DATE: February 14, 2012
TO: The Interagency Bison Management Plan (IBMP) Partners
FROM: Citizens' Working Group (CWG) on Yellowstone Bison
Re: CWG responses to Partners' clarifying questions

On Feb 13th the CWG met to consider our responses to the IBMP Partners' "Clarifying Questions" to our recommendations, seeking consensus where possible. Our responses to the Partners' questions are provided on the following pages, though we welcome the ongoing discussion of details, disagreement, and evolving understanding that will necessarily continue.

For several of the Partners' clarifying questions we could not come to a consensus answer in the time available. **The CWG wishes to emphasize that its original consensus recommendations still stand.**

We recognize that

- the Partner questions come in response to our recommendations to them as presented at the Nov30/Dec1 2011 IBMP Partners meeting in Chico Hot Springs;
- that the questions were developed by the IBMP subcommittees associated with the topic areas identified by the CWG: brucellosis risk reduction, bison population management, and habitat effectiveness/habitat expansion;
- that upon the review of CWG responses herein, the IBMP subcommittees will complete the formulation of their responses to the CWG recommendations; and that
- the subcommittees will present their responses to the CWG recommendations at the IBMP/CWG meeting scheduled for February 24, 2012 in Bozeman.

The format for this document is a verbatim reproduction of CWG recommendations (not the full CWG recommendation report presented at the Nov30/Dec1 meeting). Partner questions are highlighted; CWG responses to each to the 34 Partner questions follow directly after the question. (Note: we left the CWG responses in large text as this may be helpful in a group meeting for projection purposes, as we did.)

CWG responses were created on-the-fly with no post-meeting editing. We apologize for any spelling or grammatical inconsistencies or errors.

Finally, we note that we have included an addendum to this document that reflects a closing discussion we had at the February 13th CWG meeting.

BRUCELLOSIS RISK REDUCTION

1. **Reduce risk of transmission of brucellosis from wildlife to livestock by improving implementation of currently known livestock vaccine protocols, and through further research and refinement of livestock vaccination.**

**Question A(1): How does the CWG suggest vaccination be used by livestock producers to reduce the risk of brucellosis transmission from wildlife to cattle?

CWG: Improve implementation of current DSA vaccination protocol, recognize that RB 51 is not the cure all, research for a more effective vaccine, especially one that prevents livestock from being infected by *Brucella abortus.*

**Question B(2): Does the CWG feel the current risk management plan can be effective over the long term to minimize the risk of brucellosis transmission?

CWG: Not in the long term. The current risk management plan is not holistic enough and doesn't take into account the risk of transmission from elk. Although there has been no transmission from bison to cattle, there has been transmission from elk. Both transmissions can best be prevented by livestock management. If this question refers to the current risk management plan that the IBMP is already doing, reducing risk of transmission from bison to cattle, then it doesn't take into account the risk from elk and only addresses disease, rather than both goals of the IBMP.

**Question C(3): What are the CWG's suggestions for decreasing sero-prevalence in bison?

CWG: It would be helpful for the IBMP partners to explain what benefits/outcomes/costs ($ or ecological) they see to the reduction of sero-prevalence. To the extent that sound wildlife management practices outside the park help reduce brucellosis prevalence, we support that goal.

The CWG did not reach consensus on whether interventionist medicine is appropriate for wildlife. Please see CWG recommendation Risk Reduction, #8.

**Question D(4): Where does the current implementation of livestock vaccination seem to be lacking?

CWG: See A(1) and B(2)

2. **Work with livestock industry to work toward adoption of mandatory statewide Official Calfhood Vaccination (OCV).**

**Question A(5): Calfhood vaccination is mandatory in the entirety of Beaverhead, Madison, Gallatin and Park Counties. Since the range of brucellosis infected wildlife is believed to be entirely within these counties, what does the CWG see as the benefits of statewide brucellosis vaccination of livestock (in areas where the risk of brucellosis transmission from wildlife is believed to be zero)?

CWG: We acknowledge that in much of the State, the risk of brucellosis transmission is believed to be zero, and we hope that continues. The rationale for nevertheless urging Statewide OCV is as follows: OCV is a relatively cheap insurance policy to guard against those anomalous situations that could cause new risk in the future. This could include the presence of infected elk outside the current DSA boundary, or it could include an unusual occurrence of illegal transport of untested cattle to locations outside the GYA. Adoption of statewide OCV, in light of those remote but genuine possibilities, is thus both a symbolic and practical acknowledgement by Montana producers that "we are in this together". There is no question that the rancher residents of the DSA bear by far the largest burden of practical hassles created by the DSA risk management protocols, but others can do their small part to ensure that those considerable efforts are not in vain. Mandatory statewide OCV would also help to remove some marketing stigma that exists outside Montana regarding Montana cattle because of their proximity to the Yellowstone brucellosis reservoir.

Lobby to modify the Select Agent List (Homeland Security) to enable improved livestock or other vaccine research on *Brucella abortus.*

**Question A(6): Who should initiate and lobby?

CWG: The CWG recommends that the partners engage the Montana, Wyoming and Idaho Congressional delegations to request removal of *brucella abortus* from the list by Homeland Security. We recommend the State Veterinarians from each state put together a fact sheet about *brucella abortus* to help this effort. Livestock industry, wildlife and public health interests should promote this effort as a unified body.

3. **Strongly encourage continued funding and research to develop a practical test on live animals to distinguish between infected and resistant animals. Given the epidemiological importance of building 'herd immunity,' it is important to develop the tools to allow us to stop managing animals as if seropositive is equivalent to 'infectious.'**

**Question A(7): Does the CWG support vaccination and selective removal of potentially infectious bison to increase herd immunity?

CWG: The CWG did not reach consensus on this. Refer to C(3).

**Question B(8): Does the CWG support efforts to reduce brucellosis prevalence in Yellowstone bison regardless of whether the agencies can eradicate the disease from the population?

CWG: See C(3)

4. **Provide a clearinghouse and other opportunities to gather and report on research related to *Brucella abortus* and management tools from various research institutions to present to the public annually.**

**Question A(9): Would a website that provides access to reports and peer reviewed publications on brucellosis address this recommendation?

CWG: Yes. We recommend that the IBMP partners work in collaboration with USGS to ensure that any IBMP info stays up-to-date on Brucellosis in the Greater Yellowstone – Paul Cross, https://www.gyebrucellosis.net/index.php which has been started. We recommend that this be kept current. Please start an e-mail list or RSS feed to alert interested parties when new information becomes available

5. **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).**

**Question A(10): What specific role does the CWG see the IBMP partners playing in these suggestions (e.g. use of dogs)?

CWG: The partners should be the leaders in finding creative (e.g. talk to animal behaviorist to learn better methods, create a training program for volunteers) and direct solutions to conflicts where they occur. Consider setting up a grant program (potentially reapportioning current funding) with a review committee to fund these efforts. The CWG can work with the IBMP partners to explore financial and administrative (database of projects, education, contacts, etc.) mechanisms for this process.

6. **Reduce artificial concentrations of animals (elk or bison) that may be exacerbating transmission. This principle applies to a variety of locations, and will require a variety of implementation strategies (e.g. at Stephens Creek where bison are intermittently confined; on private lands with restricted hunting where elk congregate; bison crowding in/near the Park; Wyoming feed grounds).**

**Question A(11): Does the CWG feel there are appropriate uses for bison capture facilities in the northern and western management areas? If so, what would be the appropriate use for these facilities and are they located in the appropriate locations?

CWG: We have not reached consensus on uses or presence of capture facilities other than what is implicit in Population Management recommendations 7-10.

**Question B(12): What alternatives does the CWG propose to capture and holding animals?

CWG: More habitat outside the park coupled with our recommendations Population Management #3 & 6.

7. **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.**

**Question A(13): Does the CWG recommend a different method than vaccination to reduce brucellosis infection and increase herd immunity?

CWG: No, see next answer.

**Question B(14): Does the CWG support bison vaccination in general?

CWG: We do not have consensus on vaccination of wild bison.

8. **Education – to be addressed by the education group.**
9. **Advocate for completion of a Statewide Bison Management Plan. This is an overarching and persistent theme within the CWG. It is necessary not only as part of population management and habitat planning, but is also a sensible step toward developing risk management that is consistent with what we know about both bison and elk, in the interest of both livestock producers and wildlife advocates.**

POPULATION MANAGEMENT

1. **Modify the Interagency Bison Management Plan Zones 1, 2, and 3 with an eye to finding better habitat solutions particularly in light of changes that have occurred since zones were designated in 2000. Identify habitat that can alleviate population pressure, including available public and private lands, and potential habitat acquisition as well as potential funding sources.**
2. **Strive to manage bison as wildlife, and complete, implement, and support a Montana Fish, Wildlife and Parks management plan that includes setting bison population objectives and hunting strategies as a priority population management tool.**
3. **Make hunting a bigger component of bison management and consider different seasons or other opportunities to increase the impact of hunting. 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. A late-winter hunt for yearlings only should be tested for hunter interest and public acceptance. "Depredation" hunts should be available throughout the year and used to manage bison distribution. Other means of population control should include fencing bison out of areas where they are not welcome, and using fire, fertilizers or other habitat management to attract bison to areas where they are welcome. Lethal removal by agency personnel should be a last resort.**

**Question A(15): By late winter "yearlings only" hunt, does this recommendation refer to animals that were born the previous spring or animals that were yearlings the previous spring, or both?

CWG: Test both and proceed according to hunter interest and public acceptance, including that of tribes.

**Question B(16): Are you asking us to consider reducing or eliminating the need to haze all the bison back in to the park in the spring and initiate procedures to manage distribution throughout the summer months also (to avoid bison overlap with occupied cattle habitat)?

CWG: See Population Management recommendation #16.

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.**
5. **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:**

    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.

**Question A(17): The recommendation asks us to agree on "management tools, such as…" then lists criteria for determining target population range with no management tools specified. Do you want us to address management tools for how we will meet these criteria, or is the intention of the recommendation to establish criteria for determining target populations?

CWG: Both. The criteria list is not exhaustive.

6. **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,

    b. Moving them to nearby appropriate available lands,

    c. Translocation from the Yellowstone area (capture, quarantine, transport and release), and

    d. Lethal removal by managing agencies.

**Question A(18): Are these the management tools referred to in recommendation #5 above, and do you intend for these tools to be considered in the context of the criteria listed above?

CWG: No. These tools may be applicable to #5 but were intended to refer to #6. Suggested management tools are referred to throughout the document, not just in this recommendation.

7. **Quarantine should be economically justified in comparison with other means of producing *Brucella*-free Yellowstone bison for conservation purposes.**

**Question A(19): There are alternate methods of achieving *Brucella* free Yellowstone bison, for example embryo transfer (ET), which would be significantly less expensive than quarantine facilities. However, ET does not address the bison abundance issue (by not removing bison from park population). Does the CWG prefer low-cost technologies such as ET over quarantine? Are there other values aside from cost that the CWG would consider important to consider?

CWG: In addition to cost-effectiveness, other primary values to consider include: humane treatment of wildlife, minimally intrusive methods, and preserving wildness. Another option for producing brucella-free calves would be natural breeding of existing (2012) brucellosis-free Yellowstone bison (e.g. those that have already gone through quarantine). CWG strongly recommends against embryo transfer as a management technique for wild bison.

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.**

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.**

**Question A(20): Does the CWG support moving bison outside of Montana?

CWG: Yes, but see this and other recommendations regarding management of these bison (e.g. bison managed as public/tribal wildlife). The CWG focused most of its translocation discussions on Montana, largely because we agreed at the outset that this should be a priority. The CWG does not preclude the possibility of transferring bison elsewhere, particularly to other public and tribal lands.

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**.

Question A(21): Does this mean **free roaming sero-positive bison outside the Hebgen/Gardiner basins?

CWG: It could mean free-roaming untested bison are allowed outside the Hebgen & Gardiner basins, within the DSA, without increasing risk of transmission to livestock.

**Question B(22): Please clarify the relationship of this recommendation to the Habitat recommendation 2d: "Upper Gallatin/Taylor Fork/Cabin Creek/Porcupine/Buffalo Horn Creek, … i. Begin a public process to evaluate opportunities for reintroduction and management of bison in this area, including within Yellowstone National Park."

CWG: There are areas within the DSA that should be available to untested free-roaming bison, and there are areas that should not be available to untested free-roaming bison. The Taylor Fork/ Upper Gallatin/ Cabin Creek/ Porcupine/ Buffalo Horn Creek area is in the former category (i.e. should be available). Recommendations regarding contingency plans for bison moving beyond this area would apply.

We don't think it makes sense to move quarantined, brucellosis-free bison within the DSA.

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.**
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.**
13. **Develop and work with the livestock industry to implement an effective cattle vaccine and protocol to reduce the risk of transmission and make bison presence/translocation more acceptable. Support/secure funding for ongoing vaccine research.**
14. **Lobby for removing the significant barriers that exist for *Brucella abortus* research because of the select agent listing.**
15. **Develop and implement a strong, factual education component so an informed public is involved in the discussions.**

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.**

**Question A(23): Is this limited to Horse Butte, as laid out in the Habitat recommendations, or are you asking for additional areas to be considered?

CWG: No. And yes.

HABITAT EFFECTIVENESS/HABITAT EXPANSION

1. **Identify public lands that could/should be open to bison year-round in accordance with state and federal law.**

**Question A(24): Is this a standalone recommendation? Should we consider this with the other recommendations?

CWG: This is a broad, stand-alone recommendation, which should be considered along with the other more specific recommendations. We support the IBMP habitat sub-committee continuing to evaluate other potential habitat areas not specifically included in these recommendations.

2. **Systematically identify suitable, available habitat outside Yellowstone National Park in the Greater Yellowstone Area (i.e., Federal, State and Private lands)**

**Question A(25): What is specifically meant by "suitable" and "available"?

CWG: By suitable and available, we mean:

- **Biologically/ ecologically viable habitat that meets needs of bison for at least part of the year.**
- **Habitat bison would use to fulfill any of their seasonal habitat or migratory requirements.**
- **Public or private lands which can be used by bison within the context of current laws, regulations, landowner acceptance on private lands, and agency**

mandates on public lands.

- **This may necessitate an inventory of easements for wildlife in relevant areas, and an evaluation of potential acquisition opportunities.**

3. 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.

**Question A(26): What is meant by the CWG's use of the term "Flats"? Is this the entire land from Zone 3 to Park Boundary north of Hwy 20 and south of Madison Arm, or just the topographically flat area around West Yellowstone?

CWG: The "Flats" refer more or less to the land bounded on the north by the Madison Arm of Hebgen Reservoir, on the east by the boundary of YNP, on the south by US 20, and on the west by Denny Creek/South Fork Madison River.

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.

**Question A(27): Is the suggestion of the CWG that the IBMP Partners take this on as a task? Are there conflicts with privacy and courtesy issues? Does the CWG feel this mapping should be public information?

CWG: Yes, the IBMP partners should take it on. This should be done in a manner that is as sensitive as possible to privacy concerns. But if public resources are used on private property, it should be public information.

BFC has already begun this and is willing to share the information they have gathered. FWP has done this in the Gardiner basin already.

iii. By the end of 2013, implement adequate fencing or acceptable alternatives.

**Question A(28): What geographic area is embedded in this recommendation?

CWG: Hebgen Basin – see above (Habitat recommendations #2 and #3).

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.

ii. By the end of 2013, implement adequate fencing or acceptable alternatives.

iii. Following the interview process and implementation of fencing/alternative strategies, consider designating the Gardiner Basin year-round habitat using an adequate public process.

**Question A(29): What suggestions would the CWG have for segregating livestock and bison under a yearlong scenario (i.e. on national forest allotments that are currently stocked)?

CWG: We support the types of management options presented in the Forest Service EA for the Watkins Creek and South Fork allotments, such as: adjusting turn-on dates, livestock class, etc. We recommend continuing to work with landowners in Gardiner Basin who have cattle in the basin year-round. There are no year-round cattle allotments that bison would also use year-round.

c. Beyond the Gardiner Basin

i. Based on a minimum of two years of bison experience in the Gardiner Basin, and

ii. Using adequate public process, consider allowing bison to roam on Dome Mountain Ranch, Dome Mountain Wildlife Management Area and surrounding lands with landowner concurrence.

**Question A(30): What is meant by landowner concurrence?

CWG: Landowner concurrence means landowners (based on their individual preferences and concerns) agree that their land is available as bison habitat.

**Question B(31): What is meant by surrounding lands?

CWG: This means any adjacent lands with landowner concurrence (see above).

**Question C(32): Is there a geographic area envisioned?

CWG: The area identified in the public process discussed above.

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.

**Question A(33): Does reintroduction include transporting and releasing or just a tolerance for bison if they naturally move there?

CWG: Both options could be considered in the public process. Other options to encourage migration could include: scent marking, habitat enhancement/ modification, and hazing (loose herding), etc.

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.

**Question A(34): What specific plans are being referred to above?

CWG: Any plans or decisions that would inhibit implementation of the recommendations in this document.

Point of clarification: this recommendation is not meant to refer exclusively to the Taylor Fork, etc., but rather to the entire habitat section.

e. Additional Habitat Areas

i. Immediately initiate and complete by the end of 2013 the statewide bison management plan to restore wild bison to additional biologically suitable, socially acceptable areas.

Addendum report on CWG closing discussion

Overview from the meeting facilitator[1]

The CWG closed its Feb13 meeting with a ~45-min discussion centered on some broad thinking about the future of the bison/livestock issue and current paradigms. The CWG would like the Partners to be aware of this discussion, and to recognize that it is at a discussion-in-progress stage, not a decision or recommendation stage. The discussion had its genesis in the seven Partner clarifying questions that the CWG could not reach consensus on, or could only reach limited consensus on, during the time available: #s 3,7,8,11,12,13,14.

The discussion was largely directed at seroprevalence and two potential long term solutions to greatly reducing risk of brucellosis transmission from bison to cattle: natural selection and vaccination. The discussion **does not** negate the CWG recommendations on vaccination.

CWG Discussion

Several seemingly disparate questions in the Partners' questions list ultimately all relate back to one area of contention: "Is there a real, long-term benefit of active intervention to reduce seroprevalence for either ranchers or wildlife"? Our answers to the Partners' questions note this relationship accordingly, without resolving it.

Questions abound: Suppose we can achieve considerable seroprevalence reduction in bison by some aggressive suite of tools (capture / test / slaughter / immunecontraception / wildlife vaccination, and so forth). How will it be maintained? How will reinfection via elk be mitigated or prevented? Are the costs justified? How does it affect the long-term course of herd immunity? How does it affect the long-term marketing and logistical burden on ranch operators?

To answer these questions, we must challenge the premise of much public discourse, veterinary advice, legislative activity, rancher concern, and many of the Partners' questions, that premise being "Seroprevalence is bad; therefore it would be good to reduce it". We believe it is in the best interests of bison, elk, cattle, ranchers, and taxpayers to rigorously examine that assumption and its relationship to the stated IBMP goal of maintaining a wild bison population. This rigorous examination should be done in the context of further research illuminating the relationship between seroprevalence, infection, and immunity. Each interest group will approach this examination differently, but the exercise may be instructive to all.

[1] Scott Bischke; scott@emountainworks.com

Possible long-term solutions to the bison/livestock issue that deserve more review and emphasis by the Partners include

1. ***Allowing the disease to run its course through natural selection in wildlife.—*** Reducing seroprevalence makes bison habitat expansion more palatable for the livestock industry. Yet we should also evaluate the implications of adhering to our consensus focus on protecting cattle from the disease through vaccination and livestock management, *and* adopting an alternative approach to building wildlife "herd immunity", i.e., allow the disease to run its course while implementing fundamental principles of wildlife management. In evaluating the importance of seroprevalence reduction, we also need to consider the possibility that tolerating some level of seroprevalence in wildlife may be the most effective, the lowest cost, and the most consistent with Montana's unique combination of wildlife and ranching heritage.
2. ***Improved vaccine for livestock.—***If we had an acceptable (more effective) vaccine to prevent livestock infection (not just abortions), disease in wildlife would not be an issue for the livestock industry. That is not the case at the present time. This need is already reflected in CWG recommendations, but strong concern exists regarding progress towards improved vaccination due to, for example, funding availability for research and roadblocks to research presented by Homeland Security.

These two items received much concerted discussion, including questioning whether they might occur on parallel tracks. Some in the CWG thought that items 1-2 above could occur in parallel. Others thought that no, a foolproof cattle vaccine to stop infection was needed first; given such a vaccine then item 1 would be acceptable.

This discussion closed with no resolution. However, we caution the Partners not to interpret the absence of consensus on some points as equivalent to either absolute rejection or acceptance of any particular idea.