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Montana response to USDA review of Montana's Brucellosis
Management Plan (BMP)



Response to Review of Montana's Brucellosis Management Plan

July 10, 2013

In September of 2012 the United States Department of Agriculture Animal and Plant Health Inspection Service Veterinary Services (USDA-APHIS-VS) performed a review of Montana's Brucellosis Management Plan (BMP) which addresses the risk of brucellosis transmission from infected wildlife to domestic cattle and bison.

The Montana Department of Livestock (DOL) appreciates the hard work of the review team and is very pleased with the outcome and acknowledgment of the numerous effective and proactive management practices that are already in place. Nearly half (19 of 40) of the review team recommendations suggest to continue current practices.

Additionally, the DOL appreciates the review team's commendation in their final report and has already or is currently addressing all recommendations.

The USDA-APHIS-VS BMP review states:

The purpose of the USDA-APHIS-VS BMP review was to evaluate the State's ability to prevent brucellosis-infected animals from leaving the designated surveillance area [DSA] and potentially putting the rest of the national domestic cattle and bison herd at risk.

Key strengths of Montana's BMP include:

- 1. Proactive actions leading to adjustments to the boundaries of Montana's DSA.*
- 2. Cooperative efforts between Montana Department of Livestock's Animal Health Division and their Brand's Enforcement Division, including the implementation and use of an electronic brands software program at the livestock markets. Brand inspection plays a critical role in Montana's brucellosis management plan.*
- 3. Wildlife surveillance activities, most notably the multiyear elk capture and surveillance project.*
- 4. Testing and surveillance requirements for domestic cattle and bison in the DSA.*
- 5. Use of individual herd plans for herds located in the DSA*

Montana is commended for its proactive approach to addressing the brucellosis situation in DSAs and developing and implementing a BMP reflecting requirements critical to mitigating the risk of spread of disease. The Montana Department of Livestock and the Montana APHIS-VS Area Office are commended for the placement of competent personnel in key positions. The forward thinking and progressive attitudes of these valuable employees will continue to help the Montana Department of Livestock and Montana VS accomplish their goals to the greater good of the cattle industry and the brucellosis eradication efforts in the GYA [Greater Yellowstone Area].

1. **RECOMMENDATION:** Increase the number of herds within the DSA on approved herd plans. Risk assessments should be conducted on each herd prior to developing an individualized herd plan.

RESPONSE: Producers without a herd plan are subject to all DSA requirements. As of June 1, 2013, 156 of the 270 (58 percent) cattle herds which reside or graze in the DSA have approved herd plans.

DOL prioritizes herd plan development:

- a) The highest priority herds are those that utilize the DSA for only part of the year. This ensures that herds are included in surveillance activities even if they are headquartered outside the DSA. Because of Montana's change of pasture permitting brands regulations, change of ownership, and county line movement brand inspection requirements, producers that fit into this category are recognized quickly.
All of the 87 DSA utilizing herds headquartered outside the DSA are on herd plans and are subject to surveillance at a level determined by their herd plan (all test at some level).
 - b) Also of high priority are herds that are known to have contact with potentially infected wildlife.
 - c) DOL strives to review existing herd plans and establish new agreements.
2. **RECOMMENDATION:** Montana should continue performing risk assessments and developing herd plans with the producers in the DSA.

RESPONSE: DOL appreciates the recognition and support of our current efforts which have contributed to the success of our program.

3. **RECOMMENDATION:** Continued educational efforts are needed to adequately mitigate the risk of disease transmission from elk.

RESPONSE: DOL appreciates the recognition and support of our current efforts which have contributed to the success of our program. We will continue outreach and education.

4. **RECOMMENDATION:** Montana should establish a target that 100 percent of the producers with cattle and privately owned bison in the DSA at any given time have a risk assessment and an approved herd plan that mitigates the risk of transmission of brucellosis to herds and minimizes the likelihood of exposure to unidentified brucellosis infection from sources being shipped out of the DSA.

RESPONSE: Montana continues to strive to have all DSA producers on a herd plan with a risk assessment. However, due to seasonal grazing within or out of the DSA, we prioritize the creation of herd plans for new seasonal herds as well as renewal for producers that stay within the DSA and are at the highest risk of exposure during the risk period. Please also see response to #1.

Movement and pre-sale testing continue to be pillars of the DSA program. It is important to note that if the producer does not have a herd plan then the cattle under that ownership are subject to all DSA regulations without exception.

5. **RECOMMENDATION:** Montana should continue monitoring all dairy herds using BRT surveillance.

RESPONSE: We thank the review team for the recognition of our current efforts and its success. Dairy herds within the DSA perform the Brucellosis Ring Test (BRT) at least twice quarterly (up to 10 times per year). These herds also follow blood testing regulations for movement and change of ownership unless they have a variance written into a herd plan. Dairy herds outside of the DSA perform BRT quarterly.

6. **RECOMMENDATION:** Since cull slaughter cattle will likely not be tested via market cattle surveillance conducted at out-of-State slaughter plants, Montana should test all test-eligible slaughter cattle destined to slaughter plants out-of-State at their livestock markets or prior to any direct shipments to out-of-State slaughter plants.

RESPONSE:

- Montana has required by Administrative Rules of Montana (ARM) 32.3.435 the testing of cattle 12 months of age and older prior to slaughter if they are not tested by MCI.
- Following the review, the rule language was further clarified, and producer education was enhanced in early 2013.
- Montana recognized the inadequate slaughter testing of DSA cattle early and has been working with APHIS to continue surveillance through “preslaughter” testing which began in 2011.
- The national MCI program augments the preslaughter surveillance that is focused on the DSA

7. **RECOMMENDATION:** Montana should acquire an FPA plate reader since one of the additional recommendations resulting from this review is to use the FPA to screen all blood samples from brucellosis-affected herds.

RESPONSE: APHIS-VS Western Region transferred a FPA Synergy 2 instrument to the Montana State Veterinary Laboratory in September of 2012.

DOL wants to thank APHIS-VS Western Region for the transfer of the FPA Synergy 2 to the Montana Veterinary Diagnostic Laboratory. We appreciate the support and will use FPA as recommended by the review team. FPA is the test used for all affected herd animals.

8. **RECOMMENDATION:** Develop a template for a formal brucellosis-affected herd plan and a template for approved DSA herd plans detailing the proactive risk mitigation actions in place.

RESPONSE: Historically all affected and adjacent herds have immediately been placed under quarantine and herd plans developed rapidly with the goal of development within 15 days. Testing as well as continued surveillance of the affected herd has not been an issue in the past but a formal brucellosis-affected herd plan has been developed and will be utilized upon detection of an affected herd.

9. **RECOMMENDATION:** A herd plan should be developed with the herd owner within 15 days following the disclosure and classification as an affected herd. (title 9 *Code of Federal Regulations* (9 CFR) part 78.1 (b)(3)).

RESPONSE: All affected and adjacent herds have immediately been placed under quarantine, after which, herd plans are developed rapidly with the goal of development within 15 days. Testing as well as continued surveillance of the affected herd has not been an issue in the past but a formal brucellosis-affected herd plan will be developed upon detection of an affected herd.

10. **RECOMMENDATION:** A brucellosis-affected herd plan template should be developed for brucellosis-affected and all adjacent and contact herds. These herd plans are required per 9 CFR part 78.

RESPONSE: A template has been developed for affected herds. This template was modeled after Idaho's affected herd template which outlines testing timelines. Also see response #8.

11. **RECOMMENDATION:** The verbiage, "*This herd plan is voluntary, is subject to review and revision, and is not intended to represent a legal contract*" should not be included in any affected herd plans.

RESPONSE: DOL appreciates the review team recommendation and has removed the voluntary verbiage from the affected herd plan template.

12. **RECOMMENDATION:** Herd plan should include a test schedule, including the number of negative herd tests required for quarantine release, requirements for the removal of reactor animals, a requirement for a post-quarantine assurance test, vaccination recommendations both adult and calfhood vaccination, requirements for herd additions, requirements for maintaining a herd inventory, requirements for movements out of the herd, and best management practices, including recommendations for cleaning and disinfection.

RESPONSE: The affected herd plan template has been updated with a testing schedule table and will define the number of tests required for quarantine release. Also, please see responses to #8-#11

13. **RECOMMENDATION:** Documentation needs to be maintained for any waivers to requirements specified in the 9 CFR part 78 or the *Brucellosis Uniform Methods and Rules*. This should include documentation of waivers allowing variances to the number of negative herd tests and length of quarantine or required quarantine release protocols.

RESPONSE: Any waivers or variances to requirements specified in the 9 CFR part 78 or the *Brucellosis Uniform Methods and Rules* have been discussed with and agreed upon by USDA-APHIS Western Region personnel. A record of decision has been kept in the Montana AVIC office.

14. **RECOMMENDATION:** The VS Form 1-27 should be used when restricted animals are moved.

RESPONSE: DOL and USDA-APHIS-VS have always used the VS Form 1-27 for movement of quarantined animals to slaughter. Yellowstone National Park (YNP) bison moved from YNP for research will also be moved on a VS Form 1-27.

15. **RECOMMENDATION:** Since the FPA test has the highest sensitivity and specificity of all of the routine brucellosis serology tests, it should be used as the screening test on all animals tested as part of all brucellosis-affected herd tests. When the FPA is used, especially when used on the quarantine release test, it will provide the best assurance (albeit not 100 percent) that there are no remaining animals incubating brucellosis.

RESPONSE: DOL again wishes to thank USDA for providing the FPA Synergy 2. Please also see response to #7

16. **RECOMMENDATION:** Increase surveillance on slaughter cattle coming out of the designated surveillance area, especially when going direct to slaughter.

RESPONSE: Change of ownership testing has always been required on DSA cattle 12 months of age and older sexually intact which includes sexually intact cattle going directly to slaughter as described in ARM 32.3.435. This ARM was recently clarified to ensure the preslaughter testing of all test eligible cattle that have been within the DSA whether the animals ship from a ranch or a market.

Additionally, all test eligible cattle that are owned by a producer that has utilized ground within the DSA, regardless of the time of year, are brucellosis tested prior to sale through a Montana market. Many of these tests are "pre-slaughter" tests because these cattle are often times cull animals and are sold for slaughter.

DOL records ownership brands on a state level so that there is no duplication of brands within the state of Montana. Any livestock owners whose livestock reside in or travel into Montana's DSA have their brands flagged in this software. This brand information is available to all state employees, including animal health, field and market personnel. As a result, any livestock travelling through a livestock market bearing a flagged brand are

tested for brucellosis. Cattle require an inspection for change of ownership *and* movement across county lines. Local brands enforcement officials are educated on the testing requirements for cattle moving out of the DSA, even when the animals do not change ownership.

Additionally, Montana has three area supervisors who are law enforcement agents as well as seventeen additional law enforcement officials (district investigators) who work under the supervision of the three supervisors. The three area supervisors' salaries are paid half by Animal health and half by brand enforcement which allows for the animal health and brands divisions to work in concert.

17. **RECOMMENDATION:** Continue to develop the electronic process and data logger that records, stores, coordinates and retrieves all the herd and individual animal information together. This helps simplify and expedite identifying and tracing of animals through livestock markets and back to the appropriate herds of origin.

RESPONSE: DOL appreciates recognition and support of our current efforts which have contributed to the success of our program. Additionally a pilot project is currently taking place that will allow for electronic capture of identification and creation of ICVIs. A constantly increasing number of Montana veterinarians are utilizing electronic systems. Please also see response to #16 (third paragraph)

18. **RECOMMENDATION:** Test eligible cattle with negative test results within the prior 30 days should have their individual identification verified for assurance that the cattle presented are the same cattle listed on the test chart.

RESPONSE: If any doubt exists as to whether animals presented are on the test chart, the entire group is generally tested. However, as often as possible individual identification of animals on a test chart is verified. Electronic technology has simplified and increased the speed at which I.D. verifications can be accomplished.

19. **RECOMMENDATION:** Consider recording official identification for test eligible cattle that move through Montana's livestock markets to assure future traceability.

RESPONSE: Official individual identification is always recorded on the official test chart. Official identification is then recorded at the State veterinarian's office and stored in a searchable database.

20. **RECOMMENDATION:** Because of the abbreviated national slaughter surveillance, all direct consignments of test eligible cattle originating from premises in the DSA that are destined to slaughter should have a negative brucellosis test within 30 days prior to shipping.

RESPONSE: All of Montana's federally and state inspected slaughter plants collect samples from test eligible cattle and bison for brucellosis testing. Regardless of

destination, if test eligible animals are sold to slaughter, a negative “pre-slaughter” brucellosis test is required. Also, please see response to #6.

21. **RECOMMENDATION:** “Continue wildlife surveillance activities and studies to expand the knowledge base about brucellosis in elk.”

RESPONSE: DOL appreciates recognition and support of our current efforts which have contributed to the success of our program. DOL has a strong working relationship with Montana Department of Fish Wildlife and Parks (FWP) as well as their department’s commission. The 5 year live elk capture study began in February 2011 and will continue into the foreseeable future. This study continues to produce a great deal of information such as; elk movement data, abortion period and helps to define the risk period.

22. **RECOMMENDATION:** The APHIS VS cooperative agreement funding runs out at the end of January, while the window of time pertinent to conducting testing and research project activities extends through June. Consequently, the opportunity for obtaining relevant calving and abortion location data may be seriously hindered.

RESPONSE: The current “umbrella” cooperative agreement with APHIS-VS terms start April 1 through the following March, and therefore, this issue has been addressed.

23. **RECOMMENDATION:** Continue hunter-kill elk surveillance in addition to the ongoing elk project collar studies.

RESPONSE: Montana does not rely heavily on hunter-kill test kits because of the poor rate of return, low percentage of usable samples and cost. The cost per usable sample of a hunter returned test kit has been estimated to be \$100. Therefore, this effort has been limited to select areas, late hunts and upon request from hunters. Additionally, elk locations have been documented to be very different during hunting season (low risk period) and late winter and spring (high risk period) locations.

The multi-year elk capture study has been implemented to address the shortcomings of hunter collected samples.

24. **RECOMMENDATION:** Allow late-season elk hunts in geographic areas where elk pose a risk to cattle. Late-season elk hunts will facilitate mitigating elk-cattle commingling during the season of higher risk of disease transmission. In addition, late-season hunts will provide Montana FWP greater opportunity to collect samples from hunter harvested elk for brucellosis evaluation.

RESPONSE: The Montana FWP commission sanctioned the elk-brucellosis citizens’ working group to develop elk management options in areas where the transmission of brucellosis between elk and livestock is a concern. This group is made up of multiple different interests such as; livestock producers, wildlife enthusiasts, hunters, and veterinarians. It met multiple times in 2012 and presented recommendations to the FWP commission in early 2013. Some of the recommendations included use of late-season

hunting, fencing, and or hazing of wild elk to prevent or stop commingling of livestock and elk during the risk period. The recommendations were accepted by the commission with a commitment to review results, in the summer of 2013, following their implementation. Thus far, involved producers feel that the late season dispersal hunts were a success.

25. **RECOMMENDATION:** A prospective study consisting of collaring young seronegative females in high prevalence areas to determine the rate of seroconversion in each age group, immediate outcomes of infection, number of abortions following seroconversion, and other factors in the epidemiology of the disease would be extremely valuable.

RESPONSE: DOL appreciates that USDA recognizes the benefits of the live capture study conducted by FWP. The study aims to answer a number of the questions that are being asked in this recommendation.

26. **RECOMMENDATION:** There is need for better animal-side diagnostic tests.

RESPONSE: DOL agrees that better animal side diagnostic tests would further help mitigate the risks of brucellosis from wildlife and would support any effort to develop such technologies.

27. **RECOMMENDATION:** The cooperative agreement funding period should be adjusted to accommodate surveillance activities.

RESPONSE: The current “umbrella” cooperative agreement with USDA-APHIS–VS terms are April 1 through the following March, and therefore, this issue has been addressed.

28. **RECOMMENDATION:** Work[ing] with APHIS to develop a State-specific (or DSA specific) slaughter cattle surveillance plan that would provide for sampling and testing “pre-slaughter.”

RESPONSE: DOL strives to test 100% of test eligible cattle prior to slaughter regardless of subsequent MCI testing. The brands computer program has been instrumental to brands and market personnel to readily recognize animals that have testing requirements. Also, please see response to #6 above.

29. **RECOMMENDATION:** Continue the use of RFID tags. Additional discussion should be had with the APHIS Traceability Program regarding availability of program provided RFID tags and flexibility in the use of traceability funding (i.e. allow use to purchase software).

RESPONSE: DOL appreciates recognition and support of our current efforts which have contributed to the success of our program. Montana requires that all sexually intact cattle, regardless of age, are officially individually identified prior to leaving the DSA.

In the past 4 years, MDOL has ordered approximately 65,000 840 RFID tags, of which about 18,000 have gone into DSA cattle. Additionally, DOL has placed hand held computers and electronic identification reading devices at veterinary clinics throughout the State with the majority in the control of veterinarians that service the largest number of DSA producers.

30. **RECOMMENDATION:** Continue first-point testing at livestock markets and encourage, where and when more appropriate to better mitigate risk, testing before cattle and domestic bison leave the ranch. Brucellosis-infected animals are being identified by these proactive activities.

RESPONSE: DOL appreciates recognition and support of our current efforts which have contributed to the success of our program.

31. **RECOMMENDATION:** Require a test on female cattle of any age intended for use as breeding stock.

RESPONSE: DOL agrees with this recommendation and has published ARM 32.3.435 which now includes the testing of all sexually intact cattle and domestic bison of any age that are sold for breeding from the DSA.

32. **RECOMMENDATION:** APHIS should lead efforts (perhaps a task for the Regional Brucellosis Epidemiologist) to harmonize elk testing protocols (laboratory testing protocols) between all three GYA States.

RESPONSE: DOL agrees with this recommendation which would minimize the three states from varying interpretation of the same serologic information from wildlife.

33. **RECOMMENDATION:** The State and Federal Regional, Area, and Designated Brucellosis Epidemiologists are encouraged to network with appropriate State and Federal wildlife agencies to pursue ideas for projects to assess the role other wildlife species may play in maintaining (possible sentinel populations) and transmitting brucellosis to other domestic and wildlife species (i.e. cattle and elk).

RESPONSE: DOL supports improved communication and research to address this difficult issue.

34. **RECOMMENDATION:** Alternative slaughter surveillance sampling strategies that will meet the intended level of MCI program surveillance for states with *B. abortus* in wildlife need to be developed specific for slaughter cattle moving out of the GYA States and more specifically out of the DSAs in the GYA states. "Pre-slaughter sampling" was proposed as an opportunity to meet the intended level of MCI program surveillance. DOL personnel indicated the desire to work with APHIS to develop and implement a State-specific "pre-slaughter surveillance plan" for cattle originating from the designated surveillance areas to meet this need. Such a plan should be incorporated into and funded through the national bovine brucellosis slaughter surveillance plan.

RESPONSE: DOL agrees with this recommendation to improve slaughter surveillance and, as stated by the review team, specifically out of the DSA. Please also see response to #6.

35. **RECOMMENDATION:** Strengthen seasonal grazing activities by developing a current list of producers moving into the DSA, limit issuing of permits to the District, and any producers partaking of seasonal grazing to have approved herd plans, which identifies the permits being used, animal identification, and testing requirements.

RESPONSE: Montana continues to monitor for and place high priority herds on herd plans as well as the enforcement of DSA and brand regulations (Please also see response to #1). Individual identification is a requirement and has been made readily available at low or no cost to many producers (Please also see response to #29).

36. **RECOMMENDATION:** Maintain calfhood vaccination requirement and recommend booster and adult vaccination in herds with known or suspected elk exposure. Prioritize use of Federal funds to support these activities. Also suggest monitoring vaccination data and comparing with calf crop data, especially for herds in the DSA, as a way of assessing compliance with vaccination requirements.

RESPONSE: DOL agrees with this recommendation, and will maintain the calfhood vaccination requirement and in many cases does recommend calfhood booster and Adult Vaccination (AV) of cattle, especially those that utilize the DSA. 1916 animals have been adult vaccinated so far in this fiscal year to date.

37. **RECOMMENDATION:** APHIS should lead efforts to continue discussion regarding the need for vaccination tattoos. An evaluation of the current need for a vaccination tattoo should be explored – what is the current “function” of the vaccination tattoo?

RESPONSE: DOL supports these efforts as the concern over misidentifying an animal previously vaccinated with RB 51 does not carry the same consequences as it once did when strain 19 was widely used.

38. **RECOMMENDATION:** The Montana Department of Livestock and the Montana VS Area Office are encouraged to assess current field-testing equipment (such as chutes and gate panels) and upgrade as appropriate to assure the safety of personnel and animals when testing herds.

RESPONSE: Private/local veterinarians conduct the majority of testing on Montana’s DSA cattle. Veterinarians have been able to upgrade their equipment in a large part through continued testing reimbursement.

39. **RECOMMENDATION:** Continuing producer education and outreach using a variety of venues through which to deliver and disseminate information about Montana's brucellosis surveillance program.

RESPONSE: DOL appreciates recognition and support of our current efforts which have contributed to the success of our program. DOL intends to continue producer outreach throughout the State regarding the brucellosis surveillance program. Methods of outreach have included, but have not been limited to, news releases, producer mailings, work with producer groups and associations, an up to date MTDOL website and other methods. DOL works closely with FWP and their commission to continue outreach and education. Additionally, FWP works to educate their stakeholders including Montana land owners, livestock producers, wildlife enthusiasts, and hunters.