

2013 ANNUAL REPORT OF THE INTERAGENCY BISON MANAGEMENT PLAN

1 November 2012 - 31 October 2013



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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, 2012 to October 31, 2013, plus provides some updates on important end-of-2013 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 current IBMP Adaptive Management Plan can be found at <http://ibmp.info/adaptivemgmt.php>.

CONTENTS

KEY CONTRIBUTORS TO THE ANNUAL REPORT	1
ANNUAL REPORT OVERVIEW	1
LIST OF ABBREVIATIONS	3
BACKGROUND	4
2012/2013 HIGHLIGHTS	4
MANAGEMENT ACTIONS FOR THE IBMP	8
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, Appendix A)...	8
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, Appendix A).....	13
MANAGEMENT ACTION 1.1.C —Use research findings to inform adaptive management.	15
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.	16
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.	16
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.	18
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.....	19
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).	19
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.....	20
MANAGEMENT ACTION 1.4.A —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.	21
MANAGEMENT ACTION 1.4.B —Coordinate management activities that could potentially impact opportunities for tribal members to exercise their treaty rights.	21
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.	22
MANAGEMENT ACTION 2.1.B —Increase the understanding of genetics of Yellowstone bison to inform adaptive management.	23
MANAGEMENT ACTION 2.1.C —Increase understanding of the ecological role of bison to inform adaptive management by commissioning a comprehensive review and assessment.	24
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.....	25
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.	25
MANAGEMENT ACTION 2.2.C —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.	26
MANAGEMENT ACTION 3.1.A —Continue bison vaccination under prevailing authority.	28
MANAGEMENT ACTION 3.1.B —Complete EIS processes (MEPA/NEPA) for remote delivery vaccination of bison and use the outcomes to inform adaptive management.....	28

MANAGEMENT ACTION 3.1.C—Test and vaccinate cattle.....	29
MANAGEMENT ACTION 3.2.A—Use spatial and temporal separation and hazing to prevent cattle/bison interactions.....	30
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.....	31
MANAGEMENT ACTION 3.2.C—Haze bison from the Hebgen basin into YNP with a target date of May 15.....	31
MANAGEMENT ACTION 3.2.D—Haze bison from the Gardiner basin into YNP with a target date of May 1.....	33
ANNUAL PROGRESS REPORT ON CITIZENS’ WORKING GROUP	
RECOMMENDATIONS	35
Habitat Effectiveness / Habitat Expansion.....	35
Population Management.....	38
Risk Reduction.....	46
LITERATURE CITED	48
APPENDIX A.—IBMP NORTHERN AND WESTERN MANAGEMENT AREAS	49
APPENDIX B.—BISON NUMBERS AND LOCATIONS IN THE WESTERN MANAGEMENT AREA FOR THE 2012-2013 MANAGEMENT SEASON	50
APPENDIX C.—LOG OF INCIDENTS RESPONDED TO BY MFWP WARDENS, NOVEMBER 2011 THROUGH AUGUST 2012	51
APPENDIX D.—STATUS OF GALLATIN NATIONAL FOREST GRAZING ALLOTMENTS	64

LIST OF ABBREVIATIONS

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

2012/2013 HIGHLIGHTS

- **Meetings.**—The IBMP agencies met three times in Montana between November 1, 2012 and October 31, 2013: November 27-28, 2012 in Bozeman MT; May 9, 2013 in Bozeman; and July 31, 2013 in Polson MT. (This report will also touch on relevant information from a November 21, 2013 meeting in Chico Hot Springs MT.) Links to full reports summarizing each meeting can be found at <http://ibmp.info/meetings.php>.
- **Field trip.**—A field trip was held November 20th, 2013 on the North Side with the purpose of viewing and discussing various habitat restoration projects in the Gardiner Basin west of the Yellowstone River. Roughly 40 people attended. Due to inclement weather, the field trip was held inside, in conference facilities at the NPS Heritage and Research Center in Gardiner. Discussions focused on issues as defined in the original field trip schedule: (1) YNP personnel hosted a discussion on their two projects located in the Stephen's Creek vicinity; (2) USDA-Forest Service introduced their projects at Beattie Gulch and Cutler Meadows; and (3) an additional discussion among the agencies and public focused on hunting and public safety issues.
- **GAO correspondence.**—On behalf of the IBMP Partners, Lead Partner APHIS sent a letter to the Government Accounting Office (GAO) regarding IBMP progress toward completing GAO recommendations from their 2008 report (see "Background" section above).
- **Adaptive management changes.**—The IBMP agencies adopted, are in the process of considering, or dropped several changes to their Adaptive Management Plan during this reporting period, as follows.
 - Potential changes associated with the new tolerance area north of YELL:
 - *Adopted—New tolerance area north of YELL:* The IBMP Partners negotiated an area of increased tolerance for bison in mid-March 2011. The enlarged conservation area encompasses

the north end of the Gardner Basin on both sides of the Yellowstone River, extending essentially to Yankee Jim Canyon. Partners signed this adaptive management change pending the outcome of a State of Montana environmental assessment. Based on that assessment MDOL and MFWP ratified the change in late February 2012. Two lawsuits were filed against the State of Montana in objection to the increased area for tolerance, one from Park County and one from the Park County Stockgrowers Association. These lawsuits were settled in favor of the State of Montana, meaning the adaptive management change was upheld, on January 7, 2013.

- **Adopted—New map for North Side area of tolerance:** After dropping the idea to eliminate zones 1, 2, and 3 as demarcations for changing levels of bison tolerance, the Partners agreed to update the map in the Adaptive Management Plan to include the new North Side area of tolerance.
 - **Dropped—Elimination of the zone concept:** Partners debated a plan to drop the concept of Zone 1, 2, and 3 as ways to demarcate areas of decreasing bison tolerance. In part this debate resulted from the adaptive change to increase the North Side tolerance area (bullets directly above). The proposal—having only two areas: a tolerance (“conservation”) zone and a no tolerance zone—received considerable Partner discussion across two meetings, but ultimately was not adopted.
 - **Adopted—Support hazing of bison within Zone 2:** Partners agreed to an AM change to support hazing of bison within Zone 2 for the entire management area to reduce the opportunity for bison to exit the tolerance area.
 - **Adopted—Rewording of Management Action 1.1c:** Partners made a simple rewording change in the Adaptive Management Plan to recognize that while a specific research project originally called out in the Plan had been completed, research findings in general should continue to be considered as a tool to guide their 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) is underway and expected to be completed in mid-December 2013, at which point it will be released for a 30-day public comment period.
 - **Considering—Proposed change of the target haze-back date for bison from the Hebgen Basin into YNP:** The recommended adjustment was to change the target haze-back date for bison from the Hebgen basin into Yellowstone National Park (YNP) from May 15 to June 1 to reduce repetitive hazing (with the associated funding, logistical, staffing, and wildlife disturbance costs), and focus hazing in April and May on keeping bison off areas that will be occupied by cattle in summer. Partners agreed to withhold further discussion of the potential adaptive change until decision on the new tolerance area for the West Side is complete (see bullet directly above).
- **Transfer of quarantined bison.**—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. There is currently no operational quarantine facility or terminal pasture.
- **Winter Operations Plan.**—Partners recognize that North Side operations tend to be driven by separation of bison and cattle, while West Side operations tend to be driven by green-up, spring grazing, and timing of cattle returning to pasture. Winter operations highlights from 2012/2013 include
- **North Side:** NPS reported that the largest number they recorded in the Gardner Basin was 680, with 220-225 animals outside the Park north of Reese Creek.
 - **West Side:** At the May 2013 IBMP meeting, MDOL reported that 199 bison had been seen on Horse Butte, and that several excursions into Zone 3 occurred.

The Winter 2012/2013 Winter Operations Plan was the first update of the Winter Operations Plan to incorporate adaptive changes adopted since 2009. Partners agreed to have the 2013/2014 Winter

- Operations Plan signed by December 31, 2013, as described in their Partner Protocols. The Plan and the Partner Protocols can be found at <http://ibmp.info/library.php>.
- **Bison hunt.**—On many occasions the IBMP Partners reiterated their commitment to use public and tribal hunting in Montana as an important method to reduce the abundance of Yellowstone bison. CSKT, MFWP, and NPT reported a combined harvest of around 175 animals (see report for specifics). CSKT reported stopping their hunt earlier than planned due to hunting success and concerns about potential impact on bison populations. Partners discussed issues identified during the year’s hunt, as well as possible solutions. Those issues included congestion, infractions, gut piles that held potential to attract grizzly bears, and illegal hunting under tribal treaty rights. Separately, the Montana Fish and Wildlife Commission approved authority for MFWP to undertake late season damage hunts. This authority was not exercised in 2013.
 - **Reinitiation of Consultation.**—In September 2012, the NPS reinitiated consultation with the U.S. Fish & Wildlife Service under Section 7(a)(2) of the Endangered Species Act and its implementing regulations (50 CFR Part 402.16) regarding the hazing of Yellowstone bison and its potential effects on threatened grizzly bears, as well as new information on decreases in key grizzly bear foods. The NPS prepared a biological evaluation that provided updated information, an evaluation of potential effects, and descriptions of mitigation actions that should minimize potential adverse impacts. Hazing activities are generally short-term events whose effects are relaxed almost immediately, rather than sustained, long-term, or chronic events. Thus, the NPS does not believe that bison hazing activities cause injury, decrease productivity, or significantly interfere with normal behavior patterns of grizzly bears such as breeding, feeding, or sheltering. Occasional disturbances of grizzly bears during bison hazing operations that cause them to run short distances likely have insignificant energetic costs with a lengthy summer and autumn period for recovery. Thus, NPS staff concluded that bison hazing operations may affect, but are not likely to adversely affect, listed grizzly bears. The USFWS concurred with this conclusion in December 2012.
 - **IBMP-related lawsuits.**—
 - Lawsuit regarding increased North Side tolerance for bison: Two lawsuits were filed against the State of Montana in objection to the increased area for tolerance, one from Park County and one from the Park County Stockgrowers Association. These lawsuits were settled in favor of the State of Montana, meaning the adaptive management change was upheld, on January 7, 2013
 - Lawsuit regarding use of helicopters for bison hazing: A decision was made in favor of the defendants (the IBMP Partners), with the judge indicating that the Plaintiffs presented insufficient evidence that helicopter hazing of bison in Montana resulted in the taking of grizzly bears under section 9 of the Endangered Species Act. The case was appealed to the Ninth Circuit Court and a hearing was held on November 8, 2013. No decision has been issued by the appellate court.
 - Lawsuit regarding relocation of quarantined bison from YNP to Turner: The lawsuit ended with summary judgment in favor of the defendants (MFWP). The contention was that the state had violated managing the public trust (and more) by moving bison to the Turner Ranch. The case may be appealed.
 - **Partner Protocols.**—In November 2012 the Partners agreed to a set of “Partner Protocols” to 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 and public policy realms, including (1) Dr. Steve Olsen of the APHIS National Animal Disease Center gave a talk regarding seroprevalence testing and what positive or negative results do and do not tell us about active host infection by bacteria of the *Brucella* genus; (2) Dr. John Treanor of the Yellowstone Center for Resources spoke about how active brucellosis infection could be identified in live bison and the implications of nutrition on the maintenance of brucellosis in wild bison; (3) Dr. Peter Gogan of the USGS Northern Rocky Mountain Science Center provided a presentation on the population structure of YELL bison, (4) Dr. Jack Rhyan of APHIS provided a presentation on the history of bison and brucellosis management in YELL, and (5) Dr. Samuel Fuhlendorf of Oklahoma State University spoke about the interaction, historical and present day, of fire and grazing.

- **Communication with the public.**—The 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, and summary reports on IBMP meetings, with links to agency web sites that have additional data and reports about Yellowstone bison conservation and prevention of brucellosis transfer to cattle. The website had a full overhaul in 2013 to improve searching, including re-labeling of some subheadings, plus renaming and reordering of files to show chronological order. Additionally, a full timeline depicting IBMP adaptive management history, with hyperlinks to appropriate documents, was completed.
- **Citizens' Working Group (CWG).**—The CWG did not actively meet in 2013, 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.
 - The Partners engaged Drs. Olsen and Treanor (November 2012 meeting) to address an outstanding issue and commitment to the CWG regarding CWG Population Recommendation 13. That recommendation dealt with implementing an effective cattle vaccine, and supporting vaccine research. The result of the November 2012 discussion was that the Partners decided against action on either of these CWG concepts because (a) developing a more effective vaccine that prevents infection in cattle and/or wildlife is problematic at best, and (b) additional research on vaccines, delivery, and diagnostics is necessary.
 - 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, is underway. The project helps landowners purchase and install fencing to manage wild bison coming adjacent to or onto their property.
- **Creation of a public education program about bison.**—Based on a CWG recommendation MFWP, with limited help from CWG members and other Partners, created two brochures scoped to present factual (i.e., non-political) information about bison. The two brochures—(1) *Bison Basics: Biology, Behavior, and a Brief History*, and (2) *Staying Safe in Bison Country*—are available in printed form (4000 copies) 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.**—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 is scheduled for release in early 2014. A Record of Decision is expected during the first quarter of 2014.
- **Vaccination research trials.**—Through the period of this report, APHIS researchers conducted a trial on the use of GonaCon as a contraceptive vaccine in bison. While carried out by an IBMP Partner, this work was not an action of the IBMP. The trial, being carried out at APHIS facilities in the Gardner Basin, continues as of the end of 2013.
- **Brucellosis Science Review Workshop.**—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>.

MANAGEMENT ACTIONS FOR THE IBMP

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, Appendix A).

Monitoring Metric 1.—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)).

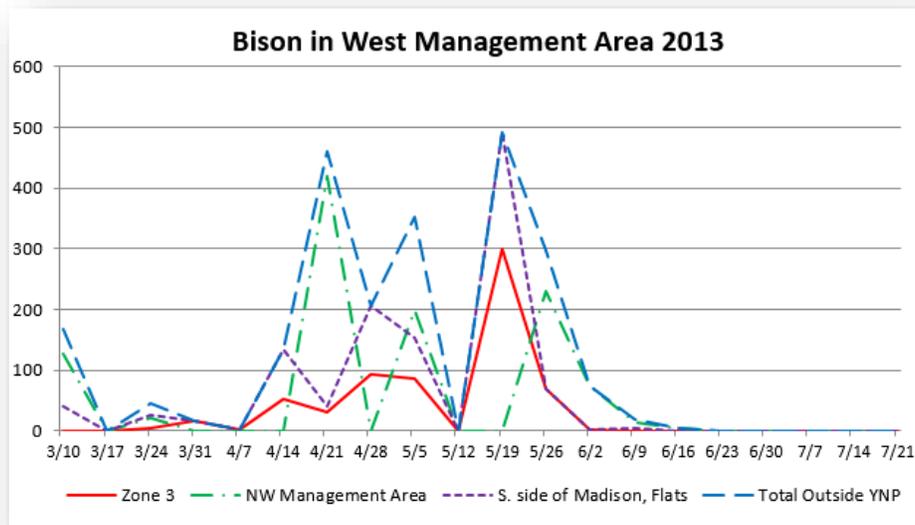


Figure 1.—Peak bison abundance by week in various portions of the Western Management Area during the 2013 management season.

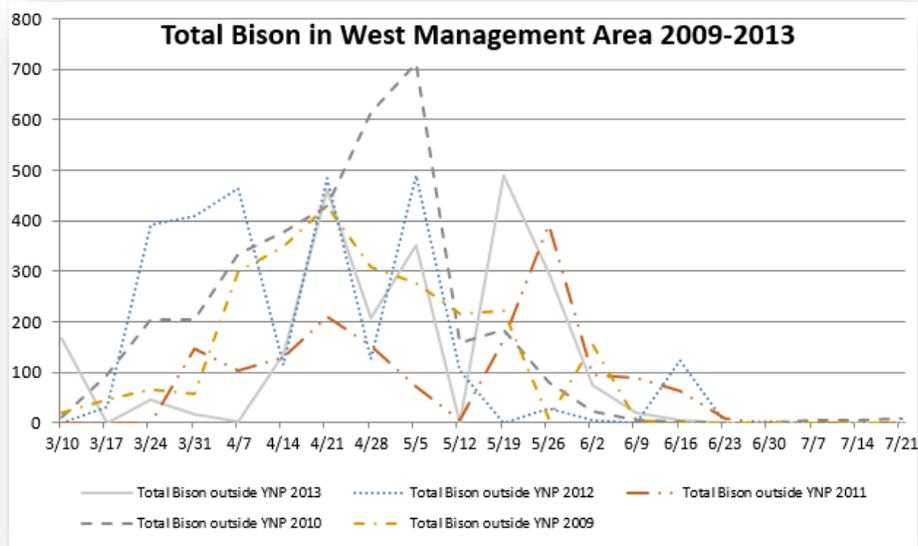


Figure 2.—Comparison of bison abundance in the Western Management Area during the 2009-2013 management seasons.

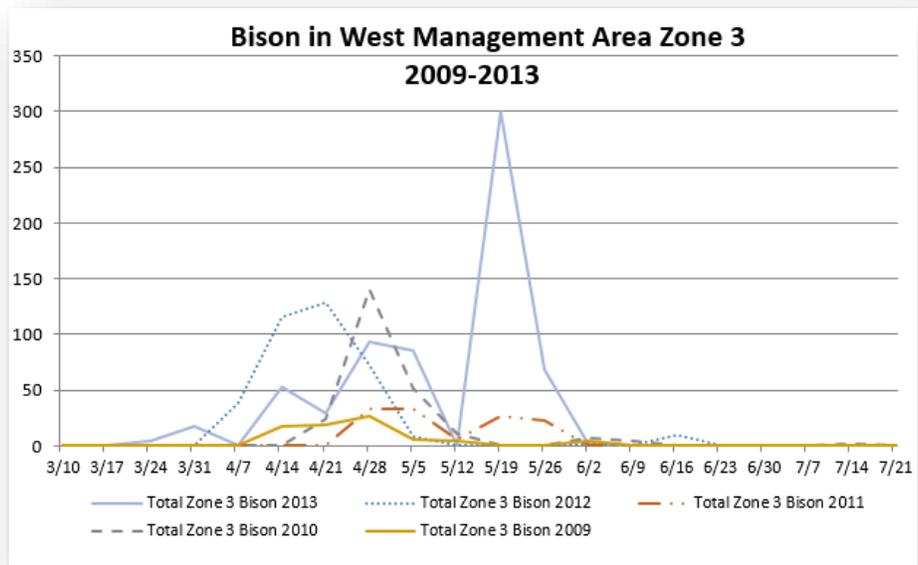


Figure 3.—Comparison of bison abundance in Zone 3 of the Western Management Area during the 2009-2013 management seasons.

Monitoring Metric 2.—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 National Park Service (NPS)).

Please see Appendix B for a complete list of bison numbers and hazing operations in the Western Management Area as provide by MDOL. Table 1 provides the number of bison observed during NPS aerial counts.

Table 1.—Number of bison observed during aerial counts conducted over the western management area during October 2012 to June 2013.

Location	Number of Bison Observed						
	Oct 18	Dec 31	Jan 21	Feb 19	Mar 19	Apr 23	Jun 6
IBMP Zone 1	23	221	164	42	22	95	242
IBMP Zone 2	0	0	0	0	172	436	9
West of Madison Junction to 7-mile bridge	2	70	215	97	117	3	249
Total	25	291	379	139	311	534	500

Monitoring Metric 3.—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).

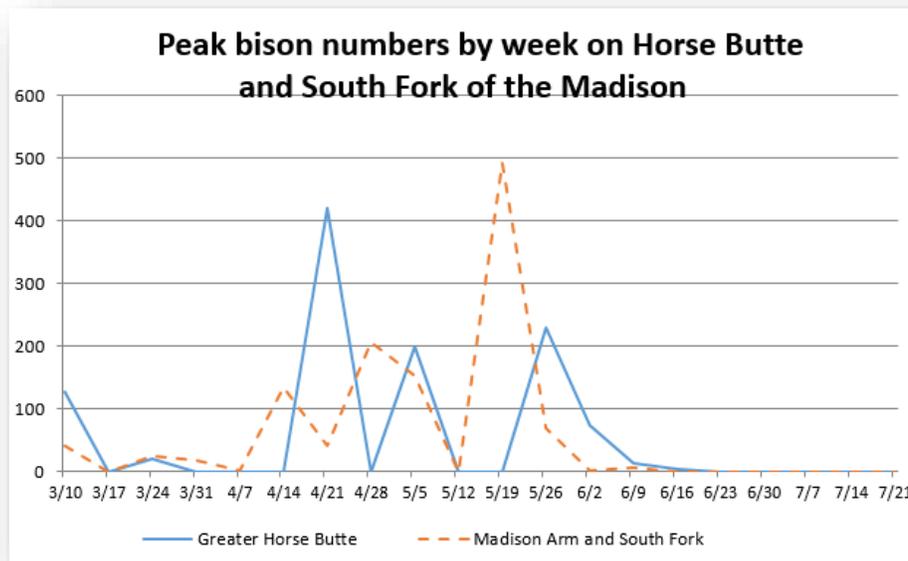


Figure 4.—Comparison of bison abundance by week on Horse Butte and the South Fork of the Madison area for the 2012-2013 management season.

Monitoring Metric 4.—Determine natural routes and timeframes (in the absence of hazing) for bison migration back into the park (Lead = NPS). Use this information to evaluate the effectiveness of management responses for bison tolerance in Zone 2 (Lead = MDOL).

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.

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, observations over the past six to eight years show that at the beginning of the haze back program, few if any bison remain in the Park and immediately return to the boundary or beyond (Table 2). Thus, the following analysis was conducted using an assumption that the bison are not likely to be successfully hazed until they are naturally inclined to migrate back to the Park. More likely, bison would migrate back to the Park on their own slightly later than the time period in which the agencies are successful at getting bison to stay in the Park following management hazing operations.

The data suggest that bison are likely to return to the Park on their own between 24 May and 7 June most years. However, bison currently respond to multiple hazing operations during this time, therefore the timing and whether they would naturally return to the Park cannot be definitively assessed from this data.

Table 2.—Summary of hazing efforts.

Year	Total # of bison in West Side Management area (Hebgen Basin)	Hazing Operations Season	Date >80% of bison at or past Cougar Creek/ 7-mile bridge
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	Late Mar – 5 Jun	27-May

** 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 third 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.*

Radio marked bison are an alternate data set that can be used to evaluate the probability of migration (Figure 5). Each year the NPS recaptures a monitoring group of 30 bison and some of those individuals participate in the management operations along the west boundary area. During the years 2010 to 2012, six to seven radio-marked female bison have been in the west boundary area during the haze back operation period. These individuals have been involved in 39 animal hazing events in which bison during 24 (62%) of the events failed to respond to hazing by moving eastward in to the Madison River corridor. Bison in 15 (38%) of these events responded successfully to hazing and did move east in to the corridor and never returned west of Cougar Meadows. Thus, there appears to be a period from 24 May to 7 Jun that bison move back in to the park during most years.

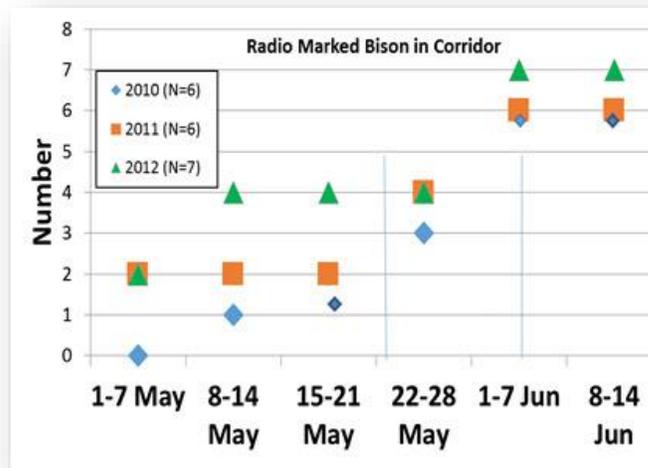


Figure 5.—Time period when radio marked bison in the west management area return to Yellowstone National Park.

Management response (from the current AM Plan)

- 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, Appendix A).

Monitoring Metric 1.—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)).

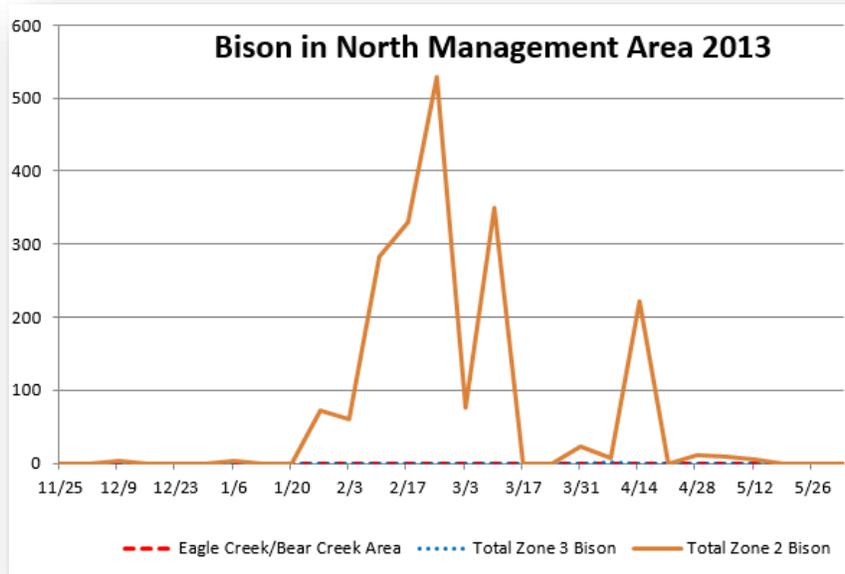


Figure 6.—Bison abundance in various portions of the Northern Management Area during the 2012-2013 management season.

Table 3.—Summary of the abundance of Yellowstone bison in the Northern Management Area based on aerial surveys from October 2012 to June 2013.

Location	Numbers of Bison Observed						
	Oct 18	Dec 31	Jan 21	Feb 19	Mar 19	Apr 23	Jun 6
IBMP Zone 1	2	51	67	420	504	170	0
IBMP Zone 2	0	0	0	26	11	73	0
Eagle Creek, Gallatin National Forest	0	0	0	0	9	1	0
Hellroaring Slope	25	654	270	156	186	90	0
Blacktail Deer Plateau	333	943	590	1072	768	493	277
Swan Lake, Gardiner Hole	0	36	9	10	4	14	11
Total	360	1684	936	1684	1482	841	288

Table 4.—Counts of bison observed in the Gardiner Basin during winter 2012/2013.

Date	Mammoth to Gardiner	Triangle to Stephens Creek	Stephens Creek to Boundary	North of Boundary	Eagle Creek	Total
31 Dec	80					80
1 Feb				6		
8 Feb				20		
Early Feb				22-35 Daily		
11 Feb	16	48	34	57	1	156
19 Feb		420		26	0	446
22 Feb	32	280	205	20	6	542
24 Feb	26	194	70	0	6	296
27 Feb		316		184		500
28 Feb		200		200		400
1 Mar	1	410	100	60		561
4 Mar		180		2		182
5 Mar	211	9	0	0	30	250
8 Mar	135	343	28	35	4	543
9 Mar				224		
11 Mar	100	444	77	60	8	679
14 Mar	26	212	115	70	6	429
19 Mar	454	50	0	11	9	524
25 Mar	100	107	12	5	20	244
29 Mar	21	2	0	39	15	77
3 Apr	51	6	9	21	12	99
9 Apr	118	48	0	2	5	173
19 Apr	55	5	0	58	20	138
23 Apr	170			71	2	

Monitoring Metric 2.—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).

The only report of bison attempting to exit Zone 2 was a single bull entering the Dome Mountain area near Yankee Jim Canyon. This bull was lethally removed on April 12, 2013.

Monitoring Metric 3.—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).

Bison began occupying the Zone 2 area of the Gardiner Basin in mid-December, 2012, and sporadically used the area until late January. Larger numbers of bison (up to 200 at one time) occupied the area from the end of January through mid-March, with up to 49 animals in Zone 2 in mid-April. MDOL participated in 15 operations during the entire season to assist with removing bison from private property. One lethal removal occurred (see Monitoring Metric 2).

MFWP wardens responded to 81 incidents associated with hazing, and 11 incidents associated with property damage. See Appendix C, Table C1 for incident log details.

Monitoring Metric 4.—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).

Monitoring Metric 5.—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).

Groups of bison (maximum group size was 224 mixed bison) were reported in the Gardiner Basin throughout the management season, primarily during February into April. Operations to move bison only occurred when there was a need to remove them from private property. MDOL has no reports of bison in the Gardiner Basin after May 17.

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 the 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, when 20 to 35 bison were observed north of the boundary most days. As hunting parties began to occupy the boundary area the bison movements out of the Park became less regular (Table 4 above). By early to mid-April, bison in northern Yellowstone began to move eastward and distribute more widely across the Lamar Valley, Little America, Blacktail Deer Plateau, and Hellroaring slopes. Most of the Northern Range radio marked bison were east of Blacktail Deer Plateau by 10 April. Thus, most of the bison on Blacktail Deer Plateau and in the Gardiner Basin in late April were likely Central Range bison.

Monitoring Metric 6.—Annually document the number of bison tested negative at Stephens Creek facility for release into the Gardiner Basin (Lead = NPS).

No bison were captured at the Stephens Creek facility during this reporting period.

Monitoring Metric 7.—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. (Lead = UNDEFINED)

One bull exited Zone 2 near Yankee Jim Canyon into the Dome Mountain area on April 12. This animal was lethally removed.

Management response (from the current AM Plan)

- 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 attached map).
- 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 Metric 1.—Complete research reports and attempt to publish findings in a peer-reviewed, scientific journal (Lead = all agencies).

An APHIS-led study on the potential shedding of *Brucellosis abortus* in bull bison semen was accepted for, and subsequently published in, the *Journal of Wildlife Diseases* (Frey et al. 2013).

Management response (from the current AM Plan)

- 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 Metric 1.—Weekly counts and locations of bull bison in Zone 2 (Lead = MDOL/MFWP).

Bulls were tolerated within the management area in accordance with the Adaptive Management Plan. Operations were initiated when animals breached the non-tolerance zone, as described in Table 5.

Table 5.—Weekly counts and locations of bull bison in Zone 2

Date	# Bulls	Location of Bison
4/11/2013	1	South Fork Zone 3
4/22/2013	8	Madison River south “flats”
4/22/2013	3	West of the Madison Arm Resort
5/31/2013	1	South Fork Zone 3
6/5/2013	2	South Fork Zone 3 private property with cattle (lethal removals)
6/20/2013	1	North Duck Creek area
6/28/2013	4	South Fork Zone 3 private property with cattle (lethal removal)
7/10/2013	1	South Fork Zone 3 private property with cattle (lethal removal)

Monitoring Metric 2.—Document threats to human safety and property damage (Lead = MFWP/MDOL).

MDOL report: referred to MFWP.

MFWP wardens responded to 53 incidents associated with public safety and 11 incidents associated with property damage. See Appendix C, Table C1 for incident log details.

Management response (from the current AM Plan)

- 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 Metric 1.—Weekly counts and locations of bull bison in Zone 2 (Lead = MDOL/MFWP).

Bull bison presence in Zone 2 is shown in Table 6. One bull exited Zone 2 near Yankee Jim Canyon into the Dome Mountain area on April 12.

Table 6.—Weekly counts and locations of bull bison in Zone 2

Date	# Bulls	Location of Bison	Operations
12/14/2012	2	Gardiner Basin Zone 2	No
1/7/2013	2	Gardiner Basin Zone 2	No
2/1/2013	6	Gardiner Basin Zone 2	No
2/6/2013	2	Gardiner Basin Zone 2	No
2/7/2013	3	Gardiner Basin Zone 2	No
2/19/2013	3	In with livestock on private property	Yes
2/27/2013	3	In with livestock on private property	Yes
2/28/2013	7	In with livestock on private property	Yes
3/15/2013	5	Gardiner Basin Zone 2	No
4/2/2013	4	Gardiner Basin Zone 2	No
4/4/2013	4	In with livestock on private property	Yes
4/12/2013	1	Zone 3 Dome Mountain (lethal removal)	Yes
4/17/2013	5	Zone 2 private property	Yes
5/2/2013	2	Zone 2 private property	Yes
5/2/2013	1	Gardiner Basin Zone 2 (picked up when moving bison from private property)	Yes

Monitoring Metric 2.—Document threats to human safety and property damage (Lead = MFWP/MDOL).

MDOL report: referred to MFWP.

MFWP wardens responded to 53 incidents associated with public safety and 11 incidents associated with property damage. See Appendix C, Table C1 for incident log details.

Monitoring Metric 3.—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).

See April 12, 2013 entry in the Table 6. There were no reports of bulls leaving Zone 2 through Mol Heron Creek Canyon or to the east side of the river and north of Little Trail Creek.

Management response (from the current AM Plan)

- 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 metric 1.—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).

Information on turn-out dates is provided in Tables 7 and 8. No fencing was erected to separate bison from livestock in either the Northern or Western management areas. No acres were made available to bison via conservation easements during this reporting period.

Table 7.—Ownership and turn-out dates for cattle in the Northern Management Area, Tom Miner basin, and southern Paradise Valley.

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	December 31
Yellowstone Cattle Co	3	100	600	pairs	May 21	December 1
B-Bar	3	150	600	pairs	June 15	November 15
Anderson Ranch	3	100	160	pairs	June 15	November 15
West Creek Ranch	3	100	100	pairs	June 1	November 1

Table 8.—Ownership and turn-out dates for cattle in the Western Management Area.

Property Owner	Livestock Owner	Zone	Date in	No. Cattle	Class
SR—Red Creek Ranch	BM—Reed Point, MT	2	June 20	200/4	Pairs/Bulls
RS—Duck Creek	BM—Reed Point, MT	2	June 20	31/1	Pairs/Bulls
PP—Deep Well Ranch	LM—Twin Bridges, MT	3	June 15	320/10	Pairs/Bulls
LD—Quarter Circle JK	CC/BF—Cameron, MT	3	July 1	22/1	Pairs/Bulls
USFS—South Fork Allotment	CC/BF—Cameron, MT	3	July 1	11/1	Pairs/Bulls
USFS—Watkins Cr. Allotment	CC/BF—Cameron, MT	3	July 1	55/4	Pairs/Bulls
RP—Diamond P Ranch	BM—Billings, MT	3	June 15	6/1	Heifers/Bulls

Management response (from the current AM Plan)

- 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 metric 1.—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).

MDOL report: referred to MFWP.

MFWP wardens responded to 53 incidents associated with public safety, 81 incidents associated with hazing, and 11 incidents associated with property damage. See Appendix C, Table C1 for incident log details.

Monitoring metric 2.—Annually document the numbers and types of actions taken to provide conflict-free habitat bison (Lead = MFWP with support from MDOL).

MDOL report: referred to MFWP.

MFWP wardens responded to 53 incidents associated with public safety, 81 incidents associated with hazing, and 11 incidents associated with property damage. See Appendix C, Table C1 for incident log details.

Management response (from the current AM Plan)

- 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 metric 1.—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)).

- Gardiner Basin
 - No changes in this reporting timeframe.
- Hebgen Basin
 - Sulfur Spring Allotment (10 horses, July 1 to Sept 30, 250 acres) was vacated. The permittee waived the permit back to the USFS. The allotment remains vacant, and will be so until further notice. The fences have been removed.
 - In 2013, the Basin Allotment was vacated; this was the fourth year of no grazing. For the foreseeable future, half of the allotment (32 acres) will be used by the USFS for administrative purposes, the other half of the allotment (25 acres) will remain vacant until further notice.
 - In the Madison Valley area near Hebgen Basin: Sheep Mile Allotment (89 yearling, mid-June to mid-October, 1072 acres primary pasture) was not grazed for the third year. However, it is not vacated yet.

Further details on USFS grazing allotments are provided in Appendix D.

Management response (from the current AM Plan)

- 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 metric 1.—Annually document the number of acres and days made available to bison through the voluntary program (Leads = MDOL and MFWP).

No state funding is available for this purpose.

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

MANAGEMENT ACTION 1.4.A—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 metric 1.—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 2012-13 hunt season activities:
 - CSKT held the Yellowstone bison hunt season from September 1, 2012 to January 31, 2013. Attending a bison hunt orientation class was required to obtain a bison tag. To increase hunter success, all hunters had the opportunity to obtain two tags for the season; 365 tags were issued. The CSKT hunt in the West Yellowstone Area was closed early (January 3, 2013) due to (a) the high success of CSKT hunters, (b) the need to assess overall harvest and population levels, and (c) the need to allow for other hunt agencies to engage in a West Side hunt.
 - CSKT participated in the annual hunt coordination meeting and maintained communication with MFWP staff throughout the hunt period to maximize law enforcement patrols, bison monitoring, and public and hunter safety.

Monitoring metric 2.—Annually document the number of bison (by age and sex) harvested by tribal hunters (Leads = CSKT and NPT).

- CSKT: Total Harvested—60
 - 54 in West Yellowstone Area: Males—15 adults and 5 calves, Females—26 adults and 8 calves
 - 6 in Gardiner Area: Males—4 adults, Females—2 adults
- Umatilla: Total Harvested—47
 - 0 in West Yellowstone Area
 - 47 in Gardiner Area: Males—29 adults and 3 calves, Females—11 adults and 4 calves
- Nez Perce: Total Harvested—80
 - 4 in West Yellowstone Area: Males—3 adults, Females—1 adult
 - 76 in Gardiner Area: Males—47 adults and 4 calves, Females—22 adults and 3 calves
- Sho-Ban: Total Harvested—5
 - 3 in West Yellowstone Area: Males—3 adults
 - 2 in Gardiner Area: Females — 1 adult and 1 calf
- Grand Total Treaty Harvest: 192
 - 61 in West Yellowstone Area: Males—26, Females—35
 - 131 in Gardiner Area: Males—87, Females—44

MANAGEMENT ACTION 1.4.B—Coordinate management activities that could potentially impact opportunities for tribal members to exercise their treaty rights.

Monitoring metric 1.—Annually document the number of hazing operations while tribal hunts are occurring (Leads = MDOL, CSKT and NPT).

MDOL hazing dates are reported in Appendix B. Tribal hunt dates, as available, are provided under Management Action 1.4.A, Monitoring Metric 1.

Management response (from the current AM Plan)

- 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 metric 1.—Conduct aerial and ground surveys to estimate the annual abundance of Yellowstone bison each summer (Lead = NPS).

During summer 2012, the minimum population abundance of Yellowstone bison was estimated at 4,200 bison, including approximately 2,600 northern and 1,600 central herd members. This is the largest number of bison ever observed in northern Yellowstone (Figure 7).

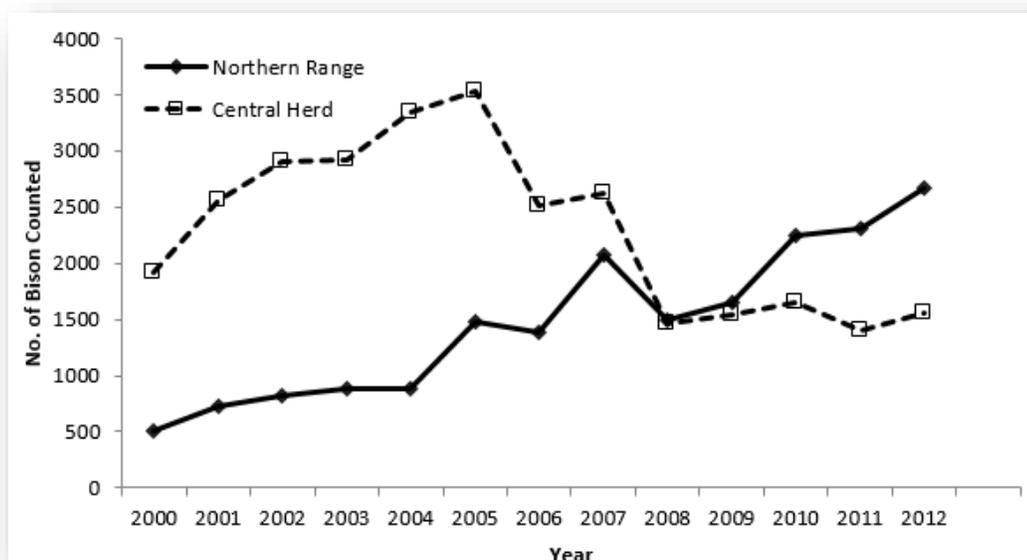


Figure 7.—Numbers of Yellowstone bison observed in the central and northern breeding herds during aerial surveys in summer from 2000 to 2012.

Monitoring metric 2.—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 1.1.b, Monitoring Metric 4.

Monitoring metric 3.—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 9—Counts of Yellowstone bison observed during aerial distribution surveys in Yellowstone National Park and adjacent areas of Montana during the reporting period.

Month	Northern YELL	Central YELL	Total
December 2012	2,599	1,448	4,047
January 2013	2,334	1,167	3,501
February 2013	2,479	837	3,316
March 2013	1,943	676	2,619
April 2013	1,741	636	2,377
October 2013	2,340	1,345	3,685

* Distribution surveys are designed to estimate where the majority of bison are located at various times through winter. The surveys are not population abundance estimates, which are conducted during summer when bison congregate for mating.

Monitoring metric 4.—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 response (from the current AM Plan)

- 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 metric 1.—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 draft manuscript for submission to a peer reviewed journal. The results were presented in the 2012 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 Annual Report (IBMP 2012).

Management response (from the current AM Plan)

- 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 1.—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, three-year research project with Syracuse University to quantify forage production and consumption at six study sites across the northern grasslands in YELL. Five or six grazing exclosures were deployed at each site. Production and percent consumption estimates were made monthly from May to September. The data collected this summer will be analyzed and described in a progress report during the upcoming winter.

During the 1980s and 1990s, migratory ungulates on the northern grassland of YELL 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.

Management response (from the current AM Plan)

- 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 metric 1.—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).

No bison were sent to slaughter in 2013.

Monitoring metric 2.—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).

Several American Indian Tribes and tribal organizations (Tribes) have expressed interest in obtaining Yellowstone bison. The NPS anticipates some bison may be available to send to the Tribes for conservation, cultural, and nutritional purposes for the foreseeable future. Thus, the NPS has proposed to periodically provide the Tribes with Yellowstone bison through various methods to support their nutrition and culture and enhance the conservation of bison. There is currently no operational quarantine facility or terminal pasture. However, the NPS has signed agreements with ITBC and the CSKT to trailer bison from YELL directly to slaughter facilities for killing and processing. Also, 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, terminal pastures, or quarantine facilities. The protocols are under review by the IBMP members.

Management response (from the current AM Plan)

- 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 metric 1.—Weekly and annual summaries of bison harvested by state and treaty hunters (Lead = MFWP).

Montana- State Licensed Bison Harvest (Winter 2012-2013)				
Hunting District	Bulls Taken	Cows Taken	Unknown Sex	Total Bison Taken in District
385-GARDINER	6	10		16
395-WEST YELLOWSTONE	10	11		21
Total	16	21		37

Montana- Tribal Treaty Bison Harvest (Winter 2012-2013)				
Hunting District	Bulls Taken	Cows Taken	Unknown Sex	Total Bison Taken in District
385-GARDINER	92	33	33	158
395-WEST YELLOWSTONE	21	33	1	55
Total	113	66	34	213

Montana- Combined State Licensed and Tribal Treaty Bison Harvest (Winter 2012-2013)				
Hunting District	Bulls Taken	Cows Taken	Unknown Sex	Total Bison Taken in District
385-GARDINER	98	43	33	174
395-WEST YELLOWSTONE	31	44	1	75
Combined State and Treaty Harvest	129	87	34	250

Figure 8.—Harvest data for state and tribal hunters as of 15 April 2013 and compiled by MFWP. Note that Tribal data are MFWP estimates as Tribes are not required to report their harvest numbers. Tribal entities did provide data for this report, which can be found under Management Action 1.4A, Monitoring metric 2.

Monitoring metric 2.—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).

The IBMP Habitat subcommittee began discussing habitat management options in Gardiner Basin, with respect to bison and other wildlife. Areas off of GNF fall into broader purview of state bison management planning. Also, areas of suitable habitat identified to-date on GNF lands to the west of YNP are included in State MEPA for potential bison tolerance expansion in these areas.

Management response (from the current AM Plan)

- 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 2.2.C—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 metric 1.—Annual summary of bison sent to quarantine and bison transported from quarantine to suitable restoration sites (Lead = MFWP/APHIS).

No animals were sent to the BQFS facility at Corwin Springs for the purpose of quarantine in 2013, nor were any animals transported from the site for the purpose of restoration.

Monitoring metric 2.—Annual summaries from bison populations restored using quarantined Yellowstone bison, including numbers, demographic rates, and implemented risk management actions (Lead = MFWP/APHIS).

Quarantine feasibility study bison that were provided to the Ft. Belknap Tribe last year were split with the Ft. Peck Tribe in August 2013. All but four bison were tested for brucellosis at the time they were rounded up. None tested positive.

Just prior to the testing, there were 76 bison: 51 adults, 8 yearlings, and 17 calves. At least two mortalities occurred during the round-up/testing.

Monitoring metric 3.—Evaluate regulatory requirements and constraints for moving live bison, including adults, to suitable restoration sites (Lead = APHIS/MDOL).

Testing protocols to move live bison to restoration site have been established with a final evaluation coming after the five-year soft release testing period.

Monitoring metric 4.—Conduct an assessment of the quarantine feasibility study and offer recommendations regarding whether the quarantine of bison should become operational (Lead = IBMP Subcommittee).

The manuscript summarizing the quarantine feasibility study has been submitted to the *Journal of the American Veterinary Medical Association* for publication. JAVMA has given APHIS an anticipated publication date of early 2014. The manuscript concludes that the original quarantine protocol as created by the USAHA and followed in the study was successful. A recommendation as to whether quarantine should be operational will have to be based on the available funding, operation sites, agency commitment, and final restoration locations.

Monitoring metric 5.—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 been working with the Fort Peck and Fort Belknap tribes to determine quarantine facility possibilities, 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 response (from the current AM Plan)

- 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 metric 1.—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 in 2013.

Monitoring metric 2.—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 and an annual summary of accomplishments and monitoring results will be completed and posted on the NPS website during the coming year. No bison were captured at the Stephens Creek facility during this reporting period, thus no new vaccinates were included in the population.

Monitoring metric 3.—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).

Veterinarians from the University of California-Davis worked with the NPS to estimate the risk of brucellosis exposure to cattle north of Yellowstone National Park from wild bison and elk (Schumaker et al. 2010). They found that transmission risk from bison was insignificant (0-0.3%) compared to elk (99.7-100% of total risk) because (a) boundary management operations were important in minimizing the contribution of bison to cattle exposure risk, and (b) elk have a larger overlap with cattle and are more tolerated by managers and livestock producers. They concluded that management (e.g., vaccination) to suppress brucellosis in bison will not substantially reduce the far greater transmission risk from elk.

Management response (from the current AM Plan)

- 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 metric 1.—Complete the NEPA process and reach a decision on whether remote delivery vaccination of bison can/will be employed inside YNP (Lead = NPS).

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. This deduction was based on the inconsistent syringe delivery of vaccine to eligible bison occupying the boundary ranges, probable low efficacy of remote vaccination given highly variable immune responses in wild bison and consistency issues with vaccine encapsulation and delivery, limitations of the proposed delivery technology (distance; injuries), and potentially negative behavioral responses by bison to repeated, annual remote deliveries resulting in the avoidance of humans.

To further review the NPS NEPA analysis, Yellowstone National Park collaborated with MFWP to host a review of the feasibility of successfully implementing a brucellosis vaccination program. Eight panelists with collective experience in wildlife science, wildlife management, and disease ecology were gathered to evaluate the feasibility of significantly suppressing brucellosis in Yellowstone bison, the effects of disease suppression techniques on the conservation of Yellowstone bison, and the likelihood that disease suppression would result in any changes in bison conservation practices. The panel concluded that the best available data does not support that remote vaccination of bison

with the currently available vaccines will be an effective tool for suppressing brucellosis in wild bison to a level that changes the IBMP management strategies. 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>.

Management response (from the current AM Plan)

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

MANAGEMENT ACTION 3.1.C—Test and vaccinate cattle.

Monitoring metric 1.—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 designated surveillance zone (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 response (from the current AM Plan)

- 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 metric 1.—Document the minimum temporal separation and space between bison and cattle during February through June (Lead = MDOL).

In the Northern Management Area, there were six reports of bison comingling with livestock, four in February, one in March, and one in April (Table 10).

In the Western Management Area, mixed bison were present on private property in the South Fork area of Zone 3 through June 5th, ten days prior to cattle turnout in the area. Mixed bison were present in the Red Canyon/Duck Creek area as late as June 10, ten days prior to cattle turnout in the area. A single bull was present in the Duck Creek area of the Western Management Area on June 20, the date of cattle turnout in that area.

Monitoring metric 2.—Document the number of times bison are successfully or unsuccessfully moved to create separation in time and space from cattle (Lead = MDOL).

Table 10 lists the dates that MDOL assisted with moving bison off private property where cattle were present in the Northern Management Area. The bison were successfully moved off private property in each instance.

Table 10.—MDOL activities to move bison off private property where bison were present in the Northern Management Area

Date	# Bison	Type of Bison	Location
2/19/2013	3	Bulls	In with BH cattle on Zone 2 private property
2/22/2013	27	Mixed	In with BH cattle on Zone 2 private property
2/27/2013	3	Bulls	In with BH cattle on Zone 2 private property
2/28/2013	7	Bulls	In with BH cattle on Zone 2 private property
3/11/2013	65	Mixed	In with BH cattle on Zone 2 private property
4/4/2013	4	Bulls	In with BH cattle on Zone 2 private property

In the Western Management Area, three hazing operations occurred in late March and early April to remove bison from Zone 3 areas, and 25 hazing operations occurred between April 18 and June 20 to create separation between cattle and bison. Two operations occurred on June 20, which is after the June 15 turn out date for cattle in the area.

Monitoring metric 3.—Annually document the amount of strategic fencing erected to minimize bison/cattle interactions (Leads = MDOL, MFWP, and USFS).

No new fence or acres were provided by fencing on national forest lands.

Management response (from the current AM Plan)

- 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 metric 1.—Document the number of additional acres of habitat made available for bison as a result of strategic fencing (Lead = MFWP/USFS/MDOL).

No new acres were provided by fencing on national forest lands or private lands.

Monitoring metric 2.—Document fence damage or the number of times fencing fails to inhibit bison trespass on private property occupied by cattle (Lead = MDOL).

In the Northern Management Area, there were six reports of bison commingling with livestock. See the table in Management Action 3.2a for more specifics.

Any private property complaints in the Western Management Area were referred to MFWP.

Management response (from the current AM Plan)

- 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 metric 1.—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).

The IBMP agencies began discussing potential haze-back dates on May 6, 2013. The approximately average snow pack that accumulated over the winter melted to the ground in the Hebgen Basin by 27 April 2013. Thus, the agencies agreed to begin the operations to haze bison back into the park on May 13.

Monitoring metric 2.—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

Operations began on March 25 (due to a Zone 3 incursion), with 28 separate operations occurring over the following 87 days. See Appendix B for numbers of bison outside YELL with related hazing operations in the Western Management Area during the 2012-2013 management season. Several factors contributed to the lack of early success in bison remaining within YNP, including the lack of permission for (a) use of helicopter within YNP interior, and (b) deeper hazing (13, 15 May) to Cougar Meadows. The ratio of calves to adults steadily increased as the season progressed consistent with bison calving season, which peaks around 15 May.

Week of May 13.—On 13 May, 100 bison from private property, Zone 3, South Fork (west of Denny Creek Road) and 100 bison from Horse Butte were hazed in a multi-agency operation. YNP personnel requested that all hazing operations cease within 100 yards of the boundary within YNP. Based on time of day (1330 hrs), MDOL requested authorization to continue pushing bison further into YNP (on horseback and/or with helicopter) to reduce the chance that bison will return to Montana, but the request was denied.

By 14 May, the group hazed on 13 May dispersed with some bison returning to Montana, and some being pushed toward Cougar Meadows by YNP personnel. MDOL personnel were in the area, but have no record of these bison reaching Cougar Meadows or 7-Mile Bridge Meadows. Also on 14 May: (a) 56 bison were moved from the Zone 3 boundary Hwy 287 to ½ mile inside YNP at Cougar Creek, helicopter use was not permitted; and (b) seven bison were gathered from private property on Denny Creek Road (Zone 3) and pushed across from south side of Madison River. On 15 May, approximately 350 bison were herded from Horse Butte including private property to the boundary of YNP (Baker's Hole). MDOL requested authorization to continue pushing bison further into YNP (on horseback and/or with helicopter) to reduce the chance that bison will return to Montana, but the request was denied.

On 16 May, the bison from the previous day's operation dispersed, and two operations were conducted to continue pushing bison to the YNP interior. One group (121 bison) were pushed via the slough to Cougar Meadows, but operations were aborted two miles short of Cougar Meadows in the slough area because MDOL was not permitted to use the helicopter. The second group (approximately 150) was pushed upstream via the Madison River corridor and were dropped in the riverside drive area. When operations concluded on 16 May, the majority of bison were within YNP, but without being able to reach Cougar or 7-Mile Meadows, the bison returned to Montana.

Week of May 20.—On 19 May (Sunday), 40 bison were on private property in Zone 3, South Fork of the Madison. MDOL requested assistance in operations from YNP, but the request was denied. MDOL and MFWP conducted operations and pushed bison to the three-mile corner on the Madison River. On 20 May, 22 bison hazed the previous day returned to private property, Zone 3, Denny Creek Road and these were picked up again. This group, in addition to other bison totaling approximately 250, were pushed to the one-mile marker of Madison Arm Road. Operation was aborted because of lack of helicopter support. On 21 May, the group was moved to Barns Hole. On 22 May, gathered 75 bison in Baker's Hole and moved them through the slough, to Cougar Meadows and into 7-Mile Meadows. A second group (120) was moved up the Madison River to 7-Mile Meadows.

On 23 May, 15 bison were picked up from private property on Denny Creek Road (Zone 3) and were joined with other bison from the Madison River area (total of 133 bison), which were pushed across the Madison River to Horse Butte (Whiskey Bay). On 24 May, bison from the previous day's operation and bison already in the area (150-200 bison) remained in Montana, primarily on Horse Butte and vicinity. MDOL ceased operations for the week in the interest of public safety prior to the heavily traveled Memorial Day holiday.

Week of May 27.—On 28 May, moved 25 bison from South Fork (Zone 3) on private property and gathered an additional 90 bison (total 115), crossed the Madison River, and moved the entire group to Whiskey Bay. On 29 May, moved 230 bison (including bison gathered previous day) to the YNP boundary at Baker's Hole. On 30 May, moved bison from previous day to 7-Mile Meadows. An additional group of 36 bison were gathered from private property Zone 3 and were moved to 7-Mile Meadows. On 31 May, gathered 8 cows from Baker's Hole and moved them to the slough. Also, on 31 May, a bull was herded from South Fork, Zone 3 private property.

Week of June 3.—On 3 June, gathered 20 bulls, 30 cows, and 10 calves from Lower Bear Trap from private property and moved them to Maple Creek. On 4 June, gathered 23 cows from the Narrows (Horse Butte) and moved the bison to Baker's Hole.

The last hazing operation occurred on 20 June which included three pair of bison which were moved from private property on Horse Butte to YNP.

NPS report

The general strategy this year was for the agencies to move bison from Montana in to Yellowstone National Park and leave them at the Baker's Hole area along the Madison River, allow them to overnight in this valley, and continue herding them upstream the following day. During the week of 13 May a helicopter was used to assist staff on horseback in moving bison to the Baker's Hole from many locations west of the park boundary. Riders on horseback then moved bison from Baker's Hole toward the east with the Cougar Meadows and 7-mile bridge meadow being the primary goal. On 13 May, 180 bison were moved to Baker's Hole, and on 14 May this group was moved to Cougar and 7-mile bridge meadows. Also, on 14 May an additional 50 bison from the Duck Creek and lower Cougar Creek areas were moved upstream in to the Park. On 15 May, 360 bison were moved from Montana to Baker's Hole. The results of this week's effort was that about 60-70 bison remained in the Madison River corridor, while about 500 bison moved back out of the Park to Montana.

During the week of 20 May all hazing operations were conducted by staff on horseback without the use of the helicopter to assist with air operations. On 21 May, 210 brown/57 red bison were moved in to Baker's Hole. Then on 22 May, 181 brown and 55 red bison were moved from Baker's Hole to 7-mile meadow. The result of this week's effort was that about 200 bison remained in the Madison River Corridor, while about 25 to 40 bison returned to Montana.

During the week of 27 May all hazing operations were again conducted exclusively by riders on horseback. On 29 May, 230 brown/70+ red bison were moved from Montana to Baker's Hole. Then on 30 May these bison were moved on to 7-mile bridge meadow with an additional group of 36 brown/13 red bison that were ultimately gathered at Denny Creek Road and moved all the way to 7-mile bridge. The result of this week's effort is that about 270 brown and 90 to 100 red bison remained in the corridor while few moved back in to Montana.

During the week of 3 June small groups of bison were still observed outside the park. On 4 June bison were moved in to Baker's Hole and 26 brown/12 red were moved on to 7-mile bridge. By 5 June very few bison remained outside the National Park in Montana.

Monitoring metric 3.—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).

Bison were observed outside YELL as early as mid-November, but the majority of bison were outside the Park between the middle of April and the middle of June, when the *Brucella* organism is known to have an environmental persistence of up to 44 days in materials deposited in April and 25 days in those deposited in May. Operations occurred on 25 days during that time period. Cattle were brought into the area on June 15, which is within the duration of persistence of the *Brucella* organism for that calendar date. Operations occurred on nine occasions in June, including two instances of removing bison from Zone 3 areas where cattle were present. Based on the intensive management operations conducted by the interagency partners, the risk of brucellosis transmission from bison to livestock in the Hebgen basin was minimized.

Management response (from the current AM Plan)

- 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 metric 1.—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

Bison operations were conducted on 37 occasions: (a) when bison exceeded tolerance numbers, (b) when bison breached the perimeter of Zone 2, and (c) to return bison after the haze-back date. Operations were initiated on March 25th and the last operation of the season was conducted on June 20th.

NPS report

Bison returned to YELL primarily on their own in the Northern Management Area by late May.

Monitoring metric 2.—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

See Management Action 1.1b, Monitoring Metric 2 for a complete list of numbers and locations of bison in the Northern Management Area for the 2012-2013 management season. Bison began occupying the Zone 2 of the Gardiner Basin in mid-December, 2012, and sporadically used the area until mid-May. The maximum number of bison outside the park at one time was 224 (March 9). Groups of several dozen bison had to be repeatedly hazed through June 3.

NPS report

Bison returned to YELL primarily on their own in the Northern Management Area by late May.

Monitoring metric 3.—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 1.3.a. 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.

Management response (from the current AM Plan)

- 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.

ANNUAL PROGRESS REPORT ON CITIZENS' WORKING GROUP RECOMMENDATIONS

The following section provides the second 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 24 February and 1 May 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.

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.

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.

2013 Report

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

*** 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.

*** 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.

* **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.

*** *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.

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

- 3(a).—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.
- 3(b).—MFWP continues to collaborate with four aboriginal treaty hunting tribes to increase bison harvest through hunting.
- 3(c).—MFWP continues to collaborate with four aboriginal treaty hunting tribes to increase bison harvest through hunting.
- 3(d).—MFWP Commission approved game damage bison hunt roster process to further address bison hunting management tools outside the general season framework and hunt areas.
- 3(e).—Nothing to report for this year.
- 3(f).—Nothing to report for this year.

2013 Report

- 3(a).—Currently MFWP has increased the total number of bison permits available for the 2014/2015 season.
- 3(b).—MFWP has made season timeframe adjustments to increase the hunt opportunity for each hunt area.
- 3(c).—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.
- 3(d).—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.
- 3(e).—No report made for 2013.
- 3(f).—See habitat recommendation number 1 above.

*** 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.*

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

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.

*** 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.

* ***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)

e. 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.
- 6(a).—In process. MFWP continues to look for every opportunity to use hunting as a primary management tool.
- 6(c).—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.

- 6(d).—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

- 6(a).—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. 6(c).—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.
- 6(d).—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.

*** 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).

*** 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.

*** 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.

*** 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.”

*** 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.

*** 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 [APHIS])**

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.

*** 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.

*** *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.

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 projects have been completed or are in progress.
- The Partners invited Dr. Pete Coppelillo, Executive Director for Working Dogs for Conservation (WD4C), to give a presentation at their November 21 meeting. Dr. Coppelillo 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. Coppelillo put forth potential opportunities—and possible challenges—for using conservation dogs to meet the twin goals of the IBMP.

-
- * 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.

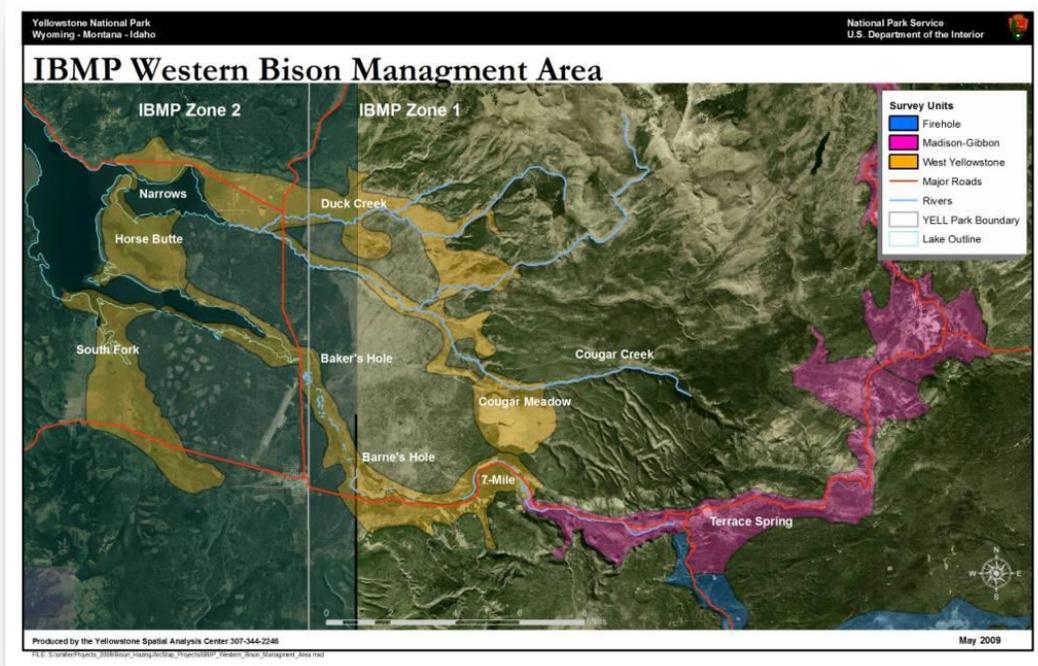
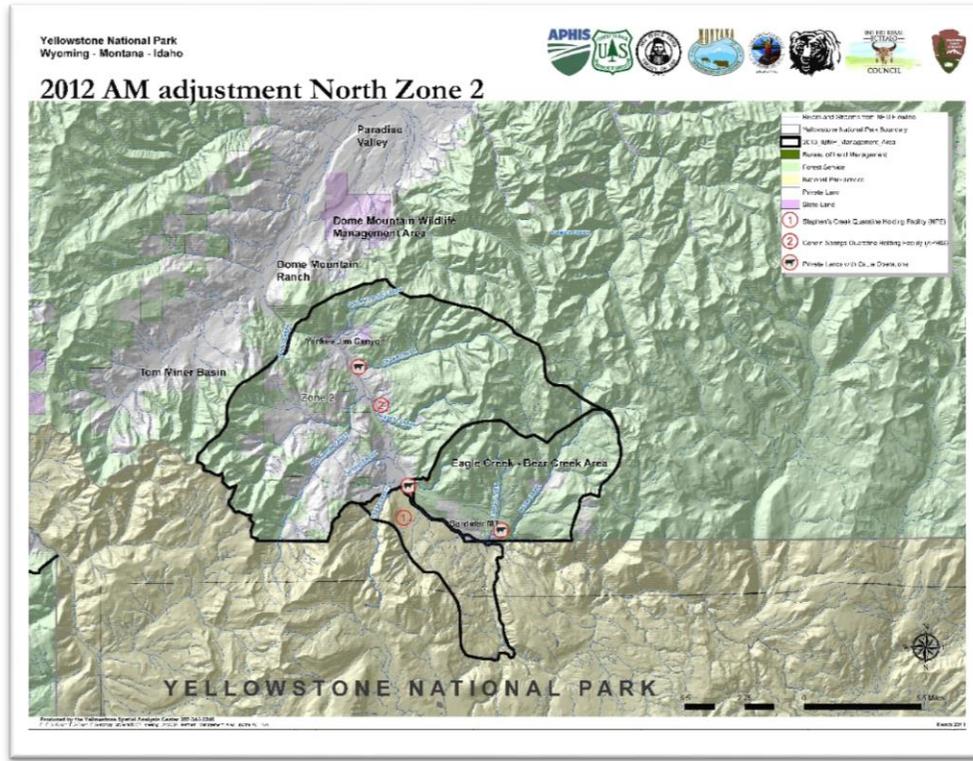
2013 Report

- 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>.

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APPENDIX A.—IBMP NORTHERN AND WESTERN MANAGEMENT AREAS



**APPENDIX B.—BISON NUMBERS AND LOCATIONS IN THE WESTERN MANAGEMENT AREA
FOR THE 2012-2013 MANAGEMENT SEASON**

Table B1.—Number of bison and locations in the Western Management Area for the 2012-2013 management season.

Date	Number of Bison	Location of Bison	Operation
11/13/2012	40 mixed	Horse Butte	No
12/5/2012	10 mixed	Madison River south "flats"	No
	15 mixed	Horse Butte	No
12/29/2012	50 mixed	West of the Madison Arm Resort	No
1/22/2013	10 mixed	Horse Butte subdivisions	No
2/13/2013	2 mixed	Horse Butte	No
2/15/2013	2 mixed	Horse Butte	No
2/19/2013	7 mixed	Horse Butte	No
2/20/2013	9 mixed	Horse Butte subdivisions	No
2/22/2013	29 mixed	Madison River north "flats"	No
	9 mixed	Horse Butte subdivisions	No
2/25/2013	29 mixed	Madison River north "flats"	No
	9 mixed	Horse Butte subdivisions	No
2/27/2013	29 mixed	Madison River north "flats"	No
	9 mixed	Horse Butte subdivisions	No
3/13/2013	10 mixed	Madison River north "flats"	No
	31 mixed	Madison River south "flats"	No
	78 mixed	Horse Butte	No
3/15/2013	127 mixed	Horse Butte	No
3/25/2013	4 mixed	South Fork Zone 3	Yes
3/30/2013	21 mixed	West of the Madison Arm Resort	No
	21 mixed	Horse Butte	No
4/2/2013	17 mixed	South Fork Zone 3	Yes
4/11/2013	1 bull	South Fork Zone 3	Yes
4/18/2013	28 mixed	West of the Madison Arm Resort	Yes
	53 mixed	Madison River south "flats"	Yes
4/19/2013	53 mixed	South Fork Zone 3	Yes
	27 mixed	West of the Madison Arm Resort	Yes
4/22/2013	30 mixed	South Fork Zone 3	Yes
	3 bulls	West of the Madison Arm Resort	Yes
	8 bulls	Madison River south "flats"	Yes
4/26/2013	420 mixed	Horse Butte	No
4/30/2013	93 mixed	South Fork Zone 3	Yes
	20 mixed	Madison River south "flats"	Yes
5/1/2013	71 mixed	South Fork Zone 3	Yes
5/2/2013	12 mixed	South Fork Zone 3	Yes
	13 mixed	West of the Madison Arm Resort	Yes
5/3/2013	64 mixed	South Fork Zone 3	Yes
	100 mixed	Madison River south "flats"	Yes
5/4/2013	26 mixed	South Fork Zone 3	Yes
5/5/2013	199 mixed	Horse Butte	No
5/7/2013	86 mixed	South Fork Zone 3	Yes
5/8/2013	26 mixed	South Fork Zone 3	Yes
	67 mixed	Madison River south "flats"	Yes
5/21/2013	300 mixed	South Fork Zone 3	Yes
5/22/2013	191 mixed	Madison River south "flats"	Yes
5/23/2013	133 mixed	South Fork Zone 3	Yes
5/28/2013	68 mixed	South Fork Zone 3	Yes
5/29/2013	230 mixed	Horse Butte	Yes

Table B1.—Number of bison and locations in the Western Management Area for the 2012-2013 management season.

Date	Number of Bison	Location of Bison	Operation
5/30/2013	36 mixed	South Fork Zone 3	Yes
5/31/2013	1 bull	South Fork Zone 3	Yes
6/3/2013	50 mixed	North Duck Creek area	Yes
6/4/2013	23 mixed	Horse Butte	Yes
6/5/2013	2 bulls	South Fork Zone 3 (lethally removed)	Yes
6/6/2013	3 mixed	North Duck Creek area	Yes
6/10/2013	6 mixed	North Duck Creek area	Yes
6/11/2013	8 mixed	Horse Butte subdivisions	Yes
6/12/2013	5 mixed	Madison River south "flats"	Yes
6/20/2013	3 mixed	Horse Butte subdivisions	Yes
	1 bull	North Duck Creek area	Yes

APPENDIX C—LOG OF INCIDENTS RESPONDED TO BY MFWP WARDENS, NOVEMBER 2011 THROUGH AUGUST 2012

MFWP reported 358 responses to IBMP-related matters between Nov2012 and Aug2012. Details of those incidents and responses are provided chronologically in Table C1.

Table C1.—Log of incidents responded to by MFWP Wardens from Nov 2012 through Aug 2013.

Officer 358	Hours 1108	Date	Landowner or contact	Address	Concern	Public Safety (PS), Hazing (H), Property Damage (PD)			Actions Taken
						PS 53	H 81	PD 11	
Smolczynski	6	11-Nov-12	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK SALISH HUNTERS, 30 BISON TAKEN
Smolczynski	5	15-Nov-12	USFS/PRIVATE SUBDIVISION	WYELLOWSTONE	ARCHERY BISON HUNTER TRESPASS	1		1	HELP TRACK BISON AND LOCATE LANDOWER FOR PERMISSION. NO VIOLATIONS ISSUED
Smolczynski		18-Nov-12	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK SALISH HUNTERS, 20 BISON TAKEN
Smolczynski		22-Nov-12	USFS	WYELLOWSTONE	BISON PATROL	1			CHECK TRIBAL AND STATE PERMITS
Smolczynski		27-Nov-12	USFS	WYELLOWSTONE	BISON PATROL	1			CHECK TRIBAL HUNTERS, 4 BISON TAKEN
Smolczynski		29-Nov-12	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK PERMITS AND FIELD QUESTIONS
Knarr	1	12-Dec-12	SMOLZ		40 BISON FOUND ON THE BUTTE ON PRIVATE				INFO ONLY
Smolczynski	6	16-Dec-12	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK TRIBAL AND STATE HUNTERS
Knarr	1	17-Dec-12	SMOLZ		30+ BISON TAKEN BY TRIBES				INFO ONLY
Smolczynski	4	20-Dec-12	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			SNOWMOBILE PATROL FOR HUNTERS
Smolczynski	2	24-Dec-12	USFS	WYELLOWSTONE	CALL FROM SALISH HUNTER ASKING ABOUT BISON MOVEMENTS	1			NONE
Smolczynski	1	25-Dec-12	USFS	WYELLOWSTONE	CALL FROM BFC ABOUT POSSIBLE BISON HUNTER VIOLATION	1			TALK WITH HUNTER FROM PARTY, SALISH HUNTER TOOK THREE BISON
Knarr	1	25-Dec-12	SMOLZ		3 BISON REPORTED KILLED BY BFC. TURNED OUT TO BE CSKT.				
Smolczynski	15	26-Dec-12	USFS	WYELLOWSTONE	FOLLOW UP WITH BISON WASTE OF GAME VIOLATION	1			CALL SALISH WARDEN AND COLLECT EVIDENCE FOR HIM

Table C1.—Log of incidents responded to by MFWP Wardens from Nov 2012 through Aug 2013.

Officer 358	Hours 1108	Date	Landowner or contact	Address	Concern	Public Safety (PS), Hazing (H), Property Damage (PD)			Actions Taken
						PS 53	H 81	PD 11	
Knarr	1	26-Dec-12	SMOLZ		CSKT WARDEN MIKE ISSUES 4 CITES OVERLIMIT, WASTE				
Knarr	1	26-Dec-12	SHEPPARD		UPDATE CALL				
Smolczynski	7	27-Dec-12	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK PERMITS AND FIELD QUESTIONS
Knarr	1	27-Dec-12	SMOLZ		UPDATE CALL				
Knarr	1	28-Dec-12	FLOWERS		UPDATE TALK AT R3				
Knarr	1	28-Dec-12	SMOLZ		BISON DISPEARED. SEVERAL TRIBAL MEMBERS ON THE GROUND.				
Smolczynski	5	29-Dec-12	USFS	WYELLOWSTONE	BISON PATROL	1		1	CHECK PERMITS AND ANIMAL BOTH TRIBAL AND STATE
Knarr	1	29-Dec-12	SMOLZ		UPDATE CALL SAME AS ABOVE				
Smolczynski	2	30-Dec-12	USFS	WYELLOWSTONE	VISIT WITH OUTFITTER WITH BISON QUESTIONS	1			STANDARD INFO FOR BISON LOCATIONS
Knarr	9	30-Dec-12	KNARR		PATROL WEST YELLOWSTONE FOR TRIBAL AND STATE (1) HUNTER. 20+ BISON TAKEN BY CSKT HUTNERS, 1 STATE				
Kerin	1	31-Dec-12	Gary Olson						Informed Gary to report to Park
Smolczynski	5	3-Jan-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK TRIBAL AND STATE HUNTERS
Smolczynski	1	4-Jan-13	OUTFITTER FROM R-1	PLAINS , MT	COMPLAINT ABOUT BISON INFO BEING DISTRIBUTED FAIRLY	1			LET HIM VENT AND REQUEST THAT HE TALK WITH PAT FLOWERS
Smolczynski	6	6-Jan-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			SNOWMOBILE PATROL FOR HUNTERS
Knarr	1	6-Jan-13	SMOLZ		CK ON BISON OUT				
Kerin	1	10-Jan-13	Rigler		Does not like Bison or FWP				Introduced myself and gave contact info, Rigler stated I was not allowed on his property, and bison might be shot if they rub on father in laws house or trees, stated he would contact sheriff's office if issues arise
Smolczynski	4	12-Jan-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			SNOWMOBILE PATROL FOR HUNTERS
Knarr	8	12-Jan-13	SHEPPARD/ KNARR		BISON REIVEW				TRAVEL TO GARDINER SPEND DAY WITH 313 REVIEWING BISON ISSUES
Smolczynski	7	13-Jan-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			SNOWMOBILE PATROL FOR HUNTERS
Smolczynski	3	16-Jan-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK TRIBAL AND STATE HUNTERS
Kerin	1	16-Jan-13	Thomas Gauthier	Principal Gardiner High School					Meet with and discuss bison issues stated has very little problems and will call the Park Dispatch if problem arises
Smolczynski	5	19-Jan-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK TRIBAL AND STATE HUNTERS
Kerin	2	19-Jan-13							Check Bison hunters z hill no Bison out
Kerin	2	22-Jan-13			36 Bison in Beattie Gulch				1 state hunter - 1 cow bison taken, 1 CSKT - 2 cow bison taken
Knarr	1	22-Jan-13	KERIN		BISON STAGING NEAR BEATE GULCH. STATE HUNTER KILLS ONE, TRIBAL HUNTER CSKT 2				
Kerin		23-Jan-13							1 state hunter - 1 Bull taken
Knarr	1	23-Jan-13	KERIN		STATE HUNTER KILLS BULL AT BEATE GULCH				
Knarr	1	23-Jan-13	SMOLZ		POSS. 60 BISON OUT				
Knarr	1	24-Jan-13	KERIN		NEZ PERCE HUNTERS ON THE GROUND. NO BISON OUT				
Smolczynski	4	26-Jan-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			SNOWMOBILE PATROL FOR HUNTERS
Kerin		26-Jan-13							report Nez Perce taking elk
Kerin		27-Jan-13							Report 1 bison taken Tribal - Beattie Gulch

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Officer 358	Hours 1108	Date	Landowner or contact	Address	Concern	Public Safety (PS), Hazing (H), Property Damage (PD)			Actions Taken
						PS 53	H 81	PD 11	
Kerin	1	28-Jan-13							Phone calls regarding bison hunt from hunters
Knarr	1	28-Jan-13	KERIN		BISON STATUS CALL				
Knarr	1	28-Jan-13	SMOLZ		BISON STATUS CALL				
Kerin	9	29-Jan-13			120 bison between Gardiner and Beattie Gulch				State hunter - 1 Bull Decker flats, 2 cow bison taken Beattie Gulch, 1 state and 1 CSKT
Knarr	1	29-Jan-13	KERIN		BISON STATUS CALL				
Smolczynski	3	30-Jan-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK TRIBAL AND STATE HUNTERS
Kerin	3	30-Jan-13			120 bison between Gardiner and Beattie Gulch				Patrol for bison locate - 28 Bison out Beattie Gulch, no hunters
Kerin	3	31-Jan-13			34 Bison Beattie Gulch				Patrol for bison locate - 34 Bison out Beattie Gulch, 1 state hunter
Knarr	1	31-Jan-13	SMOLZ		BISON STATUS CALL				
Knarr	1	31-Jan-13	KERIN		BISON STATUS CALL				
Smolczynski	4	1-Feb-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK TRIBAL AND STATE HUNTERS
Kerin	3	1-Feb-13							Looked for Bison ,26 crossed into town
Knarr	1	1-Feb-13	KERIN		BISON STATUS CALL				6 BULLS OUT
Kerin	3	2-Feb-13							Looked for Bison, one taken state hunter?
Smolczynski	2	3-Feb-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK TRIBAL HUNTER, NEZ PERCE HUNTER
Kerin	0	3-Feb-13							1 Bison taken state hunter eagle creek campground
Knarr	1	3-Feb-13	SHEPPARD		CALL NEZ PERCE OATMAN IN WEST YELLOWSTONE				
Knarr	1	3-Feb-13	BRYSON N.P. WARDEN		OATMAN HAS PERMITS				
Knarr	1	3-Feb-13	APRIL N.P. WARDEN		CONTACTED OATMAN ALL WAS FINE				
Knarr	1	3-Feb-13	SMOLZ		CHECKED "LEE" OATMAN IN FIELD WENT OKK				
Knarr	1	3-Feb-13	SHEPPARD		CALL BACK WITH UPDATE				
Kerin	5	4-Feb-13							Look for bison, 1 bull taken Eagle Creek Campground- Nez. 53 Beattie Gulch, 6 bulls RTR, 24 south Eagle Creek
Kerin	2	4-Feb-13			High Fence on Forest Service at Battie Gulch				Tear down 20 yards of fence in north east corner
Knarr	X3	4-Feb-13	KERIN		CHECK ON BISON STATUS				
Knarr	X2	4-Feb-13	MORGAN DALE		CHECK W MORGAN ABOUT OATMAN CONTACT ALL WENT WELL				
Knarr	1	5-Feb-13	SMOLZ		BISON STATUS CALL				
Knarr	1	5-Feb-13	KERIN		BISON STATUS CALL				
Knarr	1	5-Feb-13	HAMILTON		CALL ABOUT BISON, SET UP MEET FOR NEXT DAY				
Knarr	1	5-Feb-13	SHEPPARD		BISON STATUS CALL				
Kerin	1	6-Feb-13							5 Bison phone calls
Smolczynski	2	7-Feb-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			SNOWMOBILE PATROL FOR HUNTERS
Kerin	3	7-Feb-13							Look for bison, 33 Beattie Gulch, 1 taken Beattie Gulch state Hunter
Kerin	13.5	8-Feb-13							look for Bison.3 Nez hunters 3 bulls down, 3 state hunters 2 bulls down 1 state hunter 1 cow down and 1 NTA Hunt without permission. BPC -10
Kerin	8	9-Feb-13							look for bison, 3 state hunters 3 cows down cutler meadows, 1 nez 1 cow ,1 yearling cow down cuter meadows BPC -30
Knarr	10	9-Feb-13	KNARR		Bison hunt				check bison locations, visit Lee

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Officer 358	Hours 1108	Date	Landowner or contact	Address	Concern	Public Safety (PS), Hazing (H), Property Damage (PD)			Actions Taken
						PS 53	H 81	PD 11	
Smolczynski	4	10-Feb-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			SNOWMOBILE PATROL FOR HUNTERS
Kerin	4	10-Feb-13							Look for bison 1 state hunter 1 cow down cutler meadows. 130 Bison out in MT BPC - 15
Knarr	8	10-Feb-13	KNARR		BISON HUNT				1 Bison taken by state hunter Cutler meadows
Kerin	5.5	11-Feb-13	Judy Jensin	595 Old Yellowstone trail	Bison in horse pasture			1	looked at and pulled up fence closed gate and inspected pipe- no damage. Contacted Judy gave her Zack Waterman's # and Contacted Zack left msg.
Kerin		11-Feb-13							1 nez hunter 1 bull down cinnabar mountain BPC -20
Knarr	1	11-Feb-13	SHEPPARD		BISON HUNT				SEIZED BISON TO HAPPPELS
Knarr	1	11-Feb-13	KERIN		BISON HUNT				
Kerin	7	12-Feb-13	Stermitz	4 HWY 89 south	Bison crossed river and were in with Stermitz horses and broke into 4 boards into coral in Hoppe cow pasture.		1	1	First on scene,Tried to haze back across river did not work used horses and hazed across hwy up Little Trail Creek assisted by MHP, DOL, Park County, Park Service, MHP BPC -60
Knarr	1	12-Feb-13	SHEPPARD		BISON IN HOPPIES CATTLE				313 MOVED BISON OUT OF AREA OF CATTLE
Kerin	6	13-Feb-13							Patrol bison hunt 8 bulls Beattie Gulch 4 Airport 5 bottom z hill
Kerin	9.5	14-Feb-13							Patrol bison hunt Umatilla 2 bull 3 cows down BPC-10
Smolczynski	3	15-Feb-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK TRIBAL AND STATE HUNTERS
Kerin	11	15-Feb-13							Patrol bison hunt, nez 1 cow down Z hill, Umatilla 1 cow down z hill, 1 bull and 2 cows down Beattie BPC-20
Knarr	3X	15-Feb-13	KERIN		UPDATE ON BISON ACTIVITY AND HUNT				
Knarr	2X	16-Feb-13	KERIN		UPDATE ON BISON ACTIVITY AND HUNT				
Kerin	10	17-Feb-13							Patrol bison hunt Nez 6-cows 4-bulls Beattie, 1 bison put down in Park BPC-20
Knarr	1	17-Feb-13	KERIN		UPDATE ON BISON ACTIVITY AND HUNT				
Knarr	3X	17-Feb-13	SCOTT		UPDATE ON BISON ACTIVITY AND HUNT,QUITE LEFT AREA 1800				
Kerin		22-Feb-13	RTR	Old Yellowstone Trail	1 Bison in with Warren Johnson's horses		1		Hazed out of pasture through gate
Kerin	11.5	22-Feb-13							Patrol bison hunt Umatilla 3- bull 6- cows down, Nez 2-Bulls 5-cows Battie, 2 Bison seized hunt/out license non tribal - Nez, 1 bison shot got back into park UTL BPC-40
Kerin	11	23-Feb-13							Patrol bison hunt Umatilla 12- bulls, Nez 4- Bulls 2- Cows Beattie BPC-20
Kerin	10	24-Feb-13							Patrol Bison hunt Nez 2- Bulls Battie BPC-20
Kerin	6	25-Feb-13							Nez 1- bull Cinabar BPC-15
Knarr	1	25-Feb-13	BRIDGER		CALL TO GET UP DATE ON BISON IN WEST				BISON OUT ON HORSE BUTTE 30+ NO CONFIRMED HUNTERS IN THE AREA
Knarr	1	26-Feb-13	KERIN		UPDATE ON HUNT STATUS				
Kerin	3	27-Feb-13	Bill Hoppie	89 South mm 4.5	3 Bison in with cows		1		Assist Dol with hazing 3 bull bison out of cow pasture back across river into park. Park Service blocked traffic.
Kerin	2	28-Feb-13	Allen Shaw	Old Yellowstone Trail	3 Bison behind hot fence around blue buildings		1		Allen Shaw requested me to haze Bison off property, I moved the bison through green gates . No damage.

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Officer 358	Hours 1108	Date	Landowner or contact	Address	Concern	Public Safety (PS), Hazing (H), Property Damage (PD)			Actions Taken
						PS 53	H 81	PD 11	
Kerin	2	28-Feb-13	Bill Hoppie	89 South mm 4.5	7 Bison in with cows		1		Assist DOI with hazing 7 bison out of cow pasture back across river into park. Park Service and Park county blocked traffic.
Kerin	3	28-Feb-13							Patrol Bison hunt. 3 Bulls down penstock on z hill Umatilla
Knarr	4X	28-Feb-13	KERIN		UPDATE ON HUNT STATUS				
Knarr	1	28-Feb-13	KERIN		BISON IN HOPPES CATTLE				313 ASSISTED MOUNT IN MOVING BISON OUT OF CATTLE
Kerin	9	1-Mar-13							patrol bison hunt nez -3 bulls 2 cows umatilla -3 bulls 1 cow all at Beattie
Knarr	2X	1-Mar-13	KERIN		BISON STATUS CHECK				
Kerin	10	2-Mar-13							patrol bison hunt nez- 1 bull Umatilla- 1 cow 1 bull trespass on RTR 2 nta issued non tribal
Knarr	4X	2-Mar-13	KERIN		BISON STATUS CHECK, 313 ASSIST W 1 BISON IN HOPPE'S, 29 BISON CROSS RIVER NEAR AIRPORT, 313 CITED TWO NON TRIBAL FOLKS FOR TRESPASS ON RTR				CITE 2 NON TRIBAL FOR TRESPASS
Knarr	2X	4-Mar-13	KERIN		BISON STATUS CHECK, NO HUNTERS ON LANDSCAPE, BISON STILL NEAR HIGHWAY AT AIRPORT.				
Kerin		7-Mar-13							Nez -2 cows 1 bull
Knarr	3x	7-Mar-13	KERIN		BISON STATUS CHECK				
Kerin	6	8-Mar-13							Patrol bison hunt nez- 1 bull beattie
Knarr	2X	8-Mar-13	KERIN		BISON STATUS CHECK				
Kerin	11	9-Mar-13							Patrol bison hunt nez 3 -bulls 1 cow Shoshone Bannock -3 bulls Tip-mont call bison- waste found not to be true.
Knarr	8	9-Mar-13	KNARR		BISON				BISON HUNT PATROL, BISON TAKEN IN CULTLER MEADOW AND BEATTIE GULCH. 313 HAD ISSUE W/PERSON INTERFERING WITH HUNT AT BEATTIE. SEVERAL HUNDRED OUT BETWEEN STEPHENS CRK AND CUTLER
Smolczynski	3	10-Mar-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK BISON NUMBERS
Kerin	7	10-Mar-13							Patrol bison hunt nez -3 cows 2 bulls
Knarr	1	10-Mar-13	KERIN		BISON STATUS CHECK				
Smolczynski	3	11-Mar-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			SNOWMOBILE PATROL FOR HUNTERS
Kerin	1	11-Mar-13	RTR Church blue buildings		Bison behind fence		1		Hazed 3 bulls of church near Beattie
Kerin	2	11-Mar-13	Stermitz	mm5	6 bison in with hoppie cows		1		assist DOL haze 6 bison out of Hoppe's cows back across river FWP Park service DOL
Kerin	5	11-Mar-13							Patrol bison hunt
Knarr	1	11-Mar-13	FREY						CALL TO CHECK ON GUT PILE ISSUE
Kerin	4	12-Mar-13							patrol bison hunt
Knarr	5X	12-Mar-13	KERIN						CALLS ABOUT BISON STATUS
Kerin	10	13-Mar-13	Stermitz	Cinnabar	40 + bison on property in horse pasture "not welcome"		1		hazed bison from Cinnabar towards cutler lake assisted by DOL, Park Service, APHIS put in touch with Zack Waterman
Kerin	1.5	13-Mar-13	RTR Church blue bildings		Bison behind fence		1		Hazed 3 bulls of church near Beattie

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Smolczynski	10	14-Mar-13	USFS	GARDINER	BISON GUT PILES	1			CLEAN UP GUT PILES LEFT FROM HUNT
Kerin	11	14-Mar-13							patrol bison hunt. Pick up dump trailer and haul bison guts to landfill in Livingston 14 bison harvested total today
Knarr	10	14-Mar-13	GARDINER BASIN						ASSIST IN REMOVAL OF BISON GUT PILES FROM BETTE GULCH, BISON PATROL
Kerin	4.5	15-Mar-13			shooting across road	1			1 nez hunter was issued a citation for shooting across the road way and 1 bison was seized as evidence and donated to food bank
Kerin	5	15-Mar-13							Patrol bison hunt nez -9 bulls 2 cows
Knarr	1	15-Mar-13	KERIN						BISON UPDATE
Kerin	9.5	16-Mar-13							patrol bison hunt nez -4 bulls
Knarr	1	16-Mar-13	KERIN						BISON UPDATE
Kerin	5.5	17-Mar-13							Patrol bison hunt nez -2 bulls, investage waste case 2 bulls near Hayes ranch, took photos and turned case over to April with nez tribe.
Knarr	6X	17-Mar-13	KERIN						CONFIRM WASTE BY 313 ON 2 BISON UP HAYS PLACE. N.P. APRIL WILL FOLLOW UP. POSS. WASTE W/BISON UP EAGLE CRK.
Knarr	1	17-Mar-13	SHEPPARD						BISON WASTE UP DATE
Smolczynski	1	18-Mar-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK BISON LOCATIONS ON HWY
Kerin	5.5	18-Mar-13							patrol bison hunt 4 bulls -Umatilla
Knarr	2X	18-Mar-13	KERIN						BISON UP EAGLE CRK OK
Knarr	3X	19-Mar-13	KERIN						BISON UPDATE
Knarr	1	20-Mar-13	KERIN						BISON UPDATE
Smolczynski	2	21-Mar-13	USFS	WYELLOWSTONE	BISON HUNTER PATROLS	1			CHECK BISON NUMBERS ON HORSE BUTTE
Knarr	4X	21-Mar-13	KERIN						BISON UPDATE. 5 BULLS NEAR ROAD AT CEDAR CRK
Smolczynski	2	22-Mar-13	MT. STATE HWY	WYELLOWSTONE	TRUCK VERSUS BISON	1		1	REMOVE 2 DEAD BISON FROM HWY 191
Knarr	1	22-Mar-13	KERIN						BISON UPDATE, MOST BACK IN PARK
Smolczynski	3	23-Mar-13	USFS	WYELLOWSTONE	REQUEST BY DOL FOR BISON # ON SOUTH FORK		1		LOCATE AN REPORT 4 BISON ON SOUTH FORK TO DOL
Kerin	4	23-Mar-13							Patrol bison hunt 1 bull Eagle Creek
Knarr	5x	23-Mar-13	KERIN						SHOBAN TAKES ONE BISON
Smolczynski	1	24-Mar-13	MT. STATE HWY	WYELLOWSTONE	CAR VERSUS BISON	1		1	CAR VS. BISON, I WAS AT TRAINIING. Call from dispatch
Knarr	1	24-Mar-13	KERIN						SHOBAN HEADED OUT ONLY ONE BISON TAKEN
Kerin	2	25-Mar-13	Bill Hoppe	Z hill	3 bulls in with horses			1	Bill called stated 3 bulls in with horses he hazed them out, they ran through the fence he requested new fence he was put in contact with Zack Waterman third time this has happened this year.
Knarr	1	25-Mar-13	KERIN						ONE BULL AT CORWIN SPRINGS 313 ORG. HAZE IN MORNING
Kerin	2	26-Mar-13	Allen Shaw RTR church	Corwin Springs	1 bull becoming a pain	1	1		Allen stated 1 bull not welcome any more they tried to haze off 3 times keeps returning set up hazing operation with MHP DOL Park Service FWP, bull moved off that night no need for hazing.
Knarr	1	26-Mar-13	KERIN						BULL MOVED ACROSS BRIDGE AND HEADED SOUTH ON ITS OWN
Knarr	2X	27-Mar-13	KERIN						BISON UPDATE 0

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Knarr	1	29-Mar-13	SMOLZ						CALL FOR UPDATE. UP TO 200 BISON OUT MOSTLY ON NORTHSIDE OF RIVER.
Smolczynski	2	30-Mar-13	USFS	WYELLOWSTONE	BISON PATROL	1			ROUTINE PATROL OF BISON LOCATION
Knarr	5X	1-Apr-13	KERIN						BISON UPDATE, 8 AT AIRPORT 4 AT CORWIN BRIDGE
Knarr	2	1-Apr-13	SMOLZ						BISON UPDATE 250 ON BUTTE
Knarr	2X	2-Apr-13	KERIN						BISON UPDATE NO CHANGE
Knarr	3X	2-Apr-13	SMOLZ						BISON UPDATE, DOL HAZE 7 OFF SO. FORK TO BUTTE
Smolczynski	10	3-Apr-13	USFS	Gardiner	bison on private land		1		Haze 20 bison back into YNP
Knarr	1	3-Apr-13	KERIN						NO CHANGE
Knarr	1	3-Apr-13	SMOLZ						350 NOW ON BUTTE
Kerin	1	4-Apr-13	Strmitz	mm5	6 bulls in with Hoppie Cows		1		Assisted DOL Haze 6 bulls out of Hoppe Cows
Kerin	1	4-Apr-13	RTR	Blue Buildings	1 Bull bison around buildings		1		Hazed 1 Bull bison out of blue buildings assisted by Park Service
Knarr	2	4-Apr-13	KERIN		BISON IN HOPPEES. BISON AT RTR				4 BULLS MOVED OUT OF HOPPEES, BISON AT CORWIN SPRINGS, RTR, U.T.L.
Knarr	1	5-Apr-13	SMOLZ						BISON UPDATE, NOTHING NEW
Knarr	4X	5-Apr-13	SCOTT		BISON AT RTR CORWIN BRIDGE				38 FOUND 4 BULLS NEAR VILLAGE AT BRIDGE. MOVED THEM ACROSS HIGHWAY TO EASTSIDE. BULLS RAN SOUTH
Knarr	2X	6-Apr-13	SCOTT		BULLS BACK AT CORWIN				4 BISON MOVED FROM WEST TO EASTSIDE OF HIGHWAY.
Knarr	1	6-Apr-13	MOUNT		BULLS BACK AT CORWIN				CALLED MOUNT LEFT MESSG, NO CALL BACK FROM HIM
Knarr	1	6-Apr-13	WADE AT RTR		BULLS BACK AT CORWIN				CALLED LEFT MESSG WITH WADE DID NOT HEAR BACK
Smolczynski	4	7-Apr-13	Donna Johnson	Horse Butte Resident	tribal hunt on private land	1			investigate kill area, on FS property
Knarr	1	7-Apr-13	SMOLZ						BISON HIT ON 287 FRIDAY NIGHT ONLY ACTIVITY
Knarr	1	7-Apr-13	SCOTT						NO CALL TODAY OR SUNDAY. WADE DID CALL BACK SUGGESTED CHURCH NEEDS MORE TOLERANCE FOR BISON
Knarr	1	7-Apr-13	MOUNT						RETURNED CALL FROM SAT. IS IN THE AREA TODAY IF NEEDED.
Knarr	1	8-Apr-13	KERIN						BISON UPDATE
Knarr	1	8-Apr-13	SMOLZ						BISON UPDATE
Kerin	1	10-Apr-13		833 US HWY 89 S	1 Bull Bison rubbing on Propane Tank	1	1		Tried to Haze 1 Bull Bison assisted by Park Service Bull was hazed off property but not across river brushed up in thicket left and watched.
Knarr	1	10-Apr-13	KERIN						ONE BISON MOVED FROM RESIDENCE 833 HWY. BY 313
Knarr		10-Apr-13	SMOLZ						50 BISON ON WEST ARM ROAD ABOUT 2 MILES DOWN.
Kerin	2	11-Apr-13	RTR	Buildings at Corwin Springs	4 Bulls Around Houses	1	1		Hazed 4 Bulls Off RTR Property, Hazed Across Bridgde and pushed South, Assisted byu 5 Park Service Officers
Kerin	1	11-Apr-13	Gardiner School		30+ Bison on football fiels trying to coinduct Track	1	1		Hazed 30+ Bison off football field assisted by Park Service
Smolczynski	1	11-Apr-13	DOL	Wyellowstone	request to look for bison on Mad Arm road		1		Give location of approx, 30+ head
Knarr	2x	11-Apr-13	KERIN						BISON UPDATE
Knarr	1	11-Apr-13	MOUNT						BISON UPDATE ?

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						PS 53	H 81	PD 11	
Kerin	1	12-Apr-13	Gardiner School		Bison on Football Field	1	1		Park service Hazed Bison Off Football Field at my request I was on another bison mission.
Kerin	12	12-Apr-13			1 Bull Bison Dome Mountain Area		1		Assisted DOL locate Bison on Back side of Dome Mountain, moved trailer from Joe Brown to Daily Lake picked up DOL. Assisted by Park Service also
Smolczynski	6	12-Apr-13	USFS	Wyellowstone	Bison on Mad Arm road, heading for zone 3		1		Haze 30+ back to Madison River
Knarr	2X	12-Apr-13	SMOLZ						BISON UPDATE, BISON ON SOUTH FORK?
Kerin	7.5	16-Apr-13			42 Head Bison located on HWY at Cattle Gard	1	1		Hazed 42 hazed bison on hwy at cattle guard pushed across river north of check station. Assisted by DOL, Park County, Park Service, Forest service and FG 38, Used ATV
Kerin	6	17-Apr-13			42 Head Bison located on HWY at Cattle Gard	1	1		Hazed 42 head bison on hwy at cattle guard put together hazing operation bison moved up sportsmans access before starting. Assisted by DOL, APHIS, Park County, Park Service, and FG 38, MHP Used ATV
Kerin	2	17-Apr-13	RTR	Corwin and Blue bildings	5 bison Corwin and 2 bison Blue buildings	1	1		Hazed 5 Bison out of Buildings in Corwin assisted by DOL. Also hazed 2 bison out of blue buildings with ATV alone.
Kerin	9.5	18-Apr-13			Locate 42 Bison up Joe Brown		1		Helped Dol locate 42 Bison up on red Mountain Hazed back to south of Cutler area assisted by MHP , Park Service, FWP
Smolczynski	3	18-Apr-13	Povah	Wyellowstone	Bison on South Fork		1		Haze 20+ bison back to Mad river
Kerin	3	19-Apr-13	Bill Hoppie Sheep		3 bull in with Sheep		1	1	Hazed 3 bulls out of sheep pushed across river onto RTR one fence rail broke by bison.
Kerin	1	19-Apr-13	RTR	Blue Buildings	2 bulls in hay Field		1		Hazed 2 bulls + 3 bulls from Hoppe sheep out of hay field on to Forest service assisted by Park service
Smolczynski	8	19-Apr-13	Povah	Wyellowstone	Bison on South Fork		1		Haze 80+bison back to 3mile corner
Smolczynski	6	22-Apr-13	Povah	Wyellowstone	Bison on South Fork		1		Haze 27+ Bison back to mad river
Smolczynski	7	23-Apr-13	Povah	Wyellowstone	Bison on South Fork		1		Haze 18+ bison back to 3mile
Kerin	5	23-Apr-13			62 bison Headed north part of 42 located on red mountain.				Assisted DOL haze 62 bison back to park line
Smolczynski	6	25-Apr-13	Povah	Wyellowstone	Bison on South Fork		1		Haze bison back across South Fork
Kerin	10	26-Apr-13	Gardiner area		Return bison to Park		1		Assisted DOL haze 11 bison back to park 4 left up Cider Creek Assisted by APHIS ,FWP, Park Service, Park County
Knarr	1	26-Apr-13	SMOLZ		BISON ON GARDINER SIDE				32 ASSIST DOL AND 313 W HAZE OF BULLS BACK TO PARK
Knarr	2X	26-Apr-13	KERIN		BISON ON GARDINER SIDE				ASSIST DOL AND PARK W BISON HAZE BACK TO PARK, MOST/ALMOST ALL CUT BACK
Knarr	1	26-Apr-13	TIERNEY		BISON HAZING				FRIDAY MAY 3, HAZE OF BISON OFF SOUTH FORK W. Y. AND BIG PUSH ON MAY 13TH.
Smolczynski	6	30-Apr-13	private	Wyellowstone	Bison on Hwy 287		1		Haze bison to cougar creek
Knarr	1	30-Apr-13	SHEPPARD						BISON HAZE 0800 FRIDAY
Knarr	1	30-Apr-13	SMOLZ						BISON HAZE W DOL OFF SOUTH FORK
Smolczynski	7	1-May-13	povah	wyellowstone	bison on South Fork of Madison		1		Haze 30 bison to bakershole
Knarr	1	1-May-13	SMOLZ		SOUTH FORK BISON				HAZE WITH DOL
Kerin	1.5	2-May-13					1		Drive to West Yellowstone
Smolczynski	10	2-May-13	private	wyellowstone	bison On Hwy 287		1		Haze 50 bison to cougar crk in Park
Knarr	1	2-May-13	SMOLZ		SOUTH FORK BISON				HAZE WITH DOL
Kerin	11	3-May-13					1		Assisted DOL West Yellowstone hazed 160+ head Bison & drive hime

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Smolczynski	6	3-May-13	povah	wyellowstone	bison on South Fork of Madison		1		Haze 20 bison to 3 mile
Knarr	1	3-May-13	KERIN		SOUTH FORK BISON				HAZE 60+ OFF SOUTH FORK W DOL
Knarr	1	3-May-13	SMOLZ		SOUTH FORK BISON				HAZE 60+ OFF SOUTH FORK W DOL
Knarr	1	3-May-13	TIERNY		SOUTH FORK BISON				NO ANSWER
Knarr	1	3-May-13	FLOWERS						BISON UPDATE ON HAZE
Knarr	1	4-May-13	KERIN						BISON STATUS UPDATE NO ACTIVITY ON NORTH SIDE
Smolczynski	9	6-May-13	povah	wyellowstone	bison on South Fork of Madison		1		Haze 30 bison to bakershole
Knarr	2x	6-May-13	SMOLZ		SOUTH FORK BISON				BULL IN POVAH'S WAS GONE WHEN THEY WENT BACK. HAZED 80+ UP SOUTH SIDE, REQ. FOR ANOTHER RIDER 2MARROW
Knarr	2X	6-May-13	KERIN						NO BISON ISSUES ON NORTH SIDE, REQ. HIS HELP FOR HAZE 2MARROW IN WEST YELLOW.
Knarr	1	6-May-13	FLOWERS						BISON CONF. CALL WITH PAT
Knarr	2X	6-May-13	FLOWERS						UPDATE DAY HAZE, BULL IN POVAH'S, AND REQ. FOR ADD RIDER 2MARROW
Smolczynski	10	7-May-13	USFS	wyellowstone	bison on Mad Arm road		1		Haze bison back to bakershole
Knarr	2x	7-May-13	SMOLZ						80-90 HAZED OFF SO. FORK TO BUTTE
Knarr	1	7-May-13	KERIN						80-90 HAZED OFF SO. FORK TO BUTTE W DOL. CALL FROM RTR BULL AT BRIDGE.
Knarr	1	7-May-13	KNARR		BULL ON RTR BY CORWIN				TALKED TO ALAN ADVISED WE WOULD HAZE BULL OFF IN MORNING. HE AGREED
Knarr	1	7-May-13	SCOTT						CALLED SCOTT, DAY OFF, ABOUT HAZING BULL FORM RTR. UNAVAILABLE
Kerin	1	8-May-13	RTR	Corwin Springs Houses	1 Bull Bison in buildings	1	1		Hazed 1 bull bison with ATV. Tried to push across bridge but could not left Bull in Campground across the street, no one in camp ground. Assisted by Park county and FG 38
Kerin	1	8-May-13	RTR	Blue Buildings	2 Bulls in buildings and hay field	1	1		Hazed 2 bulls out of hay field onto Forest Service used ATV assisted by FG38
Smolczynski	6	8-May-13	USFS	wyellowstone	bison on Horsebutte side		1		Bring bison to park
Knarr	2X	8-May-13	SMOLZ						NEEDS NEW HORSE FOR HAZE HAS TO GIVE HIS HORSE A BREAK. 312 TO DELIVER ROSCO TODAY
Knarr	2X	8-May-13	KERIN						MOVED BULL OUT OF TRAILERS TO SOUTH. HAZED 2 MORE FROM BLUE BUILDING
Knarr	1	8-May-13	BRIDGER						DOL IS GOING TO HAZE 4 OFF SO. FORK TOMORROW LOOKING FOR ONE RIDER IF POSSIBLE.
Kerin	1	9-May-13	Pat Reamer	MM5	1 bull Bison around house worried about children	1	1		Tried to locate 1 bull bison UTL informed Pat to call if bison is located and I would return.
Kerin	1	9-May-13	RTR	Corwin Springs Houses	1 Bull Bison in buildings	1	1		Hazed bull of church back to camp ground no help pushed off by myself. Located 2 bulls back on church Blue buildings left for another day.
Smolczynski	7	9-May-13	povah	wyellowstone	bison on South Fork of Madison		1		Haze bison to 3mile, push across madison river
Knarr	1	9-May-13	BRIDGER						MESSG TO BRIDGER ABOUT HAZING NEXT WEEK
Knarr	1	9-May-13	KERIN						UPDATE HAZE IN GADINER NOTHING NEW
Kerin	1	10-May-13	Pat Reamer	MM5	1 bull Bison around house worried about children	1	1		located bison pushed across river assisted by 2 Park Service 1 DOL all horse back. 2 Park Service for Traffic

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Kerin	4	10-May-13	Bill Ostrike	MM5	1 Cow with calf not welcome		1		Pushed across bridge at Corwin picked up bull in buildings on RTR Corwin and Cow and Calf, and 2 bulls in blue buildings RTR Pushed south into Park dropped in power line flats assisted by 2 Park Service, 1 Dol all horse back and 2 Park Service traffic control.. Cow and Calf ran all the way back to Bill's same night.
Knarr	1	10-May-13	BRIDGER						CALL BRIDGER ABOUT HAY AND HORSE STORAGE
Knarr	1	10-May-13	KERIN						SEVERAL BISON HAZED WITH DOL ON GARDINER SIDE
Knarr	1	10-May-13	SMOLZ						NO BISON ISSUES ON NORTH SIDE, REQ. HIS HELP FOR HAZE 2MARRON IN WEST YELLOW.
Knarr	6	10-May-13	KNARR						DELIVER EXTRA HAY TO WEST YELLOWSTONE IN PREP FOR HAZE
Kerin	3	11-May-13	Bill Ostrike	MM5	1 Cow with calf not welcome		1		Hazed Cow and Calf back to the park she ran over the top of us at Beattie and ran back to Bill's assisted by 1 DOL Horseback and FS74 Traffic control
Knarr	3	11-May-13	KERIN		COW AND CALF				COW AND CALF RETURNED TO AREA NEAR CORWIN BRIDGE AFTER BEING HAZED
Knarr	2	11-May-13	MOUNT		COW AND CALF				DISCUSS WHAT TO DO W COW AND CALF
Knarr	1	11-May-13	TIERNY		COW AND CALF				MESSG TO TIERNEY TO CALL ABOUT COW AND CALF
Kerin	2	12-May-13							Drive to West Yellowstone to haze Buffalo
Knarr	2	12-May-13	KERIN		COW AND CALF				NO COMPLAINTS OR CALLS ABOUT THE COW AND CALF
Kerin	9	13-May-13					1		Asssted DOL Hazed 200+ head off Horse Butte to Baker Hole... West Yellowstone
Smolczynski	3	13-May-13	povah	wyellowstone	bull by povahs horses		1		attempt to haze from ranch. Lost in willows
Knarr	2	13-May-13	KERIN						UPDATE ON HAZE 313 ON BUTTE
Knarr	1	13-May-13	SMOLZ						UPDATE HAZE OP 32 ON SOUTH SIDE
Knarr	1	13-May-13	SHEPPARD						UPDATE ON CURRENT HAZE
Kerin	14	14-May-13					1		Assisted DOL West Yellowstone hazed 80+ head Bison & drive home
Kerin	9	14-May-13					1		Asssted DOL Hazed 70+ head off Red Canyon back to park... West Yellowstone
Smolczynski	11	14-May-13	povah	wyellowstone	bison on South Fork of Madison		1		haze bison to madison river
Knarr	1	14-May-13	KERIN						UPDATE ON HAZING OPS
Knarr	1	14-May-13	SMOLZ						UPDATE ON HAZING OPS
Knarr	1	14-May-13	KNARR						BISON OPS CALL UPDATE AT 1000 HRS. CURRENT STATUS AND PLANS
Kerin	9	15-May-13					1		Assisted DOL Hazed 400+ head off Horse Butte to Baker Hole... West Yellowstone
Smolczynski	12	15-May-13	Horsebutte	wyellowstone	bison on galanis property		1		haze 400 bison to bakershole

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Officer 358	Hours 1108	Date	Landowner or contact	Address	Concern	Public Safety (PS), Hazing (H), Property Damage (PD)			Actions Taken
						PS 53	H 81	PD 11	
Knarr	1	15-May-13	SMOLZ						HAZING 400 BISON OFF BUTTE TO PARK
Knarr	1	15-May-13	MOUNT						REQST. TO HAVE 313 STAY AND HAZE TOMORROW. TALK TO 313 AND HE WILL STAY AND HAZE
Knarr	1	15-May-13	KERIN						CALL TO 313 AND CONFIRM HE CAN STAY TO HAZE .
Kerin	11	16-May-13				1			Assisted DOL in West Yellowstone hazed 100 head Baker Hole to Cougar Meadow... Move 30 head From Cougar Meadow to 7 mile bridge drive home
Smolczynski	8	16-May-13	povah	wyellowstone	bison on South Fork of Madison		1		haze20 bison to bakershole
Knarr	1	16-May-13	SMOLZ						RPT 460 BACK TO PARK ON PREVIOUS DAY. PUSH FROM BAKER HOLE IN W SAME TODAY.
Smolczynski	6	20-May-13	povah	wyellowstone	bison on South Fork of Madison		1		Haze 40 bison to 3 mile
Kerin	2.5	20-May-13							Drive to West Yellowstone to haze Buffalo
Knarr	2x	20-May-13	BRIDGER						BISON OUT REQST. RIDERS STARTING TUE. CALL BACK AND LEFT MESSG. KERIN AND 32 ARE AVAIL.
Knarr	2X	20-May-13	SMOLZ						300-400 OUT MOSTLY ON SO. FORK
Knarr	2X	20-May-13	KERIN						CALL 313 HE WILL GO TO WEST YELL. TUE AND STAY AS LONG AS NEEDED.
Kerin	10.5	21-May-13					1		Assisted DOL in West Yellowstone hazed 200 head South fork to Baker Hole
Smolczynski	6	21-May-13	USFS	wyellowstone	bison on Mad Arm road		1		Haze bison to bakershole
Knarr	1	21-May-13	SMOLZ						250 TO BAKER HOLE
Kerin	11	22-May-13					1		Assisted DOL in West Yellowstone hazed 130+head from Baker Hole to 7 mile bridge
Smolczynski	9	22-May-13	private	wyellowstone	bison On Hwy 287		1		Haze bison to cougar creek in park
Knarr	1	22-May-13	SMOLZ						TAKING BISON IN BAKER HOLE BACK FARTHER INTO PARK
Kerin	9	23-May-13					1		Assisted DOL in West Yellowstone Hazed 150 Head off South Fork to Horse Butte... drive home
Smolczynski	9	23-May-13	USFS	wyellowstone	bison on Mad Arm road		1		Haze bison to Barnes hole in Park
Knarr	2	23-May-13	KERIN						REQST TO GO BACK TO WEST TUE.WEN. THU NEXT WEEK
Knarr	1	23-May-13	MOUNT						REQST. FOR 313 TO RETURN NEXT WEEK
Knarr	1	23-May-13	SHEPPARD						MESSG. TO 31 FOR UPDATE
Smolczynski	10	24-May-13	USFS	wyellowstone	bison on Mad Arm road		1		Haze bison to 7mile in Park
Knarr	2x	24-May-13	MOUNT						CALL TO MOUNT ABOUT HAZING
Knarr	2X	24-May-13	KERIN						BISON HAZING PLAN
Knarr	1	25-May-13	SMOLZ						BISON HAZING PLAN

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Officer 358	Hours 1108	Date	Landowner or contact	Address	Concern	Public Safety (PS), Hazing (H), Property Damage (PD)			Actions Taken
						PS 53	H 81	PD 11	
Knarr	1	25-May-13	KERIN		BISON WERE IN HOPPE'S SHEEP HAVE BEEN HAZED TO PASTURE NEXT TO SHEEP				
Knarr	3	25-May-13	SCOTT						SEND 38 TO GARDINER. HAZE BULLS FARTHER FROM SHEEP PASTURE
Knarr	1	28-May-13	KERIN						HAZING IN WEST
Knarr	1	28-May-13	SMOLZ						HAZING IN WEST
Kerin	14	29-May-13					1		Drive to West Yellowstone Hazed 200+ head off Horse Butte to Baker Hole... drive home
Smolczynski	9	29-May-13	Horsebutte	wyellowstone	bison on galanis property		1		Haze 250 bison to Barnshole in park
Knarr	1	29-May-13	KERIN						HAZE BISON FROM BUTTE TO BAKER HOLE
Knarr	1	29-May-13	SMOLZ						UPDATE ON BISON HAZE FROM BUTTE TO BAKER HOLE
Smolczynski	11	30-May-13	povah	wyellowstone	bison on South Fork of Madison		1		Haze 38 bison from south fork to 7 mile in park
Knarr	2X	30-May-13	KERIN						UPDATE ON BISON HAZE FROM BUTTE TO BAKER HOLE
Knarr	1	30-May-13	GOSSE						311 TALKED TO 32 NO NEED TO HAZE TOMORROW
Smolczynski	6	31-May-13	Horsebutte	wyellowstone	bison on galanis property		1		Haze bison to bakershole
Knarr	1	31-May-13	MOUNT						CALL FROM MOUNT FOR 313 HELP ON MON. TUE
Knarr	1	31-May-13	KERIN						SET UP TO HELP HAZE ON MON. TUE.
Smolczynski	1	1-Jun-13	povah	southfork of denny creek	bison on private property		1		Haze 20 bison to southfork
Kerin	11	3-Jun-13					1		Drive to West Yellowstone assisted DOL hazed 50+ Head from Red Canyon to Maple Creek
Knarr	2	3-Jun-13	GOSSE						CHECK IN FROM BISON HAYS. HAZED OFF 287 TO MARBLE FALLS.
Knarr	1	3-Jun-13	KERIN						CHECK IN FROM BISON HAYS. HAZED OFF 287 TO MARBLE FALLS.
Knarr	2	3-Jun-13	SMOLZ						CHECK IN WITH BISON LOC. WILL HAZE ON TUE. WEN.
Knarr	1	3-Jun-13	MOUNT						CALL TO MOUNT THAT WE WILL HAVE 2 RIDERS TUE. AND WEN.
Kerin	10.5	4-Jun-13					1		Assted DOL Hazed 30+ head Bison Horse Butte to baker Hole
Smolczynski	11	4-Jun-13	USFS	Horse butte	bison on private property		1		Haze 100 bison to Barnshole
Kerin	11.5	5-Jun-13					1		DOL lethally removed 2 bulls off Povah, assted on horses and clean up.
Smolczynski	9	5-Jun-13	povah	southfork of denny creek	2 bulls on southfork			1	shoot and assist field dress 2 bulls
Knarr	1	5-Jun-13	TIERNEY						2 BULLS SHOT ON SOUTH FORK ONE ON PRIVATE ONE ON F.S.
Knarr	1	5-Jun-13	SMOLZ						UPDATE BULLS SHOT
Knarr	1	5-Jun-13	KERIN						UPDATE BULLS SHOT
Knarr	1	6-Jun-13	KERIN						UPDATE ON PREV. DAYS HAZE
Knarr	1	7-Jun-13	SMOLZ						BISON UPDATE, DONE
Knarr	1	10-Jun-13	SMOLZ		POSS. HAZE ON TUE.				DIRECT HIM TO CATCH UP ON CALLS HE AND I HAVE REC'D

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Public Safety (PS), Hazing (H), Property Damage (PD)									
Officer 358	Hours 1108	Date	Landowner or contact	Address	Concern	PS 53	H 81	PD 11	Actions Taken
Knarr	1	10-Jun-13	BRIDGER						REQST. FOR RIDER, REV'D 1700 HRS. TOLD HIM NO ONE AVAIL.FOR TUE. BUT WEN OK IF NEEDED.
Kerin	1	11-Jun-13	Bill Hoppe	Jardine	Bison in with sheep	1	1		Hazed 2 bulls out of pasture fence rails broke in corner by Forest service.
Knarr	1	11-Jun-13	BRIDGER						NEED RIDERS ON WEN. FOR BUTTE BISON
Knarr	1	11-Jun-13	KERIN						KERIN WILL RIDE IN WEST ON WEN.
Knarr	1	11-Jun-13	SMOLZ						SMOLZ WILL RIDE ON WED.
Knarr	1	11-Jun-13	SMOLZ/KERIN						SMOLZ AND CHRIS ABOUT WHAT TIME TO MEET TOMORROW
Knarr	1	11-Jun-13	BRIDGER						MESSG. TO BRIDGER ABOUT WHO IS HAZING TOMORROW
Kerin	12.5	12-Jun-13					1		Assted DOL Hazed 12 Bison West Yellowstone Horse Butte to Baker hole.
Knarr	1	12-Jun-13	SMOLZ						HAZED SOME BACK INTO PARK UP TO 3 PAIR CUT BACK TO BUTTE
Smolczynski	2	14-Jun-13	borash	duck creek road	fencing down, and property damage			1	none, fence damage was not caused by bison
Knarr	1	14-Jun-13	SMOLZ						BISON UPDATE
Smolczynski	1	19-Jun-13	usfs	Horse butte	bison on private property		1		haze aborted , other duties prevailed
Smolczynski	8	20-Jun-13	usfs, galanis	horsebutte and hwy 287	bison on private property		1		failed haze on horsebutte, pushed 2 bulls across duck creek
Knarr	1	20-Jun-13	SMOLZ						3 PAIR LEFT ON BUTTE. UNABLE TO ASSIST IN HAZE WORKIG ON BOAT ACCIDENT
Smolczynski	5	28-Jun-13	povah	southfork ofdenny creek	bison on private property			1	kill and dispose of 4 bull bison
Knarr	4	28-Jun-13	SMOLZ		DOL ENR. TO KILL 4 BULLS AT CHIEF CROWES				DOL REQ. ASST. W/SHOOT. 32 TOLD TO ASST.AFTER SHOOTING IS DONE. DID HELP TRANSPORT TO LANDFILL.
Knarr	2	28-Jun-13	BRIDGER						BRIDGER REQ. ASST. W/BULL. TOLD 32 WILL ASST. AFTER SHOOTING. OK W/THIS
Knarr	1	28-Jun-13	FLOWERS						DISCUSS SITUATION W/BULLS. ASDVICE MINIMUL INVOLVEMENT BY 32
Knarr	2	28-Jun-13	SHEPPARD						DISCUSS SITUATION W/BULLS.AGrees W/FLOWERS ASSESMENT. CALLED AFTER SHOOTING FOR W/UPDATE
Smolczynski	1	31-Dec-13	MT STATE	WYELLOWSTONE	BISON ON HWY	1	1		HAZE BISON FROM HWY 191
Kerin		12/1-12/13							Patrol Gardiner area looking for Bison
Kerin		12/1-12/13							Revive phone calls from hunters regarding bison hunt. 0 bison out of the park in Dec 2012.
Knarr	1		SMOLZ						BISON HAZE W DOL OFF SOUTH FORK
Knarr									Nez Perce warden, 4 bison taken in Cutler meadow area by state and tribal hunters.
Knarr									

APPENDIX D.—STATUS OF GALLATIN NATIONAL FOREST GRAZING ALLOTMENTS³

Table D1.—Status of Gallatin National Forest Grazing Allotments

Allotment Name	Location	Status	Class and Number of Livestock	On-Off Dates	Changes
West of Park					
Watkins Creek	West of Hebgen Lake	Active	51 cow/calf pairs	7/1-9/30	
South Fork	South of Hebgen Lake	Active	19 cow/calf pairs	7/1-9/30	
Basin	South of Hebgen Lake	Active	10 cow/calf pairs	7/21-9/19	administrative use, vacant
Sulphur Springs	S of HebgenLk&Hwy 20	Vacant	10 horses	7/1-9/30	vacant
Wapiti	Taylor Fork	Vacant	160 cow/calf pairs (2 permittees)	7/11-10/10	Permit waived to FS
Cache-Eldridge	Taylor Fork	Vacant	154 cow/calf pairs	7/1-10/15	Permit waived to FS
Red Canyon	North of Horse Butte, North of Hwy 287	Vacant	cow/calf pairs		
Duck Creek	East of Hebgen Lake	Closed	cow/calf pairs		Status changed from vacant to closed
Dry Gulch	NE of Horse Butte, North of Hwy 287	Closed	cow/calf pairs		Status changed from vacant to closed
Horse Butte	East of Hebgen Lake	Closed (2009)	cow/calf pairs		
University	Taylor Fork	Closed	sheep		Status changed from vacant to closed
Sheep Mile	S. of Quake Lake	Active	89 yearlings	6/20-10/20	Non-use in 2013
Two Top	Hebgen Lake	Closed	Used to be sheep		Status changed from vacant to closed
Lionhead	Hebgen Lake	Closed	Used to be sheep		Status changed from vacant to closed
North of Park					
Tom Miner and Ramshorn		Active (combined allotments)	126 cow/calf pairs 134 pvt land permit	7/1-10/15	
Horse Creek and Reeder Creek	Upper Tom Miner	Active (combined allotments)	78 cow/calf pairs 30 horses	7/1-9/30	
Mill Creek and Section 22	Upper Cinnebar and Upper Mulherin	Vacant	36 cow/calf pairs	6/16-10/15	Permit waived to FS
Green Lake		Active	46 cow/calf pairs	6/16-10/15	Change from 2 permittees to 1, permittee waived permit to FS
Wigwam		Active	56 cow/calf pairs	6/16-9/30	
Slip and Slide	East side of Yellowstone River	Active	47 cow/calf pairs, one permit vacant	6/16-10/15	Non - use in 2012
Canyon		Closed	cow/calf pairs		Status changed from vacant to closed
Cottonwood		Vacant	cow/calf pairs		
Lion Creek		Vacant	cow/calf pairs		
Park		Closed	cow/calf pairs		Status changed from vacant to closed
Sentinel Butte		Closed	cow/calf pairs		Status changed from vacant to closed

³ USFS personnel noted that the 2011 IBMP Annual Report lists Horse Butte as vacant; however that allotment was officially closed in November 2009.