

ADAPTIVE MANAGEMENT RECOMMENDATIONS TO MOVE FORWARD WITH (8 DECEMBER 2010)

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1	Action 1.1a, Metric 2: Revise this metric to read “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 (Lead = MDOL/NPS).” Note: NPS recommendation
3	Action 1.1b, Metric 3: Revise this metric to read “Annually document the number of bison in the north boundary management area and the number and type of management activities needed to manage bison distribution (Lead = MDOL/MFWP/NPS).” Note: NPS recommendation
4	Action 1.1b, 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 YELL. Consider the findings of analyses evaluating these relationships (Lead = NPS).” Note: NPS recommendation
8	Action 1.3b, Metric 2: Revise this metric to read “Annually document the numbers and types of actions taken to provide conflict-free habitat for bison (Lead = MFWP with support from MDOL).” Note: Just editing a missing word; NPS recommendation
9	Action 1.3b: Add a new metric that reads “Develop new funding source to assist land owners with fencing damage from bison (Lead = All Partners)” Note: GNF/MFWP recommendation
12	Action 1.3d: Add an action that reads “Begin to institute a voluntary compensation program to allow for adaptive livestock turn-on dates on private land beyond May 15.” Add a metric that reads “Number of acres and days made available to bison through the voluntary program.” Note: GNF/MFWP recommendation
13	Action 2.1b, Metric 1: Replace with the following: “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.” Note: NPS recommendation
16	Action 3.1b, Metric 1: Modify the adaptive management recommendation in the 2008-2009 IBMP Annual Report to read as follows: “During 2011-12, complete the NEPA process and reach a Record of Decision to decide whether to proceed with the implementation of remote delivery vaccination of bison in YELL.” Note: NPS recommendation
17	Action 3.1c, Metric 1: Revise this metric to read “By June 15, determine and document the vaccination status of all “at-risk” cattle in or coming into the Hebgen and Gardiner basins (Lead = MDOL/APHIS).” Note: NPS recommendation
19	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). Note: GNF/MFWP recommendation
20	Action 1.1a, Metric 4: Add a recommendation (i.e., Management Response) to the Adaptive Management Plan that reads: “Allow bison to remain on Horse Butte, where there are no cattle, until calving is essentially completed in early June and plot the movement patterns and migration routes (without hazing) of bison with GPS collars.” Note: NPS recommendation

22	Action 1.1b, Metric 2: Revise this metric to read “Annually document the numbers and dates that bison attempt to move north of Yankee Jim Canyon into Tom Miner basin or the Paradise Valley (Lead = MDOL/MFWP).” Note: NPS recommendation
23	Action 1.1c, Metric 1: Replace the adaptive management recommendation in the 2008-2009 IBMP Annual Report for Action 1.1c with the following in the Adaptive Management Plan: “Managers should consider allowing bison to occupy public lands outside the Park where cattle are never present (e.g. Horse Butte peninsula) until most bison calving is completed (late May or early June) to reduce stress on pregnant females and their newborn calves, while still minimizing the risk of brucellosis transmission to cattle.” Note: NPS recommendation
24	Action 1.2b, Metric 3: Revise this metric to read “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 (Lead = MDOL/MFWP).” Note: NPS recommendation
26	<p>Add new Objective 1.5: Recognize tribal treaty rights for hunting bison. Management Action 1.5 a: Allow bison to occupy National Forest System lands within Zone 2 and other areas determined suitable and maximize timing and geographical extents to increase tribal hunt opportunities.</p> <p>Monitoring Metrics:</p> <ul style="list-style-type: none"> • Number of acres and number of days available for tribal hunting. (Lead=USFS, FWP). • Number of bison harvested by tribal hunters. (Lead=Tribes, FWP). <p>Management Action 1.5 b: Coordinate management activities that could potentially impact opportunities for tribal members to exercise their treaty rights. Monitoring Metrics:</p> <ul style="list-style-type: none"> • Tribal leadership involvement in and signatories to Annual Operations Plan. • Number of hazing opportunities while tribal hunts are occurring. (Lead=DOL, Tribes). • 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). <p>Note: GNF/MFWP recommendation</p>
29	Action 2.2b, Metric 1: Replace the adaptive management recommendation in the 2008-2009 IBMP Annual Report with the following: “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. Adjust conservation zones and allow for increased tolerance in some areas to increase state and treaty hunting opportunities in habitat outside YELL. 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.” Note: NPS recommendation
31	Action 3.2a: Add a new metric such as: “Document strategic fencing erected to minimize bison/cattle interaction. The proposed fence near the airport that would decrease bison moving to the South Side of the Madison would fit under this metric.” Note: NPS recommendation

ADAPTIVE MANAGEMENT RECOMMENDATIONS THAT NEED FURTHER DISCUSSION BY TECHNICAL COMMITTEE

5	Action 1.1c: Add a recommendation (i.e., Management Response) to the Adaptive Management Plan that reads: “Evaluate the impacts of proposed interim rules for changes in brucellosis management that would remove state status in lieu of national status on the economic impacts of one or two cattle herds testing positive. Incorporate knowledge gained from review and discussion to applicable actions and metrics in the Adaptive Management Plan (Lead = APHIS).” <u>Note: NPS recommendation</u>
7	Action 1.2a, Metric 2: Add an adaptive management recommendation (i.e., Management response) to the Adaptive Management Plan that reads: “Coordinate with the Montana Department of Transportation to conduct a highway safety review and assess options for reducing vehicle strikes of bison and other wildlife on sections of Highways 191 and 89, including additional warning signs and changes to winter-time speed limits.” Note: NPS recommendation
12	Action 1.3d: Add an action that reads “Begin to institute a voluntary compensation program to allow for adaptive livestock turn-on dates on private land beyond May 15.” Add a metric that reads “Number of acres and days made available to bison through the voluntary program.” Note: GNF/MFWP recommendation
14	Action 2.1c: Replace the adaptive management recommendation in the 2008-2009 IBMP Annual Report with the following: “Initiate research during 2011 to improve understanding of the role and function of Yellowstone bison for providing nutrient redistribution, prey and carrion, and microhabitats for other species.” Note: NPS recommendation
15	Action 2.2c, Metric 5: Add the following adaptive management recommendation: “Complete the state-wide bison management plan, including habitat assessments for bison on public lands in Montana, and issue a report with findings regarding opportunities for the restoration of wild bison.” Note: NPS recommendation

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2	Action 1.1a, Metric 3: Revise metric to read as follows: “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. Plot the migration routes of bison with GPS collars to and from the west management area and evaluate their movement corridors. Use this information to modify or verify the limits set for bison counts at Madison Arm Resort that trigger management responses (Lead = MDOL/NPS).” <u>Note: NPS recommendation</u>
6	Action 1.2a, Metric 1: Revise the adaptive management recommendations in the 2008-2009 IBMP Annual Report to read “Consider additional tolerance for bulls and mixed groups of bison moving north of Duck Creek to habitat in the Cabin Creek Recreation and Wildlife Management Area, the Monument Mountain Unit of the Lee Metcalf Wilderness, and other public lands (e.g., Taylor Fork) further north in the Gallatin mountain range.” <u>Note: NPS recommendation</u>
10	Action 1.3c: Replace the recommendations in the 2008-2009 IBMP Annual Report with “Complete an assessment of suitable bison habitat in the Hebgen and Gardiner basin watersheds and refine zone boundaries based on this assessment. Continue monitoring of National Forest cattle allotments for opportunities to increase spatial separation or temporally available habitat for bison and reduce conflicts with cattle on National Forest system lands. Notify IBMP partners and the public when allotments are under review.” <u>Note: NPS recommendation</u>
11	Action 1.3c: Change action to read “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.” Replace metric with “Annually track changes in number of acres available to bison on National Forest System lands. (Lead = USFS).” <u>Note: GNF/MFWP recommendation</u>
18	Action 3.2a, Metric 2: Add an adaptive management recommendation that reads: “Consider hazing bison from boundaries of areas where there is no tolerance (e.g., former Zone 3) to nearby areas of conflict-free public lands. <u>Note: Per 2006 adjustments to the IBMP; NPS recommendation</u>
21	Action 1.1a: Limit the use of the South side of the Madison between February 15 and April 1 to allow capacity for bison moving from horse Butte and from YNP in April and early May. <u>Note: MDOL recommendation</u>
25	Add new Objective 1.4: Expand opportunities for bison habitat. Management Action 1.4a: Continue assessing other suitable lands for bison distribution. Monitoring Metrics: <ul style="list-style-type: none"> • Identify factors limiting bison distribution and means to address barriers in the Upper Gallatin and Taylor Fork drainage. (Lead=USFS/FWP). • Evaluate options for establishing bison in the upper Gallatin and Taylor Fork drainage (Lead=FWP/USFS). • Evaluate moving Zone 2 line on east side of Yellowstone River north of Gardiner to allow for more tolerance and hunting opportunities. • Identify and prioritize other potential suitable habitat areas for detailed analysis. (Lead=USFS/FWP). • Evaluate opportunities for adjusting Zone 2/Zone 3 boundaries to allow for more tolerance for bison and hunting opportunities. <u>Note: GNF/MFWP recommendation</u>
27	Action 2.1a, Metric 4: Revise to read “Within a range of 2,500 to 4,500 bison, management agencies should prioritize the conservation of bison migration to essential winter range areas within and adjacent to YELL, while actively preventing dispersal and range expansion into areas occupied by cattle via public

	and treaty hunting, hazing bison to habitat, transfers of bison to American Indian tribes, and risk-management actions.” <u>Note: NPS recommendation</u>
28	Action 2.1b, Metric 2: Replace the monitoring metric with the following: “The maintenance of a population abundance that fluctuates between 2,500 and 4,500 bison should conserve genetic diversity, especially if large population fluctuations are infrequent and average population abundance over decades is maintained above 3,000 bison.” <u>Note: NPS recommendation</u>
30	Action 2.2c, Metric 3: Add the following adaptive management recommendation “During 2010-11 and subsequent years, facilitate the transfer of “surplus” Yellowstone bison to quarantine facilities on tribal lands for surveillance and eventual release onto suitable habitat, or to terminal destinations on tribal lands for periodic harvest for food or ceremonial purposes.” <u>Note: NPS recommendation</u>
32	Action 3.2b, Metric 1: Add the following adaptive management recommendation: “Evaluate whether strategic fencing is appropriate on or adjacent to cattle-occupied lands along the Zone 3 boundary south of the Madison Arm of Hebgen Lake.” <u>Note: NPS recommendation</u>
33	Action 3.2c, Metric 1: Add the following adaptive management recommendations: “The IBMP agencies will begin coordinating in early April to compile and update knowledge on bison movements and distribution, snow conditions, vegetation green-up, stream flow in the Madison River, logistical issues (e.g., staff, horse, and helicopter availability, traffic control, visitation and road closures), and cattle turn-on dates and locations. The IBMP agencies will complete an assessment of the expected late-winter scenario by May 1 and concur on tactics for hazing bison back into YELL. While maintaining a focus on brucellosis risk management, haze-back operations could occur earlier than the May 15 benchmark if forage and other conditions at higher elevations in YELL are suitable or later if conditions preclude safe and effective movements of bison to habitats that will hold/sustain them (e.g., adequate snow melt or vegetation green-up). IBMP managers should consider allowing bison to remain on Horse Butte, where no cattle are present, until early June after most calving is completed, and plot the movement patterns and migration routes of bison with GPS collars to determine natural routes and timeframes (without hazing) for bison migration back into the park. As necessary, haze bison near the boundaries of cattle-occupied areas south of the Madison Arm of Hebgen Lake to prevent bison movements into no-tolerance areas. Consider placing the capture facility along the Zone 3 boundary south of the Madison Arm to remove bison that no longer respond to hazing actions.” <u>Note: NPS recommendation</u>
34	New Item requested by MDOL - Action 2.2d, Evaluate new technologies for reducing prevalence of brucellosis in bison population including immunocontraception. Monitoring Metric 1: Conduct literature review and publish analysis of immunocontraception to reduce shedding of B. abortus by Yellowstone bison while reducing the growth of the population that necessitates lethal removals. (NPS and MDOL)