

Summary Report from the Interagency Bison Management Plan Meeting November 28, 2017



First draft presented 14 December 2017 by meeting facilitator Scott Bischke

The following summary report reflects activities at the November 28, 2017 meeting of the Interagency Bison Management Plan (IBMP) Partners, held at the Chico Hot Springs Resort in Pray, MT. This report comes from the flip chart notes of facilitator Scott Bischke¹. The report will be marked *Draft* until formal Partner agreement to making it final before the start of their next meeting. The nine Partner attendees were Ryan Clarke (APHIS), Leonard Gray (CSKT), Ervin Carlson (ITBC), Mike Honeycutt (MBOL), Martin Zaluski (MDOL), Mike Volesky (MFWP), Daniel Wenk (NPS-YNP), Quincy Ellenwood (NPT), and Mary Erickson (USFS-CGNF). In addition to those at the deliberative table, ~25 staff members from across IBMP organizations and ~45 members of the public were present at various times during the day.

Action items identified	2
Agreeing to previous meeting minutes	2
Improve utilization of expanded bison habitat, especially in new West Side tolerance area	3
Bison quarantine and translocation	8
Improving safety, quality of the north side hunt/improving boundary issues	9
Findings of the National Academies of Sciences (NAS) review of brucellosis in wildlife in the Greater Yellowstone Area (GYA)	9
Discussion and preparation for 2017/2018 Winter IBMP Operations Plan	12
Bison harvest planning	12
Partner Winter Operations discussion	17
Process for completing 2017/18 Winter Operations Plan	19
Preparation of the 2017 Annual Report	19
Partner briefings/updates—status of ongoing activities related to Yellowstone bison and brucellosis	19
Administrative items	20
Public comment	20
Abbreviations	23

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Action items identified

Action items identified during this meeting

#	Who	What	By when
1	Scott Bischke	Post the Aug 2017 meeting report to the website as "final"	ASAP
2	Chris Geremia	NPS will provide habitat suitability modeling for outside the Park applying what they have learned from inside the Park. They expect this effort to be completed for the spring IBMP meeting	By the spring IBMP meeting
3a	MFWP, USFS	MFWP committed to inviting landowners from both the west and north sides to meet and share experiences and concerns, likely in a panel setting.	During winter field trip to Taylor Fork or spring IBMP meeting (TBD)
3b		Landowners and NGOs to help organize a panel discussion of landowners—north and west sides—to discuss the issue of living with bison.	
4	Julie Cunningham	Partner agreed upon changes before accepting the Technical Committee charter (please see text of report)	ASAP
5	Technical Committee	Partners address the questions put forward by landowner Daphne White of the Elkhorn Ranch following their Aug 3, 2017 IBMP meeting report (available at http://ibmp.info/Library/20170803/20170803.php). Those responses would come through the Technical Committee and focus on tools available in the IBMP Adaptive Management plan.	At the spring IBMP meeting

Agreeing to previous meeting minutes

The meeting started with introductions of Partners, staff, and all members of the general public in attendance, followed by a short review of IBMP history. Then the facilitator asked if there were any objections or changes to the draft meeting report from the August 2017 meeting, and noted the report has been available in draft for review since shortly after that meeting. No objections were brought forth. Thus the facilitator, per Partner Protocols, is to post the August 2017 meeting notes to IBMP.info as *final* (** action item 1).

The facilitator also reminded Partner of their agreement to include focus on three items that they agreed to as having a good chance for short term success. That agreement, first discussed at their May 2017 meeting and finalized at their August 2017 meeting, can be found at <http://ibmp.info/Library/20170803/20170803.php> (see link titled "Report on increasing IBMP Partner effectiveness"). The three items of focus—1) Improving utilization of expanded bison habitat, especially in new West Side tolerance area, 2) Creating a bison quarantine facility, 3) Improving safety, quality of the north side hunt/improving boundary issues—form the first three sections of this meeting, as reported below.



Figure 1.—Roughly 85 people attended this meeting of the IBMP, including IBMP Partners, staff, and the public.

Improve utilization of expanded bison habitat, especially in new West Side tolerance area

Julie Cunningham provided an update on the creation of a West Side Bison Tolerance Technical Committee. That summary is depicted by the *draft* outline of the Technical Committee’s charter, as shown below:

***DRAFT: West Side Bison Tolerance Technical Committee of the IBMP
Committee Charter
September 2017***

Need

Montana Governor Steve Bullock’s November 2015 decision allows for year-round tolerance of wild bison in areas west of Yellowstone National Park (west side). The Partner agencies of the Interagency Bison Management Plan (IBMP) have identified a need to clarify details about how bison could enter and use available habitat on the west side, and how they would be managed when/if they do arrive.

Purpose

The Charter for the West Side Bison Tolerance Technical Committee (committee) is to present a synthesis of biological, social, and economic information to IBMP partners for use in decision-making regarding bison management on the west side of Yellowstone National Park.

Committee Composition

The initial committee will be composed of one representative from Montana Fish, Wildlife and Parks (MFWP; Julie Cunningham, Bozeman area wildlife biologist), two representatives from the U.S. Forest Service (USFS; Scott Barndt, Ecosystems Staff Officer, and Allison Kolbe, Acting Forest Wildlife Program Manager), and two representatives from Yellowstone National Park (Rick Wallen and Chris Geremia).

The committee may utilize additional expertise as it deems necessary to provide specific input and/or recommendations on a particular subject.

Oversight

The role of sponsor of the committee will be shared between representatives from the USFS and MFWP. For the USFS, co-sponsor will be Custer Gallatin Forest Supervisor Mary Erickson. For MFWP, co-sponsor will be chief of staff Mike Volesky.

The co-sponsors will act as resources, providing policy input and direction to the group's work and serving as decision-makers on matters requiring an official response or action.

Timeframe

The committee will meet as necessary, with a tentative goal of presenting its findings and recommendations at the November 28th IBMP meeting.

Expected Products: Strategy/Roadmap Recommendations

The committee is expected, as best it can within a short timeframe, to critically assess three biological factors related to west side bison:

- 1) Determine suitable habitat for bison, to include summer and winter range.
- 2) Delineate numerical goal(s) for bison relative to year-round or seasonally-present bison considering the ecology of the region and other management considerations.
- 3) Identify possible migration routes from Yellowstone National Park into the west side area. This will include discussion about likely herd composition and seasonality for identified migratory behaviors.

Throughout, the committee will address when/how hunting would be managed, address landowner questions, delineate areas of conflict, all under the purview of the current IBMP adaptive management plan. The written product(s) will provide information to the larger IBMP for policy direction.

Scope of Authority

The committee is granted its authority through the IBMP Partner agencies.

The committee has the authority to:

- Review available data and literature
- Create maps and other products based on habitat and management experience
- Request information from other partners and staff in the IBMP regarding this effort
- Correspond with non-partner groups for input or clarification regarding socio-economic components (i.e., landowner questions as presented in Draft Summary Report from August 3rd IBMP meeting)
- Make initial recommendations for improvement and desired future state for the scope of this effort, with the possibility of more refined recommendations at a later date if desired, given additional time and resources.

The committee does not have authority to grant final approval for any action or recommendations.

Following Julie's presentation, Partners and staff held an open discussion regarding the Technical Committee and its role. Some key points from that discussion follow:

- (1) NPS will provide habitat suitability modeling for outside the Park applying what they have learned from inside the Park. They expect this effort to be completed for the spring IBMP meeting (**** action item 2**).
- (2) Julie said that the Technical Committee recognizes two core areas of needed work:
 - a. Biophysical — including such items as habitat suitability, carrying capacity², and possible bison migration corridors.
 - b. Social/cultural — including such items as getting landowners in the Hebgen and Gardner

² Julie said that for IBMP discussions she would like to replace the use of the term "carrying capacity" with "management objective" as the former generally connotes a closed population and area, whereas this is not such a situation. Also, "management objective" can include far more than a population measure, for example restoring native vegetation or reducing conflict objectives. She said that the Partners could review management objectives set forth for Montana Statewide Elk Management Plan.

Basins to talk, including on such basic ideas as living with bison (e.g., fencing needs, safety), policy questions, and playing out what-if and what is possible, what is not scenarios. MFWP committed to inviting landowners from both the west and north sides to meet share experiences and concerns, likely in a panel setting (** action item 3a; see also **action item 4).

- (3) Julie showed a map of a *proposed* expanded west-side bison hunting district (Figure 2). As of this meeting, the proposed district required approval from the Montana Fish & Wildlife Commission at their December 2017 meeting. If that approval happens, the proposal will then be opened to public comment. Having a hunting district declared allows FWP to open and close seasons in these areas. The proposal does not request or include a change of seasons or permit numbers. If adopted, the newly proposed bison hunting district would begin closed.

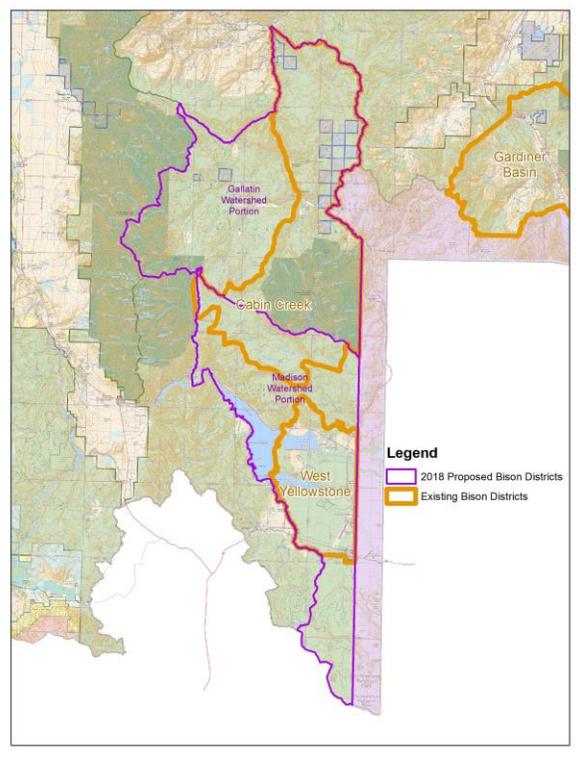


Figure 2.—Existing bison hunting district, and expanded hunting district *proposed* for 2018 by MFWP. As of this meeting, the proposed district was not yet open for public comment pending approval from the Montana Fish & Wildlife Commission.

- (4) MV stated that the current decision is to allow bison in the tolerance zone (per the Governor’s declaration) and to manage those bison as per the *current* IBMP Adaptive Management Plan. He noted that Adaptive Management plan already includes many management tools dealing with traffic and other issues being brought up for bison coming into the Taylor Fork. A big question does exist: do we allow bison to arrive naturally, or do we move them to the Taylor Fork? If the latter, MV recognized that such an operation would require lots of work and would be unlikely to occur soon. We intend to move thoughtfully, he said.

The Lead Partner asked if the Partners would accept the draft Technical Committee charter as final. Partners agreed with just a couple of changes requested (** **action item 4**):

- Change the timeframe of the charter to say that the Technical Committee reports at each public meeting with reports of progress to date.
- Add Josh H as the CGNF representative
- Partners asked for the Technical Committee to be expanded, and provided the following names to be added: NPT—Neil Thagard, CSKT—Steph Gillin, Yakama—LeRoy Adams Jr, MDOL—Jeff Mount, ITBC—Patrick Toomey, CTUIR—Carl Scheeler, and APHIS — Rebecca Counts (note, this request came after the IBMP meeting). It was noted that the Shoshone-Bannock Tribe might also request a member on the Technical Committee.

Under the topic of “What’s next?” for the Technical Committee, the Lead Partner said that along with action items already assigned, that she wanted to ask landowners and NGOs if they could help organize a panel discussion of landowners—north and west sides—to discuss the issue of living with bison (** **action item 3a,b**). During a callout to public input, both representatives from the 320 Ranch and the Sierra Club stated their interest in helping with this request. John Richardson of the 320 Ranch passed along word that Cameron Kelsey of the Nine Quarter Circle Ranch also said that they could help. A panel might convene following the field trip at one of the two ranches.

The Lead Partner also asked that at their spring meeting the Partners address the questions put forward by landowner Daphne White (Elkhorn Ranch; see Aug 3, 2017 IBMP meeting report) (** **action item 5**). Those responses would come through the Technical Committee and focus on tools available in the IBMP Adaptive Management plan.

Finally, the Lead Partner noted that the CGNF had received a copy of a letter from a group of landowners living in the upper Gallatin River drainage to Montana Governor Bullock. She said she would make that letter available for the notes of this meeting. The letter to the Governor is reproduced below:

The Honorable Steve Bullock
Governor of Montana
Office of the Governor
PO Box 200801
Helena MT 59620-0801

November 21, 2017

Dear Governor Bullock,

As residents of the upper Gallatin Canyon we understand the special responsibilities that come with living adjacent to some of Montana's most spectacular forest, wilderness, and Yellowstone National Park. We too know that bison are wild animals and understand their need to migrate out of the confines of Yellowstone National Park. We respect your decision to allow them to naturally move into the Upper Gallatin Canyon should they choose to do so. Today, we write you with our concerns related to the management of naturally migrating bison, and our opposition to the artificial introduction of a herd of bison into the upper Gallatin.

First, we want to state that we are unified in our opposition to the artificial introduction of bison into the Taylor Fork area. Recently at meeting and field trip sponsored by the Interagency Bison Management Plan Partners there was talk of introducing a herd of bison into this area. We are landowners and ranchers in the expanded bison tolerance zone in the Gallatin Canyon and we are uniformly opposed to the introduction of bison to this area by any artificial means including trucking or hazing.

Secondly, when some bison naturally migrate into the upper Gallatin Canyon we have concerns for the safety of our families and the long term viability of our ranches. We ask that you and your agencies work with us to make the migration of bison into the area a success for the bison and safe for the residents.

- Bison like all visitors will travel to this area via the Highway 191 corridor. This highway is heavily used by truckers and tourists, and our families and guests travel this road daily. Bison in this roadway will cause accidents resulting in injuries and deaths to people and the bison. Significant changes to speed limits with meaningful enforcement will be required when bison are present.
- In the past bison have destroyed our fences and other private property and killed livestock. There are many miles of fencing on our private lands and grazing allotments. We do not know what would be required to build fences to keep the bison out and livestock in, but such fences will surely cost more than the current fences and will not be a one-time expense but go on as long as bison are in the area. The cost of fencing for bison will be beyond what we could afford.
- Four of the six ranches in the area are commercial guest ranches that have been in operation in their current locations for the last century. They are dependent on grazing

allotments. We are concerned that the bison will threaten the continued access to area grazing allotments.

- The Taylor Fork area has heavy recreational use with little supervision by the National Forest rangers or the local police. The presence of bison will only exacerbate this problem.
- Taylor Fork is one of the State's premier habitats for native westslope cutthroat trout. A herd of grazing bison, if not heavily managed to keep them out of the riparian area, will severely degrade this valuable fishery.

We will need help from the many agencies of the State of Montana and Yellowstone National Park in making the migration of bison into our area a success for the bison, the residents of the area, and the people of Montana.

Sincerely,

Eva and Duncan Patten, Black Butte Ranch

Kurt and Melissa Puckett, Covered Wagon Ranch

Linda Miller, Jim McGuiness, Daphne White, Elkhorn Ranch

Kim, Kelly, and Kameron Kelsey, Nine Quarter Circle Ranch

John Richardson, Three Twenty Guest Ranch

Sandy Martin, Trappers Cabin Ranch

Bison quarantine and translocation

At the August meeting, DW noted the NPS is making steps to upgrade the Stephens Creek facility into a certified brucellosis quarantine facility, as delineated by MDOL and APHIS. The upgrade is considered a temporary step until a quarantine facility could be built outside the Park. That possibility has been initiated, though pending resolution of the Quarantine EA currently in progress. Work on that EA includes several collaborators: NPS, MDOL, the Fort Peck Tribe, and APHIS.

At this meet DW described a September meeting of NPS, the Fort Peck Tribe, and APHIS that was held at the Stephens Creek facility for discussion of how to move forward on the quarantine process. Since that time, Fort Peck has stepped out of the discussions until the other three groups come to some sort of agreement.

DW further described that NPS and the state of Montana currently have an agreement in principle regarding signing a future Memorandum of Agreement that *could* include using quarantine to transfer bison to tribes. That agreement includes a number of guiding tenets, including such things as using the quarantine protocol defined by APHIS, how agencies would share data, and many more. DW stepped through perhaps ten of the tenets, but asked they not be recorded given that the process is still in its early stage. He said that NPS and the other parties would provide further detail once the MOA is signed and would provide an update at the spring 2018 IBMP meeting.

Improving safety, quality of the north side hunt/improving boundary issues

JW described the outcome of recent activities of the Tribal Hunt Managers, made up of the CSKT, CTUIR, NPT, Yakama, and SBT). He reported that the group has made great progress, in large part due to excellent communication and excellent staff, and that all but the SBT had recently signed a Tribal Hunt Managers MOA. (It was noted that the SBT could still operate under the tenants of the MOA, even if they are not a signee).

JW said the tribes are sovereigns, with treaty hunting rights and that the MOA enhances those rights by keeping tribes and locals safe. LG said one could not overstate that having four tribes come together and make such an agreement should be recognized as a really big deal. JH seconded that thought and added that the group was most focused in two areas: a safer hunt and escapement from the Stephens' Creek facility.

JW said that the MOA includes methods of hunting on the north side of YNP. It includes methods of communication and coordination and answers questions like who, where, when, and how. The MOA is organized into three sections: 1) policy, 2) enforcement, and 3) hunters. JW said that this will be the first year for tribes to hunt under the MOA, and that it is an organic document. As such, he did not want to give a full briefing on many specifics of the MOA—he did mention that the tribes will share an enforcement radio frequency—nor to provide a printout or otherwise make details of the MOA public. The tribes would like to try out operation under their MOA for a year before sharing great details so as not to create expectations that might not work. RW pointed out that the Partners need to all know what is in the MOA so that the MOA's objectives can be incorporated into the IBMP Adaptive Management Plan.

The MOA includes only the tribes for the moment, not the state of Montana. The tribes decided to set it up that way in part because they are not regulated by the state. But they recognize that they always work with the state. MV said that MFWP is really encouraged with the tribes' actions to create an MOA and that MFWP stands ready to be a part of the MOA in the future in whatever manner might work out.

JW also mentioned that all five tribes had a public meeting in Gardner that included media and was a very positive experience. He said the tribes were able to address many concerns, that often the public simply lacked knowledge of treaty rights, hunting process, mandatory hunter education, and so on. He said the tribes are likely to repeat this process in the future.

JW emphasized that for the CTUIR this is part of their homeland that they are returning to. He noted that bison are part of the CTUIR's first foods philosophy, where they consider life and their food supply from mountaintop to the sea and how the tribe seeks to protect those things in between all at once.

JW stressed that the tribes believe they need to be involved in the entire management of bison not just what happens in Beattie Gulch. They want Beattie Gulch to be part of the hunt, but not the sole focus. Instead, they should be involved in bison management around the GYA and in the operation of the Stephens' Creek facility. They would like to better understand the protocols used at the Stephens' Creek facility (e.g., what are the thresholds for actions at the trap?). The tribes believe they can help NPS and NPS can help the tribes.

The Lead Partner provided sincere thanks to the tribes for their work and for their spirit of cooperation and coordination.

Findings of the National Academies of Sciences (NAS) review of brucellosis in wildlife in the Greater Yellowstone Area (GYA)

Dr. Paul Cross, USGS

Dr. Cross, who was a member of the NAS review committee, discussed the committee's findings and some to the discussions that lead to those findings. Paul's full presentation, which is briefly summarized here, can be found on the meeting website at <http://ibmp.info/Library/20171128/20171128.php>.

Paul first reviewed the request to the committee, which was in part to conduct a comprehensive literature review on the prevalence and spread of *Brucella abortus* in the GYA. He noted that the committee was made up of 11 members, having a diverse range of expertise (diagnostics-1, economics-2, ecology-2, immunology and vaccine-3, veterinary-3). The committee's findings were in turn reviewed by a separate group of 13 subject area experts.

Paul noted that the work of the committee was not just for YNP, but instead for the full GYA and included looking at such things as cattle testing protocols, the Designated Surveillance Area, and supplemental feeding.

Paul showed that seroprevalence in elk has increased substantially in geographic extent since the year 2000 (Figure 3).

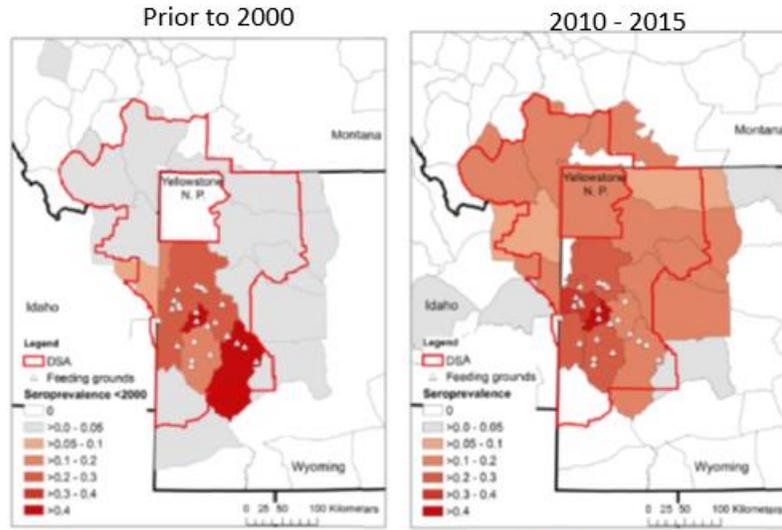


FIGURE 3-3 Maps of seroprevalence in elk using data prior to 2000 (left) and from 2010 to 2015 (right). The designated surveillance area is represented by the red line while the polygons show elk management units. SOURCE: Data provided by the state and federal wildlife agencies of Idaho, Montana, and Wyoming.

Figure 3.—Figure from Dr. Cross’s presentation showing the increase of the seroprevalence of brucellosis in the GYA since 2000.

Dr. Cross presented a subset of the committee’s conclusions and recommendations. The text that follows are those areas Paul chose to highlight, but are not necessarily the full text of the committee’s report for each item (the full NAS report can be found online at <http://www.nap.edu/24750>):

- “Conclusion 1: With elk now viewed as the primary source for new cases of brucellosis in cattle and domestic bison, the committee concludes that brucellosis control efforts in the GYA will need to sharply focus on approaches that reduce transmission from elk to cattle and domestic bison.”
- “Recommendation 1: To address brucellosis in the GYA, federal and state agencies should prioritize efforts on preventing *B. abortus* transmission by elk.”
- The committee did also say that “further reducing the prevalence of brucellosis in bison may be desirable in the future if efforts are successful in reducing prevalence in elk.”

The committee recommended five methods for reducing the prevalence of brucellosis in bison³:

- (1) **Removal of infected bison.**—Population reduction alone is not likely to reduce brucellosis prevalence in bison since transmission is frequency dependent rather than density dependent. For this reason, if reduction of brucellosis prevalence is a goal, removal of bison for population management purposes will need to target brucellosis infected individuals, whenever possible (Conclusion 4).
- (2) **Quarantine and relocation.**—Sufficient evidence is now available to also include separation and quarantine of test negative bison as a management action, allowing for the eventual relocation of GYA bison to other bison herds (including onto tribal lands). However, there are limitations on the effectiveness of this approach toward population reduction since the time required to confirm *Brucella* negative status is prolonged, the number of bison that can be relocated is not large, and relocation sites will reach maximum carrying capacity over time.

³ Note the text for the five bullets here was provided in notes to Dr. Cross’s report; it may be direct quotes from the NAS report.

- (3) **Targeted removal within Yellowstone National Park.**—While this option may not be politically, logistically, socially, or economically feasible, targeted removal of seropositive bison (which would be facilitated by the use of a pen-side assay) or high-risk bison (such as young, pregnant females) within YNP in the winter could reduce the need for large culls of bison populations that move outside YNP. This could also reduce the episodic swings in the bison population and winter emigrations from YNP that lead to large culls in some years. Additionally, any gains in reducing seroprevalence in bison could be negated by exposure of remaining bison to infected elk within YNP and in elk feedgrounds if concurrent efforts to reduce seroprevalence in elk does not occur. This is particularly important for the Jackson bison herd, for which exposure to elk on the National Elk Refuge continues to be a significant risk, and will need to be considered in bison control plans. However, the impact could be assessed using an active adaptive management approach.
- (4) **Bison genetics.**—Test and removal of bison provides a valuable opportunity to preserve genetic material and live cells for future use in establishing brucellosis negative and potentially disease resistant bison through cloning techniques.
- (5) **Contraception.**—Experimental and modeling results in bison suggest that contraception using a gonadotropin releasing hormone immune-contraceptive (i.e., GonaCon™) may help in reducing prevalence of brucellosis. This approach targets high-risk females, preventing pregnancy and thus abortion and birthing events that increase risk of transmission through shedding of high numbers of bacteria. Contraception would need to be used strategically, recognizing that population reduction (an outcome of using contraception) may not be acceptable for bison in all areas.



Figure 4.—Dr. Paul Cross of the USGS updated Partners, staff, and public on the findings of an NAS panel review of brucellosis in the Greater Yellowstone Area. Paul was a member of the NAS panel.

The committee recommended that state and federal agencies employ active adaptive management for reducing the risk of *B. abortus* transmission from elk, but concluded that “no single management approach can independently result in reducing the risk to a level that will prevent *B. abortus* among wildlife and domestic species.” Thus, the committee said, effectively, no silver bullet exists.

The committee also noted that spatial and temporal separation, key management strategies under the IBMP, have worked to stop transmission of brucellosis from bison to cattle, and should be continued.

Dr. Cross concluded his talk by noting several calls to strategic action put forth by the committee. Three of those are provided below:

- Effectiveness is dependent on political will, a respected leader who can guide the process with goals, timelines, measured outcomes, and a sufficient budget. Therefore, participation of leadership at the highest federal (Secretary) and state (Governor) level for initiating and coordinating agency and stakeholder discussions and actions, and in sharing information is critical.
- Establish goals and objectives on an ecosystem-wide basis, with performance based measures and outcome assessment tied to funding decisions.
- Transparent sharing of information across tri-state area is critical.

In the Q&A session Dr. Cross noted that the NAS committee's role was not to promote its conclusions and recommendations, only to make them. He said that typically the findings of an NAS review are used as a basis for interested parties to request changes in an administration's behavior. Additionally, upon questioning Paul noted that as a science panel, the committee was not directed to talk about management activities. Even if the committee had wanted to do so, he noted, one missing or poorly understood piece of key information is when and where cattle are being infected.

Questioning among Partners established that currently there is very little coordination between Montana, Wyoming, and Idaho regarding the management of elk and brucellosis.

One questioner asked how the committee could say that the IBMP was effective at stopping transmission to cattle, when there was no transmission before the IBMP existed. Paul noted that the committee concluded such transmission *is* possible and has now shown to have occurred between elk and cattle when there is no separation. Thus the work of the IBMP is apparently effective.

Other questions included such things as: 1) if brucellosis-infected elk are expanding in geographic scope across the GYA, are we really doing anything to stop brucellosis transmission to cattle by focusing on the zone management of bison? 2) Can we stop brucellosis transmission focusing just on one host species? 3) Would it be better to have a bison quarantine facility outside an area where brucellosis-infected elk live? (In this instance, Dr. Zaluski responded that such facilities are designed to prevent transmission from outside *into* the facility.)

Discussion and preparation for 2017/2018 Winter IBMP Operations Plan

Each year the IBMP Partners review the Winter Operations Plan they collectively operate under for the following year. The Partners begin their deliberations with the previous year's Winter Operations Plan, and then determine what needs to be modified based on adaptive management changes, on the ground changes, or new information. As such, this agenda topic included the opportunity for Partners to discuss six key areas: 1) bison harvest planning, 2) use of the trap during hunting season, 3) transfer of bison to research facilities, 4) transfer of bison to Tribal groups, 5) shipment of bison for processing, and 6) potential use of quarantine. In practice, the Partners considered built their entire discussion of the 2017/18 Winter Ops Plan around the topic of bison harvest planning, as described below.

BISON HARVEST PLANNING

PJ White of NPS began the discussion by providing a talk on bison harvest planning based on NPS population modeling. PJ's full slide presentation follows (it is also available at the meeting website (<http://ibmp.info/Library/20171128/20171128.php>)).

2016-2017 Operations

Summer 2016: ~5,500 bison with 4,000 in north and 1,500 in central Yellowstone

Manage for a decreasing population

Removed ~1,274 bison in winter 2017

- ~486 harvested; 788 culled
- 492 adult females; 209 adult males; 342 calves; 195 juveniles; 36 not recorded
- Removals biased towards females and young

Harvests and Culls of Bison 2016-2017

	MT	CSKT	Nez Perce	ShoBan	CTUR	ITBC	APHIS	Other
Total (1,274)	70	683	101	22	81	246	0	71
Harvest (486; 38%)	70	181	101	22	81	0	0	31
Culled (788; 62%)	0	502	0	0	0	246	0	40

Other includes bison held for quarantine (35), bison confiscated or dispatched [wounded] (18), management deaths and shootings (5), and the Yakama Nation harvest (13).

Harvests and Culls of Bison 2011-2017

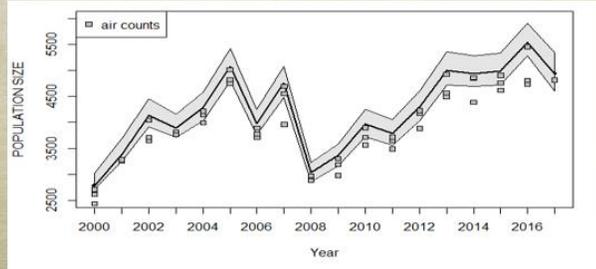
	MT	CSKT	Nez Perce	ShoBan	CTUR	ITBC	APHIS	Other
Total (3,641)	251	1,712	535	61	260	605	120	97
Harvest (50%)	14%	39%	29%	3%	14%	0	0	1%
Culled (50%)	0	57%	0	0	0	34%	7%	2%

MT = Montana public hunt; CSKT = Salish and Kootenai tribes; ShoBan = Shoshone Bannock tribes; CTUR = Umatilla tribes; ITBC = InterTribal Buffalo Council; Other includes the Yakama Nation harvest, bison held for quarantine, and management removals.

Population Count - Summer 2017

4,816 bison after calving (12% decrease from 2016)

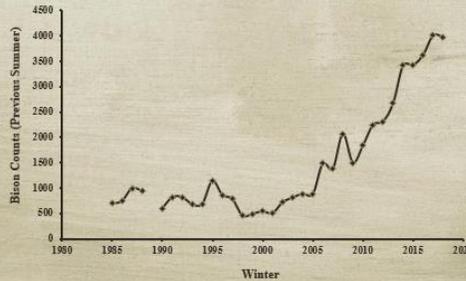
- 3,969 in north Yellowstone (1-2% decrease)
- 847 in central Yellowstone (42-48% decrease)



Bison in Northern Yellowstone

Long-term trend = exponential growth due to high birth, survival, and immigration rates

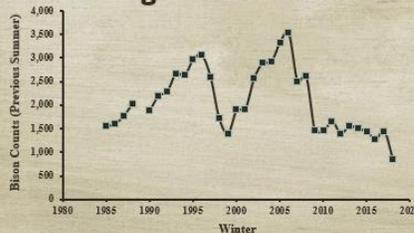
No indication of resource limitation affecting birth and survival rates despite high bison density



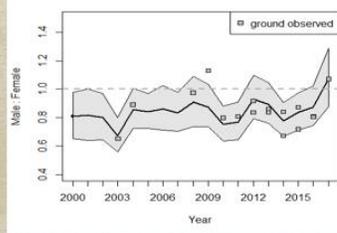
Bison in Central Yellowstone

Long-term trend = substantial decrease due to large removals (2006, 2008, 2017), lower production, and continued dispersal to north

- ~30% of bison migrate north in severe winters; some are harvested or culled; causes of emigration are unknown

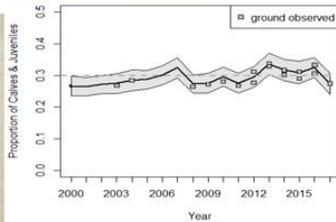


Overall Age and Sex Composition

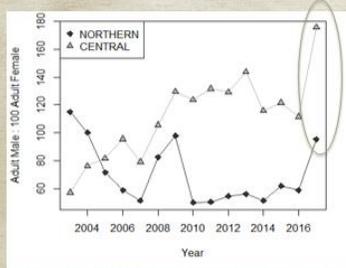


Proportion of males and females are similar and near the desired condition (dotted line) in 2017

Proportion of calves and juveniles (27%) is near the desired condition (30%) in 2017

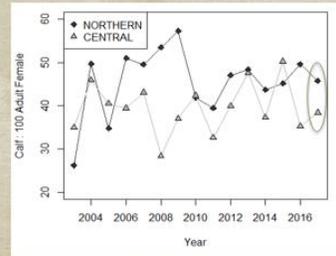


Age and Sex Composition by Herd



Increase in males during 2017 reflects higher removals of females at the boundary

Productivity of central bison is lower than northern bison (long-term average = 43)



Management Issues

- Even though 92% of harvests and culls occurred in or near northern Yellowstone, there were still nearly 4,000 bison in this region after calving
 - Intense grazing in some areas during summer
 - Dispersal from central Yellowstone
 - Since 2004, 26 of 39 (67%) collared adult female bison in central Yellowstone migrated with other female and young bison to northern Yellowstone during winter
 - Twelve of the 26 (46%) females remained there the next summer through breeding

Factors Potentially Influencing Increased Dispersal to North since 2005

High bison densities, intense grazing in some areas, and severe winters (~3,500 central bison in 2005)

Intense hunting and hazing of bison along western boundary to keep them in the park through 2005

Groomed roads for over-snow vehicles facilitate rapid travel

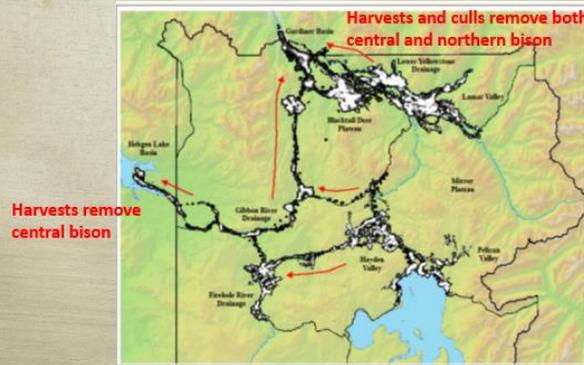
High wolf densities and selection of bison in central Yellowstone during early 2000s

A 50% decrease in numbers of elk spending winter in northern Yellowstone by 2006; 75% decrease by 2013

Bison intermix and remain with groups encountered in northern Yellowstone

Management Issues

Culling at north boundary will continue to remove many central herd bison, especially during severe winters



Females and young disproportionately migrate outside the park during severe winters

Management Issues

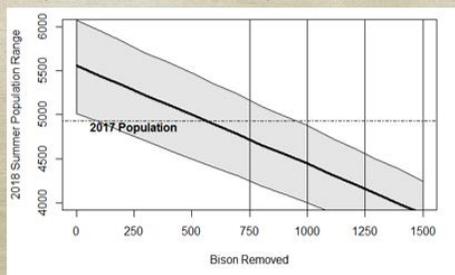
- Culling at north boundary will continue to remove many central herd bison
 - Could lead to further decreases in central bison (<300 adult females in 2017)
 - Genetic lineages (indigenous; reintroduced)
- Lack of a consistent strategy among winters
 - Executive Order/Hunting: 2011-2013, 2016
 - Culling through winter: 2014-2015, 2017
- Hunting is effectively working like hazing did prior to 2011 to keep bison primarily in the park
 - Need to allow bison to distribute across the landscape and pioneer new areas
 - Transition to a conflict resolution approach

2017-2018 Operations

- Manage for a decrease in the number of bison breeding and living in northern Yellowstone
- Allow bison to distribute on landscape and hunt where suitable; limit harvests on west side
- Begin culling bison in north when migration is sufficient to support hunting and culling
- Maintain 250-400 bison north of Mammoth to support harvests, but reduce potential conflicts
- Remove bison in proportion to occurrence (~73% adults, 12% yearlings, 15% calves; 50:50 sex ratio)
- Use telemetry to inform timing and extent of removals (reduce culls of central bison, if possible)

Predicted Outcomes

- Remove few bison → ~5,500 bison after calving
- Remove 600 bison → ~4,900 bison after calving
- Remove 1,000 bison → ~4,400 bison after calving
- Remove 1,400 bison → ~4,000 bison after calving



PARTNER WINTER OPERATIONS DISCUSSION

Following PJ's presentation, the Partners and staff discussed ramifications of what had been presented and how they might or might not be incorporated into the 2017/18 Winter Operations Plan. Highlights of those discussions, lumped by topic, follow:

- (1) **Changing bison demographics.**—NPS counts show a large decrease in the numbers of the Central herd, with commensurate increase in the Northern herd. This change has been a trend for several years and brings with it a number of uncertainties as expressed by Partners and staff, for example: a) Why?; b) Is the increased Northern herd putting the Northern Range at risk of overgrazing?; c) How many bison that are culled after capture at the Stephens' Creek facility, or killed by hunting in the North are actually Central herd animals that might have gone back?; d) How do we tell the Central and Northern herd apart, how many animals do we track and is that number enough to know what is really happening?; e) Should we forcibly move bison back to the Central herd historic range (note: YNP management is to let bison move in the Park wherever and whenever they want)?
- (2) **What is the IBMP population target?**—PJ noted that removal of ~600 animals would keep the bison population at roughly status quo. The Park does not want the Northern herd to grow over 4000 animals due to concerns (e.g., traffic safety, possible large culling) based on past out-migrations over the Northern boundary. Some suggested managing for a decreasing population, as was last year's goal.

- Others lobbied for the status quo. When asked if NPS had a recommended population goal, DW said that the Winter Ops Plan population goal should come from the IBMP Partners collectively.
- (3) **Genetics.**—Are the Northern and Central herds genetically unique? From a genetic diversity standpoint, does it matter if the Central herd numbers decrease? YNP scientists considers the two herds to be one genetic population having two breeding areas. Yet the question comes up repeatedly.
- (4) **Interplay of the Stephens' Creek capture facility and hunt.**—Treaty hunting tribes described frustration at not knowing how the Stephens' Creek facility is run, including how the decision is made to allow bison pass the trap and thus be available for hunting on the northern edge of the Park. Some suggested that the trap be closed, and that only the hunt be employed. As in the past, others noted that it a) would be difficult to remove 600 bison, for example, based on the number of animals that come out of the Park; b) would be impossible to know the number that will come out, which is largely a function of weather (especially snowpack); and c) that in the winter of 2015/16 delaying operation of the trap made it hard to meet population reduction goals due in part to a mild winter *even* when that year had high hunter harvest numbers
- (5) **A record of possible goals for the 2017/18 IBMP Winter Ops Plan, for or reasoning to develop those goals (note: no consensus on any of these):**
- 1) Manage for a stable or decreasing population
 - 2) Recognize the potential for redistribution of bison and play it conservative and try to minimize this redistribution (i.e., strive to maintain numbers in the Central herd)
 - 3) Allow the tribes to be part of the decision-making process for when bison are allowed to bypass (or be released) from the Stephens' Creek facility (the level of escapement is considered key to hunter success)
 - 4) Use both the trap and hunting to decrease bison population, but strive to minimize the former and maximize the latter.
 - 5) taking 600 by hunt would probably require more social tolerance than the locals would give—instead shoot for a goal of 400 animals harvest
 - 6) Manage for a stable population, minimum removal of 600 bison with goals of \geq 400 by hunt and the balance by trap. Shoot for this lowest level (600) bison to minimize the chance of killing more Central herd animals until the dynamics of the Northern and Central herds are better understood
 - 7) Seek to have 250-400 bison north of Mammoth.
 - 8) Set up Winter Ops Plan to better understand why the bison population is shifting from the Central to the Northern herd. Understanding this distribution question is more important this year than decreasing the overall population. Several relevant comments followed:
 - Is the distribution change really a problem? If so, it sounds like it is an issue of range utilization, not genetic diversity.
 - If we lose the Central herd then we lose the opportunity to hunt on the West side.
 - Are we thinking with enough of a long-term outlook? If we stop hunting animals on the West side, then perhaps bison will move into the new West side tolerance zones. Then 10 years from now, once their migration is established, there may be more hunting opportunities on the West side.
 - 9) We cannot allow population of bison to grow, and even keeping stable for multiple years may not be prudent. There is no release valve on the North Side. If the population builds and/or we have another bad winter, we may end up with bison in Paradise Valley which then must by law be killed. That benefits no one on any side of this issue.
 - We seem to find that we have North side issues when the population gets above around 4500 and I don't think there is any particular risk to reducing the population somewhat.
 - 10) Amidst this talk, please remember that the tribes hunt for subsistence, not for population control.
 - 11) Another thought put forward: manage to a stable or decreasing population (remove 600-900 animals); remove via hunting (maximize) and capture (rolling); be conservative (though must take advantage of the times when bison are outside the Park); develop protocols for operation of the

trap that increase hunting opportunities; decrease the West side harvest; increase the use of habitat on both the West and North sides; become better partners with the local communities; consider habitat manipulation

PROCESS FOR COMPLETING 2017/18 WINTER OPERATIONS PLAN

Following the discussions just described, the Partners agreed on working to complete the three steps proposed below, and then complete the IBMP Winter Operations Plan on the following timeline:

Proposal

- Manage to stable or decreasing population (removal of 600-900 animals via hunting and rolling capture)
- Tribes operate under their new MOA
- By Dec 15 NPS, tribes and state have met and developed protocols for coordination between hunt and management of the trap

Timeline

- Nov 10 – 1st draft presented to Partners
- Nov 28 – today's discussion
- By Dec 15 – state, tribes, NPS (leads) have met & created coordination protocol on trap operations and hunting
- Dec 18 – Lead Partner CGNF incorporates this protocol, and proposal above, into 2018 Winter Ops Plan and sends to Partners
- Dec 20 – Electronic signing of 2018 IBMP Winter Ops plan begins
- Dec 31 – Signing complete and 2018 IBMP Winter Ops Plan posted

By Partner Protocols, the IBMP Winter Operations Plan is to be completed, signed by all Partners, and posted to the IBMP website by Dec 31st each year. The facilitator reminded Partners that per those protocols if the Partners can't agree to a new Winter Operations Plan, the last signed Winter Operations Plan remains in effect.

Preparation of the 2017 Annual Report

The facilitator projected the current draft of the 2017 Annual Report on the screen, showing that it lacked input from many Partners, then presented the following timeline for completion:

- By Dec 10 - Final Partner input to CGNF
- By Dec 30 - CGNF completes Annual Report
- By Dec 31 - Facilitator posts to ibmp.info

By Partner Protocols, the IBMP Annual Report is to be completed and posted to the IBMP website by Dec 31st each year. The facilitator reminded Partners that per those protocols, a) the Lead Partner (in this case C-GNF) has final say in any language or reporting disputes, and b) the Annual Report does not require Partner signature.

Partner briefings/updates—status of ongoing activities related to Yellowstone bison and brucellosis

Status of new EIS process—Jennifer Carpenter

Currently the process is on hold, largely due to the quarantine process decision (discussed elsewhere in this meeting and report). When that is resolved, the new EIS is expected to be picked up again, effectively with a new start and a new timeline.

Update on NPS Quarantine Environmental Assessment—Jennifer Carpenter

NPS provided a short update on the status of the quarantine EA earlier in the meeting.

Update on bison coexistence/fencing project—Matt Skoglund

The project has been ongoing for 6 years, and is alive and well.

Update (if any) on proposed management action to vaccinate bison in the western management area—Marty Zaluski

No update.

Update on GonaCon study—Ryan Clarke

This update was not on the original agenda. Ryan provided this update near the start of the meeting start, but it is reported here. The APHIS GonaCon has been terminated, effective essentially immediately.

Update on personnel—Dan Wenk

This update, likewise, was not on the original agenda and occurred elsewhere in the meeting. Dan announced that Tim Reed has returned to YNP, working as a representative to the Superintendent's office on coordinating bison management.

Administrative items

Partners, staff, and public provided a nice round of applause to thank 2017 Lead Partner Mary Erickson and CGNF for their work. The group recognized and welcomed Mike Volesky and MFWP as the lead partner agency for 2018.

Partners set their meeting for 2018 as follows:

- March 1st: Winter tour of the Taylor Fork (details to follow, but included are an invite to meet after the tour from both the Nine Quarter Ranch and/or the 320 Ranch;
- April 25th: West Yellowstone;
- August 1st: Bozeman; and
- November 28th: either Gardner or Chico Hot Springs.

Public comment

The following summaries of public comment are not intended to be complete, but rather to capture key points of each public comment as stated. Upon review, Partners sometimes point out that statements made during the public comment are either incomplete or incorrect.

The facilitator has especially attempted to capture those comments from the public that appeared to be solution-oriented and/or have the potential for inclusion in adaptive management planning, and/or process improvement, and/or use as agenda items for future meetings. These items, as well as other potentially actionable public input, are called out with a "***" in the listings that follow. The "***" callouts are especially added to items that the facilitator does not believe are already under consideration by the Partners (or have been in the past).

Names associated with comments are available from the facilitator. They are not included here, however, in an effort to focus on the comment rather than the speaker. Line breaks in the bullets indicate a new speaker. Public comment was taken just after lunch in reaction to numerous past public comments about public input being of less value at the end of the day.

- I am glad to see we are expanding buffalo habitat to the west side, including the southern and northern Madison Range.
- Buffalo are very popular across the USA. Montana doesn't have a good reputation with treatment of buffalo. I do feel somewhat better after what I've heard today.
- The final remedy for this problem is in northeast Montana, to put bison north and south of the CMR Wildlife Refuge.
- The Nation is looking at us and wants a national conservation area; that is the answer to having wild and free bison without brucellosis.

- ** I want to know what the status of the EIS for bison management is. An NPS website says that the draft EIS would be released for public comment in late 2016 or early 2017, yet we have heard nothing else. The Record of Decision was scheduled for fall 2017. Please update us.
- The Technical Committee sounds like a diet version of the IBMP.
- Those of us in the field know what your management does. We are worried about the Central Herd. The report from the Park says we may stop the west side hunt but how can you then at the same time consign 1200 bison to capture and hunt and slaughter?
- What happened to the 2016/17 bison held in quarantine study that are now only 24. The others are dead.
- [the speaker also handed out a letter to “Interagency Bison Management Plan Decision-Makers” and dated 11/28/17. A few points from that letter, paraphrased, follow:
 - The Central herd is declining due to management actions.
 - We support stopping hunting of the Central herd as a first step, stopping hazing as a second step.
 - We don’t know which animals are from which herd. So it is irresponsible to continue capture for slaughter operations.
 - The public demands a cease fire, a moratorium on capture, and more habitat for buffalo to roam free, including throughout Montana.
- I have heard the word “allow” used many times in this meeting. These animals were around long before any agency. They do not need us to “allow” them to do anything.
- We can’t control the wild; the wild is here to do what it pleases.
- Our group, based in Gardner, is made up entirely of volunteers. We address lots of issues (many named) including the bison issue.
- Safety of the hunt is our #1 concern.
- We would like to see more live bison leave YNP to establish conservation herds elsewhere.
- The people of Gardner live where all of the north side activities are occurring.
- We recognize Beattie Gulch as a hotspot, and note that the Jardine Road is likewise a hotspot.
- **If there is no habitat, perhaps there should be no hunt.
- We appreciate what has been expressed here today. We really appreciate the tribes’ efforts toward a safer hunt and for having a meeting in Gardner to improve communications with locals.
- ** Our group would like to facilitate a future meeting.
- I am a full-time writer. We need to have more than 2-4 min at these meetings to express ourselves.
- ** I would like to request two new Partners at the table: 1) one from a conservation group, and 2) an unbiased scientist.
- What we are missing is discussion about how bison should live.
- The transfer of brucellosis to cattle come from elk.
- The economic hurt of bison to the cattle industry has been overstated. Also, even with the transfer of brucellosis from elk to cattle the cattle industry thrives (provides some figures on Montana cattle industry income).
- ** Brucellosis is not the issue; shared grass is the issue.
- I’d like to congratulate the IBMP on killing more bison than anyone. This job should include keeping bison viable for the future...so don’t say you care about the future of bison.

** Final **

- I demand that we know what herd bison come from—Northern or Central—before we kill them.
- You say let's cart bison up to the Taylor Fork. We've had some there before. Like elk bison don't have a hospitable ecosystem there in the winter. There is no food and they have to go elsewhere.
- No one wants a quarantine facility in YNP. What, are we next going to have an open petting zoo next? Might as well because you are desecrating our last wild bison.

- I am part of the group of Upper Gallatin drainage landowners.
- **We invite folks to the Taylor Fork in February. We do want people to see that there can be 3-5 foot drifts there in the winter. The only thing there in the winter now is snowmobilers, wolves, and moose.
- Cattle people, now horse people, move their stock to lower elevations during winter. There is no nutrition, no forage up there for the animals in winter.
- If elk are at carrying capacity already, sure seems like they and the landscape will be hurt by the addition of bison.
- The Upper Gallatin landowner group is not opposed to bison in the area but we are opposed to forcefully relocating them there.
- We leave it up to the group to decide when to come visit. < facilitator's notes: a) speaker provided name and phone # for later contact along with an invitation to use their ranch facilities for a meeting after a tour of the Taylor Fork; b) Partners later in the meeting set a date of Mar 1 as the potential for a winter Taylor Fork tour. >

- I am also part of the Upper Gallatin landowner group and you are also welcome to come up to my house.
- I am willing to admit I want to keep it to myself up there. If we make changes, we need to look at what those changes will do.
- ** I want an EA associated with bison coming into the Taylor Fork, especially regarding traffic.
- When your son or your daughter is in an accident with a bison, who will we look at or go to?
- There is already issue in the Taylor Fork with lack of moose, because of wolves. Things are not in balance.
- I appreciate the tribes' successes described here today. That success resulted from good communication. It is the same with landowners.

- Thanks for the Technical Committee work to date.
- Our group agrees with the NAS report in that it is time to relook at brucellosis in the GYA. However, we are concerned about the report findings placing sharp focus on elk. We don't believe that brucellosis management should come at the expense of native wildlife, be it bison or elk.
- We should not be treating bison like domestic animals. We don't want bison to go down the same path that bison have. The solutions here must be livestock industry focused and address policies and actions that livestock managers can take, not wildlife.

*** Meeting adjourned ***

Abbreviations

- AJ—Andrea Jones
- AM—Adaptive management
- APHIS—Animal and Plant Health Inspection Service
- BB—Brooklyn Baptiste
- BFC—Buffalo Field Campaign
- CGNF—Custer Gallatin National Forest
- CS—Carl Scheeler
- CSKT—Confederated Salish Kootenai Tribes
- CTUIR—Confederated Tribes of the Umatilla Indian Reservation
- CWG—Citizens’ Working Group
- DH—Don Herriot
- DSA—Designated Surveillance Zone
- DW—Dan Wenk
- EA—Environmental Assessment
- EC—Ervin Carlson
- EH—Eric Holt
- GAO—Government Accountability Office
- GNF—Gallatin National Forest
- GW—Germaine White
- GWA—Gallatin Wildlife Association
- GYA—Greater Yellowstone Area
- ITBC—Inter Tribal Buffalo Council
- JC—Jennifer Carpenter
- JH—John Harrison
- JW—Jeremy Wolf
- LG—Leonard Gray
- LW—Leander Watson
- MBOL—Montana Board of Livestock
- MD—Marna Daley
- MDOL—Montana Department of Livestock
- MDOT—Montana Department of Transportation
- ME—Mary Erickson
- MEPA—Montana Environmental Policy Act
- MFWP—Montana Fish Wildlife and Parks
- MH—Mike Honeycutt
- MOA—Memorandum of Agreement
- MOU—Memorandum of Understanding
- MR—Majel Russell
- MSGA—Montana Stockgrowers’ Association
- MSU—Montana State University
- MV—Mike Volesky
- MZ—Marty Zaluski
- NAS—National Academy of Sciences
- NEPA—National Environmental Policy Act
- NGO—Non-governmental organizations
- NP—Nez Perce
- NPS—National Park Service
- NPT—Nez Perce Tribe
- NPTEC—Nez Perce Tribal Executive Committee
- NRC—National Research Council
- NRDC—Natural Resources Defense Council
- NT—Neil Thagard
- Park—Yellowstone National Park
- PIOs—Public Information Officers
- PJ—PJ White
- QE—Quincy Ellenwood
- RC—Ryan Clarke
- ROD—Record of Decision
- RF—Rebecca Frye
- RFP—Request for proposals
- RT—Rob Tierney
- RTR—Royal Teton Ranch
- RW—Rick Wallen
- SB—Scott Bischke
- SEIS—Supplemental EIS
- SG—Stephanie Gillin
- SK—Salish Kootenai
- SS—Sam Sheppard
- TM—Tom McDonald
- USFWS—US Fish and Wildlife Service
- USGS—US Geological Survey
- WMA—state of MT wildlife management areas
- YELL—Yellowstone National Park
- YNP—Yellowstone National Park