance in the northern management area exceeded 450 to 500 animals (Figure 7). The IBMP management agencies moderated the abundance to fewer than 500 animals and breaches of Zone 3 did not recur for the remainder of the management season.

- Annually document the number of bison in the north boundary management area and the number and type of management activities needed to (1) track disease management (Lead = MDOL), and (2) provide for public safety and property protection (Lead = MFWP).

MDOL report

Table 6.—Bison moving north of Yankee Jim Canyon

Date	Number	Type	Location	Hazing Operation
4/3/2014	136	mixed bison	Tom Miner	Yes
4/4/2014	65	mixed bison	Tom Miner	Yes
4/5/2014	365	mixed bison	Tom Miner	Yes
4/7/2014	3	mixed bison	Tom Miner	Yes

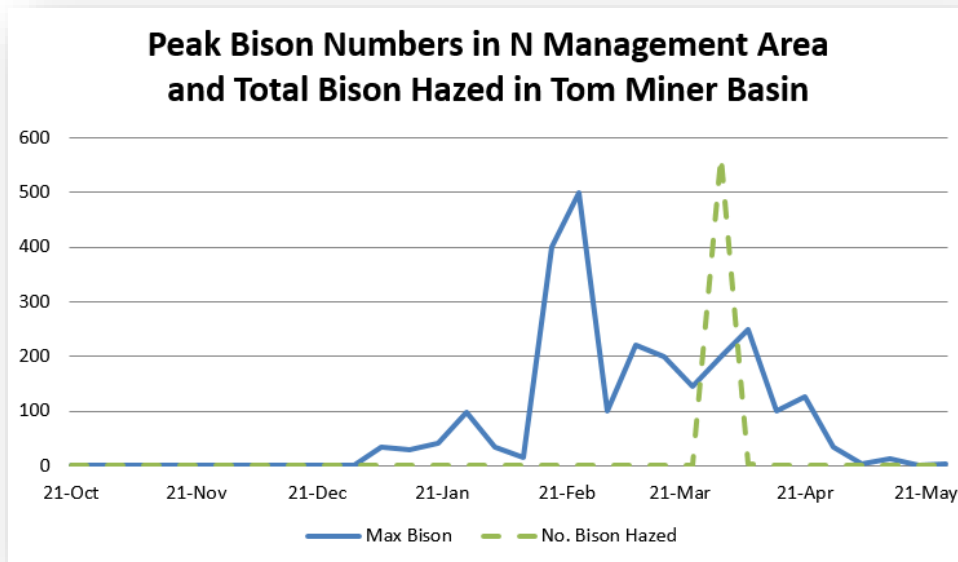


Figure 7.— Bison in the N Management area and the Tom Miner basin during the 2013-2014 management season

MFWP report

Montana FWP wardens responded to 413 incidents dealing with bison between December 2013 and July 2014, logging 1145 hours during those responses. Wardens recorded the chief complaint they were responding to, or activity that they engaged in, as follows:

- Hazing: 155 incidents
- Public Safety: 95 incidents
- Property Damage: 74 incidents

Note that any given incident might include one, two, or all three of these issues. Also, these numbers are considered to be a minimum as wardens did not always record the issue involved with the incident. Line item entries for each incident reported can be found in Appendix C.

The breakdown of incident responses to bison issues parallels the time of maximum numbers of bison outside of the Park, as follows:

- Dec13-10

- Jan14-16
 - Feb14-25
 - Mar14-82
 - Apr14-216
 - May14-57
 - Jun14-5
 - Jul14-2
- Annually collect data to update the relationships between bison herd and/or population size, snow pack, and the number of bison moving near or beyond the boundary of YNP (Lead = NPS).

NPS staff and colleagues published a scientific article (Geremia et al. 2011) summarizing analyses of the relationships between bison population size, accumulated snow pack, aboveground dried biomass, and the number of bison migrating to the boundary of YELL. A summary of these findings was included in the 2011 IBMP annual report (IBMP 2011).

- Annually collect data to determine natural migration routes and timeframes (in the absence of hazing) for bison migration out of and back into the park (Lead inside YNP = NPS; Lead outside YNP = MDOL/MFWP).

MDOL report

Groups of bison (maximum group size was 400 mixed bison) were reported in the Gardiner Basin throughout the management season, primarily during February and March. Operations to move bison only occurred when there was a need to remove them from private property or a breach of Zone 2 boundary into Zone 3 (Table 3). Because hazing activities occurred frequently after March 22, it was difficult to assess natural migration routes. MDOL has no reports of bison in the Gardiner Basin after May 29.

NPS report

Migration routes out of the park included two primary routes into the Gardiner basin: (1) across the Blacktail Deer Plateau and down the Lava Creek drainage along the creek or the road corridor; and (2) down the Yellowstone River trail to Eagle Creek (out of park). Migration routes further north progressed through the Yellowstone River valley and adjacent foothills. These same routes are used in reverse when bison begin to migrate to higher elevation summer ranges in response to spring green-up conditions.

Few bison moved out of the park until early February. Throughout February, 40 to 50 bison were often observed north of the boundary with a high count of 281 observed on 22 February. As hunting parties began to occupy the boundary area, bison movements out of the park became less regular (Table 5).

By the end of March, bison were moving off of Blacktail Deer Plateau and traveling west to Gardiner Basin and east toward Hellroaring Creek and Little America. During the final week of March and through the first week of April, the number of bison in the Gardiner basin reached a peak. The high count was observed on 31 March when nearly 1,200 bison were observed in the basin, with about 700 observed north of the park boundary on 3 April. By the end of the second week in April, the number had declined to less than half the peak abundance and by the end of the month there were less than 200 bison remaining in the basin.

Approximately 30% of the radio marked bison that summer on the northern range were east of Blacktail Deer Plateau by the 10th of April. The migration east from the Blacktail Deer Plateau progressed fairly quickly with 60% of the radio marked bison observed east of Blacktail and never observed west again by 20 April, while 80% had moved east of the Blacktail by 6 May. The remaining 20% migrated east by 15 May. Thus, most of the bison on Blacktail Deer Plateau and in the Gardiner Basin after 15 May were likely central range bison.

- Annually document the number of bison tested negative at Stephens Creek facility for release into the Gardiner Basin.

NPS report

- adult male = 0

- yearling male = 6
 - male calf = 4
 - adult female = 1
 - yearling female = 10
 - female calf = 0
- Annually document number of times bison move north of the hydrological divide and the actions taken; i.e. licensed hunting, agency lethal removal, or haze back into Zone 2.

MDOL report

No lethal removals occurred during the 2013-2014 management season. However, several operations were conducted after bison breach the Zone 3 boundary and migrated into Tom Miner basin in early April. Hunting was not implemented because of the large number of bison that were involved, the difficulty of access, and the urgency because of the proximity to livestock operations. Table 6 provides details on haze back operations.

It became apparent that when a threshold of bison abundance was reached in the northern management area (approximately 450 to 500 bison) private property conflicts increase, the Zone 2 northern boundary is more likely to be breached.

Management responses:

- Bison will 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 (see map in Appendix A).
- 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.
- Bison will not be allowed in Zone 3 any time of year. Bison entering Zone 3 will trigger management actions to reduce risk that may include hazing to available habitat within Zone 2, the Eagle Creek/Bear Creek area, or the park, increased monitoring, capture, or removal at the discretion of the State Veterinarian.
- Regardless of testing status, bison will be allowed year-round in the Eagle Creek/Bear Creek area.
- Adaptive adjustments to monitoring metrics and management responses will be made prior to subsequent winters based on new information obtained through surveillance, the effects of management actions on the conservation of bison, and the effectiveness of management actions at maintaining spatial and temporal separation of cattle and bison and retaining bison within Zone 2.

Management Action 1.1.c—Use research findings to inform adaptive management.

Monitoring metrics:

- Complete research reports and attempt to publish findings in a peer-reviewed, scientific journal (Lead = MFWP).

There are no updates from MFWP to report.

Through the period of this report, APHIS researchers continued work on a trial to test GonaCon as a contraceptive vaccine in bison. This work is in progress.

Management responses:

- Adapt temporal and spatial separation guidelines during spring and summer based on research findings.

■ **OBJECTIVE 1.2—Manage bull bison to reflect their lower risk of transmission of brucellosis to cattle.**

Management Action 1.2.a—Allow bachelor groups of bull bison to occupy suitable habitat areas outside the west boundary of YNP in the portion of Zone 2 south of Duck Creek each year within the parameters of conflict management.

Monitoring metrics:

- Weekly counts and locations of bull bison in Zone 2 (Lead = MDOL/MFWP).

On numerous occasions bull bison were observed and not hazed (Table 7).

Table 7.—Weekly counts and locations of bull bison in Zone 2 outside the western boundary of YNP.

Date	No Bulls	Location
10/28/2013	6	Duck Creek
11/4/2013	6	Duck Creek
11/13/2013	6	Duck Creek
11/18/2013	5	Duck Creek
11/19/2013	1	Madison River South "flats"
12/9/2013	5	Duck Creek
1/3/2014	3	Duck Creek
1/23/2014	2	Madison River South "flats"
4/18/2014	1	Madison River North "flats"
4/21/2014	4	Madison River North "flats"
4/21/2014	4	Duck Creek
4/29/2014	1	Madison River North "flats"
5/1/2014	2	Madison River South "flats"
5/5/2014	2	Madison River South "flats"
5/19/2014	2	Madison River North "flats"
5/29/2014	3	Madison River South "flats"

- Document threats to human safety and property damage (Lead = MFWP/MDOL).

Montana FWP wardens responded to 413 incidents dealing with bison between December 2013 and July 2014, logging 1145 hours during those responses. Wardens recorded the chief complaint they were responding to, or activity that they engaged in, as follows:

- Hazing: 155 incidents
- Public Safety: 95 incidents
- Property Damage: 74 incidents

Note that any given incident might include one, two, or all three of these issues. Also, these numbers are considered to be a minimum as wardens did not always record the issue involved with the incident. Line item entries for each incident reported can be found in Appendix C.

The breakdown of incident responses to bison issues parallels the time of maximum numbers of bison outside of the Park, as follows:

- Dec13-10

- Jan14-16
- Feb14-25
- Mar14-82
- Apr14-216
- May14-57
- Jun14-5
- Jul14-2

Management responses:

- Avoid hazing or removing bull bison unless they are breaching the agreed-upon perimeter or pose an imminent threat to livestock co-mingling, human safety, or property damage.
- If there is a threat of livestock co-mingling, human safety, or property damage, or a group (≥ 1 animal) of bull bison attempt to travel beyond the perimeter of Zone 2, then the bull bison will initially be hazed from area of conflict.
- If bull bison actually co-mingle with cattle, then they will be lethally removed and additional management actions may be taken by the State Veterinarian to reduce the risk of further commingling by other bull bison, including capture, hazing, or lethal removal.

Management Action 1.2.b—Allow bachelor groups of bull bison to occupy suitable habitat areas in Zone 2 outside the north boundary of YNP within the following parameters of conflict management.

Monitoring metrics:

- Weekly counts and locations of bull bison in Zone 2 (Lead = MDOL/MFWP).
On numerous occasions, bull bison were observed in the northern management area and not hazed (Table 8).

Table 8.—Counts of bull bison in Zone 2 outside the YNP north boundary.

Date	No Bulls	Location
4/15/2014	1	Gardiner Basin Zone 2
4/15/2014	1	Gardiner Basin Zone 2
4/15/2014	4	Gardiner Basin Zone 2
4/16/2014	4	Gardiner Basin Zone 2
4/17/2014	1	Gardiner Basin Zone 2
4/21/2014	4	Gardiner Basin Zone 2
4/22/2014	8	Zone 2 Private Property
4/22/2014	13	Zone 2 Private Property
4/23/2014	2	Zone 2 Private Property
4/28/2014	1	Gardiner Basin Zone 2
4/28/2014	1	Zone 2 Private Property
4/28/2014	2	Zone 2 Private Property
4/29/2014	3	Zone 2 Private Property
5/2/2014	1	Gardiner Basin Zone 2
5/2/2014	1	N of Trail Creek/E of River
5/2/2014	3	Zone 2 Private Property
5/8/2014	2	Zone 2 Private Property
5/8/2014	4	Zone 2 Private Property

Table 8.—Counts of bull bison in Zone 2 outside the YNP north boundary.

Date	No Bulls	Location
5/9/2014	2	Gardiner Basin Zone 2
5/9/2014	3	Gardiner Basin Zone 2
5/29/2014	3	Zone 2 Private Property

- Document threats to human safety and property damage (Lead = MFWP/MDOL).

Montana FWP wardens responded to 413 incidents dealing with bison between December 2013 and July 2014, logging 1145 hours during those responses. Wardens recorded the chief complaint they were responding to, or activity that they engaged in, as follows:

- Hazing: 155 incidents
- Public Safety: 95 incidents
- Property Damage: 74 incidents

Note that any given incident might include one, two, or all three of these issues. Also, these numbers are considered to be a minimum as wardens did not always record the issue involved with the incident. Line item entries for each incident reported can be found in Appendix C.

The breakdown of incident responses to bison issues parallels the time of maximum numbers of bison outside of the Park, as follows:

- Dec13-10
- Jan14-16
- Feb14-25
- Mar14-82
- Apr14-216
- May14-57
- Jun14-5
- Jul14-2

- Annually document the numbers and dates that bull bison attempt to move north of Yankee Jim Canyon into Tom Miner basin or the Paradise Valley (Leads = MDOL and MFWP).

All zone breaches into Tom Miner Basin were mixed groups.

Management responses:

- Avoid hazing or removing bull bison from Zone 2 during November through April each year unless they are breaching the agreed-upon perimeter or pose an imminent threat to livestock co-mingling, human safety, or property damage.
- Regardless of testing status, bull bison will be allowed year-round in the Eagle Creek/Bear Creek area.
- Bull bison will not be allowed in Zone 3 any time of year. Bull bison entering Zone 3 will trigger management actions to reduce risk that may include hazing to available habitat within Zone 2, the Eagle Creek/Bear Creek area, or the park, increased monitoring, or removal at the discretion of the State Veterinarian.
 - If a group of bull bison progresses beyond Yankee Jim Canyon, then they may be lethally removed at the discretion of the State Veterinarian.
 - If groups of bull bison progress beyond Yankee Jim Canyon two or more times, then additional management actions may be taken by the State Veterinarian to reduce the risk of future incidents by other bull bison, including capture, hazing, or lethal removal.
- If bull bison actually co-mingle with cattle, then they will be lethally removed and additional management actions may be taken by the State Veterinarian to reduce the risk of further commingling by other bull bison, including capture, hazing, or lethal removal.

- Adaptive adjustments to monitoring metrics and management responses will be made prior to subsequent winters based on new information obtained through surveillance, the effects of management actions on the conservation of bison, and the effectiveness of management actions at maintaining spatial and temporal separation of cattle and bison and retaining bull bison within the agreed-upon perimeter of Zone 2.

OBJECTIVE 1.3—Reduce conflict between landowners, livestock operators, and bison outside YNP via permit management, improved relations, education, and incentives.

Management Action 1.3.a—Work with private land owners and livestock producers and operators to provide conflict-free habitat in the Hebgen and Gardiner basins.

Monitoring metrics:

- Create an annual record of the: 1) number of acres made available to bison from conservation easements (Lead = MFWP); 2) locations, numbers, types, and turn-out/off dates for cattle grazed on private land in the Hebgen and Gardiner basins (Lead = MDOL); and 3) extent of fencing erected to separate bison from livestock (Lead = MDOL).

The number of acres made available to bison from conservation easements are the same as indicated in the 2013 report. There have been no additional conservation easements. No fencing was erected to separate bison from livestock.

Table 9.—Ownership and Turn-out dates for the Northern Management Area.

Owner	Zone	No. Cattle	Maximum	Class	On-date	Off-date
BH	GB	20/1		pairs/bull	year-round	n/a
JT	GB	23		pairs	year-round	n/a
Grizzly Creek	3	100	250	pairs	May 21	Dec 31
Yellowstone Cattle Co	3	100	600	pairs	May 21	Dec 1
B-Bar	3	150	600	pairs	June 15	Nov 15
Anderson Ranch	3	100	160	pairs	June 15	Nov 15
West Creek Ranch	3	100	100	pairs	June 1	Nov 1
Bridger Cunningham	3	64/4	68	pairs/bulls	July 5	Oct 6

Table 10.—Ownership and Turn-out dates for the Western Management Area.

Property Owner	Livestock Owner	Zone	Date in	No. Cattle	Class	Date out
SR—Red Creek Ranch	BM—Reed Point, MT	2	Jun 20	200/4	Pairs/Bulls	Oct 9
PP—Deep Well Ranch	LM—Twin Bridges, MT	3	Jun 15	320/10	Pairs/Bulls	
LD—Quarter Circle JK	CC/BF—Cameron, MT	3	Jul 1	22/1	Pairs/Bulls	
USFS—South Fork Allotment	CC/BF—Cameron, MT	3	Jul 1	11/1	Pairs/Bulls	
USFS—Watkins Cr. Allotment	CC/BF—Cameron, MT	3	Jul 1	55/4	Pairs/Bulls	

Management responses:

- Implement site-specific brucellosis risk management plans for livestock that may include stocking less-brucellosis susceptible cattle (e.g., steers), brucellosis testing and vaccination, fencing for livestock, and adjustments of turnout dates, when necessary, to ensure temporal separation. As available, financial incentives (working with government and non-government partners) may be provided for altering the timing of cattle operations to ensure temporal separation.
- Evaluate where additional habitat is available for bison commensurate with land management and ownership changes.

Management Action 1.3.b—Work with landowners who have human safety and property damage concerns, as well as those who favor increased tolerance for bison, to provide conflict-free habitat in the Hebgen and Gardiner basins.

Monitoring metrics:

- Annually document the numbers, timing, and types of reported incidents for human safety and property damage related to bison (Lead = MFWP with support from MDOL).

Montana FWP wardens responded to 413 incidents dealing with bison between December 2013 and July 2014, logging 1145 hours during those responses. Wardens recorded the chief complaint they were responding to, or activity that they engaged in, as follows:

- Hazing: 155 incidents
- Public Safety: 95 incidents
- Property Damage: 74 incidents

Note that any given incident might include one, two, or all three of these issues. Also, these numbers are considered to be a minimum as wardens did not always record the issue involved with the incident. Line item entries for each incident reported can be found in Appendix C.

The breakdown of incident responses to bison issues parallels the time of maximum numbers of bison outside of the Park, as follows:

- Dec13-10
- Jan14-16
- Feb14-25
- Mar14-82
- Apr14-216
- May14-57
- Jun14-5
- Jul14-2

- Annually document the numbers and types of actions taken to provide conflict-free habitat bison (Lead = MFWP with support from MDOL).

No changes in available habitat in this management season

Management responses:

- If there is a human injury by bison, then this will trigger management actions to reduce the risk of future incidents that may include hazing, capture, or lethal removal.
- If annual property damage is excessive or unacceptable in frequency, impact, and/or cost, then this will trigger management actions to reduce the risk of future damage that may include hazing, capture, or lethal removal at the discretion of the Region 3 Supervisor of Montana Fish, Wildlife, and Parks.
- Consider developing a new funding source to assist land owners with fencing damage from bison.

Management Action 1.3.c—Annually, the Gallatin National Forest will ensure conflict-free habitat is available for bison and livestock grazing on public lands, as per management objectives of the Interagency Bison Management Plan (IBMP).

Monitoring metrics:

- Annually track the status (e.g., number of acres, location, etc.) of active and inactive grazing allotments on public lands (Lead = U.S. Forest Service (USFS)).

Active and inactive grazing allotments—no change from the previous year.

Management responses:

- Evaluate where additional habitat is available for bison commensurate with land management and ownership changes.

Management Action 1.3.d—Consider a voluntary compensation program to allow for adjusting the dates livestock are released on private land beyond May 15.

Monitoring metrics:

- Annually document the number of acres and days made available to bison through the voluntary program (Leads = MDOL and MFWP).

MDOL did not receive any requests for adjusting the dates of grazing. No change since 2013.

■ **OBJECTIVE 1.4—Recognize tribal treaty rights for hunting bison.**

Management Action 1.4a—Allow bison to occupy National Forest System lands and other areas determined suitable within the designated tolerance area (Zone 2), and maximize timing and geographical extents to increase tribal hunt opportunities.

Monitoring metrics:

- Annually document the number of acres and number of days available for tribal hunting (Leads = USFS, Confederated Salish and Kootenai Tribes (CSKT), and Nez Perce Tribe (NPT)).

CSKT hunters annual bison hunt season was from September 1, 2013 through January 31, 2014, taking place on all open Federal lands within the Yellowstone area.

Nez Perce Tribal hunters were authorized to hunt from November 8, 2013 through March 17, 2014 for a total of 130 days.

- Annually document the number of bison (by age and sex) harvested by tribal hunters (Leads = CSKT and NPT).

North Side (Gardiner Basin) 2013-2014 bison hunt harvest (Gardiner) = 258 total, broken down as follows:

- State= 25 (14 male, 8 female, 3calves)
- CSKT= 18 (17 male, 1 female)
- NPT= 148 (48 male, 66 female, 33 calves, 1 unknown)
- SB= 4 (1 male, 1 female, 2 calves)
- CTU= 63 (31 male, 17 female, 15 calves)

West Side (Hebgen Basin) 2013-2014 Bison Hunt Harvest = 70 total, broken down as follows:

- State= 11 (8 male, 3 female)
- CSKT= 52 (23 male, 20 female, 9 calves)
- NPT= 1 (unknown)
- SB= 6 (3 female, 3 unknown)
- CTU= 0

Management Action 1.4b—Coordinate management activities that could potentially impact opportunities for tribal members to exercise their treaty rights.

Monitoring metrics:

- Annually document the number of hazing operations while tribal hunts are occurring (Leads = MDOL, CSKT and NPT).

CSKT—During the 2013-2014 CSKT hunt period, Tribal hunters and wardens observed hazing operations in mid-October and early November in the West Yellowstone area.

MDOL—Please refer to Table 6 and Appendix B, Table B1 for hazing information.

NPT—The NPT documented no hazing operations during the 2013-14 hunt.

Management responses:

- Tribal leadership involvement in, and signatories to, the annual Operations Plan.
- Complete evaluation of opportunities for tribal hunting outside of the hunt period for licensed Montana hunters when bison are typically available in greater number (i.e., late winter or spring).

OBJECTIVE 2.1—Manage the Yellowstone bison population to ensure the ecological function and role of bison in the Yellowstone area and to maintain genetic diversity for future adaptation.

Management action 2.1.a—Increase the understanding of bison population dynamics to inform adaptive management and reduce sharp increases and decreases in bison abundance.

Monitoring metrics:

- Conduct aerial and ground surveys to estimate the annual abundance of Yellowstone bison each summer (Lead = NPS).

During summer 2013, the population abundance of Yellowstone bison was estimated at 4,924 bison, including approximately 3,420 northern and 1,504 central herd members (Figure 8). At the time, this was the largest number of bison ever observed in northern Yellowstone.

Following winter operations that included both hunter harvest and management capture and culling by the agencies, the summer 2014 population abundance was estimated at 4,868 including approximately 3,424 northern and 1,444 central herd members.

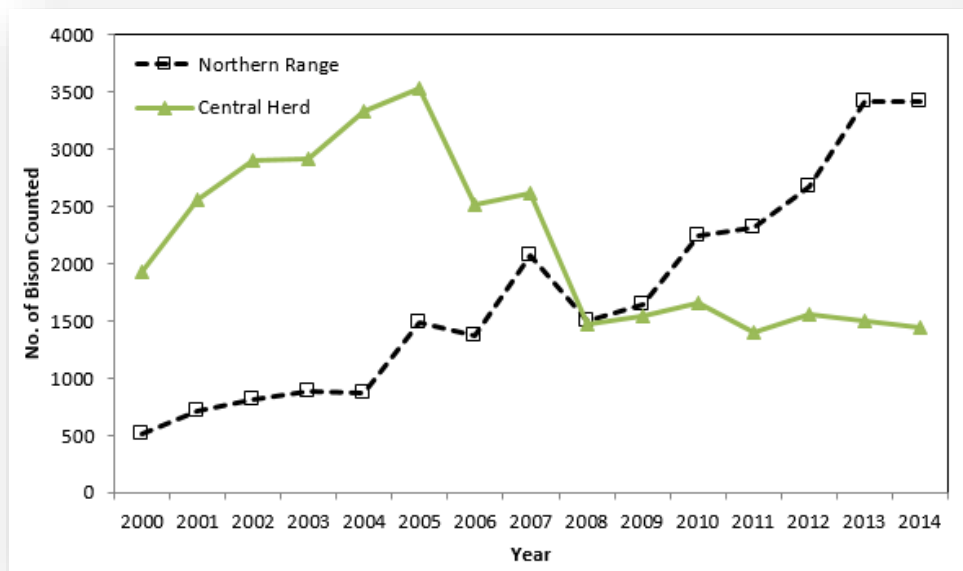


Figure 8.—Estimated annual abundance of Yellowstone bison since 2000 based on summer surveys.

- Document and evaluate relationships between bison migration to the boundary of YNP and bison abundance, population (or subpopulation) growth rates, and snow pack in the central and northern herds (Lead = NPS).

See Management Action 1.1b, Monitoring Metric 4.

- Continue to obtain estimates of population abundance through the remainder of the year based on surveys, knowledge of management removals, and survival probabilities (Lead = NPS).

Table 11.—Counts of Yellowstone bison observed during aerial distribution surveys in Yellowstone National Park and adjacent areas of Montana from October 2013 to May 2014.

Month	Northern YELL	Central YELL
October 2013	3,685	1345
January 2014	2,846	1,124
March 2014	1,617	815
May 2014	3,226	713

- Conduct an assessment of population range for Yellowstone bison that successfully addresses the goals of the IBMP by retaining genetic diversity and the ecological function and role of bison, while lessening the likelihood of large-scale migrations to the park boundary and remaining below the estimated carrying capacity of the park’s forage base (Lead = NPS).

NPS staff and colleagues published a scientific article (Plumb et al. 2009) in the journal *Biological Conservation* summarizing analyses of the population range that should satisfy the collective long-term interests of stakeholders as a balance between the park’s forage base, conservation of the genetic integrity of the bison population, protection of their migratory tendencies, brucellosis risk management, and other societal constraints related to management of bison. A summary of these findings was included in the 2011 IBMP annual report (IBMP 2011).

Management responses:

- If abundance estimates decrease to $\leq 2,300$ bison, then the agencies will increase the implementation of non-lethal management measures.
- If abundance estimates decrease to $\leq 2,100$ bison, then the agencies will cease lethal brucellosis risk management and hunting of bison and shift to non-lethal management measures.

Management action 2.1.b—Increase the understanding of genetics of Yellowstone bison to inform adaptive management.

Monitoring metrics:

- IBMP managers will consider the findings of genetic analyses that evaluate effective population size, allelic diversity, and effects of various management actions on the genetic diversity of Yellowstone bison and document findings as necessary (Lead = NPS).

NPS staff collaborated with colleagues at University of Montana to conduct DNA extractions with fecal samples collected from Yellowstone bison in the northern and central breeding herds during 2006 and 2008. These results have been compiled into a final project report. The results were presented in the 2012 IBMP Annual Report (IBMP 2012). NPS staff and colleagues have published two additional scientific articles to describe genetic diversity indices of Yellowstone bison (Halbert et al. 2012, White and Wallen 2012). The results of these publications were also included in the 2012 IBMP Annual Report (IBMP 2012).

Management responses:

- Define genetic diversity and integrity, and establish long-term objectives for conserving genetic integrity, including assessing hunting and risk management removal strategies that are compatible with conservation of genetic diversity.

Management action 2.1.c—Increase understanding of the ecological role of bison to inform adaptive management by commissioning a comprehensive review and assessment.

Monitoring metric:

- Complete research to gain a better understanding the role and function of bison for providing nutrient redistribution, prey and carrion, and microhabitats for other species (Lead = NPS).

The NPS continued a collaborative research project with Syracuse University to quantify the influence bison exert on grassland forage production. This year, intensive efforts were conducted to quantify plant community production under six controlled clipping rates compared to bison grazing on the plant community adjacent to the clipping exclosures. The data collected this summer will be analyzed and described in a progress report during the upcoming winter with a subsequent manuscript submitted for peer review.

During the 1980s and 1990s, migratory ungulates on the northern grassland of Yellowstone had tight biogeochemical linkages with plants and soil microbes that doubled the rate of net nitrogen mineralization, stimulated aboveground production by as much as 43%, and stimulated belowground productivity by 35% (Frank and McNaughton 1993). These biogeochemical linkages were largely driven by high densities of elk that deposited large quantities of nitrogen, phosphorus, and other nutrients via dung and urine. However, rates of ungulate grazing intensity and grassland nitrogen mineralization were reduced by 25-53% by 1999-2001, partially as a result of 60% fewer elk.

Since 2002, bison numbers in northern Yellowstone have more than tripled and larger groups of grazing bison could potentially have quite different effects than elk on nutrient redistribution and cycling on grasslands. This project should help elucidate the influence of recent changes in elk and bison numbers and distributions on ecosystem processes such as the spatial pattern and intensity of ungulate grazing and grassland energy and nutrient dynamics. The project will replicate previous work describing plant production on grazed and ungrazed sites sampled ten and 20 years ago (Frank and McNaughton 1993, Frank 2008) to compare the effects of grazing across multiple decades and evaluate the effects of changes in grazer densities (e.g., bison, elk) on nutrient cycling and plant productivity.

No adaptive management changes were made to the IBMP Adaptive Management Plant during the period of this report by the IBMP Partners.

Management response:

- Adapt the management responses in 2.1.a based on new monitoring, research, and management findings.

■ **OBJECTIVE 2.2—Minimize bison slaughter by employing alternative management techniques.**

Management action 2.2.a—Use slaughter only when necessary (e.g., disease suppression by selectively removing likely infectious bison); attempt to use other risk management tools first.

Monitoring metrics:

- Annually document the number, age, sex, and sero-status of bison sent to slaughter (Lead = Animal and Plant Health Inspection Service (APHIS) with the MDOL).

During 2013/2014 reporting period, hunting was used as the primary tool for removing bison from the population as per the annual operations plan. The removal objectives were to cull 600 to 800 bison from the northern boundary area using a specific formula to meet demographic objectives rather than to use selective parameters to influence brucellosis reduction objectives. Hunters removed 258 bison from the northern management area and an additional 70 from the western management area (see Management Action 1.4a). Shipments to slaughter were used as a secondary management action to supplement the hunter harvest of bison. Two hundred fifty eight bison were consigned to slaughter from the northern boundary capture facility and an additional 60 were consigned from the same facility to a research project being conducted by APHIS (Tables 12 and 13).

Table 12.—Bison shipped to slaughter from the north boundary management area during February and March 2014

Age/Sex	Positive on brucellosis serology test	Negative on brucellosis serology test	Total
Adult Male	12	1	13
Yearling Male	27	2	29
Male Calf	5	31	36
Adult Female	96	36	134
Yearling Female	0	0	0
Female Calf	5	43	48
Total	145	113	258

Table 13.—Bison consigned to APHIS from the north boundary management area during February and March 2014

Age/Sex	Positive on brucellosis serology test	Negative on brucellosis serology test	Total
Adult Male	2	4	6
Yearling Male	0	12	12
Male Calf	0	4	4
Adult Female	6		6
Yearling Female	19	10	29
Female Calf	3	0	3
Total	30	30	60

- Develop ideas for limiting Yellowstone bison abundance within a range that conserves a wild population, while reducing shipments of bison to domestic slaughter facilities (Lead = IBMP Subcommittee).

During August and September the National Park Service conducted public scoping to collect input about the issues surrounding quarantine of Yellowstone bison. A draft environmental assessment will be released in 2015.

Management responses

- Consistent with the management responses in 2.1.a, increase the use of, and allocation of resources to, management actions (e.g., hazing to habitat, hunting, quarantine, and shipping eligible bison to alternate, isolated destinations) that reduce the number of bison sent to slaughter.

Management action 2.2.b—In Zone 2 lands adjacent to YNP, emphasize management of bison as wildlife and increase the use of state and treaty hunts to manage bison numbers and demographic rates, limit the risk of brucellosis transmission to cattle, and protect human safety and property.

Monitoring metrics:

- Weekly and annual summaries of bison harvested by state and treaty hunters (Lead = MFWP).

These summaries are tallied and regularly reported. They can be found at <http://www.ibmp.info/library.php> under the Risk Management Action Reports pull down tab, labeled Harvest Report with the applicable date range.

- Complete an assessment of suitable bison habitat in the Hebgen and Gardiner basin watersheds and explore appropriate new areas with increased tolerance for bison that could accommodate additional hunting opportunities (Leads = IBMP Subcommittee).

No report made for this 2014 Annual Report.

Management responses:

- Consistent with the management responses in 2.1.a, develop a hunting strategy annually by August that includes combined harvest thresholds with state and tribal hunters that manage bison abundance, especially in areas of high brucellosis transmission risk to cattle, while ensuring the conservation of population demographics and genetic integrity. That strategy might include, for example, a goal of increasing the hunt as a percent of overall yearly bison mortality.
- Consider adjusting conservation zones and allow for increased tolerance in some areas to increase state and treaty hunting opportunities in habitat outside YNP. For example, the Eagle Creek area could be expanded to include Maiden Basin, located north of Little Trail Creek and adjacent to Bison Hunting District 385.

Management action 2.2c—Complete the quarantine feasibility study and consider an operational quarantine facility to provide a source of live, disease-free bison for tribal governments and other requesting organizations.

Monitoring metrics:

- Annual summary of bison sent to quarantine and bison transported from quarantine to suitable restoration sites (Lead = MFWP/APHIS).

No additional bison were sent to quarantine or transported to or from quarantine for the 2014 report.

- Annual summaries from bison populations restored using quarantined Yellowstone bison, including numbers, demographic rates, and implemented risk management actions (Lead = MFWP/APHIS).

Bison from the quarantine facility were provided to Ft. Peck Tribes in 2012. In 2013 they were split, with half going to the Ft. Belknap Tribes. All of these bison and their offspring will continue to be

tested for brucellosis for a five-year period. They will be managed as conservation herds by both reservations. An additional 145 brucellosis-free bison previously held by Turner Enterprises were transferred to the Fort Peck Indian Reservation in November of 2014

- Evaluate regulatory requirements and constraints for moving live bison, including adults, to suitable restoration sites (Lead = APHIS/MDOL).

Distribution of bison from the Bison Quarantine Feasibility Study (BQFS) is being conducted with necessary environmental review by MFWP.

- Conduct an assessment of the quarantine feasibility study and offer recommendations regarding whether the quarantine of bison should become operational (Lead = IBMP Subcommittee).

This is an ongoing conversation between APHIS, MDOL, and YNP. Movement of bison to new location is somewhat reliant upon the regulatory requirements and political requirements of the receiving location. Those requirements cannot be evaluated until a location is proposed.

During August and September the National Park Service conducted public scoping to collect input about the issues surrounding quarantine of Yellowstone bison. A draft environmental assessment will be released in 2015.

- Develop plans for implementing operational quarantine and transferring bison to American Indian tribes. Make recommendations regarding the goals and scale of bison restoration, including possible sites for operational quarantine facilities and suitable release sites for brucellosis-free bison that complete operational quarantine (Leads = IBMP Subcommittees and the InterTribal Buffalo Council (ITBC)).

The ITBC has conducted meetings with various tribes, federal agencies, and conservation groups to begun planning work for implementing a quarantine program. Specifically, ITBC has been working with the Fort Peck and Fort Belknap tribes to determine quarantine facility feasibilities, as well as potential recipients of bison that graduate through quarantine process. Over 30 ITBC member tribes have expressed an interest in receiving live YNP bison.

Management responses:

- Based on the National Environmental Policy Act (NEPA) and Montana Environmental Policy Act (MEPA) processes, determine if operational quarantine of bison will be implemented to restore bison outside of YNP.
- Release brucellosis-free bison from quarantine to suitable sites recommended by the Interagency/Tribal Bison Restoration Panel.

■ OBJECTIVE 3.1—Reduce the risk of disease transmission through vaccination.

Management Action 3.1.a—Continue bison vaccination under prevailing authority.

Monitoring metrics:

- Document the number of eligible bison captured and vaccinated outside of the park (Lead = MDOL/APHIS).

No bison were captured and vaccinated outside the park.

- Implement the *Monitoring Plan for Yellowstone Bison* to assess the effects and effectiveness of management actions (Lead = NPS).

The NPS implemented the bison monitoring and surveillance plan during 2013-2014 and an annual summary of accomplishments and monitoring results will be completed and posted on the NPS website. Three hundred and fifty-three bison were captured at the Stephens Creek facility during this reporting period. Of these, 318 were consigned to tribal partners for shipment directly to meat processing facilities and the remaining 35 were released. Since hunting activities were still being conducted, none of the 35 released animals was vaccinated.

- Complete an assessment of why brucellosis seroprevalence has not decreased in Yellowstone bison and recommend adaptive management adjustments and strategies that should result in a reduction in brucellosis prevalence (Lead = IBMP Subcommittee).

APHIS—We are not aware of any bison being captured or vaccinated outside the park in 2014.

MDOL— Prevalence of brucellosis in Yellowstone bison has not decreased. Tested bison continue to test seropositive at approximately 50%. Variability in seroprevalence rate of tested bison is primarily a factor of the demographic composition of tested animals with a larger proportion of older animals testing seropositive. Fewer than 350 female bison have been vaccinated since 2000 and therefore, the rate of vaccination has not been adequate to affect bison herd seroprevalence.

NPS—The subcommittee structure was largely put on hold following the Partners receiving the recommendations of the Citizens' Working Group in late 2011. Thus the subcommittee responsible for reporting on this metric, as a working entity, has nothing to report at this time.

Management responses:

- Consistent with the management responses in 2.1.a, vaccinate and release eligible bison (i.e., calves, yearlings, non-pregnant females) captured near the boundary of YNP after state and treaty hunting seasons end each winter and spring.

Management Action 3.1.b—Complete EIS processes (MEPA/NEPA) for remote delivery vaccination of bison and use the outcomes to inform adaptive management.

Monitoring metrics:

- Complete the NEPA process and reach a decision on whether remote delivery vaccination of bison can/will be employed inside YNP (Lead = NPS).

NPS—The NPS completed the NEPA process by issuing a record of decision on 3 March 2014. The NPS concluded that the implementation of park-wide remote vaccination at this time would likely

not achieve desired results and could have unintended adverse effects to the bison population and visitor experience and, therefore, selected the No Action alternative in the Record of Decision. The NPS received 9,410 individual comments on the Draft EIS and the majority of respondents suggested that the projected cost of remote vaccination (\$300,000 per year for at least 30 years) was too expensive to justify the benefits, especially given the substantial uncertainties. A Bison/Brucellosis Science Panel of disease experts convened in 2013 by the NPS and Montana Fish, Wildlife & Parks indicated that “The best available data do not support that vaccination of wild bison with currently available vaccines will be effective at suppressing brucellosis to a level that changes bison management strategies under the Interagency Bison Management Plan.”

MDOL response to Science Panel recommendations—The recommendations were limited to the areas of the Interagency Bison Management Panel in place at that time (February 2013) and the management practices within those areas. The recommendations did not address the impact of brucellosis on relocation of bison outside the management areas as of February 2013.

Management responses:

- Based on the MEPA process, determine if remote delivery vaccination of bison can/will be employed outside of YNP (Lead = MDOL).

MDOL is considering further environmental review on remote delivery of vaccine to bison in the state of Montana.

Management Action 3.1.c—Test and vaccinate cattle.

Monitoring metrics:

- By June 15, determine and document the vaccination status of all “at-risk” cattle in or coming into the Hebgen and Gardiner basins (Leads = MDOL and APHIS).

Vaccination is required in the entirety of the four counties in which Montana’s DSA is located (Beaverhead, Madison, Gallatin, and Park). All eligible cattle that reside or seasonally graze in the Hebgen and Gardiner basins are required to be vaccinated.

Management responses:

- Vaccinate all calves, with booster vaccination of adults as deemed appropriate by the Montana State Veterinarian.
- Use existing regulations and provide incentives to ensure 100% of adult cattle in the Hebgen and Gardiner basins are calf hood and booster vaccinated.
- For Zone 2, vaccination is mandatory. If the vaccination status of adult cattle is not 100%, then undertake vaccination or other to-be-determined actions to achieve 100% status as determined by the Montana State Veterinarian.

■ **OBJECTIVE 3.2—Prevent cattle/bison interactions, with an emphasis on the likely bison birthing and abortion period each year.**

Management action 3.2.a—Use spatial and temporal separation and hazing to prevent cattle/bison interactions.

Monitoring metrics:

- Document the minimum temporal separation and space between bison and cattle during February through June (Lead = MDOL).

No events of cattle commingling with bison were reported for this management season.

Adequate temporal separation is being maintained according to research performed on environmental persistence of *Brucella abortus*, and fetal disappearance (Aune et al. 2011).

- Document the number of times bison are successfully or unsuccessfully moved to create separation in time and space from cattle (Lead = MDOL).

No events of cattle commingling with bison were reported for this management season.

- Annually document the amount of strategic fencing erected to minimize bison/cattle interactions (Leads = MDOL, MFWP, and USFS).

No change from the 2013. No new fence or acres were provided by MDOL

Management responses:

- As necessary, institute bison hazing, capture, or lethal removal to prevent bison from entering cattle-occupied properties.
- Adapt temporal separation guidelines for bison and cattle during spring and summer based on research findings from *Brucella abortus* persistence and viability research.
- Consistent with the management responses in 1.1.a, 1.1.b, and 2.1.a, any bison found within areas that will be occupied by cattle within 20 days will be hazed, captured, or lethally removed.

Management action 3.2.b—Evaluate the use of limited, strategically placed fencing when and where it could effectively create separation between domestic livestock and bison, and not create a major movement barrier to other wildlife.

Monitoring metrics:

- Document the number of additional acres of habitat made available for bison as a result of strategic fencing (Lead = MFWP/USFS/MDOL).

No change from the 2013. No new fence or acres were provided by MDOL.

- Document fence damage or the number of times fencing fails to inhibit bison trespass on private property occupied by cattle (Lead = MDOL).

Damage to private property is referred to MFWP.

Management responses:

- Fencing to provide additional bison habitat will not create a movement barrier to other wildlife or detract from or preclude other land management priorities.

- Any incidence of fence failure requires that action be taken to repair and/or enhance the effectiveness of the fence.

Management Action 3.2.c—Haze bison from the Hebgen basin into YNP with a target date of May 15.

Monitoring metrics:

- Consistent with management action 1.1.a, assess the prevailing environmental conditions and reach consensus by May 13 on a step-wise, integrated plan for the end-of-winter return of bison into YNP from Zone 2 (Lead = MDOL/NPS).

MDOL report

Groups of several dozen bison had to be repeatedly hazed through July 2. On two occasions, agency operations needed to be terminated and bison were left near the Yellowstone National Park boundary. On June 5, a haze ended when NPS personnel directed to leave 80 bison from the South Fork and Bakers Hole areas at the sloughs at Cougar Meadows. One June 11, NPS personnel did not allow a haze of 21 bison that began on Whiskey Bay to continue past Barns Hole, despite recommendations from MDOL to continue to 7-Mile Bridge (Table 14).

Table 14.—Bison in the Hebgen basin after May 15.

Date	No. of Bison	Start Location	Stop Location
5/16/2014	266	Greater Horse Butte	No operation
5/16/2014	52	Narrows	No operation
5/19/2014	2	Madison River North "flats"	4-Mile Marker on Madison Arm Rd
5/19/2014	69	Madison River South "flats"	4-Mile Marker on Madison Arm Rd
5/19/2014	63	South Fork Zone 3	4-Mile Marker on Madison Arm Rd
5/20/2014	80	Madison River South "flats"	Baker's Hole inside YNP
5/20/2014	80	South Fork Zone 3	Baker's Hole inside YNP
5/21/2014	194	Greater Horse Butte	Baker's Hole, 7 Mile Meadows
5/22/2014	149	Duck Creek	7 Mile Meadows
5/23/2014	2	South Fork Zone 3 – no operation	No operation
5/23/2014	61	Duck Creek	7 Mile Bridge
5/28/2014	99	Greater Horse Butte	E end of Riverside*/Wildlife Lookout
5/29/2014	6	Red Canyon	YNP Boundary/Duck Creek
6/4/2014	2	South Fork Zone 3 – no operation	No operation
6/5/2014	3	South Fork Zone 3	Sloughs at Cougar Meadows*
6/5/2014	14	Madison River South "flats"	Sloughs at Cougar Meadows*
6/5/2014	65	Madison River North "flats"	Sloughs at Cougar Meadows*
6/10/2014	80	Madison River South "flats"	2 Ribbons Lookout YNP
6/11/2014	21	Greater Horse Butte	Barns Hole*
6/23/2014	20	Duck Creek	Duck Creek**
7/2/2014	18	Madison River North "flats"	Bakers Hole

*Hazing operations were halted at the direction of NPS officials.

**Hazing operation failed due to lack of cooperation with private property owner.

NPS report

The IBMP agencies began discussing potential haze-back dates in April. The above-average snow pack that accumulated over the winter was followed by a rather quick melt out during the spring, with the West Yellowstone SNO-TEL station recording zero snow on the ground on 4 May 2014. Thus, the agencies agreed to begin the operations to haze bison back into the park on 19 May.

- Annually document the timing of the end-of-winter return of bison into YNP, the number of bison returned, prevailing environmental conditions, and success or lack thereof of hazing bison and getting them to remain in the park (Lead = MDOL/NPS)

MDOL report

Please see Appendix B, Table B1 for numbers of bison outside YELL with related hazing operations in the Western Management area during the 2013-2014 management season. Field operations began on April 27 due to a Zone 3 incursion. Seventeen separate operations occurred over the following 65 days. Operations to begin the end-of-winter return of bison to YNP began May 19th.

Groups of several dozen bison had to be repeatedly hazed through July 2 due to lack of permission from NPS to push bison to the interior of YELL. See MDOL report in Management Action 3.2c above.

NPS report

The general strategy this year was for the agencies to move bison from Montana into Yellowstone National Park and leave them at the Baker's Hole to Barns Hole area along the Madison River; allow bison to overwinter in this valley; and continue herding them upstream the following day. On some occasions a subsequent hazing was determined to be unnecessary. Observations made on 19 May noted that few (4) bison were observed in the Madison River corridor from Madison Junction to the bison ford near 7-mile Bridge meadow. All of the radio-marked bison that had moved into the river corridor the previous week had returned to Montana outside the Park over the weekend.

- *Results of week 1.*—About 450 yearling or older bison were in the west side management area, both inside and outside the park. Agencies moved about 250 yearling or older bison and many newborn calves into the park. Another 70 to 100 bison moved into the park on their own. Most of these bison moved from 7-mile Bridge up to Madison Junction on their own, with as many as 100 moving up to Fountain Flats or beyond during this week. By Friday, the 7-mile Bridge meadow was flooded.
 - *Results of week 2.*—More than 100 yearling or older bison remained in the west boundary management area early this week. Agencies moved about 100 bison with many newborn calves into the park from the Horse Butte area. Most of these bison moved up to Madison Junction after they were released east of Barns Hole.
 - *Results of week 3.*—About 100 yearling or older bison remained in the Madison River corridor by early this week. All bison observed at Madison Junction early in the week returned to Montana (16% to areas outside the park) and were subsequently hazed back in to the park.
 - *Results of week 4.*—About 100 yearling or older bison remained in the Madison River corridor early this week. Approximately 50% of these bison began the week out of the park in Montana and were moved back in to the park. The following day, about 20% of the bison were again out of the park in Montana and again moved back into the park.
 - *Results of week 5.*—No hazing actions occurred this week. Based on observations during aerial surveys, it appeared that about 20 bison moved out of the area and back to Hayden Valley on their own, leaving about 80 yearling or older bison with some newborn calves in the west side management area (about 25% were observed in Montana outside the park).
 - *Results of week 6.*—About 85 yearling or older bison were in the Madison River corridor this week. Early in the week, about 75% of those bison moved to the Firehole Geyser Basin on their own. The remaining 25%, observed in Montana outside the park, were hazed back inside the park.
 - *Results of week 7.*—About 17 yearling or older bison and 10 newborn calves remained in the Madison River corridor this week. There was no evidence of any pregnant females in this group. The group was located outside the park and brought back into the park with two hazing efforts. Subsequent monitoring did not detect this group and we suspect they moved to Hayden Valley to participate in the breeding season activities.
- Annually review and apply *Brucella abortus* persistence information, private land cattle turn-on dates, and applicable research results to determine the effects of haze-to-habitat actions on bison and their effectiveness at preventing the commingling of bison and cattle (Lead = MDOL).

No cattle commingling events were reported in 2014. (NPS comment—There are no cattle commingling events to report because of the management actions taken between 27 April and 19 May and the fact that there were no time frame overlaps in cattle and bison distribution in those areas.)

Management responses:

- The actual beginning date for hazing bison will be consistent with the management responses in 1.1.a and based on weather (e.g., green-up, snow pack), cattle turn-out dates, and consideration of the natural migration by bison back into the park.
- Step-wise, coordinated, interagency hazing will be used, as needed, to minimize repeated hazing into situations where snow or other variables will prevent bison occupancy.

Management Action 3.2.d—Haze bison from the Gardiner basin into YNP with a target date of May 1.

Monitoring metrics:

- Consistent with management action 1.1.b, assess the prevailing environmental conditions and reach consensus by April 15 on a step-wise, integrated plan for the end-of-winter return of bison into YNP from Zone 2 (Lead = MDOL/NPS).

MDOL report

Planning for return of bison to Yellowstone National Park in the northern management area began during the week of April 21.

NPS report

Hazing to return bison to YELL by 1 May was primarily unnecessary following all of the management hazing that occurred in early April to manage bison movements along the conservation area boundary.

- Annually document the timing of the end-of-winter return of bison into YNP, the number of bison returned, prevailing environmental conditions, and success or lack thereof of hazing bison and getting them to remain in the park (Lead = MDOL/NPS)

MDOL report

Table 15 shows a complete list of numbers and locations of bison in the Northern Management area for the 2013-2014 management season. Bison began occupying the Zone 2 area of the Gardiner Basin in late October, 2013, and sporadically used the area until late-May. The maximum number of bison outside the park at one time was 500 in late February.

Groups of several dozen bison had to be repeatedly hazed through June 3 due to lack of permission from NPS to push bison to the interior of YELL.

Table 15. —Bison in the Gardiner Basin after May 1

Date	Number of Bison	Start Location	Stop Location
5/2/2014	4	Gardiner Basin Zone 2	Power line YNP
5/2/2014	1	N of Trail Creek/E of River	Power line YNP
5/2/2014	7	Steven's Creek to Boundary	Power line YNP
5/2/2014	5	Zone 2 Private Property	Power line YNP
5/8/2014	6	Zone 2 Private Property – No operation	No operation
5/9/2014	5	Gardiner Basin Zone 2	
5/13/2014	12	Eagle Creek - No operation	No operation
5/29/2014	3	Zone 2 Private Property	

NPS report

Less than 10 bison remained in Zone 2 by 28 April.

- Annually review and apply *Brucella abortus* persistence information, private land cattle turn-on dates, and applicable research results to determine the effects of haze-to-habitat actions on bison and their effectiveness at preventing the commingling of bison and cattle (Lead = MDOL).

Cattle turn-on dates were previously described for Management Action 1.3a. Bison were observed outside YELL as early as the middle of December, but the majority of bison were outside the park in February and March. There were six operations that occurred in February-March to remove bison from private property where livestock were present year round (Aune. et al 2011).

Management responses:

- The actual beginning date for hazing bison will be consistent with the management responses in 1.1.b and based on weather (e.g., green-up, snow pack), cattle turn-out dates, and consideration of the natural migration by bison back into the park.
- Step-wise, coordinated, interagency hazing will be used, as needed, to minimize repeated hazing into situations where snow or other variables will prevent bison occupancy.

Management Action 3.2.e—Haze bison away from tolerance boundaries when conditions are conducive to breach. The goal is to reduce the opportunity for bison to breach the tolerance zone boundaries by employing management actions at the most efficient trigger points in consideration of overall conditions and risks.

Monitoring metrics:

- Document the number of times and numbers of bison are successfully or unsuccessfully moved away from tolerance boundaries.

Table 16 lists operations were bison approached non-tolerance areas and were moved to prevent breaches into Zone 3. These operations were either to remove bison from private property or to move them away from tolerance boundaries.

Table 16.—Showing bison hazed because they approached Zone 3.

Date	Head	Type	Location
3/25/2014	70	mixed bison	N of Trail Creek/E of River
3/27/2014	16	mixed bison	N of Trail Creek/E of River
4/11/2014	66	mixed bison	N of Trail Creek/E of River
4/12/2014	15	mixed bison	N of Trail Creek/E of River
4/25/2014	1	mixed bison	N of Trail Creek/E of River
4/29/2014	8	mixed bison	Zone 2 Private Property
5/21/2014	194	mixed bison	Greater Horse Butte
5/22/2014	149	mixed bison	Duck Creek
5/23/2014	61	mixed bison	Duck Creek
5/28/2014	99	mixed bison	Greater Horse Butte
5/29/2014	6	mixed bison	Red Canyon
6/5/2014	14	mixed bison	Madison River South "flats"
6/5/2014	65	mixed bison	Madison River North "flats"
6/10/2014	80	mixed bison	Madison River South "flats"
6/11/2014	21	mixed bison	Greater Horse Butte
6/23/2014	20	mixed bison	Duck Creek
7/2/2014	18	mixed bison	Madison River North "flats"

- Document occurrences of bison entering non-tolerance areas.

Table 17 shows breaches into Zone 3. Five incidents of up to 80 bison were recorded in Zone 3 between May 15 and June 5.

Table 17.—Occurrences of bison entering non-tolerance areas.

Date	Number of Bison	Type	Location	Operation
10/15/2013	3	bulls	South Fork Zone 3	No
10/17/2013	3	bulls	South Fork Zone 3	No
11/9/2013	46	mixed bison	South Fork Zone 3	Yes
11/10/2013	46	mixed bison	South Fork Zone 3	Yes
4/3/2014	136	mixed bison	Yankee Jim Canyon Zone 3	Yes
4/4/2014	65	mixed bison	Yankee Jim Canyon Zone 3	Yes
4/5/2014	365	mixed bison	Yankee Jim Canyon Zone 3	Yes
4/7/2014	3	mixed bison	Yankee Jim Canyon Zone 3	Yes
4/25/2014	7	bulls	South Fork Zone 3	No
4/27/2014	20	mixed bison	South Fork Zone 3	Yes
4/28/2014	53	mixed bison	South Fork Zone 3	No
4/29/2014	20	mixed bison	South Fork Zone 3	No
4/30/2014	41	mixed bison	South Fork Zone 3	No

Table 17.—Occurrences of bison entering non-tolerance areas.

Date	Number of Bison	Type	Location	Operation
5/1/2014	31	mixed bison	South Fork Zone 3	No
5/2/2014	41	mixed bison	South Fork Zone 3	No
5/5/2014	57	mixed bison	South Fork Zone 3	Yes
5/6/2014	111	mixed bison	South Fork Zone 3	Yes
5/8/2014	12	mixed bison	South Fork Zone 3	Yes
5/9/2014	71	mixed bison	South Fork Zone 3	Yes
5/10/2014	21	mixed bison	South Fork Zone 3	No
5/12/2014	75	mixed bison	South Fork Zone 3	Yes
5/14/2014	20	mixed bison	South Fork Zone 3	Yes
5/19/2014	63	mixed bison	South Fork Zone 3	Yes
5/20/2014	80	mixed bison	South Fork Zone 3	Yes
5/23/2014	2	mixed bison	South Fork Zone 3	No
6/4/2014	2	mixed bison	South Fork Zone 3	No
6/5/2014	3	mixed bison	South Fork Zone 3	Yes

Management responses:

- If bison approach tolerance boundaries, then the State Veterinarian will evaluate the site specific circumstances (e.g. number of bison, bison behavior, weather, snowpack, time of year, etc.) to determine what management actions are necessary to prevent the further movement of bison out of Zone 2 into Zone 3.

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ANNUAL PROGRESS REPORT ON CITIZENS' WORKING GROUP RECOMMENDATIONS

The following section provides the third annual progress report on a set of recommendations presented to the IBMP Partners by a Citizens' Working Group (CWG). The 44 recommendations, which came as a result of ten months of meetings, were presented to the Partners at the November 30, 2011 IBMP meeting. The Partners discussed and sometimes lumped, then adopted or rejected each recommendation during meetings on February 24 and May 1, 2012. Because of this process, the report below does not flow sequentially in a numeric sense, but rather describes only those recommendations as adopted.

For the report that follows, in some cases reasoning for Partner decisions on the CWG recommendation is shown in gray out for clarity. In other cases, readers seeking clarification are referred to the IBMP meeting notes archive (<http://ibmp.info/meetings.php>) for detail on Partner decisions regarding CWG recommendations. For this report, we show only Partner efforts for 2014. Progress reports on the CWG recommendations for previous years can be found in those annual reports at the IBMP library on-line (<http://www.ibmp.info/library.php>).

Habitat Effectiveness / Habitat Expansion

* *Habitat Recommendation 1.—Identify public lands that could/should be open to bison year-round in accordance with state and federal law. (Lead = MFWP/USFS)*

Partner decision.—Accept

Discussion.—This work will be carried out under the State of MT Bison Management Plan, which is in progress and expected to be complete by 2015. The scoping process is expected to start soon.

2013 2012 Report

- CWG habitat recommendations—reference habitat subcommittee responses/comments (table from summary report of 3/9/12) and also summarize on-going efforts (MFWP Environmental Assessments [EAs]).
- CWG Population recommendation #3 regarding use of fire, fertilizers or other habitat management—reference population subcommittee responses and comments.
- Gardiner and Hebgen Lake basins dependent upon 2011 adaptive management changes and current 2012 environmental assessment regarding proposed adaptive management changes in the Hebgen Basin, Taylor Fork, and Cabin Creek.

Report

- Habitat group began discussing habitat management options in Gardiner Basin. Areas off of GNF fall into broader purview of state bison management planning.

2014 Report

- Same as the 2013 report with the exception of the ongoing exploration of expanded tolerance on the west side.
- Areas identified to-date on the Custer-Gallatin National Forest are included in state MEPA for possible expansion west of YNP.

* *Habitat Recommendation 2.—Systematically identify suitable, available habitat outside Yellowstone National Park in the Greater Yellowstone Area (i.e., Federal, State and Private lands). (Lead = MFWP, USFS)*

2012 Report

- Gardiner and Hebgen Lake basins dependent upon 2011 adaptive management changes and current 2012 environmental assessment regarding proposed adaptive management changes in the Hebgen Basin, Taylor Fork, and Cabin Creek.

2013 Report

- Areas identified to-date on GNF lands are included in State MEPA for potential expansion west of YNP.

2014 Report

- Same as the 2013 report with the exception of the ongoing exploration of expanded tolerance on the west side.

- Habitat group continued discussing habitat management options in the Gardiner Basin, and entered into an agreement with MSU to begin evaluating baseline habitat conditions.

** Habitat Recommendation 3ai-3aiii.—Develop and implement strategies that manage bison as wildlife on those lands, specifically:*

- a) Hebgen Basin
 - i. Designate Horse Butte Peninsula ~~and the Flats~~ as year-round bison habitat by May 2012 following an adequate public process for this management change. (Lead = MFWP/MDOL)
 - ~~ii. By the end of 2012, interview and map landowners to identify where bison are welcome, unwelcome, which landowners are on the fence and what their reservations are.~~
 - iii. Investigate and come to conclusion on feasibility of fencing or acceptable alternatives on the Flats to prevent co-mingling with private livestock. (Lead = MFWP/MDOL)

Partner decision.—(3ai) Move to rework

Discussion.—The Partners affirmed that their intention is that bison be allowed year-round on Horse Butte but will need to go through public process before implementing. Recommendation not accepted due to concerns about the Flats.

Partner decision.—(3aii) Reject

Discussion.—Private property owner concerns drive Partner decision. CWG states that one of their goals is to clarify/improve inaccuracies in current maps (e.g., maps label areas have no tolerance for bison when indeed they do).

Partner decision.—(3aiii) Reject as is, but Accept as rewritten to say, “Investigate and come to conclusion on feasibility of fencing or acceptable alternatives on the Flats to prevent co-mingling with private livestock.”

Discussion.—Subcommittees concern that due to heavy snow loads the ability to use fencing successfully in the Hebgen Basin is less certain than in the Gardner Basin.

From May and 2, 2012 meeting after clarification by CWG:

CWG: We would like bison to be able to use the Flats for the entire year.

Partners: We have not been successful managing bison movement on the Madison Arm. Bison do not stay east of the South Fork of the Madison; instead they go to the west side, at least for the last couple of years.

Partners: We prefer step-wise effort, starting with showing success of year around tolerance on Horse Butte and then potentially moving forward from there. Decision = accept year round tolerance of mixed groups on Horse Butte. MDOL and MFWP will take lead on an environmental review and determine final scope of the decision.

2012 Report

- 3ai).—Pending environmental assessment and IBMP management final decision. As of September 2012, MDOL and MFWP are in the process of conducting an environmental review for additional tolerance in this area.
- 3aiii).—In process. As of October 2012, MDOL, the Defenders of Wildlife and two landowners have committed to construct additional fencing in a South Fork area.

2013 Report

- 3ai).—A decision on an environmental assessment of expanding bison habitat is pending.
- 3aiii).—IBMP Partners discussed a fence on US Forest Service lands adjacent to the West Yellowstone airport that would direct bison exiting YNP to move north and northwest onto Horse Butte rather than on to the flats, South Fork, and potentially into Idaho. THE USFS had concerns about construction of this fence because of (a) potential impediment to the movement of other wildlife, (b) uncertainty about who the owner and responsible party would be to install and maintain the fence, and (c) implications of the fence for other Forest users.

2014 Report

- 3ai).—This is also considered part of the ongoing exploration of expanded tolerance. A decision on an environmental assessment of expanding bison habitat is pending.
- 3aiii).—This is also considered part of the ongoing exploration of expanded tolerance.

* *Habitat Recommendation 3bi-3biii.—Develop and implement strategies that manage bison as wildlife on those lands, specifically:*

b) Gardiner Basin

- i. By the end of 2012, interview and map landowners to identify where bison are welcome, unwelcome, which landowners are on the fence and what their reservations are. (NGOs with MFWP support)
- ii. By the end of 2013, implement adequate fencing or acceptable alternatives. (NGOs with MFWP support)
- iii. Following the interview process and implementation of fencing/alternative strategies, consider designating the Gardiner Basin year-round habitat using an adequate public process. (Lead = none pending decision on State of MT Hebgen Basin EA decision)

Partner decision.—(3bi) Accept

Discussion.—Subcommittees state this work is already complete.

Partner decision.—(3bii) Accept

Discussion.—Subcommittee accepts but considers of low priority.

Partner decision.—(3biii) Move to rework

Discussion.—Subcommittee statement that bison will not use the Gardiner Basin year-round. CWG counter that we haven't let them try, so how do we know? Obstacles identified for making decision: results from (1) State of MT EA on and pending legal actions against Gardner Basin adaptive management changes. Partners note that this recommendation hits at the very issue of current lawsuits and thus they cannot recommend on it until the lawsuits are resolved.

From May 1 and 2, 2012 meeting after clarification by CWG: Partners: 3biii will be kept alive pending State of MT Hebgen Basin EA outcome. >>

2012 Report

- 3bi).—NGO effort shifted to working with individual landowners interested in strategic fencing. NGOs are continuing their work with interested landowners.
- 3bii).—In process.
- 3biii).—NA.

2013 Report

- 3bi) and 3bii)—Working with MFWP, five NGOS—the Defenders of Wildlife, the Greater Yellowstone Coalition, the Natural Resources Defense Council, the Sierra Club, and the Horse Butte Neighbors of Buffalo—have created a program called the “Yellowstone Bison Coexistence Project”. The groups pay half the cost of fencing projects (up to \$1,000) that will help landowners coexist with bison. The groups have contributed more than \$40,000 to date to the project and around 20 project have been completed or are in progress.
- 3biii).—NA for this reporting period; still pending decision on State of MT Hebgen Basin EA decision.

2014 Report

- 3bi).—No update.
- 3bii).—In process.
- 3biii).—Still pending decision on State of MT Hebgen Basin EA decision. Endorsed by MFWP; on hold at MBOL.

* *Habitat Recommendation 3di-3dii.—Develop and implement strategies that manage bison as wildlife on those lands, specifically:*

d) Upper Gallatin/Taylor Fork/Cabin Creek/Porcupine/Buffalo Horn Creek, etc.

- i. Begin a public process to evaluate opportunities for reintroduction and management of bison in this area, including within Yellowstone National Park. (Lead = MFWP, USFS, MDOL)

- ii. Start work to amend/alter State and Federal Management Plans and other decisions to account for the presence of bison on the landscape and take responsibility/be accountable for successfully implementing those plans regarding bison. (Lead = MFWP)

Partner decision.—(3di) Accept.

Discussion.—Recognized need to clarify the Zones (1,2,3) of the ROD.

Partner decision.—(3dii) Accept.

Discussion.—NA.

2012 Report

- 3di).—In process. As of September 2012, MDOL and MFWP are in the process of conducting an environmental review for additional tolerance in this area.
- 3dii).—In process.

2013 Report

- 3di).—In process, as noted for 2012. A decision on an environmental assessment of expanding bison habitat is pending.
- 3dii).—In process, as noted for 2012.

2014 Report

- 3di).—Same as the 2013 report with the exception of the ongoing exploration of expanded tolerance on the west side. A decision on an environmental assessment of bison management is pending. Relevant documents can be found at <http://fwp.mt.gov/fishAndWildlife/management/bison/>.
- 3dii).—Ongoing effort. No change in 2014.

Population Management

** Population Management Recommendation 3*.—(a) Make hunting a bigger component of bison management and consider different seasons or other opportunities to increase the impact of hunting. (Lead = MFWP, NPT, CSKT) (b) Outside the Park, the main means for controlling bison abundance and distribution should be state-administered and tribal hunting. Montana Fish, Wildlife and Parks should test new methods for dispersing hunting in time and space. (Lead = MFWP, NPT, CSKT) (c) A late-winter hunt for yearlings only should be tested for hunter interest and public acceptance. (Lead = MFWP, NPT, CSKT) (d) “Depredation” hunts should be available throughout the year and used to manage bison distribution. (Lead = MFWP, NPT, CSKT) (e) Other means of population control should include fencing bison out of areas where they are not welcome (Lead = MDOL), and (f) using fire, fertilizers or other habitat management to attract bison to areas where they are welcome (Lead = USFS). CWG desire: Lethal removal by agency personnel should be a last resort.*

**Note: labels (a) – (f) added by subcommittees*

Partner decision.—(3b [note two parts above]) Accept.

Discussion.—In progress. However, caveat that current ROD and court settlement established seroprevalence reduction as an IBMP priority, and hunting alone will not accomplish this goal, hence lethal removal of infectious animals remains an IBMP tool.²

2012 Report

- 3a).—In process. MFWP continues to collaborate with four aboriginal treaty hunting tribes to increase bison harvest through hunting. MFWP Commission approved game damage bison hunt roster process to further address bison hunting management tools outside the general season framework and hunt areas.
- 3b).—MFWP continues to collaborate with four aboriginal treaty hunting tribes to increase bison harvest through hunting.
- 3c).—MFWP continues to collaborate with four aboriginal treaty hunting tribes to increase bison harvest through hunting.

² This sentence removed per discussion at 050112 IBMP meeting. See notes for that meeting for explanation.

- 3d).—MFWP Commission approved game damage bison hunt roster process to further address bison hunting management tools outside the general season framework and hunt areas.
- 3e).—Nothing to report for this year.
- 3f).—Nothing to report for this year.

2013 Report

- 3a).—Currently MFWP has increased the total number of bison permits available for the 2014/2015 season.
- 3b).—MFWP has made season timeframe adjustments to increase the hunt opportunity for each hunt area.
- 3c).—MFWP has adjusted the current cow calf roster into a bison roster. This roster may be used to address additional hunt opportunities and response to damage or management situations as they arise.
- 3d).—MFWP has adjusted the current cow calf roster into a bison roster. This roster may be used to address additional hunt opportunities and response to damage or management situations as they arise.
- 3e).—No report made for 2013.
- 3f).—See habitat recommendation number 1 above.

2014 Report

- 3a).—MFWP increased the number of state hunters in 2014 from 50 total guaranteed licenses to 80. MFWP also increased its flexibility to utilize a roster of 200+ additional hunters in order to address large out-migrations or tolerance-area breaches.
- 3b).—Ongoing efforts of all harvest managers to adjust hunting pressure to maximize use of bison on the landscape.
- 3c).—Under consideration. This is possible under the flexibility of the bison roster implementation.
- 3d).—Implemented.
- 3e).—No report made for 2014.
- 3f).—No report made for 2014.

* *Population Management Recommendation 4.—Montana Fish, Wildlife and Parks and the Tribes hunting Yellowstone bison should work more closely together to set collective hunt targets and to document the hunting success numbers. (Lead = MFWP, NPT, CSKT)*

Partner decision.—Accept.

Discussion.—Recognized hesitancy on behalf of tribes to commit to an absolute hunting limit—would they commit to one? Response—yes but should be based on population, population goals, and what is available to tribal hunters. CWG request that 1) Partners switch emphasis from how many do we take to how many do we leave, and 2) recognition that hunting changes behavior (e.g., migration patterns, where new groups might establish themselves).

2012 Report

- In process. MFWP continues to collaborate with four aboriginal treaty hunting tribes to increase bison harvest through hunting. This collaboration includes discussion of population goals.

2013 Report

- Please refer to harvest numbers provided in the Annual Report (see Management Actions 1.4.A and 2.2.B).
- MFWP continues to work closely with all aboriginal hunting tribes to address harvest goals, as well as to monitor hunt activities and success.

2014 Report

- Implemented.

* *Population Management Recommendation 5a-5f*.—Agree on and establish a target population range that is biologically and ecologically acceptable and accounts for a variety of public interests. As Interagency Bison Management Partners, agree on criteria for evaluating and determining a population range and appropriate management tools, such as: (Lead = Partners)

- a). Winter range outside the Park (target population range could change to reflect changes in habitat availability),
- b). Risk factors-
- c). Individual agency management mandates, constraints and responsibilities (such as the National Park Service's mandate to manage its resources unimpaired for future generation and its natural regulation policy),
- d). Genetic diversity, population structure and demographics, reproduction, and distribution,
- e.) Realistic opportunity for addressing private land owners' concerns, and
- f). Hunting and wildlife viewing opportunities.

Partner decision.—(5a-f) Accept as rewritten to say, "The Partners will use 5(a-f) in future population number determination using 3000 as a guideline, not a target."

Discussion.—Partners—Population target of 3000 exists in the ROD and took into account factors listed. CWG feels that 1) no one knows what 3000 means and how to adaptively manage (i.e., change) that goal (thus, the request for a population range), 2) concern over 3000 is the genetic brink and thus a great danger for long-term bison viability, and 3) that much has changed since the completion of the ROD.

From May 1 and 2, 2012 meeting after clarification by CWG: Partners: We have interest in this concept and support a peer reviewed study of literature of bison population and genetic viability. We would be interested in seeing the work completed by an unbiased group made up of members of both conservation and livestock communities. Decision: Yes, Partners will support this recommendation as they reworded it previously, but additionally support the idea of a literature review as noted. The Partners explicitly stated that they were supporting a literature review, not an "analysis" as described in the CWG note shown directly above.

2012 Report

- 5(a).—The potential for winter range outside the Park is being explored in an environmental analysis (EA; carried out under the Montana Environmental Policy Act) looking at year-round bison tolerance on the Taylor Fork, upper Gallatin, and broader Hebgen Basin.
- 5(b).—Risk factors are under consideration as part of the EA.
- 5(c).—NPS staff and colleagues published a scientific article (Plumb et al. 2009) in the journal *Biological Conservation* summarizing analyses of the population range that should satisfy the collective long-term interests of stakeholders as a balance between the park's forage base, conservation of the genetic integrity of the bison population, protection of their migratory tendencies, brucellosis risk management, and other societal constraints related to management of bison. A summary of these findings was included in the 2011 IBMP annual report.
- 5(d).—NPS staff and colleagues published a scientific article (Pérez-Figueroa et al. 2012) that evaluated the effects of variance in male reproductive success and annual variations in population size due to culling on the maintenance of genetic diversity in Yellowstone bison. Maintenance of 95% of allelic diversity is likely to be achieved with a fluctuating population size that increases to greater than 3,500 bison and averages around 3,000 bison. A summary of these findings was included in the 2011 IBMP annual report.
- 5(e).—Landowner concerns were documented at scoping meetings held August 20th in West Yellowstone, and August 21st in Gardiner. In addition, Partners met with landowners and listened to their concerns during a day-long tour of the Taylor Fork Basin.
- 5(f).—Nothing to report.

2013 Report

- 5(a).—The potential for winter range outside the Park is being explored in an environmental analysis (EA; carried out under the Montana Environmental Policy Act) looking at year-round bison tolerance on the Taylor Fork, upper Gallatin, and broader Hebgen Basin.
- 5(b).—Risk factors are under consideration as part of the EA.
- 5(c).—No report made for 2013.

- 5(d).—No report made for 2013.
- 5(e).—Landowner concerns were heard at public testimony at each IBMP meeting, as well as heard and discussed at a field trip on November 20th (turned out to be an inside meeting due to inclement weather in Gardiner).
- 5(f).—No report made for 2013.

2014 Report

- 5a).—No report made for 2014.
- 5b).—No report made for 2014.
- 5c).—No report made for 2014.
- 5d).—No report made for 2014.
- 5e).— Landowner concerns were heard at public testimony at each IBMP meeting, as well as heard and discussed at a field trip hosted by NPT and USFS on November 19th in the Gardiner Basin with a focus on the Beattie Gulch, Eagle Creek, and Cutler Meadows areas.
- 5f).—No report made for 2014.

* *Population Management Recommendation 6a-6d.—When bison have to be removed because of high migration numbers, management constraints, safety, etc., the priorities should be (in order):*

- a). Hunting outside the park, (Lead = MFWP)
- ~~b). Moving them to nearby appropriate available lands,~~
- c). Translocation from the Yellowstone area (capture, quarantine, transport and release), and (Lead = NPS, MDOL, APHIS)
- d). Lethal removal by managing agencies. (Lead = MDOL)

Partner decision.—(6a) Accept.

Discussion.—In progress. Tribes would like to see hunting available every year and a move away from the idea that moving bison is necessary (i.e., hunting could be the main population control).

Partner decision.—(6b) Reject.

Discussion.—Moving (hazing) and translocation (capture and move) are recognized to not be effective tools for long-term population management. They are, however, in the short term a tool managers need at their disposal.

Partner decision.—(6c) Accept (note: post quarantine bison only).

Discussion.—NA.

Partner decision.—(6d) Accept (note: same note as in 3b discussion above applies regarding seroprevalence)

Discussion.—NA.

2012 Report

- The NPS developed a management plan recommending the removal of approximately 450 bison during winter 2013 through public and tribal hunting in Montana, transport of likely infectious bison to slaughter, and the transfer of bison to quarantine or research facilities. The primary management tool used to reduce bison numbers is public and treaty harvests in Montana. However, additional bison may be captured at boundary facilities and removed from the population after general hunting seasons end in mid-February if necessary to reach removal objectives for that year. These bison may be selectively culled (shipment to slaughter) to reduce the proportion of infectious bison, transferred to research facilities, or transferred to quarantine facilities for further testing and eventual release of brucellosis-free animals. In September 2012, the NPS signed an agreement with the ITBC that sets forth the roles and responsibilities of the parties regarding the transfer of bison from Yellowstone National Park to the ITBC for transport directly to slaughter facilities and subsequent distribution of meat, hides, horns, and other bison parts to support the nutrition and culture of American Indian tribes.
- 6a).—In process. MFWP continues to look for every opportunity to use hunting as a primary management tool.

- 6c).—MDOL will coordinate with NPS to ensure that relocated bison do not pose a brucellosis transmission risk or jeopardize the brucellosis status of the state of Montana.
- 6d).—While lethal removal remains as one of the tools in the IBMP, other options must be exhausted before lethal removal for population control will be employed.

2013 Report

- 6a).—See Management Action 1.4.A. MFWP continues to look for every opportunity to increase the appropriate fair chase use of hunters as a management tool. MFWP has developed additional measures to address management responses to property damage and Zone 3 breaches by the potential use of hunters.
- 6c).—The agreement described in the first bullet under the 2012 report remains in effect. In March of 2013 the NPS signed a second agreement with the CSKT with similar language as the agreement with ITBC.
- 6d).— During this reporting period, no bison were captured at the Stephens Creek facility and thus no bison were removed from the population in addition to those harvested by hunters and those removed by the state of Montana to prevent brucellosis exposure to livestock.

2014 Report

- 6a).—Implemented when applicable.
- 6c).— The NPS developed a management plan recommending the removal of 600 to 800 bison during winter 2013-2014 through public and tribal hunting in Montana and the transport of bison to meat processing and research facilities. The primary management tool used to reduce bison numbers was public and treaty harvests in Montana. Additional bison were captured at boundary facilities and shipped to meat processing facilities after mid-February to reach removal objectives for the year. In September 2012, the NPS signed an agreement with the ITBC that set forth the roles and responsibilities of the parties regarding the transfer of bison from Yellowstone National Park to the ITBC for transport directly to meat processing facilities and subsequent distribution of meat, hides, horns, and other bison parts to support the nutrition and culture of American Indian tribes. The NPS signed similar agreements with the CSKT in March 2013 and the NPT in March 2014.

During this reporting period, 353 bison were captured at the Stephens Creek facility. Two hundred and fifty-eight bison were consigned to meat processing facilities and an additional 60 bison were consigned to APHIS for research projects under their jurisdiction. Thirty-five bison were released.

This is an ongoing conversation between APHIS, MDOL and YNP. Movement of bison to new location is somewhat reliant upon the regulatory requirements and political requirements of the receiving location. Those requirements cannot be evaluated until a location is proposed.

Sixty bison were tested at the Stephens Creek capture facility, and transferred to the Brogan facility for research.

- 6d).—No report made for 2014.

** Population Management Recommendation 8.—In order to locate bison to lands elsewhere, Montana should develop and implement a translocation process for bison leaving quarantine. The quarantine process should minimize infrastructure requirements for places receiving bison. (Lead = MFWP, MDOL, APHIS, NPS)*

Partner decision.—Accept with the following modification to the second line: “The quarantine process should use the minimum containment infrastructure necessary for places receiving bison.”

Discussion.—In progress.

2012 Report

- It is apparent from the attempts to place bison graduating from the quarantine facility that the translocation process originally described in the Quarantine Feasibility Study is not suitable—because of lack of suitable potential sites and extreme public controversy about any potential sites. The translocation process to date has been that described in the EA for Phase II/III of the quarantine feasibility study—that is to solicit proposals for translocation of the quarantine bison. A modification to that is the requirement the bison be held in a manner that they can be captured and monitored for brucellosis over a 5-year period. Because of the recommendation that the initial Quarantine Feasibility Study bison be held and monitored for five years after leaving the facility, and because of the extreme controversy surrounding relocation of the Quarantine Feasibility Study bison, infrastructure requirements have been significant. Upon successful completion of the Quarantine Feasibility Study, assuming all bison continue to test negative, future quarantine bison could be translocated to areas with minimal infrastructure if that area was approved for such a translocation.

Because of the intense socio-political concerns about free-roaming bison, additional planning and coordination efforts are required before bison can be translocated to new locations (at least in Montana).

- Also, please see Population Management recommendation 6a-d above.
- During 2012 the Secretary of the Interior directed staff to begin consultation with the Tribes to identify and evaluate opportunities for relocations of brucellosis-free Yellowstone bison to tribal lands. He also directed the NPS to explore developing and operating additional quarantine facilities for Yellowstone bison. NPS staff at YELL are developing a protocol in collaboration with the other IBMP agencies that outlines roles and responsibilities that will apply when live Yellowstone bison are transferred from the NPS to American Indian tribes or other organizations. This protocol should be completed during 2013. The NPS is also consulting with the 26 Tribes associated with YELL and exploring options for operational quarantine in collaboration with the Bureau of Indian Affairs.

2013 Report

- The NPS worked with APHIS, ITBC, the State Veterinarian, and the other IBMP members to adapt the protocols developed during the quarantine feasibility study to allow live Yellowstone bison to be transferred from the NPS to Tribes associated with YNP or other interested parties. These protocols identify the requirements, roles, and responsibilities that would apply when live Yellowstone bison are transferred from the NPS to Tribes or other recipients to be transported to slaughter facilities, terminal pastures, or quarantine facilities. The protocols are under review by the IBMP members.
- A translocation process is described in the Phase II/III EA for the Bison Quarantine Feasibility Study. That process involves a request for proposals, a review of proposals by an interagency review team, and final decision by the MFWP Director. Unless/until there is a statewide bison conservation strategy for Montana that identifies acceptable areas for bison restoration, this process will likely remain (e.g., for placement of the bison currently held on the Green Ranch).

2014 Report

- In process. 2013 comments are still relevant. Also, please see Population Management recommendation 6a-d above.
- During 2012, the Secretary of the Interior directed staff to begin consultation with the Tribes to identify and evaluate opportunities for relocations of brucellosis-free Yellowstone bison to tribal lands. He also directed the NPS to explore developing and operating quarantine facilities for Yellowstone bison. NPS staff initiated an environmental planning process to study the feasibility of including a quarantine program as an adaptive management tool as described in the 2000 Record of Decision for the IBMP. Scoping was conducted with public constituents and IBMP partners during the summer of 2014. A draft environmental assessment is being prepared for possible release in 2015.

** Population Management Recommendation 9.—Determining where bison completing quarantine will go and how they will be restored and conserved on the landscape, with the highest priority on managing them as public and tribal wildlife, must precede capturing bison and implementing quarantine. Recipients of quarantined bison must be identified and an acceptable, appropriate translocation process must be in place prior to quarantining Yellowstone bison. This determination of where bison will go should be integrated with all Fish, Wildlife and Parks or other assessments of relocation possibilities for wild bison in Montana. (Lead = MFWP, NPS)*

2012 Report

- MFWP initiated a statewide bison management planning effort in 2012 to determine if there are suitable locations for restoration of bison in Montana. To prepare a statewide bison management plan, Montana Fish, Wildlife & Parks is moving forward with the development of a programmatic environmental impact statement to address the potential for bison restoration in Montana. The EIS will examine an array of possible alternatives from a no action alternative to a number of different bison restoration alternatives and the potential impacts of those alternatives. A scoping effort was conducted during summer 2012, resulting in a significant level of interest and number of comments. Comments have been summarized; based on those comments potential sites where further analysis will be conducted are being determined. A summary of comments can be found on MFWP's website at: <http://fwp.mt.gov/fishAndWildlife/management/bison/>.
- In 2011, the Director of the NPS unveiled a Call to Action initiative which, in part, calls for returning American bison to our country's landscape by restoring and sustaining three wild bison populations across the central and western United States in collaboration with the Tribes, private landowners, and other public

management agencies. In addition, during 2012 the Secretary of the Interior directed staff to begin consultation with the Tribes to identify and evaluate opportunities for relocations of brucellosis-free Yellowstone bison to tribal lands. NPS staff at YELL are participating in both these efforts.

2013 Report

- On 15 and 16 October 2012, the NPS, in collaboration with the U.S. Bureau of Indian Affairs, held consultation meetings with interested tribal constituents regarding whether they had any interest in partnering with Yellowstone National Park to develop a quarantine process to utilize when Yellowstone bison were scheduled for removal. The tribes participating in this consultation included Fort Peck (Sioux and Assiniboine Tribes), Fort Belknap (Gros Ventre and Assiniboine Tribes), Confederated Salish and Kootenai Tribes, Nez Perce Tribe, Shoshone-Bannock Tribes, Confederated Tribes of the Umatilla Reservation, Eastern Shoshone Tribe, Northern Arapaho Tribe, Coeur d'Alene Tribe, Northern Cheyenne Tribe, and Little Shell Chippewa Tribe. Additionally, the Inter-tribal Buffalo Council and Montana Wyoming Tribal Leaders Council participated in the conversations along with representatives from Wyoming Department of Livestock, Wyoming Governor's Office, and U.S. Fish and Wildlife Service. Several tribes are interested in participating in the quarantine of live Yellowstone bison. However, each of the potential partners expressed concern that they needed additional funding to construct infrastructure and manage an operational quarantine program. The treaty harvest tribes expressed a concern that removing bison that could otherwise be hunted would directly impact their ability to harvest bison.
- The NPS held government to government consultations with associated tribes during the summer of 2013. The park met with representatives of the Northern Cheyenne Tribe, Standing Rock Sioux Tribe, Oglala Sioux Tribe, and the Yankton Sioux Tribe on July 23rd in Rapid City, South Dakota. On July 25th the park met with the Assiniboine and Sioux Tribes, Chippewa Cree Tribe, Confederated Salish and Kootenai Tribes, Crow Tribe, Gros Ventre and Assiniboine Tribes, and the Shoshone-Bannock Tribes in Helena, Montana. Bison management was a significant topic at both meetings with discussion regarding abundance, disease management, and translocation and disposition. Tribes were supportive of treaty hunting outside the park and acquiring surplus bison through other means as well. A clear issue that was recognized but not resolved through the discussion was the need for funding for tribes to support shipment, quarantine facilities, and adequate pasturage. Until funding for these types of activities are identified shipment and translocation to quarantine facilities will remain challenging. Discussion also centered on varying degrees of tolerance amongst federal, state, and tribal governments for shipment of bison to slaughter and potential quarantine facilities.
- The feasibility study is in its final stages, with some additional testing of the QFS bison at the Ft. Peck and Ft. Belknap tribes still to be done. There presently are no plans by MFWP to continue the quarantine process until such time as there is a need for bison for restoration purposes. MFWP is in the process of completing an EIS analyzing the potential for bison restoration. As part of that analysis, if there is a need for bison, quarantine may be a tool to provide a source of wild bison.

2014 Report

- A request for proposals (RFP) was issued for placement of the quarantine feasibility study (QFS) bison being held on the Turner Enterprises Green Ranch in Spring 2014. Ten proposals were received. Proposals were reviewed by an interagency committee of experts, who recommended five be considered for receipt of some of the estimated 145 bison available. MFWP decided to move forward with four of those, and included them in an Environmental Assessment that is out for public comment through the end of October 2014. The FWP Commission, who must approve any transplant, voted to send all of the bison to the Ft. Peck Reservation if there is a finding of no significant impact through the Montana Environmental Protection Act (MEPA) process, and advocated for a strong memorandum of understanding (MOU) that could allow a portion of the bison and their offspring to be available for future conservation efforts. A final decision will be made in early November 2014, with bison being relocated as early as mid-November, pending completion of the MEPA process.
- NPS staff initiated an environmental planning process to study the feasibility of including a quarantine program as an adaptive management tool as described in the 2000 Record of Decision for the IBMP. Scoping was conducted with public constituents and IBMP Partners during the summer of 2014. A draft environmental assessment is being prepared for possible release in 2015.

* *Population Management Recommendation 10.—Bison translocation and bison movement should not include moving seropositive animals outside the current DSA, and may preclude relocating seropositive animals to new areas within the DSA with the intent of establishing new herd ranges. The intent is to avoid establishing new sources of disease and new disease risks to cattle. (Lead = MDOL)*

2012 Report

- No report for this year. Partner note: it is impractical to move Quarantine Feasibility Study seronegative bison to an area within the DSA where they could become re-infected.

2013 Report

- No seropositive bison were translocated in 2013 as described by this recommendation.

2014 Report

- No report made for 2014.

* *Population Management Recommendation 11.—Hazing of bulls should be minimized, unless there are issues with property damage or safety, because they are not a factor in the issue of brucellosis transmission. Hazing of newborn calves should be minimized for humane reasons. (Lead = MDOL, MFWP)*

Partner decision.—Accept. (Partner clarification: accepting this recommendation is not equivalent to saying bull bison are allowed anywhere at any time.)

*Discussion.—Partners asked for clarification from the CWG on this question: Did they mean within current tolerance areas or did they mean regardless of current zone system? Response = 1) If we are within the current tolerance zones bison are already allowed; the recommendation meant anywhere in space and time regardless of zone with recognition that safety and other qualifies still exist. Partners—not sure we can do that (tolerance outside allowed Zones) without MEPA process. **action item 3: Partners request greater clarification from CWG on what is meant by recommendation 11.*

From May 1 and 2, 2012 meeting after clarification by CWG:

Partners: asked if the CWG was requesting that bison be tolerated outside of currently allowed zones.

CWG: Noted that they had provided related recommendations under Population #1 and Habitat #1,2,3. Population #11 does not mean anywhere but instead means bulls should be able to move wherever, whenever they want in the Hebgen and Gardner basins given the caveats of public safety and similar, regardless of current zone designations.

Partners: This might be logistically difficult since bison often move in mixed groups so it would be difficult to separate the bulls out for increased tolerance. A concern was expressed that bachelor bison are exploratory and can lead females to wander more widely.

CWG: We see lone bulls mostly keeping to themselves and not exploring new habitat. Instead, females lead in habitat recruitment.

Partners: Some concern about this proposed increase in tolerance when the details of prevalence reduction are not yet set forth.

Partners/CWG: Some discussion around the difficulty in understanding what each person/group means by “Hebgen Basin” and “Gardner Basin” (actual watersheds or something else?). The terms “northern” and “western management areas”, as used in the Adaptive Management Plan, seemed more appropriate to most. A shared Partner/CWG mapping exercise was considered, but then set aside in realization that such an exercise would be required in the MEPA/NEPA process shortly upcoming.

Partners: Yes we agree to minimum hazing of bull bison but again, we want to clarify if you explicitly mean that bulls should be free to wander wherever, whenever they want.

CWG: Yes, we meant in space and time.

Partners: The EA on expanded tolerance will address the Hebgen Basin and Upper Gallatin but not beyond. (see section in this report titled “Status of Potential EA for Additional Bison Habitat”).

Partner-to-Partner questions:

What is the relation of this EA to the state-wide bison plan? Response: the EA does nothing to preclude the statewide effort.

Does this proposed action include the full Hebgen Basin? Response: We don’t know.

Should we expand the EA to include mixed groups in the broader area (full basin)? Response: We don’t know.

Then what is the area that will be included in the EA? We don't know. This will be determined by MDOL and MFWP in the days ahead.

CWG: A reminder that one of the CWG sideboards was that they not be allowed where they could impact cattle.

2012 Report

- In process.

2013 Report

- For 2013 MFWP notes “nothing to add to the Partner discussion portion of the paragraph.”

2014 Report

- No report made for 2014.

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- * *Population Management Recommendation 12.—Discuss expected adverse weather events (similar to fire management) and work with involved entities (public and private) to develop and agree on contingency plans. (Lead = Partners)*

2012 Report

- In process.
- NPS staff and colleagues published a scientific article (Geremia et al. 2011) summarizing analyses of the relationships between bison population size, accumulated snow pack, aboveground dried biomass, and the number of bison migrating to the boundary of YELL. During June and early July, the NPS conducts counts and age and gender classifications of bison in the central and northern breeding herds. The NPS uses long-term weather forecasts and population and migration models to predict herd abundances and compositions at the end of the upcoming winter, and the magnitude of numbers of bison migrating to park boundaries. They establish annual removal objectives for bison based on abundance, disease, distribution, and demographic (age, herd, sex) goals. These analyses and objectives are shared with the other IBMP agencies for their consideration (e.g., refining harvest quotas) and comment. As winter progresses, the NPS uses aerial and ground counts, snow model projections for the park, and revised long-term weather forecasts to refine predictions of the timing and magnitude of trans-boundary movements by bison and support decision-making during winter operations.

2013 Report

- No report made for 2013.

2014 Report

- NPS staff and colleagues published a scientific article (Geremia et al. 2011) summarizing analyses of the relationships between bison population size, accumulated snow pack, aboveground dried biomass, and the number of bison migrating to the boundary of YELL. During June and early July, the NPS conducts counts and age and gender classifications of bison in the central and northern breeding herds. The NPS uses long-term weather forecasts and population and migration models to predict herd abundances and compositions at the end of the upcoming winter, and the magnitude of numbers of bison migrating to park boundaries. They establish annual removal objectives for bison based on abundance, distribution, and demographic (age, herd, sex) goals. These analyses and objectives are shared with the other IBMP agencies for their consideration (e.g., refining harvest quotas) and comment. As winter progresses, the NPS uses aerial and ground counts, snow model projections for the park, and revised long-term weather forecasts to refine predictions of the timing and magnitude of trans-boundary movements by bison and support decision-making during winter operations.

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- * *Population Management Recommendation 14.—Lobby for removing the significant barriers that exist for Brucella abortus research because of the select agent listing. (Lead = Lead Partner that year—CSKT, ITBC, NPT)*

Partner decision.—Accept.

Discussion.—Partners: two members have made concerted effort, but issue comes down to public health groups; Senator Baucus also made an attempt but result of all efforts remains CDC say not coming off; believe this effort would be stronger coming from a grass roots citizens' coalition. CWG: Can Partners write a letter or in some way (e.g., letter to representatives) affirm their interest for the CWG to use in their lobbying efforts?

***action item 5—Partners agree to write a letter to representatives stating their support for removing the significant barriers that exist for Brucella abortus research because of the select agent listing.*

2012 Report

- In process. In May 2012, the Partners (excluding APHIS) signed a letter urging Montana’s Congressional delegation to ask the Centers for Disease Control to move to a tiered approach when classifying *B. abortus* to allow research to more readily proceed. In July 2012, the USDA-APHIS and CDC responded via letter to Senator John Tester that it was unlikely *Brucella abortus* would be removed from the select agent list.

2013 Report

- Nothing new to report.

2014 Report

- No report made for 2014.

** Population Management Recommendation 15.—Develop and implement a strong, factual education component so an informed public is involved in the discussions. (Lead = Lead Partner that year [APHIS])*

2012 Report

- In process. A committee was formed and met several times. A series of brochures are in progress and a new web page on the ibmp web portal is planned.

2013 Report

- MFWP reported that 4000 copies of two bison education brochures (Bison Basics and Staying Safe in Bison Country) have been printed and are ready for distribution by Partners and public or private groups for appropriate use. A webpage—<http://ibmp.info/bisoneducation.php>—has been created to provide access to those wishing to get brochures for distribution, as well as in the future instructional videos on bison. The next goal is to complete landowner and Tribal brochures.

2014 Report

- A third bison education brochure (Bison and Tribal Peoples) has been printed and is ready for distribution by Partners and other interested groups. Work continues on the private landowner brochure.

** Population Management Recommendation 16.—Outside the Park, hazing and removals should be minimized in selected, suitable areas to establish year-round populations of Montana bison. This approach should be pursued incrementally in a “learn as we go” fashion. This will be a public process that identifies the boundaries of the area and a contingency plan if bison leave that area. (Lead = MDOL, MFWP)*

Partner decision.—Accept.

Discussion.—Partners added a clarification that they are voting yes (accept) on the recommendation provided by the Subcommittee in their spreadsheet (Appendix B), not on the qualifier provided in the same spreadsheet for this CWG recommendation.

2012 Report

- In process. Contingent upon approval of adaptive management changes and current environmental assessment. See comments above regarding the environmental assessment for additional tolerance of bison in the Northern and Western Management area begun in August-September 2012.

2013 Report

- In process. Next steps contingent upon (1) approval of the current environmental assessment for increased tolerance in the Hebgen Basin, and (2) completion and implementation of the State Bison Management Plan.

2014 Report

- In process through adaptive management.

Risk Reduction

** Risk Reduction Recommendation 6.—Reduce livestock/wildlife interactions at key seasons. This will include building upon and improving techniques already in use as well testing and application of other innovations (e.g. strategic hazing using low-stress animal handling methods; targeted fencing; guard dogs to keep wildlife off feedlines/haystacks/calving areas; trained dogs to locate fetal material to enable cleanup, and so forth). (Lead = CWG)*

Partner decision.—Move to rework.

Discussion.—Partners: decreasing interactions very important. However not realistic as this is not our job. Obstacles identified: 1) funding to support, 2) who handles, trains, etc dogs? 3) what would it look like (e.g., use APHIS guard dogs?)? 4) more specificity asked from the CWG.

*From May 1 and 2, 2012 meeting after clarification by CWG: Partners: Not sure about the likely success of dogs (or something else?) working with bison. This would be a new area of study. To implement such ideas, we would need to find a willing landowner(s). PF noted that the Wildlife Conservation Society has done some work with dogs and that he would contact Keith Aune to ask him about it (** action item 4). A note was made that in the Taylor Fork there are a number of horses so bison/horse interactions must also be considered. Decision: Partners accept this recommendation but state that they cannot be the lead for the work.*

2012 Report

- There is a lot of interest here, but no significant updates to report.

2013 Report

- Working with MFWP, five NGOs—the Defenders of Wildlife, the Greater Yellowstone Coalition, the Natural Resources Defense Council, the Sierra Club, and the Horse Butte Neighbors of Buffalo—have created a program called the “Yellowstone Bison Coexistence Project”. The groups pay half the cost of fencing projects (up to \$1,000) that will help landowners coexist with bison. The groups have contributed more than \$40,000 to date to the project and around 20 project have been completed or are in progress.
- The Partners invited Dr. Pete Coppolillo, Executive Director for Working Dogs for Conservation (WD4C), to give a presentation at their November 21 meeting. Dr. Coppolillo gave an overview of conservation detection dogs and their possible application to disease management. He described how dogs’ powerful sense of smell can be applied to conservation issues ranging from invasive weed discovery to finding endangered species to detecting disease. Dr. Coppolillo put forth potential opportunities—and possible challenges—for using conservation dogs to meet the twin goals of the IBMP.

2014 Report

- NGO, in conjunction with MFWP, continue fencing efforts under the Yellowstone Bison Coexistence Project. A summary of progress under the Project since inception, as provided by Defenders of Wildlife, follows:
 - 2014 (through Oct 31, 2014)
 - 6 Projects completed (5 in Gallatin County, 1 in Park County)
 - Amount allocated on materials/reimbursements: \$4,335
 - *2 additional projects completed, but awaiting paperwork/reimbursement (1 in Gallatin County, 1 in Park County; totaling estimated \$2,000)
 - *7 additional projects in progress for 2014 or planning stages for 2015 (3 in Gallatin County, estimated \$3,000; 4 in Park County, estimated \$4,000)
 - 2013
 - 5 projects completed (1 in Gallatin County, 4 in Park County)
 - Amount spent on materials/reimbursements: \$5,650
 - 2012
 - 5 projects completed (3 in Gallatin County, 2 in Park County)
 - Amount spent on materials/reimbursements: \$4,280
 - 2011:
 - 5 projects completed (all in Gallatin County)
 - Amount spent on materials/reimbursements: \$10,890

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- * *Risk Reduction Recommendation 8.—Remote vaccination of wild bison using the current vaccine and delivery method as a means of reducing risk of transmission should not be a priority at this time. (Lead = None pending outcome of EIS)*

Partner decision.—Cannot make decision.

Discussion.—EIS is in progress. Partners cannot make a declaration of intent on this CWG Recommendation as it would be pre-decisional to the EIS.

2012 Report

- NPS staff continued evaluations regarding whether to remotely vaccinate free-ranging bison inside YELL for brucellosis using a rifle-delivered bullet with a vaccine payload. Several factors suggested that the implementation of remote delivery vaccination at this time may not achieve desired results (>50% reduction in prevalence) and could have unintended adverse effects to bison, other wildlife, and visitor experience. To develop a lasting solution, the NPS is seeking input from independent scientists regarding the feasibility and sustainability of brucellosis suppression without significantly affecting bison behavior or visitor experience. A brucellosis science workshop, co-chaired by a representative from MFWP, is being organized for early 2013 to integrate science into a brucellosis management program that considers all stakeholder perspectives. Invited expert panelists will be asked to provide input on how brucellosis prevalence in Yellowstone bison could be reduced, as well as to identify critical knowledge gaps and research priorities that could improve brucellosis management practices. A report will be produced during 2013. Release of the final EIS evaluating whether to remotely vaccinate free-ranging bison inside YELL has been postponed until this input is received and evaluated.

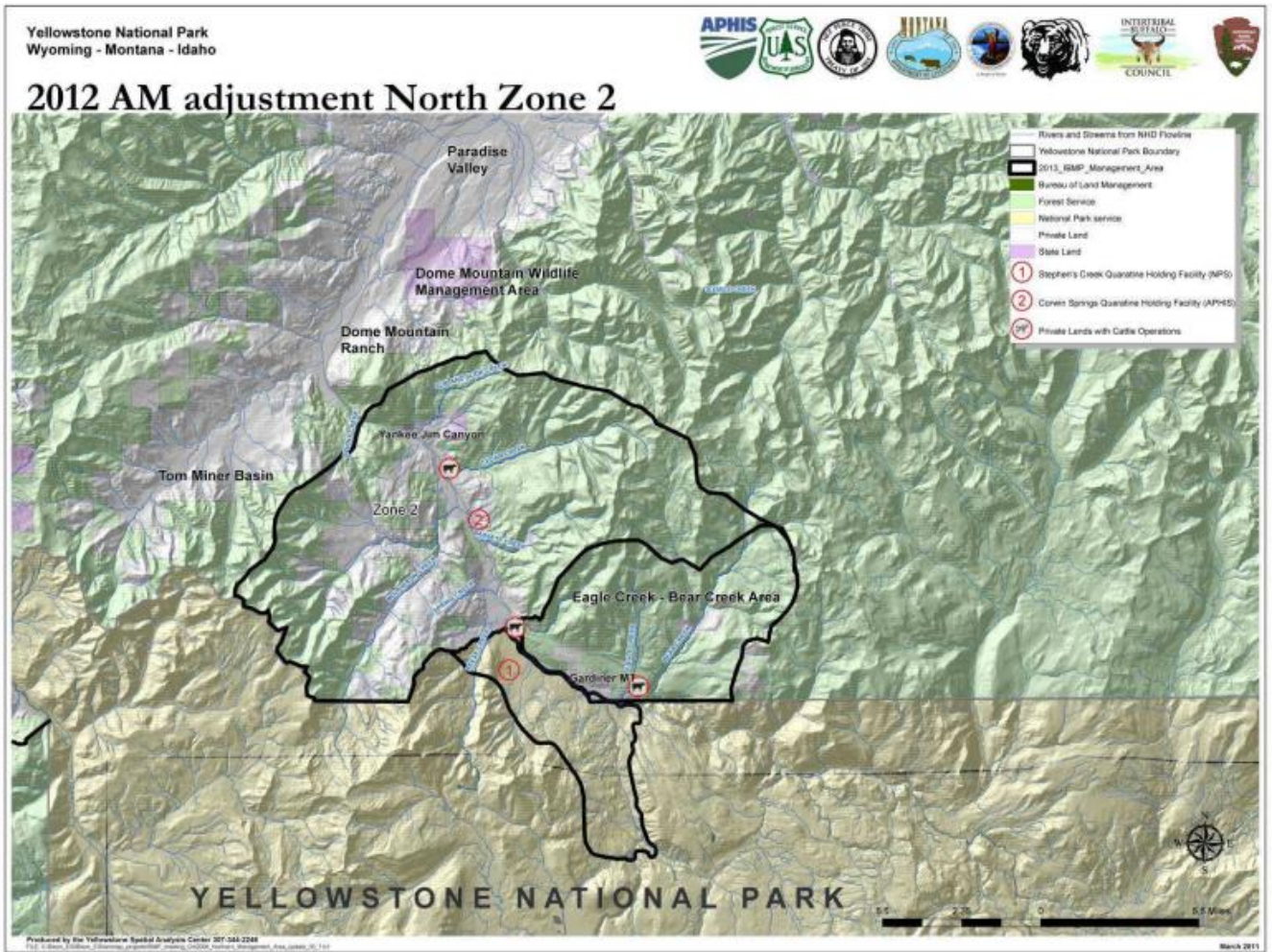
2013 Report

- NPS and MFWP jointly sponsored a Brucellosis Science Review Workshop in February 2013, convening eight panelists from across the country with collective experience in wildlife science, wildlife management, and disease ecology. In their deliberations, the review panel considered existing areas of tolerance for bison only, not areas of possible expansion. While two IBMP Partners led this workshop, and other Partners watched or made presentations, the workshop was not a function of the IBMP. A summary of the workshop panel's findings was presented at the July 2013 IBMP meeting. The panel recommended against the use of remote vaccination, as called out in the 2000 IBMP ROD, plus put forth opinions on the potential ecological impacts of remote vaccination, and the value of (a) culling in disease and bison population management and (b) using fertility control in disease and bison population management. The full, 20-page report on the Brucellosis Science Review Workshop panel's findings can be found at <http://www.ibmp.info/Library/20130731/Brucellosis%20Science%20Review%20Workshop.pdf>.

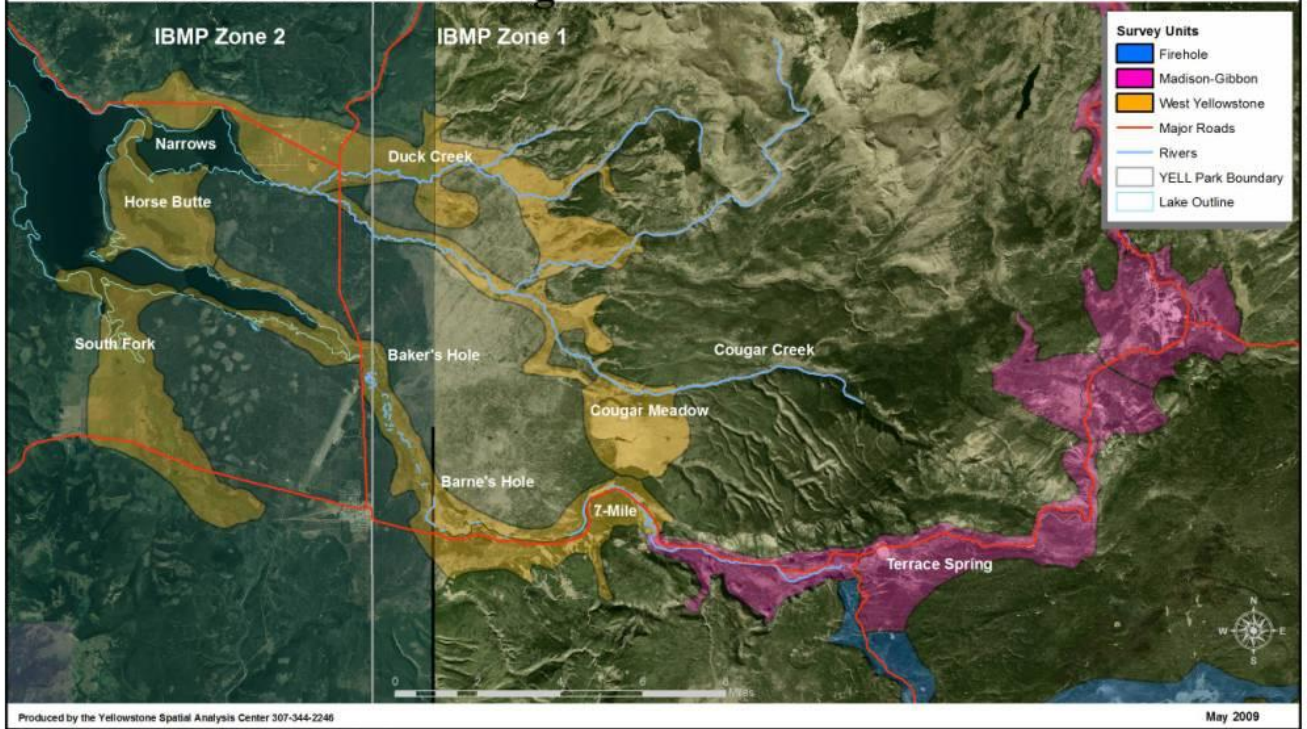
2014 Report

- NPS staff issued a Record of Decision regarding remote vaccination on 3 March 2014. The NPS concluded that the implementation of park-wide remote vaccination at this time would likely not achieve desired results and could have unintended adverse effects to the bison population and visitor experience. Therefore, the NPS selected the No Action alternative in the Record of Decision. The NPS received 9,410 individual comments on the Draft EIS and the majority of respondents suggested that the projected cost of remote vaccination (\$300,000 per year for at least 30 years) was too expensive to justify the benefits, especially given the substantial uncertainties. A Bison/Brucellosis Science Panel of disease experts convened in 2013 by the NPS and Montana Fish, Wildlife & Parks indicated that “The best available data do not support that vaccination of wild bison with currently available vaccines will be effective at suppressing brucellosis to a level that changes bison management strategies under the Interagency Bison Management Plan.”

APPENDIX A—MAPS SHOWING ZONES 1, 2, AND 3 OF THE NORTHERN AND WESTERN MANAGEMENT AREAS



IBMP Western Bison Management Area



**APPENDIX B—BISON NUMBERS AND LOCATIONS IN THE WESTERN MANAGEMENT AREA
FOR THE 2013-2014 MANAGEMENT SEASON**

Table B1 provides the Number of bison and locations in the Western Management Area for the 2013-2014 management season.

Table B1.—Number of bison and locations in the Western Management Area for the 2013-2014 management season.

Date	Number of Bison	Location	Operation
10/15/2013	3	South Fork Zone 3	No
10/15/2013	100	Madison River South "flats"	Yes
10/17/2013	3	South Fork Zone 3	No
10/18/2013	126	Madison River South "flats"	No
10/21/2013	27	Greater Horse Butte	No
10/21/2013	43	Madison River South "flats"	No
10/28/2013	6	Duck Creek	No
10/28/2013	80	Greater Horse Butte	No
11/4/2013	6	Duck Creek	No
11/4/2013	58	Greater Horse Butte	No
11/9/2013	46	South Fork Zone 3	Yes
11/10/2013	46	South Fork Zone 3	Yes
11/11/2013	32	Madison River South "flats"	No
11/11/2013	40	Madison River North "flats"	No
11/13/2013	6	Duck Creek	No
11/13/2013	129	Greater Horse Butte	No
11/18/2013	5	Duck Creek	No
11/18/2013	30	Greater Horse Butte	No
11/19/2013	1	Madison River South "flats"	No
12/9/2013	5	Duck Creek	No
12/9/2013	22	Greater Horse Butte	No
12/16/2013	22	Greater Horse Butte	No
12/17/2013	22	Greater Horse Butte	No
12/18/2013	25	Greater Horse Butte	No
12/19/2013	25	Greater Horse Butte	No
12/20/2013	25	Greater Horse Butte	No
1/2/2014	25	Greater Horse Butte	No
1/3/2014	3	Duck Creek	No
1/3/2014	25	Greater Horse Butte	No
1/6/2014	25	Greater Horse Butte	No
1/7/2014	25	Greater Horse Butte	No
1/8/2014	25	Greater Horse Butte	No
1/10/2014	25	Greater Horse Butte	No
1/13/2014	25	Greater Horse Butte	No

Table B1.—Number of bison and locations in the Western Management Area for the 2013-2014 management season.

Date	Number of Bison	Location	Operation
1/14/2014	25	Greater Horse Butte	No
1/20/2014	26	Greater Horse Butte	No
1/23/2014	2	Madison River South "flats"	No
1/24/2014	21	Greater Horse Butte	No
1/28/2014	25	Greater Horse Butte	No
1/29/2014	25	Greater Horse Butte	No
1/30/2014	25	Greater Horse Butte	No
3/12/2014	5	Greater Horse Butte	No
3/20/2014	20	Madison River South "flats"	No
3/21/2014	15	Madison River North "flats"	No
3/21/2014	21	Greater Horse Butte	No
3/31/2014	11	Greater Horse Butte	No
4/1/2014	11	Madison River South "flats"	No
4/1/2014	30	Greater Horse Butte	No
4/1/2014	32	Madison River North "flats"	No
4/5/2014	90	Madison River South "flats"	No
4/7/2014	13	Greater Horse Butte	No
4/8/2014	103	Greater Horse Butte	No
4/10/2014	7	Greater Horse Butte	No
4/10/2014	15	Madison River North "flats"	No
4/14/2014	187	Greater Horse Butte	No
4/18/2014	1	Madison River North "flats"	No
4/18/2014	6	Duck Creek	No
4/18/2014	47	Greater Horse Butte	No
4/21/2014	65	Greater Horse Butte	No
4/21/2014	3	Red Canyon	No
4/21/2014	4	Madison River North "flats"	No
4/21/2014	4	Duck Creek	No
4/21/2014	132	Greater Horse Butte	No
4/22/2014	1	Madison River North "flats"	No
4/22/2014	3	Red Canyon	No
4/23/2014	3	Red Canyon	No
4/23/2014	25	Madison River North "flats"	No
4/24/2014	3	Red Canyon	No
4/24/2014	4	Duck Creek	No
4/24/2014	25	Madison River South "flats"	No
4/24/2014	153	Greater Horse Butte	No
4/25/2014	7	South Fork Zone 3	No
4/25/2014	25	Madison River North "flats"	No

Table B1.—Number of bison and locations in the Western Management Area for the 2013-2014 management season.

Date	Number of Bison	Location	Operation
4/26/2014	20	Madison River South "flats"	No
4/27/2014	20	South Fork Zone 3	Yes
4/28/2014	53	South Fork Zone 3	No
4/28/2014	171	Greater Horse Butte	No
4/28/2014	30	Narrows	No
4/29/2014	1	Madison River North "flats"	No
4/29/2014	20	South Fork Zone 3	No
4/30/2014	41	South Fork Zone 3	No
5/1/2014	8	Madison River South "flats"	No
5/1/2014	31	South Fork Zone 3	No
5/2/2014	41	South Fork Zone 3	No
5/5/2014	70	Madison River South "flats"	No
5/5/2014	57	South Fork Zone 3	Yes
5/5/2014	323	Greater Horse Butte	No
5/6/2014	111	South Fork Zone 3	Yes
5/7/2014	1	Madison River South "flats"	No
5/8/2014	12	South Fork Zone 3	Yes
5/8/2014	14	Madison River South "flats"	Yes
5/9/2014	71	South Fork Zone 3	Yes
5/10/2014	21	South Fork Zone 3	No
5/12/2014	4	Madison River North "flats"	No
5/12/2014	179	Greater Horse Butte	No
5/12/2014	75	South Fork Zone 3	Yes
5/13/2014	9	Madison River South "flats"	No
5/13/2014	31	Madison River North "flats"	No
5/13/2014	92	Greater Horse Butte	No
5/14/2014	29	Madison River South "flats"	Yes
5/14/2014	20	South Fork Zone 3	Yes
5/14/2014	30	Madison River North "flats"	Yes
5/15/2014	1	Madison River North "flats"	No
5/15/2014	40	Greater Horse Butte	No
5/16/2014	266	Greater Horse Butte	No
5/16/2014	52	Narrows	No
5/19/2014	2	Madison River North "flats"	Yes
5/19/2014	69	Madison River South "flats"	Yes
5/19/2014	63	South Fork Zone 3	Yes
5/20/2014	80	Madison River South "flats"	Yes
5/20/2014	80	South Fork Zone 3	Yes
5/21/2014	194	Greater Horse Butte	Yes

Table B1.—Number of bison and locations in the Western Management Area for the 2013-2014 management season.

Date	Number of Bison	Location	Operation
5/22/2014	149	Duck Creek	Yes
5/23/2014	2	South Fork Zone 3	No
5/23/2014	61	Duck Creek	Yes
5/24/2014	74	Madison River South "flats"	No
5/24/2014	16	Red Canyon	No
5/26/2014	150	Greater Horse Butte	No
5/27/2014	2	Madison River North "flats"	No
5/27/2014	15	Duck Creek	No
5/27/2014	17	Madison River South "flats"	No
5/27/2014	150	Greater Horse Butte	No
5/28/2014	99	Greater Horse Butte	Yes
5/29/2014	1	Madison River North "flats"	No
5/29/2014	3	Madison River South "flats"	No
5/29/2014	6	Red Canyon	Yes
5/30/2014	3	Greater Horse Butte	No
6/2/2014	7	Madison River South "flats"	No
6/4/2014	2	South Fork Zone 3	No
6/4/2014	19	Madison River South "flats"	No
6/5/2014	3	South Fork Zone 3	Yes
6/5/2014	14	Madison River South "flats"	Yes
6/5/2014	65	Madison River North "flats"	Yes
6/10/2014	80	Madison River South "flats"	Yes
6/11/2014	21	Greater Horse Butte	Yes
6/23/2014	20	Duck Creek	Yes
7/2/2014	18	Madison River North "flats"	Yes

**APPENDIX C—LOG OF INCIDENTS RESPONDED TO BY MFWP WARDENS,
DEC2013 - JUL2014**

MFWP reported 413 responses to IBMP-related matters between December 2013 and July 2014. Details of those incidents and responses are provided chronologically in Table C1.

Table C1.—Log of incidents responded to by MFWP wardens from Dec 2013 through Jul 2014.

Office r	Hrs 1145	Month / Day / Yr			Landowner or contact	Addr ess	Public Safety (PS), Hazing (H), or Property Damage (PD)				Actions Taken
							Concern	PS 95	H 155	PD 74	
Knarr_ Joe	1	12	4	2013	FG32		CK BISON				CSKT SHOULD BE DONE W 50
Knarr_ Joe	1	12	9	2013	FG32		CK BISON				NO BISON OUT, CALLED BY ARCHY AND MESSG. FROM N.P.
Knarr_ Joe	1	12	10	2013	FG313		CK BISON				NO BISON OUT, DISCUSS F.S. CLOSURE
Kerin	2	12	16	2013	Park CO.		1 bull bison on hwy going to get hit by car at night.	1			Reported by Park co. original call from Franklin Rigler. Informed sherrifs office not going to haze. Made contact with hwy department to put up info bords on hwy regarding "animals on road way use coution".
Knarr_ Joe		12		2013							
Knarr_ Joe	16	12		2013	FG313		CK BISON				DEALING W COMPLAINT FROM FRANKIN'S WIFE OF BISON ON ROAD WAY. RECVD DIRECTION FROM 31
Knarr_ Joe	23	12		2013	FG313		CK BISON				STILL JUST ONE BULL OUT
Knarr_ Joe	23	12		2013	FG32		CK BISON				BISON ON GALANIS ONLY
Knarr_ Joe	28	12		2013	FG313		CK BISON				ONE BULL OUT UNK. LOCATION, 90 BISON IN MAMMOTH.
Knarr_ Joe	30	12		2013	FG32		CK BISON				NO CHANGE IN BISON
Knarr_ Joe	1	1	6	2014	KERIN		BISON UPDATE				
Knarr_ Joe	1	1	6	2014	SMOLZ		BISON UPDATE				
Knarr_ Joe	1	1	13	2014	KERIN		BISON UPDATE				
Knarr_ Joe	1	1	13	2014	SMOLZ		BISON UPDATE				
Kerin	1	1	15	2014	DOL		3 bull Bison running down hwy	1			None... DOL observed bison run across bridge at Corwin south down hwy cross river at brogans landing FAS and ran back into park

Table C1.—Log of incidents responded to by MFWP wardens from Dec 2013 through Jul 2014.

Office r	Hrs 1145	Month / Day / Yr			Landowner or contact	Addr ess	Public Safety (PS), Hazing (H), or Property Damage (PD)			Actions Taken
							Concern	PS 95	H 155	
Kerin	1	1	18	2014	Monty Casebolt				BFC told parents they were breaking the law and they were going to document it and turn them in. I explained they were not breaking the law and they were legal to hunt there. Informed BFC not to give advice when they don't know the law.	
Kerin	1	1	20	2014	Monty Casebolt	Wrote me a leter BFC language			talked with BFC regarding use of language and allowing hunters to enjoy there hunt	
Knarr_ Joe	1	1	20	2014	KERIN	BISON UPDATE				
Knarr_ Joe	1	1	20	2014	SMOLZ	BISON UPDATE				
Kerin	2	1	23	2014	Art Burns	BFC Stalking him	1		Visited with Art turned over to Park Co. not Hunter Herassment. Park Co. looking into it disipointed F/G laws do not cover this issue. Stated now Park co. has to deal with hunting issues.	
Kerin	2	1	24	2014	Park service	BFC hazing while no hunters around and BFC walking behind Bison in the field	1		Talked with BFC made sure they were clear with rules regarding hazing and about being in a safe locatin while filming the hunt and where the line is in interfiering with the hunt.	
Knarr_ Joe	5	1	25	2014	SHEPPARD	TRAVEL TO GARDINER AND VISIT W/313 ON BISON ISSUES				
Knarr_ Joe	1	1	27	2014	KERIN	BISON UPDATE				
Knarr_ Joe	1	1	27	2014	SMOLZ	BISON UPDATE				
Kerin	1	1	29	2014	Park Dispatch	Bison Calf at the High school near the doors	1	1	Hazed Bison calf back in to the park to powerline flats.	
Kerin	2	1	30	2014	CSTK hunters	Complant BFC hazing bison at Park line			Looked into it for the park no sigh of foot prints in the snow near the park line at Beattie.	
Knarr_ Joe	1	2	3	2014	KERIN	BISON UPDATE				
Knarr_ Joe	1	2	3	2014	SMOLZ	BISON UPDATE				
Knarr_ Joe	1	2	4	2014	KERIN	BISON UPDATE				

Table C1.—Log of incidents responded to by MFWP wardens from Dec 2013 through Jul 2014.

Office r	Hrs 1145	Month / Day / Yr			Landowner or contact	Addr ess	Concern	Public Safety (PS), Hazing (H), or Property Damage (PD)			Actions Taken
								PS 95	H 155	PD 74	
Knarr_ Joe	1	2	4	2014	SMOLZ		BISON UPDATE				
Knarr_ Joe	1	2	5	2014	KERIN		BISON UPDATE				
Knarr_ Joe	1	2	5	2014	SMOLZ		BISON UPDATE				
Knarr_ Joe	1	2	6	2014	KERIN		TRAILER UPGRADE FOR BISON WORK				
Kerin	1	2	7	2014	Pat Hoppie	mm5 hwy 89 south	5 bison in with horses stated to dol he wanted them hazed off		1		Called back satted he did not want them hazed off. Stated they could stay till morning and we could go from there or would except 100.00 trespass fee. One hunter did pay Fee also saving bison for Nez hunters.
Knarr_ Joe	1	2	10	2014	SHEPPARD		BISON UPDATE				
Knarr_ Joe	1	2	10	2014	SMOLZ		BISON UPDATE				
Knarr_ Joe	1	2	11	2014	KERIN		BISON DOC. UPDATE				
Knarr_ Joe	9	2	12	2014	KNARR		BISON PATROL				PATROL BISON AND HUNT, CALLS TO HELMS, MOUNT. VISIT WITH PAT AND BILL HOPPE, CK STATE HUNTER W/BISON.
Knarr_ Joe	1	2	13	2014	SMOLZ		BISON UPDATE				
Knarr_ Joe	1	2	14	2014	KERIN		STATE HUNTER CITED FOR ATTEMPT TO TAKE OVER LIMIT.				CITE TO STATE HUNTER, 313 FOUND AND DISPATCHED SECOND BISON
Knarr_ Joe	1	2	17	2014	KERIN		BISON UPDATE				SEVERAL BISON HARVESTED OVER WEEKEND BY TRIBES
Knarr_ Joe	1	2	17	2014	SMOLZ		BISON UPDATE				
Scott	6	2	17	2014	Forest Service	Gardi ner MT	none				assisted with the tribal hunts
Kerin	1	2	18	2014	RTR Church	7 east river road	5 bison on church property		1		hazed 5 bison off RTR church assisted by 1 DOL 1 FG
Knarr_ Joe	1	2	18	2014	KERIN		BISON UPDATE				ASSIST 31 W/OVER LIMIT BISON TO HAPPLES
Knarr_ Joe	1	2	18	2014	SMOLZ		BISON UPDATE				
Knarr_ Joe	10	2	19	2014	KNARR		BISON PATROL				2 BISON TAKEN BY UMITILLA, AND 1 BY NEZ PERCE

Table C1.—Log of incidents responded to by MFWP wardens from Dec 2013 through Jul 2014.

Office r	Hrs 1145	Month / Day / Yr		Landowner or contact	Addr ess	Public Safety (PS), Hazing (H), or Property Damage (PD)				Actions Taken	
						Concern	PS 95	H 155	PD 74		
Scott	8	2	2 1	2014	Forest Service	Gardi ner MT	none				assisted with the tribal hunts
Scott	9	2	2 2	2014	Forest Service	Gardi ner MT	none				assisted with the tribal hunts
Kerin	1	2	2 7	2014	RTR church		no cell coverage message left regarding bison on property		1		Called back at 1600 hours they had already moved the bison off.
Scott	13	2	2 7	2014	Forest Service	Gardi ner MT	none				assisted with the tribal hunts
Knarr_ Joe	1	3	1	2014	KERIN		UPDATE				313 WORKING WITH N.P. THRU MINOR ISSUES
Knarr_ Joe	1	3	3	2014	KERIN/SM OLZ		UPDATE				31 IN GARDINER TODAY
Knarr_ Joe	2	3	4	2014	KERIN		UPDATE				MONITOR TAKE
Knarr_ Joe	1	3	4	2014	SMOLZ		UPDATE				
Knarr_ Joe	12	3	6	2014	KNARR/SHE PPARD		MONITOR ACTIVITIES				TRAVEL TO GARDINER W/31 MONITOR ACTIVITIES. VISIT W/313. TAKE 31 S/V.
Knarr_ Jen	12	3	7	2014	USFS	n/a	tribal hunts	1			n/a
Knarr_ Joe	1	3	7	2014	SHEPPARD		UPDATE				UPDATE ON N.P AND UMITILLA TAKE. SEMOUR ON THE GROUND
Knarr_ Joe	1	3	8	2014	KERIN		UPDATE				N.P & UMIT TAKE 4 MORE, TRAILER.
Knarr_ Joe	4	3	8	2014	KNARR/SHE PPARD						BISON TRAILER DROPPED OFF IN T.F.
Knarr_ Joe	1	3	9	2014	KERIN		BISON UPDATE				TRIBES MOVING OUT TODAY
Knarr_ Joe	1	3	1 0	2014	KERIN		BISON UPDATE				
Knarr_ Joe	1	3	1 0	2014	SMOLZ		BISON UPDATE				
Knarr_ Joe	1	3	1 1	2014	KERIN		BISON UPDATE				ALL QUITE
Kerin	1	3	1 4	2014	Pat Hoppie	MM 5 89 South	4 calf and 1 cow on property want thyem moved		1		Hazed 4 calf and 1 cow off property assisted by 1 Dol and 1 Park Service 1 FG
Kerin	1	3	1 5	2014	Bill Hoppie	17 Jardin e RD	Bison knocked down fence			1	Bison ran out of pasture and knocked down 100 yard of fence

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Office r	Hrs 1145	Month / Day / Yr			Landowner or contact	Addr ess	Public Safety (PS), Hazing (H), or Property Damage (PD)			Actions Taken	
							Concern	PS 95	H 155		PD 74
Kerin	1	3	16	2014	RTR Church	Hay fiels with horse s 100 head in other field	Want them moved		1		Haxed 100 head out of hay fiels blue bildings and hazed 10 head out of horse pasture assisted by 1 DOL 1 FG
Knarr_ Joe	1	3	16	2014	KERIN		BISON UPDATE				NUMBERS FROM WEEKEND
Kerin	1	3	17	2014	Bill Hoppie	17 Jardin e RD	2 bull 1 cow in with horses		1		Call came in night before arrived 0800 next day and hazed them out.
Knarr_ Joe	2	3	17	2014	KERIN		BISON UPDATE				WEEKEND TOTALS
Knarr_ Joe	1	3	17	2014	SMOLZ		BISON UPDATE				NO CHANGE
Kerin	1	3	18	2014	Bill Hoppie	17 Jardin e RD	9 head bison on property		1		Hazed off
Knarr_ Joe	1	3	18	2014	KERIN		BISON IN B.HOPPE'S				313 SENT TO HAZE
Knarr_ Joe	2X	3	18	2014	BILL HOPPE		BISON IN HIS YARD				313 SENT TO HAZE
Kerin	1	3	19	2014	Bill Hoppie	17 Jardin e RD	4 bull on property		1		Hazed off
Knarr_ Joe	1	3	19	2014	JOE SUPRONO		BISON IN HIS YARD				CALL HIM BACK, JOE SAID MOST OF THE BISON HAVE MOVED OUT OF THE YARD AND HE DOES NOT WANT THE ONES' S IN THE YARD HAZED B/C THEY MAY JUST CAUSE MORE DAMAGE.
Knarr_ Joe	1	3	19	2014	BILL HOPPE		BISON ON HIS PROPERTY				CALLED 313, HE WILL RESPOND AND HAVE BISON.
Knarr_ Joe	1	3	19	2014	KERIN		BISON ON BILL HOPPE'S				DISPATCHED TO HAZE
Kerin	1	3	20	2014	Rod Mcallster	4 Old Yello wston e TR	Bison on property	1			wanted info on fencing fowarded info to NGO's
Knarr_ Joe	1	3	20	2014	KERIN		BISON UPDATE				NO ACTION NEEDED
Knarr_ Joe	1	3	20	2014	ROD McCALLIST ER	BEAT TIE GULC H	BISON ON LAWN/PROPERTY				AGREED TO HAVE 313 CALL HIM SAT. MORNING TO DISCUSS AND LOOK
Kerin	1	3	21	2014	RTR Church	Blue bildin gs	60 head in hay field		1		Hazed off on 3/22/14 assisted by 2 DOL 1 FG

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Office r	Hrs 1145	Month / Day / Yr		Landowner or contact	Addr ess	Public Safety (PS), Hazing (H), or Property Damage (PD)				Actions Taken	
						Concern	PS 95	H 155	PD 74		
Kerin	1	3	2 1	2014	Joe. Sparano Sr.		60 head on property	1		1	Does not want them moved just informing us. Informed him we would move them when requested.
Kerin	1	3	2 1	2014	Joe Sparano Jr.		60 head on property	1	1	1	wanted bison hazed off pused on to Joe Sr. property for time being. No resources at this time.
Knarr_ Joe	1	3	2 1	2014	RTR ALAN SHAW	RTR	BISON ON RANCH				ALAN COMPLAINED BISON ON RANCH IN 2 LOCATIONS AND WANTS THEM HAZED. CALLED 313 HE WILL LOOK AT SITUATION AND COORD ANY HAZING IF NECC.
Knarr_ Joe	4X	3	2 1	2014	KERIN		BISON ON RTR				313 WILL CALL ALAN, CALL JOE S. AND DISCUSS OPTIONS, CALLED DUSTY S. WILL BE ON SCENE TO ASSESS OPTIONS. JEFF DOES NOT HAVE HORSE OR ATV AND MOST OF PARK HELP IS OFF.
Knarr_ Joe	1	3	2 1	2014	JOE SUPRONO		100 BISON ON JOE'S				VIA M.M. JOE TOLD MARGARETT HE DID NOT WANT THEM HAZED, FEAR OF DAMAGE
Knarr_ Joe	1	3	2 1	2014	DUSTY SPARANO		BISON ON MOMS PROPERTY				VIA M.M. DUSTY'S MOM WANTS THEM MOVED OFF PROPERTY
Kerin	1	3	2 2	2014	Bill Hoppie	17 Jardin e RD	10 head bison on property	1	1	1	Hazed off 1 FG
Knarr_ Joe	2	3	2 2	2014	KERIN		BISON ON BILL HOPPE'S				313 ASSISTED B.H MOVE BISON OFF PROP. TILL 2100 HELP B.H. CATCH HORSES
Kerin	2	3	2 3	2014	Riggler	89 south MM 11	Bison on Hwy	1			Bison on side of road in ditch no hazing.
Knarr_ Joe	7	3	2 3	2014	KNARR/SHE PPARD						TRAVEL TO GARDINER TO ASSIST. NO ISSUES WHILE 320 WAS IN GARDINER
Knarr_ Joe	2	3	2 3	2014	KERIN		BISON ON ROADWAY COMPL. BY RIGGLER. BULL SPOTTED ON RIGGLERS DRIVEWAY BY 313 NO CALL FROM RIGGLER				BISON CHECKED ON BY 313, BISON MOVED OUT OF RIGGLERS DRIVEWAY, RIGGLER DID NOT CALL 313 AT ANY TIME

Table C1.—Log of incidents responded to by MFWP wardens from Dec 2013 through Jul 2014.

Office r	Hrs 1145	Month / Day / Yr		Landowner or contact	Addr ess	Public Safety (PS), Hazing (H), or Property Damage (PD)				Actions Taken	
						Concern	PS 95	H 155	PD 74		
Kerin	1	3	2 4	2014	Joe Sparano Jr.		30 Head bison on property	1	1	1	was out of the area in Bozeman stated I would come up when I returned in the afternoon bison were off when I got back to Gardiner
Kerin	1	3	2 4	2014	Bill Hoppie	17 Jardin e RD	3 Bulls on property	1	1	1	was out of the area in Livingston stated I would come up when I returned in an hour bison were off when I got back to Gardiner
Kerin	1	3	2 4	2014	Tina Holland	89 south MM 9	bison have been on property rubbing on trees	1		1	stated her husband hazed off looking for info on fencing and compinsation for damage informd her about NGO's stated she would call back if wanted later
Knarr_ Joe	4X	3	2 4	2014	KERIN		JOE SPARANO JR. CALLED ABOUT BISON ON PROPERTY				313'S VEH. IS BEING TOWED TO BOZ. AND 313 IS PICKING ANOTHER VEH. TOLD JR HE WILL ADDRESS AS SOON AS HE RETURNS.
Kerin	9	3	2 5	2014	DOL	Joe Brow n slip and slide	70 head up Joe Brown		1		Hazed back across river to cutler medows 3 DOL 1 APHIS 2 PARK 1 Park Co 1 FG
Kerin	1	3	2 5	2014	Pat Hoppie	89 South MM 5	20 head in Horses	1	1	1	Hazed out assisted by 1 Park Service 1 FG
Kerin	1	3	2 5	2014	Rod Mcallster	4 Old Yello wston e TR	30 Head bison on property	1	1	1	by the time I arrived that had moved off
Knarr_ Joe	1	3	2 5	2014	KERIN		BISON UPDATE				
Kerin	1	3	2 6	2014	Joe Sparano Jr.		30 Head bison on property	1	1	1	Hazed off
Kerin	1	3	2 6	2014			50 head at cattle gard				Left not hazed
Kerin	1	3	2 6	2014	Bill Hoppie	17 Jardin e RD	6 bulls on property	1	1	1	Hazed off
Knarr_ Joe	3X	3	2 6	2014	KERIN		BISON UPDATE				
Knarr_ Joe	1	3	2 6	2014	SHEPPARD		BISON UPDATE				FORMULATE PLAN FOR CREW TO COVER FOR NEXT FEW DAYS

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							Concern	PS 95	H 155	PD 74	
Kerin	1	3	2 7	2014	Joe Sparano Sr.		stated bison on property	1	1	1	hazed 3 off after I left he stated there were more behind house I did not see he stated it was too dark and they were fine till daylight
Kerin	1	3	2 7	2014	Tina Holland	89 south mm 9	bison in yard during night rubbed on 2 trees very upset wants to be contacted by NGO's	1		1	gave sam here information to give to NGO's
Knarr_ Joe	2	3	2 7	2014	SCOTT		BISON HAZE				HAZE BISON OFF J.SPARANO'S 2X DURING DAY, J.S. CALLED BACK AFTER DARK, HAZED OFF BY 313. 38 ALSO ASST. DOL WITH HAZE AT CK STATION.
Knarr_ Joe	2	3	2 7	2014	KERIN		BISON ON J.SPARONO'S				WENT TO J.S. AFTER DARK AND HAZED OFF PROPERTY. SET UP PLAN FOR NEXT DAY
Knarr_ Joe	1	3	2 7	2014	SMOLZ		BISON ON SPARANO'S				SET UP 32 TO GO OVER ON 28TH TO HAZE THEN CALLED HIM BACK AND CANCELLED
Knarr_ Joe	2	3	2 7	2014	SHEPPARD		BISON ON SPARANO'S				COORD. HAZING EFFORTS ON S.P.
Scott	1	3	2 7	2014	Joe Sperano	16 Maid en Basin Road	private property issue		1		18 bulls 1 cow hazed from his place
Scott	1	3	2 7	2014	DOL	Game Check Statio n	Assisted DOL		1		Hazed bison across the river
Scott	1	3	2 7	2014	Joe Sperano	16 Maid en Basin Road	private property issue		1		Hazed 21 bison
Knarr_ Joe	4X	3	2 8	2014	SCOTT		BISON STUCK IN RAKER				32 WILL ASSIST W/APHIS TO TRY AND FREE BISON AND THEN HELP S.P WITH BISON ON PROPERTY. BISON FREED SELF. NO HAZING DONE ON J.S. BISON OFF HIS PROPERTY AT THIS TIME.
Knarr_ Joe	1	3	2 8	2014	SHEPPARD		BISON STUCK IN RAKER				UPDATE

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						Concern	PS 95	H 155	PD 74		
Knarr_ Joe	1	3	28	2014	MOUNT					MOUNT FOUND 7 BULLS ON A BENCH HIGH UP JOE BROWN TRAIL IN SLIP N SLIDE. THINKING ABOUT ORGANIZING HORSE HAZE MONDAY OR TUES. NEXT WEEK.	
Scott	1	3	28	2014	Joe Sperano 16 Maiden Basin Road	private property issue		1		Hazed 21 bison off his place	
Knarr_ Joe	1	3	29	2014	TINA HOLLAND 570-6249	1079 HWY	BISON WERE IN YARD LAST NIGHT AND CAUSED TREE DAMAGE GONE NOW.			1	CALLED 37 WHO WAS COVERING TO CONTACT TINA
Knarr_ Joe	1	3	29	2014	LLOYD		HOLLAND				CONTACT T.HOLLAND
Knarr_ Joe	1	3	29	2014	SUSAN RIGGLER	4 PLEX	BISON ON PROPERT AT 4PLEX WANT THEM MOVED.	1			PLACE CALLS TO 313,LOVELESS MESSG. LEFT. CALL SUSAN BACK AND SHE AND TOLD HER NO ONE WASE IMM. AVAIL. BUT MESSG. LEFT. SUSAN SAID SHE MOSTLY JUST WANTED A RECORD MADE.
Knarr_ Joe	1	3	29	2014	KERIN		S. RIGGLERS				MESSG. LEFT
Knarr_ Joe	1	3	29	2014	LOVELESS		S. RIGGLERS				MESSG. LEFT
Knarr_ Jen	10	3	30	2014	Joe Sperano	?	bison in yard	1	1	1	used truck to move 2 bulls out of pasture area of Sperano's property
Knarr_ Jen		3	30	2014	Rigler	?	bison on drain field		1	1	moved 17 bison off of Rigler's drain field
Knarr_ Joe	1	3	30	2014	JEN KNARR		BISON UPDATE				CONT. TO MONITOR
Knarr_ Joe	1	3	30	2014	KERIN		BISON UPDATE				
Knarr_ Joe	1	3	30	2014	LOVELESS		RETURING MY CALL FROM LAST NIGHT.				
Knarr_ Joe	1	3	31	2014			BISON VEH. COLLISION				32 ENROUTE GARDINER
Knarr_ Joe	1	3	31	2014			BISON VEH. COLLISION				UPDATE FLOWERS AND ANDREA ON COLLISION
Knarr_ Joe	1	3	31	2014			BISON UPDATE				VISIT WITH 313 ON DAYS ACTIVITIES, START TO SET UP HAZE FOR WEN

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						Concern	PS 95	H 155	PD 74		
Knarr_ Joe	1	3	3 1	2014		JOE SPARANO JR. CALLED ABOUT BISON ON PROPERTY				ADVISED TO CALL 32 AND JOE SAID HE ALREADY HAD B4 I CALLED NOW.	
Knarr_ Joe	1	4	1	2014	KERIN	BISON UPDATE				PLANNING FOR LARGE HAZE	
Knarr_ Joe	3	4	1	2014	GUSE, C.ANDERSON, N,	HAZE				SUPPORT FOR HAZE	
Smolc zynski	8	4	1	2014	hoppe	gardi ner/ja rdine	bison on pasture	1	1		Haze bison across river
Kerin	2	4	2	2014	Riggler	89 south MM 9	Bison on drive way and hwy creating hazerd	1		1	went down and looked around I did not haze they were not on Riggler's when I got there.
Kerin	4	4	2	2014	Car VS Buffalo	89 south mm 6		1		1	Leo Carrier 6-23-1957 reported to me he hit a bison at mm 6 and it was not dead. I put down the buffalo had it removed. Assisted by 2 DOL 1 FG
Kerin	2	4	2	2014	Riggler	89 south mm 9	25 head biosn on Riggler's and on hwy	1	1	1	Hazded bison north to check station assted by 1 Dol and 2 FG
Kerin	2	4	2	2014	Pat Hoppie	89 south mm 6	4 bulls in with horses	1	1	1	hazed 4 bull out assisted by 3 DOL 2FG
Kerin	3	4	2	2014		89 south mm 12	130 head on the hwy at cattle gard	1	1		Hazed back to FAS assisted by 2 DOL 1 FG
Kerin	1	4	2	2014	Riggler	89 south mm 9	13 head bison on property	1	1	1	I left for the call when I got it. When I got there Riggler had already move the bison back up to slip and slide.
Kerin	2	4	2	2014	Car VS Buffalo	89 South mm 10		1		1	Yellowstone dispatch informed me a car had hit a buffalo and it needed to be put down. I responded and dispatched the buffalo and had it picked up in the morning.
Knarr_ Joe	1	4	2	2014	JEFF MOUNT		HAZE				HAZE SUPPORT
Knarr_ Joe	1	4	2	2014	KERIN		HAZE				SET UP HAZE
Knarr_ Joe	1	4	2	2014	SUSAN RIGGLER	HWY	BISON ON HWY				CALLED 313 HE IS ADDRESSING BISON

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							Concern	PS 95	H 155	
Knarr_ Joe	13X	4	2	2014	KERIN				BISON PUSHED FROM CHURCH CROSSED TO WESTSIDE OF ROAD (200), BISON AT RIGGLERS MOVED FROM AREA, 400+ BISON IN CORRIDOR, CONF. CALL W FLOWERS DIRECTWD TO SET UP FRIDAY HAZE, CONTACTING APHIS, DOL, PARK FOR RIDERS. MOVED 20 OUT OF F. RIGGLERS 1200 HRS.	
Knarr_ Joe	10X	4	2	2014	SCOTT	ASSIST 313			SENDING 38 TO ASSIST 313 WITH BISON. HAVE 32 PICK UP AIRHORNS TO BE DELIVERD TO SUSAN RIGGLER TODAY. CALL AND 38 TO ASSIST IN A.M. 38 AND MOUNT BUMP 130 FROM CATTLE GUARD WHEN LEAVING.	
Knarr_ Joe	1	4	2	2014	MOUNT	CALL BACK			LET 313 CALL MOUNT AND COORDINATE HAZING ASSISTANCE	
Knarr_ Joe	3X	4	2	2014	SGT. CHRIS ANDERSON	HORSEBACK ASSISTANCE			R5 WILL HAVE 2-3 RIDERS FOR FRIDAYS HAZE. COORD W 313 ON TIME AND PLACE TO KEEP HORSES.	
Knarr_ Joe	21X	4	2	2014	KEVIN FREY	ASSIST WITH HAZE			TALK WITH FREY TO HELP ASSIST WITH HAZE ON FRIDAY WILL GET BACK WITH ME 2MORROW ON AVAILABILITY.	
Knarr_ Joe	3X	4	2	2014	FLOWERS	BISON ISSUES			MEET THROUGHOUT DAY AND PLAN HAZE FOR FRIDAY	
Knarr_ Joe	1	4	2	2014	BILL HOPPE	BISON ISSUES			DISCUSS FRIDAYS HAZE	
Knarr_ Joe	1	4	2	2014	SUSAN RIGGLER	BISON IN DADS AND BEHIND PEN.				
Knarr_ Joe	2X	4	2	2014	KERIN	313 RESPONDED TO S.R. CALL TALK TO S.R. AND CK FOR BISON REPORT IN 4 PLEX				
Knarr_ Joe	1	4	2	2014	KERIN	BISON AND VEHICLE COLLISION NO INJURIES, BISON DEAD. MM5				
Scott	4	4	2	2014	with FG 313	Gardi ner MT	private property issue	1		hazed bison

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							PS 95	H 155	PD 74	
Kerin	2	4	3	2014	Riggler	89 SOUT H MM 11 RIGGLER CALLED 2x STATED BISON IN AND ON PROPERTY	1	1	1	I responed both times when I arrived there were no bison on his property.
Kerin		4	3	2014	RTR Church	Old Yello wston e Tr 3 bison in main complex	1	1	1	I stated I would get to them as soon as I could 400 on hwy at this time. They moved off on there own.
Kerin	2	4	3	2014	Rod Mcallster	4 old yello wston e tr called 2 x stated bison on property	1	1	1	I offered to come out but rod hazed the bison off both times I gave him 3 boxes mid range rubber slug
Knarr_Joe	1	4	3	2014	SUSAN RIGGLER	MESSG. THAT BISON ARE BEHIND DADS AND ONE IN DRIVEWAY. CHASED OUT, JUST WANTED US TO KNOW HOW BAD IT IS.				
Knarr_Joe	1	4	3	2014	KERIN	BISON ISSUES				DISCUSS S.R. CALL FROM MORNING AND EFFORTS FOR THE DAY AND HAZE
Knarr_Joe	1	4	3	2014	KEVIN FREY	BISON ISSUES				FREY AND JEREMIAH WILL HEAD TO GARDINER TO ASSIST
Scott	9	4	3	2014	8 bulls from Hoppe's field	Gardi ner MT private property issue		1		hazed bison
Kerin	4	4	4	2014		Hazed bison assisted DOL hazed 63 bison out of Tom Miner		1		
Kerin	6	4	4	2014		Hazed bison ran operation hazing bison		1		Hazed 100 head bison across bridge at corwin, hazed 115 head bison up little trail creek from Joe Sparano, Hoppie, Stermitz area bison did not go up the cerrk. Assisted by 1 DOL, 5 FG, 3 Park Service
Knarr_Joe	14	4	4	2014	KNARR	BISON HAZE GARDINER		1		TO GARDINER ASSIST DOL IN TOM MINER BASIN HAZE BACK TOWARD GARDINER.CALL FROM DISPATCH COMP. ABOUT F.RIGG FROM F RAKE. COMPLAINT FROM FRANK RAKE ABOUT F. RIGGLER HAZING.

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							Concern	PS 95	H 155	PD 74	Actions Taken
Knarr_ Joe		4	4	2014						75+ bison moved from so. Of corwin bridge across bridge and then south. 65+ from near Joe Sparno's south and up trail creek. Hamilton and Voss assist w traffic. Call to sgt. Mcglauphlin MHP for traffic support. Not available for 5th. Update Hamilton	
Scott	8	4	4	2014	with FG 313	Gardi ner MT	private property issue		1		hazed bison
Kerin	3	4	5	2014		Hazed bison	assisted DOL hazed 6 bison out of Tom Miner		1		Assisted by 5 FG, 4 DOL, 3 park service
Kerin	3	4	5	2014		Hazed bison	ran operation hazing bison		1		Hazed 40 head bison across corwin bridge assisted by 1 DOL, 3 Park, 1 Park co. 3 FG
Kerin	4	4	5	2014		Hazed bison	ran operation hazing bison		1		Hazed 115 head bison from Sparano, Hoppie, Stermitz area across river at Stermitz hay field into park. Assisted by 1 DOL, 3 Park, 1 Park co. 3 FG
Kerin	2	4	5	2014		Hazed bison	Picked up 100 head bison at Corwin area and pushed them to past Beattie				Assisted by 3 FG, 1 DOL, 3 park service
Knarr_ Joe	9	4	5	2014			HORSES TO GARDINER, HAZE				transport 2 horses to gardiner. 150 taken from Maiden Basin across river into park. Assist with vehicle . Send r5 guys home, visit with tierney, sheppard, kerin on ops. FG320,313,318,312,c.anders on, brad balis. Fg32. fg38. (4) horse and (4) vehicle
Scott	8	4	5	2014	with FG 313	Gardi ner MT	private property issue		1		hazed bison
Smolc zynski	9	4	5	2014	sturmitz	gardi ner/ja rdine	bison on pasture		1	1	Haze bison across river
Kerin	6	4	6	2014		Hazed bison	ran operation hazing bison		1		Hazed 115 head bison from Sparano, Hoppie, Stermitz area across river at Stermitz hay field into park. Assisted by 3DOL, 3 Park, 4 FG

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						Concern	PS 95	H 155	PD 74		
Knarr_ Joe	9	4	6	2014		Bison on or near roadway				FG313, 320, 300, 37.(1) horse, (3) veh. DOL 526,544,534, Dooly, cunnigham. 100+Bison moved from maiden basin across river to park. Dol had 2 riders, Park had 2. support staff 1 dol rob, 3 Fish, Wildlife and Parks. Rob said he was happy with haze. Fish, Wildlife and Parks was lead. no other hazing requested. call on way home 3 in tom miner dol req. 2 riders. will send 1 rider (only one avail) and 1 support for next a.m.	
Knarr_ Joe	1	4	6	2014	SPARONO	BISON ON PROPERTY				TALKED TO 313 WILL ADDRESS IN A.M.	
Lloyd	1	4	6	2014	Pat Hoppie	Pastu re on Hwy. 89 S north of Gardi ner	Didn't want bison there.		1	1	Hazed about 10 out of his pasture
Kerin	3	4	7	2014		Hazed bison	Assisted DOL haze 3 bison out of tome minner back two Cutler Medows		1		2 FG, 2 DOL, 2 Park Service
Kerin	2	4	7	2014	Joe Sparano Sr. and Jr.		40 head on property	1	1	1	they were gone when we got there gave Joe, Sr. 4 Boxes of Mid Rangs Rubber Slugs
Kerin	4	4	7	2014	RTR Church	Blue bildin gs	100 + head bison in hay field		1	1	Haxed out assisted by 2 DOL 2 FG pushed to Power line flats in Park
Knarr_ Joe		4	7	2014			3 BISON UP TOM MINER				320 VEH. SUPPORT GATE BFC SECURITY. 3 BISON MOVED INTO CUTLER
Kerin	2	4	8	2014	Pat Hoppie	89 south MM 5	20 head bison in with horese	1	1	1	hazed out and up little trail creek went around stermitz house. Assisted by 1 DOL 2FG
Kerin	2	4	8	2014	High school		5 Bulls around school school is about to get out	1	1		hazed 5 bulls off school to power line flats 1FG

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Kerin	1	4	9	2014	Bill Hoppie	17 Jardine Rd	Bill called stated 3 bulls on property had wife and dog pinned in corner	1	1		Turned call over to Srg. Knarr
Kerin	4	4	9	2014			36 Bison up Joe Brown on top Red Mountain		1		Assisted DOL haze 36 Bison off Red Mountain Asssted 5 FG, 4 Dol, 2 Yellowstone Park
Kerin	1	4	9	2014	Riggler		40 head on property	1	X	1	Hazed 40 head out of subdivision across river picked up by dol and hazed south.
Kerin	2	4	9	2014	Pat Hoppie	89 south MM 5	30 Head bison on property	1	1	1	Hazed 40 mhead off property across river back into Park.
Kerin	2	4	9	2014	Bill Hoppie	17 Jardine Rd	4 bulls in with horses	1	1	1	hazed off property across flat to north west
Kerin	1	4	9	2014	Joe Sparano Sr. and Jr.		37 head on Property	1	1	1	Hazed 37 head off property across river back into Park
Knarr_Joe		4	9	2014	KERIN						Bison update
Lloyd	1	4	9	2014	Joe Sporano	16 Maiden Basin Rd., Gardiner	Didn't want bison there.		1	1	Hazed about 30 out of his pasture.
Lloyd	2	4	9	2014	Frank Riggler	Pasture between Hwy and River.	Didn't want bison there.		1	1	Hazed about 8 out of his pasture.
Lloyd	1	4	9	2014	Pat Hoppie	Pasture on Hwy. 89 S north of Gardiner	Didn't want bison there.		1	1	Hazed about 12 out of his pasture.
Scott	11	4	9	2014	6 Bison from Franklin Rigler	Gardiner MT	private property issue		1		hazed bison
Wahl	3	4	9	2014							Drove to Gardiner

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Knarr_ Joe	1	4	1 0	2014	Susan Riggler					call from S. Riggler, bison at dads house she is concerned for safety and just documenting.	
Knarr_ Joe	1	4	1 0	2014	Smolz					call to 32 have him make susan priority	
Knarr_ Joe	1	4	1 0	2014	Wahl					message to contact S. Riggler	
Knarr_ Joe	3	4	1 0	2014	KERIN					disucss op's plans for fridey	
Knarr_ Joe	1	4	1 0	2014	Mount					discuss op's plans for Friday	
Knarr_ Joe		4	1 0	2014	Wahl					c/b from 36 talked to charlieRiggler, charlie said he was going to start shooting bison said the bison were out behind the cattle, 36 looke could not find bison.	
Knarr_ Joe		4	1 0	2014	Kline					discuss help for Friday and Sat.	
Wahl	11	4	1 0	2014	Rigler/Hop pe	Bison on properties		1		Moved Bison to Park	
Knarr_ Joe	2	4	1 1	2014	Tierney	haze				discuss details of changes to haze today. And how to meet both dol and Fish, Wildlife and Parks needs	
Knarr_ Joe	2	4	1 1	2014	KERIN					discuss todays haze	
Knarr_ Joe	1	4	1 1	2014	kline					discuss haze help	
Knarr_ Joe	6	4	1 1	2014	Knarr	haze and bison shot				Gardiner, check on haze development. Handle call bill hoppe shot bison in self defense. Investigate case interview witnesses, dress bison and hall to livingston to be processed.	
Knarr_ Joe	2	4	1 1	2014	Jen					Call regarding haze	
Knarr_ Joe	1	4	1 1	2014	Tierney	Haze ops				messg. To call me	
Knarr_ Joe	1	4	1 1	2014	Mount	Haze ops				messg. To call me	
Lloyd	2	4	1 1	2014	Slip and Slide Ranch	Traffic for DOL haze.	1			Traffic control for DOL haze.	
Lloyd	2	4	1 1	2014	Frank Riggler	Traile r Park & Oat field	Didn't want bison there.		1	1	Hazed about 30 off of his property.

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						Concern	PS 95	H 155	PD 74		
Lloyd	1	4	1	2014	Pat Hoppie	Pasture on Hwy. 89 S north of Gardiner	Didn't want bison there.		1	1	Hazed about 15 out of his pasture.
Lloyd	1	4	1	2014	Bill Hoppie	Eagle Creek area.	Didn't want bison there.		1	1	Hazed 4 bulls off of his property.
Lloyd	1	4	1	2014	Joe Sporano	16 Maiden Basin Rd., Gardiner	Didn't want bison there.		1	1	Hazed about 35 off of his property.
Wahl	12	4	1	2014	Public/Hoppe/Hoppe		Bison on properties	1	1		Traffic control/Bison to park/Returned to Dillon
Kerin	2	4	1	2014			6 Bulls up Joe brown red mountain		1		Assisted DOL haze 6 bulls off Red Mountain assisted 4 FG, 4 Dol,
Kerin	2	4	1	2014	Pat Hoppie	89 south mm5	4 bulls in with horses	1	1	1	Hazed 4 buls off property across river
Kerin	2	4	1	2014	Stermitz		7 Bison on Property	1	1	1	Hazed 7 Bison off property across river
Kerin	1	4	1	2014	RTR Church		11 head in Blue bildings	1	1	1	Hazed off property back into Park
Knarr_Joe	1	4	1	2014	Mount						c/b from mount about next week schedule said to call tierney
Knarr_Joe	1	4	1	2014	Tierney		haze ops				messg. To call me
Knarr_Joe	1	4	1	2014	Tierney						talked to tierney about haze next week lost signal twice
Knarr_Joe	2	4	1	2014	KERIN		haze ops				calls to 313 and set schedule for next week
Knarr_Joe	1	4	1	2014	smolz, coy,		haze ops				cancel 310 for tomorrow, ck w/32 for suday
Knarr_Joe	1	4	1	2014	33,34,312, 37,313,31, 311,38		haze ops				send out next weeks schedule
Scott	8	4	1	2014	with FG 313	Gardiner MT	private property issue		1		hazed bison
Kerin	7	4	1	2014	Pat Hoppie		27 head bison on property	1	1	1	Hazed off Across river into Park

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							PS 95	H 155	PD 74		
Knarr_ Joe	1	4	1 3	2014	KERIN	haze ops				50 bison return to maiden basin, hazed 27 back across river w/32.	
Kerin	2	4	1 4	2014	RTR Church	Blue bildin gs	65 head on property	1	1	1	Hazed off back into park
Kerin	3	4	1 4	2014	RTR Church	Corwin Bridge	35 Head	1	1	1	Hazed across bridge
Kerin	2	4	1 4	2014	Stermitz Hay field		29 Head	1	1	1	Hazed off across river into park assisted all day, 1 Dol 4 FG
Knarr_ Joe	1	4	1 4	2014	Kerin						call bison update,
Knarr_ Joe		4	1 4	2014	Knarr		sturmitz				haze 65 from pivot into park, haze 35 from corwin across bridge, haze 29 from sturmitz across river into park.
Knarr_ Joe		4	1 4	2014	mount		haze ops				assisted w haze, talk with tierny about final push he called tierney
Kerin	3	4	1 5	2014	Pat Hoppie		8 Bulls	1	1	1	Hazed 8 Bulls off Property across river Assisted by 1 DOL, 2 FG, 1 Park servivce
Kerin	2	4	1 5	2014	Stermitz Hay field		25 head	1	1	1	pushed off with Pat Hoppie group across river back into Park Assisted by 1 Dol, 2 FG, 1 Park Service
Kerin	2	4	1 5	2014	Pat Hoppie		7 Head	1	1	1	Hazed 7 Bison off property across river 2 FG
Kerin	2	4	1 5	2014	Stermitz Hay field		22 head	1	1	1	pushed off with Pat Hoppie group across river back into Park 2 FG
Knarr_ Joe	1	4	1 5	2014	KERIN		p. hoppel's maiden basin				discuss bison status, some bison back at Maiden Basin and Papish stick with original plan for Friday. 60 off pivot rtr, 33 pats and sturmits across river.
Schma uch	8	4	1 5	2014	RAYMOND STERMITZ		Buffalo in Hay field.		1	1	Haze out 30 or so head.
Knarr_ Joe	3x	4	1 6	2014	Scott		sturmitz				hazed 30+ across river at sturmitz, hazed off rtr back, issues with bfc
Knarr_ Joe	3x	4	1 6	2014	KERIN		bison building near highway				change haze from Friday to thu. This week

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						Concern	PS 95	H 155	PD 74		
Knarr_ Joe	2x	4	1 6	2014	Tierney	haze ops				dol committs 3 riders for thu. Haze	
Knarr_ Joe	1	4	1 6	2014	McGlauphli n	traffic				MHP will have unit on scene for thu. Haze	
Knarr_ Joe	2	4	1 6	2014	sheppard					update 31 on status and haze change	
Knarr_ Joe	1	4	1 6	2014	Gosse	haze op				Bison update	
Knarr_ Joe	1	4	1 6	2014	Smolz	haze op				Bison update	
Knarr_ Joe	1	4	1 6	2014	B. Hoppe					missed late call did not leave messg	
Schma uch	2	4	1 6	2014	WAYNE HOPPE	Buffalo in fields		1	1	Haze out 42 or so head.	
Schma uch	2	4	1 6	2014	RAYMOND STERMITZ	Buffalo in fields.		1	1	Haze out 21 or so head	
Schma uch	2	4	1 6	2014	CHURCH UNIV. TRIUM.	Buffalo in field.		1	1	Haze out 22 or so head.	
Schma uch	2	4	1 6	2014	JOSEPH SPERANO	Buffalo in field.		1	1	Haze out 19 or so head.	
Schma uch	1	4	1 6	2014	RIGLER	Buffalo along hghwy	1			Observe/monitor/traffic.	
Schma uch	3	4	1 6	2014	MISC		1		1	Observe/monitor/traffic.	
Scott	11	4	1 6	2014	40 bison from Hoppe's field	Gardi ner MT	private property issue		1		hazed bison
Kerin	1	4	1 7	2014	Corwin area		43 head	1	1		Pushed across bridge and pushed south Assised by 4 FG, 3 park service, 3 DOL and 1 MHP all day
Kerin	1	4	1 7	2014	La-duke area		35 Head	1	1		pushed across river put with Corwin bunch and pushed south tro Beattie
Kerin	1	4	1 7	2014	RTR Church	Blue bildin gs	10 Head	1	1		picked up and taken to Beattie
Kerin	2	4	1 7	2014	Pat Hoppie		30 Head bison on property	1	1		pushed to stermitz hay field
Kerin	1	4	1 7	2014	Stermitz Hay field		70 head	1	1		picked up and pushed across river back to Park pushed to landslide creek
Kerin	2	4	1 7	2014	Hank Rate	Horse pastu re mm9	43 head	1	1	1	tried to haze up Ceader creek could not pushed to Deval slide
Kerin	2	4	1 7	2014	Stermitz Hay field		8 Head	1	1	1	Puch back out into Park

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Knarr_ Joe	3x	4	1 7	2014	KERIN					update on todays haze. Will start at Maiden basin area. Haze 200+ bison back to park,	
Knarr_ Joe	1	4	1 7	2014	smolz					txt on haze info	
Knarr_ Joe	1	4	1 7	2014	B. Hoppe	he hazed 12 bison from property, damage to fence				just wanted a record made of event	
Knarr_ Joe		4	1 7	2014	Lold	haze ops				called off of gardiner duty b/c schmauch is staying thru fridea	
Knarr_ Joe	2	4	1 7	2014	Schmauch	haze ops				volunteers to stay thru Friday	
Schma uch	1	4	1 7	2014	Rigler	Buffalo along hghwy	1			Observe/monitor/traffic.	
Schma uch	11	4	1 7	2014	Multiple		1	1	1	FWP, DOL & NPS horse haze	
Smolc zynski	10	4	1 7	2014	sturmitz	gardi ner/ja rdine	bison issues on road	1			hazebison across river
Kerin	2	4	1 8	2014	Pat Hoppie		43 head	1	1		Pushed across river into park
Kerin	2	4	1 8	2014	RTR Church	Joe Spran o Sr. horse pastu re	4 Bulls	1	1		Pushed to Devil Slide
Kerin	2	4	1 8	2014	RTR Church	Blue bildin gs	97 Head	1	1		Pushed to Ice Lake in Park
Kerin	2	4	1 8	2014	Bill Hoppie	house	13 head bison on property	1	1	1	pushed off to the North
Kerin	1	4	1 8	2014	Pat Hoppie	Horse pastu re mm9	put down gray horse stated did not limp untill bison in and on property just FYI				
Knarr_ Joe	2	4	1 8	2014	kerin		sturmitz				hazed bison off pivot and bill hopped, pat hopped and sturmitz back across river to park
Knarr_ Joe	1	4	1 8	2014	smolz						bison update on haze for Saturday
Knarr_ Joe	1	4	1 8	2014	kline		haze ops				haze update for schedule
Schma uch	7	4	1 8	2014	Multiple			1	1	1	FWP, DOL & NPS horse haze
Smolc zynski	8	4	1 8	2014	hoppe	gardi ner/ja rdine	bison on pasture	1	1	1	haze bison to park

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Kerin	4	4	1 9	2014	RTR Church	Blue bildin gs	14 Head	1	1		Hazed to park Line
Kerin	4	4	1 9	2014	Stermitz Hay field		30 Head bison on property	1	1		Hazed back to Park
Kerin	4	4	1 9	2014	Riggler	on hwy near Riggle r	18 Head	1	1		tried to push across at check station would not cross taken down to corwin bridge and crossed there and taken to Devil Slide Assisted by 4 FG, 3 DOL, 1 Park service all day
Knarr_ Joe	1	4	1 9	2014	kerin		sturmitz				bison in hay fiel, 3 hazed from rigglers, bison at pat hoppes, call off 32
Knarr_ Joe	1	4	1 9	2014	smolz		haze ops				messg. To 32 to not come over
Knarr_ Joe	1	4	1 9	2014	Hamilton		haze ops				messge about the haze thu. And Friday.
Knarr_ Joe	10	4	1 9	2014	knarr		Rigglers				asssit move 18 bulls from rigglers driveway south across river to devils slide. 6 bulls out of pats
Kerin	1	4	2 0	2014	Corwin area		5 head	1	1		Hazed to Devil Slide
Kerin	1	4	2 0	2014	Pat Hoppie	Horse pastu re	3 Bulls	1	1		Hazed out went into Yellow House no permission left they like bison
Kerin	1	4	2 0	2014	Stermitz Hay field		13 head bison on property	1	1		Hazed across river back into park
Kerin	1	4	2 0	2014	Pat Hoppie	Horse Pastu re	3 Bulls	1	1		Bison from yellow house came out headed back to Pats Hazed through Stermitz across river into Park tried to fix fiencie at north cornner of Stermitz hay field.
Kerin	1	4	2 0	2014	RTR Church	Blue bildin gs	15 head	1	1		Hazed back to Park assisted 2 FG all day

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						Concern	PS 95	H 155	PD 74		
Knarr_Joe	9	4	20	2014	knarr					320 and 313 hazed bison out of rtr pivot into park, group out of lighthouse across corwin bridge, large bull group in stermitz and 3 bull off highwya at p. hoppes across river. Stopped by Stephanie BFC told us we did an excellent job hazing the bison , as nice as they can expect it be done. rehaze 8 bulls from sturmitz	
Knarr_Joe	1	4	21	2014	Mount	sturmitz				call about bison move into park at sturmitz. It bison at sturmitz don't cross easily let them stay for big push tomorrow.	
Knarr_Joe	1	4	21	2014	Scott	sturmitz				haze info	
Knarr_Joe	1	4	21	2014	helms	haze ops				leave messg to request park haze bison from sturmitz farther back into park. Cant have rider until tomorrow suggest leave bison in sturmitz until then, will also help stop teaching them bad habits, agreed, pass onto mount and drew.	
Knarr_Joe	1	4	21	2014	sheppard	haze ops				discuss tradegy for hazes. Keep calf out of harms way. Do not haze in sturmiz tomorrow	
Lloyd	1	4	21	2014	Pat Hoppie	Pasture on Hwy. 89 S north of Gardiner	Didn't want bison there.		1	1	Hazed about 8-10 out of his pasture.
Lloyd	1	4	21	2014	RTR		Didn't want bison there.		1	1	Hazed about 10 off of church property.
Scott	11	4	21	2014	9 Bison from Hoppe's field	Gardiner MT	private property issue		1		hazed bison
Brozovich	6	4	22	2014	Stermitz			1			
Knarr_Joe	2	4	22	2014	Jen K.		haze ops				discuss tradegy for hazes. Keep calf out of harms way. Do not haze in sturmiz today

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Knarr_Joe	3	4	2 2	2014	Scott					discuss tradegy for hazes. Keep calf out of harms way. Do not haze in sturmiz today. Move bison out of pat hoppes into sturmiz and leave there.	
Knarr_Joe	1	4	2 2	2014	helms					let helms know about change not haze from sturmiz today.	
Scott	10	4	2 2	2014	0 bison from Hoppe's field	Gardiner MT		1		hazed bison	
Brozovich	9	4	2 3	2014			1				
Kerin	6	4	2 3	2014	Pat Hoppie		2 Bulls	1	1	1	Haxed up Little Trail Creek located 20 head that were on Stermitz hay field
Knarr_Joe	2x	4	2 3	2014	KERIN						2 up high behind p. hopes, nothing in hay field, dol heard there maybe some up at greenlake and joe brown. Very slow
Knarr_Joe	1	4	2 3	2014	loveless		haze ops				worried about hours, only available for partial days next week. Told her she was not needed today.
Yaskus	8	4	2 3	2014	Gardiner area assisting Kerin	Hwy 89	Bison damage	1	1		worked traffic
Brozovich	9	4	2 4	2014				1			
Kerin	9	4	2 4	2014	Green Lake						Assist Dol locate 0 bison Green Lake Assisted 1 FG, 2 Dol
Knarr_Joe	1	4	2 4	2014	KERIN		pat hoppes				hazed bison off pat hoppes across river.
Yaskus	9	4	2 4	2014	Gardiner area assisting Kerin	Hwy 89/ Old Yellowstone Road	Bison damage		1		shuttled horsetrailers
Kerin	2	4	2 5	2014	Joe Sparano Sr. and Jr.		10 cows	1	1	1	Haxed off property they walked on there own down the hwy I opened gate at Stermitz hay field and they crossed river on there own back into the park.

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Kerin	4	4	25	2014	Slip and Slide					Assisted DO:L locate 1 bull bison tried to haze out ran over the top of us 3 times declared un hazeable.	
Kerin	1	4	25	2014	Pat Hoppie	Horse pasture	1 Bull	1	1	1	Haxed up little trail Creek.
Knarr_Joe	1	4	25	2014	KERIN		slip and slide dol assist				only a couple of bison out, 313 assisting dol in search for bison up slip and slide, one bison in pat hoppes
Knarr_Joe	1	4	25	2014	coy and wahl		haze ops				discuss w 313 and cancell wahl for tomorrow.
Lloyd	1	4	25	2014	Joe Sporano Jr.	16 Maiden Basin Rd., Gardiner	Didn't want bison there.		1	1	Hazed about 30 off of his property.
Knarr_Joe	1	4	26	2014	KERIN		haze ops				ck with 313 on bison update, very slow, working with 300 today
Knarr_Joe	2	4	27	2014	KERIN						ck with 313 on bison update. Few bison out. 313 s/v issues, coordinate w/300 and 312 to 313 another veh. In livingston.
Knarr_Joe	2	4	28	2014	KERIN		haze ops				coord. Personel for haze w/dol tomorrow.
Knarr_Joe	1	4	28	2014	conf. call						sit in on conf. call of bison ops. Discuss haze for tomorrow and biosn out on west side
Knarr_Joe	1	4	28	2014	sheppard						discuss bison work for next week
Knarr_Joe	2	4	28	2014	Gosse						coord. Travel for bison haze on Tuesday.
Kerin	7	4	29	2014	Assisted dol haze back			1			assisted dol haze 7 Bulls devil slide picked up 2 bulls on church blue bildings and pushed 3 bulls out of stermitz hay field all taken to powerline flats assisted by 3 fg, 3 dol, 3 park service. 1 BFC arrested interfering with haze

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Knarr_Joe	10	4	29	2014	Knarr					trvel to gardiner asist in bison haze with dol. 8 bulls hazed into park
Kerin	2	4	30	2014	Stermitz Hay field		1	1		Hazed across river back into park 2 FG ATV
Kerin	2	4	30	2014	RTR Church	Blue bildin gs	1	1		same bulls from Stermitz Hay field pushed back intpark assisted by 2 FG, 1 Park service
Knarr_Joe	1	4	30	2014	kerin					only 3 bulls on parkside of river. 313 and 38 hazed 3 bison from pivot to bette gulch.
Scott	4	4	30	2014	with FG 313	Gardi ner MT		1		hazed bison
Knarr_Joe	1	4		2014	FLOWERS					MEET WITH FLOWERS AND DISCUSS PLAN FOR LARGE HAZE .
Knarr_Joe		4		2014						313 VEH. FG638 TRANNY WENT OUT ARRANGE TOW TO BOZEMAN
Knarr_Joe		4		2014						REQST PARK CO. TO HELP WITH TRAFFIC SCOTT SAID NO PROBLEM. DOL CHANGED PLAN TO ASSIST US WITH OUR HAZE AND IS GOING TO PUSH THE 3 FARTHER INTO THE PARK. DIRECTION FROM ROB.T.
Knarr_Joe		4		2014						5 boxes of ruber bullets delieverd to joe s. sr. Haze 160 bison from rtr pivot, 2 dol horse 1 Fish, Wildlife and Parks atv
Scott		4		2014	18 bison from Hoppe's field	Gardi ner MT		1		hazed bison
Scott		4		2014	35 bison from Joe Sperano	Gardi ner MT		1		hazed bison
Scott		4		2014	2 Bison from Franklin Rigler	Gardi ner MT		1		hazed bison
Scott		4		2014	30 bison from CUT ranch	Gardi ner MT		1		hazed bison
Scott		4		2014	22 Bison from Joe Sperano	Gardi ner MT		1		hazed bison

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Scott		4		2014	20 from Stermitz property	Gardiner MT	private property issue		1		hazed bison
Scott		4		2014	6 from Cut ranch	Gardiner MT	private property issue		1		hazed bison
Scott		4		2014	10 bison from CUT ranch	Gardiner MT	private property issue		1		hazed bison
Scott		4		2014							
Kerin	2	5	1	2014	RTR Church	Blue Buildings	3 Bulls	1	1		Hazed out, back into park assisted 1 Park service, 1 FG
Knarr_Joe	2	5	1	2014	KERIN		3 BULLS IN PIVOT, 1 BULL AT CORWIN, 3 BULL MOVING NORTH IN PARK, HUNTER ACCEPTED BISON BULL HUNT IN SLIP AND SLIDE				
Knarr_Joe	2	5	1	2014	smolz		call to have 32 in Gardiner on 2nd.				
Knarr_Joe	1	5	1	2014	Mount		call to check on need for rider on 2nd				
Knarr_Joe	1	5	1	2014	Feddes		line up 300 to work in gardiner in morning.				
Kerin	6	5	2	2014	Assisted DOL Haze Back				1		hazed 1 north of Corwin, 3 rtr hay field 2 Stermitz , picked up 6 stephins creek all taken to power line flats, assisted by 3 dol, 2 FG, 2 Park service , 2 MHP
Knarr_Joe	1	5	2	2014	kerin						300 and 313 haze 6 bison back into park
Knarr_Joe	1	5	2	2014	Bill Hoppe		4 bulls in pasture				call bill back sending 38 to assist in haze
Knarr_Joe	1	5	2	2014	scott						heading to b. hoppel's to assist in haze
Smolczynski	8	5	2	2014	povah	south fork of madison river	bison on private property		1		Haze approximately 60 bison to horsebutte side
Knarr_Joe	1	5	4	2014	Hamilton						email update to Scott

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Smolc zynski	9	5	4	2014	povah	south fork of madis on river	bison on private property		1		Haze approximately 20 head of bison to horsebutte side
Kerin	1	5	5	2014	Bill Hoppie	Hous e	5 bulls on property	1	1	1	bill stated 5 bulls on property stated he thought he could get thym off stated he would call back if he needed help. I offered to go.
Knarr_ Joe	1	5	5	2014	Tierney						71 out on South fork, requesting help starting toward end of week.
Knarr_ Joe	1	5	5	2014	Kerin						
Kerin	13	5	6	2014	Assisted DOL Haze Back	West Yello wston e	100 head southfork		1		assisted pushed onto horse butte
Smolc zynski	4	5	6	2014	usfs	madis on arm road	bison potential for southfork		1		Haze bison to park line
Kerin	2	5	7	2014	stermitz hay field		4 bulls	1	1		Hazed off across river into park used atv.
Knarr_ Joe		5	7	2014	smolz						bison update
Knarr_ Joe	2	5	8	2014	kerin						bison on sturmitz, across from sturmitz, on rtr. Mount set up riders 313 set up traffic, 31 and mhp
Knarr_ Joe	2	5	8	2014	Bridger		bison on southfork				looking for riders for tomorrow haze. Call back leave messg. 32 will ride tomorrow
Knarr_ Joe	1	5	8	2014	smolz						conf. 32 will ride tomorrow
Kerin		5	9	2014	stermitz hay field		2 bulls	1	1		located 2 bulls when went back to haze they were gone they went up little trail creek on there own.
Kerin	4	5	9	2014	Assisted DOL Haze Back	Beatti e	3 Bulls		1		assised DOL hazed 3 bulls to rambo lake assised by 2 Fg, 1 DOL, 1 Park service , 1 Aphis

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Kerin	5	5	9	2014	Bison conflict areas					looked at Pat Hoppie, Bill Hoppie, Sprano Jr. ans Sr. propertys for fiencing ideas with sam		
Knarr_ Joe	1	5	1 2	2014	kerin					Bison hazed w/31		
Smolc zynski	9	5	1 3	2014	povah	south fork of madis on river	bison on private property		1		Haze approximately 40 bison to 7mile bridge in ynp	
Kerin	2	5	1 4	2014	Bill Hoppie		35 bison	1	1	1	Bill called stated he had already hazed 2 different groups of 12-15 bison off property today and now there was 5 more bulls back on property. I went up and hazed 6 bulls off property and left 3 boxes of Mid rang Rubber slug with Bill.	
Smolc zynski	8	5	1 4	2014	povah	south fork of madis on river	bison on private property		1			Haze 55 head of bison to park. Bakers hole
Kerin	2	5	1 5	2014	Bill Hoppie		6 Bulls	1	1	1	Hazed 6 Bulls off Bill Hoppie	
Smolc zynski	8	5	1 6	2014	povah	south fork of madis on river	bison on private property		1			Haze bison to park line
Knarr_ Joe	9	5	1 7	2014	smolz							transport hay to west yellowstone for haze operations next week. 32 said 3 bison were hit on hwy at his driveway last night at 330 am. No one hurt hit by semi. Bison taken to transfer station.
Knarr_ Joe	1	5	1 8	2014	Tierney							message to tierney on haze details
Knarr_ Joe	1	5	1 9	2014	smolz		bison on south fork					32 assisting with haze off south fork
Knarr_ Joe	2	5	1 9	2014	tammie							get tammie lined out for tuesdays haze

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Smolc zynski	7	5	19	2014	Horsebutte	Horse butte, west yello wston e	bison on private property		1		Haze bison to bakers hole
Knarr_ Joe	2	5	20	2014	smolz						100+ bison hazed from south fork to bakers hole
Smolc zynski	8	5	20	2014	povah	south fork of madis on river	bison on private property		1		Haze bison to 7mile in ynp
Knarr_ Joe	1	5	21	2014	smolz						assisting in haze from bakers hole back into park
Knarr_ Joe	1	5	21	2014	C. Anderson						assisting in haze from bakers hole back into park. 2 more riders arriving tonight for thu. Friday haze.
Knarr_ Joe	1	5	21	2014	Tierney						bison in bakers hole to be moved to 7mile. Additional bison on part of butte to be taken to bakers hole today. Riders tomorrow will take these bison to 7mile. Friday riders will hold the line. Advise of riders we will have on ground.
Smolc zynski	9	5	21	2014	Horsebutte	Horse butte, west yello wston e	bison on private property		1		Haze bison to cougar meadows in ynp
Smolc zynski	9	5	22	2014	povah	south fork of madis on river	bison on private property		1		Haze approximately 70 head to 7mile bridge in ynp
Smolc zynski	9	5	23	2014	ynp	yello wston e natio nal park	push bison to cougar meadows		1		patrol bison in park to push deeper interior
Knarr_ Joe	1	5	26	2014	Tierney						call tierney discuss wen. Haze. Tierney sugg. Calling off R5 riders b/c of private prop. Ruling by Gov.

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Knarr_Joe	1	5	26	2014	C. Anderson					cancel help for wen. Haze	
Kerin	2	5	27	2014	Moorie Miller	23 Maiden Basin drive	Just returned home and found damage to her trees caused by bison			1	looked at property and damage gave her information to Sam who will give it to the NGO. She is intersted in some fiencing to protect her trees she has almost 80 trees
Knarr_Joe	1	5	27	2014	Tierney						conf. w/rob we will have 3 riders for haze. On wen. Bison in red canyon and few off priv. on butte
Knarr_Joe	1	5	27	2014	smolz						call to conf. riders for wen
Knarr_Joe	1	5	27	2014	kerin						mess. To confirm riding on wen.
Knarr_Joe	1	5	27	2014	gosse						mess. To confirm riding on wen.
Smolczynski	8	5	27	2014	Horsebutte	Horse butte, west yellowstone	bison on private property			1	move bison to bakers hole in ynp
Kerin	15	5	28	2014	Assisted DOL Haze Back	West Yellowstone	130 head out sub division			1	assisted dol haze 130 head bison back to 7 mile bridge assisted by 3 FG, 5 DOL, 2 APHIS, 2 Park service only at park line
Knarr_Joe	1	5	28	2014	smolz						call to 32 to get up date on haze. 32 and 313 will haze thu.
Smolczynski	11	5	28	2014	ynp	yellowstone national park	bison coming out			1	move bison further in ynp
Kerin	8	5	29	2014	Assisted DOL Haze Back	West Yellowstone	3 cows Red Canyon			1	assisted dol hazed back into park duck creek they would not stop running so we let them go at park line they keep running. Assisted by 1 FG, 5 DOL, 2 APHIS, 2 Park service only at park line
Knarr_Joe	1	5	29	2014	smolz						call from 32 not needed on haze, 313 is asst. w/haze off red canyon.
Knarr_Joe	1	6	9	2014	BRIDGER		CALL FOR ASST TO HAZE				

Table C1.—Log of incidents responded to by MFWP wardens from Dec 2013 through Jul 2014.

Office r	Hrs 1145	Month / Day / Yr			Landowner or contact	Addr ess	Concern	Public Safety (PS), Hazing (H), or Property Damage (PD)			Actions Taken
								PS 95	H 155	PD 74	
Knarr_ Joe	1	6	9	2014	SMOLZ		NOT AVAIL. TO ASSIST				
Knarr_ Joe	1	6	1 3	2014	SMOLZ		CK ON BISON ISSUES OK				
Knarr_ Joe	1	6	2 3	2014	SMOLZ		ASSIST DOL				32 ASSIST DOL WITH HAZE ON DENNY CREEK.
Knarr_ Joe	1	6	2 3	2014	BRIDGER		BISON ON DENNY CRK. LOOKING FOR HELP				
Smolc zynski	10	7	2	2014	povah	south fork of the madi on	bison among cows		1		haze approx 12 head of bison to 7 mile in ynp
Smolc zynski	4	7	3	2014	ynp	yello wston e Natio nal Park	bison coming back out of park				ride park route to insure bison have moved further to interior