ENVIRONMENTAL ASSESSMENT

2023 Elk Management Plan

(FWP-SEA-WLD-R8-23-001)

November 27, 2023

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Environmental Assessment

The Montana Department of Fish, Wildlife & Parks (FWP) has prepared this environmental assessment (EA) in accordance with the requirements of the Montana Environmental Policy Act (MEPA). The purpose of an EA is to identify, analyze, and disclose the impacts of a proposed state action. This document may disclose impacts that have no required mitigation measures, or over which FWP, more broadly, has no regulatory authority.

Local governments and other state agencies may have authority over different resources and activities under separate regulations. FWP actions will only be approved if the proposed action complies with applicable regulations. FWP has a separate obligation to comply with any federal, state, or local laws and to obtain any other permits, licenses, or approvals required for any part of the proposed action.

This EA was prepared for the following action:

PROJECT NAME: 2023 Statewide Elk Management Plan	
LOCATION: State of Montana	**COUNTY:** All 56 Counties of Montana
PROPERTY OWNERSHIP: ☒**FEDERAL** ☒**STATE** ☒**COUNTY** ☒**PRIVATE**	
EA PREPARER: Lindsey Parsons and Brian Wakeling	**DATE ISSUED:** 11/20/2023

I. Compliance with the Montana Environmental Policy Act

Before a proposed project may be approved, environmental review must be conducted to identify and consider potential impacts of the proposed project on the human and physical environment affected by the project. The MEPA and its implementing rules and regulations require different levels of environmental review, depending on the proposed project, significance of potential impacts, and the review timeline. § 75-1-201, Montana Code Annotated (MCA), and the Administrative Rules of Montana (ARM) 12.2.430, General Requirements of the Environmental Review Process.

FWP must prepare an EA when:

- It is considering a "state-proposed project," which is defined in § 75-1-220(8)(a) as:
  (iii) a project, program, or activity initiated and directly undertaken by a state agency;
  (ii) … a project or activity supported through a contract, grant, subsidy, loan, or other form of funding assistance from a state agency, either singly or in combination with one or more other state agencies; or
  (iii) … a project or activity authorized by a state agency acting in a land management capacity for a lease, easement, license, or other authorization to act.
- It is not clear without preparation of an EA whether the proposed project is a major one significantly affecting the quality of the human environment. ARM 12.2.430(3)(a));
- FWP has not otherwise implemented the interdisciplinary analysis and public review purposes listed in ARM 12.2.430(2) (a) and (d) through a similar planning and decision-making process (ARM 12.2.430(3)(b));
- Statutory requirements do not allow sufficient time for the FWP to prepare an EIS (ARM 12.2.430(3)©);
- The project is not specifically excluded from MEPA review according to § 75-1-220(8)(b) or ARM 12.2.430(5); or
- As an alternative to preparing an EIS, prepare an EA whenever the project is one that might normally require an EIS, but effects which might otherwise be deemed significant appear to be mitigable below the level of significance through design, or enforceable controls or stipulations or both imposed by the agency or other government agencies. For an EA to suffice in this instance, the agency must determine that all the impacts of the proposed project have been accurately identified, that they will be mitigated below

the level of significance, and that no significant impact is likely to occur. The agency may not consider compensation for purposes of determining that impacts have been mitigated below the level of significance (ARM 12.2.430(4)).

MEPA is procedural; its intent is to ensure that impacts to the environment associated with a proposed project are fully considered and the public is informed of potential impacts resulting from the project.

II. Background and Description of Proposed Project

This section includes project background and a description of the proposed project including the responsible party, the type of proposed action and the anticipated schedule of the proposed project.

Name of Project: 2023 Draft Elk Management Plan

Under the proposed action, FWP would adopt and implement the 2023 Draft Statewide Elk Management Plan. The current Elk Management Plan was adopted in 2005. Since adoption, many changes on the Montana landscape suggest the development of an updated plan for the overall management of elk, statewide, is appropriate. In 2005, Montana was home to 940,102 residents and that human population had increased to 1,104,000 by 2021 (United States Census Bureau). In 2005, the sustainable number of elk was determined to be between 72,413 and 101,525; FWP observed 98,643 elk on survey. The 2023 Elk Management Plan defines a statewide sustainable number of elk between 96,015 and 151,425; FWP observed 143,310 elk on survey in 2023. Although elk distribution has changed historically, elk have primarily expanded their distribution and density in the past decade based primarily on aerial surveys (**Figure 1**).

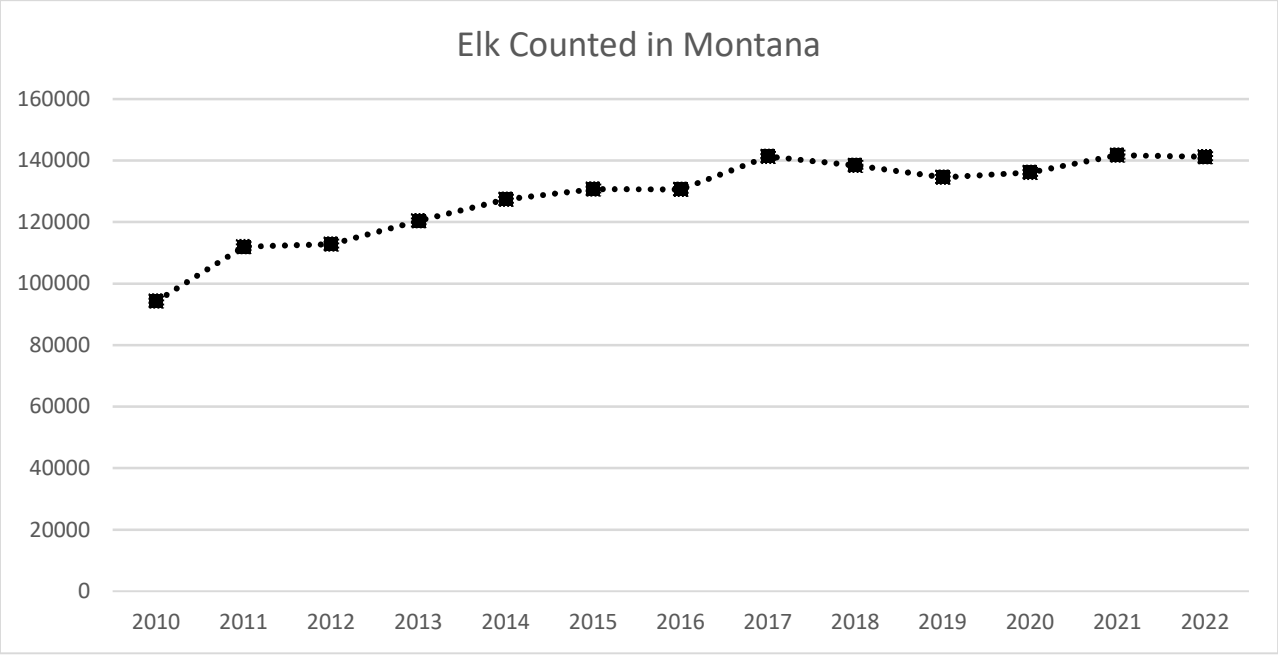

Figure 1. Number of elk counted on aerial survey in Montana, 2010–2022.

During the period of 2004 through 2018, Montana experienced a shift in the proportion of the human population that hold mutualistic (18% to 25%) and traditionalist (48% to 39%) views related to their values on wildlife (Manfredo et al. 2018). Mutualists believe wildlife are part of our social network and that we should live in harmony. Traditionalists believe wildlife should be used and managed for human benefit. During the same

time period, pluralists in Montana increased from 23% to 25% of the population. Pluralists prioritize their values differently depending on the specific context and often demonstrate perspectives that incorporate both traditionalist and mutualistic views. Cumulatively, this information suggests that Montana's elk management strategy, reflected in its elk management plan, warrants reevaluation in the future.

Under the proposed action, FWP would adopt and implement the 2023 Draft Statewide Elk Management Plan (2023 Plan), which includes elk management goals, by hunting district (HD), that have been revisited by FWP and the public on a periodic basis to ensure they are consistent with current landowner tolerance, social desires, and habitat capacities. Population size goals for 106 HDs have been established and include a range within which FWP intends to manage individual elk populations in most cases. In some instances, small population size or forested habitat makes population surveys ineffective or unachievable. In some of these instances, alternate goals, such as harvest, have been included as a surrogate for population surveys (Table 1).

Table 1. Hunting districts that lack a specific goal for surveyed numbers of elk, the reason an alternate, non-traditional goal is needed, and the population demographic management seeks to achieve.

Hunting District(s)	Reason for non-traditional population Goal	Alternative population demographic Goals
100, 103, 104, 110, 120, 122, 124, 130, 141	Surveys not conducted due to difficulty observing elk in forested cover	Develop methodology to estimate population status and trend
		Maintain or increase elk population
		Maintain or increase bull elk harvest trend
101	Surveys not conducted due to urban low altitude flying constraints	Develop methodology to estimate population status and trend
		Maintain or increase elk population
		Maintain or increase bull elk harvest trend
170	Surveys not conducted due to extensive tree cover and housing density	Develop methodology to estimate population status and trend
		Maintain or reduce size of valley elk herds
		Maintain or increase Mud Lake herd
280	No wintering elk	No population demographic goals
316	No wintering elk	No population demographic goals
361	Few wintering elk	No population demographic goals
388	Surveys not conducted due to urban low altitude flying constraints	No population demographic goals
400, 403, 404, 405, 406, 419, 444, 471	Surveys not conducted due to scattered elk at low densities	Accept the occasional transitory elk in passage across these hunting districts, but tolerate no permanent occupancy by elk
600, 640, 650, 652, 670	Surveys not conducted due to scattered elk at low densities	Maintain low elk densities across the elk management unit (EMU)
701, 703	Surveys not conducted due to scattered elk at low densities	No population demographic goals

When comparing targets between the 2005 Plan and the 2023 Plan, the vernacular used to describe them differs. In the 2005 Statewide Elk Management Plan (2005 Plan), these numbers are referred to as "population objectives", whereas in the 2023 Plan (2023 Plan) they are referred to as "population size goals".

More specifically, 76 HDs have increased the upper limit of the goal range and 6 have decreased the upper limit of the goal range. There are also 17 HDs with similar population goals between plans, 30 HDs that do not have population goals (due to high amount of canopy cover, no wintering elk or low elk density), and 7 HDs with population goals that cannot be compared across years (due to boundary changes in 2022 or newly established population goals). In some HDs, population goals have increased commensurate with landowner tolerance, as measured through the public process. Increased goals in these areas are set to not exceed current habitat capacities. In HDs where the population goal has decreased since 2005, either landowner tolerance has decreased, or ecological carrying capacity has decreased. (Tables 1 and 2). These goals are provided for each HD within the 2023 Plan within the section titled *Hunting District Information and Management Direction*.

Table 2. Hunting district, 2005 Plan objective and range, 2022 survey count, and proposed goal range for those hunting districts with surveyed animals.

Hunting District(s)	2005 Elk Plan Objective	2005 Objective Range	Most Recent Elk Count (as of 2022)	Proposed Goal Range
214	450	360-540	170	160-240
250	1,400	1,120-1,680	750	800-1200
310	1,500	1,200-1,800	757	600-1000
331	1,290	1940-2300	810	1250-1950
360	1,200	3760-5640	1,323	3300-4700
121	1,355	1,084-1,626	1,497	1,350-1,890
123	365	292-438	311	360-510
140	150-320[2]	150-320	102	250-350
150	310-500	310-500	198	450-630
202	350	280-420	350	400-600
204, 261, 262	600	1040-1560	636	1060-1680
210, 211, 212, 216	1,450	1420-2130	2,127	1440-2160
215	1,400	1,120-1,680	1,709	1,360-2,040
282, 285	900-1,100	900-1,100	863	1140-1460
301, 309	500	400-600	714	400-800
303	800	700-900	813	650-1100
312	600	480-720	1,347	1000-2000
314	3,000	2,400-3,600	3,961	2900-4200
315	1,000	800-1,200	2,500	1200-2000
317	900	720-1,080	1,747	900-1700

318	500	400-600	666	400-800
335	600	480-720	1,174	500-1400
339, 343, 284, 293	2,150	1,720-2,580	2,858	1800-3500
350, 370	600	480-720	586	650-850
390	900	720-1,080	1,338	1200-1800
391	975	780-1,170	1,233	1000-1500
392	400	320-480	325	480-720
393	1,500	1,200-1,800	3,415	2700-4000
401	350	280-420	600	450-650
410	2,000-2,300	2,000-2,300	2,735	2600-3200
411, 535	400	640-960	9,133	6000-12000
412	300	240-360	992	600-1500
413	825	660-990	940	700-1000
415	200	160-240	169	150-250
416	725	580-870	2,321	1000-1500
417	375	350-400	2,545	1500-2500
418	150	120-180	288	200-300
420, 448	1,200	960-1,440	1,136	1000-1500
422	500	450-550	1,042	600-800
426	75	75-75	314	150-350
441	500	400-600	627	500-700
445, 455	2,200	1760-2640	4,742	2500-3500
446	950	760-1,140	3,608	1500-2000
447	700	560-840	1,637	800-1200
450	87	75-100	589	300-400
451	275	220-330	162	200-800
452	600	480-720	1,009	800-1200
502	50	50	181	150-250
515	160	128-192	1,045	900-1500
525	1,000	800-1200	2694	2200-3300
540	600	480-720	1,739	1500-2000
575	225	180-270	1,172	650-1050
580	975	780-1,170	4,215	2500-4000
590	750	840-1260	3,132	2400-3600

620, 621, 622	1,400-1,650	1,400-1,650	1,292	1600-2400
630	300-350	300-350	254	400-600
690	250	225-275	1,026	800-1200
700	200-300	200-300	1,379	1600-2400
702, 704, 705	500	400-600	3,046	3,240-4,860
201	*	*	2,164	1600-2400
240	*	*	971	600-900
302	*	*	2,768	1100-2100
311	*	*	1,146	400-2000
321	-	N/A		1600-2000
329	*	*	831	700-1300
270	3,800	3,040-4,560	4,386	3600-4400
200	300	240-360	265	240-360
213	1,150	920-1,380	1,873	920-1380
217	600	480-720	781	480-720
281	500-700	500-700	463	500-700
291	600	480-720	654	480-720
292	800	640-960	540	640-960
290, 298	600	480-720	1,006	480-720
313	4,000	3,000-5,000	5,473	3000-5000
340	1,000	800-1200	830	800-1200
380	2,000	1,700-2,300	1,794	1,700-2,300
421	500	400-600	742	400-600
424, 425, 442	2,500	2,250-2,750	2,307	2,250-2,750
555	200	200	90	150-250
260	50	40-60	205	0-100
320	1,000	800-1,200	1,296	500-1500
322	8,000	6,400-9,600	10,771	6000-10000
565	300	240-360	87	225-375
319	1,475	1250-1700	1,311	1300-1700
304	2,500	2000-3000	2,063	1500-3000

In establishing HD population goals, FWP held 50 public scoping meetings throughout Montana during 2022. FWP intentionally sought localized input through these public meetings so that the specifics of the individual HDs and local elk populations could be discussed in detail with the locally affected public, including interested landowners and sportsmen. Public scoping is the process used to identify the full range of issues that may be

affected if an agency decides to implement a proposed action or alternatives to a proposed action. During the public scoping process, public input was received addressing perceptions about the following key topics:

- Appropriate population levels for elk
- Appropriate distributions of elk
- Desired bull management
- Elk relationships with other ungulates, predator communities, and domestic livestock
- Appropriate tools for managing elk
- Habitat (biological) carrying capacity
- Social carrying capacity
- Ecological carrying capacity

As noted, the concept(s) of habitat (biological), ecological, and social carrying capacity were discussed during the public meetings.

- *Biological carrying capacity* is the maximum number of individuals of a species that the habitat can support. At this level, the area can continuously supply all energetic and physiological requirements. Biological carrying capacity can fluctuate with changing conditions on the landscape. For instance, if habitat conditions improve, the biological carrying capacity increases; conversely, if severe weather, such as drought, diminishes habitat, then the biological carrying capacity may be reduced. In human-dominated landscapes, the biological carrying capacity can differ substantially from that of wildland environments and may be greater because of access to artificial or augmented food sources (Wakeling et al. 2023).

- *Ecological carrying capacity* is the maximum number of individuals of a species at which the population does not negatively influence native plants and animals. For example, when deer levels are greater than ecological carrying capacity, they can affect the regeneration of some plant species and degrade habitat. This, in turn, affects other wildlife species that also depend on those plant species or habitat characteristics (DeCalesta 1994, Tilghman 1989). Overabundant deer can browse heavily on forest understories and alter vegetative communities, which can influence the distribution and abundance of the species that depend on those vegetative communities at multiple trophic levels (Allombert et al. 2005, Adams et al. 2006). Reversing the effects of exceeding ecological carrying capacity can take years (Wakeling et al. 2023).

- *Social carrying capacity* is the population level at which the local human population can tolerate or accept the problems associated with a wildlife population (Wakeling et al. 2023). Along with other societal shifts in wildlife values nationwide (Manfredo et al. 2018), elk management has shifted from a focus on biological carrying capacity to social carrying capacity (Krausman et al. 2014). The social carrying capacity for wildlife abundance is determined by local stakeholders. Because the tolerances by stakeholder group differ, social carrying capacity can vary within an area (Wingard and Krausman 2019). Social carrying capacity is often mediated by concerns about public safety and financial considerations. Social carrying capacity specifically considers conflicts among recreationists (Hendee et al. 1978).

While ecological carrying capacity is a convenient concept, the absolute number of elk that may exist on the landscape based on forage availability is a number that changes seasonally and annually, and in relation to other grazing animals on the landscape. In practice, ecological carrying capacity is difficult to measure effectively. Yet when elk populations exceed ecological carrying capacity for an extended period of time, the effects of excessive numbers become evident.

Current data, including population surveys and harvest data for elk, public input from the 50 public scoping meetings and written comments FWP received associated with the scoping meetings, and the draft elk management plan released in June 2023, were used to guide FWP in developing additional elk management goals such as management of bulls, overall and specific elk population distribution, elk game damage, and elk recreation opportunities.

In April 2020, the Montana Fish and Wildlife Commission (Commission) endorsed FWP's initiation of the process to develop a new elk management plan. In the first step, FWP assembled the Elk Management Plan Initial Guidance Citizens Group (Initial Citizens Group). There was representation from all seven FWP administrative regions, and the Initial Citizens Group was diverse, independent, and represented multiple stakeholder perspectives, as follows:

- Hunter
- Conservation group
- Landowner or manager involved with agricultural land use
- Outfitter or guide
- Non-consumptive wildlife enthusiast
- Landowner or manager involved with land use other than agriculture
- Business owner
- Industry group
- Wildlife and land management enthusiast
- Local government

The Initial Citizens Group met three times during winter 2020 and developed 19 guiding principles using a facilitated, structured process. The 19 guiding principles established by the Initial Citizens Group are identified below (see Appendix A in the 2023 Statewide Elk Management Plan for more information).

Initial Citizen Group's guiding principles:

1. Maximize public input in setting elk objectives
2. Maximize local grassroot input
3. Maintain hunting as a primary tool for elk population management
4. Maximize partnerships between private landowners, land management agencies, and FWP
5. Maximize hunter access to elk
6. Maximize satisfaction with elk distribution in Montana for:
    a. Hunters
    b. Landowners
    c. Wildlife enthusiasts
    d. Outfitters
    e. Agricultural producers
7. Minimize prevalence and spread of CWD in Montana
8. Minimize impacts on agricultural production, private rangeland, and infrastructure
9. Minimize transmission of brucellosis to livestock
10. Maintain over-the-counter opportunity to hunt elk
11. Minimize impacts of crowding on hunter experience
12. Maintain limited-draw permit areas for hunting mature bulls
13. Maximize the use of the general rifle season as a primary management tool, reducing the need for additional hunts
14. Maintain the availability of a variety of hunting tools for addressing elk conflicts
15. Incentivize collaboration among stakeholders
16. Maximize landowner-hunter cooperation with elements of the elk management plan

17. Maximize opportunity for FWP to improve hunter-landowner relations
18. Maximize internal and external programs that promote ethical hunter behaviors
19. Maintain the fair chase principles in the management of hunting and regulation of hunting technology

FWP offered two real-time public comment opportunities during the Initial Citizens Group meetings and received minimal public input at this time (https://www.youtube.com/watch?v=zHgOaAi-Luo&t=1538s) (https://www.youtube.com/watch?v=pPP1y1c8OMM) (https://fwp.mt.gov/binaries/content/assets/fwp/commission/2021/jun-24/wildlife/new-elk-guidng-principles-public-comment.pdf). The 19 guiding principles were then presented to the Commission in April of 2021, and a 30-day public comment period was opened. FWP received several public comments during this time.

In the summer of 2022, a second Elk Management Citizen Advisory Group (Citizen Group 2) was established to develop new relationships among stakeholders and collaboratively identify new, creative ideas and recommendations for issues surrounding elk management in Montana to balance hunter and landowner interests. The stakeholders that participated in this group were not assigned to specific representations so as to eliminate any biases associated with affiliations and positions.

The Citizen Group 2 met 10 times and developed 15 recommendations to be considered by the director of FWP. The recommendations were released for public comment, and FWP received 1,397 comments (https://fwp.mt.gov/aboutfwp/public-comment-opportunities/emcag-recommendations). The 15 recommendations (See Appendix B in the 2023 Statewide Elk Management Plan) included:

1. **Access Plus Program:** The intent of the program would be to incentivize landowners to allow public hunting by addressing major concerns regarding allowing public access. This program would produce a pool of hunters that have an elevated skill set and intimate knowledge of landowner operations and concerns through required training.
2. **Choose your weapon season:** The intent of the recommendation is to reduce pressure on elk on public land by easing the crowding on public land. This proposal would make hunters choose which weapon they want to hunt with, therefore limiting the number of people in the field at any given time.
3. **Collaboration between FWP, USFS, BLM, DNRC, and any other pertinent local, state, or federal land management agencies:** The intent of this recommendation is to reaffirm the relationships FWP has with these organizations/agencies, including communicating their collaborations to the public.
4. **Create an A9 tag bundle:** The intent of this recommendation is to increase harvest and lower populations in hunting districts that are over objective. The reduction of elk populations in over-objective districts will also reduce disease risk associated with overpopulation.
5. **Develop user-friendly and effective methods to collect data:** The intent of this recommendation is to demonstrate transparency on the part of the agency as to data collection methods. It would create ways for the general public to receive, contribute to, and find data. This improves stakeholder relationships as everyone feels part of the process.
6. **Establish (where possible) localized elk working groups:** This recommendation encourages communication between landowners, hunters, outfitters, and local FWP biologists. Citizen science would be heard concerning elk movement, and together the group would address redistribution of elk, objectives, access, and other related issues. Season structure and number of permits could also be topics.
7. **Expanded hunter education:** The intent of this recommendation is to improve hunter-landowner relationships with programs similar to the Master Hunter Program. This would improve hunter quality and, with certification possibilities, a potential way for program graduates to access private land to hunt.

8. **Promote focused damage hunts:** This recommendation would allow landowners and biologists to have a list of willing, local participants to choose from. This is a harvest tool to help landowners strategically redistribute elk, mitigate disease, and improve stakeholder relationships.
9. **Improve accessibility to the FWP videos, programs, PSAs, etc. that promote the desired behaviors between landowners and hunters:** This recommendation would make existing communication pieces readily available or easy to find.
10. **FWP landowner liaison:** This recommendation creates a liaison position to work with landowners and creates a communication pathway between community partners. This could improve stakeholder relationships and mitigate disease.
11. **We have to manage elk where they are not:** The intent of this recommendation is to restore historic elk numbers in northwest Montana to alleviate the excessive elk hunting pressure that is experienced in the rest of the state. This proposal also is intended to strategically redistribute hunters, improve quality access to harvest, and encourage better data collection by the department.
12. **Understand and mitigate the disease of brucellosis in elk:** This recommendation recognizes the impacts on livestock producers within the designated surveillance area who deal with the risk of disease transmission from elk to cattle and improve stakeholder relationships.
13. **Use of shoulder seasons:** The intent would be to assess the benefits of shoulder seasons, redistribute elk, and reduce landowner hunting fatigue, thereby improving relationships between landowners and hunters.
14. **Stakeholder meetings:** This recommendation fulfills one of the key components of the group's intended purpose – "to forge new relationships among stakeholders."
15. **Enforce stricter penalties for trespassing and other bad behaviors by hunters and landowners:** The intent of tougher laws is to discourage trespassing and other unethical behaviors that occur, including landowners illegally blocking or detouring access to public lands. The intent is to improve stakeholder relationships and address quality access to harvest.

The recommendations were released for public comment, and FWP received 1,397 comments. Several of the recommendations, or portions of recommendations, had public support, were within the scope of the plan, and were within FWP's authority. These recommendations are included in the plan within the "strategies" portion of the statewide direction, as well as some of the HD strategies where applicable. Recommendations included in the plan are:

- Recommendation #3: Collaboration with other local, state, and federal land management agencies
- Recommendation #6: Establish localized elk working groups
- Recommendation #8: Promote focused game damage hunts (included portions of this recommendation)
- Recommendation #9: Improve accessibility to the FWP videos and programs that promote the desired behaviors between landowners and hunters
- Recommendation #11: We have to manage elk where they are not (included portions of this recommendation in Region 1 HD management direction sections)
- Recommendation #12: Understand and mitigate the disease of brucellosis in elk
- Recommendation #13: Use of shoulder seasons (included portions of this recommendation)

Public scoping for the elk management plan was open from June 20 through Oct. 15, 2022, and included 50 public scoping meetings held across the state to gather feedback on desired elk population size and distribution, bull goals, and other elk management challenges for each HD. In total, FWP received 824 comments that were used in developing proposed goals and measures related to objectives for each HD.

Work completed by the citizens group(s), and public comment received during those advisory processes, helped guide statewide objectives, goals, and strategies included in the 2023 Plan. Area biologists with FWP developed

proposed goals and measures for local elk population demographic objectives, distribution goals, and elk recreation goals after considering public scoping comments and elk biology, while maintaining relative consistency across HDs and regions.

In Montana, hunting regulations are evaluated biennially and established by the Commission. The Commission, not FWP, has the authority to fix harvest quotas. The 2023 Plan is intended to guide FWP proposals to the commission in accordance with each entities' statutory obligations. Thus, the process of setting goals occurs before the commission determines appropriate hunting regulations, which incorporate a sustainable population number. Evaluating hunting regulations biennially provides FWP wildlife managers the opportunity to assess the efficacy of a regulation in meeting goals and adapt elk harvest strategies on an as-needed basis.

There are several functional differences between the 2005 plan and the 2023 Plan. The 2005 Plan included annual changes to recommended population goals and proposed regulation packages. The 2023 Plan allows for updates to the plan, with a deliberate evaluation approximately every five years (offset from biennial season-setting years). The 2023 Plan has an indefinite expected lifespan, but after 15-years will be evaluated by FWP for the necessity of an update, major revision, or development of a new plan. By allowing for updates, the most current available elk management tools will be included as needed, and individuals interested in changes to the 2023 Plan will be provided opportunity to share their perspective using a formal public process, including the commission's season-setting processes. Under the 2023 Plan, FWP may incorporate new, adaptive, or innovative approaches to monitoring and management of elk as new science and information becomes available. This type of change would only initiate an update to the 2023 Plan if it resulted in a substantive change to management or monitoring strategies.

Another difference between the 2005 Plan and the 2023 Plan is the structure by which recommended harvest numbers are proposed for each HD in the state. The 2005 Plan included a set of hunting regulation packages (standard, liberal, and restrictive) with population measurement criteria (triggers) for moving from one regulation package to another. The approach in the 2005 Plan directly tied hunting regulation packages to results of monitoring data, which differed by HD and did not have consistent statewide responses. As elk management tools have changed over the past 18 years, the prescribed management action of a single specific season type resulted in season packages that were no longer available (e.g., legislative discontinuation of the antlerless A7 license), or failed to prescribe new season packages that are now available but were not available when the 2005 Plan was developed (e.g., shoulder seasons by commission action that extended season dates for some elk hunts, legislative increase to the annual bag-limit per hunter up to three elk per year). The 2023 Plan includes harvest matrices for antlerless and antlered elk that describe all season-types currently available in Montana ranging from liberal to restrictive. Each HD can move through the harvest matrices as needed to meet multiple goals, and the matrices can be updated as needed (see the Antlerless and Antlered Harvest Matrices on page 42-51 in the 2023 Elk Management Plan).

Further differences between the 2005 Plan and the 2023 Plan include the number and type of objectives used to determine success. The 2005 Plan focused on a population size objective and included a bull objective for Elk Management Units (EMUs). An EMU was generally defined as one or more HDs that was occupied by a single subpopulation or herd of elk that moved across these HDs throughout the year. The 2023 Plan would continue to include population demographic goals (population size and bull metrics), but would also include elk distribution goals, agricultural impact goals, and elk recreation goals. Elk distribution goals have been added to describe desired population and harvest distributions throughout the year. Agricultural impact goals have been added to delineate desired (lower) impacts on agriculture. Elk recreation goals have been added to describe the desired harvest goals, such as higher bull-to-cow ratios or age structure in the harvest. This larger suite of goals better reflects the complex nature of elk management, allows FWP to consider multiple goals simultaneously, and increases transparency when there are competing goals and tradeoffs associated with a given element of FWP's elk management strategy.

Lastly, the 2005 Plan defined bull objectives for most EMUs but did not specify those that would have special management to achieve a higher bull-to-cow ratio or older-age bull structure. The 2023 Plan explicitly recommends 32 HDs as "Special Bull Management Districts;" if an HD is not recommended to be a "Special Management District," then it is considered a "Bull Opportunity District." (*See* descriptions for each HD beginning on page 66 in the 2023 Elk Management Plan). The following HDs are considered Special Bull Management Districts: 217, 250, 339, 380, 401, 410, 411, 412, 417, 424, 425, 426, 441, 442, 445, 447, 455, 502, 515, 535, 555, 575, 590, 620, 621, 622, 630, 690, 700, 702, 704, and 705. Comparisons between the two plans show similarities and differences in approaches (Table 3).

Table 3. Unique aspects included in the 2005 Plan and the 2023 Plan and those incorporated in both plans.

2005 Plan	Both Plans	2023 Plan
• Focus on population size objective	• Include numerical population size goals where surveys are conducted	• Focus on multiple goals simultaneously
• Single measure of success (meeting population objective)	• Defined criteria for success	• Multiple measures of success • Transparency where competing goals and tradeoffs exist
• Regulation options defined for each HD	NA	• Regulation options defined for the state, all available as needed to any HD
• No defined Special Bull Management HDs	NA	• Special Management HDs are recommended and have common bull-to-cow ratio goals (with few exceptions)
• Option for commission adjustment of objectives annually	• Adjustment-review of plan can occur throughout plan lifespan	• Option to review-adjust plan as necessary
• Local scale defined as EMU	• Local scale and statewide scale goals and objectives	• Local scale defined as HD scale

Affected Area – Location of Proposed Action, Associated Elk Data by Location, and Historical Insights

Under the 2023 Plan, the analysis area for direct, secondary, and cumulative impacts on affected resources includes the entirety of the state of Montana (all 56 counties) covering an area of 147,040 mi^2 (380,832 km^2).

Elk were widely distributed across North America prior to the arrival of the first Europeans. In Montana, elk were distributed throughout the lengths of the Missouri and Yellowstone River valleys and overlapped with numerous tribal territories. At the time of the Lewis and Clark expedition in 1804 and 1805, observations extended little beyond the vicinity of the major river valleys. By the early 1800s, unregulated subsistence, market, and hide hunting had almost eliminated elk east of the Mississippi River. Unregulated hunting continued to reduce elk in the western United States, and elk were extirpated from eastern Montana (generally east of the continental divide) by the mid-1880s. Elk were also heavily reduced in western Montana at this time.

Elk probably reached a low point in numbers in North America during 1900–1910. In 1910, it was estimated that fewer than 50,000 elk existed in North America. About half were associated with Yellowstone National Park (YNP), Jackson Hole, and the surrounding areas, often referred to as the Greater Yellowstone Ecosystem (GYE). The establishment of YNP in 1872 and its remoteness was a major factor in preserving and preventing the extirpation of elk across North America (**Figure 2**).

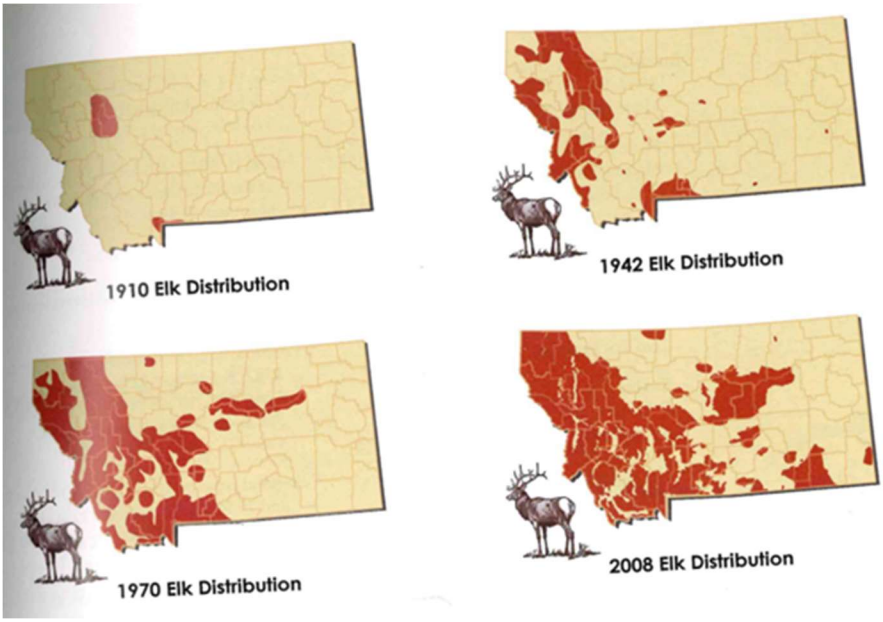

Figure 2. Historical distribution of elk in Montana, 1910–2008 (Picton and Lonner 2008).

During the late 1910s and 1920s, local Montana and national interests in protecting and expanding existing elk herds increased. Many local sportsmen's clubs were formed with a primary purpose of preserving elk. In 1910, the first transplant of elk from YNP was made to Fleecer Mountain, near Butte, Montana. During the period from 1910–1940, 1,753 elk from the GYE and the National Bison Range, located on the Flathead Indian Reservation in southwest Montana, were transplanted to 31 sites in the National Forests of Montana (West 1941). In 1913, the Sun River Game Preserve was established to protect wintering elk and elk habitat, and hunting season closures were established elsewhere in locations where elk populations had been diminished (**Figure 3**).

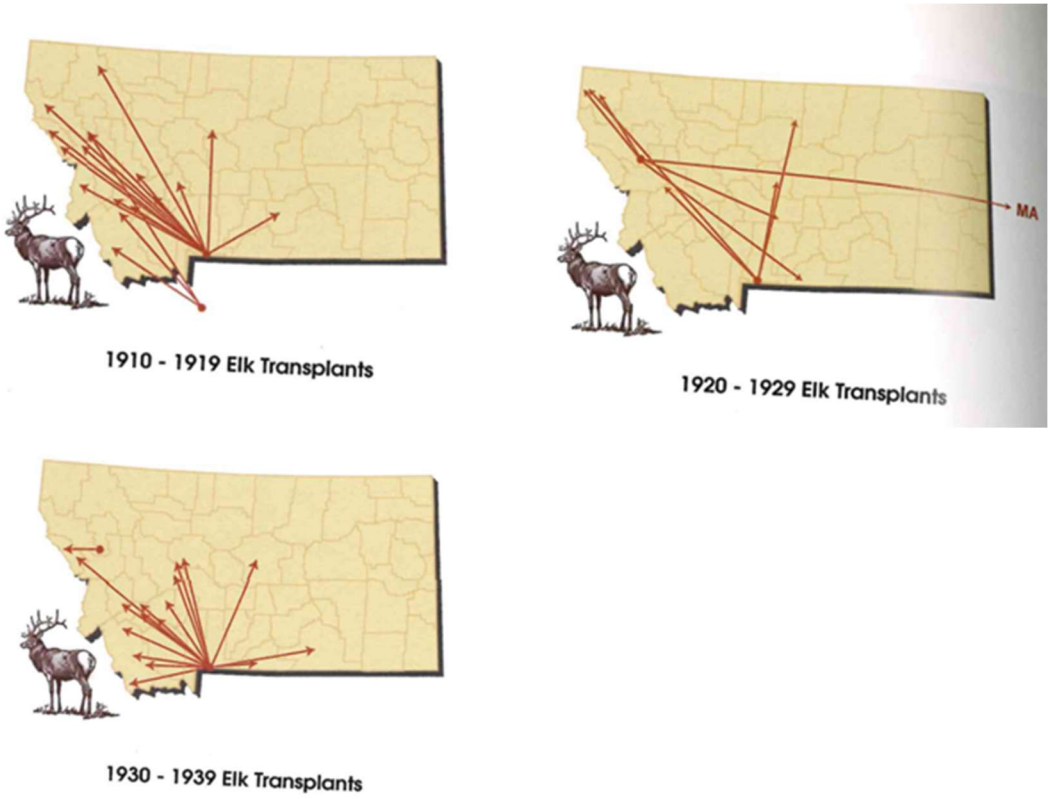

Figure 3. Translocations of elk from the Greater Yellowstone Ecosystem into areas in Montana, 1910–1939 (Picton and Lonner 2008).

In 1922, about 13,000 elk were estimated to inhabit the national forests of Montana and northern Idaho, exclusive of YNP. It is estimated, about 7,500–8,000 of these elk were in Montana. In 1928, an estimated 10,900 elk were in Montana (Raymer 1930). By 1940, the national forests of Montana, excluding YNP, were estimated to contain 22,000 elk.

The era of management based on biology began in 1940. At that time, there were seven major native elk herds in Montana and small elk herds at scattered transplanted locations (West 1941). In 1940, the first state game manager position was created, biologists were hired, and the first portion of the Judith River Game Range was acquired by the state for elk winter range.

Reintroduction of elk through transplants continued, and from 1941 to 1970, an additional 4,140 elk were released into various locations across Montana (**Figure 4**), mostly from YNP. As a result of these and earlier transplants, and natural increases in distribution of existing elk, elk began to fill in much of their former habitat, including some areas of eastern Montana. Today, all timbered mountainous areas of central and western Montana contain elk, as well as some of the open habitat types. Additionally, some huntable elk herds exist in areas of eastern Montana. While the state's elk population was estimated at about 8,000 in 1922, biologists counted over 141,000 elk in the state during aerial surveys conducted in 2022, making it clear that elk are much more abundant and well distributed today than they were a century ago in Montana.

Figure 4. Translocations of elk within Montana, 1940–1999 (Picton and Lonner 2008).

Hunting has cultural value and is important to many Montanans. For Montana residents, General Elk Licenses are unlimited (one per hunter) and available for over-the-counter purchase, whereas nonresident elk hunters must obtain an Elk License via drawing. The number of Big Game Combination Licenses allocated to nonresidents has been set by the legislature at 17,000 since 1979. There are additional elk license options for nonresidents available over the counter or via draw, such as B Licenses, Nonresident Youth Big Game Combination Licenses, Nonresident College Student Combination Licenses, and others. In HDs where numbers of B Licenses or special permits are limited, nonresidents are limited to, but not guaranteed, 10% of license or permit quotas by law.

General Elk Licenses are unlimited in number with one license available to each Montana resident hunter. Additionally, a hunter may hold an Elk B License, allocated via random draw or purchased over the counter. B Licenses are valid for the take of antlerless elk only. A hunter may hold up to three elk licenses in a year (either three B Licenses or two B Licenses and one General Elk License). Elk Permits, which validate a General License in a specific area, are allocated through a random draw; an Elk Permit does not allow the hunter to harvest additional elk. An Elk Permit allows hunters to hunt in a restricted area, restricted time-period, or for a specific sex of elk where there are other restrictions in place for General Elk License holders. Elk harvest in Montana is

currently allocated by using combinations of valid license types, permits, and season dates. For example, limited numbers of licenses and permits are available to nonresident hunters as well, limited to 10% of those available through the draw in the current regulations for 2023 (**Figures 5 and 6**).

RESIDENT License and Permit Availability Chart					
Individual License/Permit	Resident 18-61 years Cost	Resident Youth (12-17) or Senior (62+)	Resident Disabled	Deadline to apply	Additional Information
Deer					
General License	$16.00	$8.00	$8.00	-	
Deer Permit - Drawing only	$5.00	$5.00	$5.00	April 1	Application fee only. Permit must be used in conjunction with General deer license. Residents must have current year General deer license to apply.
Deer B License - Drawing only	$15.00	$15.00	$15.00	June 1	Antlerless only.
Deer B License - OTC	$10.00	$10.00	$10.00	-	Over-the-counter. Antlerless only. Valid in specific district(s). Purchase beginning Aug. 7.
Elk					
General License	$20.00	$10.00	$10.00	-	
Elk Permit - Drawing only	$9.00	$9.00	$9.00	April 1	Residents must have current year General Elk License to apply. A permit must be used in conjunction with a General Elk License.
Elk B License - Drawing only	$25.00	$25.00	$25.00	June 1	Antlerless only
Elk B License - OTC	$20.00	$20.00	$20.00	-	Over-the-counter. Antlerless only. Valid in specific district(s). Purchase beginning Aug. 7.

Figure 5. Deer and elk licenses available to residents of Montana, 2023.

NONRESIDENT License and Permit Availability Chart

Opportunities	Non-resident Cost	Deadline to apply	Additional Information
Nonresident Native (NR)			
NR Big Game Combination License	$604.00	-	For Montana native born with current Montana resident relative; other qualifications apply. For information, call 406-444-2950. The NR Big Game Combination includes General Deer, General Elk, Upland Bird (excluding turkey), and Season Fishing Licenses. The NR Elk Combination has everything except Deer, and the NR Deer Combo has everything except Elk.
NR Elk Combination License	$509.00	-	
NR Deer Combination License	$352.00	-	
Season Fishing License	$50.00	-	$15 AISPP fee also required.
Bird License	$55.00	-	Conservation License and a Base Hunting License also required.
Deer B (OTC)	$37.50	-	Antlerless deer
Elk B (OTC)	$135.00	-	Antlerless elk
Big Game Combination: Includes General Deer, General Elk, Upland Bird (excluding turkey), and Season Fishing licenses. For information call 406-444-2950.			
Big Game Combination- Drawing	$1,213.00	April 1	
Big Game Combination- Youth (12-17) - Sponsored	$604.00	-	For information, call 406-444-2950.
Big Game Combination- College Student	$604.00	-	Certification required for nonresident students attending a Montana college full-time. For information call 406-444-2950. License available a any FWP office after Sept. 12.
Deer **Deer Combination: Includes General Deer, Upland Bird (excluding turkey), and Season Fishing licenses. For information call 406-444-2950.**			
Deer Combination- Drawing	$709.00	April 1	
Deer Combination- Youth (12-17)- Sponsored	$352.00	-	For information call 406-444-2950.
Deer Combination- College Student	$352.00	-	Certification required for nonresident students attending a Montana college full-time. For information, call 406-444-2950. License available at any FWP office after Sept. 12.
Deer Permit- Drawing	$5.00	April 1	Nonresidents must also apply for a Deer License when applying for a Deer Permit. A permit must be used in conjunction with a General Deer License.
Deer B- Drawing	$80.00	June 1	Antlerless deer
Deer B- OTC	$75.00	-	Purchase beginning Aug. 7.
Elk **Elk Combination: Includes General Elk, Upland Bird (excluding turkey), and Season Fishing licenses. For information call 406-444-2950.**			
Elk Combination- Drawing	$1,023.00	April 1	
Elk Combination- Youth (12-17) - Sponsored	$509.00	-	For information call 406-444-2950.
Elk Combination- College Student	$509.00	-	Certification required for nonresident students attending a Montana college full-time. For information call 406-444-2950. License available a any FWP office after Sept. 12.
Elk Permit - Drawing	$9.00	April 1	Nonresidents must also apply for an Elk License when applying for an El Permit. A permit must be used in conjunction with a General Elk License.
Elk B - Drawing	$275.00	June 1	Antlerless elk- includes drawing fee.
Elk B - OTC	$270.00	-	Over-the-counter. Antlerless only. Valid in specific district(s).

Figure 6. Licenses available to Montana nonresidents to hunt deer and elk in Montana, 2023.

Since 1953, FWP has annually surveyed a random sample of elk license holders via telephone. From these surveys, the number of license holders who actively hunted for elk, the number of days spent afield hunting for elk, and the number of elk harvested can be estimated with a predetermined level of confidence. These

data highlight the importance of hunter survey data along with licensing information to estimate the number of hunters who actively hunted for elk annually (**Figure 7 and 8**).

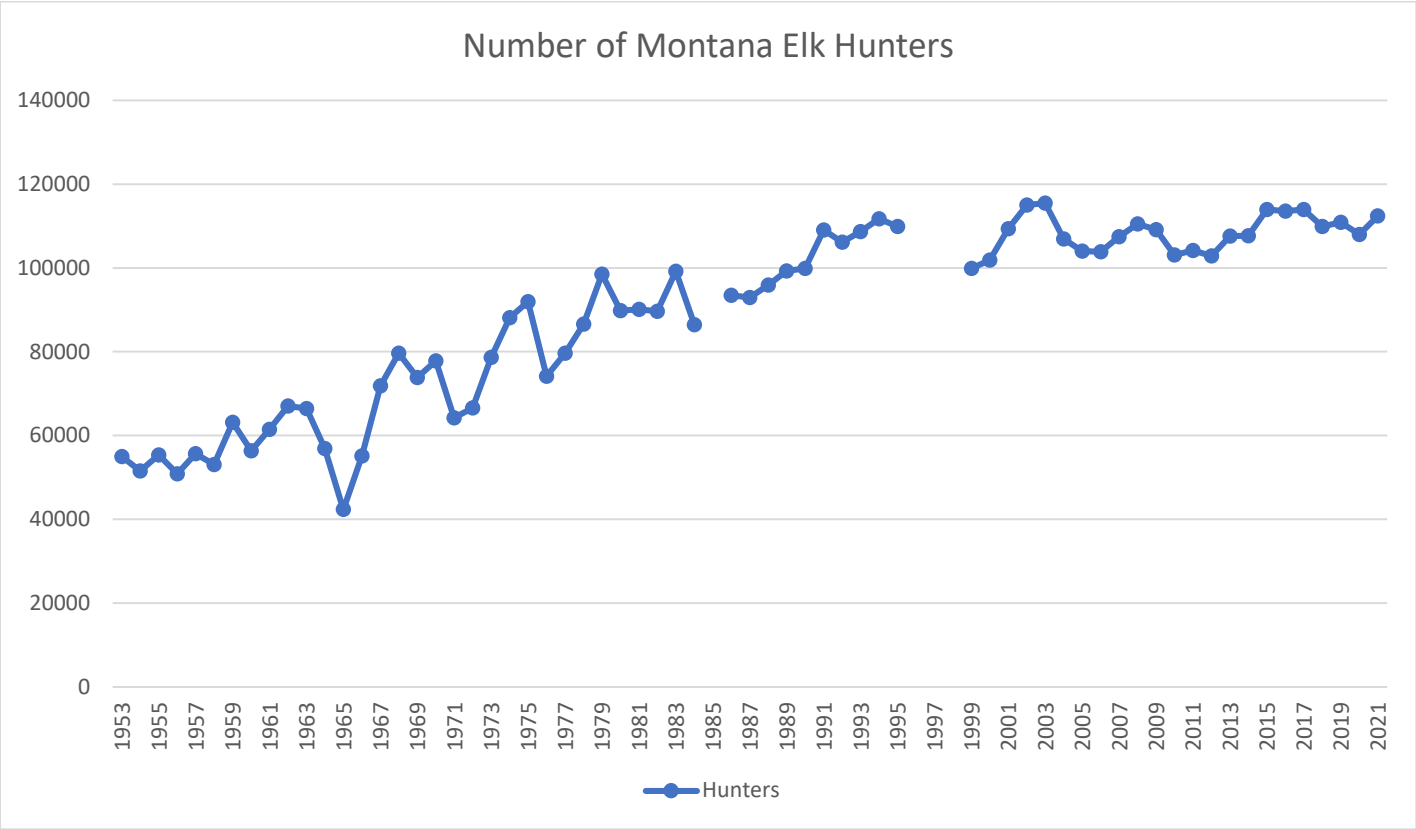

Figure 7. The number of hunters that pursued elk in Montana, 1953–2020.

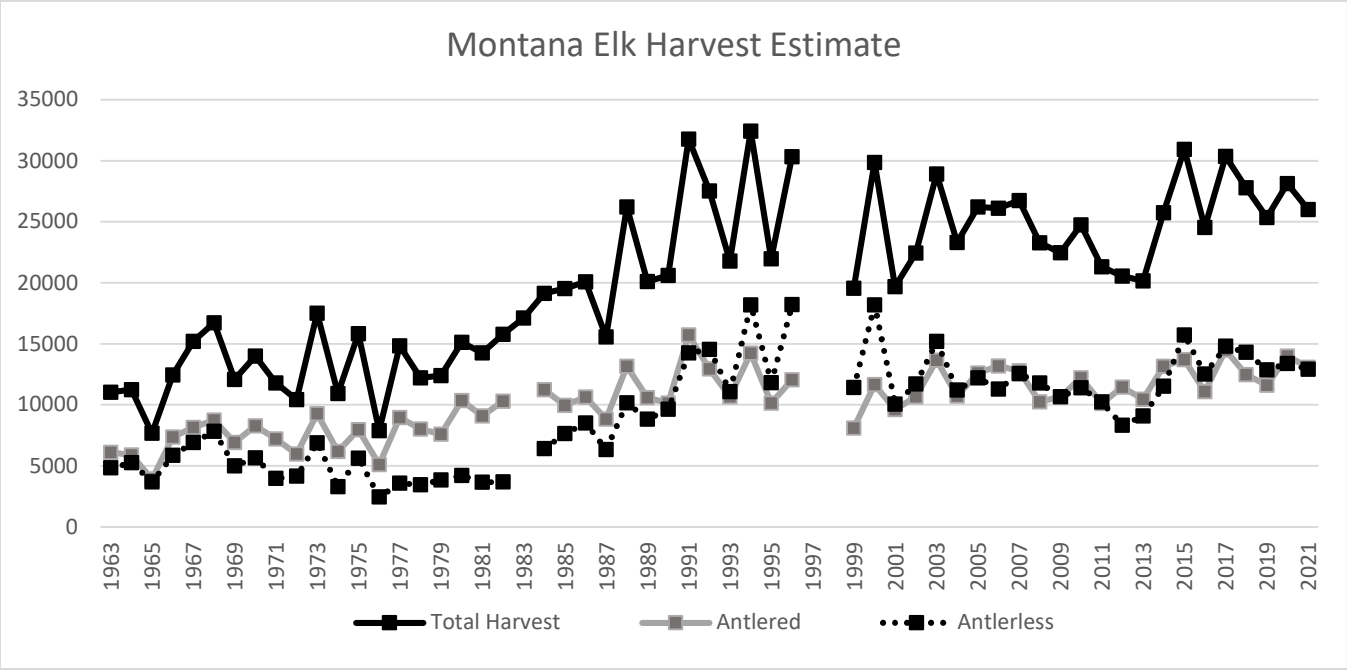

Figure 8. Number of elk harvested in Montana by sex, 1963–2021.

Between 2004 and 2021, the estimated number of hunters who actively hunted for elk in Montana fluctuated between 102,860 in 2012 and 113,976 in 2017. During the time-period between 2004 and 2021, the estimated number of days hunters spent pursuing elk varied between 811,831 days in 2006 to 1,066,716 days in 2016. Number of days spent hunting per hunter varied between 7.8 days per hunter (2006) to 9.4 days per hunter (2016 and 2021). During the same timeframe, nonresident elk hunters comprised 13–18% of total active elk hunters in Montana (**Figure 9**). In comparison, a 2016 nationwide survey estimated 9.2 million big game hunters in the United States and 712,000 of those hunters hunted for elk a total of 6 million days. If the nationwide and state hunter effort datasets are compared, Montana hunters comprise approximately 14-18% of the nation's elk hunters and elk hunter days.

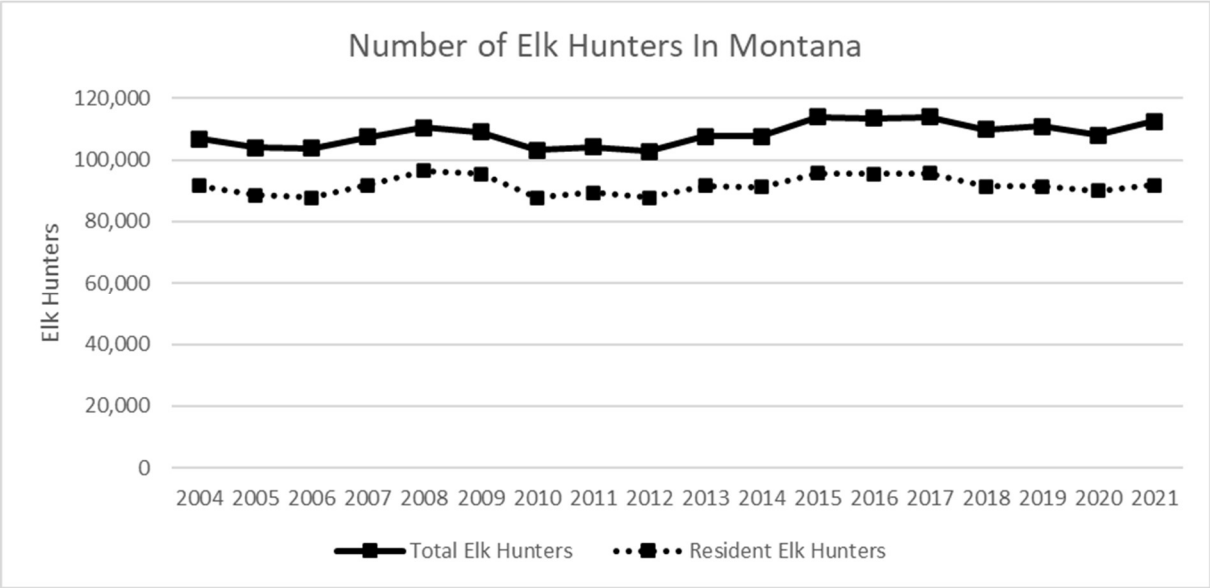

Figure 9. Total hunter numbers and resident hunter numbers in Montana have remained relatively stable from 2004 through 2021.

Elk harvest is estimated for each hunting district annually using a telephone survey of a random stratified sample of elk license holders. Elk hunting effort data is also collected during these surveys. This method has been shown to be cost-effective and reliable, whereas other methods such as self-reporting can have unacceptable levels of bias, if follow-up surveys are not conducted. Statewide, elk harvest peaked in 1994 with a total estimated harvest of 32,433. Beginning in 2004, Montana allowed for the harvest of two elk, only one of which could be antlered. In 2020, Montana allowed for the harvest of three elk, only one of which could be antlered. These additional opportunities were allocated using B-licenses.

Under the 2005 Plan, where numerical population objectives were included, population objectives were based on counts from aerial surveys. Likewise, population demographic goals contained in the 2023 Plan are based on observed number of elk during aerial surveys where they were feasible to conduct. Aerial elk surveys are typically flown using a fixed-wing aircraft or helicopter with the pilot and an FWP biologist. During aerial elk surveys, biologists count all visible elk in the survey area, known as a complete coverage survey. These surveys do not yield an overall abundance or population estimate, rather, a minimum count and index of the population trend which can provide useful information over time (increasing, decreasing, or stable).

Given variable elk behavior, landscape variables, and shifting seasonal weather patterns within a specific HD, biologists design and conduct surveys to yield optimal results. Most surveys (76%) are conducted between

January and April (FWP 2013). Good winter surveying conditions include cold, clear, and sunny days with complete snow cover on the ground. Fresh snow can be helpful for biologists and pilots to locate elk because their tracks are visible from the air. Some aerial surveys are also flown during spring green-up (March–May) or during the summer (July). Spring green-up and summer surveys are predominately used in heavily forested habitats (i.e., the northwest part of Montana) because this is when and where elk are most visible.

Observing all elk in an HD during a survey is highly unlikely, and some elk will not be observed. Factors such as habitat type, time of day, group size, snow cover, elk activity, time of year, weather, aircraft, pilot, and even the observer can affect the number of elk observed. To mitigate factors associated with survey variability, FWP biologists consider multiple years of data. A long-term trend count is then used to gauge relative changes in the population and year-to-year variability (**Figure 10**).

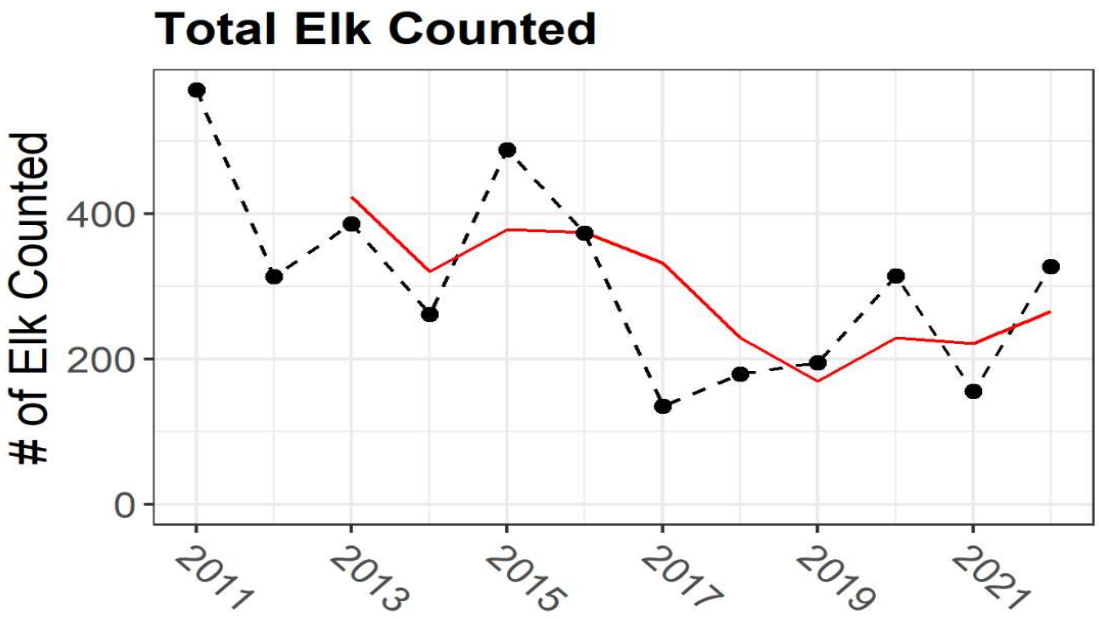

Figure 10. An example of a hunting district survey of elk with high variability in among year surveys.

In general, elk are classified during aerial surveys, but in some areas, classification is done from ground observations separate from aerial surveys. Classifying consists of enumerating cows, calves, and bulls (sometimes bulls are further classified into age classes based on antler size). After elk have been counted and classified, biologists calculate standardized calf-to-cow ratios (calves:100 cows), and bull-to-cow ratios (bulls:100 cows). Age and sex ratios provide a standardized metric to compare across years and sites. Interpreting age and sex ratios can be challenging because they distill multiple processes into a single metric. For example, calf-to-cow ratios represent harvest, pregnancy, juvenile survival, and cow survival in a single variable.

Similarly, bull-to-cow ratios are influenced by recruitment and mortality which may differ between sexes. Antlerless elk harvest may have a substantial influence on measured calf-to-cow ratios and bull-to-cow ratios. For example, when harvest of adult females is occurring, an increase in calf-to-cow ratios may be observed. This is because when adult females are removed via harvest, the denominator of the ratio is decreased and the numerator remains constant, resulting in an increase in the ratio. An increased calf-to-cow ratio in this situation should not be interpreted to reflect an increase in recruitment of calves when compared with years when no adult females are harvested. Incorporating count and classification data from surveys into an Integrated Population Model (IPM) that also uses additional data may improve inference.

Calf-to-cow ratios are used by biologists as an index of recruitment into the population. Obtaining calf-to-cow ratios from aerial or ground-based surveys is less expensive and less time consuming than other direct measures of recruitment (such as radio-collaring calves), and calf-to-cow ratios have been shown to be a reliable index to recruitment. Typically, in Montana, FWP biologists use calf-to-cow ratios collected during late winter or early spring as an estimate of recruitment. However, because potentially significant calf mortality might occur in late winter, calf-to-cow ratios may need to be corrected for assumed mortality from the date of survey to June 1 (when calves are assumed "recruited" to the population). Comparing recruitment indices like calf-to-cow ratios among areas can be challenging because not all data are collected during the same time period or in the same manner. Surveys that occurred substantially earlier in the year may result in greater calf-to-cow ratios simply because calf mortality continues throughout the fall and winter.

Estimating bull-to-cow ratios through classifying elk during aerial surveys provides an index of the proportion of bulls in the population. Overall, sighting bulls is more difficult than sighting cows and calves, as bulls are known to separate from other age and sex classes in winter more so than during other seasons. Therefore, sighting smaller bachelor groups of bulls can be more challenging. Proportionally, smaller bachelor groups of bulls are more often missed during aerial surveys than larger groups. Additionally, bulls may be misclassified as cows during spring green-up surveys if they have already dropped their antlers. Therefore, bull-to-cow ratios recorded during surveys can be biased low, and the true ratio is generally higher than reported. Flying surveys with fresh snow cover can aid in locating single or small groups of bulls.

Observed bull-to-cow ratios are often compared to management objectives or biological requirements. Some state wildlife agencies set post-hunting season bull-to-cow ratio objectives whereas other states have pre-hunting season bull-to-cow ratio objectives. Bull-to-cow ratios collected post-season (mid-late winter) may be biased lower because the sexes are separated during this time and bachelor bull groups have lower detectability. If surveyed during the rut, adult elk are mixed in distribution and unbiased sex ratios can be obtained, however these do not account for bulls removed during the hunting harvest to follow. Montana has used post-season bull-to-cow ratio goals for most HDs where post-season or spring green-up aerial survey data are available to establish the goals in the 2023 Plan, although the commission may choose to target alternative goals, reflected in quotas, for any elk season.

Though ideal in much of the state, aerial surveys are impractical in some areas, such as northwest Montana, that are thickly timbered or northeast Montana where elk densities are very low. In northwest Montana, FWP is evaluating other techniques for estimating elk numbers, such as the use of trail cameras to estimate abundance.

Lower elevation elk habitats (below 6,000 ft. or 1,829 m) vary greatly and include large areas of shortgrass-sagebrush prairie, mountain foothills, intensively cultivated areas (grain and hay field agriculture), natural wetlands and lakes, riparian plant communities ranging from narrow streambank zones to extensive cottonwood river bottoms, manmade reservoirs, small communities, and sizeable towns and cities.

The mountainous portions of elk habitat (above 6,000 ft. or 1,829 m) contains 44 mountain ranges, including the Absaroka, Anaconda-Pintler, Beartooth, Beaverhead, Big Belt, Bitterroot, Blacktail, Boulder, Bridger, Cabinet, Castle, Centennial, Coeur d'Alene, Crazy, East Pioneer, Elkhorn, Flathead, Flint Creek, Gallatin, Garnet, Gravelly, Henry's Lake, Highland, John Long, Lewis, Lewis and Clark, Little Belt, Livingston, Madison, Mission, Nevada, Ninemile-Reservation Divide, Purcell, Rattlesnake, Ruby, Sapphire, Salish, Sawtooth, Snowcrest, Spanish Peaks, Swan, Tendoy, Tobacco Root, and West Pioneer ranges. Mountainous habitats are dominated by coniferous forest (Douglas fir, lodgepole pine, Engelman spruce, western cedar, hemlock, whitebark pine, limber pine, ponderosa pine, juniper), and rocky subalpine-alpine communities found above timberline. Elk were distributed widely throughout Montana in 2022 (**Figure 11**).

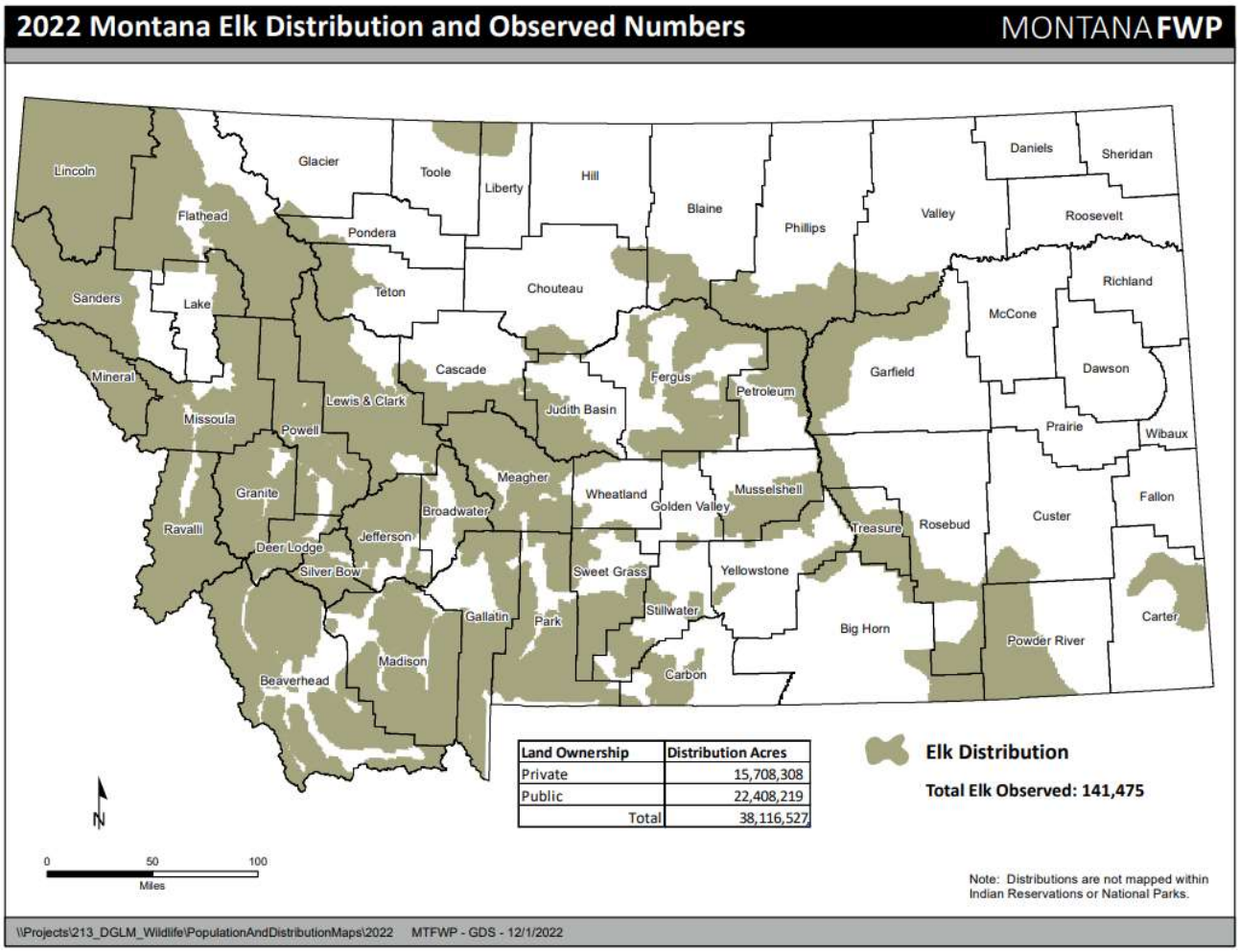

Figure 11. 2022 General Elk Distribution in Montana.

III. Purpose and Benefits of Proposed Project

The EA must include a description of the purpose and need or benefits of the proposed project. ARM 12.2.432(3)(b). Benefits of the proposed project refer to benefits to the resource, public, department, state, and/or other.

FWP's purpose is to fulfill its statutory obligation in supervising Montana's elk population under the 2023 Elk Plan. Under the proposed action, FWP would adopt and implement the 2023 Plan to:

- Inform the decisions regarding elk management and conservation in Montana
- Assist FWP personnel when considering elk management recommendations
- Define FWP's public commitment to responsibly manage elk populations
- Guide FWP in meeting their statutory requirement to sustainably manage elk populations in Montana

If FWP prepared a cost-benefit analysis before completion of the EA, the EA must contain the cost-benefit analysis or a reference to it. ARM 12.2.432(3)(b).

	Yes*	No
Was a cost/benefit analysis prepared for the proposed project?	☐	☒

* If yes, a copy of the cost/benefit analysis prepared for the proposed project is included in Attachment A to this draft EA

IV. Other Agency Regulatory Responsibilities

FWP must list any federal, state, and/or local agencies that have overlapping or additional jurisdiction, or environmental review responsibility for the proposed project, as well as permits, licenses, and other required authorizations. ARM 12.2.432(3)(c).

Other local, state, and federal agencies provide approvals, such as permits, certificates, and/or licenses that influence FWP (**Table 4**). Although this is a summary of state requirements, it does not necessarily represent a complete and comprehensive list of all permits, certificates, or approvals needed. This lists the primary state agencies with regulatory responsibilities, the applicable regulation(s) and the purpose of the regulation(s). Agency decision-making is governed by state and federal laws, including statutes, rules, and regulations, that form the legal basis for the conditions the proposed project must meet to obtain necessary permits, certificates, licenses, or other approvals. Further, these laws set forth the conditions under which each agency could deny the necessary approvals.

FWP does not anticipate needing any permits, certificates, or other authorizations to implement the 2023 Plan.

Table 4. Federal, state, and/or local regulatory responsibilities by various agencies that influence elk management in Montana.

Agency	Type of Authorization (permit, license, stipulation, other)	Purpose
Montana Fish and Wildlife Commission	Manage wild elk populations	Season setting and harvest management, primary authority in Montana for elk harvest
Montana Department of Labor and Industry: Montana Board of Outfitters	Enforcement of laws regulating the outfitting industry	Regulate and permit the outfitters and guides that guide elk hunters in Montana
United States Forest Service	Public lands management, including elk habitat, in Montana	Manage federal lands under the U.S. Department of Agriculture that provides elk habitat
Bureau of Land Management	Public lands management, including elk habitat, in Montana	Manage federal lands (primary) under the U.S. Department of Interior that provides elk habitat
United States Fish & Wildlife Service	Public lands management, including elk habitat, in Montana	Manage federal lands (secondary) under the U.S. Department of Interior that provides elk habitat. USFWS manages substantially less land than does BLM.

V. List of Mitigations, Stipulations

Mitigations, stipulations, and other *enforceable* controls required by FWP, or another agency, may be relied upon to limit potential impacts associated with a proposed Project (**Table 5**). FWP evaluates enforceable conditions that they may rely on to limit potential impacts associated with the proposed Project. ARM 12.2.432(3)(g).

Table 5: Listing and evaluation of enforceable mitigations limiting impacts.

Are enforceable controls limiting potential impacts of the proposed action? If not, no further evaluation is needed.			**Yes ☒**	**No ☐**
If yes, are these controls being relied upon to limit impacts below the level of significance? If yes, list the enforceable control(s) below			**Yes ☒**	**No ☐**
Enforceable Control	**Responsible Agency**	**Authority (Rule, Permit, Stipulation, Other)**	**Effect of Enforceable Control on Proposed Project**	
Season setting	Montana Fish and Wildlife Commission	Authority to set elk hunting seasons (MCA 87-1-301)	Although the 2023 Plan will guide FWP's elk hunting season proposals, the authority to set elk seasons rests with the Commission	
Outfitter operations	Montana Department of Labor and Industry: Montana Board of Outfitters	Authority to set regulations governing outfitting for hunting in Montana (MCA 37-47-101)	Number and type of outfitter operations for hunting elk	
Land management	United States Forest Service	Federal land manager	Regulate land management activities on USDA federal lands that govern elk habitat	
Land management	Bureau of Land Management	Federal land manager	Regulate land management activities on USDI federal lands that govern elk habitat	
Land management	United States Fish & Wildlife Service	Federal land manager	Regulate land management activities on USDI federal lands that govern elk habitat	

VI. Alternatives Considered

In addition to the proposed project, and as required by MEPA, FWP analyzes the "No-Action" alternative in this EA. Under the "No Action" alternative, the proposed project would not occur. Therefore, no additional impacts to the physical environment or human population in the analysis area would occur. The "No Action" alternative forms the baseline from which the potential impacts of the proposed project can be measured.

Under the No Action Alternative, the 2023 Plan would not be adopted by FWP. FWP would continue to manage elk as prescribed by the 2005 Plan. The selection of this alternative would eliminate the proposed action and FWP would continue to manage elk using a numerical population objective and a bull objective for most herds, as outlined in the 2005 Plan. Other components of elk management, such as distribution and recreational values, would continue to be omitted from explicit consideration during elk management decisions.

	Yes*	No
Were any additional alternatives considered and dismissed?	☐	☒

* If yes, a list and description of the other alternatives considered, but not carried forward for detailed review, is included below

VII. Terms Used to Describe Potential Impacts on the Physical Environment and Human Population

The impacts analysis identifies and evaluates **direct**, **secondary**, and **cumulative impacts**.

- **Direct impacts** are those that occur at the same time and place as the action that triggers the effect.
- **Secondary impacts** "are further impacts to the human environment that may be stimulated or induced by or otherwise result from a direct impact of the action." ARM 12.2.429(18).
- **Cumulative impacts** "means the collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures." ARM 12.2.429(7).

Where impacts are expected to occur, the impact analysis estimates the **extent, duration, frequency,** and **severity** of the impact. The duration of an impact is quantified as follows:

- **Short-Term**: impacts that would not last longer than the proposed project.
- **Long-Term**: impacts that would remain or occur following the proposed project.

The severity of an impact is measured using the following:

- **No Impact**: there would be no change from current conditions.
- **Negligible**: an adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor**: the effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- **Moderate**: the effect would be easily identifiable and would change the function or integrity of the resource.
- **Major**: the effect would irretrievably alter the resource.

Some impacts may require mitigation. As defined in ARM 12.2.429, mitigation means:

- Avoiding an impact by not taking a certain action or parts of a project;
- Minimizing impacts by limiting the degree or magnitude of a project and its implementation;
- Rectifying an impact by repairing, rehabilitating, or restoring the affected environment; or
- Reducing or eliminating an impact over time by preservation and maintenance operations during the life of a project or the time period thereafter that an impact continues.

FWP may, as an alternative to preparing an EIS, prepare an EA whenever the action is one that might normally require an EIS, but effects which might otherwise be deemed significant appear to be mitigable below the level of significance through design, or enforceable controls or stipulations, or both, imposed by the agency or other government agencies.

For an EA to suffice in this instance, the agency must determine that all the impacts of the proposed action have been accurately identified, that they will be mitigated below the level of significance, and that no significant impact is likely to occur. The agency may not consider compensation for purposes of determining that impacts have been mitigated below the level of significance. ARM 12.2.430(4).

A list of any mitigation strategies including, but not limited to, design, enforceable controls or stipulations, or both, as applicable to the proposed project is included in **Section VI** above.

FWP must analyze impacts to the physical and human environment for each alternative considered. The proposed project considered the following alternatives:

- Alternative 1: No Action

  Under the No Action Alternative, the proposed action of adopting and implementing the 2023 Draft Elk Management Plan would not be adopted by FWP. FWP would continue to manage elk as prescribed by use the current 2005 Elk Management Plan to guide elk management. The selection of this alternative would eliminate the proposed action and result in FWP continuing to manage elk using a numerical population objective and a bull objective for most herds, as outlined in the 2005 Plan.

- Alternative 2: Proposed Project

  Under the proposed action, FWP would adopt and implement the 2023 Plan, which includes elk management goals, by HD, that have been revisited by FWP and the public to ensure they are consistent with current social tolerance, desires, and habitat capacities. Population demographic goals for 106 HDs have been established and include a range within which FWP intends to target individual elk populations. Distribution and recreation goals are established for each HD for consideration in addition to population demographic goals.

VIII. General Setting of the Affected Environment (statewide)

The analysis area for direct, secondary, and cumulative impacts on the physical environment and human population resources analyzed by this draft EA includes the entirety of the state of Montana, all 56 counties. Together, these counties cover 147,040 mi^2 (380,832 km^2) (**Figure 12**).

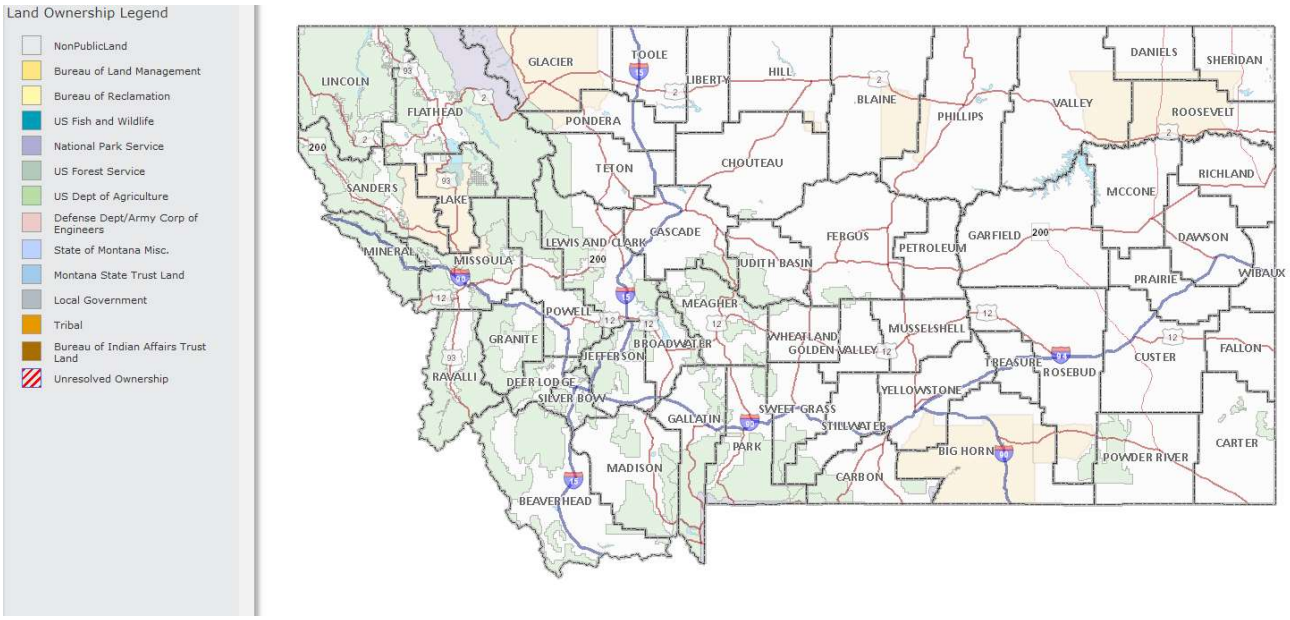

Figure 12. Montana counties and landownership, 2023.

Physical Environment:

Most Montana counties located west of the Continental Divide (Figure 12) are characterized by one or more river valleys divided by rugged mountain ranges. Elevations range from 1,820 ft. (555 m) where the Kootenai River enters Idaho near Troy, Montana, to 12,799 ft (3,904 m) on top of Granite Peak in the Beartooth Mountain Range. Major river drainages in Montana west of the Continental Divide include the Kootenai (which flows into the Columbia River in British Columbia), Bitterroot, Blackfoot, and Flathead (all of which flow into the Clark Fork, which itself flows into Lake Pend Oreille in Idaho, and from there into the Columbia River near the Washington-British Columbia boundary). East of the Continental Divide, major drainages in Montana include the Bighorn, Clarks Fork, and Tongue rivers (all of which flow into the Yellowstone River), the Beaverhead and Big Hole (which form the Jefferson), Gallatin, Judith, Madison, Marias, Musselshell, Sun, and Teton rivers (all of which flow into the Missouri River). Additionally, the Belly, St. Mary, and Waterton rivers, which originate in Glacier National Park, are tributaries of the Saskatchewan River system, ultimately flowing into Hudson Bay, Canada.

Lower elevation habitats (below 6,000 ft., 1,829 m) vary greatly and include large areas of shortgrass-sagebrush prairie, mountain foothills, intensively cultivated areas (grain and hay field agriculture), natural wetlands-lakes, riparian plant communities ranging from narrow stream bank zones to extensive cottonwood river bottoms, man-made reservoirs, small communities, and sizeable cities and towns. The mountainous portions of Montana (above 6,000 ft., 1,829 m) contain all, or portions of, 44 mountain ranges including the Absaroka, Anaconda-Pintler, Beartooth, Beaverhead, Big Belt, Bitterroot, Blacktail, Boulder, Bridger, Cabinet, Castle, Centennial, Coeur d'Alene, Crazy, East Pioneer, Elkhorn, Flathead, Flint Creek, Gallatin, Garnet, Gravelly, Henry's Lake, Highland, John Long, Lewis, Lewis and Clark, Little Belt, Livingston, Madison, Mission, Nevada, Ninemile-Reservation Divide, Purcell, Rattlesnake, Ruby, Sapphire, Salish, Sawtooth, Snowcrest, Spanish Peaks, Swan, Tendoy, Tobacco Root, and West Pioneer ranges. Mountainous habitats are dominated by coniferous forest (Douglas fir, lodgepole pine, Engelman spruce, western cedar, hemlock, whitebark pine, limber pine, ponderosa pine, juniper), and rocky sub-alpine-alpine communities found above timberline. About one third of the land mass of Montana is public land (**Table 6, Figure 13**).

Table 6. Acres of land by federal, state, county, municipal government within the state of Montana.

Owner	Acres
City Government	47,950
County Government	79,944
Local Government	33,873
Montana Department of Corrections	35,213
Montana Department of Natural Resources and Conservation	14,320
Montana Department of Transportation	8,382
Montana Fish, Wildlife & Parks	451,709
Montana State Trust Lands	5,197,389
Montana University System	25,221
National Park Service	1,188,144
State of Montana	48,237
U.S. Army Corps of Engineers	6,497
Bureau of Land Management	8,041,210
Bureau of Reclamation	156,208
U.S. Department of Agriculture	71,361
U.S. Department of Defense	9,313

U.S. Fish & Wildlife Service	941,148
U.S. Forest Service	17,177,072
U.S. Government	1,730

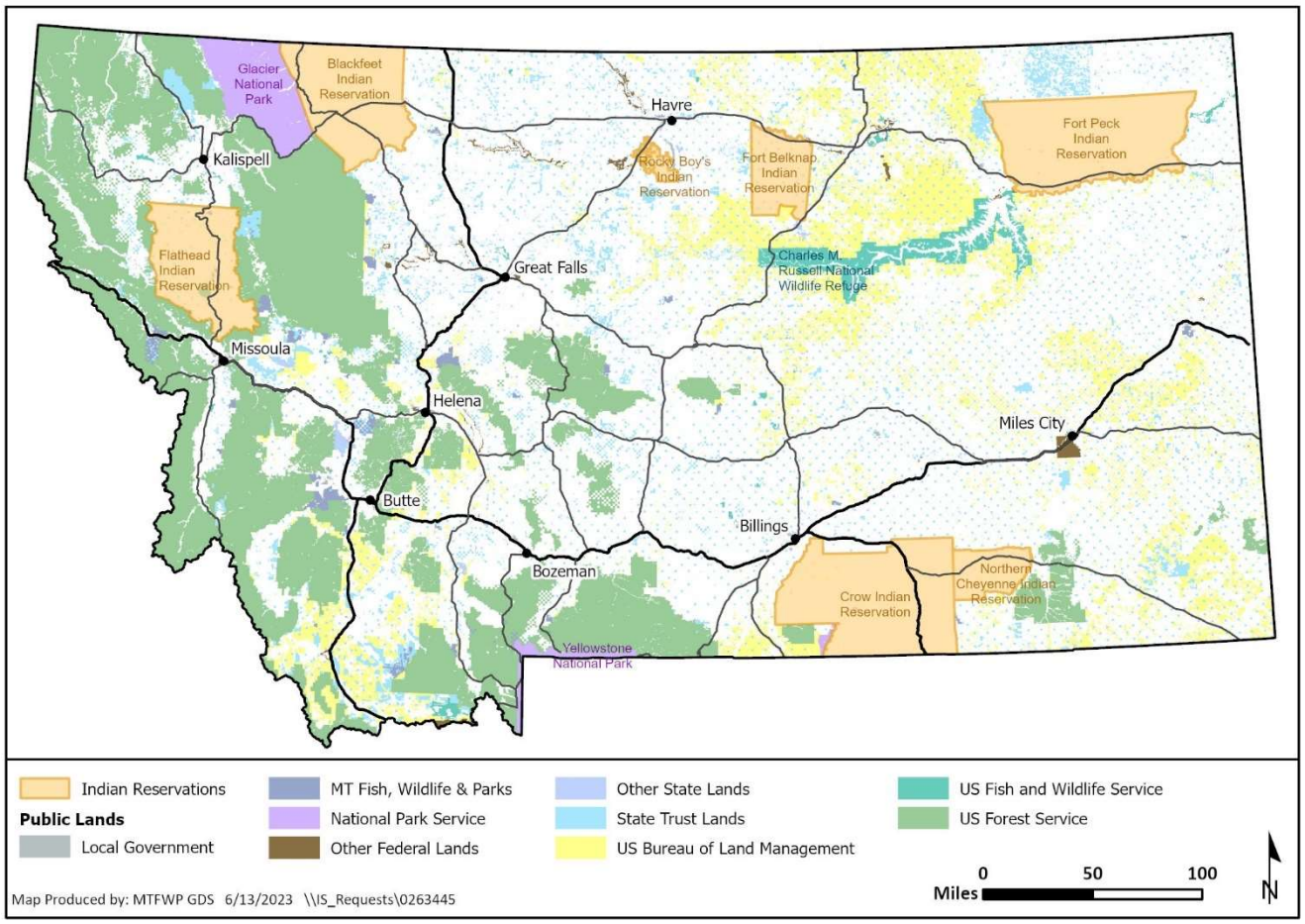

Figure 13. Map of Montana delineating landownership by federal, state, county, municipal, and tribal governments.

Human Population:

As of 2021, an estimated 1,104,000 people lived in Montana. The 2021 estimate also reflected an almost 24% increase in population since the year 2000. During the 20 year-period (2000-2019), population growth was highest in Gallatin, Broadwater, and Flathead counties; population declined modestly in nine counties (**Table 7**).

Table 7. Population, area, and population density of all 56 Montana counties. Counties are listed in descending order by 2021 human population (Montana.gov; January 25, 2021)

County	Population, 2000	Population, 2021	Annual growth rate, 2000–2020	Area in miles (excluding large water bodies)	Population density

Yellowstone	129,570	167,146	1.30%	2,635	63.44
Gallatin	68,375	122,713	2.70%	2,608	47.06
Missoula	96,178	119,533	1.10%	2,598	46.01
Flathead	74,774	108,454	3.50%	5,098	21.27
Cascade	80,318	84,511	0.20%	2,688	31.44
Lewis and Clark	55,886	72,223	1.60%	3,461	20.87
Ravalli	36,301	45,959	3.60%	2,394	19.20
Silver Bow	34,571	35,411	0.70%	718	49.35
Lake	26,588	32,033	2.50%	1,493	21.45
Lincoln	18,818	20,525	4.00%	3,619	5.67
Park	15,710	17,473	1.60%	2,802	6.24
Hill	16,605	16,179	-0.40%	2,895	5.59
Glacier	13,183	13,785	0.30%	2,991	4.61
Sanders	10,287	12,959	4.10%	2,762	4.69
Big Horn	12,669	12,957	-0.70%	4,996	2.59
Jefferson	10,052	12,470	2.80%	1,657	7.53
Custer	11,678	11,916	0.50%	3,783	3.15
Fergus	11,902	11,617	1.40%	4,335	2.68
Richland	9,619	11,283	-1.90%	2,084	5.41
Carbon	9,561	10,847	3.20%	2,047	5.30
Roosevelt	10,623	10,821	0.40%	2,354	4.60
Beaverhead	9,204	9,524	1.60%	5,543	1.72
Deer Lodge	9,409	9,491	0.80%	731	12.98
Stillwater	8,247	9,044	0.40%	1,790	5.05
Madison	6,870	8,917	3.00%	3,587	2.49
Dawson	9,050	8,904	-0.20%	2,373	3.75
Rosebud	9,399	8,124	-2.10%	5,010	1.62
Valley	7,653	7,537	-0.20%	4,919	1.53
Broadwater	4,378	7,288	6.50%	1,189	6.13
Powell	7,203	6,999	0.90%	2,326	3.01
Blaine	6,968	6,980	-0.30%	4,218	1.65
Teton	6,436	6,269	0.40%	2,271	2.76
Pondera	6,384	5,994	1.90%	1,626	3.69
Chouteau	6,062	5,916	0.30%	3,965	1.49
Toole	5,261	5,011	0.90%	1,916	2.61
Musselshell	4,471	4,896	3.10%	1,866	2.62
Mineral	3,877	4,860	6.50%	1,220	3.98
Phillips	4,568	4,192	0.00%	5,123	0.82
Sweet Grass	3,633	3,723	1.40%	1,855	2.01
Sheridan	4,078	3,527	0.30%	1,669	2.11
Granite	2,849	3,344	1.10%	1,727	1.94
Fallon	2,816	3,017	-0.50%	1,620	1.86
Wheatland	2,243	2,059	-1.60%	1,422	1.45
Judith Basin	2,330	2,044	1.30%	1,870	1.09
Meagher	1,916	1,964	2.00%	2,392	0.82
Liberty	2,168	1,946	-0.70%	1,427	1.36
McCone	1,960	1,718	-0.90%	2,641	0.65
Powder River	1,847	1,702	0.50%	3,298	0.52
Daniels	2,005	1,686	1.70%	1,426	1.18
Carter	1,335	1,428	1.10%	3,339	0.43

Garfield	1,268	1,209	3.20%	4,668	0.26
Prairie	1,179	1,091	1.40%	1,736	0.63
Wibaux	1,072	934	0.60%	888	1.05
Golden Valley	1,019	831	1.30%	1,173	0.71
Treasure	854	768	0.90%	979	0.78
Petroleum	493	519	4.20%	1,651	0.31

Economics:

In 2021, the median per capita income in the United States was $37,522, and the median household income was $70,784. In Montana, median per capita income was somewhat lower, at $34,423, with median household income of $60,560. All but three of Montana's 56 counties ranked below the U.S. median household income in 2021 (**Table 8**).

Table 8. Median household income and poverty rate (%) by county in Montana, 2021.

County	Median household income	Poverty rate (%)
Gallatin	$78,910	9
Stillwater	$75,820	8
Dawson	$70,252	11
Yellowstone	$69,182	11
Jefferson	$68,128	7
Lewis and Clark	$67,702	9
Broadwater	$66,307	9
Flathead	$65,835	10
Missoula	$65,682	13
Fallon	$63,793	9
Richland	$63,148	9
Carbon	$62,841	9
Madison	$62,516	9
Sweet Grass	$61,454	10
Rosebud	$61,331	18
Ravalli	$60,030	10
Teton	$59,787	13
Park	$59,113	10
Treasure	$58,275	12
Cascade	$57,085	13
Sheridan	$56,095	12
Valley	$55,338	12
Custer	$54,913	13
Fergus	$54,823	12
Hill	$54,377	17
Musselshell	$54,003	16
Beaverhead	$53,776	13
Phillips	$53,626	15
Granite	$52,984	12
Daniels	$52,852	11
Silver Bow	$52,495	13

Powder River	$52,298	11
Carter	$52,116	13
Wibaux	$51,924	11
McCone	$51,881	14
Judith Basin	$51,392	15
Chouteau	$51,113	14
Lake	$50,978	17
Mineral	$50,327	14
Sanders	$50,270	15
Garfield	$49,898	15
Toole	$49,297	15
Liberty	$49,277	16
Lincoln	$48,156	17
Petroleum	$48,141	13
Pondera	$47,900	17
Powell	$47,687	17
Roosevelt	$47,266	25
Big Horn	$47,179	26
Blaine	$46,335	19
Prairie	$46,328	14
Deer Lodge	$45,725	15
Meagher	$45,391	15
Glacier	$44,777	25
Golden Valley	$43,820	17
Wheatland	$42,431	17

Land Ownership:

The federal government owns 27,276,820 acres (29.3% of Montana), state government owns 5,196,400 acres (5.6% of Montana), and private entities own 60,682,580 acres. The majority of mountainous habitat (above 6,000 ft., 1,829 m) is located within publicly owned national forests, corporate timber lands and Glacier and (the Montana portion of) Yellowstone national parks. Approximately 36% of western Montana is managed by USFS, and just over 2% by NPS. National forests include Bitterroot, Custer-Gallatin, Deer Lodge-Beaverhead, Flathead, Helena-Lewis and Clark, Kootenai, Kaniksu (part of the Idaho Panhandle National Forest complex), and Lolo. The Bureau of Land Management (BLM) manages just under 3% of lands in western Montana. A small portion (just over 1%) of mountainous habitat is in state ownership (Montana Department of Natural Resources and Conservation [DNRC]). The Blackfeet Indian Reservation constitutes over 3% of total lands, and the Flathead Indian Reservation constitutes an additional 2.6%. Smaller amounts are managed specifically for wildlife by USFWS and FWP. Other lands are in private ownership, including private subdivisions, ranches, land trusts, ski resorts, and timber company lands. Communities of various sizes also occupy several thousand acres of low-elevation river-valley habitat.

Agriculture:

Montana supports a large agricultural economy. In 2017, there were an estimated 27,048 farms and ranches. By far the most common activities of these farms and ranches were raising beef cattle, growing forage (hay) for cattle, and growing grain crops (wheat, oats, barley). Sheep, hogs, and dairy cattle were also raised in smaller numbers.

Sheep and beef cattle were grazed on privately owned grassland and on publicly owned (USFS, BLM, DNRC) grazing allotments. In 2022, ranchers paid an average of $28.00 per cow-calf pair per month, and $26.50 per head of cattle per month (USDA, NASS 2023). The average annual cash rent for an acre of pasture in 2022 was $7.80 (USDA, NASS 2023).

In 2021, an estimated 2,451,500 cattle (including calves) grazed in Montana, as well as some 287,300 sheep (including lambs). By 2023, the numbers of cattle and sheep in Montana declined to 2,160,000 and 190,000, respectively (USDA, NASS 2023). Using the breakdown of types of cattle in Montana during 2023, as described by USDA, NASS (2023) i.e., cows with calves, steers, bulls, etc., there was an estimated 1,913,500 Animal Units (AUs) of cattle in 2023. Additionally, there were an estimated 25,150 sheep AUs in Montana during 2023 (using AU definitions for differing weights, ages and sexes of cows and sheep from UDSA NRCS 2022).

The largest populations of cattle in 2021 were in Beaverhead (~ 125,000), Fergus (~ 115,000), and Yellowstone (~ 110,000) counties, and the largest number of sheep were in Carter (~ 19,000), Golden Valley (~ 15,300), Stillwater (~ 12,300), and Beaverhead (~ 12,200) counties. Cattle density was highest in Yellowstone, Carbon, and Judith Basin counties; cattle outnumbered people by the greatest proportion in Carter, Garfield, and Powder River counties (**Table 9**).

Table 9. Number and density of cattle, and ratio of cattle to people by county in Montana, 2021. *From nass.usda.gov/mt (USDA, NASS, Mountain Region 2021). Counties are listed in descending order by 2021 number of cattle.*

County	Number of cattle	Cattle density	Cattle:person
Beaverhead	125,000	22.55	13.12
Fergus	115,000	26.53	9.90
Yellowstone	110,000	41.75	0.66
Carter	89,000	26.65	62.32
Rosebud	89,000	17.77	10.96
Custer	89,000	23.53	7.47
Powder River	83,000	25.17	48.77
Big Horn	82,000	16.41	6.33
Madison	79,000	22.02	8.86
Carbon	77,000	37.61	7.10
Phillips	75,000	14.64	17.89
Garfield	72,000	15.42	59.55
Judith Basin	70,000	37.44	34.25
Blaine	69,000	16.36	9.89
Cascade	63,000	23.44	0.75
Richland	62,000	29.75	5.49
Valley	61,000	12.40	8.09
Meagher	50,000	20.91	25.46
Lake	48,000	32.14	1.50
Prairie	47,000	27.07	43.08
Stillwater	45,500	25.43	5.03
Fallon	45,000	27.79	14.92
Teton	45,000	19.82	7.18
Glacier	43,000	14.38	3.12
Wheatland	41,000	28.83	19.91
Gallatin	40,000	15.34	0.33

McCone	39,500	14.95	22.99
Lewis and Clark	39,000	11.27	0.54
Musselshell	38,000	20.37	7.76
Chouteau	36,500	9.20	6.17
Park	36,000	12.85	2.06
Dawson	35,500	14.96	3.99
Powell	34,500	14.84	4.93
Sweet Grass	32,500	17.52	8.73
Treasure	27,500	28.09	35.81
Roosevelt	26,500	11.26	2.45
Ravalli	26,500	11.07	0.58
Jefferson	24,500	14.78	1.96
Pondera	23,500	14.45	3.92
Broadwater	22,500	18.92	3.09
Petroleum	21,500	13.03	41.43
Wibaux	20,000	22.51	21.41
Granite	18,900	10.94	5.65
Toole	17,800	9.29	3.55
Sheridan	17,300	10.37	4.91
Hill	16,400	5.67	1.01
Golden Valley	16,100	13.73	19.37
Sanders	15,200	5.50	1.17
Daniels	14,000	9.82	8.30
Liberty	10,000	7.01	5.14
Flathead	8,300	1.63	0.08
Deer Lodge	7,200	9.85	0.76
Missoula	5,700	2.19	0.05
Silver Bow	3,600	5.02	0.10
Lincoln	2,100	0.58	0.10
Mineral	400	0.33	0.08

An undetermined amount of income for some agricultural operations occurs from all hunting activities, including hunter leasing fees and outfitting-guide leasing fees. In 2019, a survey of elk license holders was conducted regarding access types on which they hunted in 2018. About 1.7% of resident hunters reported hunting on land for which they had paid an access fee for (Lewis 2019). In 2018, 91,396 resident hunters pursued elk, which yields an estimate of 1,554 resident hunters paying access fees to hunt elk, as well as an unquantified number of nonresident hunters paying fees for access to elk hunting. These estimates do not include hunters that paid for outfitting or guide services.

Hunting:

In 2016, the United States Fish and Wildlife Service (USFWS) conducted a survey of hunting, fishing, and other wildlife related recreation across the United States. They estimated that $14.9 billion was spent on big game hunting trips and equipment nationwide (USFWS 2016). Similarly, FWP estimated that in 2020, elk hunters in Montana spent about $187.1 million annually on trip related expenditures (transportation, food, beverages, lodging, and access or guide fees) (Lewis 2021), with residents spending about $87.8 million and nonresidents spending about $99.3 million (Lewis 2021).

Revenue to FWP from elk license sales was nearly $9 million in 2005 and increased to over $17 million in 2021. This total revenue does not include elk permit drawing fees, archery license fees, or conservation license fees. This total does not include the share of federal Pittman-Robertson funds that could be attributed to elk hunting or hunters.

Outfitting:

About 1 to 1.5% of resident elk hunters use the services of outfitters (King and Brooks 2001, Lewis et al. 2014, Lewis 2019), which yields an estimate of about 1,083 resident hunters in 2022 potentially using outfitting services for elk hunting. For the 2022 season, 5,124 nonresident hunters purchased outfitter preference points for elk combination or big game combination licenses and were successful in drawing those licenses (2,091 purchased the outfitter preference points but were unsuccessful in drawing or they successfully drew but returned their license). This number provides an approximation of how many nonresident elk hunters may have used the services of outfitters in 2023, although other nonresident hunters who drew big game or elk combination licenses without purchasing an outfitter preference point may have used outfitting services for elk as well. The website of Montana Outfitter and Guides Association (MOGA) was surveyed for listings of elk hunting services. Fifty-nine businesses using the MOGA website provided price information on guided elk hunting trips on their individual websites. The average for reported price options (n = 175) for a bull elk hunt in 2022 was $6,511 (where available, 2:1 hunter to guide pricing is reported). Given the total number of hunters that may be using outfitting services for elk (5,124) and the average price for a bull elk hunt in Montana ($6,511), elk outfitting revenue in Montana could be as high as 33.3 million. However, some hunters may be outfitted for antlerless hunts which cost less and are not figured into this calculation, so this estimate may be inflated.

Elk and Livestock Economic Competition:

Over the years, the estimated AU equivalent for elk and cattle has been debated by various authors but has generally ranged from 0.33–0.6 cattle equivalent AUs per elk (Murie 1951, Stoddard and Smith 1955, Skovlin et al. 1968, Thorne et al. 1976, USDA NRCS 2022). These figures may be somewhat elevated because they do not take into consideration the greater consumption of forbs and shrubs by elk (Hobbs and Carpenter 1986). The Department uses 0.6 as the cattle equivalent AU for an elk, as defined by the USDA NRCS (2022), which yields the greatest estimate of impacts by elk on the forage capacity of a given piece of land.

In 2023, FWP counted 143,310 elk in Montana. Of those elk, some were adult cows and bulls, some were yearling cows and bulls, and some were calves. The AU estimate of 0.6 for elk assumes a mature animal, and not all counted elk were mature. However, for the purposes of AU calculation we will assume all counted elk were mature, again producing maximum impacts by elk. These numbers produce an elk AU estimate of 85,986 for 2023. Total AUs from domestic livestock and elk in Montana total 2,026,636 (1,915,500 cattle AUs, 25,150 sheep AUs, and 85,986 elk AUs) for 2023; of the total, elk AUs comprise 4.2%.

The sustainable number of elk in 2005 was determined to be 72,413–101,525; the upper threshold of the range is the equivalent of 60,915 AUs. The sustainable number of elk in the 2023 Plan is 96,015–151,425; the upper threshold of the range is the equivalent of 90,855 AUs. The difference in maximum AUs between plans is 29,940. Combining the 2023 domestic livestock AUs (1,940,650) with 2005 maximum sustainable elk AUs (60,915) totals 2,001,565 AUs with elk comprising 3.0% of the total AUs. Combining the 2023 domestic livestock AUs (1,940,650) with the 2023 maximum sustainable elk AUs (90,855) totals 2,031,505 AUs with elk comprising 4.5%. The 2023 plan could result in elk comprising 1.5% more of the total AUs.

Statewide level analyses do not adequately represent individual situations. Unfortunately, information does not exist to analyze each local situation and these situations can change annually with weather, economic conditions, and elk harvest (Adkins and Irby 1992).

Mining:

Large mineral deposits, ranging from talc to gold, are located throughout Montana. Of these, metallic minerals provide the largest share of Montana's non-fuel mining income, with copper, palladium, and platinum leading the list of important metals (these latter two being mined nowhere else in the United States). In 2012, there were a total of 53 mines in production, development, standby permitting, or reclamation status, all but seven of which were located in the western part of the state.

Wood Products:

The majority of Montana's forested lands (23 million acres) are located within the western part of the state. Nearly 4 million acres of these forest lands are permanently reserved as either wilderness areas or national parks. Eleven million acres of the remaining forested land is administered by the USFS, with 5.2 million acres of this public estate designated by current forest plans as suitable for timber production. Private forest lands occupy approximately 6 million acres, with 2 million owned and managed by large timber companies. Another 4 million acres of private forest lands are owned by some 11,000-plus private individuals. Timber production has declined since the late 1980s (http://www.bber.umt.edu/fir/s_mt.asp). In 1988, an estimated 1,163 million board feet (MMBF) were produced; this declined to approximately 352 MMBF in 2009, before recovering slightly to 367 MMBF in 2018 (**Figure 14**).

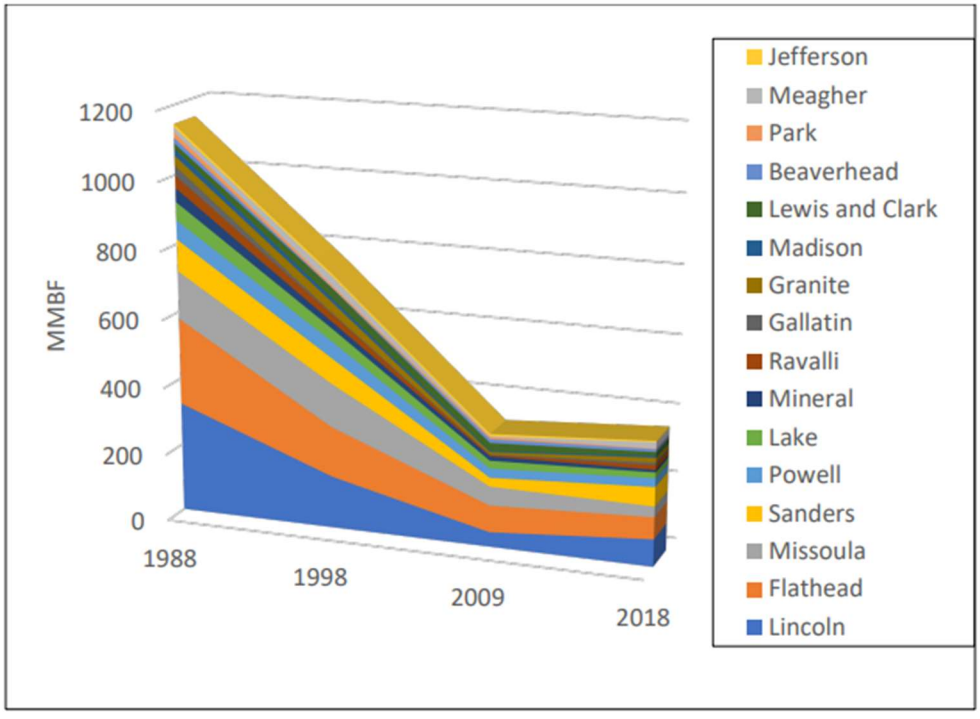

Figure 14: Gross wood products output from primary wood-producing counties, which are located within western and west-central Montana, 1988-2018 (in million board feet [MMBF]/year).

Sources for wood products, categorized broadly into public (U.S. Forest Service, Bureau of Land Management, state, and other public) and private (corporate industrial timber lands, private, non-industrial, and tribal) forestlands, has varied over time (**Figure 15**). During the 1980s, most production came from U.S. Forest Service

lands, being almost matched by private industrial forests, with very little coming from other state lands. As production on U.S. Forest Service lands declined in the 1990s, the proportion coming from non-industrial and tribal lands increased (briefly becoming dominant in 1994). The relative contribution from private industrial lands peaked in 1998 as U.S. Forest Service lands continued to decline, but other public lands made up some of that. However, the proportion contributed by private industrial lands has declined markedly in the past 20 years, with the other sources increasing in importance.

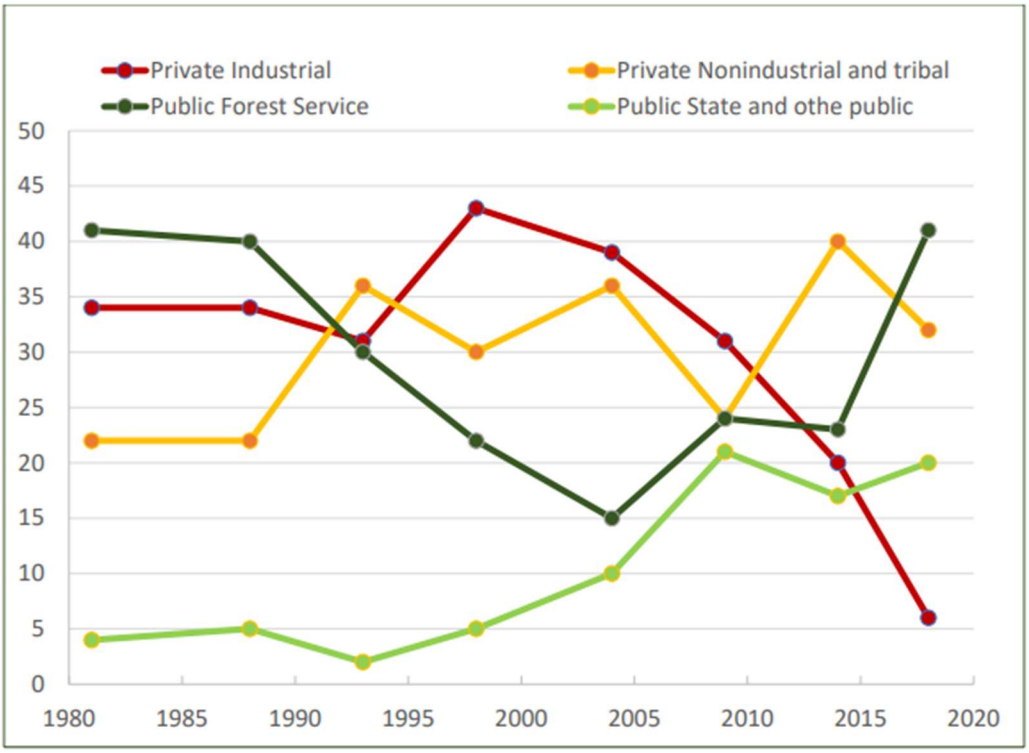

Figure 15: Percentage of wood products coming from four categories of forest producing lands in Montana, 1985–2020. Source: UM Bureau of Business and Economic Research 2020. http://www.bber.umt.edu/pubs/forest/fidacs/MT2018%20Tables.pdf

In 2018, the University of Montana Bureau of Business and Economic Research estimated that Montana's forest industry accounted for just under 8,000 jobs in direct employment, and an additional 13,300 jobs indirectly associated with wood products. This was up somewhat from employment circa 2010, but lower than the late 1990s.

Recreation:

Outdoor recreation and tourism are major components of Montana's economy, particularly in the mountainous western part of the state. Western Montana is nationally renowned for its high-quality fishing, hunting, camping, hiking, river floating, skiing, snowmobiling, wildlife viewing (including elk), and sightseeing opportunities. Glacier and Yellowstone national parks, Flathead Lake, and other public lands attract large numbers of people to Montana every year. Many of these outdoor activities are made possible by public ownership of large tracts of mountainous habitat and additional access provided by private landowners. Recreationists have largely unhindered access to millions of acres of undeveloped land in Montana. Most of this land is occupied by elk.

Value Orientations of Montanans Relevant to Elk Management:

Although largely rural (only the Billings and Missoula areas are considered "metropolitan" by the U.S. Census Bureau), ethnically more homogenous than most states (88.6% white, 6.4% Native American), and older than most (23.2% 62 years or older), Montana's estimated 1,104,000 people in 2021 contained a populace with a diversity of values and attitudes toward wildlife. Based on a large-scale public opinion survey in 19 western states conducted in 2004, Teel and Manfredo (2009) developed a typology of value orientations they termed "traditionalists," "mutualists," "pluralists," and "distanced." Those with a "traditionalist" orientation tended to score high on such measures as valuing use of animals and hunting, tending to emphasize that wildlife should be used and managed for the benefit of people. Those with a "mutualist" orientation scored higher on measures such as social affiliation and caring, tending to view wildlife as part of their extended social network. Those categorized as "pluralists" scored high on both sets of measures, with context and situations controlling which might dominate in any given issue. Those categorized as "distanced" scored low on both sets of measures, i.e., were more apathetic generally about wildlife. Based on a nationwide follow-up survey conducted during 2016-18, 28% of U.S. respondents were categorized as "traditionalists," 35% as "mutualists," 21% as "pluralists," and 15% as "distanced" (Manfredo et al. 2018).

Montana had a greater percentage of respondents categorized as "traditionalists" than the national average (38.5%), but this was down considerably from the 47% estimated in 2004. Montana had a lower percentage of respondents categorized as "mutualists" than the national average (26.5%), but this was up considerably from the 19% estimated in 2004. Montana had among the highest percentage among the 19 western states categorized as "pluralists" (27.5%), almost unchanged from 2004. Of note is that Montana had among the lowest percentage of respondents among western states categorized as "distanced" (7.5%). In short, Montanans don't all share the same value orientation toward wildlife, but very few are apathetic.

Manfredo et al. (2018) also found that, among all 50 states, only Alaska (62.9%) and Wyoming (62.1%) exceeded Montana's 60.8% of respondents agreeing that local communities should have more control than they currently do over management of fish and wildlife by the state. In a somewhat surprising finding, given that FWP's funding is largely provided by hunters and anglers, and that "traditionalists" outnumber "mutualists," Montana ranked highly among states in percentage of respondents who prefer a funding model that includes public state taxes (albeit not a funding model that prioritizes public state taxes). Just under 75% of Montana respondents preferred including some public taxes in wildlife funding, similar to percentages in Washington, Arizona, and Michigan, but higher than percentages in Wyoming, the Dakotas, Colorado, or Utah. Almost 14% of Montana respondents reported being active hunters, the 11th highest among the 50 states. Thirty-seven percent of Montana respondents reported being active wildlife viewers, a percentage exceeded only by the 40.7% in Alaska. Montana, Alaska, and Wyoming stood apart as states with high percentages of active wildlife viewers while also having high percentages of "traditionalists" (who might otherwise be assumed to hunt wildlife but not watch it; Manfredo et al. 2018). However, Montana also had the largest decrease in the proportion of self-identified active hunters from 2004 to 2018. Nationwide, Manfredo et al. (2018) found that trust in state wildlife agencies in 2018 (64%) far exceeded trust in state government generally (41%) or the federal government (25%). "Traditionalists" tended to trust state wildlife agencies more (65%) than "mutualists" (54%), although pluralists were the most trusting of state wildlife agencies (72%). In Montana, trust in the state wildlife agency was higher than the national average among both "traditionalists" (71.5%) and "mutualists" (62.3%) and was 69% among all respondents in 2018. In contrast, trust in the federal government among Montana respondents declined from 41% in 2004 to just 22% in 2018. The proportion of mutualists and traditionalists differs among counties in Montana (**Figure 16**).

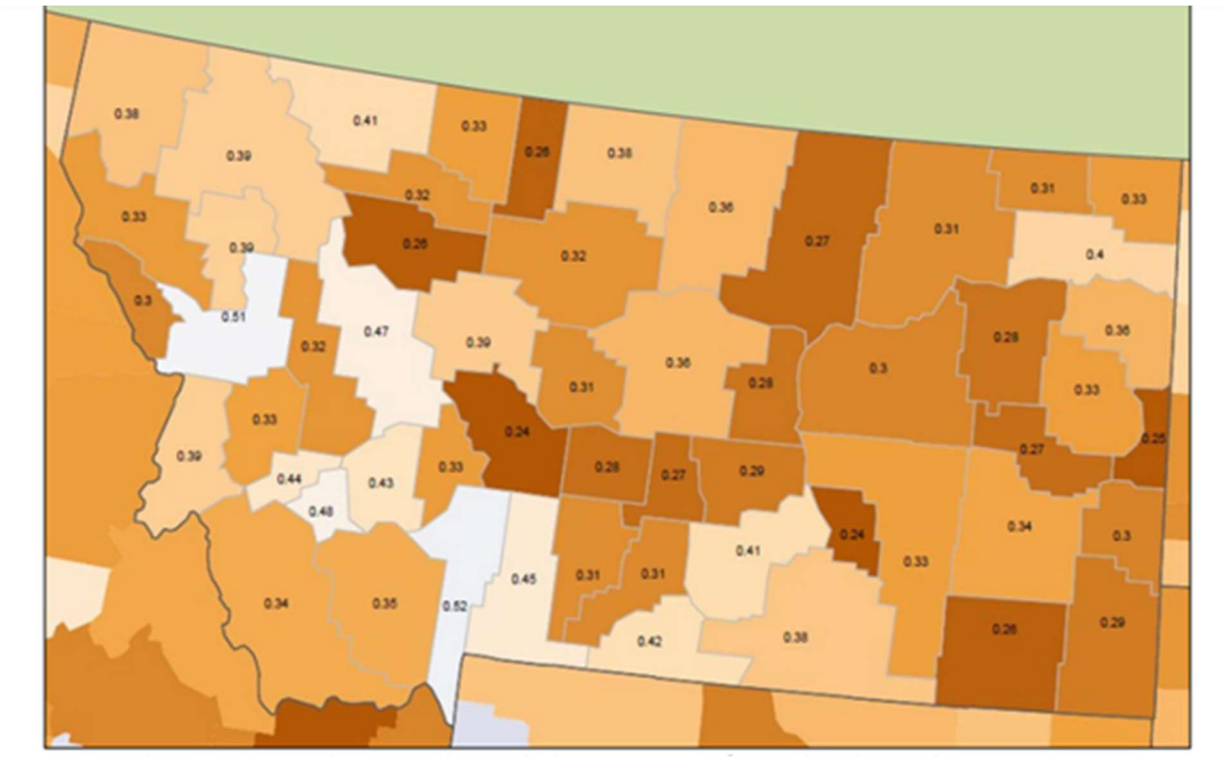

Figure 16. County-level social-habitat index predicted by a statistical model using data from a nationwide survey. Values above 0.5 indicate a higher percentage of mutualists than traditionalists; values below 0.5 indicate a higher percentage of traditionalists than mutualists. See also Manfredo et al. (2021).

The proportion of wildlife values orientations within a county or municipality may influence social acceptance of management approaches. Counties with greater traditionalist tendencies are more likely to support hunting, livestock, and private property rights. Those counties with greater mutualistic tendencies are more likely to support wildlife-viewing opportunities. Of course, pluralists may be supportive of multiple management options depending on the situation.

The state of Montana encompasses many types of ecological systems including 16 varieties of forest-woodland systems; five varieties of alpine systems; 10 varieties of shrubland, steppe and savannah systems; five varieties of grassland systems; six varieties of sparse-barren systems; and 18 varieties of wetland-riparian systems, open water systems, human land use systems, and recently disturbed or modified systems (https://fieldguide.mt.gov/displayES_LCLU.aspx). A general discussion of each ecological system is included below. A detailed discussion of Montana's ecosystems and associated wildlife is also available online through the Montana State Library at https://fieldguide.mt.gov/displayES_LCLU.aspx.

More specific analysis of the affected or existing environment, by HD, is included in the 2023 Plan (Page 70). The 2023 Plan provides a detailed discussion of the existing environment of each affected HD in an HD-specific "District Summary." Those districts and summaries are listed in the table of contents in the 2023 Plan.

IX. Cumulative Impacts Analysis

For the purposes of MEPA, "cumulative impact" means the collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. ARM 12.2.429(7).

Under the “No Action” alternative, the proposed project would not occur. Therefore, no additional cumulative impacts to the physical or human environment in the analysis area would occur. The “No Action” alternative forms the baseline from which the potential impacts of the proposed Project can be measured. For the purposes of adoption and implementation of the 2023 Elk Management Plan the cumulative impacts analysis below applies to all resources analyzed under Alternative 2, Proposed Action/Project (Section XI.A and B).

No significant adverse cumulative impacts would be expected because of the proposed project. No additional cumulative impacts to the physical or human environment are anticipated from the proposed action. Current elk management strategies in Montana are guided collectively by the following:

- FWP’s 2005 Elk Management Plan and Final Programmatic EA (would be supplanted by proposed action
- Montana Fish and Wildlife Commission
- Montana Department of Labor and Industry: Montana Board of Outfitters
- United States Forest Service
- Bureau of Land Management
- United States Fish & Wildlife Service
- National Park Service
- Montana Department of Natural Resources and Conservation

CURRENT FWP ELK MANAGEMENT PLAN

The 2005 Plan currently guides the overall management of elk in Montana. The 2005 Plan provides elk herd goals and hunting district or elk management unit specific prescriptions for season structures. Upon evaluation and approval of the statewide management plan, the 2023 Plan would supplant the 2005 Plan.

MONTANA FISH AND WILDLIFE COMMISSION

The commission has statutory authority to prescribe hunting seasons, structures, and license opportunities. The commission has acted on recommendations provided by the department that were developed using the 2005 Plan. The commission is not bound by either the existing or proposed plan, however the commission can rely on the biological information that is developed under the guidance of the elk plan to make decisions.

UNITED STATES FOREST SERVICE

The United States Forest Service manages much of the habitat occupied by elk in Montana. Changes in habitat structure and condition resulting from actions by the U.S. Forest Service may influence elk distribution and density, and the 2023 Plan will influence FWP biologist input into U.S. Forest Service planning efforts. Effectively, the input provided as a result of the 2023 Plan is unlikely to differ from that provided under the 2005 Plan.

BUREAU OF LAND MANAGEMENT

The Bureau of Land Management manages some of the habitat occupied by elk in Montana. Changes in habitat structure and condition resulting from actions by the Bureau of Land Management may influence elk distribution and density, and the 2023 Plan will influence FWP biologist input into Bureau

of Land Management planning efforts. Effectively, the input provided as a result of the 2023 Plan is unlikely to differ from that provided under the 2005 Plan.

UNITED STATES FISH AND WILDLIFE SERVICE AND NATIONAL PARK SERVICE

Both the U.S. Fish & Wildlife Service and the National Park Service manage limited portions of habitat occupied by elk in Montana. Harvest restrictions are sometimes greater on lands managed by the U.S. Fish and Wildlife Service, and harvest is precluded on areas managed by the National Park Service. Changes in habitat structure and condition resulting from actions on these lands certainly influence elk, but no change is expected as a result of the 2023 Plan.

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

The Montana Department of Natural Resources and Conservation manages a small proportion of elk habitat within Montana. Changes in habitat structure and condition resulting from actions on these lands certainly influence elk, but no change is expected as a result of the 2023 Plan.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact terrestrial, avian, and aquatic life and habitats in the analysis area:

- Agriculture and livestock operations: Agricultural and livestock development in the area consists mostly of cropland, pastureland, and grazing lands. Historical and ongoing agricultural and livestock development would alter habitat within the analysis area; however, impacts would be consistent with current practices. The proposed action does not include any additional agricultural or livestock production; therefore, the project does not contribute to cumulative impacts associated with agricultural or livestock production.

- Road and associated right-of-way construction: These activities have historically resulted in habitat loss or fragmentation within the analysis area due to land disturbances. These activities would continue under the proposed action, which would contribute to habitat losses and displacement impacts from past and future land disturbance associated with construction of infrastructure. The proposed action does not propose any additional construction disturbance; therefore, the project does not contribute to cumulative impacts associated with road or right-of-way construction.

- National park, wilderness, and national forest area designations: Federal land managers have jurisdiction over national parks, wilderness areas, and national forests. These areas are protected from certain activities that could impact terrestrial, avian, and aquatic life and habitats in the affected areas. The proposed action does not propose specific major changes to public land management or designations. Therefore, the project does not contribute to cumulative impacts associated with National park, wilderness, and national forest area designations.

- Wildland and prescribed fires directly influence elk forage in various ways. Forbs, grasses, and other undergrowth may respond quickly and immediately thrive in post-fire conditions (Houston, 1973; Turner et al., 1999; Wamboldt et al., 2001). Maturing trees and other undergrowth may later shade out these plants. Also, root crops can either be negatively or positively influenced by fire; a handful of variables define this. Ungulate distribution in the

spring can also be altered following fire events. Elk evolved with wildfire, have the ability to move large distances in response to altered habitat, and are opportunistic foragers. The proposed action does not propose any addition or decrease of wildland or prescribed fire; therefore, the project does not contribute to cumulative impacts associated with wildland or prescribed fire.

Under the proposed action, FWP would continue to recommend similar public land management FWP would work with federal land management entities via MEPA and the National Environmental Policy Act (NEPA) planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. The commission may base subsequent management decisions on information in the plan, or recommendations from the department based on the plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a direct impact on the number or distribution of elk. Changes to the numbers or distribution of elk on the landscape is dependent upon commission action, and not the proposed project itself. For these reasons, the proposed project would not contribute to cumulative impacts.

X. Alternative 1: No Action. Evaluation and Summary of Potential Impacts on the Physical Environment and Human Population

Under the "No Action" alternative, the proposed project would not occur. Therefore, no additional impacts to the physical or human environment in the analysis area would occur. The "No Action" alternative forms the baseline from which the potential impacts of the proposed project can be measured.

Under the No Action alternative, FWP would not adopt and implement the 2023 Plan. FWP would continue managing elk as prescribed by the current 2005 Plan. Management under the 2005 Plan would maintain a focus on a single population number for each area, with the single measure of success being that population number objective. In addition, regulations would remain narrowly defined for each HD, without any recommended special bull management HDs. The local area of focus would remain the EMU rather than the HD, and the plan would acknowledge the commission's authority to adjust population objectives but would have no revision timeline.

XI. Alternative 2: Proposed Project. Evaluation and Summary of Potential Impacts on the Physical Environment and Human Population

A. Evaluation and Summary of Potential Impacts on the Physical Environment

1. Terrestrial, Avian, and Aquatic Life and Habitats

Existing Environment-Baseline Conditions (No Action Alternative): The state of Montana has 114 mammal species, 458 bird species, 15 amphibian species, 20 reptile species, and 91 fish species. The state encompasses many types of ecological systems including 16 varieties of forest-woodland systems; five varieties of alpine systems; 10 varieties of shrubland, steppe and savannah systems; five varieties of grassland systems; six varieties of sparse-barren systems; and 18 varieties of wetland-riparian systems, open water systems, human land use systems, and recently disturbed or modified systems (https://fieldguide.mt.gov/displayES_LCLU.aspx). A comprehensive guide and discussion of Montana's wildlife and associated habitats is available online through the Montana State Library at Field Guide. See

Section VIII, General Setting of the Affected Environment (statewide), for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on the terrestrial, avian, and aquatic life and habitats is providing information to the public and the commission.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on the terrestrial, avian, and aquatic life and habitats.

Secondary Impacts: No significant adverse secondary impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on terrestrial, avian, and aquatic life and habitats if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on terrestrial, avian, and aquatic life and habitats. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

Changes to the number and distribution of elk as a result of commission action, may affect terrestrial, avian, and aquatic life and habitats. Regulating elk numbers through harvest management tools to achieve management goals as discussed above helps mediate ecological conditions. Managing elk numbers and distribution influences forage availability and predator-prey communities. A healthy elk population at or below the habitat (biological) and ecological carrying capacity (described previously in EA) promotes a healthy overall ecosystem. A healthy overall ecosystem promotes the well-being of all affected wildlife and habitats. The number and distribution of elk located within a given HD would affect the availability and condition of resources used by other wildlife in the affected area. Elk consume forage, which may influence the availability of food resources for other species, such as deer and bighorn sheep. Some species may be intolerant of elk presence and may choose to avoid habitats occupied by elk. Finally, elk are prey for some species and elk abundance may influence the distribution of predators that prey on elk.

The 2023 Plan includes habitat-improvement work as a strategy to meet certain goals; however, most elk habitat is located on federal or privately owned property, thus FWP has little control over a majority

of available elk habitat in Montana. The 2023 Plan recommends working with federal land management agencies and private landowners to improve elk habitat, but specific habitat projects are not defined within the plan and would almost always result in their own MEPA process. Also, elk serve an important ecological role as a grazing ungulate. Their grazing activity has the potential to remove greater biomass than desired if their numbers are not regulated through harvest or changes in distribution. Alternatively, light to moderate grazing has been demonstrated to be an effective tool to benefit vegetative communities and elk grazing may produce these results.

Effectively, managing for a healthy elk population will result in beneficial secondary impacts to terrestrial, avian, and aquatic life and habitats. Failing to manage for a sustainable level of elk (i.e., allowing them to exceed habitat capacity) has the potential to have negative secondary influences on forage availability for domestic livestock that may be permitted to graze on federal land. Disease is also more easily spread when elk are overabundant, which might influence cattle (e.g., brucellosis prevalence in elk in some instances) or other wild ungulates (CWD prevalence).

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact as a result of the proposed action. Therefore, no significant secondary impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project.

2. Water Quality, Quantity, and Distribution

Existing Environment/Baseline Conditions (No Action Alternative): The larger riverine systems that run through the project area include the Missouri River, Milk River, Yellowstone River, Kootenai River, Clark Fork, Powder River, Musselshell River, Tongue River, and Marias River. The larger lakes and reservoirs in the project area include Fort Peck and Flathead. Additionally, there are numerous ephemeral or permanent wetlands throughout the project area. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on the water quality, quantity, and distribution is providing information to the public and the commission. Water quality, quantity, and distribution in the project area would continue to be protected by applicable water quality, quantity, and distribution regulations, over which FWP has no direct control.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on water quality, quantity, and distribution.

Secondary Impacts: No significant adverse secondary impacts to water quality, quantity, and distribution would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on water quality, quantity, and distribution if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on water quality, quantity, and distribution. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

Existing surface water resources would continue to be used by elk and no new water resources would be needed or established for such purposes because of the proposed project. Elk may congregate near existing water sources causing increased turbidity and deposition of wastes thereby impacting water quality in the affected area. However, this would be consistent with existing impacts. The quantity of water consumed by elk would vary with elk numbers.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to water quality, quantity, and distribution would be expected because of the proposed project.

3. Geology

Existing Environment-Baseline Conditions (No Action Alternative): Under the No Action Alternative, the proposed alternative would not occur, and no disturbances associated with the proposed actions would therefore impact geology. Elk would continue to be managed under the existing plan and no additional impact would occur on geology where they occur. The No Action Alternative would not change the status of the existing area. Impacts on geology due to current and future activities in the existing area would continue. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: There would be no significant adverse direct impacts to the geology of the affected area because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. It is not expected the proposed action would result in any direct impact to geology.

Secondary Impacts: There would be no significant adverse secondary impacts to geology in the area affected by the proposed project.

4. Soil Quality, Stability, and Moisture

Existing Environment-Baseline Conditions (No Action Alternative): There are 700 soil types within the analysis area. Although Scobey is the most common soil type in the state, it is primarily located in the north central part of the state and has little overlap with the mapped elk distribution. See *Section VIII,*

General Setting of the Affected Environment (statewide), for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on the soil quality, stability, and moisture is providing information to the public and the commission. Soil quality, stability, and moisture in those portions of the project area would continue to be protected by applicable regulations, over which FWP has no direct control.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on soil quality, stability, and moisture.

Secondary Impacts: No significant adverse secondary impacts to soil quality, stability, and moisture would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on soil quality, stability, and moisture if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on soil quality, stability, and moisture. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

Hoof action from elk grazing and congregating near water and food resources may cause a temporary increase in soil compaction and erosion in the affected area. However, hoof action may also benefit soil quality by breaking down old residual vegetative material, thus returning nutrients to the soil and seed planting. These impacts would also occur under the "no action" alternative. Severity in hoof action varies with the number and distribution of elk.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to soil quality, stability, and moisture would be expected because of the proposed project.

5. Vegetation Cover, Quantity, and Quality

Existing Environment-Baseline Conditions (No Action Alternative): Common habitat types within the analysis area include Great Plains mixed-grass prairie (67,251 km^2), big sagebrush steppe (45,747 km^2), Rocky Mountain lower montane, foothill and valley grassland (20,096 km^2), montane sagebrush steppe (16,425 km^2), Rocky Mountain subalpine dry-mesic spruce-fir forest and woodland (12,579 km^2), Rocky Mountain lodgepole pine (12,036 km^2), Rocky Mountain dry-mesic montane mixed conifer forest (10,888 km^2), and Great Plains sand prairie (10, 516 km^2). See *Section VII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on the vegetation cover, quantity, and quality is providing information to the public and the commission. Vegetation cover, quantity, and quality in the project area would continue to be protected by applicable regulations, over which FWP typically has no direct control.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on vegetation cover, quantity, and quality.

Secondary Impacts: No significant adverse secondary impacts to vegetation cover, quantity, and quality would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on vegetation cover, quantity, and quality if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on vegetation cover, quantity, and quality. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

Elk grazing activities may impact the diversity, productivity, and abundance of standing cover over time. Elk grazing activities would generally support productivity and overall health of native vegetation in a given area with a healthy elk population that is in line with the habitat and ecological carrying capacity of the affected area. Elk grazing activities depend on elk abundance and distribution, which are dependent on commission action and environmental conditions (weather, forage availability).

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no

significant secondary impacts to vegetation cover, quantity, and quality would be expected because of the proposed project.

6. Aesthetics

Existing Environment-Baseline Conditions (No Action Alternative): The proposed project area has many unique features across the natural landscape that include native habitats, minerals, flora, fauna, areas of historic significance, and riverine and wetland ecosystems. The proposed project area also has diverse communities, including urban communities and rural communities that are dominated by agricultural use and outdoor recreational opportunities. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on the aesthetics is providing information to the public and the commission. Aesthetic values in those portions of the project area would continue to be protected by applicable regulations, over which FWP may or may not have direct control.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on aesthetics.

Secondary Impacts: No significant adverse secondary impacts to aesthetics would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on aesthetics if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on aesthetics. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

Many Montanans and visitors to the state alike hold high regard for elk for hunting, as an icon of the state, and a valuable component of the ecosystems in which they reside. As such, elk are deeply engrained in the customs and lifestyles of residents and visitors to the state of Montana and seeing them on the landscape provides aesthetic value. Conversely, some ranchers and farmers may realize adverse impacts stemming from competition with elk for livestock grazing resources and or elk

consumption and associated damage to agricultural crops. The presence and signs of elk located in any given area may be objectionable to some segments of the public and appreciated by others.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to aesthetics would be expected because of the proposed project.

7. Air Quality

Existing Environment-Baseline Conditions (No Action Alternative): Air quality in most areas of Montana is currently unclassifiable or in compliance with-attainment for the applicable national ambient air quality standards (NAAQS). Existing sources of air pollution in Montana are varied and generally include industrial point sources (i.e., Colstrip coal-fired power plant), fugitive dust associated with high-wind events and exposed ground, vehicle travel on unpaved roads (fugitive dust), vehicle exhaust emissions, and various agricultural practices (vehicle exhaust emissions and fugitive dust). See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Historically, ambient air quality monitoring in some areas of the state has demonstrated non-compliance or nonattainment for the particulate matter (PM_{10}), carbon monoxide (CO), and sulfur dioxide (SO_2) NAAQS. Since that time, the affected areas have generally demonstrated compliance with the affected NAAQS. Montana's affected air quality nonattainment and/or maintenance areas (areas that once violated but have since attained the NAAQS) include the following: Libby ($PM_{2.5}$ Maintenance Area, PM_{10} Maintenance Area); Whitefish (PM_{10} Maintenance Area); Columbia Falls (PM_{10} Maintenance Area); Kalispell (PM_{10} Maintenance Area); Thompson Falls (PM_{10} Maintenance Area); Missoula (PM_{10} Maintenance Area, CO Maintenance Area); Great Falls (CO Maintenance Area); East Helena (Pb Maintenance Area); Butte (PM_{10} Maintenance Area); Laurel (SO_2 Nonattainment Area); Billings (CO Maintenance Area, SO_2 Maintenance Area); Polson, Tribal (PM_{10} Nonattainment Area); Ronan, Tribal (PM_{10} Nonattainment Area); and Lame Deer, Tribal (PM_{10} Nonattainment Area). See *Section VII, General Setting of the Affected Environment (statewide)*, for additional detailed information related to the affected existing environment. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: There would be no significant adverse direct impacts to the air quality of the affected area because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. Fugitive dust emissions resulting from the movement of elk over exposed ground may directly and adversely contribute to existing air quality impacts. However, these impacts are consistent with existing and historic impacts. Therefore, it is not expected the proposed action would result in any direct impact to air quality.

Secondary Impacts: There would be no significant adverse secondary impacts to air quality in the area affected by the proposed project.

8. Unique, Endangered, Fragile, or Limited Environmental Resources

Existing Environment-Baseline Conditions (No Action Alternative): The proposed project area has freshwater emergent wetlands, freshwater ponds, riparian forest, riparian scrub-shrub, native Great Plains mixed-grass prairie, big sagebrush steppe, and other fragile ecosystem resources. See *Section VII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

The presence of any animal and/or plant Species of Concern (SOC) or any Threatened or Endangered species located within or using the affected area were assessed. There are 227 animal SOC and 451 plant SOC, which may be viewed at https://mtnhp.org/SpeciesOfConcern/output/NHP_Plant_SOC.pdf and https://mtnhp.org/SpeciesOfConcern/output/NHP_Animal_SOC.pdf.

Within the project area, there are also eight federally threatened species: Canada lynx (*Lynx canadensis*), grizzly bear (*Ursus arctos*), yellow billed cuckoo (*Coccyzus americanus*), bull trout (*Salvelinus confluentus*), meltwater lednian stonefly (*Lednia tumana*), western glacier stonefly (*Zapada glacier*), red knot (*Calidris canutus*), and piping plover (*Charadrius melodus*). Additionally, there are four species listed as endangered under the Endangered Species Act: northern myotis (*Myotis septentrionalis*), least tern (*Sternula antillarum*), pallid sturgeon (*Scarphirynchus albus*), and black-footed ferret (*Mustela nigripes*). Also, the federally endangered whooping crane (*Grus americana*) may be found migrating through the project area. Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) use habitats throughout the proposed project area. The proposed project area may also have important animal habitat such as bat roosting areas (i.e., maternity roosts, hibernacula, or bachelor roosts), bird rookeries, and important stopover sights for migrating birds that provide critical resources for their annual migrations. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on the unique, endangered, fragile, or limited environmental resources is providing information to the public and the commission.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on unique, endangered, fragile, or limited environmental resources.

Secondary Impacts: No significant adverse secondary impacts to unique, endangered, fragile, or limited environmental resources would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent

commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on unique, endangered, fragile, or limited environmental resources if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on unique, endangered, fragile, or limited environmental resources. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

Achieving the identified population goals in the 2023 Plan would result in the following secondary impacts to other wildlife:

- A healthy elk population at or below the habitat (biological) and ecological carrying capacity (described previously in EA) would promote a healthy overall ecosystem.

- A healthy overall ecosystem promotes the well-being of all affected wildlife and habitats, including any unique, endangered, fragile, or limited environmental resources.

- Effectively, managing for a healthy elk population will result in beneficial secondary impacts to other wildlife, including any unique, endangered, fragile, or limited environmental resources in the affected area.

- Conversely, if there are excessive numbers of elk above what is determined to be sustainable, the ecosystem, vegetative communities, and populations of associated wildlife would be adversely impacted. Reduced abundance of elk may also have some detrimental effects because predators might switch to other prey excessively and their numbers may be reduced as well. Managing for a healthy elk population will result in beneficial secondary impacts to other wildlife.

The number and distribution of elk located within a given HD would impact the availability and condition of resources used by other wildlife in the affected area, including any unique, endangered, fragile, or limited environmental resources. Elk are primarily grazers, and as their numbers increase, the amount of forage they consume increases. Forage consumption may limit the amount of forage or vegetation for other species that may depend on the same plants. Conversely, as elk numbers are reduced, forage and plant availability increase for animals other than elk. Notably, forage consumption of specific plants may alter the vegetative composition of an area, and the composition of the plants in a vegetative community may provide more or less favorable conditions for listed plants and animals. The abundance of elk in an area may also influence the abundance of predators that prey on them. The abundance of predators may influence other species that are prey for predators, and predator abundance may influence the composition of other predators in the community. If elk numbers increase, greater numbers of bears, both black and grizzly, may prey on elk calves. Increased bear abundance may influence the abundance or distribution of wolves or coyotes, which may in turn influence abundance and distribution of mesocarnivores. Although changes to elk population size may occur over time, the plan itself will not direct those increases or decreases, the commission's action would.

The 2023 Plan includes habitat-improvement work as a strategy to meet certain goals; however, most elk habitat is located on federal or privately-owned property, thus FWP has little control over a majority of available elk habitat in Montana. The 2023 Plan recommends working with federal land management agencies and private landowners, but specific habitat projects are not defined within the Plan. Therefore, any impacts to affected habitat, including any plant SOC, would be consistent with existing impacts.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to unique, endangered, fragile, or limited environmental resources would be expected because of the proposed project.

9. Historical and Archaeological Sites

Existing Environment-Baseline Conditions (No Action Alternative): The proposed project location was the traditional homeland and hunting grounds for the Kootenai, Pend d' Oreille, Salish, Blackfeet, Gros Ventre, Crow, Assiniboine, Hidatsa, Mandan, Arikara and Sioux tribes. Additionally, there were homesteaders, trappers, pioneers, and other travelers through the area. All these groups utilized the proposed project area and there are known and unknown historical, archaeological, and other sites of importance across the proposed project area. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: There would be no significant adverse direct impacts to historical and archaeological sites of the affected area because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. It is not expected the proposed action would result in any direct impact to historical and archaeological sites.

In keeping with the Montana Antiquities Act and related regulations (ARM 12.8.501-12.8.510), all undertakings on state lands are assessed by a qualified archaeologist or historian for their potential to affect cultural resources. The process for this assessment may include a cultural resource inventory and evaluation of cultural resources within or near the project area, in consultation with the State Historic Preservation Office. FWP also consults with all Tribal Historic Preservation Offices affiliated with each property in accordance with FWP's Tribal Consultation Guidelines. Regardless of the nature of a proposed project, if cultural resources within or near the project area are recorded and are eligible for the National Register of Historic Places, they will be protected from adverse impacts through adjustments to the project design or cancellation of the project if no design alternatives are available. If cultural resources are unexpectedly discovered during project implementation, FWP would cease implementation and contact FWP's Heritage Program for further evaluation.

Secondary Impacts: There would be no significant adverse secondary impacts to historical and archaeological sites in the area affected by the proposed project.

10. Demands on Environmental Resources of Land, Water, Air, and Energy

Existing Environment-Baseline Conditions (No Action Alternative): Much of the proposed project area is considered rural and relies on the resources of the land and water for agricultural operations. Both land and water are used for recreational opportunities throughout the project area. Further, various types of energy development and production occur throughout the project area. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological),

and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. No increased use of fuel would be required for the proposed project and no existing energy development and production facilities would be impacted. The proposed project's only direct impact on the demands of environmental resources of land, water, air, and energy is providing information to the public and the commission.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on the demands of environmental resources of land, water, air, and energy.

Secondary Impacts: There would be no significant adverse secondary impacts to demands of environmental resources of land, water, air, and energy in the area affected by the proposed project.

B. Evaluation and Summary of Potential Impacts of the Proposed Project on the Human Environment

1. Social Structures and Mores

Existing Environment-Baseline Conditions (No Action Alternative): The project area has a population of 1,122,867 (2022 U.S. Census). The five largest ethnic groups in the project area are white (non-Hispanic) 85.5%, American Indian and Alaska Native (non-Hispanic) 6.6%, Hispanic or Latino 4.3%, two or more races 3.0%, and Asian 1.0%. In 2022, an estimated 4.0% of Montana households reported speaking a language other than English in the home. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment (https://www.census.gov/quickfacts/MT).

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on the social structures and mores is providing information to the public and the commission.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are

existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on social structures and mores.

Secondary Impacts: No significant adverse secondary impacts to social structures and mores would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on social structures and mores if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on social structures and mores. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

Many Montanans and visitors to the state alike hold high regard for elk for hunting, as an icon of the state, and a valuable component of the ecosystems in which they reside. As such, elk are deeply engrained in the customs and lifestyles of residents and visitors to the state of Montana and seeing them on the landscape provides aesthetic value. Conversely, some ranchers and farmers may realize adverse impacts stemming from competition with elk for livestock grazing resources and or elk consumption and associated damage to agricultural crops. The presence and signs of elk located in any given area may be objectionable to some segments of the public and appreciated by others.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to social structures and mores would be expected because of the proposed project.

2. Cultural Uniqueness and Diversity

Existing Environment-Baseline Conditions (No Action Alternative): The project area has a population of 1,122,867 (2022 U.S. Census). The five largest ethnic groups in the project area are white (non-Hispanic) 85.5%, American Indian and Alaska Native (non-Hispanic) 6.6%, Hispanic or Latino 4.3%, two or more races 3.0%, and Asian 1.0%. In 2022, an estimated 4.0% of Montana households reported speaking a language other than English in the home. The proposed project location was the traditional homeland and hunting grounds for the Kootenai, Pend d' Oreille, Salish, Blackfeet, Gros Ventre, Crow, Assiniboine, Hidatsa, Mandan, Arikara and Sioux tribes. Additionally, there were homesteaders, trappers, pioneers, and other travelers through the area. All these groups utilized the proposed project area. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any

given HD depends on subsequent commission action. The proposed project's only direct impact on the cultural uniqueness and diversity is providing information to the public and the commission.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on cultural uniqueness and diversity.

Secondary Impacts: There would be no significant adverse secondary impacts to historical and archaeological sites in the area affected by the proposed project.

3. Access to and Quality of Recreational and Wilderness Activities

Existing Environment (No Action Alternative): Visitor opportunities within the proposed project area are available for hunting, trapping, fishing, wildlife viewing, photography, hiking, camping, as well as other recreational opportunities. The proposed project location has thousands of acres of accessible public lands including, but not limited to, national parks, wilderness areas, national forests, state forests, state parks and campgrounds. The proposed project area has numerous Block Management Areas that provide a wide variety of hunting opportunities for Montanans and visitors to the state in pursuit of certain species. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Many Montanans and visitors to the state come in pursuit of hunting big game and more specifically elk. FWP estimated that in 2021 there were 112,441 elk hunters, 148,698 deer hunters, 18,803 antelope hunters, 459 bighorn sheep hunters, 160 mountain goat hunters, and 294 moose hunters. Upland game bird hunting and turkey hunting are additional popular activities within the proposed project area. FWP estimated in 2021 there were 32,388 upland game bird hunters and 11,151 turkey hunters.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. Multiple congressionally designated wilderness areas currently exist in the affected area; however, no wilderness areas would be closed or otherwise manipulated because of the proposed action. The proposed project's only direct impact on access to and quality of recreational and wilderness activities is providing information to the public and the commission.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on access to and quality of recreational and wilderness activities.

Secondary Impacts: No significant adverse secondary impacts to access to and quality of recreational and wilderness activities would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on access to and quality of recreational and wilderness activities if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on access to and quality of recreational and wilderness activities. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to access to and quality of recreational and wilderness activities would be expected because of the proposed project.

4. Local and State Tax Base and Tax Revenue

Existing Environment-Baseline Conditions (No Action Alternative): Under the No Action Alternative, the proposed alternative would not occur, and no actions would therefore impact local and state tax base and tax revenue. Elk would continue to be managed under the existing elk plan and will have no impact on local and state tax base and tax revenue where they occur. The No Action Alternative would not change the status of the existing area. Impacts on local and state tax base and tax revenue due to current and future activities in the existing area would continue. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on the local and state tax base and tax revenue is providing information to the public and the commission.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on local and state tax base and tax revenue.

Secondary Impacts: No significant adverse secondary impacts to local and state tax base and tax revenue would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on local and state tax base and tax revenue if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on local and state tax base and tax revenue. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to local and state tax base and tax revenue would be expected because of the proposed project.

5. Industrial, Commercial, Agricultural Activities and Production

Existing Environment-Baseline Conditions (No Action Alternative): Under the No Action Alternative, the proposed alternative would not occur, and no further disturbance associated with the proposed actions would therefore impact agriculture, industrial, or commercial production. Elk will continue to be managed in accordance with the existing elk plan with no additional impact on Agriculture, industrial, or commercial production where they occur. The No Action Alternative would not change the status of the existing area. Impacts on agriculture, industrial, or commercial production due to current and future activities in the existing area would continue. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on industrial, commercial, agricultural activities and production is providing information to the public and the commission.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on industrial, commercial, agricultural activities and production.

Secondary Impacts: No significant adverse secondary impacts to industrial, commercial, agricultural activities and production would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts industrial, commercial, agricultural activities and production if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on industrial, commercial, agricultural activities and production. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

Increased elk abundance and distribution in agricultural areas may result in increased damage to crops and overall crop production in a given area. It would be expected that some HDs with increased elk abundance and/or distribution would experience increased adverse agricultural impacts while others would experience decreased adverse agricultural impacts. The 2023 Plan provides for game damage hunts, thereby mitigating any potential increased adverse impacts in affected areas. A specific goal within the plan is to minimize impacts on agricultural production, private rangeland, and infrastructure. The strategies include providing a variety of alternatives to increasing the efficacy of the existing game damage program, that primarily provides hunters to remove or disburse elk to limit damage. Any of these impacts are dependent on commission action.

An increase in elk abundance and distribution within an area, and a subsequent increase in license sales for the affected area, may beneficially impact existing or new commercial guiding and outfitting activities in the affected area. Conversely, a decrease in elk abundance and distribution within a given area, and a subsequent decrease in license sales for the affected area, may adversely impact existing or new commercial guiding and outfitting activities in the affected area. Any of these impacts are dependent on commission action.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to industrial, commercial, agricultural activities and production would be expected because of the proposed project.

6. Human Health and Safety

Existing Environment-Baseline Conditions (No Action Alternative): According to the 2022 U.S. Census, 19.6% of Montana residents are at least 65 years old. The leading cause of death in Montana is heart disease followed by cancer. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: There would be no significant adverse direct impacts to human health and safety of the affected area because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. It is not expected the proposed action would result in any direct impact to human health and safety.

Secondary Impacts: There would be no significant adverse secondary impacts to human health and safety in the area affected by the proposed project.

7. Quantity and Distribution of Employment

Existing Environment-Baseline Conditions (No Action Alternative): The economy in Montana employs approximately 470,230 people. The most common occupations include retail, fast food, cashiers, clerks, and nurses. The highest paying industries are medical, dental, and pharmaceutical. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on the quantity and distribution of employment is providing information to the public and the commission.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on the quantity and distribution of employment.

Secondary Impacts: No significant adverse secondary impacts to quantity and distribution of employment would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on quantity and distribution of employment if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on quantity and distribution of employment. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

An increase in elk abundance and distribution within an area, and a subsequent increase in license sales for the affected area, may beneficially impact existing or new commercial guiding and outfitting activities and resulting employment in the affected area. Conversely, a decrease in elk abundance and distribution within a given area, and a subsequent decrease in license sales for the affected area, may adversely impact existing or new commercial guiding and outfitting activities in the affected area. Any of these impacts are dependent on commission action.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to quantity and distribution of employment would be expected because of the proposed project.

8. Density and Distribution of Human Population and Housing

Existing Environment-Baseline Conditions (No Action Alternative): The project area has a population of 1,122,867 (2022 U.S. Census) with 7.4 persons/square mile (2020 U.S. Census). The median household income is $60,560 and the median value of owner-occupied housing is $263,700 (2022 U.S. Census). See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: There would be no significant adverse direct impacts to density and distribution of human population and housing of the affected area because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. It is not expected the proposed action would result in any direct impact to density and distribution of human population and housing.

Secondary Impacts: No significant adverse secondary impacts to density and distribution of human population and housing would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on density and distribution of human population and housing if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on density and distribution of human population and housing. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

The proposed action would not result in an increase or decrease in the abundance and distribution of elk on certain public and private lands, but commission action may. An increase in elk abundance and distribution within a given area, and a subsequent increase in license sales for the affected area, may result in the establishment of new commercial guiding and outfitting activities in the affected area. Conversely, a decrease in elk abundance and distribution within a given area, and a subsequent decrease in license availability for the affected area, may adversely impact existing commercial guiding

and outfitting activities in the affected area. An increase or decrease in the number of guides and outfitters providing services in a given area may impact the need for housing on a local level.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to density and distribution of human population and housing would be expected because of the proposed project.

9. Demands for Government Services

Existing Environment-Baseline Conditions (No Action Alternative): Under the No Action Alternative, the proposed alternative would not occur, and no further demand associated with the proposed actions would therefore impact demands for government services. Elk will continue to be managed in accordance with the existing elk plan with no additional impact on demands for government services where they occur. The No Action Alternative would not change the status of the existing area. Impacts on demands for government services due to current and future activities in the existing area would continue. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. Affected FWP wildlife staff and managers would shift prior elk management responsibilities under the 2005 Plan to new, but similar, responsibilities under the new elk management plan. Therefore, consistent and minor direct impacts to the demands for government services would be expected because of the proposed project.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on demands for government services.

Secondary Impacts: No significant adverse secondary impacts to demands for government services would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on demands for government services if the commission bases subsequent decisions on the information in the plan. However, the commission also

has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on demands for government services. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

The proposed action would not result in an increase or decrease in the abundance and distribution of elk on certain public and private lands, but commission action may. An increase in historical elk abundance and distribution within a given area, and a subsequent increase in license sales for the affected area, may result in the establishment of new commercial guiding and outfitting activities in the affected area. Conversely, a decrease in historical elk abundance and distribution within a given area, and a subsequent decrease in license availability for the affected area, may adversely impact existing commercial guiding and outfitting activities in the affected area. An increase or decrease in the number of guides and outfitters providing services in a given area may impact the need for government services to regulate the industry.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to demands for government services would be expected because of the proposed project.

10. Locally Adopted Environmental Plans and Goals

Existing Environment-Baseline Conditions (No Action Alternative): Under the No Action Alternative, the proposed alternative would not occur, and no further effects associated with the proposed actions would therefore impact locally adopted environmental plans and goals. Elk will continue to be managed in accordance with the existing elk plan with no additional impact on locally adopted environmental plans and goals where they occur. The No Action Alternative would not change the status of the existing area. Impacts on locally adopted environmental plans and goals due to current and future activities in the existing area would continue. See *Section VIII, General Setting of the Affected Environment (statewide)*, for more detailed information related to the affected existing environment.

Direct Impacts: No long-term significant adverse direct impacts would be expected because of the proposed project. The 2023 Plan would establish elk population goals by HD and recommend population ranges that result in healthy and sustainable elk populations within the ecological, habitat (biological), and social carrying capacity of the affected HD. These population goals would be made available to the public and also to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. Therefore, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action. The proposed project's only direct impact on locally adopted environmental plans and goals is providing information to the public and the commission.

The proposed project also includes activities that: require additional MEPA analysis before implementation (e.g., habitat improvement on state land); do not directly result in an action being implemented (e.g., consultation with federal or private land managers); or are a continuation of existing activities and programs (e.g., use of FWP access programs).

The number and distribution of elk on the landscape depends on subsequent commission action. Also, other plan components require additional MEPA analysis, are exempt from MEPA analysis, or are

existing activities. Therefore, the proposed project, in and of itself, has no significant direct impact on locally adopted environmental plans and goals.

Secondary Impacts: No significant adverse secondary impacts to locally adopted environmental plans and goals would be expected because of the proposed project. The plan and its goals would be made available to the commission in support of their obligation to establish elk seasons, including harvest opportunities, by HD. As the commission may base subsequent management decisions on information in this plan, or recommendations from the department based on this plan, subsequent commission action (i.e., season setting, game damage quotas, etc.) may have direct impact on the number and distribution of elk. This means the proposed project may have secondary impacts on locally adopted environmental plans and goals if the commission bases subsequent decisions on the information in the plan. However, the commission also has the discretion to act outside of the department's recommendations (which are based on this plan), and in that instance, this action would not have a secondary impact on locally adopted environmental plans and goals. Regardless, the number and distribution of elk on the landscape in any given HD depends on subsequent commission action.

The number and distribution of elk within a given HD would impact the availability and condition of resources used by other wildlife in the affected area. Elk are primarily grazers, and as their numbers increase, the amount of forage they consume increases. Forage consumption may limit the amount of forage or vegetation for other species that may depend on the same plants. Conversely, as elk numbers are reduced, forage and plant availability increase for animals other than elk. Notably, forage consumption of specific plants may alter the vegetative composition of an area, and the composition of the plants in a vegetative community may provide more or less favorable conditions for listed plants and animals. The abundance of elk in an area may also influence the abundance of predators that prey on them. The abundance of predators may influence other species that are prey for predators, and predator abundance may influence the composition of other predators in the community. If elk numbers increase, greater numbers of bears, both black and grizzly, may prey on elk calves. Increased bear abundance may influence the abundance or distribution of wolves or coyotes, which may in turn influence abundance and distribution of mesocarnivores. Although changes are expected based on numbers of elk, the plan itself will not direct those increases or decreases.

Ultimately, the commission has authority to establish harvest regulations in accordance with harvest limitations set by the legislature. Anticipating specific commission actions and the results on elk numbers and distribution is difficult. The number of potential outcomes is infinite, and not all commission actions would be a secondary impact resulting from the proposed action. Therefore, no significant secondary impacts to locally adopted environmental plans and goals would be expected because of the proposed project.

XII. Determining the Significance of Impacts

If the EA identifies impacts associated with the proposed action, FWP must determine the significance of the impacts. This determination forms the basis for FWP's decision as to whether it is necessary to prepare an environmental impact statement. FWP considered the criteria identified in **Table 10** below to determine the significance of each impact on the quality of the physical and human environment. ARM 12.2.431.

The significance determination is made by giving weight to these criteria in their totality. For example, impacts identified as moderate or major in severity may not be significant if the duration is short-term. However, moderate, or major impacts of short-term duration may be significant if the quantity and quality of the resource is limited and/or the resource is unique or fragile. Further, moderate or major impacts to a resource may not be significant if the quantity of that resource is high or the quality of the resource is not unique or fragile.

Table 10: Determining the Significance of Impacts

	Criteria Used to Determine Significance
1	The **severity, duration, geographic extent,** and **frequency** of the occurrence of the impact **"Severity"** describes the density of the potential impact, while **"extent"** describes the area where the impact will likely occur, e.g., a project may propagate ten noxious weeds on a surface area of 1 square foot. Here, the impact may be high in severity, but over a low extent. In contrast, if 10 noxious weeds were distributed over 10 acres, there may be low severity over a larger extent. **"Duration"** describes the time period during which an impact may occur, while **"frequency"** describes how often the impact may occur, e.g., an operation that uses lights to mine at night may have frequent lighting impacts during one season (duration).
2	The probability that the impact will occur if the proposed project occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur
3	Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts
4	The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values
5	The importance to the state and to society of each environmental resource or value that would be affected
6	Any precedent that would be set as a result of an impact of the proposed project that would commit FWP to future actions with significant impacts or a decision in principle about such future actions
7	Potential conflict with local, state, or federal laws, requirements, or formal plans

XIII. Private Property Impact Analysis (Takings)

The 54th Montana Legislature enacted the Private Property Assessment Act, now found at § 2-10-101. The intent was to establish an orderly and consistent process by which state agencies evaluate their proposed projects under the "Takings Clauses" of the United States and Montana constitutions. The Takings Clause of the Fifth Amendment of the United States Constitution provides: "nor shall private property be taken for public use, without just compensation." Similarly, Article II, Section 29 of the Montana Constitution provides: "Private property shall not be taken or damaged for public use without just compensation…"

The Private Property Assessment Act applies to proposed agency projects pertaining to land or water management or to some other environmental matter that, if adopted and enforced without due process of law and just compensation, would constitute a deprivation of private property in violation of the United States or Montana constitutions.

The Montana state attorney general's Office has developed guidelines for use by state agencies to assess the impact of a proposed agency project on private property. The assessment process includes a careful review of all issues identified in the attorney general's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency project has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act.

Table 11: Private Property Assessment Act (Taking and Damaging Assessment)

PRIVATE PROPERTY ASSESMENT CHECKLIST			
Does the Proposed Action Have Takings Implications under the PPAA?	**Question #**	**Yes**	**No**

Does the project pertain to land or water management or environmental regulations affecting private property or water rights?	1	☐	☒
Does the action result in either a permanent or an indefinite physical occupation of private property?	2	☐	☒
Does the action deprive the owner of all economically viable uses of the property?	3	☐	☒
Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 4a and 4b and continue with question 5.)	4	☐	☒
Is there a reasonable, specific connection between the government requirement and legitimate state interest?	4a	☐	☐
Is the government requirement roughly proportional to the impact of the proposed use of the property?	4b	☐	☐
Does the action deny a fundamental attribute of ownership?	5	☐	☒
Does the action have a severe impact of the value of the property?	6	☐	☒
Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public general? (If the answer is NO, skip questions 7a-7c.)	7	☐	☒
Is the impact of government action direct, peculiar, and significant?	7a	☐	☐
Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?	7b	☐	☐
Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?	7c	☐	☐
Does the proposed action result in taking or damaging implications?		☐	☒
Taking or damaging implications exist if **YES** is checked in response to Question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if **NO** is checked in response to question 4a or 4b.			
If taking or damaging implications exist, the agency must comply with MCA § 2-10-105 of the PPAA, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.			
Alternatives: The analysis under the Private Property Assessment Act, §§ 2-10-101-112, MCA, indicates no impact. FWP does not plan to impose conditions that would restrict the regulated person's use of private property to constitute a taking.			

XIV. Public Participation

Scoping

Scope is the full range of issues that may be affected if an agency implements a proposed action or alternatives to the proposed action. The scope of the environmental review is described through a definition of those issues, a reasonable range of alternatives considered, a description of the impacts to the physical and human environments, and a description of reasonable mitigation measures that would ameliorate the impacts. Scoping is the process used to identify all issues that are relevant to the proposed action.

Depending on the level of impact associated with a proposed action, the scoping process may include a request for public participation in the identification of issues.

Scoping provides an opportunity for public and agency involvement during the early planning stages of the analysis. The intent of the scoping process is to gather comments, concerns, and ideas from those who have an interest in or

who may be affected by the proposed action. Several strategies were used to inform the public about and solicit comments on the proposed action. These strategies included:

- Press releases
- Notices of meetings in local newspapers
- Public meetings held in communities across the state
- Virtual meeting
- Information for each HD posted online
- Online option to submit comments

In summer and fall 2022, FWP hosted 50 elk plan scoping meetings throughout the state. Additionally, each of the seven regions recorded a video summarizing and presenting information from every HD in the region. Regional videos were posted on FWP's website. Options for commenting included an online survey, mail, email, or written comments during public meetings. In total, FWP received 824 comments during this process that were used in developing proposed goals and measures related to goals for each HD.

Statewide questions that FWP sought feedback on included the following:

- Current population objectives are expressed as a desired number of elk counted, and typically include a range around that value (±20%). The range accounts for anticipated variability in elk counts among years. In this HD, should FWP maintain the current form of objective (point value with fixed range) or should FWP consider alternative population objective forms, like using the long-term average (five years, 10 years) ±20%, or some other approach to establish a population objective?
- Elk populations are classified into objective status using annual or biennial survey data. Because there is often variation among surveys, would it be more appropriate to use individual surveys or a three-year average of surveys to determine objective status for this HD or would you recommend some other approach?

Local scale elk counts were provided along with questions. Questions had slight variations between HDs but generally included the following (note, "###" and "XXX" represent numbers and words, respectively, that were unique to each HD):

- The current population objective for HD XXX is ### (range ### - ###). Do you think the current population objective level should be maintained, increased, or decreased? If increased or decreased, what should the new range be?
- In HD XXX, there is a bull objective to maintain at least ##bulls: 100 cows. Should there be a bull objective in this HD? If so, is the current bull objective appropriate? If not, what should it be?
- Are you satisfied with the current elk distribution in this HD? If not, would you suggest any specific objectives to address the distribution?
- What else does the Elk Management Plan need to include for this HD?

A comprehensive list of elk scoping meetings follows. Information included is the location, date, venue, time, and HDs that were discussed. A statewide press release occurred at the initiation of elk plan scoping along with an outreach video describing the purpose of the meetings and importance of collecting feedback. There were subsequent local press releases and advertisements in local newspapers. FWP social media also provided reminders prior to each meeting.

Statewide Question and Answer Session

- Date: Sept. 26
- Venue: virtual meeting

- Time: 6-8 p.m.

Kalispell

- Date: Aug. 23
- Venue: Flathead Valley Community College, Arts and Technology Building (downstairs)
- Time: 6 p.m.
- HDs: 103, 120, 122, 130, 140, 141, 150, 170

Eureka

- Aug. 24
- Venue: Timbers Lodge
- Time: 6 p.m.
- HDs: 100, 101, 103, 110

Libby

- Aug. 22
- Venue: Little Theater
- Time: 6 p.m.
- HDs: 100, 101, 103, 104

Thompson Falls

- Aug. 25
- Venue: Thompson Falls Elementary School gym
- Time: 6 p.m.
- HDs: 121, 122, 123, 124

Hamilton

- Sept. 22
- Venue: Daly-Leach Memorial Chapel (1010 W. Main St.)
- Time: 6-8 p.m.
- HDs: 204, 240, 250, 260, 261, 262, 270

Anaconda

- Sept. 27
- Venue: Metcalf Center (115 E Pennsylvania Ave).
- Time: 6-8 p.m.
- HDs: 212, 213, 214, 215

Drummond

- Sept. 28
- Venue: Community Hall & Senior Center (54 E. Broad St)
- Time: 6-8 p.m.
- HDs: 210, 211, 216, 217, 291

Deer Lodge

- Sept. 29
- Venue: Powell County Community Center (416 Cottonwood Ave)
- Time: 6-8 p.m.
- HDs: 212, 213, 214, 215, 217

Ovando

- Oct. 4
- Venue: Ovando School gym (108 Birch St.)
- Time: 6-8 p.m.

- HDs: 280, 281, 282, 284, 285, 290, 292, 293, 298

Seeley Lake

- Oct. 5
- Venue: Community Hall (3248 Hwy 83)
- Time: 6-8 p.m.
- HDs: 280, 281, 282, 284, 285, 290, 292, 293, 298

Missoula

- Oct. 6
- Venue: FWP Missoula Office
- Time: 6-8 p.m.
- Overview of region; more focus on 201, 260

Lincoln

- Oct. 11
- Venue: Lincoln Community Hall, 404 Main Street
- Time: 6-8 p.m.
- HDs: 280, 281, 282, 284, 285, 290, 292, 293, 298

Superior

- Oct. 13
- Venue: High School multipurpose room (410 Arizona)
- Time: 6-8 p.m.
- HDs: 200, 201, 202

Wisdom

- June 20
- Venue: Wisdom Community Center
- Time: 6:30-9 p.m.
- HDs: 321, 329, 331

Helena 1 of 2

- June 22
- Venue: Helena Middle School Auditorium
- Time: 6:30-9 p.m.
- HDs: 380, 391, 392

Helena 2 of 2

- June 27
- Venue: Helena Middle School Auditorium
- Time: 6-8 p.m.
- HDs: 318, 335, 339, 343, 388

Townsend

- June 28
- Venue: Broadwater Rod & Gun Club Indoor Shooting Range
- Time: 6:30-9 p.m.
- HDs: 380, 390, 391

Dillon

- July 21
- Venue: Beaverhead Search and Rescue Building

- Time: 6-9 p.m.
- HDs: 302, 303, 322, 329, 331, 340

Ennis

- July 26
- Venue: Ennis Elementary, Cafeteria
- Time: 6-8 p.m.
- HDs: 320, 322, 360, 361

Butte

- July 27
- Venue: FWP Butte Area Resource Office
- Time: 6:30-9 p.m.
- HDs: 302, 303, 319, 329, 331, 340

Gardiner

- Aug. 3
- Venue: Gardiner High School
- Time: 6-9 p.m.
- HDs: 313, 316

Livingston

- Aug. 8
- Venue: Park County Fairgrounds
- Time: 6-9 p.m.
- HDs: 313, 314, 315, 316, 317, 393

Boulder

- Aug. 10
- Venue: Jefferson County Fairgrounds, Volunteer Hall
- Time: 6:30-9 p.m.
- HDs: 350, 370, 380

Bozeman

- Aug. 16
- Venue: Best Western Plus GranTree Inn, Hyalite Room
- Time: 6-9 p.m.
- HDs: 301, 304, 309, 310, 311, 312, 314, 390, 393

Lewistown 1 of 2

- Aug. 2
- Venue: Yogo Inn
- Time: 6-8 p.m.
- HDs: 411, 412, 419, 535

Lewistown 2 of 2

- Aug. 4
- Venue: Yogo Inn
- Time: 6-8 p.m.
- HDs: 410, 417, 426

Winnett

- Aug. 11

- Venue: Petroleum County Courthouse
- Time: 6-8 p.m.
- HD: 410

White Sulphur Springs

- Aug. 16
- Venue: Meagher County Shooting Range
- Time: 7-9 p.m.
- HDs: 416, 451, 452, 446

Chester

- Aug. 17
- Venue: Chester High School
- Time: 7-9 p.m.
- HD: 401

Choteau

- Aug. 18
- Venue: Choteau Public Library
- Time: 7-9 p.m.
- HDs: 415, 441, 450

Stanford

- Aug. 18
- Venue: Stanford City Hall
- Time: 7-9 p.m.
- HDs: 413, 418, 420, 447, 428

Great Falls

- Aug. 15
- Venue: FWP Region 4 office, 4600 Giant Springs Rd
- Time: 7-9 p.m.
- HDs: All Region 4 HDs (400, 401, 403, 404, 405, 406, 410, 411, 412, 413, 415, 416, 417, 418, 419, 420, 421, 422, 424, 425, 426, 441, 442, 444, 445, 446, 447, 448, 450, 451, 452, 455, 471)

Augusta

- Aug. 23
- Venue: Augusta Community Center
- Time: 7-9 p.m.
- HDs: 422, 424, 425, 442, 444

Craig

- Aug. 25
- Venue: Craig Volunteer Fire Department
- Time: 7-9 p.m.
- HDs: 421, 441, 451

Fort Benton

- Aug. 31
- Venue: Fort Benton Ambulance Station
- Time: 7-9 p.m.
- HDs: 400, 403, 404, 405, 406, 419, 444, 447, 471

Columbus

- June 20
- Venue: Columbus High School
- Time: 5-9 p.m.
- HDs: 502, 515, 525, 555, 575

Billings

- June 22
- Venue: Hilton Garden Inn
- Time: 5-9 p.m.
- HDs: All Region 5 HDs (502, 515, 525, 535, 540, 555, 565, 575, 580, 590)

Roundup

- June 28
- Venue: Roundup Senior Center
- Time: 5-9 p.m.
- HDs: 411, 535, 590

Big Timber

- June 29
- Venue: Big Timber Library
- Time: 5-9 p.m.
- HDs: 315, 515, 525, 565, 575, 580

Harlowton

- June 30
- Venue: Harlowton Kiwanis Center
- Time: 5-9 p.m.
- HDs: 411, 515, 535, 540, 580

Malta

- Aug. 9
- Venue: Malta High School
- Time: 6-8 p.m.
- HDs: 600, 620, 621, 622, 630, 640, 650, 652, 670

Glasgow

- Aug. 11
- Venue: Cottonwood Inn
- Time: 6-8 p.m.
- HDs: 600, 620, 621, 622, 630, 640, 650, 652, 670

Havre

- Aug. 16
- Venue: Best Western Great Northern Inn
- Time: 6-8 p.m.
- HDs: 600, 640, 650, 652, 670, 690

Miles City

- July 12
- Venue: Miles City FWP Office
- Time: 6-8 p.m.
- HDs: All Region 7 HDs (700, 701, 702, 703, 704, 705)

Glendive

- July 13
- Venue: Dawson Community College, Ullman Center Room 102
- Time: 6-8 p.m.
- HDs: All Region 7 HDs (700, 701, 702, 703, 704, 705)

Colstrip

- July 18
- Venue: Colstrip City Hall
- Time: 6-8 p.m.
- HDs: 702, 704, 705

Ekalaka

- July 19
- Venue: Carter County Fairgrounds Exhibit Hall
- Time: 6-8 p.m.
- HDs: 702, 704, 705

Broadus

- July 20
- Venue: Community Center
- Time: 6-8 p.m.
- HDs: 702, 704, 705

Jordan

- July 25
- Venue: VFW Building
- Time: 6-8 p.m.
- HD: 700

Public Review of Environmental Assessments

The level of analysis in an EA will vary with the complexity and seriousness of environmental issues associated with a proposed action. The level of public interest will also vary. FWP is responsible for adjusting public review to match these factors (ARM 12.2.433(1)). For the proposed project, FWP determined the following public notice strategy will provide an appropriate level of public review:

- An EA is a public document and may be inspected upon request. Any person may obtain a copy of an EA by making a request to FWP.
- Public notice will be served on the Montana Fish, Wildlife & Parks website at: https://fwp.mt.gov/public-notices.
- Public notice will be served on the Montana Environmental Quality Council's MEPA Document List website at: https://leg.mt.gov/mepa/search/.
- As applicable, copies will be distributed to neighboring landowners to ensure their knowledge of the proposed project and opportunity for review and comment on the proposed action.
- FWP maintains a mailing list of persons interested in a particular action or type of action. FWP will notify all interested persons and distribute copies of the EA to those persons for review and comment (ARM 12.2.433(3)).
- FWP will issue public notice in the following newspaper periodical(s) on the date(s) indicated.

Public notice announces availability of the draft EA for public review, summarizes the proposed project, identifies the time-period available for public comment, and provides direction for submitting comments.

A press release containing this public notice information was sent on June 30 to nearly every media outlet in the state, including more than 70 newspapers, all local television stations, and most radio stations. It was also sent to several

reporters from state news outlets. The press release can be found at this link: https://fwp.mt.gov/homepage/news/2023/jun/0630-fwp-seeks-comment-on-draft-environmental-assessment-of-elk-management-plan.

- **Duration of Public Comment Period:** The public comment period begins on the date of publication of legal notice in area newspapers (see above). Written or emailed comments will be accepted until 5 p.m., Mountain Time, on the last day of public comment, as listed below:

  Length of Public Comment Period: 30 days

  Public Comment Period Begins: June 30, 2023

  Public Comment Period Ends: July 31, 2023

Comments must be addressed to the FWP contact listed below.

- **Where to Mail or Email Comments on the Draft EA:**

  Name: Montana FWP Wildlife Division

  Email: FWPWLD@mt.gov

  Mailing Address:

  Montana Fish, Wildlife & Parks
  Attn: Wildlife
  PO Box 200701
  Helena, MT 59620-0701

Link to online comment option: https://fwp.mt.gov/public-notices/news/2023/jun/0630-2023-draft-elk-management-plan-ea

XV. Recommendation for Further Environmental Analysis

NO further analysis is needed for the proposed action	☒
FWP must conduct **EIS** level review for the proposed action	☐

XVI. EA Preparation and Review

	Name	Title
EA prepared by:	Lindsey Parsons and Brian Wakeling	Deer-Elk Coordinator & Game Bureau Chief (respectively)
EA reviewed by:	Eric Merchant	FWP MEPA Coordinator

Appendix A - References

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