

ELK MANAGEMENT IN AREAS WITH BRUCELLOSIS

2023 WORK PLAN

Draft presented to Fish and Wildlife Commission October 2022

INTRODUCTION

This proposed 2023 annual work plan ("plan") listing management actions available for implementation has been assembled by the Montana Fish, Wildlife, and Parks Department (Department) with input from the Elk Management Guidelines in Areas with Brucellosis Work Group (work group). The plan builds upon previous annual work plans, a growing body of management experience, and public input. Fundamentally these actions are meant to reduce commingling of elk and livestock (primarily cattle) and the associated risk of brucellosis transmission. These actions are designed to adjust local elk distribution away from cattle at small geographic scales.

When adopted, this annual plan will guide implementation within and adjacent to the Designated Surveillance Area (DSA) as defined by the Montana Department of Livestock (DoL) and in other areas where brucellosis-exposed elk have been confirmed within the previous five years. While the highest potential for disease transmission from elk abortions or live births is the period between January 15 and June 30, management actions may be applied outside that window to reduce risk in subsequent years. While DoL has authority to define the boundaries and conditions of the DSA for livestock, this work plan does not create any wildlife management authority for DoL. Wildlife management authority within this plan is wholly represented by the Department and the Fish and Wildlife Commission (commission). While identified as the 2023 plan, the term for this plan begins with final commission adoption in fall 2022 and continues until fall 2023 when the next annual work plan will be presented to the commission for approval.

This work plan is proposed as a "default" or general work plan for implementation beginning in fall 2022. Any additional or replacement work plans from local work groups may be proposed for public review and commission adoption.

Non-lethal management actions may be applied in any sequence or combination with appropriate approval from the Department, the area commissioner, or the full commission. DoL has no authority to prescribe wildlife management actions. Lethal removal will be considered only after non-lethal means have been deemed insufficient. While some actions (e.g., dispersal hunts, haystack fencing, and hazing) are available for implementation without additional public review, other management actions require additional public review prior to implementation (e.g., biennial season setting, public land habitat manipulations, and risk mitigation fencing projects).

ANNUAL REVIEW OF EFFECTIVENESS

The Department shall evaluate effectiveness of management actions relative to commingling and maintaining elk. This may be incidental to other duties and may include general observations and anecdotal information as well as formal research and monitoring. The commission will annually and publicly review yearly efforts during its consideration of new work plans.

CONDITIONED DEPARTMENT ASSISTANCE

Recognizing that management actions cannot address all risk of transmission from elk to livestock, the Department will work with landowners to identify and reduce risky elk concentrations including those caused or enhanced by limited or no public hunting access during the general fall hunting seasons. While public hunting access or other means of disturbing or displacing elk is not initially required for a landowner to receive Department brucellosis risk management assistance, identifying and reducing risky concentrations of elk is considered a necessary component of comprehensive risk management over time. This could include identifying and addressing fall concentrations of elk or other elements that increase risk outside January 15–June 30. If, over time, fall concentrations of elk that are contributing to risk and other identified elements of risk remain unaddressed, assistance to landowners may be suspended until comprehensive risk management is proposed for implementation.

The Department and the landowner may approach a comprehensive response incrementally, adding additional management tools over time. Efforts towards comprehensive response will be part of the annual commission review which ultimately modifies and/or approves the annual work plan. Proposed and adopted actions should address all recognized risk.

Participation by the Department is contingent upon adequate funding for individual mitigation efforts. In the event demand for work exceeds fiscal or staff capacity, the Department will prioritize efforts to reflect the most urgent risk management needs and the broadest implementation approach across the DSA.

LOCAL WORK GROUPS

Department staff will work with local working groups to design area-specific annual work plans. At a minimum, the Department will provide technical input as necessary. Interested members of the public should be involved as desired. Local work groups may represent one of the best opportunities to address risky concentrations of elk associated with limited or no public hunting access. Any proposed local work plan will be presented to the commission for public review and comment. At that time, it shall be made clear what perspectives were present in the local discussion and to what degree any proposal does or does not represent consensus.

EDUCATION AND OUTREACH

The Department will explore and implement education and outreach opportunities with the commission, public and landowners. This should include communication and education targeted at new landowners that may not be familiar with elk, elk management, and brucellosis.

GENERAL HUNTING SEASONS

The work group recognizes there may be opportunities to manage risk of brucellosis transmission with adjustments to Montana's hunting seasons. Objectives could include adjusted elk population numbers consistent with elk objectives, adjusted short- and long-term elk population distribution, and minimizing resident elk where they may conflict with wintering elk populations. Any hunting season proposals will be incorporated into the established public season setting process.

STEP-WISE IMPLEMENTATION

Recognizing the public advocacy and value in identifying risk management efforts that are least impactful to elk and most effective at mitigating risk, the Department will consider non-lethal options before implementing lethal tools that are in addition to the general hunting season. The Department shall also consider practical limitations including available human and financial resources, equipment, terrain, weather, elk numbers, and landownership when assessing management actions to reduce transmission risk.

AGENCY COLLABORATION

Work with DoL to increase communication to landowners. Work with DoL and USDA APHIS to assess and coordinate the need, opportunity, and capacity for continued targeted elk surveillance. This collaboration shall not dilute the wildlife management authority of the Department and commission and it shall not expand management authority of DoL or APHIS.

NON-LETHAL ACTIONS APPLIED IN ANY SEQUENCE OR COMBINATION

Elk Hazing to Reduce Commingling with Cattle

The intent of hazing is to reduce commingling of elk and cattle. In addition to responding to observed or reported commingling events, hazers should periodically assess local elk distribution and movement patterns to better anticipate and prevent commingling. This approach is not to suggest all commingling events will or can be prevented given the proximity of elk and cattle during winter and spring. The presence of hazers does not prevent nor preclude landowners from hazing elk. To be effective, hazers, the Department, and landowners need to work together in this effort.

- This plan does not limit the number of private land hazing efforts that may take place.
- Habitat with adequate forage and security for elk to use instead of high-risk areas must be identified prior to hazing.
- To the degree possible, hazing should not push elk into more risky circumstances.

- Hazing may be conducted on private lands and Montana Department of Natural Resource Conservation (DNRC) lands within the DSA and in other specific areas where brucellosis-exposed elk have been confirmed, ~~within the previous five years~~. Elk may not be deliberately hazed off lands managed as Wildlife Management Areas.
- Hazing may be conducted at any time to reduce risk during current or subsequent years.
- Prior to any hazing effort, the hazers and Department will work with landowners to define and agree to a communication strategy. The strategy will ensure all parties are aware of hazing efforts, elk and livestock presence, observed or anticipated comingling events, and results of hazing. Communications should include inputs and updates from hazers, the Department, and landowners.
- [Explore the use of new hazing techniques based on the efficacy of past efforts to push elk off private lands during the transmission risk period.](#)
 - [Explore the success of hazing even when elk are not present based on results of a study that indicated continued hazing increased the number of days between when elk were hazed and when they returned.](#)
 - [Explore the use of drones, dogs and other new technologies as hazing tools. New technologies may include remote cameras that alert landowners when elk are moving into high-risk areas.](#)
 - [Implement one project using a drone or other new technology during the 2023 season. Monitor success.](#)
 - [Explore the efficacy of hazing at night based on new knowledge that elk often move into high-risk areas at night.](#)
- Both the Department region supervisor and local area FW Commissioner may modify hazing plans, and both must approve hazing efforts.

Fence Modification and Repair

- The intent of fence modification is to reduce damage to existing fence from elk being hazed to reduce transmission risk. Modifications would ease elk passage through existing fences while maintaining the integrity of fences for livestock. Fence modification projects may include some limited fence repair of fence damaged from elk being hazed. Fence repair must be done in conjunction with fence modifications to preclude future damage.
- The Department may contribute materials, but the landowner is responsible for installation and routine maintenance. Additional cost sharing is encouraged.
- At least one half of the cost of all materials for modifications and repair shall be used for fence modifications. Fence modifications must be fully paid for before Department dollars may be used to purchase materials to repair fence damaged by elk. Any fence repair with Department dollars must be tied to new fence modifications to aid passage of elk being hazed. Fence repairs may not be tied to pre-existing fence modifications.

- This plan does not limit the number of fence modifications that may take place. When annual resources are limited, any one landowner may receive materials for only one stackyard or fence modification (~~about \$2,500~~) per year.
- Fence modification or repair shall consider and avoid to the degree possible the potential for elk to be inadvertently encouraged into more risky circumstances.
- Fence modification and repair efforts may be implemented within the DSA and in other specific areas where brucellosis-exposed elk have been confirmed, ~~within the previous five years~~.
- These actions may be applied at any time to reduce risk during current or subsequent years.
- Both the Department region supervisor and local area FW Commissioner may modify plans for fence modification or repair, and both must approve fence modification or repair efforts.

Stackyard Fencing

- The Department may contribute materials, but the landowner is responsible for installation and routine maintenance. Additional cost sharing is encouraged.
- This plan does not limit the number of stackyard fencing efforts that may take place. When annual resources are limited, any one landowner may receive materials for only one stackyard or fence modification (~~about \$2,500~~) per year.
- Stackyard fencing efforts shall consider and avoid to the degree possible the potential for elk to be inadvertently encouraged into more risky circumstances.
- Stackyard fencing efforts may be implemented within the DSA and in other specific areas where brucellosis-exposed elk have been confirmed, ~~within the previous five years~~.
- These actions may be applied at any time to reduce risk during current or subsequent years.
- Both the Department region supervisor and local area FW Commissioner may modify plans for stackyard fencing and both must approve stackyard fencing efforts.

Risk Mitigation Fencing

Expanded Fencing in the Paradise Valley
Risk mitigation fencing is intended to reduce the ability for elk to cross into or use high-risk areas, such as calving pastures. The Department will explore the option for approving risk mitigation fencing projects through a programmatic environment assessment (EA) under direction of the Montana Environmental Policy Act (MEPA). Until such time a programmatic EA is completed any individual risk mitigation fencing project can be approved through a project specific EA.

- The Department may contribute materials, but the landowner is responsible for installation and routine maintenance. Additional cost sharing is encouraged.
- This plan does not limit the number of risk mitigation fencing projects that may take place. When annual resources are limited, any one landowner may receive materials for only one risk mitigation fencing project per year.

- Risk mitigation fencing projects may be proposed only if the Department has identified sufficient dollars for cost share participation at the time of proposal.
- Risk mitigation fencing efforts shall consider and avoid to the degree possible the potential for elk to be inadvertently encouraged into more risky circumstances.
- Risk mitigation fencing efforts may be implemented within the DSA and in other specific areas where brucellosis-exposed elk have been confirmed.
- Except for small scale fencing of attractants such as stackyards, any proposed fencing project with Department support that reduces the ability for elk to cross the fence or move across the landscape shall require a written plan that clearly enumerates: submitted to the FW Commission for review and potential approval.
 - fence description;
 - size of fenced area;
 - location;
 - season of use;
 - timing and size of any elk concentrations and their relationship to risk and mitigation;
 - a description of sufficient seasonal habitats and their availability for elk and other wildlife species while the fence is operational;
 - cost share opportunities.
- Any risk mitigation fencing project may include only the minimum acreage and minimum structure necessary to keep elk out of consistent commingling situations with cattle.
- Risk mitigation fencing projects may be proposed only on private lands in those specific areas with a history of applied livestock risk management plans, other elk management risk mitigation efforts such as hazing, and repeat livestock infections.
- Risk mitigation fencing projects may be only with those landowners that have developed and followed a livestock risk management plan for brucellosis. This may include risk management plans developed by the landowner with DoL.
- Risk mitigation fencing projects may include multiple landowners.
- Risk mitigation fencing projects must reduce the potential to capture elk and other wildlife. Without prior Department approval, no managed species of wildlife may be lethally removed from within an elk proof fence.
- Except for permanent stackyard fencing where the Department and the landowner agree the fence should remain in place, any risk mitigation fence may be in place no longer than two weeks before January 15 and after June 30.
- Consistent with the concept of a "pilot project," not more than two risk mitigation fencing projects may be implemented without at least one full year of evaluation after the fences have been put in place. Any evaluation shall assess effective wildlife passage around these fenced areas. In the event adequate wildlife passage is not maintained or there are

consistent wildlife captures, the landowner and the Department must pursue appropriate modifications.

- ~~Risk mitigation fencing projects shall include a public review and comment period and site specific environmental assessment (EA) as provided for in the Montana Environmental Policy Act (MEPA).~~
- ~~The written plan and MEPA document must be presented to the FW Commission for their public review and potential adoption prior to implementation.~~
- ~~Individual risk mitigation fencing projects must be approved by both the Department region supervisor and local area FW Commissioner even after approval through the MEPA process.~~

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Habitat Adjustments

- Habitat adjustments can be used on public or private lands to lure elk into areas away from cattle or to remove habitat attractions near cattle.
- Given wide support of this concept versus other management actions, the Department shall place priority on identifying and implementing these actions.
- This plan does not limit the number of habitat adjustments that may take place to adjust elk distribution.
- On private and public lands, the Department may contribute materials, but the landowner is responsible for installation and routine maintenance. Additional cost sharing is encouraged.
- Habitat adjustment projects shall consider and avoid to the degree possible the potential for elk to be inadvertently encouraged into more risky circumstances.
- Habitat adjustment projects are available for implementation within the DSA and in other specific areas where brucellosis-exposed elk have been confirmed. ~~within the previous five years.~~
- These actions may be applied at any time to reduce risk during current or subsequent years.
- ~~Habitat manipulations on state lands require additional MEPA review and commission approval. Habitat manipulations on federal lands would require additional NEPA review and commission approval.~~
- ~~Implement a habitat improvement project to attract elk onto public lands or as habitat to haze elk onto during the 2023 season. Design a monitoring program to evaluate success.~~

LETHAL ACTIONS APPLIED AFTER NONLETHAL ACTIONS HAVE BEEN DEEMED INSUFFICIENT (not including general hunting seasons)

Small Scale Elk Management Removals (EMR) Using Hunters

- Non-lethal actions must be deemed insufficient prior to implementing EMRs.
- The total elk lethally removed by EMRs and kill permits (see below) shall not exceed 250 elk across the entire DSA and not more than 25 elk may be taken by EMRs and kill permits in any hunting districts below management objective in the most recent Department survey efforts. Elk surveys reveal more than 24,000 elk directly observed within the DSA.
- EMRs will be used to adjust elk distribution, not for population control.
- Each EMR may harvest no more than 10 elk and would be individually described (dates, area, number of hunters, and related information) by Department region staff working directly with the landowner(s) involved. Multiple EMRs (each up to 10 harvested elk) could be applied in the same area and during the same time, but each would require specific approval.
- Hunters must use elk licenses valid for the license year in which the management removal takes place. The Department may consider issuing EMR specific licenses to maximize hunter participation.
- Antlered and/or antlerless elk may be made available for take depending upon circumstances that include herd composition, population status, and risk to other elk and cattle from reproductive tissues in gut piles.
- Throughout the DSA and with cause in other specific areas, EMRs may be used from August 15 through April 30 with no EMR initiated after April 15.
- EMRs are available for implementation within the DSA and in other specific areas where brucellosis-exposed elk have been confirmed. within the previous five years.
- EMRs may be applied on private, DNRC, Bureau of Land Management, and US Forest Service lands but may not include Montana state lands managed as Wildlife Management Areas. These public lands would be within or near deeded private lands where co-mingling is occurring; the purpose would be to increase the effectiveness of risk mitigation and reduce the frequency of lethal removals/hazing and therefore the overall impact to wintering elk.
- EMR area identification will be based in part on commingling risk of re-distributed elk onto other properties.
- Plans to implement EMRs shall recognize the need for habitat with adequate forage and security for elk to use instead of high-risk areas.
- Hunters will be selected using mechanisms comparable to those used for game damage hunts, i.e., the hunt roster. The Department may request the landowner(s) provides names of hunters in addition to hunt roster hunters if the Department region supervisor determines landowner(s) provided hunters could help achieve the EMR objective.

Landowner-identified hunters may not constitute more than 25% of the total number of hunters identified for the EMR.

- Hunters contacted for EMRs will be provided with written information addressing human infection risk and how to mitigate that risk.
- Prior to any lethal removal, Department staff and landowners will agree how gut piles will be managed to reduce the potential for disease transmission to cattle and elk. Depending upon circumstances this may range from leaving the gut piles at the harvest site to instructing the hunter where gut piles must be taken. In some situations, landowners may be able and willing to assist hunters with this logistic, but the primary responsibility should be communicated and placed upon the hunter before the hunter accepts the opportunity to participate.
- Both the Department region supervisor and local area FW Commissioner may modify plans for EMR proposals, including the sex and age of animals to be harvested, and both must approve of the final EMR plan.

Kill Permits for Landowners or Their Agents

- Non-lethal actions must be deemed insufficient prior to implementing kill permits.
- Kill permits will be used to adjust elk distribution, not for population control.
- Kill permits may be used in circumstances where lethal removal is prescribed but the use of hunters is reasonably precluded.
- The total elk lethally removed by kill permits and EMRs shall not exceed 250 elk across the entire DSA and not more than 25 elk may be taken by kill permits and EMRs in individual hunting districts identified as being below management objective in the most recent Department surveys. Elk surveys reveal more than 24,000 elk directly observed within the DSA.
- Each kill permit may be authorized for no more than five elk. Multiple kill permits (each up to 5 harvested elk) could be applied in the same area and the same time but each requires separate approval.
- Antlered and/or antlerless elk may be made available for take depending upon circumstances that include herd composition, population status and risk to other elk and cattle from reproductive tissues in gut piles.
- Throughout the DSA and with cause in other specific areas, kill permits will be available from January 15–April 30.
- Kill permits are available for implementation within the DSA and in other specific areas where brucellosis-exposed elk have been confirmed.within the previous five years.
- Kill permits may be applied on private lands and DNRC lands but may not be applied on state lands managed as Wildlife Management Areas.
- Kill permit area identification will be based in part on commingling risk of re-distributed elk onto other properties.

- Plans to implement kill permits shall recognize the need for habitat with adequate forage and security for elk to use instead of high-risk areas.
- Prior to any lethal removal, Department staff and landowners will agree how gut piles will be managed to reduce the potential for disease transmission to cattle and elk.
- Both the Department region supervisor and local area FW Commissioner may modify plans for kill permit use, including the sex and age of animals to be harvested, and both must approve of the final plan to use kill permits.

Expanded Kill Permits for Landowners or their Agents in Paradise Valley May 1–May 15

- Non-lethal actions must be deemed insufficient prior to authorizing expanded kill permits.
- Expanded kill permits will be used to adjust elk distribution, not for population control.
- Expanded kill permits may be used in circumstances where lethal removal is prescribed but the use of hunters is reasonably precluded.
- The total elk lethally removed by all kill permits and EMRs shall not exceed 250 elk across the entire DSA and not more than 25 elk may be taken by kill permits and EMRs in individual hunting districts identified as being below management objective in the most recent Department surveys. Elk surveys reveal more than 24,000 elk directly observed within the DSA.
- Total kill permit authorizations will not exceed three elk per landowner. Only one expanded kill permit per landowner may be issued for use between May 1 and May 15.
- To further reduce risk and public concern with the late stage of pregnancy, emphasis shall be given to lethal removal of yearling and bull elk.
- Expanded kill permits are available for implementation on private land only within the Paradise Valley portion of the DSA.
- Expanded kill permit area identification will be based in part on commingling risk of redistributed elk onto other properties.
- Plans to implement expanded kill permits shall recognize the need for habitat with adequate forage and security for elk to use instead of high-risk areas.
- Prior to any lethal removal, Department staff and landowners will agree how gut piles will be managed to reduce the potential for disease transmission to cattle and elk.
- Both the Department region supervisor and local area FW Commissioner may modify plans for expanded kill permit use, including the sex and age of animals to be harvested, and both must approve of the final plan to use expanded kill permits.

Authorization Needed for Specific Brucellosis Risk Management Actions

Full Fish and Wildlife Commission

- Annual Work Plans

FWP Region Supervisor and Area Fish and Wildlife Commissioner

- Hazing
- Stackyard Fencing
- Fence Modifications and Repair
- Risk Mitigation Fencing (projects approved individually by supervisor and commissioner following MEPA process)
- Elk Management Removals
- Kill Permits
- Expanded Kill Permits in Paradise Valley (May 1–May 15)

Full Fish and Wildlife Commission and Environmental Analysis (MEPA)

- Risk Mitigation Fencing (programmatic EA or project specific EA)
- Habitat manipulations on public land