

MONTANA GRIZZLY BEAR MANAGEMENT PLAN

ENVIRONMENTAL IMPACT STATEMENT 2022

EXECUTIVE SUMMARY

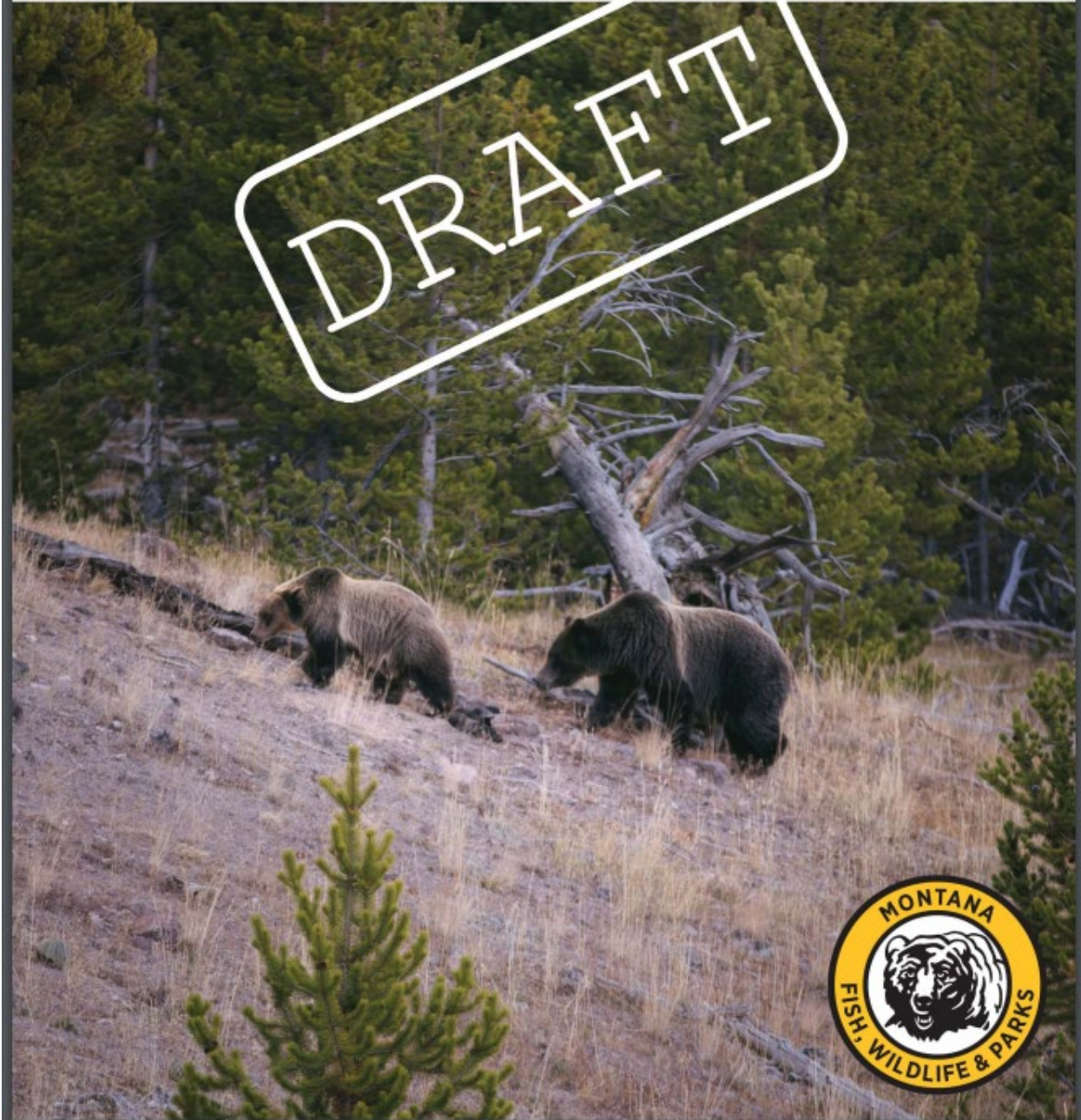


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SUMMARY

In accordance with Administrative Rules of Montana (ARM) 12.2.435(3) The agency shall prepare with each draft environmental impact statement (DEIS) a brief summary that is available for distribution separate from the DEIS.

S.1 BACKGROUND AND OVERVIEW

S.1.1. Project Background

This Draft Environmental Impact Statement (DEIS) has been prepared by the Montana Fish, Wildlife & Parks (FWP) to analyze and disclose the potential environmental impacts of adopting and implementing a statewide grizzly bear management plan.

FWP proposes to manage grizzly bears (*Ursus arctos*) within the state of Montana under the direction of a new, programmatic plan. This plan, analyzed through the Montana Environmental Policy Act (MEPA) process with an accompanying Environmental Impact Statement (EIS), will be fully compliant with responsibilities under the Endangered Species Act (ESA), and consistent with commitments made by existing agreements with federal, state, and tribal agencies. The plan will supplant two previous plans under which FWP has operated for western Montana and for southwest Montana. Recognizing that grizzly bears have expanded their area of occupancy to include many areas beyond the federally designated recovery zones as well as the buffer areas surrounding two of these zones, called Demographic Monitoring Areas (DMAs), this plan will guide management statewide, focusing on the 30 counties where grizzly bears have been documented in recent years, or could conceivably be documented in the near future. Because grizzly bears are listed as threatened under the ESA, the plan will serve both to guide state management of grizzly bears as a listed species and also to articulate FWP's vision of management should some or all segments of the species' distribution within Montana be delisted and full management authority returned to the state.

FWP envisions a future in which grizzly bears continue to be an important symbol of the state of Montana and part of its cultural heritage. The overwhelming success of grizzly bear recovery to date speaks to its importance and central role in the culture of Montana. FWP would continue to ensure their long-term presence in Montana, recognizing they are among the most difficult species to have in our midst. FWP views grizzly bears as both "conservation-reliant" and "conflict-prone," and embraces the challenges of ensuring the species' healthy future, while ensuring the safety of people and their property. As it supports a thriving grizzly bear population, FWP expects to continue its internationally recognized conflict prevention and response program and fully expects the removal of some animals will be necessary in the implementation of this plan.

S.2 PURPOSE AND NEED

MEPA and its implementing rules, ARM 12.2.428, *et. seq.*, require any DEIS prepared by a state agency include a description of the purpose and benefits of the proposed project. The purpose and benefits of the proposed project are described in the applicable sections below.

S.2.1 Purpose and Need

FWP's purpose is to provide management direction for grizzly bears (*Ursus arctos*) within the state of Montana under the direction of a new, programmatic plan. Management authority rests with the U.S. Fish and Wildlife Service (USFWS) for recovering the species. That said, federal, state, and tribal authorities typically work cooperatively and very few day-to-day management activities are conducted by field staff of the USFWS. Rather, states, tribes, and other agencies conduct most work on-the-ground under authority permitted by the USFWS.

States, tribes, and other federal agencies are expected to, and have in the past, produced management plans that explain and guide their priorities and resource allocations. Potential changes in grizzly bear populations within Montana must also be considered in this statewide plan. The Grizzly Bear Recovery Plan (USFWS 1993) recognizes six recovery areas, four of which are partly or entirely within Montana. The recovery plan identifies a recovery objective of delisting each of the populations sequentially as they achieve the recovery targets, along with continued ESA protection of each population until its specific recovery targets are met. At present, USFWS has found grizzly bears in two of the recovery areas, either partly or entirely located within Montana, to have met existing recovery criteria. These recovery areas are the Northern Continental Divide Ecosystem (NCDE) and the Greater Yellowstone Ecosystem (GYE). In 2007, the USFWS designated the grizzly bear population in the GYE as a distinct population segment (DPS) for the purpose of delisting and delineated a geographic boundary within which this designation applies, and delisting would occur. To delist the NCDE, the USFWS may similarly designate the NCDE population as a DPS and delineate a DPS boundary. Delisting of the GYE and NCDE populations could occur within the time frame typically considered for FWP management plans (generally not less than 10 years), in which case federal oversight of state activities would cease within each designated DPS boundary. Federal oversight would continue outside the DPS boundaries of these populations until targets outlined in the 1993 recovery plan are met and those recovered populations are delisted. This potential multi-jurisdictional future provides an additional rationale for a comprehensive, statewide plan for Montana.

The preferred alternative reflects these updated biological and social conditions, and updates two existing but dated plans. It takes advantage of recommendations and perspectives previously provided by the Governor's Grizzly Bear Advisory Council (GBAC), as well as a recently completed survey of Montanan's knowledge, beliefs, and attitudes toward grizzly bears. It reflects existing laws, regulations, and policies, as well as inter-governmental commitments made by FWP and by the Montana Fish and Wildlife Commission. The commission is the appointed body charged with making policy and regulations for fish and wildlife management. It will guide FWP activities consistent with ESA listed status, but also anticipate policy should delisting of recovered populations occur in the future.

S.2.2 Benefits

The project would provide the following federal, state, and local benefits:

Federal Benefits

Under the preferred alternative, the Statewide Grizzly Bear Management Plan provides clear direction on how grizzly bears would be managed by the state. It commits to numerical, mortality, and distributional objectives, as well as long-term management to maintain those objectives. These commitments provide assurance to the USFWS, as well as federal land managers, that management will

continue for listed and unlisted populations, and adequate regulatory mechanisms are in place – one of the five criteria used to evaluate whether listing/delisting is warranted.

State Benefits

Adoption of the preferred alternative will provide clearer and more predictable understanding by the state of how grizzly bears will be managed in different parts of the state, whether bears are listed or delisted. The assurances and commitments should provide support for delisting of at least the GYE and NCDE populations, which would provide additional management flexibility to the state in responding to grizzly bear conflicts, recognizing that the flexibility will still be constrained by management commitments such as the mortality thresholds contained in the GYE and NCDE conservation strategies.

Local Benefits

Similar to state and federal benefits, the primary benefit of the preferred alternative is more predictability in how grizzly bears would be managed in different parts of the state, and potentially more flexibility in response to conflicts.

S.3 AGENCY AUTHORITY AND ACTIONS

FWP is the lead agency responsible for the analysis of the project. The applicable statutes and regulations, as well as the decisions to be made, are described in Section S.3.1 below. No other required state and federal approvals, such as permits, certificates, and/or licenses from affected local, state and federal agencies are requested.

S.3.1 Applicable Statutes and Regulations

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal ESA regulations provide direction, and in some cases, restrict actions that can be taken. The 1993 recovery plan and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. Where not superseded by federal law or regulation, Montana laws (Montana Code Annotated, MCA), provide direction to FWP and the Fish and Wildlife Commission regarding the management of grizzly bears. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM).

Montana Statutes – Title 87 Fish and Wildlife

87-1-201	Powers and duties of the department
87-1-214	Disclosure of information – legislative finding – large predators
87-1-217	Policy for management of large predators – legislative intent
87-1-233	Compensation for damage caused by animal held in captivity
87-1-511	Sale of confiscated birds and animals – disposition of seized grizzly bears
87-2-101	Definitions – “game animals”
87-2-701	Special Licenses
87-2-702	Restrictions on special licenses – availability of bear and mountain lion licenses
87-2-814	Auction or lottery of grizzly bear license (Effective on concurrence of contingency)
87-3-131	Regulation of grizzly bear parts
87-4-702	Possession of game by merchants, hotelkeepers, or restaurant keepers
87-4-801	Definitions – “Wild zoo menagerie”
87-5-102; 87-5-103; 87-5-107; 87-5-108; 87-5-109; 87-5-110; 87-5-111; 87-5-112	Endangered species statutes
87-5-301	Grizzly bear – findings – policy
87-5-302	Commission regulations on grizzly bears
87-5-716	Consultation with departments of Agriculture, Public Health and Human Services, and Livestock
87-5-725	Notification of transplantation or introduction of wildlife
87-6-106	Lawful taking to protect livestock or person
87-6-202	Unlawful possession, shipping, or transportation of game fish, bird, game animal, or fur-bearing animal
87-6-205	Waste of game animal, game bird, or game fish
87-6-206	Unlawful sale of game fish, bird, game animal, or fur-bearing animal
87-6-207	Unlawful use of a boat
87-6-413	Hunting or killing over limit
87-6-701	Failure to report or tattoo
87-6-906	Restitution for illegal killing, possession, or waste of certain wildlife

Montana Statutes – Non-FWP

1-1-508	State animal
2-15-3110	Livestock loss board – purpose, membership, and qualifications
2-15-3111	Livestock loss reduction program
2-15-3112	Livestock loss mitigation program – definitions
2-15-3113	Additional powers and duties of livestock loss board
81-1-110	Livestock loss reduction and mitigation accounts

Montana Administrative Rules – Title 12 Fish, Wildlife and Parks

12.3.111	License/permit prerequisites
12.3.140	Application for drawings
12.3.404	Animals unfit for human consumption
12.6.1901	Definitions - “Bear”
12.8.806	Food storage
12.9.1401	Grizzly bear policy
12.9.1403	Grizzly bear demographic objectives for the Northern Continental Divide Ecosystem

Montana Administrative Rules – Title 36 Department of Natural Resources and Conservation

36.11.403	Definitions – “Grizzly BMU sub unit”
36.11.421	Road management
36.11.431	Threatened and endangered species – grizzly bear
36.11.432	Grizzly bear management on blocked Stillwater Unit lands
36.11.433	Grizzly bear management on other western Montana lands
36.11.434	Grizzly bear management on eastern Montana lands

S.3.2 Other Applicable Local, State, and Federal Regulatory Requirements

U.S. Endangered Species Act

S.4 SCOPING AND KEY ISSUE IDENTIFICATION**S.4.1 Scoping**

Scope is the full range of issues that may be affected if an agency decides to implement 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, a description of the impacts to the human environment, and a description of reasonable mitigation measures that would ameliorate the impacts. Scoping is the process used to identify all issues relevant to the proposed action.

This draft plan is written in the context of two existing FWP plans (Management Plan for Grizzly Bears in Western Montana (2006) and Southwest Montana (2013)), as well as internal and public processes that are considered to have fulfilled the scoping requirements of MEPA, including the convening of the GBAC, a public attitude survey, and development of conservation strategies in the NCDE and GYE.

Recognizing grizzly bears are expanding in geographic range, conflicts with humans are increasing, and populations of both grizzly bears and humans are likely to continue increasing at least for the immediate future, FWP realized new planning guidance may be necessary for grizzlies. A structured decision-making (SDM) process resulted in decisions to both work with the Governor to empanel an independent citizens council to examine these issues, and, following that, to replace existing management plans with a comprehensive statewide plan. The SDM process also developed a problem statement, strategic objectives, fundamental objectives, and constraints/sideboards.

On July 24, 2019, then-Governor Steve Bullock signed Executive Order 9-2019, creating the GBAC. In setting up the need and rationale for this group of 18 citizens, Gov. Bullock recognized grizzly bear numbers in Montana continue to increase and have expanded into areas where they have not been for decades, including places key to connecting their populations, and existing management plans did not fully anticipate grizzly bear distribution across the landscape. He tasked the GBAC to bring stakeholders and experts together to recommend statewide strategies for conserving and managing grizzly bears for today and the future. The GBAC met publicly 15 times between October 2019 and August 2020. Public comment was received at each meeting and is listed on the FWP website at <https://fwp.mt.gov/gbac>. The GBAC presented a final report to Gov. Bullock in August 2020. This report guiding principles, specific recommendations, and advice regarding resources required for implementation. The GBAC report provides an indispensable foundation for considerations made in this draft document and plan, as well as for final decisions on policy and strategy.

FWP and human dimension researchers Holly Nesbitt, Alex Metcalf, and Elizabeth Metcalf of the University of Montana designed and administered a survey of Montanans' general views about grizzly bears and attitudes toward their management. Questionnaires were sent to 5,350 randomly selected adults (aged 18+) within Montana in early November 2019, with follow-up mailings in late November 2019 and early January 2020. Results relevant to the statewide grizzly bear management plan include the following:

- Most Montanans agree (92%) that grizzly bears have a right to exist in Montana and 86% find it acceptable for bears to live in primarily forested areas that are publicly owned. When asked if grizzly bears do not belong where people live, the responses were more evenly divided: 35% agreed or strongly agreed and 43% disagreed or strongly disagreed with this statement.
- Most Montanans (57%) disagree that grizzly bears limit their recreational opportunities; however, 23% agree or strongly agree with that statement.
- When asked about their emotional response to seeing a grizzly bear from a distance while walking, more Montanans reported they would be nervous, scared, or upset than those that reported they would be relaxed, not scared, or pleased.
- A minority of Montanans agree that their personal safety is threatened by grizzly bears (19%) or that grizzly bears pose a safety risk to people they care about (28%).
- About 60% of Montanans agree that people should learn to live with grizzly bears near their homes, whereas 20% disagree with this notion. When asked about taking actions to reduce grizzly bear-human conflict on their own property, willingness was high for securing attractants but lower for actions related to livestock.
- Almost all Montanans (94%) report they have or would be willing to carry bear spray while recreating or hunting.
- About 49% of Montanans support enough hunting to manage grizzly bear population size; 30% support a very limited season that would not affect their population size; and 4% support as much grizzly bear hunting as possible. About 17% believe grizzly bears should never be hunted in Montana.

FWP also participated in development of Conservation Strategies for the Greater Yellowstone Ecosystem and Northern Continental Divide Ecosystem that were discussed in public forums and included multiple opportunities for public comment.

S.4.2 Key Issues Analysis

ARM 12.2.436(4)(a) identifies several key Physical and Human Resource issues to be analyzed through the EIS process. These issues were also identified through the scoping process and were used to guide the DEIS interdisciplinary team's analysis and alternatives development. These issues include the following:

- *Key Issue 1: Terrestrial, Avian, and Aquatic Life and Habitats*
- *Key Issue 2: Water Quality, Quantity and Distribution*
- *Key Issue 3: Geology; Soil Quality, Stability, and Moisture*
- *Key Issue 4: Vegetation Cover, Quantity, and Quality*
- *Key Issue 5: Aesthetics*
- *Key Issue 6: Air Quality*
- *Key Issue 7: Unique, Endangered, Fragile, or Limited Environmental Resources*
- *Key Issue 8: Historical and Archaeological Sites*
- *Key Issue 9: Energy Use*
- *Key Issue 10: Social Structures and Mores*
- *Key Issue 11: Cultural Uniqueness and Diversity*
- *Key Issue 12: Access to and Quality of Recreational and Wilderness Activities*
- *Key Issue 13: Local and State Tax Base and Tax Revenue*
- *Key Issue 14: Agricultural, Industrial or Commercial Production*
- *Key Issue 15: Human Health*
- *Key Issue 16: Quantity and Distribution of Employment,*
- *Key Issue 17: Distribution and Density of Population and Housing*
- *Key Issue 18: Locally Adopted Environmental Plans and Goals*

S.5 ALTERNATIVES ANALYZED

Alternatives were considered based on requirements for the alternatives analysis provided in MEPA and its implementing rules (ARM 12.2.428, *et. seq.*). MEPA does not specify the number of alternatives that need to be considered in an EIS; however, any alternative proposed must be reasonable, in that the alternative must be currently achievable and economically feasible, as determined solely by the economic viability for similar projects having similar conditions and physical locations and determined without regard to the economic strength of the specific project sponsor (MCA 75-1-201(1)(b)(iv)(C),). In addition, MEPA requires a meaningful analysis of the *No Action Alternative* in an DEIS.

Under MEPA, “alternative” means “an alternate approach or course of action that would appreciably accomplish the same objectives or results as the *proposed action*; design parameters, mitigation, or controls other than those incorporated into a proposed action by an applicant or by an agency prior to preparation of an EA or draft DEIS; no action or denial; and for agency-initiated actions, a different program or series of activities that would accomplish other objectives or a different use of resources than the proposed program or series of activities. The agency is required to consider only alternatives that are realistic, technologically available, and that represent a course of action that bears a logical relationship to the proposal being evaluated.”

FWP evaluates two alternatives in this DEIS: Alternative 1 – No Action Alternative and Alternative 2 – Proposed Action. Alternatives not carried forward for detailed analysis are discussed at the end of this chapter and within the DEIS.

Table S-1. General differences between the alternatives by issue.

Issue	Alternative 1 - No action (status quo)	Alternative 2 - FWP Preferred
Role of grizzly bears in Montana	Grizzly bears would continue to be the “official state animal of Montana,” recognizing the importance that Montana plays nationally in conservation of the species. However, contention and uncertainty would continue to surround appropriate policy for bears outside of recovery zones or DMAs, especially in light of growing population dispersal and increasing conflict.	Grizzly bears would be seen as a valued part of Montana’s fauna, a species that is both “conservation-reliant” meaning it will always require intensive management, and “conflict-prone.” Under this Alternative, clarity would be provided about where grizzly bear presence is a management objective. Core populations associated with existing recovery zones and DMAs would be maintained at recovery levels. FWP would manage for a significantly lower density of grizzly bears between core populations to provide opportunities for connectivity. The Preferred Alternative recognizes human-bear conflicts and bear mortalities would be greater in areas between population cores.
Numerical objectives	There would be no numerical statewide objectives. FWP has committed to population and habitat objectives in both the NCDE Conservation Strategy (CS) and the GYE CS.	FWP would renew its commitment to recovery and long-term demographic and genetic health of grizzly bears, statewide. FWP is committed to specific numeric goals in the GYE and NCDE as articulated in the two CS and supports the recovery goal in the Cabinet-Yaak Ecosystem (CYE). However, this alternative finds that establishing a statewide numeric minimum, optimum, or maximum population objective would not be useful.

Distributional objective	No explicit distributional objective would be identified. FWP would manage for core populations in the NCDE, GYE, and CYE. Current FWP plans envision future biological connections among these cores as well as to the Bitterroot Ecosystem (BE). A goal of the NCDE CS is to provide opportunity for connectivity with other ecosystems in Montana, but no explicit objective is articulated. FWP would continue to struggle with the meaning of “biologically suitable and socially acceptable.”	Sustaining grizzly bear recovery would continue in areas where recovery objectives have been met. Achieving recovery would continue to be a focus in areas where objectives have not yet been met. Statewide objectives would include a low density of grizzly bears, where feasible, in areas between recovery zones or DMAs that could provide connectivity opportunities. Bears could be moved if natural connectivity is lacking. Grizzly bear presence would not be an objective where connectivity between populations is not likely (i.e., east of the NCDE DMA and northeast of the GYE DMA).
Human safety	FWP would maintain a focus on human safety and conflict prevention.	FWP would maintain a focus on human safety and conflict prevention.
Role of private lands in grizzly bear conservation and management	No explicit direction would be articulated for private lands, but FWP recognizes the pivotal role private landowner support plays in recovery and the significant contribution of private lands in the recovery effort.	FWP would acknowledge the contribution that private lands make in providing habitat for grizzly bears beyond secure area and prioritize aid to landowners to minimize conflicts wherever they might occur. Where grizzly bear expansion does not contribute to connectivity, FWP would have lower tolerance for grizzly bears causing conflicts.
Conflict prevention	Focus would be on the NCDE, GYE, CYE and surrounding areas, including Sapphire, Flint, Highwoods and nearby ranges, and, beginning in 2022, the Bitterroot area.	FWP would continue its active conflict prevention program with a focus in the same core areas as at present and areas important to connectivity. FWP would continue to research emerging technologies to minimize human-bear conflict, and provide funding and in-kind support to independent research programs
Conflict response	Conflict bears would be controlled as recommended by the Interagency Grizzly Bear Committee (IGBC) in 1986,	FWP would continue its emphasis on reducing the attractants that often precipitate conflicts. When necessary, bears involved in

	<p>attempting to minimize number of bears removed. FWP would consider conservation as well as human safety and tolerance in addressing conflicts outside fundamental recovery areas. Responses to conflicts would be generally more aggressive when they occur on or near private lands. FWP would not participate in moving federally listed bears causing conflict if captured outside of recovery zones.</p>	<p>conflicts would be controlled consistent with state and federal guidelines throughout western Montana. Where discretion is possible, FWP would attempt to minimize removal (moving bears or euthanizing them) where connectivity between core populations is likely, but be quicker to recommend and/or implement removal where connectivity is unlikely. Under MCA § 87-5-301, FWP would not participate in moving federally listed bears causing conflict if captured outside of recovery zones.</p>
Public certainty vs. agency flexibility in conflict response	<p>FWP would anticipate less predictability for the public about agency management actions since there will be no management direction in the different management areas (e.g., recovery zones, DMA, outside of the DMA, connectivity areas).</p>	<p>FWP would anticipate more predictability than the status quo due to adoption of different management direction in different management areas because of the additional guidance provided in the preferred alternative regarding the biological importance of bears in certain locations. However, FWP would retain some discretion to respond to conflict bears on a case-by-case basis.</p>
Destinations of a bear captured in conflict settings when moving it away from the site is recommended and FWP is allowed to move it under state law (i.e., captured inside a recovery zone).	<p>Bears causing conflict would be moved to areas where the probability of additional conflict is low (and only to sites previously approved by the commission). Since 2009, 84% of destinations have been in FWP Region 1 (72% in Flathead County). Under MCA § 87-5-301, only bears captured within recovery zones could be moved by FWP under listed status.</p>	<p>Bears involved in conflicts with people would be moved to areas with a lower probability of conflict. However, if a non-conflict (non-target or preemptively trapped) animal is captured, FWP would consider moving it to an area outside of the ecosystem of origin, in which connectivity is an objective, if a commission-approved release site exists. As the known range of grizzly bears changes, FWP would continue to engage with the commission to gain pre-approval of new sites within occupied range (see Map 5) to which grizzly bears could be moved. If delisted, bears causing</p>

		conflict outside recovery zones could also be handled in this way.
Moving non-conflict grizzly bears (captured outside recovery zones) whose origin is uncertain	FWP would have no overall policy; decisions would be made on a case-by-case basis.	If the situation allows, these grizzly bears would be left in place. If moving the bear is required, it would be moved to a commission-approved release site which provides the best chance for the bear to find life requisites while minimizing conflict. The site selected for release need not be located within the ecosystem of origin, particularly if releasing the bear at the selected site would advance the interests of connectivity. As the known range of grizzly bears changes, FWP would continue to engage with the commission to gain pre-approval of new sites within occupied range to which grizzly bears could be moved, but would not seek approval of new release sites beyond the most-recently updated occupied range
Moving non-conflict bears to areas outside of occupied range	Movement of grizzly bears outside of occupied range would require a separate environmental analysis and decision notice, as well as approval from the commission.	If FWP proposes to move a bear into unoccupied habitat for purposes of recovery or connectivity, it will first complete an environmental analysis and seek approval from the commission.
Orphaned cubs	Cubs orphaned after Sept. 1 would be generally left in the wild. Bringing younger orphans to the Montana Wildlife Rehabilitation Center (MWRC) is discouraged and must follow the MWRC intake policy because, i) acceptable permanent captive situations are very difficult to find, and ii) re-release into the wild is only	Cubs orphaned after Sept. 1 would be generally left in the wild. Bringing younger orphans to MWRC is discouraged and must follow the MWRC intake policy because, i) acceptable permanent captive situations are very difficult to find, and ii) re-release into the wild is only permitted with pre-approved plan and release area.

	permitted with pre-approved plan and release area.	
Conflict management operational structure	FWP would continue supporting bear managers in Libby, Kalispell, Missoula, Choteau, Conrad, Anaconda, Red Lodge and Bozeman (w/ technicians in Anaconda and Hamilton).	Building on current structure, FWP would prioritize bear specialist staff where expanding population presents the need for conflict management and also opportunities for connectivity while maintaining efforts in the three occupied core areas.
Prioritizing information, outreach, and communication efforts	Efforts aimed at people living, working, and recreating in grizzly bear habitat, targeting both new and long-term residents.	Prioritize efforts where expanding population presents the need for conflict management and also opportunities for connectivity while maintaining efforts in the three occupied cores.
Population research and monitoring	Population monitoring and research will continue as it has as described in the NCDE and GYE CSs, and in the CYE.	FWP would continue monitoring, as committed to in CS documents, but would also prioritize finding ways to increase its understanding of bear status in areas of potential connectivity.
Resources required	No change from current.	Slightly more than current baseline.
Hunting of grizzly bears: values and beliefs	Goal would be to allow for limited regulated harvest upon delisting of bears, but no specific plans are in place. MCA and ARM identify the potential for grizzly bear hunting if not federally listed.	FWP would prepare for a conservative grizzly bear hunting seasons if not federally listed, but the decision on whether to establish a hunting season would rest with the commission. FWP recognizes the strongly held views held by many members of the public.
A potential grizzly bear hunt: functions, expectations, and regulations	If delisted, hunting would be implemented within a scientifically sound framework that maintains a viable and self-sustaining population.	If delisted and a hunting season is adopted by the commission, it could be used to limit expansion where core connectivity is unlikely (particularly in central and eastern Montana), but it would be consistent with maintaining an appropriate density of grizzly bears where connectivity is prioritized. Hunter-killed bears within the DMA would be counted against DMA mortality limits as outlined in the

		GYE CS and NCDE CS. In no case would hunting compromise recovered populations.
Law enforcement	FWP would continue to work cooperatively with federal (where listed) and tribal authorities to deter unlawful take and apprehend violators.	FWP would continue to work cooperatively with federal (where listed) and tribal authorities to deter unlawful take and apprehend violators.
Recreational use	FWP would consider grizzly bear presence in all recreation planning and decision on FWP lands. FWP would also consider grizzly bear presence when providing input on other public land management decisions. FWP would continue or expand its program of educating recreationalists, including hunters, about recreating safely in grizzly bear country.	FWP would consider grizzly bear presence in all recreation planning and decisions on FWP lands. FWP would also consider grizzly bear presence when providing input on other public land management decisions. FWP would continue or expand its program of educating recreationalists, including hunters, about recreating safely in grizzly bear country.
Motorized access management	FWP would support land management agencies' policies previously agreed to as part of the Conservation Strategies. Elsewhere, FWP would continue existing policy of avoiding open road densities exceeding 1 mi/mi ² on lands it owns or manages. FWP would take the view that, outside of areas with specific road density standards, grizzly bears can coexist with humans in areas with moderate amounts of motorized access if human attractants are well managed, conflicts minimized, and mortality of grizzly bears sufficiently low.	FWP would support land management agencies' policies previously agreed to as part of Conservation Strategies. Elsewhere, FWP would continue existing policy of avoiding open road densities exceeding 1 mi/mi ² on lands it owns or manages. FWP would take the view that, outside of areas with specific road density standards, grizzly bears can coexist with humans in areas with moderate amounts of motorized access if human attractants are well managed, conflicts minimized, and mortality of grizzly bears sufficiently low.
Engagement with community groups	FWP would continue informal communication and cooperation with community groups.	FWP would stand ready to fill the leading role in grizzly bear management but would also acknowledge that success will depend on actions taken by citizens working collaboratively. While exercising its authority and leadership role, FWP would actively encourage bottom-up, community-based efforts to resolve

		management challenges. FWP expects this approach to yield solutions tailored to local communities, bolstered with local buy-in, but which also respect the values and mandates expressed in national and/or state laws and regulations.
Climate change	FWP would not explicitly consider climate change as part of its grizzly bear management.	FWP will consider habitat variations, including those manifest in climate, as it allocates resources or suggests regulations. For example, lengthening of the non-denning seasons may increase the likelihood of human-bear conflict, particularly in the autumn. FWP would continue to monitor populations as they respond to these variations and adjust management responses accordingly.

S.5.3 Alternatives Not Carried Forward for Detailed Analysis

Rationale for alternatives considered, but not carried forward for detailed analysis, are summarized in Table S-2 below and further discussed in **Chapter 2** of the DEIS. Several alternatives were suggested by the public in scoping comments or by specialists based on professional experience but were not analyzed in detail for a variety of reasons, including operational feasibility and failure to meet the project purpose and need. Alternatives not carried forward for detailed analysis, and the reasons for dismissal, include the following:

Table S-2. Alternatives Not Carried Forward for Detailed Analysis

Grizzly Bears Considered Undesirable Pest Species	FWP might conceivably consider an alternative approach in which grizzly bears would not be welcome in the state or were considered an undesirable pest species (such as, for example, feral swine, <i>Sus scrofa</i>). Such an approach would run contrary not only to the ESA, but also to state law and FWP's vision. Thus, this plan does not carry such an alternative forward for further analysis.
Grizzly Bears Not Tolerated Outside of Recovery Zones	FWP might conceivably consider an alternative approach under which grizzly bear recovery in USFWS-designated recovery zones would be an objective, but grizzly bears would not be tolerated (i.e., would be removed when possible) outside these areas regardless of their behavior or conflict status. Similarly, there would be no attempt to provide for connectivity among recovery zones through movement or low-density occupancy of areas between them. Should delisting occur, hunting could be used as a tool to discourage grizzly bear distribution from expanding beyond the recovery zones. Although such an approach could arguably be viewed as strictly consistent with numeric standards under the ESA and the two existing CSs to which FWP is a signatory, it would be contrary to the clear intent of the USFWS recovery plan, the intent of the two CSs, as well as to FWP's interpretation of its responsibilities under its various mandates. It would also be more likely to hinder than to facilitate eventual transfer of management authority from federal to state level through delisting. Thus, this plan does not carry such an alternative forward for further analysis.
Human Bear Conflicts Always Favor the Bear	FWP might conceivably consider an alternative approach in which human-bear conflicts are always resolved in the most favorable way for the individual bear involved, regardless of the cost to human livelihood or safety. Although such an approach could result in increased grizzly bear population, expanded geographic distribution, and quicker and more certain biological connectivity between cores, it would fail to honor FWP's responsibility to balance its responsibility to wildlife with its responsibility to maintain public safety, running contrary to state law holding that FWP's first priority in managing large predators (a classification that includes grizzly bears) is to protect humans, livestock, and pets. Thus, this plan does not carry such an alternative forward for further analysis.

<p>Grizzly Bears Desired Throughout Montana</p>	<p>FWP might conceivably consider an alternative approach under which grizzly bear presence would be an objective anywhere they were found in Montana. Under such an approach, individual bears involved in conflicts with humans would still be controlled (e.g., hazed, moved, or euthanized, depending on circumstances), but the larger geographic context would not constitute an important part of the decision-making. Rather, the bears themselves would be considered to have indicated by their presence where they chose to live. FWP would not emphasize population stability within existing cores, nor would it explicitly prioritize connectivity among them (although, if successful, connectivity could occur indirectly). Rather, this approach would view all grizzly bears in Montana as members of an undifferentiated statewide population. Human safety and security of their property would continue to be a high priority for FWP under this alternative. However, because grizzly bears would be controlled only when conflicts arose, they would likely become more common in areas close to homes, farms, ranches, and other human infrastructure. This would include parts of the state (particularly east of the main Rocky Mountain chain) that grizzly bears historically occupied but have not been present within for over a century. The risk of encounters with humans that pose safety risks would be higher than in other alternatives.</p> <p>Although this alternative would theoretically create the most certainty that grizzly bears would thrive indefinitely in Montana, FWP considers this approach naïve, costly, biologically unnecessary, and irresponsibly dangerous to humans, their livestock, and their pets. The existing grizzly bear population cornerstones are large enough that, with the appropriate level of long-term connectivity, there is no biologically based justification for the larger population that such an alternative would envision. A critical element of FWP responsibility is to prioritize human safety, and a growing grizzly bear population increasingly in close association with homes and businesses fails that responsibility. Thus, this plan does not carry such an alternative forward for further analysis.</p>
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S.6 AFFECTED ENVIRONMENT

The DEIS summarizes and details multiple resource areas. The following paragraphs provide a brief summary of the resources, analysis areas, and baseline conditions described in **Chapter 3** of the DEIS.

Physical Environment Resources

The analysis area for direct, secondary, and cumulative impacts of physical environmental resources including *Terrestrial, Avian, and Aquatic Life and Habitats; Water Quality, Quantity and Distribution; Geology; Soil Quality, Stability, and Moisture; Vegetation Cover, Quantity, and Quality; Aesthetics; Air Quality; Unique, Endangered, Fragile, or Limited Environmental Resources; Historical and Archaeological Sites, and Energy* is the 30 counties of western and central Montana (Figure S-1). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana's total area.

Human Environment Resources

The analysis area for direct, secondary, and cumulative impacts of human environment resources including *Social Structures and Mores; Cultural Uniqueness and Diversity; Access to and Quality of*

Recreational and Wilderness Activities; Local and State Tax Base and Tax Revenue; Agricultural, Industrial or Commercial Production; Human Health; Quantity and Distribution of Employment; Distribution and Density of Population and Housing; and Locally Adopted Environmental Plans and Goals is the 30 counties of western and central Montana (Figure S-1). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana's total area.

Analysis Area

Most counties in this 30-county area 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 Mountains. Major river drainages in Montana west of the Continental Divide include the Kootenai (which flows into the Columbia River in British Columbia), and the 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, Clark's Fork and Tongue Rivers (all of which flow into the Yellowstone River), and the Beaverhead/Bighole (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.

Lower elevation habitats (below 6,000 ft., 1,829 m) vary greatly and include large areas of short-grass/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 portion of this 30-county area (above 6,000 ft., 1,829 m) contains 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 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, Engelmann spruce, western cedar, hemlock, whitebark pine, limber pine, ponderosa pine, juniper), and rocky sub-alpine/alpine communities found above timberline.

The majority of mountainous habitat (above 6,000 ft., 1,829 m) is located within publicly owned national forest, corporate timber lands and Glacier and (the Montana portion of) Yellowstone National Parks. Approximately 36% of the 30-county area is managed by U.S. Forest Service (USFS), and just over 2% by the National Park Service (NPS). All, or portions of, the Bitterroot, Custer-Gallatin, Deer Lodge-Beaverhead, Flathead, Helena-Lewis and Clark, Kootenai, Kaniksu (part of the Idaho Panhandle National Forest complex), and Lolo National Forests within this 30-county area. The Bureau of Land Management (BLM) manages just under 3% of lands in the area. A small portion (just over 1%) of mountainous habitat is in state ownership under the 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 trust properties, ski resorts and timber company lands. Communities of various sizes also occupy several

thousand acres of low-elevation river-valley habitat. Much of the 30-county area is protected, public land, as shown in Table S-3.

Figure S-1. The analysis area for direct, secondary, and cumulative impacts on this resource is the 30 counties of western and central Montana. Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area.

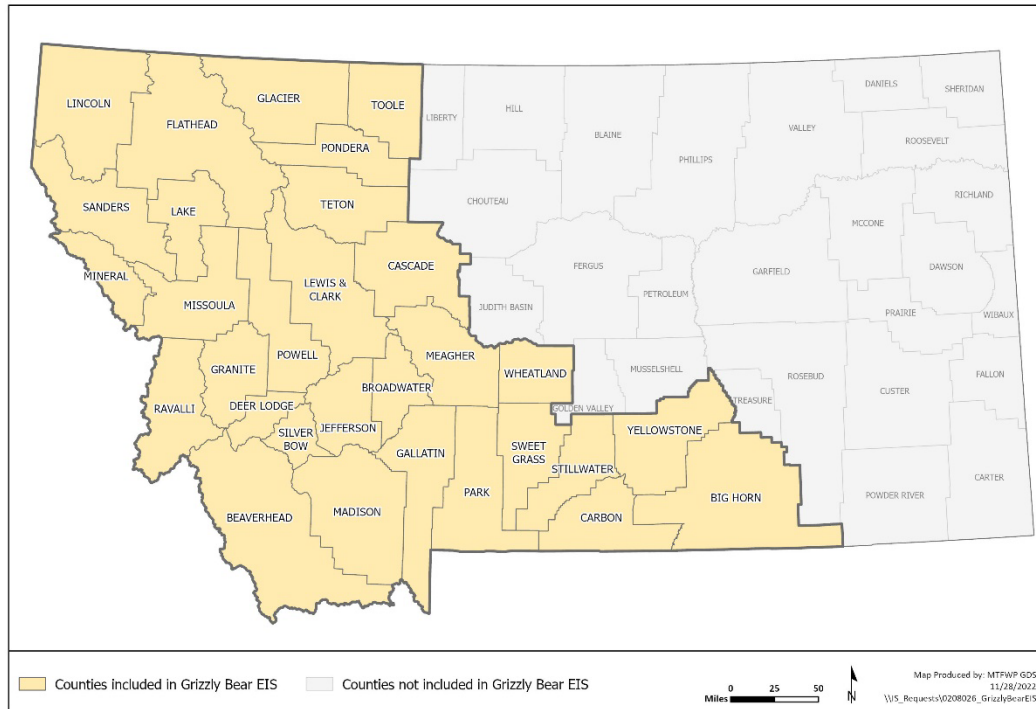


Table S-3: State and federal protected land acreage within the 30 county project area.

State or Federal Protected Lands	Acres
Bureau of Reclamation (BOR)	84,480
National Forest (USFS)	14,018,560
National Park (NPS)	1,173,920
National Recreation Area (USFS and NPS)	115,200
National Wildlife Refuge (USFWS)	76,804
Bureau of Land Management (BLM)	1,376,640
Wilderness (BLM, USFS, and USFWS)	3,300,480
Wilderness Study Area (BLM and USFS)	807,040
State Parks (FWP)	29,440
State Wildlife Management Areas (FWP)	413,440

Human population

As of 2021, an estimated 950,071 people lived in the 30-county area of Montana; despite having only slightly more than half Montana’s area, these counties comprised almost 89% of Montana’s population. 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 seven counties (Figure S-2).

Although still sparsely populated by national standards, the human population of western and central Montana and its associated developmental footprint has expanded greatly in recent decades. The 30-county area contained an estimated 292,548 single family homes in 2016, of which approximately 109,206 (over 37%) had been built since 1990. Almost 1,025,000 acres (414,803 ha) of previously open space — slightly more area than Glacier National Park — was estimated to have been converted to residences during this quarter-century. Counties with the largest acreage of open space converted included Gallatin, Madison, Flathead, and Lewis and Clark (Figure S-3), although all counties contributed.

Figure S-2. Annual population growth rate by western Montana county, 2000-2019 (Montana.gov, January 2021.)

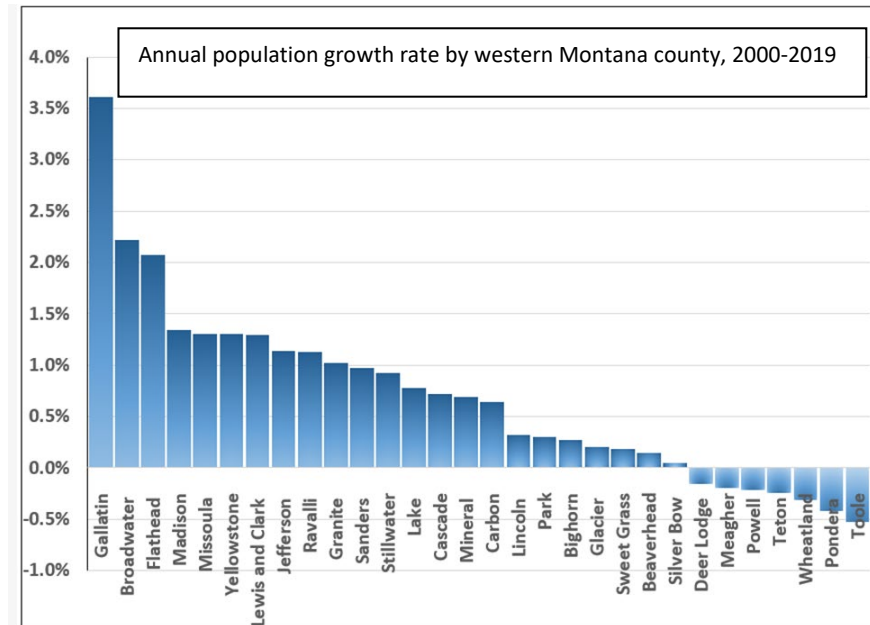
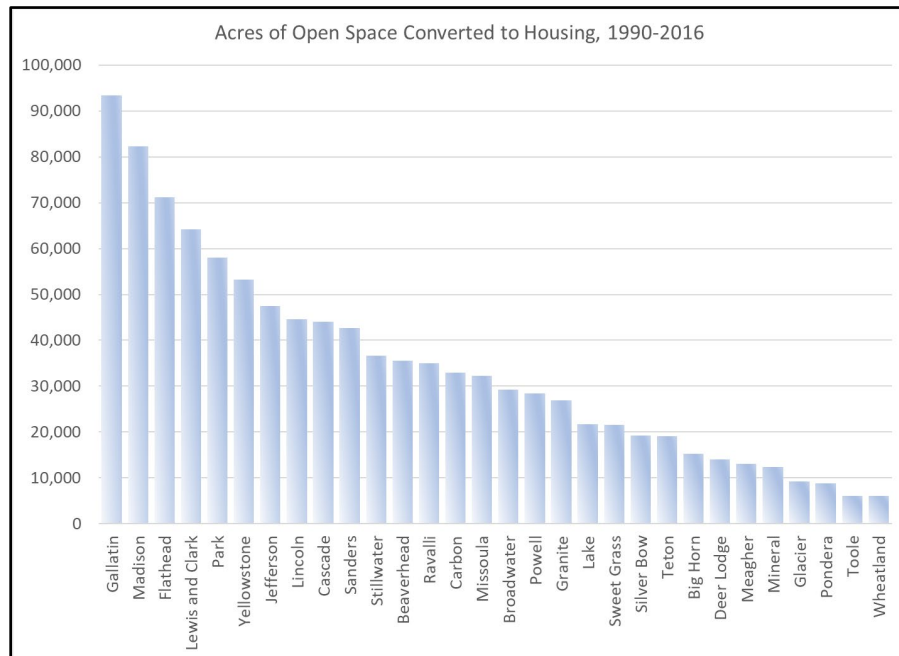


Figure S-3. Acres of Open Space Converted to Housing, 1990-2016 (Headwaters Economics, 2020).



Economics

In 2010, the median per capita income in the United States was \$27,334, and the median household income was \$51,914. In Montana, median per capita income was somewhat lower, at \$23,836, with median household income of \$43,872. All but one of the 30 counties in western Montana ranked below the U.S. median per capita income in 2010, and all but two ranked below the U.S. median household income. Twenty of the 30 counties in western Montana ranked below the Montana-wide median for per capita income, and 22 of 30 ranked below the Montana-wide median for household income.

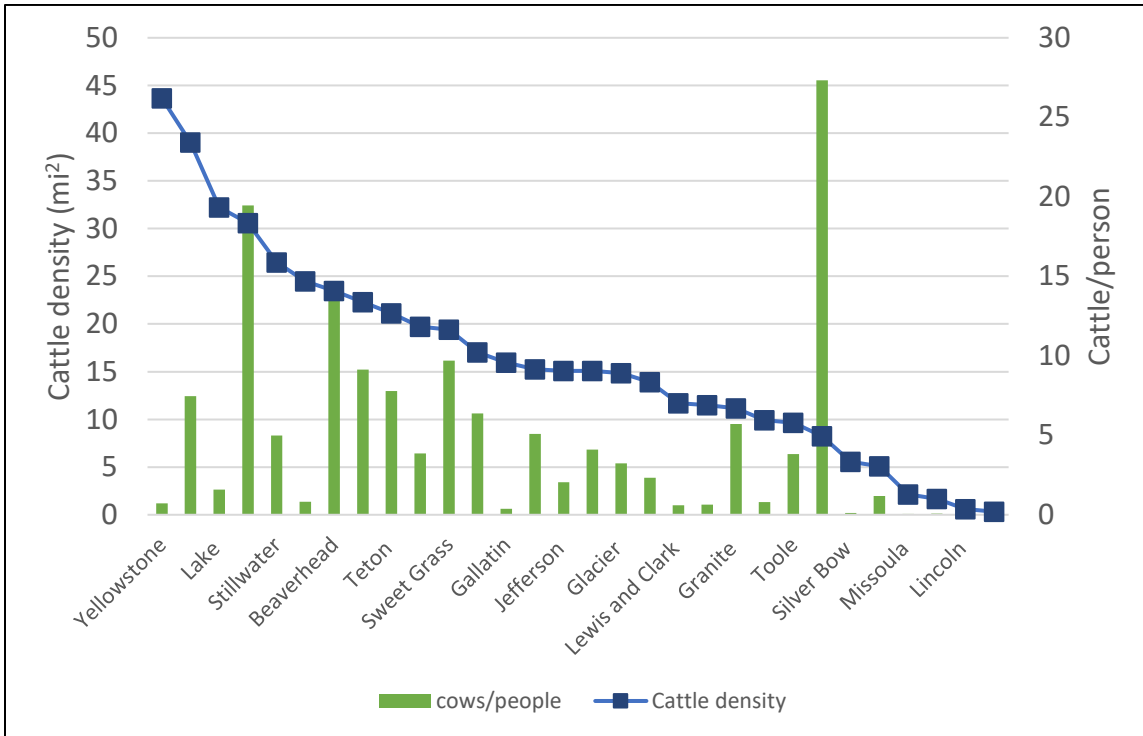
Land ownership

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 the 30-county area is managed by USFS, and just over 2% by NPS. All, or portions of, the Bitterroot, Custer-Gallatin, Deer Lodge-Beaverhead, Flathead, Helena-Lewis and Clark, Kootenai, Kaniksu (part of the Idaho Panhandle National Forest complex), and Lolo National Forests lie within this 30-county area. The BLM manages just under 3% of lands in the area. A small portion (just over 1%) of mountainous habitat is in state ownership (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 trust properties, ski resorts and timber company lands. Communities of various sizes also occupy several thousand acres of low-elevation river-valley habitat.

Agriculture

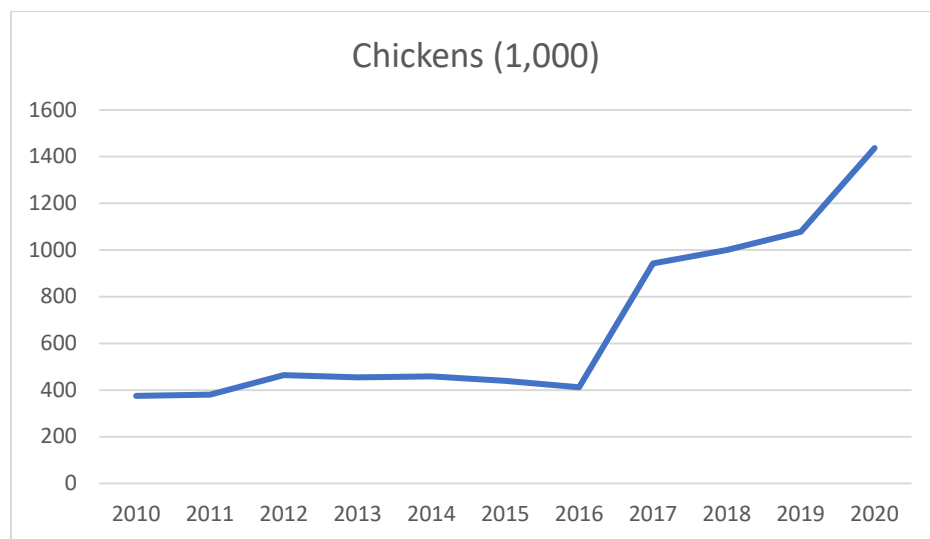
The 30-county area supports a large agricultural economy. In 2017, there were an estimated 16,993 farms and ranches in the 30-county area. By far the most common activities of these farms and ranches were raising beef cattle, growing forage (hay) for cattle, and growing grain crops (wheat, oats, barley). Sheep, hog, and dairy cattle were also raised in smaller numbers. Beef cattle and sheep were grazed on privately owned grassland and on publicly owned (USFS, BLM, DNRC) grazing allotments. Some of these allotments occurred in habitats occupied by grizzly bears. In 2020, an estimated 1,211,000 cattle (including calves) grazed in the 30-county area, as well as some 92,200 sheep (including lambs). The largest populations of cattle were in Beaverhead (~ 130,000) and Yellowstone (~ 115,000) counties, and the largest number of sheep were in Silver Bow (~ 12,000), Beaverhead (~ 12,000), and Wheatland (~ 11,500) counties. Cattle density was highest in Yellowstone and Carbon Counties; cattle outnumbered people by the greatest proportion in Meagher, Wheatland, and Beaverhead counties (Figure S-4).

Figure S-4. Density of cattle (blue squares) and ratio of cows to people (green bars) in the 30 counties considered in this document.



Although not known particularly for production of poultry, the number of chickens reported as being raised in Montana has increased in recent years, with a notable increase beginning in 2017 (Figure S-5). Most chicken producers are small scale, but even a few chickens can attract grizzly bears, resulting in conflicts.

Figure S-5. Chickens reported as raised in Montana during 2010-2020. Source: USDA 2020



Mining

Large mineral deposits, ranging from talc to gold, are located throughout western 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 within the 30-county area (these seven were predominantly coal mines; <http://www.mbmgt.mtech.edu/pdf/2012ActiveMines.pdf>).

Wood products

The majority of Montana's forested lands (23 million acres) are located within the western part of the state. Nearly four 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 six million acres, with two million owned and managed by large timber companies. Another four million acres of private forest lands are owned by some 11,000-plus private individuals. Timber production in the 30-county area 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.

Sources for wood products, categorized broadly into public (USFS; state and other public), and private (corporate industrial timber lands; private, non-industrial and Tribal) forestlands, has varied over time. During the 1980s, most production came from USFS lands, being almost matched by private industrial forests, with very little coming from other state lands. As production on USFS 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 peaks in about 1998 as USFS 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.

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

Recreation

Outdoor recreation and tourism are major components of the economy in the 30-county area. Western Montana is nationally renowned for its high-quality fishing, hunting, camping, hiking, river floating, skiing, snowmobiling, wildlife viewing and sightseeing opportunities. Glacier and Yellowstone National Parks, Flathead Lake, and other public lands attract large numbers of people to the area every year. Many of these outdoor activities are made possible by public ownership of large tracts of mountainous habitat and additional access provided by many private landowners.

Recreationists have largely unhindered access to millions of acres of undeveloped land. Some of this land is currently, or based on documented trends of increasing distribution will be, occupied by grizzly bears. As bear numbers and distribution increase, and the number of outdoor enthusiasts grow, contact and interaction between grizzly bears and people engaged in outdoor activities is likely to increase.

Value orientations of Montanans relevant to grizzly bear management

Although largely rural (only the Billings and Missoula areas are considered “metropolitan” by the U.S. Census Bureau), and 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 1,062,300 people in 2021 contained a populace with 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 the 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. Montana was among six states with the highest percentage of respondents agreeing that wolves that kill livestock should be lethally removed by state managers (Manfredo et al. 2018). In contrast, Montana clustered close to the mean of all states in percentage of respondents agreeing that a black bear attacking a person should be lethally removed by the state. (The questionnaire did not address grizzly bears specifically, probably because they are present in only five of the 50 states). In a somewhat surprising finding, given that FWP’s funding is largely provided by hunters and fishers, and that “traditionalists” outnumber “mutualists”, Montana ranked highly among states in percentage of respondents who prefer a funding model which 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%)¹. “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.

At FWP’s request, Dr. Michael Manfredo (Colorado State University, Ft. Collins, CO) examined attitudes of Montanans toward lethal control of black bears that attack humans by individual county, regardless of the circumstances, as well as county-level indices of support for “traditionalist” vs “mutualistic” values. Respondents in Gallatin, Missoula, Lewis and Clark, and Butte-Silver Bow Counties were predicted to be negatively disposed toward lethal control of black bears. Respondents in Yellowstone, Carbon, Park, Cascade, Flathead, Deer Lodge, and Jefferson counties were predicted to be neutral. Among western and west-central Montana counties, the most support for lethal control of black bears was found in Meagher, Teton, and Liberty counties, with support also being seen in Mineral, Powell, Toole, Pondera, Sweet Grass, and Stillwater Counties.

At the county level, support for lethal control of dangerous bears appeared to be highly correlated with ($r = -0.95$) the “social-habitat index” (i.e., whether values tended more toward mutualistic or traditionalistic)). Mutualistic values were greater than traditionalistic only in Missoula and Gallatin counties. Among western Montana counties scoring as most traditionalistic were Meagher, Teton, Mineral, Powell, Granite, Sanders, Broadwater, Beaverhead, and Madison.

Manfredo et al. (2017) argued that values, such as summarized above, are resistant to rapid change, at least in the absence of large-scale shifts in people’s life circumstances, but that congruence of values is not necessarily a prerequisite to facilitating adaptive behavioral changes that can support long-term conservation. Pointedly (given Montanan’s generally high regard for FWP’s ability to manage human-grizzly bear conflict), Hughes et al. (2020) argued that “the challenges to grizzly bear conservation success are more about decision-making processes and issues of legitimacy, power, trust, and respect rather than people’s attitudes toward bears.”

¹ Nesbitt et al. (2020) did not use the orientation typology of Manfredo et al. (2018), nor were they able to contrast public attitudes toward FWP with attitudes toward other government entities. However, they obtained data specific to the level of trust with which Montanans view FWP with regard to grizzly bear management. Over 70% either agreed or strongly agreed that they trust that FWP “knows how to effectively management grizzly bear populations”, over 76% either agreed or strongly agreed with trust that FWP “knows how to respond to grizzly bear-human conflict”, 80% either agreed or strongly agreed that they trust FWP to “provide the public with the best available information on how to reduce grizzly bear-human conflict”, and over 67% either agreed or strongly agreed that FWP “tells the truth about grizzly bears and their population status”.

S.7 POTENTIAL ENVIRONMENTAL IMPACTS

This section summarizes and compares the potential direct, secondary and cumulative impacts on natural, cultural, and human resources associated with *Alternative 1 – No Action* and *Alternative 2 – Proposed Action*. No unavoidable adverse, irretrievable or irreversible impacts are identified for any of the resources under either alternative.

Table S-4. Potential Human/Environmental Impacts

Under current management strategies grizzly bears inhabit the analysis area in low density and would continue to inhabit the analysis area at low density under the proposed action. No unavoidable adverse, irretrievable or irreversible impacts are identified for any of the resources under either alternative.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action
Terrestrial, Avian, and Aquatic Life and Habitats (DEIS Section 3.2)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts - grizzly bear management would look mostly the same except that delisted grizzly bears in conflict outside of secure core habitat areas and outside of connectivity areas would be assigned a lower management priority and would likely be lethally removed at a more frequent rate. Bears in these areas are not critical to reaching or maintaining recovery. There may be short-term, minor, beneficial secondary and cumulative beneficial impacts from increased transparency of how bears outside of recovery areas are to be managed. The continued conservation of habitat for grizzly bears is beneficial to a variety of species. Humans in areas of expanded grizzly bear presence may need to adjust their lifestyles.
Water Quality, Quantity and Distribution (DEIS Section 3.3)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts - grizzly bears will continue to inhabit the analysis area at low density and will have no direct impacts on water quality, quantity, and distribution in the areas where they occur. Grizzly bear management can have short-term, negligible, beneficial secondary and cumulative impacts to aquatic life and habitats because habitat management for grizzly bears limits human uses and disturbance of habitats. Management to limit open road densities and new developments in primary conservation areas (PCAs) provide benefits for a diversity of fish and wildlife and their habitat, including water quality and water quantity.

Geology; Soil Quality, Stability, and Moisture (DEIS Section 3.4)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts. - grizzly bears will continue to inhabit the analysis area at low density and will have no impact on geology, soil quality, stability, and moisture. in the areas where they occur. Grizzly bear management can have short-term, negligible, beneficial secondary and cumulative impacts to habitats because habitat management for grizzly bears limits human uses and disturbance of habitats. Management to limit open road densities and new developments in PCAs provide benefits for a diversity of fish and wildlife and their habitat, including soil quality, stability and moisture.
Vegetation Cover, Quantity, and Quality (DEIS Section 3.5)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts - grizzly bears will continue to inhabit the analysis area at low density and will have no impact on vegetation cover, quantity, and quality in the areas where they occur. Grizzly bear management can have short-term, negligible, beneficial secondary and cumulative impacts to habitats because habitat management for grizzly bears limits human uses and disturbance of habitats. Management to limit open road densities and new developments in PCAs provide benefits for a diversity of fish and wildlife and their habitat, including vegetation cover, quantity and quality.
Aesthetics (DEIS Section 3.6)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts - some people value the potential to view grizzly bears in the wild or knowing they are there. Under this alternative, that opportunity will continue, and potentially increase in connectivity areas. There would be short-term, negligible, adverse and/or beneficial secondary impacts and short-term, minor, adverse and/or beneficial cumulative impacts from the continued presence of grizzly bears. Conservation of grizzly bears and their habitat, particularly in the PCAs, will benefit multiple species and landscapes which contribute to the aesthetics of the analysis area. FWP decisions or actions made within the sideboards of the statewide plan could impact aesthetics for some people.
Air Quality (DEIS Section 3.7)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts - grizzly bears will continue to inhabit the analysis area at low density and will have no impact on air quality in the areas where they occur. There will be short-term, negligible, beneficial secondary and cumulative impacts associated with ongoing protection of affected lands from development and related human impacts within certain segments of the analysis area. Conservation of grizzly bears and their habitat, particularly in the PCAs, will benefit multiple species and landscapes which will be beneficial to air quality of the analysis area. .
Unique, Endangered, Fragile, or Limited Environmental Resources (DEIS Section 3.8)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts - grizzly bears will be managed as protected wildlife at levels sufficient to maintain recovered populations. This alternative clarifies that in areas where grizzly bears contribute to long-term persistence and connectivity, FWP would make all reasonable efforts to recommend (or implement, if appropriate) actions that minimize bear removal. Where that likelihood is low, grizzly bear presence would not be an objective, and FWP

		would be relatively quick to recommend (or implement, if appropriate) control when conflicts arise. There would be short-term, negligible, beneficial secondary and cumulative impacts from the conservation of grizzly bears and their habitat, that benefits unique, endangered, fragile or limited resources. Conservation of grizzly bears and their habitat, particularly in the PCAs, will benefit multiple species and landscapes, including any unique, endangered, fragile or limited environmental resources located in affected areas.
Historical and Archaeological Sites (DEIS Section 3.9)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts - grizzly bears will continue to inhabit the analysis area at low density and will have no impact on historical or archaeological sites. There would be no secondary impacts. Short-term, negligible, beneficial cumulative impacts may result from commitments to limit development in the PCAs. This commitment to no new developments on the public lands in these areas will help limit potential disturbance to any historical and archaeological sites located within the affected areas.
Energy (DEIS Section 3.10)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct, secondary or cumulative impacts -grizzly bears will continue to inhabit the analysis area at low density and will have no impact on energy use. Their presence may impact energy <i>development</i> if they occur in an area where energy development is proposed, especially if they remain listed under the ESA. Energy developers would have to consult with the USFWS to minimize and mitigate take.
Social Structures and Mores (DEIS Section 3.11)	No impacts - The No Action Alternative would not change the status of the existing area.	There could be short-term, minor direct, secondary and cumulative impacts, beneficial and/or adverse. Some impacts could be short-term, significant adverse or beneficial, to particular individuals depending on their beliefs and values. Adjustments to social structures and mores will be necessary under either alternative in areas where grizzly bears occur and as grizzly bear distribution expands. Recreationists, landowners, livestock producers may need to adjust lifestyles to co-exist with grizzly bears. Increased clarity on the management of grizzly bears of lower biological importance could impact individuals depending on their beliefs.
Cultural Uniqueness and Diversity (DEIS Section 3.12)	No impacts - The No Action Alternative would not change the status of the existing area.	Grizzly bears are considered sacred by many affected Native American tribes. This alternative will result in direct and cumulative impacts to tribal cultures by ensuring the sacred grizzly bear remains at recovered levels and are able to connect with cornerstone areas. However, tribes have gone on record as opposing sport hunting of grizzly bears, which could be allowed if the grizzly bear is delisted. In contrast, many Montana residents advocate for hunting grizzly bears. Therefore, there would be short-term, negligible direct impacts to cultural uniqueness and diversity. There would be short-term, minor to significant cumulative impacts. These impacts will vary by individuals depending on their beliefs.

<p>Access to and Quality of Recreational and Wilderness Activities</p> <p>(DEIS Section 3.13)</p>	<p>No impacts - The No Action Alternative would not change the status of the existing area.</p>	<p>No direct impacts - this alternative doesn't restrict access to recreational and wilderness activities. Grizzly bears occur in many areas where humans recreate, including hiking, camping, fishing and hunting. Anyone living in or visiting grizzly country must accept the costs and risk of grizzlies on the landscape. There would be short-term, minor, adverse and/or beneficial, secondary and cumulative impacts on access to and quality of recreational and wilderness activities. Some impacts could be short-term and significant to particular individuals depending on their beliefs and values. Depending on a recreationists experience and comfort level their access to quality recreational and wilderness activities could be limited by their choice not to recreate in areas occupied by grizzlies. Expanded distribution in connectivity areas will increase the area where grizzly bears overlap with recreationists, resulting in potential impacts to those recreationist's experience. Implementation of the statewide plan could be viewed by the USFWS as a commitment to adequate regulatory mechanisms, leading to federal delisting of the grizzly bear. Implementation of a hunting season for delisted grizzly bears could have short-term significant impacts to both advocates and proponents of grizzly bear hunting.</p>
<p>Local and State Tax Base and Tax Revenue</p> <p>(DEIS Section 3.14)</p>	<p>No impacts - The No Action Alternative would not change the status of the existing area.</p>	<p>No direct impacts - grizzly bears will continue to inhabit the analysis area at low density and will have no direct impact on local and state tax base and tax revenue. There would be no secondary impacts but there would be short-term, minor, adverse and/or beneficial cumulative impacts. Wildlife viewing and appreciation can bring visitors to Montana, but wildlife can also decrease profitability and tolerance of local agricultural businesses, particularly livestock operations. The number of livestock losses could increase if bears move farther outside of their cornerstone areas onto private agricultural lands. Implementation of the statewide plan could be viewed by the USFWS as a commitment to adequate regulatory mechanisms, leading to federal delisting of the grizzly bear. Implementation of a hunting season for delisted grizzly bears could lead to increased revenue in communities where bear hunters visit restaurants and motels.</p>
<p>Agricultural, Industrial or Commercial Production</p> <p>(DEIS Section 3.15)</p>	<p>No impacts - The No Action Alternative would not change the status of the existing area.</p>	<p>No direct impacts - grizzly bears will continue to inhabit the analysis area at low density and will have no direct impact on production. There would be short-term, minor, adverse and/or beneficial secondary and cumulative impacts on agricultural, industrial or commercial production. Livestock losses averaged 92 depredations per year during 2013-2020. The number of losses could increase if bears move farther outside of their cornerstone areas onto private agricultural lands or federal grazing allotments. More aggressive response to livestock conflicts in areas where bears don't connect cornerstone areas could reduce livestock conflicts in those areas. Grizzly bear presence may impact industrial and commercial activity if bears occur in an area where industrial or commercial development is</p>

		proposed, especially if they remain listed under the ESA. Developers would have to consult with the USFWS to minimize and mitigate take. For some that would preclude development.
Human Health (DEIS Section 3.16)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts - grizzly bears will continue to inhabit the analysis area at low density and will have no direct impact on production. There would be no secondary impacts to human health. There would be short-term minor, adverse and/or beneficial, cumulative impacts on human health. There could be short-term significant, adverse and/or beneficial, impacts to particular individuals depending on their beliefs and values related to the risk grizzly bears pose to human safety. Bear aware messaging and living in bear country trainings would continue to be a focus of FWP education programs to limit negative encounters between bears and humans. As grizzly bear numbers and distribution increase concurrent with human population increases and increased activity in grizzly bear habitat, there will be increases in the number of human-grizzly bear encounters.
Quantity and Distribution of Employment (DEIS Section 3.17)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts - grizzly bears will continue to inhabit the analysis area at low density and will have no direct impact on employment. There would be no secondary impacts. Short-term negligible, adverse and/or beneficial, cumulative impacts may occur. Conservation of grizzly bears and their habitat, particularly in the PCAs, has limited development and thus employment in some cases. Some natural resource industries such as timber have been impacted by presence of federally protected grizzly bears due to limitations on take, resulting in loss of employment in related jobs. This alternative would support delisting which could result in less impact on natural resource industries. Maintenance of existing bear management specialists and the possibility of adding more could impact the quantity and distribution of employment. .
Distribution and Density of Population and Housing (DEIS Section 3.18)	No impacts - The No Action Alternative would not change the status of the existing area.	No direct impacts - grizzly bears will continue to inhabit the analysis area at low density and will have no direct impact on population and housing. There would be no secondary impacts and short-term negligible, adverse and/or beneficial, cumulative impacts. Conservation of grizzly bears and their habitat, particularly in the PCAs, has limited development and thus employment and the need for housing in some cases. Some natural resource industries such as timber have been impacted by presence of federally protected grizzly bears due to limitations on take, resulting in loss of employment in related jobs. This alternative would support delisting which could result in less impact on natural resource industries. Maintenance of existing bear management specialists and the possibility of adding more could impact the distribution and density of population and housing. .

Locally Adopted Environmental Plans and Goals (DEIS Section 3.19)	No impacts - The No Action Alternative would not change the status of any existing plans or goals.	No direct, secondary or cumulative impacts on locally adopted environmental plans and goals. The adoption and implementation of the statewide plan would not influence or change other plans or goals of other plans.
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S.8 WHERE TO OBTAIN MORE INFORMATION

More information regarding the proposed project is available on FWP's website at
<https://fwp.mt.gov/aboutfwp/public-comment-opportunities/grizzly-bear-management-plan>

If you have any additional questions or concerns, please contact:

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