

To All Interested Parties:

Grizzly bears in Montana are native, iconic omnivores valued by people and cultures across the state and around the world. They also play important roles in Montana ecosystems. Montana Fish, Wildlife & Parks (FWP) has prepared this Draft Environmental Impact Statement (DEIS) to analyze the potential environmental impacts of adopting and implementing a statewide grizzly bear management plan. This DEIS provides alternatives for and the foundation of decisions to be made regarding conservation and management of grizzly bears at the state level under the purview of FWP.

The DEIS describes two alternative approaches for statewide management of grizzly bears in Montana. Alternative 1 is the “no action” alternative or status quo. Under this alternative, managing the increasing number of bears, particularly in areas outside identified recovery zones, will continue to lack a coordinated approach. This creates confusion regarding FWP’s response to conflict situations and about our approach on grizzly bear presence outside of recovery zones. Although people would likely continue to vary in how they view grizzly bears and their role in Montana, the lack of an integrated and accepted approach causes difficulty both for agency managers and for the public at large, particularly in geographic areas outside of established recovery zones.

Alternative 2, the proposed alternative, would provide needed clarity about where grizzly bear presence is a management objective. Core populations associated with existing recovery zones would be maintained near recovery levels. Connectivity would be an objective between core grizzly bear populations to provide opportunities for connecting otherwise isolated population cores. This increased clarity under a more coordinated approach, strengthens the regulatory mechanisms required for removing the grizzly bear from federal Endangered Species Act listing status.

Under both alternatives, FWP would continue to manage grizzly bears to support population recovery. Existing commitments such as those contained in the Northern Continental Divide Ecosystem and Greater Yellowstone Ecosystem Conservation Strategies will be maintained. Alternative 2 will result in one statewide plan that will supplant the two existing plans under which FWP has operated: the plans for Western Montana and for Southwest Montana.

FWP is accepting comments on the DEIS for the Statewide Grizzly Bear Management Plan through January 5, 2023. Additional information and the statewide management plan is available on FWP’s website at:

<https://fwp.mt.gov/aboutfwp/public-comment-opportunities/grizzly-bear-management-plan>

Sincerely,

Hank Warsech
Director

MONTANA GRIZZLY BEAR MANAGEMENT PLAN

ENVIRONMENTAL IMPACT STATEMENT 2022

DRAFT



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ABBREVIATIONS AND ACRONYMS

Abbreviation / Acronym	Definition
BE	Bitterroot Ecosystem, as commonly used and understood by the IGBC
BIR	Blackfeet Indian Reservation
BLM	United States Department of the Interior Bureau of Land Management
CS	Conservation Strategy. In this document, “CS” and “Conservation Strategy” refer to specific documents; either the GYE Conservation Strategy (GYE Subcommittee 2016), or the NCDE Conservation Strategy (NCDE Subcommittee 2019).
CSKT	Confederated Salish and Kootenai Tribes
Commission	Montana Fish and Wildlife Commission; the appointed body charged with making policy and regulations for FWP
CYE	Cabinet Yaak Ecosystem, a geographic area as defined by the 1993 USFWS Grizzly Bear Recovery Plan
DCA	Demographic Connectivity Area. Defined in the NCDE CS as “...an area in zone 1 intended to allow grizzly bear occupancy and potential dispersal beyond the NCDE to other recovery areas.”
DMA	Demographic Monitoring Area. Geographic areas specifically mapped as parts of the GYE Conservation Strategy and the NCDE Conservation Strategy. Encompassing corresponding RZs, these are larger areas within which recovered grizzly bear populations will be maintained, population monitoring will be conducted, and demographic objectives will be applied.
DNRC	Montana Department of Natural Resources and Conservation
DPS	Distinct Population Segment. A designation used by the USFWS to identify a vertebrate population that is distinct and significant relative to the entire species, for the purposes of listing, delisting, or reclassifying under the Endangered Species Act. For the purpose of delisting, the USFWS designated the grizzly bear population in the GYE as a DPS in 2007 and delineated a geographic boundary within which this designation applies.
FIR	Flathead Indian Reservation
FWP	Montana Fish, Wildlife & Parks; an agency of Montana state government.
GBAC	Grizzly Bear [Conservation and Management] Advisory Council, a group of 18 citizens selected and empaneled by then Gov. Steve Bullock of Montana via Executive Order 9-2019 (July 24, 2019). Their final report was issued on 10 September 2020.
GNP	Glacier National Park
GYE	Greater Yellowstone Ecosystem, a geographic area as defined by the 1993 USFWS Grizzly Bear Recovery Plan

IGBC	Interagency Grizzly Bear Committee
IGBST	Interagency Grizzly Bear Study Team, an interagency team tasked with monitoring and researching the grizzly bear population in the GYE, led by the Northern Rocky Mountain Science Center, USGS
MEPA	Montana Environmental Policy Act
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NCDE	Northern Continental Divide Ecosystem, a geographic area as defined by the 1993 USFWS Grizzly Bear Recovery Plan
PCA	Primary Conservation Area. As used in the GYE CS and the NCDE CS, these are the geographic Recovery Zones, renamed after delisting occurs, intended "to be managed as a source area for the grizzly bear population."
RZ	Federally defined grizzly bear Recovery Zone (as articulated in the federal Recovery Plan). These areas are dominated by public lands, where habitat protections are in place to support stable to increasing grizzly bear populations.
SDM	Structured Decision Making. A formal process to help identify issues and make decisions, particularly amidst uncertainty.
USDA	United States Department of Agriculture
USDA WS	USDA Wildlife Services
USFS	United States Forest Service
USGS	United States Geological Survey (under which the Northern Rocky Mountain Science Center operates)
USFWS	United States Fish and Wildlife Service

GLOSSARY OF TERMS

In this document, except where noted with an asterisk (*), we adopt the definition of terms suggested by Hopkins et al. (2010). Terminology not addressed by Hopkins et al. (2010) and their definitions for this document are indicated with a double asterisk (**).

Term	Definition
<i>Aggressive behavior:</i>	Bear behavior (defensive or offensive) that is threatening to people. Defensive behaviors can be associated with a bear's defense of itself, its young, or its food (often during surprise encounters). Offensive behaviors can be related to a bear's overt attempts to obtain anthropogenic foods in the presence of people or active predation on people.
<i>Aggressive bear:</i>	A bear that has displayed aggressive behavior and is a public safety concern.
<i>Anthropogenic food:</i>	Foods or attractants having a human origin.
<i>Augmentation: **</i>	Deliberate movement of a grizzly bear into a population with the intent of increasing its abundance, genetic diversity, or both.
<i>Attractant: **</i>	Anything that attracts a bear to a site. [From NCDE Subcommittee 2019].
<i>Aversive conditioning:</i>	A learning process in which deterrents are continually and consistently administered to a bear to reduce the frequency of an undesirable behavior.
<i>Bear attack:</i>	Intentional contact by a bear resulting in human injury.
<i>Bear deterrent**:</i>	Agent administered to bears to cause pain, avoidance, or irritation (from Lackey et al. 2018).
<i>Boneyard: **</i>	A site used for disposing of multiple animal carcasses. [From NCDE Subcommittee 2019].

<i>Conditioning:</i>	Learning triggered by receiving a reward or punishment for a given response to a given stimulus. Rewards of unsecured anthropogenic foods can lead to food-conditioning in bears, whereby they learn to associate humans or their infrastructure with food. Although the characterization is usually used in a binary sense (i.e., either “conditioned” or not) because we typically lack both sufficient knowledge of the animal’s behavior and intentions and also because we lack a nuanced vocabulary for describing it, conditioning almost certainly exists along a continuum (from mild to severe).
<i>Conflict bear:</i>	A bear involved in human-bear conflict (see below).
<i>Conflict prevention:**</i>	Strategies and actions that aim to deter or prevent bears from obtaining anthropogenic foods, killing or injuring livestock, damaging property, or injuring people.
<i>Connectivity:**</i>	The ability for animals from one population to interact physically with those from a different population. In this document, the term “connectivity” is synonymous with the term “linkage” and a “connectivity zone” is synonymous with a “linkage zone”. “Genetic connectivity” refers to situations in which neighboring populations exchange individuals and gene flow is achieved through reproduction of immigrants (and their descendants). “Demographic connectivity” refers to situations in which neighboring populations exchange individuals and immigrants (and their descendants) contribute significantly to population dynamics. By definition, demographic connectivity also achieves genetic connectivity.
<i>Control (referring to dealing with a grizzly bear):</i>	In this context, <i>hazing, moving, or euthanizing a grizzly bear.</i>
<i>Core:**</i>	In this document, FWP uses the term “core” (or “population core” or “cornerstone population”) to refer to the four focal areas entirely or partially in Montana that have been termed “grizzly bear ecosystems” in the early 1980s. These are populations that are either biologically recovered (in the case of NCDE and GYE) or identified by the USFWS as requiring recovery (in the case of CYE and BE). Note that this usage of “core” differs from the same term used in some USFS Forest Plans that do so to characterize large, contiguous blocks of the landscape devoid of motorized human use. FWP notes however that large, remote landscapes have allowed these populations to persist, and we expect that importance to continue in the future.

<i>Corridor:</i> ** See <i>Connectivity</i> .	The term “corridor” is sometimes used when referring to connectivity among core portions of a population’s geographic range. In this document, we do not use the term “corridor,” preferring to use the term “connectivity” (which we also synonymize with “linkage”). The term “corridor” can be misleading because, i) it suggests the animals using such areas do so out of specific intention to move from one core area to another (which may not be the reason they are present within the “corridor”), and ii) it suggests that animals within the corridor are present only temporarily while moving through, and these areas provide only what is needed for such movement rather than for normal requirements of obtaining food, shelter, or mates. We prefer the more general and expansive term “connectivity,” because although individual grizzly bears may use connectivity areas briefly while dispersing or finding a new home range, they may also use them during their entire lives. Connectivity areas may, by definition, contain breeding aggregations of grizzly bears, although they are likely to be at lower densities than within areas we term “population cores” or “population cornerstones”.
<i>Denning season:</i> **	The typical time period during winter months in which most grizzly bears are hibernating in dens [<i>From NCDE Subcommittee 2019</i>]
<i>Depredation:</i> **	An action generally associated with the killing of domestic livestock animals.
<i>Ecosystem:</i>	A term used to define the six recovery areas designated in the 1993 recovery plan (USFWS). Use of this technical term recognizes the complex and, sometimes, unique interactions of many living and non-living components within each of these large landscapes. In this document, reference to an ecosystem refers to the general area occupied by the resident grizzly bear population and not specifically to the RZ or DMA.
<i>Extirpate:</i>	In population biology, this term typically means to eliminate locally. An entire species could be said to be “extinct” (e.g., the passenger pigeon, <i>Ectopistes migratorius</i>); in contrast, we’d characterize grizzly bears in California as having been “extirpated.”
<i>Food-conditioned bear:</i>	A bear that has learned to associate people, human activities, human-use areas, or food storage receptacles with food. Although the characterization is often used as an absolute (i.e., a bear is either food-conditioned or not), the learning process usually means that an individual falls within a continuum from mildly to severely food-conditioned.

<i>Habituation:</i>	The waning of an innate response to a stimulus after repeated or prolonged presentations of that stimulus. Bears that are continually exposed to humans, with no negative consequences, can lose their innate avoidance behavior and become habituated or more precisely human-habituated. Although the characterization is usually used in a binary sense (i.e., either “habituated” or not) because we typically lack both sufficient knowledge of the animals’ behavior and intentions and also because we lack a nuanced vocabulary for describing it, habituation almost certainly exists along a continuum (from mild to severe).
<i>Habituated bear:</i>	A bear that shows little to no overt reaction to people as a result of being repeatedly exposed to anthropogenic stimuli without substantial consequence. Although the characterization is usually used as an absolute (i.e., a bear is either habituated or not), habituation almost certainly exists along a continuum from mildly to severely.
<i>Hazing:</i>	A technique where deterrents are administered to a bear to immediately modify the bear’s undesirable behavior.
<i>Human–bear conflict:*</i>	An interaction between a grizzly bear and human in which a bear either does, or attempts to, damage property, kill or injure livestock, damage beehives, injure people, or obtain anthropogenic foods, attractants, or agricultural crops. <i>[adapted from NCDE Subcommittee 2019]</i> . In the field, the specifics of each situation are reviewed by an inter-agency team, bears are not necessarily ‘branded’ as being “conflict” or “non-conflict” animals based solely on this definition, and chosen responses can vary in their aggressiveness based on a comprehensive review.
<i>Hyperphagia: **</i>	Increase in bears’ appetite and food consumption during the fall associated with the need to gain adequate fat reserves for hibernation (<i>from NCDE CS</i>).
<i>Linkage (and/or Linkage Zone): **</i>	See “connectivity”.
<i>Management removal:</i>	Lethal or non-lethal removal of a bear from the population by or at the direction of management personnel.
<i>Nuisance bear:</i>	We follow Hopkins et al. (2010) in considering this term poorly defined and susceptible to multiple interpretations, so avoid using it in this document. We note, however, that it was still in common usage in the mid-1980s when IGBC (1986) was finalized, so appears in that guidance as well as some older technical literature.

<i>Occupied Range:</i>	When in upper case, this refers to the area within a boundary produced using standardized, objective algorithms to differentiate where grizzly bear populations are verified to have colonized from where only scattered observations, perhaps of dispersing individuals are known. The outermost boundaries of occupied range are revised biennially, using newly obtained data and the standardized algorithms.
<i>On-site release:</i>	A management method that consists of capturing and releasing a bear at the site of capture.
<i>Relocation:</i>	The terms relocation and translocation are often used interchangeably. In this document we use relocation to describe the capture and subsequent transport of a bear from the site of capture to another location in association with attempts to mitigate human-bear conflicts.
<i>Removal: **</i>	Capture and either lethal removal or placement of a bear in an authorized zoological or research facility.
<i>Translocation:</i>	The terms translocation and relocation are often used interchangeably. In this document, we use translocation to describe the capture and subsequent transport of a bear for purposes unrelated to human-bear conflict, such as demographic or genetic augmentation of another population.
<i>Transplantation: **</i>	This term is defined in 87-5-702(11), MCA as: "the release of or attempt to release, intentional or otherwise, wildlife from one place within the state into another part of the state." For purposes of this plan, "transplant" means moving a bear outside of its home range into an area generally understood as different from its origin. The word "transplant" generally is used in reference to a new population becoming resident in the new area due to human-assisted movements (e.g., a transplanted population).

CHAPTER 1. OVERVIEW

1.1 INTRODUCTION

This Draft Environmental Impact Statement (DEIS) has been prepared by Montana Fish, Wildlife, & Parks (FWP) to analyze and disclose the potential environmental impacts of the proposed Statewide Grizzly Bear Management Plan (statewide management plan). Grizzly bears in Montana are native, iconic omnivores that have high value to people and cultures across the state and around the world and play important roles in Montana ecosystems. At the same time, they can and do injure or kill people and livestock, and cause property damage and economic loss, which may disproportionately affect certain individuals. Their potential presence is both valued and feared. While the benefits of grizzly bear population recovery are accrued broadly across society, the costs associated with increasing grizzly bear populations tend to be focused on communities and people who directly live with grizzly bears.

After 40 years of hard work by all Montanans, grizzly bear populations have reached and surpassed federal recovery goals in the Greater Yellowstone Ecosystem (GYE) and Northern Continental Divide Ecosystem (NCDE). Grizzly bear density is increasing, and they are now expanding into areas where they have not been for decades, including connectivity areas between recovery zones. These connectivity areas include a large amount of working private lands and places where the human population is also expanding, creating greater conflict potential than in areas where people are already used to bears. Existing management plans and agency communication built expectations by the public on where bears would occur and do not reflect recent changes to bear distribution.

Montana remains committed to maintaining the long-term viability of grizzly bears, consistent with our long history of wildlife conservation. The challenge is balancing conflicting values and addressing diverse needs, especially in newly recolonized areas. Federal protected status under the Endangered Species Act (ESA) currently governs Montana's ability to address distribution and abundance. However, many challenges would remain even if delisted. These are likely to intensify with time, including the likely establishment of more bears in more areas, adding to the complexity. The proposed action envisions the need for increased communication and education as well as increased funding to support necessary staff resources.

This document provides the foundation for future FWP decisions regarding conservation and management of grizzly bears at the state level. It is not a compendium of all aspects of grizzly bear conservation or management in Montana, because some decisions and commitments are incorporated in existing plans or agreements. These documents are referenced and reviewed herein, but for the sake of brevity, are not included in their entirety. That said, adoption of this plan will serve to recommit FWP to existing documents to which it is a party.

This DEIS discloses the potential direct, secondary, and cumulative environmental impacts that would result from the proposed project and alternatives. The document is organized into eight chapters:

- Executive Summary – The summary provides a brief overview of the proposed project, alternatives, and impacts. It also includes a list of acronyms, a glossary, and the table of contents (including lists of figures and tables).
- Chapter 1. Purpose and Need – Chapter 1 includes a background and overview of the proposed project; the purpose and benefits of the proposed project; FWP roles, responsibilities, and decisions; an overview of public notice and participation; and identification of the key scoping issues.
- Chapter 2. Description of Alternatives – Chapter 2 describes existing conditions and provides a detailed description of the proposed action (Alternative 2) as well as the No Action Alternative (Alternative 1). Chapter 2 also includes a description of alternatives that were considered but not carried forward for detailed analysis.
- Chapter 3. Affected Environment and Environmental Consequences – Chapter 3 describes the existing conditions and analysis areas used for the resource-specific impacts analyses; discloses the direct, secondary, and cumulative environmental impacts of implementing the Proposed Action of adopting and implementing either the statewide plan or the No Action alternative; and discloses irreversible and irretrievable commitments of resources.
- Chapter 4. Regulatory Restrictions – Chapter 4 includes a Regulatory Restriction Analysis pursuant to 75-1-201(3)(iii), MCA, which is an analysis of impacts on private property rights and whether alternatives that reduce, minimize, or eliminate the regulation of those rights have been analyzed.
- Chapter 5. Coordination and Consultation – Chapter 5 provides a list of preparers and agencies consulted during the development of the DEIS and describes consultation with Indian tribes.
- Chapter 6. List of Preparers – Chapter 6 provides the names and credentials of FWP specialists and third-party consultants.
- Chapter 7. References – Chapter 7 includes a list of references cited in the analysis.
- Chapter 8. Appendices – Chapter 8 provides appendices as referenced in the document. The following appendices provide more detailed information to support the analyses presented:

Appendix A – Considerations for translocating NCDE grizzly bears to the GYE for genetic augmentation

Appendix B – Approved sites where grizzly bears can be released by FWP

Appendix C – Tri-State Memorandum of Agreement Regarding the Management, Genetic Health, and Allocation of Discretionary Mortality of Grizzly Bears in the Greater Yellowstone Ecosystem

1.2 BACKGROUND

1.2.1 PROJECT BACKGROUND

Grizzly bears are listed under the ESA of 1973 as a “threatened” species within their entire range in the lower 48 contiguous states. Ultimate management authority thus currently rests with the U.S. Fish and Wildlife Service (USFWS) for recovering the species. The federal Grizzly Bear Recovery Plan (Recovery Plan, USFWS 1993) recognizes six recovery areas, four of which are partly or entirely within Montana. The recovery plan states 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, grizzly bears in two of the recovery areas that are partly or entirely located within Montana (NCDE and GYE) have been found by the USFWS to have met existing recovery criteria. In 2007, the USFWS designated the grizzly bear population in the GYE as a distinct population segment 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 within the time frame typically considered for FWP management plans could occur, 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 recovery targets outlined in the Recovery Plan (1993) or subsequent revisions are met. This potential multi-jurisdictional future provides an additional rationale for a comprehensive, statewide plan for Montana.

Grizzly bears have expanded in abundance and distribution in Montana in recent years. This enhances the long-term prospects for population sustainability by increasing the likelihood of biological connectivity. However, because grizzly bears can damage property and injure or kill people, their closer proximity to human habitation poses new challenges for Montanans beyond those anticipated by existing plans and agreements. The way to most appropriately manage this increasing number of bears, particularly in areas other than identified RZs, has remained a topic of contention, lacking a coherent, coordinated approach. Although people would likely continue to vary in how they view grizzly bears and their role in Montana, the lack of an integrated and accepted approach has caused difficulty both for agency managers and for the public at large, particularly in geographic areas outside of established RZs and DMAs.

FWP proposes to manage grizzly bears (*Ursus arctos*) within the state of Montana under the direction of a new, programmatic plan. This plan, vetted through the Montana Environmental Policy Act (MEPA) Environmental Impact Statement (EIS) process, 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: the plans 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 (RZ, Figure 1) as well as the buffer areas surrounding two of these zones, called Demographic Monitoring Areas (DMA), 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 (Figure 2). Because grizzly bears are listed as a threatened species under the ESA, the plan will serve both to guide state management 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.

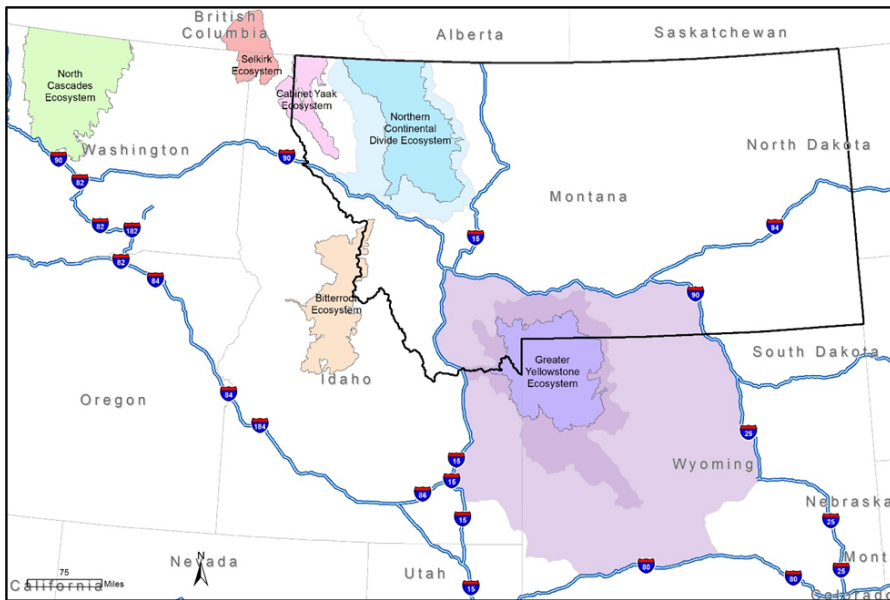


Figure 1. Montana and surrounding states, showing locations of the six grizzly bear recovery zones identified by the USFWS (individually colored and named) in relation to major interstate highways. Also shown are the DMAs surrounding the NCDE (light blue) and GYE (dark purple), as well as the area defined as a Distinct Population Segment (DPS) surrounding the GYE DMA (light purple). DPS for other recovery zones (or “ecosystems”) have not been formally mapped by USFWS.

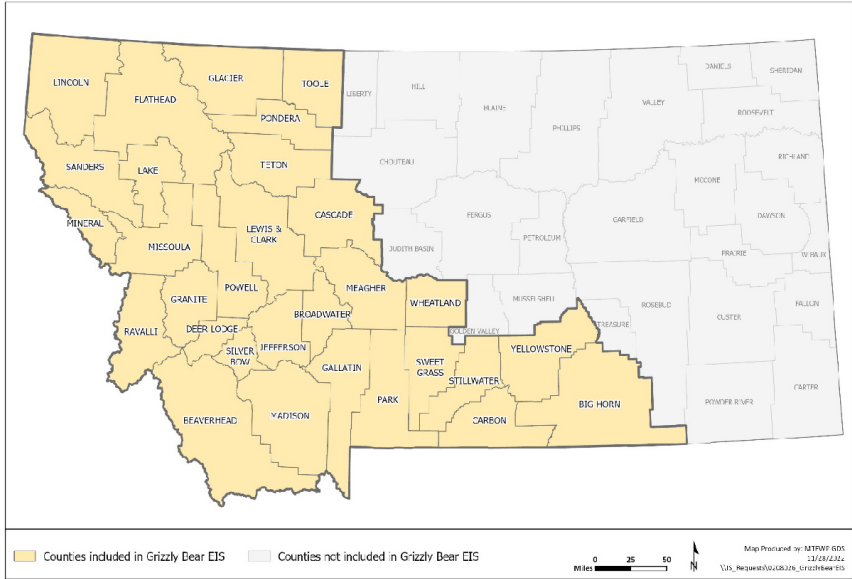


Figure 2. The analysis area for direct, secondary, and cumulative impacts on this resource is the 30 counties of western and central Montana. Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area.

1.3 PURPOSE AND NEED

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

1.3.1 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. The preferred alternative of adopting and implementing a statewide plan reflects new biological and social conditions, and upon evaluation and approval will supplant the two existing plans under which FWP has operated: the plans for Western

Montana and for Southwest Montana. The statewide plan 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. The plan reflects existing laws, regulations, and policies, as well as inter-governmental commitments made by FWP and the commission. The plan will guide FWP activities consistent with ESA listed status, but also anticipate policy should delisting of recovered populations occur in future.

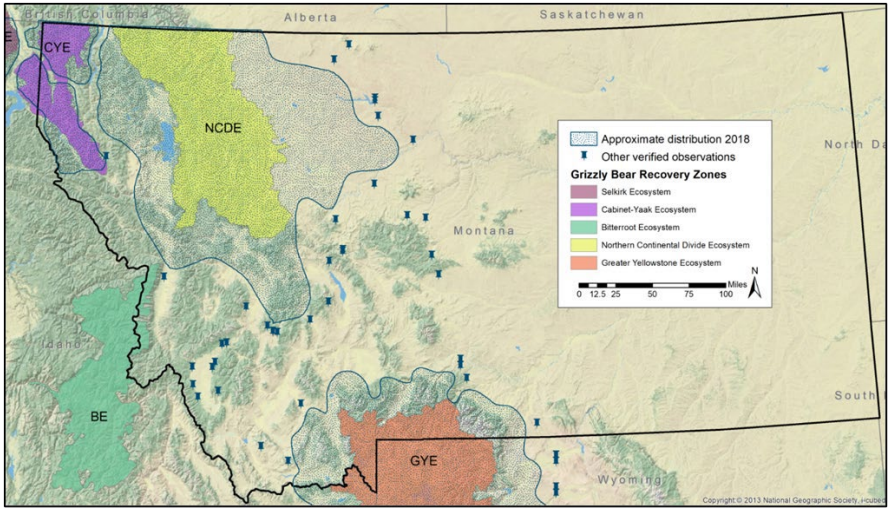


Figure 3. Estimated distribution of grizzly bears in Montana as of 2018 (blue stippled area surrounded by blue line). Also shown are estimated locations of verified observations beyond this line (pins), and locations of the Cabinet-Yaak Ecosystem (CYE), Bitterroot Ecosystem (BE), Northern Continental Divide Ecosystem (NCDE), and Greater Yellowstone Ecosystem (GYE) Grizzly Bear Recovery Zones. It is likely that occupied area as of 2021 has expanded somewhat since 2018. The stippled area should not be interpreted to suggest that grizzly bears are equally common in all areas.



Figure 4. Areas (blue shading) in which grizzly bears "may be present" according to USFWS, January 2021. This includes scattered and/or dispersing individuals and does not necessarily indicate the presence of a meaningful assemblage of grizzly bears in all outlying areas.

1.3.2 BENEFITS

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

Federal Benefits

Under the preferred alternative, the statewide 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 that 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 and its citizens 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.

1.4 AGENCY AUTHORITY AND ACTIONS

The major decisions to be made by FWP are described below. No other permits, certificates, licenses, or approvals would be required before implementation of the proposed project could begin.

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 Recovery Plan (USFWS 1993) 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 broad direction to FWP and the commission regarding the management of grizzly bears. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (Administrative Rules of Montana, ARM).

1.4.1 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

FWP Regulatory Decisions

Montana Environmental Policy Act (MEPA) requires a state agency to conduct an environmental review when making decisions or planning activities that may have a significant impact on the human environment. FWP concluded the decision to approve or deny the statewide management plan would be a major *state action* requiring preparation of a DEIS. MEPA (Title 75, chapter 1, parts 1 through 3, MCA) and its implementing administrative rules (ARM 12.2.428, *et seq.*).

MEPA Review Process

FWP Implements MEPA according to the requirements contained in Title 75, chapter 1, parts 1 through 3, MCA) and its implementing administrative rules (ARM 12.2.428, *et seq.*).

FWP must first determine whether or not a proposed state action is subject to MEPA review and, if so, the level of environmental review required. According to ARM 12.2.429(1), a state “action” subject to MEPA review is “a project, program or activity directly undertaken by the agency; a project or activity supported through a contract, grant, subsidy, loan or other form of funding assistance from the agency, either singly or in combination with one or more other state agencies; or a project or activity involving the issuance of a lease, permit, license, certificate, or other entitlement for use or permission to act by the agency, either singly or in combination with other state agencies.” All state actions are subject to MEPA review except those that qualify for a categorical exclusion under ARM 12.2.454, *Actions that Qualify for A Categorical Exclusion*, or those justified by a prior programmatic review conducted according to the requirements of ARM 12.2.444, *Preparation, Content, and Distribution of Programmatic Review*.

There are two levels of environmental review outlined by MEPA, environmental assessments (EA) and environmental impact statements (EIS). The only substantive differences between an EA and an EIS lie in the scope and depth of analysis. There also are substantial procedural differences between an EA and an EIS. For example, an EIS requires more formal procedures for public review and agency response to public comment. Although an EIS is more complex than an EA, the substantive requirements for both types of documents are similar. A standard topical outline for a generic environmental review document (EA or EIS) would include the following elements: a description of the purpose and need for the proposed action; a description of the affected environment; a description and analysis of the alternatives, including the “no action” alternative; and an analysis of the impacts to the physical and human environment of the different alternatives, including an evaluation of appropriate mitigation measures.

FWP concluded the decision to approve or deny the statewide management plan would be a major *state action*; therefore, according to the requirements of ARM 12.2.430(1)(b), the proposed action requires FWP to prepare an EIS level review for the proposed action.

Conditions

Because FWP determined that a DEIS was needed before making its decision(s), FWP must complete and publish a final EIS following adequate notice and opportunity for public and affected agency input. The contents and direction of the proposed statewide plan are compliant with applicable state and federal laws and rules.

Conditions for Denial

FWP may not approve the project if there are unacceptable impacts on the human environment. The statewide plan would be denied if it were found to violate state or federal laws or rules, or if it had unacceptable impacts to key issues. However, there are no unacceptable impacts associated with the proposed project as the statewide plan is not regulatory and primarily provides management guidance for the agency.

1.4.1 OTHER STATE AND FEDERAL AGENCIES – APPLICABLE REGULATION

U.S. Fish & Wildlife Service Applicable Regulation

Endangered Species Act - Grizzly bears are currently listed as threatened under the ESA. As such, they are protected from take by the ESA. Development of this EIS recognizes the current federal status of the grizzly bear and anticipates policy under a possible future change in that status. This plan recognizes the authority of the ESA and is not contrary to it; nor is this document a delisting plan. Removing a species from the list of threatened and endangered species requires not only documentation that recovery criteria have been met, but also documentation that the state has in place regulatory mechanisms that provide assurance that listing would not again become necessary. This plan is likely to be viewed as integral to “existing regulatory mechanisms.”

1.5 PUBLIC OUTREACH

1.5.1 SCOPING

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*.

The 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)), years of inter-agency collaboration on grizzly bear conservation, previous state and inter-agency plans, routine interactions with the public during FWP's day-to-day management and research, a human dimensions public attitude survey, internal structured decision-making (SDM) process, and a public advisory committee. These internal and public processes serve to fulfill the scoping requirements of MEPA.

Recognizing that grizzly bears are expanding in geographic range, that conflicts with humans appeared to be increasing, and that populations of both grizzly bears and humans are likely to continue increasing in the immediate future, FWP engaged in a series of internal discussions in 2018 and 2019. These discussions focused on whether existing plans were sufficient to guide future management, or whether a new planning process would be useful. A 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 that are described in the draft plan.

On July 24, 2019, then-Gov. Bullock signed Executive Order 9-2019, creating a Grizzly Bear Conservation and Management Advisory Council (GBAC). In setting up the need and rationale for this group of 18 citizens, the governor 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 that 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 in public forums 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>.

To gain a better understanding of Montanans' general views about grizzly bears and attitudes toward their management, FWP conducted a human dimensions survey of approximately 5,000 Montanans. The results of that survey are described below.

FWP also participated in development of conservation strategies for the GYE and NCDE that were discussed in public forums and included multiple opportunities for public comment.

1.5.2 SCOPING ISSUE IDENTIFICATION

During scoping, FWP staff identified several strategic and fundamental objectives that highlight potential issues or concerns similar to those heard through numerous public venues. Additionally, the GBAC identified many of the same issues. Those are listed below. These issues have emerged from years of inter-agency collaboration on grizzly bear conservation, previous state and inter-agency plans, routine interactions with the public during FWP's day-to-day management and research, the GBAC process and associated public input, and the University of Montana Attitudes Survey. FWP considered all issues and concerns in the preparation of this DEIS. The following section describes those scoping issues the DEIS interdisciplinary team identified as *key issues* considered during alternatives development. All key issues are further evaluated in **Chapter 3** of the DEIS.

- Grizzly bear population viability over the long term.
- Human safety.
- Effective response to conflicts involving grizzly bears.
- Effective grizzly-related outreach and conflict prevention.
- Intergovernmental, interagency, and tribal coordination.
- Engagement among people with diverse and competing values.
- Public confidence and ownership in grizzly bear management.
- Transparency of grizzly bear management planning processes.
- Clarity of grizzly bear management objectives in all parts of the state.
- Clarity of guidance for making time-sensitive management decisions.
- Financial costs of grizzly bear management.
- Public agreement on the role of hunting at appropriate locations, levels, and times.
- Management flexibility within the confines of the ESA.
- Honor existing grizzly bear management objectives and existing commitments. Honor intra- and interagency commitments already in place.

Summary of advice received from the Citizen Grizzly Bear Advisory Council

- In Guiding Principle 1, the GBAC advised that “all those living in or visiting Montana should expect the potential presence of grizzly bears on the landscape”. In Guiding Principle 2, the GBAC advised that “the identification of areas between established recovery zones that best contribute to genetic and demographic connectivity is necessary to prioritize resource allocation, focus outreach and education efforts, build social tolerance, and proactively engage local communities and landowners.” In Guiding Principle 3, the GBAC advised that “As expansion occurs outside the four recovery Ecosystems and the landscapes in-between them in Montana, FWP and relevant agencies will have to balance this expansion with the need to prioritize resources that support both public and private lands.” In Guiding Principle 13, the GBAC advised that “Both genetic and demographic connectivity are important to the long-term sustainability, persistence, and resiliency of grizzly bears. Connectivity areas will exist in diverse social and environmental settings. Not all these settings are conducive to permanent habitation but should

be managed to promote genetic and demographic connectivity in biologically suitable habitat, being mindful that biologically suitable does not always mean acceptable.”

- In considering “grizzly bear distribution, ‘relocation’, and connectivity,” the GBAC stated that “Genetic and demographic connectivity among Montana’s four recovery zones is important to the long-term viability of grizzly bear populations in the continental United States.” The GBAC added that their recommendations were intended to “balance the continued importance of public lands with the need for the involvement of private lands to support our vision for an interconnected metapopulation of grizzly bears in Montana.”
- More specifically, in recommendation 19, the GBAC advised that “FWP should continue to allow natural movement to new areas between all four identified recovery zones in Montana.” In recommendation 20, the GBAC advised that “FWP and all relevant agencies should clearly define the ‘landscapes in-between’ the four recovery zones in Montana that are important for genetic and demographic connectivity and the long-term sustainability of the grizzly bear.” Finally, in recommendation 21, the GBAC advised that “FWP, in coordination with relevant agencies and through a public process, should evaluate and identify those landscapes that can reasonably be considered important for grizzly bear recovery and connectivity from those that cannot, and clearly distinguish these in its management plan. Such a distinction is necessary for determining appropriate relocation sites between the four recovery zones, as well as for prioritizing resources for outreach and education, transportation upgrades, and conflict prevention, reduction, and response efforts. These decisions should be in accordance with current Conservation Strategies.”
- In Guiding Principal 5, the GBAC offered that “Strategies and tools aimed at proactively preventing or reducing conflicts are often effective and can be less expensive than compensating for conflict after the fact.” In Guiding Principle 10, the GBAC advised FWP to “... strive to cultivate social tolerance through sound management decisions and conflict prevention measures.”
- In considering conflict prevention and reduction, the GBAC stated that “Preventing conflicts with grizzly bears is essential to the development of social acceptance and the continued conservation of grizzly bears. Proactive, inclusive efforts to mitigate conflict can engage communities, protect private property, maintain human safety, and be an efficient use of limited resources, while minimizing associated bear mortality.”
- More specifically, in recommendation 11 dealing with human/grizzly bear conflicts in and around developed areas, the GBAC advised FWP to “provide guidance for land use planning to prevent human/grizzly conflicts,” to “recommend actions to governing bodies on how to minimize grizzly bear conflicts,” to “help local communities identify and use available local grants for conflict prevention,” to “prioritize...research, development, and funding of new and innovative tools and techniques for conflict prevention and aversive conditioning.” In recommendation 12 dealing with conflicts in the agricultural domain, the GBAC advised FWP to “research and make recommendations on best management practices that help reduce depredations on livestock and non-livestock commercial losses,” to “integrate technology to allow for timely reporting of agricultural conflicts to neighboring farms and ranches,” and to “...increase and diversify partnerships, funding, and support for community-based groups and

other organizations” working on preventing or reducing human/grizzly bear conflicts. Additionally, in Recommendation 3, the GBAC advised FWP to “provide residents and landowners with accurate information on the effective use of non-lethal methods to haze grizzly bears.”

- In considering conflict response and protocols, the GBAC stated that “Timely and consistent conflict response is necessary to build and maintain relationships between FWP and the communities where grizzly bears exist. Building these relationships prior to conflict will help to promote open communication and sharing of information if the need for response should occur.”
- More specifically, in recommendation 15, the GBAC advised FWP to “make bear management specialists full time equivalent (FTE) positions included in permanent base funding, provide each specialist with a year-round technician, and create more of these fully funded positions as needed.” to “clarify management protocols for conflict bears and continue to share them with landowners, livestock producers, and communities to maximize transparency,” and to “periodically review interagency Memorandums of Understanding (MOUs) for opportunities to improve efficiency and capacity for conflict response.”
- In recommendation 23, the GBAC advised FWP to “expedite work with landowners, agricultural producers, and communities to prioritize the creation of new suitable relocation areas inside and between recovery ecosystems which further the conservation, connection, and recovery of grizzly bears in Montana while ensuring existing land uses are supported”.
- In Guiding Principle 1, the GBAC advised that “All those living in or visiting Montana...should have access to education, assistance, and resources involved with coexisting with grizzly bears.”
- In considering education and outreach, the GBAC stated that “Education and outreach should engage all Montanans and visitors in the shared responsibility of grizzly bear conservation.”
- More specifically, in recommendation 2, the GBAC advised FWP to “...provide easy access to education about hunting safely in grizzly bear country for resident and non-resident hunters in Montana,” in Recommendation 3 to “provide residents and landowners with accurate information on the effective use of non-lethal methods to haze grizzly bears,” and in recommendation 5 to “create open and accessible communication channels between bear managers and the public to encourage communal efforts around bear awareness and conflict prevention.” Further, in recommendation 6, the GBAC advised FWP to work with other agencies to “create consistency and timeliness around public access to grizzly bear mortality data across recovery Ecosystems,” in recommendation 7 to “explore ways to inform, promote, and incentivize Bear Aware programs in communities,” in recommendation 8 to “support educational efforts to build a common understanding of perspectives between agricultural producers and urban communities,” and in recommendation 9 to “create and use consistent messaging around the use and effectiveness of bear spray.” Finally, in recommendation 10, the GBAC supported the creation of a “a full time and permanent Grizzly Bear Information, Education, and Outreach Coordinator to support and contribute to the broader efforts of FWP’s Wildlife Stewardship Outreach Specialist.”
- The GBAC reported to the Governor that “Substantial deliberation was given to the role of hunting; however, because of the diversity of interpretations of available science, backgrounds,

values, and opinions individually held by Council members, we cannot reach consensus that hunting has a role in grizzly bear management.” Further considerations were contained in a non-consensus section of the GBAC document.

Statewide Survey of Montanan’s Attitudes Toward Grizzly Bears

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). A total of 1,758 responses were received. To account for possible non-response bias, responses were weighted to account for differences between the sample and the adult population of Montana in terms of age, gender, educational attainment, and geographic location (rural vs. urban, within or outside grizzly bear range). The questionnaire and results (Nesbitt et al. 2020) can be found at <https://www.cfc.umt.edu/research/humandimensions/news/human-dimensions-grizzly-bear.php>.

Important results relevant to FWP developing a statewide management plan:

- (a) 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.
- (b) Most Montanans (57%) disagree that grizzly bears limit their recreational opportunities; however, 23% agree or strongly agree with that statement.
- (c) 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.
- (d) 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%).
- (e) 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.
- (f) Almost all Montanans (94%) report they have or would be willing to carry bear spray while recreating or hunting.
- (g) 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.

1.5.3 KEY ISSUES IDENTIFIED DURING PUBLIC SCOPING FOR DETAILED ANALYSIS

The issue statements below are intended to capture the essence of public and agency concerns related to grizzly bear management in Montana, as it relates to the alternatives analyzed herein. These issues are further analyzed in **Chapter 2**, Description of Alternatives and detailed resource impacts analyses of these issues are provided in **Chapter 3** (direct, secondary, and cumulative impacts).

Issues considered within alternatives

FWP has identified broad themes in grizzly bear management where FWP decisions, management, and input will have substantial effects on the species status, and on the lives of Montanans. These themes are listed here and provide organizational structure for the agency's decision making. These issues have emerged from years of inter-agency collaboration on grizzly bear conservation, previous state and inter-agency plans, routine interactions with the public during the GBAC process and associated public input and the University of Montana Attitudes Survey.

Issue 1: Status and role of grizzly bears in Montana. What do FWP and Montanans see as the status and role of grizzly bears in Montana? How does FWP view the future of the state when thinking about the advantages and disadvantages of sharing it with these animals?

Issue 2: How many grizzly bears should live in Montana? Should FWP identify statewide numeric objectives for the species, and if so, what should these be?

Issue 3: Distributional objective and population connectivity. Where will grizzly bears live within Montana over the long-term, and what biological role would grizzly bears in various parts of Montana play in the context of species conservation and management within their U.S. Northern Rocky Mountain distribution? Although inherent topographic and biological characteristics dictate much of this question (and commitments under the ESA and associated CSs constrain the decision space), FWP — through its management activities as well as those of federal, state, tribal, and non-governmental partners — influences where grizzly bears will live in Montana, and — very roughly — at what densities.

Issue 4: Human safety. Grizzly bears are large and powerful animals, that can act aggressively in defending cubs, food resources, or their sense of personal space. Although many potential interactions are resolved by the bear moving away (often well before the person was even aware of their proximity), there is no doubt that grizzly bears can, and do injure people. Although FWP cannot control the behaviors of individual bears, actions taken by FWP (in conjunction with partners) can often reduce the risk to human safety.

Issue 5: The role of private lands in the future of grizzly bear conservation and management. ~~Most planning for grizzly bear recovery in the U.S. has assumed that public lands would form the backbone of needed habitat, and grizzly bears would rarely occupy private lands. The first part of that assumption remains true, but the second part has proven false as~~ Grizzly bears are increasingly found on private lands. While this ~~discovery~~ creates increased opportunity for biological connectivity between population cores, it also increases conflict with humans as grizzly bears compete with people for resources, damage property, and threaten human safety.

Issue 6: Conflict prevention. Humans have limited ability to alter the behaviors of grizzly bears. These behaviors result from natural selection and are encoded in genetic instructions. However, FWP can greatly reduce the likelihood that the animals' biological imperative to obtain food, energy, and shelter will conflict with human needs. An entire sub-field of conflict prevention has emerged in recent decades, and a variety of technical approaches can be attempted in response to specific situations. Most of these can be summarized by the concept of securing attractants. When grizzly bears perceive the human-created environment as an easier way to obtain nutritive needs, they will overcome their natural wariness of people and attempt to procure those resources for themselves. Bird feeders, pet-food, fruit trees, garbage, spilled grain, beehives, and livestock become attractants and set the stage for property damage, habituation or conditioning of bears. However, when these attractants are secured, so grizzly bears receive no nutritive reward by responding to their natural curiosity, the probability of conflict can be reduced substantially.

Issue 7: Conflict response. Conflicts between grizzly bears and people can be reduced, but cannot be eliminated entirely. FWP sees no realistic future in which there will be no need at all for responding to individual circumstances in which a grizzly bear has, or is very likely to damage property or threaten human safety. As a threatened species under the ESA, federal guidance and approval is required if actions more intrusive than hazing a bear are considered. That said, there remains considerable flexibility for how any given situation is handled even under listed status. FWP's initial response to most conflict situations is to reduce or eliminate the source of conflict (e.g., securing attractants). In some cases, however, FWP recommends to USFWS capturing the bear. Captured bears, in turn, can be i) released on-site for further monitoring, ii) relocated a short distance from the site, iii) relocated a long distance from the site, or iv) euthanized. With legislation passed in March 2022 (87-5-301(3)(b), MCA), grizzly bears causing conflict that are captured beyond the boundaries of a recovery zone can no longer be moved by FWP. Other grizzly bears can only be moved to sites previously approved by the commission (87-5-301(3)(a), MCA).

Issue 8: Public certainty vs. agency flexibility in responding to human-bear conflict. FWP views as inevitable a tension between the two goals of i) providing flexibility to state (and federal) managers in responding to each conflict in the way that best achieves both the conservation objectives that have been articulated in that area while ensuring human safety and minimizing property damage and ii) the benefits to the public of knowing with some specificity what to expect from those managers if a conflict occurs. FWP sees no option for simultaneously optimizing both. Increasing the flexibility to fine-tune a response unavoidably reduces the ability to predict (in a programmatic plan, or on a finer spatiotemporal scale) what that response will be, whereas providing increased certainty to the public ahead of time unavoidably ties the hands of managers in ways that could force them to make decisions that are sub-optimal in any given case.

Issue 9: Destinations of bears captured in conflict settings. An option often considered by managers when dealing with a human-bear conflict is to capture the bear in question, and move it to another location with the intention of providing it an alternative, conflict-free habitat while working to reduce the attractiveness of its original conflict. Sometimes a grizzly bear is captured in anticipation of a conflict (i.e., a preemptive capture), and at other times a bear other than the presumed offender is captured incidentally (i.e., a non-target capture). In all cases, the decision of where to release the captured bear is complex, and reflects both short-term contingencies and also longer-term strategic objectives. As of March 2022, FWP can only move bears causing conflicts if captured within recovery zones (although federal authorities can move conflict bears captured outside recovery zones). The commission approved a list of pre-approved sites to which grizzly bears could be moved (including for non-conflict bears) at their meeting on October 28, 2021.

Issue 10: Moving bears to initiate new or support existing populations. ~~The USFWS has formally proposed moving bears into the two established recovery zones lacking populations (Bitterroots and North Cascades), but implementation of both proposals has been placed on hold.~~ Since 2005, FWP and USFWS have cooperatively moved selected, non-conflict grizzly bears from the NCDE to the CYE (averaging 1.2 bears/year), a program many credit with saving the latter population. The notion that grizzly bears from other ecosystems might occasionally be moved into the GYE for genetic reasons has been discussed for almost 40 years. Many citizens view animals that have been brought into new areas by people very differently than they would view the same animals who arrived on their own. Agencies have typically been reluctant to move an animal that has the potential to cause conflicts in its new home but the commission approved moving several grizzly bears from the NCDE to GYE populations at their meeting on December 14, 2021. A more detailed protocol document, articulating the purpose and need of the augmentation program, as well as providing guidance to field staff regarding the type of bear, circumstances around its capture, time of year, and likely release areas, has been drafted (Appendix A) and is now under consideration by both the GYE and NCDE subcommittees of the Interagency Grizzly Bear Committee (IGBC).

Issue 11: Orphaned cubs. Occasionally an adult female grizzly bear is killed and her offspring come into FWP possession. Offspring older than one year of age can be treated similarly to other bears, but orphaned cubs less than a year of age pose a particular challenge for managers because they face much lower odds of survival if left to fend for themselves. How and whether such situations should be handled deserves considerable thought and planning before they occur.

Issue 12: Conflict management operational structure. Minimizing and responding to human-bear conflicts requires considerable resource commitments, including skilled staff, equipment and materials, and fiscal resources necessary to acquire and maintain these operational components.

Issue 13: Prioritizing information, outreach, and communication efforts. Minimizing conflicts with grizzly bears while Montanans live their lives requires that Montanans do their part. However, living safely around grizzly bears is not something intuitive. Targeted and well-planned educational programs are required to enhance the public's level of knowledge before people can effectively avoid conflict. As with decisions on where, when, and how to deploy personnel, FWP must decide how to prioritize information, outreach and communication efforts in a world where resources are finite.

Issue 14: Population research and monitoring. In cooperation with federal and tribal partners, FWP conducts ongoing monitoring of grizzly bear populations to understand trends in abundance, distribution, and habitat use, as well as ancillary information that helps direct management. Most of these efforts are guided by inter-agency agreements currently in place. In brief, agency biologists focus their ongoing monitoring efforts on four areas: the GYE, NCDE, CYE, and Selkirk areas (the last of which does not overlap Montana). FWP is committed to continuing its participation in these monitoring efforts. To date, very few resources have been expended to better understand the status of bears outside of these four core areas.

Issue 15: Resources required. Because this plan is programmatic and FWP budgets are ultimately controlled by the Montana Legislature, only a rough estimate of resources required is provided here.

Issue 16: Values and beliefs associated with hunting of grizzly bears. State laws and regulations in Montana consider the grizzly bear a species for which hunting seasons may be authorized by the commission, should its status at the federal level allow. However, grizzly bear hunting elicits strong reactions from many members of the public. This document is a good opportunity to articulate and consider whether hunting should have a role in future grizzly bear management should delisting occur.

Many proponents of hunting feel that if a population is considered to be “recovered,” they should have some regulated hunting opportunity. Some proponents feel hunting may increase social tolerance for bears by people, or hunting may help bears become more wary of humans. Others feel hunting is a preferred population management tool for regulating the population and potentially addressing conflict bears. On the other hand, many opponents consider grizzly bear hunting to be trophy hunting. Other opponents are concerned the populations will be over-harvested, and would rather see “excess” animals used for expanding distribution into other areas. Many opponents simply do not support harvesting an iconic, and for some, a spiritual animal. The potential for hunting is a key reason some grizzly bear advocates oppose delisting.

If hunting has a role to play, there remains considerable discretion to consider the magnitude, specific objectives, geographic scope, and other constraints that would direct such a hunt. The commission would ultimately make such decisions in a separate public process that would respect the conservation objectives in this plan, and no other planning document currently exists to inform that discussion.

1.5.4 SCOPING ISSUES ELIMINATED FROM DETAILED ANALYSIS

This section identifies and summarizes issues brought forward by the public that were eliminated from detailed analysis. These issues were not analyzed because they are covered by existing laws and regulations or are not applicable to the proposed project.

Motorized access. High road density is associated with lower levels of area use by grizzly bears, and lower survival of bears that do use high road density areas. For this reason, public land managers have committed, via forest plans, conservation strategies, and habitat conservation plans to various limitations on motorized access, primarily within core population areas. FWP owns a small proportion of the public lands that provide grizzly bear habitat, and many roads in or around its lands do not fall under FWP jurisdiction. Previous FWP grizzly bear plans (Grizzly Bear Management Plan for Southwest

Montana (Dood et al. 2006) and Grizzly Bear Management Plan for Western Montana (FWP 2013)) have included the recommendation that land management agencies (including FWP) manage for open-road densities of 1 mi/mi² or less where grizzly bears might use the habitat. This matches FWP's statewide approach to managing motorized access for multiple species (e.g., elk). FWP would anticipate maintaining this approach regardless of the alternative chosen here.

Transportation accommodation. As in FWP Grizzly Bear Management Plans for western and southwestern Montana (Dood et al. 2006, FWP 2013), FWP remains interested in minimizing the disruptive and demographic effects highways create for grizzly bears. Because we know grizzly bears are likely to use only the largest and most open types of crossing structures (Ford et al. 2017), and these are generally the most expensive, careful planning will be required to avoid making a large investment in a structure that provides little benefits to grizzly bears. FWP would not be involved in developing specific proposals for highway crossing structures or other wildlife accommodation, but would be an active consultant to the Montana Department of Transportation (MDOT) on priorities and placement. FWP is increasingly engaged in transportation projects to improve the chances grizzly bears and other wildlife cross roads safely (Costello et al. 2020).

A Memorandum of Agreement (MOA) between FWP and MDOT on coordination of wildlife and transportation issues was finalized and signed in March 2020. This high-level MOA provides an umbrella structure under which work groups can share information and coordinate efforts related to reducing the negative effects that Montana's highway system has on wildlife. The MOA specifically names the Non-Governmental Organization (NGO) Montanans for Safe Wildlife Passage as an additional cooperating partner in this effort.

Climate change. FWP's understanding of how grizzly bears are likely to be affected by climate change indicates similar impacts regardless of the management direction under consideration in this DEIS. FWP will consider habitat variations, including those manifest in climate change, 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.

Approach to public information on grizzly bear conflicts, relocations, and mortalities. Whether FWP regions make individual decisions regarding the public dissemination of information when grizzly bears are moved, grizzly bears are killed, or other similar events, or FWP implements more consistency across the state in whether/when/how such information is disseminated, the same approach would be applied regardless of management direction under consideration in this DEIS.

CHAPTER 2. DESCRIPTION OF ALTERNATIVES

2.1 INTRODUCTION

This chapter provides background information on the proposed project and describes the alternatives FWP considered. This chapter also describes alternatives that were not carried forward for detailed analysis.

2.1.1 ALTERNATIVES ANALYZED

Alternatives were considered based on requirements for the alternatives analysis provided in the 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.” ARM 12.2.429(2).

FWP evaluates two alternatives in this DEIS: Alternative 1 – No Action Alternative; Alternative 2 – proposed action. Alternatives not carried forward for detailed analysis are discussed at the end of this chapter (2.5 Alternatives Not Carried Forward for Detailed Analysis.)

Table 1. General differences between the alternatives by key issue.

Issue	1. No action (status quo)	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	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

	population dispersal and increasing conflict.	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 that 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 CSs and supports the recovery goal in the 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 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 to be an objective where recovery objectives have been met. Achieving recovery would continue to be an objective 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 would recognize the pivotal role private-landowner support	FWP would acknowledge the contribution that private lands make in providing habitat for grizzly bears beyond secure

	plays in recovery and the significant contribution of private lands in the recovery effort.	areas ¹¹ , 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 Bitterroot areas.	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 IGBC (1986), 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.	FWP would continue its emphasis on reducing the attractants that often precipitate conflicts. When necessary, bears involved in 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.
Public certainty vs. agency flexibility in conflict response	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).	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 RZ).</p>	<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 conflict outside recovery zones could also be handled in this way.</p>
<p>Moving non-conflict grizzly bears (captured outside recovery zones) whose origin is uncertain</p>	<p>FWP would have no overall policy; decisions would be made on a case-by-case basis.</p>	<p>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</p>
<p>Moving non-conflict bears to areas outside of Occupied Range</p>	<p>Movement of grizzly bears outside of Occupied Range would require a separate environmental analysis and decision notice, as well as approval from the commission.</p>	<p>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.</p>

Orphaned cubs	Cubs orphaned after Sept. 1 would be generally left in the wild. Bringing younger orphans to 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 permitted with pre-approved plan and release area.	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.
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 specialists 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 conservation strategy 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.

¹¹ See ARM 12.9.1401. “Secure” is a general term meaning wild places where humans visit but do not live, where extractive activities are limited spatially and temporally, where roads are primitive and do not dominate the landscape, and where wildlife generally lives with minimal interaction with people. No specific standards are implied.

2.2 PAST AND EXISTING RESOURCE MANAGEMENT STRATEGIES AND PLANS

2.2.1 PAST AND EXISTING MANAGEMENT STRATEGIES/PLANS/OTHER

Two existing FWP documents currently guide discretionary activities regarding grizzly bears: 1) the Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016, and 2) the Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement. Upon evaluation and approval of the statewide management plan, the statewide plan will supplant those others.

Additionally, the state of Montana, represented by FWP, is a signatory to two separate but similar documents called “conservation strategies (CS)”: the “2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (Yellowstone Ecosystem Subcommittee 2016; GYE CS, hereafter), and the “Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019” (NCDE Subcommittee 2019; NCDE CS, hereafter). Both documents provide comprehensive and inter-jurisdictional guidance on how grizzly bears will continue to be conserved and managed after delisting in the two respective ecosystems. They summarize and describe strategies, standards, and guidelines to be coordinated among state, federal, and tribal entities for managing grizzly bear populations, human-bear conflicts, and grizzly bear habitats after federal protection (under the ESA) is removed in each ecosystem. They thus simultaneously prefigure management after delisting and support delisting by providing additional assurance that delisting will not re-threaten the species and thereby require re-listing (i.e., they document regulatory mechanisms, as required under the ESA). However, neither CS provides explicit guidance for managing and conserving grizzly bears outside the boundaries of the respective ecosystems (formalized in the CSs as Demographic Monitoring Areas or DMAs).

The GYE CS “was developed to be the document guiding management and monitoring of the GYE grizzly. The vision espoused by the GYE CS is the primary conservation areas (PCA, under listed status the recovery zones) “will be a secure area for grizzly bears, with population and habitat conditions maintained to ensure a recovered population is maintained for the foreseeable future and to allow bears to continue to expand outside the PCA. Outside of the PCA, grizzly bears will be allowed to expand into biologically suitable and socially acceptable areas... [but the objective outside the PCA]... is to maintain existing resource management and recreational uses and to allow agencies to respond to demonstrated problems with appropriate management actions. Per the GYE CS, habitat standards in the GYE PCA include maintenance of secure habitat at or above 1998 levels in each bear management unit (BMU) subunit through management of motorized access route building and density, with specific exceptions and short-term deviations allowed under specific conditions. Secure habitat is defined as any contiguous area ≥ 10 acres and more than 500 meters from an open or gated motorized access route, prescribed footprint of a developed site, or recurring low-level helicopter flight line during the non-denning period. The number and acreage of commercial livestock allotments and number of permitted domestic sheep animal months will not exceed 1998 levels inside the PCA. Existing sheep allotments will be phased out as the opportunity arises with willing permittees. Maintenance of developed sites and their capacity for overnight visitor use on federal lands within the PCA, will remain at or below 1998 levels, with limited exceptions for administrative and maintenance needs meeting specific conditions.

The goal of the NCDE CS (NCDE 2020) and, by reference, its signatory agencies is “to maintain a recovered, genetically diverse grizzly bear population throughout the Demographic Monitoring Area (DMA: the Primary Conservation Area (PCA) and Zone 1) while maintaining demographic and genetic connections with Canadian populations and providing the opportunity for demographic and/or genetic connectivity with other ecosystems (Cabinet-Yaak, Bitterroot, Greater Yellowstone).” Per the NCDE CS, which currently guides management in that ecosystem, and which will continue to do so post-delisting, the PCA is where the most conservative habitat protections would remain, with maintenance of habitat conditions on federal lands that were compatible with the increasing grizzly bear population from 2004–2011. Federal lands comprise approximately 80% of the 21,118 square mile PCA. The most rigorous habitat protections will apply to the PCA to achieve the goal of continual occupancy by a source population of grizzly bears. Habitat conditions compatible with long-term population stability will be maintained. Habitat management in the PCA will be focused on secure core and motorized route density, developed recreation sites, vegetation management, livestock grazing, and mineral and energy development. Attractant storage rules will be in place on federal, state and tribal lands in the PCA. Nearly 68% of all lands inside the PCA are considered “protected lands” because of their status as congressionally designated wilderness areas (30%) or other areas that restrict motorized use during the non-denning season. Altogether, approximately 8,900 mi² (21,100 km²) of lands within the PCA, zone 1, and zone 2 are considered “protected lands” in ways that benefit grizzly bears (i.e., some restrictions on motorized access and/or new road construction).

The GYE CS documents and cross-references FWP’s Grizzly Bear Management Plan for Southwest Montana (2013); the NCDE CS documents and cross-references FWP’s Grizzly Bear Management Plan for Western Montana (Dood et al., 2006). Both documents also include memoranda of understanding (MOU), in which each agency agrees to use their authorities to implement the measures for conservation, monitoring, and cooperation, while respecting statutory responsibilities that differ among each signatory. The demographic objectives of the NCDE CS were also formally adopted by the Montana Fish and Wildlife Commission in ARM 12.9.1403.

Commitments made under the two Conservation Strategies

FWP is a signatory to the inter-agency MOUs implementing the GYE CS (GYE Subcommittee 2016) and the NCDE CS (NCDE Subcommittee 2019), which serve as interagency management plans for the GYE, NCDE and surrounding lands. The CSs are not regulatory or statutory documents, but rather summaries of commitments and regulatory mechanisms made by each government entity that would take formal effect upon delisting of grizzly bears within the GYE or NCDE, and is considered a requirement for eventual delisting by the USFWS. If delisting occurs, the ESA requires the USFWS, in cooperation with the state of Montana, to monitor the species for at least five years afterwards to assure that recovery is sustainable (a separate monitoring strategy would be developed by the USFWS). The CSs, unlike USFWS monitoring, are not considered to be time-limited, but rather to be in effect indefinitely although reviewed and potentially revised by participants at 5-year intervals.

The CSs categorize the commitments made by each signatory for demographic monitoring and management (i.e., population management), habitat management and monitoring, and conflict prevention and response. FWP is primarily involved with the first and third of these, and tangentially involved with the second. Commitments made by FWP related to demographic monitoring and management (which apply within the NCDE DMA) were formalized by a public process and written into rule by the commission in ARM 12.9.1403.

Because both CSs are considered components of any future delisting rule for the populations, the statewide plan takes the view that FWP policy should continue to support the commitments made in the both the GYE and NCDE CS documents. FWP is committed (and the commission has adopted in ARM 12.9.1403) to the grizzly bear population objectives contained in these two CS documents, and both of the alternatives articulated herein reflect this commitment.

In the NCDE, this commitment means FWP, working with partners, will:

- a) maintain a well-distributed grizzly population within the NCDE DMA; specifically, that females with dependent offspring will be documented as present in at least 21 of the 23 bear management units (BMUs) and six of the seven occupancy units will be documented in at least every six years. Adherence to this objective will be evaluated by monitoring the presence of females with offspring (cubs, yearlings, or 2-year-olds) within defined geographic units of the NCDE.
- b) manage mortalities from all sources, including hunting and the loss of grizzly bears by translocation out of the NCDE, to support an estimated probability of at least 90% that the grizzly bear population within the demographic monitoring area remains above 800 bears, considering the uncertainty associated with all of the demographic parameters and further manage mortality against a 6-year running average.
- c) monitor demographic and genetic connectivity among populations.

Additionally, should delisting the NCDE occur, and a hunting season be authorized by the commission:

- d) hunting would cease if the probability that the grizzly bear population remains above 800 within the demographic monitoring area falls below 90% and would not resume until the probability is 90% or great that the population of bears remains above 800.
- e) hunting will not be allowed in a year if mortality thresholds as outlined in ARM 12.9.1403 (b)(ii) and (b)(iii) were exceeded in the previous year.

In the GYE, this means FWP, working with partners will:

- a) maintain a well-distributed grizzly population within the GYE DMA: specifically with a target of
- b) at least 16 or 18 BMUs within the PCA occupied at least one year in every six, and no two adjacent BMUs can be unoccupied over any six-year period.
- c) monitor all sources of mortality for independent females and males (> 2 years old) and
- d) dependent young (<2 years old) within the GYE DMA and limiting mortality to annual mortality percentages on a sliding scale depending on the annual population size estimate using model-averaged Chao2 (per Demographic Criterion 3).

Additionally, should delisting the GYE occur, and a hunting season be authorized by the commission:

- a) Maintain approximately 932 bears within the GYE DMA as estimated by the revised population estimation protocol. Should the estimated population within the DMA decline to 831 bears, any recreational hunting that had been authorized by any of the states post-delisting would be closed.

The GYE CS is available online at:

https://igbconline.org/document/161216_final-conservation-strategy_signed-pdf/

The NCDE CS is available online at:

<https://igbconline.org/document/ncdeconservationstrategy-3-25-20-pdf/>

2.3 ALTERNATIVE 1 – NO ACTION ALTERNATIVE

Under the *No Action Alternative*, the proposed action of adopting and implementing the statewide management plan would not be approved by FWP for one or more of the conditions outlined in **Chapter 1.4**. FWP would continue to manage grizzly bears as they are currently managed. The environmental, social, and economic conditions described in **Chapter 3** would continue. The way to most appropriately manage the increasing number of bears, particularly in areas other than identified recovery zones, will continue to lack a coordinated approach. Although people would likely continue to vary in how they view grizzly bears and their role in Montana, the lack of an integrated and accepted approach has caused challenges both for agency managers and for the public at large, particularly in geographic areas outside of established recovery zones and DMAs. The selection of this alternative would eliminate the *proposed action* and result in FWP continuing to manage grizzly bears under multiple guiding documents, with less predictability as to outcomes of different management scenarios.

Little would change compared with the current situation. We expect grizzly bears to continue slowly increasing their geographic distribution, increasingly moving through areas with a mixture of public and private land, areas that provide some security from people as well as areas closer to residences, farms, ranches, and businesses than in previous years. The probability grizzly bears originating in one core area interact reproductively with grizzly bears in other core areas will increase. Similarly, grizzly bears may gradually become more common in and around the Bitterroot Mountains, but whether they will become established as a population is unknown.

FWP would expect bear-human conflicts to gradually increase, and the need for conflict reduction and response to continue. Uncertainty and inconsistency in how FWP views, and ultimately responds to, grizzly bears in newly colonized areas would continue. We would expect public discourse on grizzly bears to become increasingly contested.

We would expect continued uncertainty, both internally and externally, regarding our approach and responses to grizzly bears, especially those located in areas outside the areas covered by either of the existing CSs.

2.4 ALTERNATIVE 2 – PROPOSED ACTION

Alternative 2 is adoption and implementation of the statewide management plan as proposed by FWP. Implementation of the plan would increase clarity as to where grizzly bear presence is a management objective. Core populations associated with existing recovery zones and DMAs would be maintained near recovery levels. Connectivity would be an objective between core populations to provide opportunities for connecting otherwise isolated population cores.

A long-term operational plan of moving grizzly bears from the genetically diverse and well-connected NCDE to isolated and/or smaller populations (along with some track record of those bears surviving and successfully breeding with resident bears), superimposed on an objective of maintaining connectivity between population cores would likely facilitate the case that the state has regulatory mechanisms in place to assure listing would not again become necessary.

Although we can reasonably expect members of the public to disagree with portions of any plan ultimately adopted, we would expect greater acceptance of FWP management than under the *No Action Alternative*, both because the statewide management plan would update our knowledge and intentions, and because uncertainty regarding the actions to be taken in conflict situation would be reduced. Key modifications from the current management approach (Alternative 1, No Action) include:

- Clarity would be provided about where grizzly bear presence is a management objective.
- FWP would anticipate somewhat more predictability in response to conflicts by more transparently considering the needs of bear and human populations with the biological importance of bears in an area. Connectivity of grizzly bears would be an objective between core populations to provide opportunities for connecting otherwise isolated population cores.
- Grizzly bear presence would not be an objective in areas where connectivity between populations is not relevant or likely (i.e., east of the NCDE DMA and northeast of the GYE DMA).
- Where grizzly bear expansion does not contribute to connectivity, FWP would have lower tolerance for grizzly bears causing conflicts, although FWP would not proactively remove bears that are conflict free.

2.4.1 DESCRIPTION OF PROPOSED ACTION

Role of grizzly bears in Montana. Grizzly bears would continue to be the “official state animal of Montana” (MCA 1-1-508). The grizzly bear would continue to be categorized as a game animal, but also as a large predator. As a species listed as threatened under the ESA, hunting is precluded. However, state laws and regulations provide authority for a hunting season subject to commission action should delisting occur. Other laws and regulations address discrete issues with grizzly bear conservation (e.g., prohibiting commerce in grizzly bear body parts, providing for increased penalties for illegal killing). State regulations (ARM 12.9.1401) recognize the importance Montana plays nationally in grizzly bear management, as well as management challenges the species poses.

Grizzly bears are a valued part of Montana’s fauna; they are both “conservation reliant” meaning they will always require intensive management and be “conflict prone.” Due to their need for large geographic areas and limited interaction with humans, FWP expects the core portions of their distribution (and areas within which they can live out their lives most naturally) to coincide with the four recovery zones (and adjacent DMAs where mapped) identified by the USFWS. However, grizzly bears at some lower density in some areas between these cores are also an objective because of their biological role in connecting population cores. These bears will live closer to people, must be able to adapt to that reality, and very likely will have a higher likelihood of suffering human-caused mortality than those living in more remote areas. Where connectivity with a population core is not likely, grizzly bear presence would not be an objective, and individual bears would be tolerated only to the extent they do not conflict with human safety or human uses of the landscape.

Numerical objectives. As signatories to the GYE and NCDE CSs, FWP has committed to the population objectives contained therein, that function both as a criterion for delisting and as long-term post-delisting objective. In brief, the GYE CS standard is to maintain approximately 932 bears within the GYE DMA as estimated by the revised Knight/Chao2 protocol. Should the estimated population within the DMA decline to 831 bears, any recreational hunting authorized in any state would be closed. In the NCDE, FWP would continue to manage mortalities from all sources to support an estimated 90% probability the grizzly bear population within the NCDE DMA remains above 800 bears. This means the

population will likely be approximately 1,000 bears in the NCDE DMA. There are no explicit numerical objectives for grizzly bears outside of these two areas-specific CSs, although the 1993 recovery plan (USFWS) conjectured the CYE could support at least 100 bears.

FWP is not proposing additional and/or explicit population objectives. Quantifying grizzly bears is very difficult and prone to imprecision (particularly when applied at small geographic scales and over short time periods). However, because connectivity between core bear populations at a low density of bears would be an objective in some places, FWP anticipates there being more bears total than in the No Action Alternative. This would provide greater certainty of long-term sustainability of the grizzly bear population than under the *No Action Alternative*.

Grizzly bear distribution and connectivity. Grizzly bear presence would be an objective in recovery zones and DMAs, and management objectives in the NCDE and GYE would follow existing CS agreements. Grizzly bear density in these cornerstone areas would be high enough to provide occasional dispersers. In areas between core populations (i.e., between recovery zones) and where natural bear movement is likely or already occurring, an objective will be to manage for connectivity. FWP's expectation is connectivity can slowly be accomplished by bears that are able to live with minimal conflict in these areas while agencies continue to respond to conflicts. When discretion exists regarding FWP's approach to individual bears, connectivity would be an important consideration, but FWP would continue working with partners in making local decisions to relocate or euthanize individuals when required, even where connectivity is an objective. Grizzly bear presence would not be an objective where connectivity between cores is unlikely. In practice, this means grizzly bears living east of a reasonable buffer around the NCDE and GYE cornerstone areas (closely approximating zone 3 of the NCDE CS) would be tolerated only in so far as they remain conflict free. Grizzly bears causing conflicts where they are not identified as an objective would be relocated or removed when possible.

The existing augmentation program in which grizzly bears are occasionally moved from the NCDE to the CYE would continue until such time that USFWS and FWP biologists deem it no longer necessary. In addition, FWP would translocate bears with no history of conflict (and low likelihood of having had undocumented conflicts) from the NCDE core area to pre-selected and pre-approved areas within the GYE. Areas chosen for release in the GYE would be those areas where habitat is suitable, potential for conflicts is low and where a translocated bear is most likely to breed. Depending on cooperation from other jurisdictions, release areas may or may not be in Montana. Trapping would be conducted to capture and move bears as resources allow. The frequency with which such animals would become available would vary annually, and not be predictable. The expectation is that approximately two to four candidate bears would meet the criteria for a suitable bear to move and be moved every 10 years (Appendix A). There would be no additional expectations or requirements for the timing beyond that. For example, if opportunities presented themselves, more than one bear might be moved in any given year; conversely, a few years might pass with no good opportunities. Decisions on moving grizzly bears for augmentation purposes would be cooperative among FWP, USFWS, and land management agencies as appropriate.

This magnitude of capturing and moving bears would result in approximately three to six bears being moved to the GYE per grizzly bear generation. If one-half of translocated bears stayed in the GYE, survived long enough to reproduce, and produced (or sired) a cub that survived to adulthood, approximately 1.5 to 3 effective migrants per generation would gradually be added to the GYE population.

Human safety. FWP would continue efforts to maintain and enhance public safety. It would do so primarily through prevention and response to human-bear conflicts (see below), as well as through educational efforts. Although FWP would continue to be limited in its ability to alter grizzly bear behavior or the geographic distribution of populations, it would use available discretion to remove or relocate grizzly bears causing conflicts with humans, particularly when conflicts occur where connectivity among population cores is unlikely.

Role of private lands in grizzly bear conservation and management. The importance of private lands in providing connectivity (where biologically likely) would be acknowledged, with commensurate aid to landowners to minimize or prevent conflicts.

Conflict prevention. FWP would continue to spend considerable resources working with the public to prevent and minimize human-bear conflicts, and to respond to conflicts that occur. Bear specialists would continue to be focused on the CYE, NCDE, and GYE. One bear specialist would continue to focus on the geography east of the NCDE and west of the GYE. Additionally, a bear technician would continue to work on human-bear conflict in the BE.

FWP staff would continue to prioritize conflict prevention. Specific actions will depend on the nature of potential human-bear conflicts. Typically, “site conflicts” (e.g., access to garbage or pet/livestock feed, depredation on chickens) predominate west of the Continental Divide, whereas livestock conflicts predominate east of the Continental Divide. FWP would prioritize conflict prevention activities in the four cores areas as well as in-between areas where low-density populations appear feasible and connectivity improved.

Moving forward, FWP will continue to encourage, support, and administer where appropriate, livestock carcass removal programs as a generally recognized best practice. While recognizing carcass composting is the best long-term disposition, secured landfills may serve this function where composting is impractical. These programs reduce the risk to livestock and nearby residents posed by grizzly bears that would be attracted to these sites, while maintaining consistency with the general goal of minimizing grizzly bears obtaining nutritional resources from human sources.

FWP is gradually phasing out the livestock carcass redistribution program in central Montana. FWP would continue reduction and ultimately cessation of the redistribution program and discourage activities that facilitate grizzly bears accessing livestock carcasses regardless of their proximity to people. FWP would work with individual livestock producers to craft site-specific programs to best reduce the probability that grizzly bears attracted to livestock carcasses would become problematic. FWP’s operating principle would be that, ideally, grizzly bears consume natural foods only (acknowledging it will be impossible to reduce to zero the probability a grizzly bear will find and consume a livestock carcass on occasion). Where livestock producers operate their own carcass redistribution sites, FWP would encourage an adaptive management approach, facilitating learning about the effectiveness (or lack thereof) of individual operations in reducing conflicts, as well as how phasing them out would alter the dynamics of human-bear conflict. Given the complexity of possible objectives and consequences of carcass redistribution, Kubasiewicz et al. (2016) suggested that an SDM approach would be useful in assessing whether these sites ameliorate, exacerbate, or have no effect (Steyaert et al. 2014) on human-grizzly bear conflicts.

Conflict response. FWP staff would continue to respond to human-bear conflicts, both within and

outside of recovery zones. Additional detail on current practice is provided in Part III of the statewide management plan. FWP managers (as well as technicians working with them) would continue to record bear conflicts in a standardized, inter-agency database, with data entry completed as promptly as possible. The database will be a valuable resource moving forward, to better understand human-bear conflicts, as well as the agency's success in minimizing them. It may allow for future detailed analyses of human-bear conflicts and agency responses. However, because the number of conflicts occurring in each year is affected by factors unrelated to the effectiveness of FWP prevention efforts (e.g., number of people living near grizzly bears, particularly those potentially offering attractants, size of the grizzly bear population, annual variation in abundance of naturally occurring foods), FWP would not consider the changes or trends in number of conflicts over time as a measure of success or failure of prevention efforts.

Responses to conflicts would generally be more aggressive when they occur on or near private lands than in remote settings. Where discretion exists, FWP would discourage removal where connectivity between core populations is likely, and encourage removal where connectivity is unlikely.

Public certainty vs. agency flexibility on conflict response. The public would be provided somewhat more certainty than presently exists regarding resolution of bear conflicts as the interests of bears would be afforded slightly more weight within population core areas, some weight where connectivity among population cores is likely, and less weight elsewhere.

Destinations of bears causing conflicts (captured inside recovery zones) when moving them is planned. Bears causing conflict would be moved to where the probability of causing additional conflict is low (Appendix B). Since 2009, 84% of destinations have been in FWP Region 1 (72% have been in Flathead County). However, if a non-conflict bear (non-target or preemptively trapped) animal is captured, FWP would consider moving it to an area outside of that recovery zone in which connectivity is an objective, and 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 to which grizzly bears could be moved. If delisted, bears causing conflict outside recovery zones could also be handled in this way.

Moving non-conflict bears (captured outside recovery zones) whose origin is uncertain. Grizzly bears are occasionally captured in a conflict setting that have not, themselves, caused a conflict. At times, a decision is made to capture a bear proactively (or pre-emptively) because its presence in the area predisposes the animal to future conflict. It is generally not possible to know at the time how long these animals have been present near the capture site, or which core population they may have originated from. 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 being least likely to come into conflict with humans. The site selected for release need not be located within the presumptive ecosystem of origin, particularly if releasing the bear at the selected site would advance the interests of connectivity. Moving bears to such sites would not constitute artificial expansion of grizzly bear distribution in Montana because these sites are within areas that bears have already colonized. FWP would continue to engage with the commission to gain pre-approval of new sites within occupied range, as documented by FWP and/or USFWS (see Figure 5) to which grizzly bears could be moved, but would not seek approval of release sites beyond the most-recently updated occupied range.



Figure 5. Montana, showing regions of occupied range as of 2020, as verified by FWP and USFWS researchers (solid gray lines), superimposed on recovery zones (orange shading), and zones 1, 2, and 3 identified in the NCDE CS (broken blue lines).

Moving non-conflict bears outside of occupied habitat – There may be situations where it is desirable to move a non-conflict bear into an area that is not currently designated as occupied habitat, such as in a connectivity area or an unoccupied portion of a recovery zone. If the situation arises and there is a desire to move a bear into unoccupied habitat to facilitate recovery or connectivity, FWP will first complete an environmental analysis of the impacts of such a transplant, and commission authorization would be required before such movement could occur. This situation would require advanced planning and public input and would not be applicable to decisions needing immediate resolution.

Orphaned cubs. Cubs orphaned after Sept. 1 would generally be left in the wild. Bringing younger orphans to MWRC would be discouraged by existing policy and must follow the MWRC intake guidelines because i) acceptable permanent captive situations are very difficult to find, and ii) re-release into the wild is only permitted with a pre-approved plan and release area (none of which exist currently). However, if an orphan cub was captured after Aug. 1, FWP would consider moving to another recovery zone, DMA, or pre-approved area where connectivity is an objective. If (separate) plans detailing over-winter rearing potential¹ (not at MWRC) as well as release location are already approved, limited over-winter rearing with release as a yearling could be considered on an experimental basis.

Conflict management organizational structure. As currently, bear managers (specialists) would be based in Libby, Kalispell, Missoula, Choteau, Conrad, Bozeman, and Red Lodge (with a technician based in Anaconda and the Bitterroot Valley).

¹No facilities currently exist that meet these requirements.

Prioritizing information, outreach, and communication efforts. Same as the *No Action Alternative*.

Population research and monitoring. Same as the *No Action Alternative*. In addition, if it becomes feasible to estimate grizzly bear abundance or trend in any of the occupied core areas, FWP would prioritize attempts to do that. FWP would also increase efforts to understand grizzly abundance and population trend in areas outside of established recovery zones and DMAs, particularly where biological connectivity is likely.

Resources required. FWP anticipates requiring somewhat more resources than the current baseline to stay ahead of human-bear conflicts that may arise as bears expand in their geographic distribution.

Hunting of grizzly bears: values and beliefs. Grizzly bears would continue to be classified by the state of Montana as a game animal, i.e., one that potentially could be subject to a regulated, recreational hunt should the commission authorize one. However, hunting would be an available option only for grizzly bears in a population that had previously been federally delisted (i.e., reverted to authority of the state of Montana from current status as threatened under the ESA). Because this alternative prioritizes biological connectivity among population cores, hunting of any delisted grizzly bears would most likely be focused (although not necessarily restricted to) areas where connectivity is unlikely. In these areas, the values of those who are comfortable with a sustainable harvest of grizzly bears would be supported. In areas between population cores, the values of those who oppose grizzly bear hunting would be supported.

A potential of grizzly bear hunt: Functions, expectations, and regulations. The commission would ultimately make such decisions in a separate public process and no other planning document currently exists to inform that discussion. FWP believes it is useful to take advantage of this planning effort to consider with the public various alternative conceptions of how hunting might occur. Hunting approaches 1, 2, or 3 (see Part III in statewide management plan) would be considered for any delisted grizzly bears. Hunting approach 4 (see Part III in statewide management plan) would be considered for areas with little opportunity to provide connectivity between population cores.

2.4.2 OPERATIONS PLAN AND OBJECTIVES

If the proposed action is implemented clarity would be provided about where grizzly bear presence is a management objective. Management of grizzly bears within the state will be under the direction of a new, programmatic plan. This plan will be fully compliant with responsibilities under the ESA, and consistent with commitments made by existing agreements with federal, other state, and tribal agencies. The plan will supplant two previously adopted (but aging) plans under which FWP has operated. Those plans are for western and southwest Montana. Recognizing that grizzly bears have expanded their area of occupancy to include many areas beyond the federally designated RZs as well as the buffer areas surrounding two of these zones (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 a threatened species under the ESA, the plan will serve both to guide state management 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.

If the proposed action of adopting and implementing a statewide management plan is approved the following objectives will guide implementation. These objectives were developed as part of a 2019 FWP

SDM process that also resulted in the decision to work with then Gov. Steve Bullock and empanel an independent citizen’s council, the GBAC.

Strategic Objectives:

1. Ensure grizzly bear population viability over the long term.
2. Maximize human safety.
3. Maximize effective response to conflicts involving grizzly bears.
4. Maximize effective grizzly-related outreach and conflict prevention.
5. Maximize intergovernmental, interagency, and tribal coordination.

Fundamental Objectives:

1. Maximize engagement among people with diverse and competing values.
2. Maximize public confidence and ownership in grizzly bear management.
3. Maximize transparency of grizzly bear planning processes.
4. Maximize clarity of grizzly bear management objectives in all parts of the state.
5. Maximize clarity of guidance for making time-sensitive management decisions.
6. Minimize financial costs of grizzly bear management.
7. Maximize public agreement on the role of hunting at appropriate locations, levels, and times.
8. Maximize management flexibility within the confines of the ESA.

Guide Management

This statewide management plan will guide management 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 a threatened species under the ESA, the plan will serve both to guide state management 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.

Provide Clarity

A lower density of grizzly bears would be an objective between core populations. Grizzly bear presence would not be an objective where connectivity between populations is not relevant or unlikely (i.e., east of the NCDE DMA and northeast of the GYE DMA), and FWP would have lower tolerance for grizzly bears causing conflicts where grizzly bear expansion does not contribute to connectivity, although FWP would not proactively remove bears that are conflict free. FWP would anticipate somewhat more predictability in response to conflicts by more transparently considering the needs of bear and human populations with the biological importance of bears in an area.

Consolidate Plans

Two existing FWP documents currently guide discretionary activities regarding grizzly bears: 1) the Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016, and 2) the Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement. Upon evaluation and approval of the statewide management plan, the statewide management plan will supplant those others.

Additionally, the state of Montana, represented by FWP, is a signatory to two separate CSs: the 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (Yellowstone Ecosystem Subcommittee 2016), and the Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE Subcommittee 2019). Both documents provide comprehensive and inter-jurisdictional guidance on how grizzly bears will continue to be conserved and managed after delisting in the two respective areas. They summarize and describe strategies, standards, and guidelines to be coordinated among state, federal, and tribal entities for managing grizzly bear populations, human-bear conflicts, and grizzly bear habitats after federal protection (under the ESA) is removed in each ecosystem. They simultaneously prefigure management after delisting and support delisting (by providing additional assurance it won't re-threaten the species and thereby require re-listing, i.e., they document regulatory mechanisms, as required under the ESA). However, neither CS provides explicit guidance for managing and conserving grizzly bears outside the boundaries of the respective DMA.

2.4.3 MITIGATION STRATEGIES FOR RESOURCE IMPACTS

If the proposed action is implemented FWP would continue to prioritize human safety and would continue efforts to maintain and enhance public safety. FWP would continue to spend considerable resources working with communities to prevent and minimize human-bear conflicts, and to respond when conflicts occur. FWP staff would continue to prioritize conflict prevention through education and proactive action (as detailed in Part III of the statewide management plan).

If the proposed action is approved and implemented the following resource impacts and mitigation strategies will be implemented:

Bear-Human Conflict Prevention and Response

FWP would continue to spend considerable resources working with local communities to prevent and minimize human-bear conflicts, and to respond to conflicts that occur. Bear specialists would continue to be focused on the CYE, NCDE, and GYE. In particular, bear specialists would continue to work on human-bear conflict with a focus on the geography east of the NCDE, northwest of the GYE and in the BE.

FWP staff would continue to prioritize conflict prevention (as detailed in Part III of the statewide management plan). Specific actions will depend on the nature of potential human-bear conflicts. Typically, "site conflicts" (e.g., access to garbage or pet/livestock feed, depredation on chickens) predominate west of the Continental Divide, whereas livestock conflicts predominate east of the Continental Divide. FWP would prioritize conflict prevention activities in the four core areas as well as in-between areas where low-density populations appear feasible and connectivity improved.

FWP staff would continue to respond to human-bear conflicts, both within and outside of RZs. Grizzly bear presence in new areas and/or increased removal of individual bears of lower management priority could require an increase in FWP staff. FWP would continue supporting bear managers in Libby, Kalispell, Missoula, Choteau, Conrad, Anaconda, Red Lodge and Bozeman (with technicians in Anaconda and Hamilton). Building on current structure, FWP would prioritize bear specialists where expanding population presents the need for conflict management but also opportunities for connectivity while maintaining efforts in the three occupied core areas. Additional detail on current practice is provided in Part III of the statewide management plan.

FWP will continue to encourage, support, and administer where appropriate, livestock carcass removal programs as a generally recognized best practice.

Monitoring

Under the *Proposed Alternative* of adopting and implementing a statewide management plan, FWP would monitor resources in the project area to ensure that any project impacts are consistent with those considered in this EIS. FWP’s monitoring program includes the following:

TYPE OF MONITORING	DESCRIPTION	RELEVANT PLAN/REQUIREMENT
Demographic	Grizzly bear populations will continue to be monitored following established protocols in the NCDE and GYE CSs and Grizzly Bear Recovery Plan to ensure populations remain at or above recovery levels	<p>NCDE CS (2019) GYE CS (2016)</p> <p>Grizzly Bear Recovery Plan (1993)</p> <p>FWP is committed to specific numeric goals in the GYE and NCDE as articulated in the two CSs and supports the recovery goal in the GYE. However, establishing a statewide numeric minimum, optimum, or maximum population objective would not be useful.</p> <p>87-1-201, MCA The Department shall implement programs that (i) manage wildlife, fish, game and nongame animals in a manner that prevent the need for listing under 87-5-107 or under the federal ESA, in a manner that assists in the maintenance or recovery of those species.</p> <p>The USFWS monitors grizzly bears in the GYE to evaluate recovery relative to recovery criteria described in the Grizzly Bear</p>

		Recovery Plan as described by Kasworm et al. (2022)
Distribution	Grizzly bear distribution will continue to be monitored and mapped following established protocols in the NCDE and GYE CSs and Grizzly Bear Recovery Plan. Occupancy maps will be produced every two years incorporating the most recent information and following the established protocol. Annual reports documenting compliance with CS commitments will be produced.	<p>NCDE CS (2019) GYE CS (2016), BE</p> <p>Grizzly Bear Recovery Plan (1993)</p> <p>NCDE: maintain a well-distributed grizzly population within the DMA; specifically, that females with dependent offspring will be documented as present in at least 21 of the 23 BMUs and 6 of the 7 occupancy units will be documented in at least every 6 years. Adherence to this objective will be evaluated by monitoring the presence of females with offspring (cubs, yearlings, or 2-year-olds) within defined geographic units of the NCDE.</p> <p>GYE: maintain a well-distributed grizzly population within the GYE DMA: specifically with a target of at least 16 or 18 BMUs within the PCA occupied at least one year in every six, and no two adjacent BMUs can be unoccupied over any six-year period. The 1993 Grizzly Bear Recovery Plan calls for 18 of 22 GYE BMUs to be occupied by females with young from a running six-year sum of verified evidence.</p>
Conflict	Conflict numbers, types, and outcomes will be tracked in a database to ensure conflicts are understood and being addressed.	<p>NCDE CS (2019) GYE CS (2016)</p> <p>FWP would continue its emphasis on reducing the attractants that often precipitate conflicts. When necessary, bears involved in conflicts would be controlled as per accepted 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</p>

		<p>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 RZs.</p> <p>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.</p>
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2.5 ALTERNATIVES NOT CARRIED FORWARD FOR DETAILED ANALYSIS

FWP’s alternatives development process was designed to identify a reasonable range of alternatives for detailed analysis in the DEIS. FWP developed alternatives in accordance with its authorities (described in **Chapter 1.4.1, Agency Authority and Actions**). Alternatives or alternative components were suggested by the public in scoping comments or by subject matter experts based on professional experience. Those considered during the development process, but not carried forward for detailed analysis, are discussed in the following sections.

MCA 75-1-220(1) defines “alternatives analysis” to mean 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.

To be considered further, an alternative must meet all the following criteria to determine which alternatives to consider (based on ARM 1417.4.603(2) and MCA 75-1-220(1) and 75-1-201(1)(b)(4)(C):

- The alternative must appreciably accomplish the same objectives or results as the proposed action;
- Meets the purpose and need as stated in **Chapter 1.3 Purpose and Need**;
- Represents a course of action that bears a logical relationship to the proposal being evaluated;
- Is technically feasible (achievable by using current technology); and

- Is economically feasible (based on similar projects having similar conditions and physical locations, regardless of the economic strength of the specific project sponsor).

2.5.1 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, *Sus scrofa*). 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.

2.5.2 GRIZZLY BEARS NOT TOLERATED OUTSIDE OF RECOVERY ZONES

FWP might conceivably consider an alternative approach under which grizzly bear recovery in USFWS-designated RZs 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 RZs 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 RZs. 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.

2.5.3 GRIZZLY BEARS DESIRED THROUGHOUT MONTANA

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.

Although this alternative would theoretically create the most certainty that grizzly bears would thrive indefinitely in Montana, FWP considers this approach naive, 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's 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.

2.5.4 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.

2.6 PREFERRED ALTERNATIVE

FWP's Preferred Alternative is Alternative 2 – Adoption and implementation of the Statewide Grizzly Bear Management Plan.

CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This chapter describes the condition of the affected environment (including its human elements), the resource-specific analysis areas for direct and secondary impacts, the regulatory framework (federal, state, and local laws and regulations) applicable to each resource, and the environmental impacts (direct, secondary, and cumulative) that may result from selection and implementation of the Proposed Action and alternatives described in **Chapter 2**.

This chapter provides the scientific and analytic basis for the comparison of the proposed action and alternatives as presented in **Chapter 2** of this EIS. Resources analyzed are listed in **Chapter 3.12** and were identified during public and agency scoping. The geographic context for the resource-specific discussions is introduced in **Chapter 3.1.3**. Environmental baseline information summarized in this chapter was obtained from the review of published sources, review of unpublished data, communication with government agencies, and review of field studies of the area.

Impacts were analyzed by considering the potential for impacts of an action (direct, secondary, and cumulative) on each of the 18 resources analyzed. FWP based these impact analyses and conclusions on the review of existing literature and studies, information provided by resource specialists or subject matter experts and other agencies, professional judgment, agency staff insights, and public input; resource-specific analysis methodologies are provided in the introductions to each resource section. An overview of impacts on each resource by alternative is presented in **Chapter 3**.

In this EIS, an environmental impact is any change from the present condition of any resource or issue that may result because of implementation of the No Action Alternative (Alternative 1) or the proposed action (Alternative 2). Definitions used to describe impacts are listed below.

3.1.1 DEFINITIONS USED FOR IMPACTS ANALYSES

The following terms were used in this EIS to describe the nature of impacts associated with each alternative. These definitions were formulated through the review of existing Administrative Rules of Montana (ARM), laws (such as MEPA), policies, and guidelines, and with assistance from resource specialists.

Direct, Secondary, and Cumulative Impacts: As defined by MEPA, impacts can be direct, secondary, or cumulative.

- *Direct impacts* are caused by an action and occur at the same time and place as the action.
- *Secondary impacts* are defined in ARM 12.2.429(18) as “a further impact to the human environment that may be stimulated or induced by or otherwise result from a direct impact of the action.”
- *Cumulative impacts* are defined in ARM 12.2.429(7) as 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.”

Duration: For this EIS, impact duration is described as short-term or long-term; generally, these are defined as follows (exceptions occur for Cultural and Historic Resources, and Geology and Geochemistry):

- Short-term impact – a change that within a short period would no longer be detectable as the resource is returned to its pre-project condition, appearance, or use. For the purposes of this EIS a “short period” is defined as less than five years which is equal to one grizzly bear generation.
- Long-term impact – a change in a resource or its condition that does not immediately return the resource to its pre-project condition, appearance, or productivity; long-term impacts would apply to changes in condition that continue beyond five years but would be expected to eventually return to pre-project conditions.

Severity: For this EIS, 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.
- Significant - the effect would irretrievably alter the resource.

Type: Impacts can be beneficial or adverse and residual. Beneficial impacts are those that create a positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition. Adverse impacts are those that move the resource away from a desired condition or detract from its appearance or condition. Residual impacts are those that are not eliminated by mitigation, as defined in ARM 12.2.429(16).

Mitigation: 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.

3.1.2 RESOURCES ANALYZED AND CHAPTER ORGANIZATION

Based on internal agency scoping and comments received during scoping, the following 18 resources were identified for detailed assessment in this EIS. Direct, secondary, and cumulative impacts on these resources are disclosed in this chapter.

Terrestrial, Avian, and Aquatic Life and Habitats (Chapter 3.2)
Water Quality, Quantity and Distribution (Chapter 3.3)
Geology; Soil Quality, Stability, and Moisture (Chapter 3.4)
Vegetation Cover, Quantity, and Quality (Chapter 3.5)
Aesthetics (Chapter 3.6)
Air Quality (Chapter 3.7)
Unique, Endangered, Fragile, or Limited Environmental Resources (Chapter 3.8)
Historical and Archaeological Sites (Chapter 3.9)
Energy (Chapter 3.10)
Social Structures and Mores (Chapter 3.11)
Cultural Uniqueness and Diversity (Chapter 3.12)
Access to and Quality of Recreational and Wilderness Activities (Chapter 3.13)
Local and State Tax Base and Tax Revenue (Chapter 3.14)
Agricultural, Industrial or Commercial Production (Chapter 3.15)
Human Health (Chapter 3.16)
Quantity and Distribution of Employment (Chapter 3.17)
Distribution and Density of Population and Housing (Chapter 3.18)
Locally Adopted Environmental Plans and Goals (Chapter 3.19)

3.1.3 GENERAL SETTING OF THE AFFECTED ENVIRONMENT

Physical Environment Resources

The analysis area for direct, secondary, and cumulative impacts on *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 where grizzly bears have been documented in recent years or could conceivably be documented in the near future (Figure 6). 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 on *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 where grizzly bears have been documented in recent years or could conceivably be documented in the near future (Figure 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area.

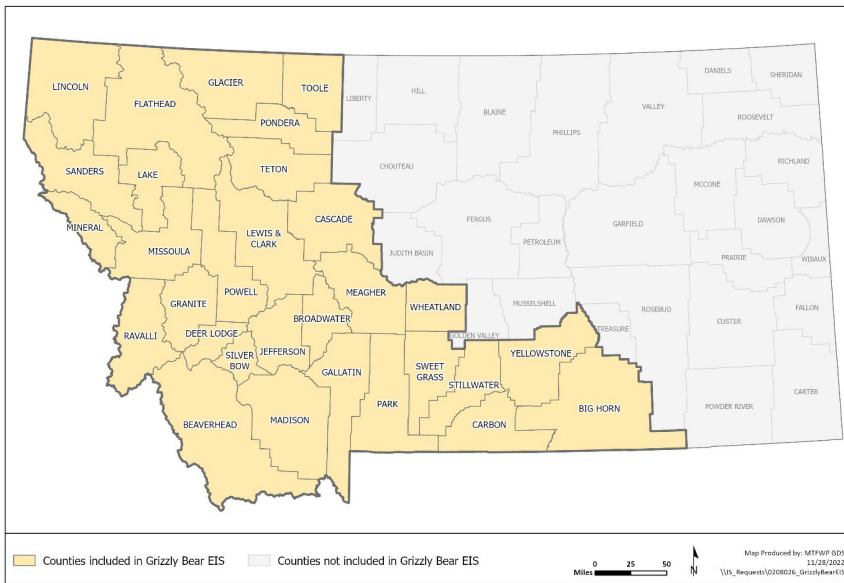


Figure 6. The analysis area for direct, secondary, and cumulative impacts on this resource is the 30 counties of western and central Montana. Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area.

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) 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 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.

Much of the 30-county area is protected, public land as shown in Table 2 and Figure 7. FWP owns 339,255 acres of Wildlife Management Area lands outside of and between the recovery Ecosystems (within the 30-county project area). FWP also has 391,204 acres in FWP held Conservation Easements outside of and between the recovery Ecosystems (within the 30-county project area). These protected lands increase the ability of grizzly bears to move outside of the protected areas within the Ecosystems.

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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

Table 2: State and federal protected land acreage within the 30-county project area.

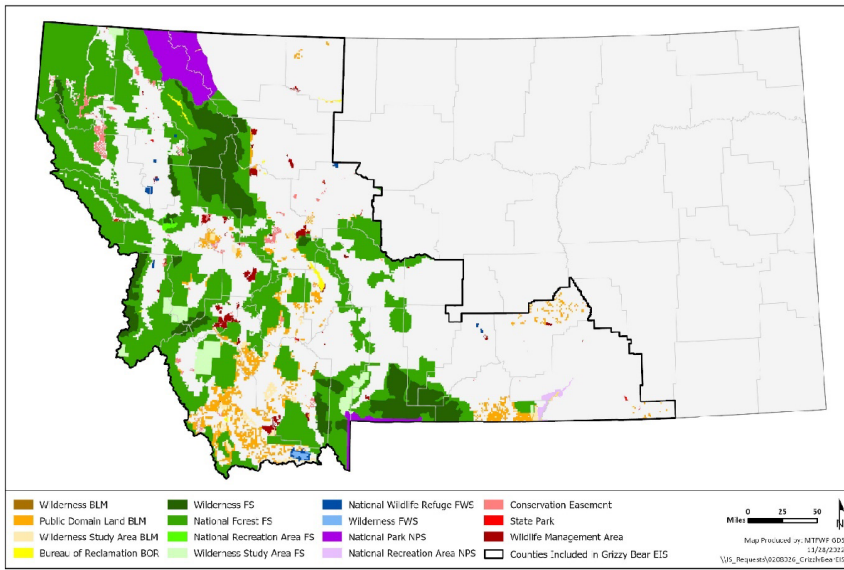
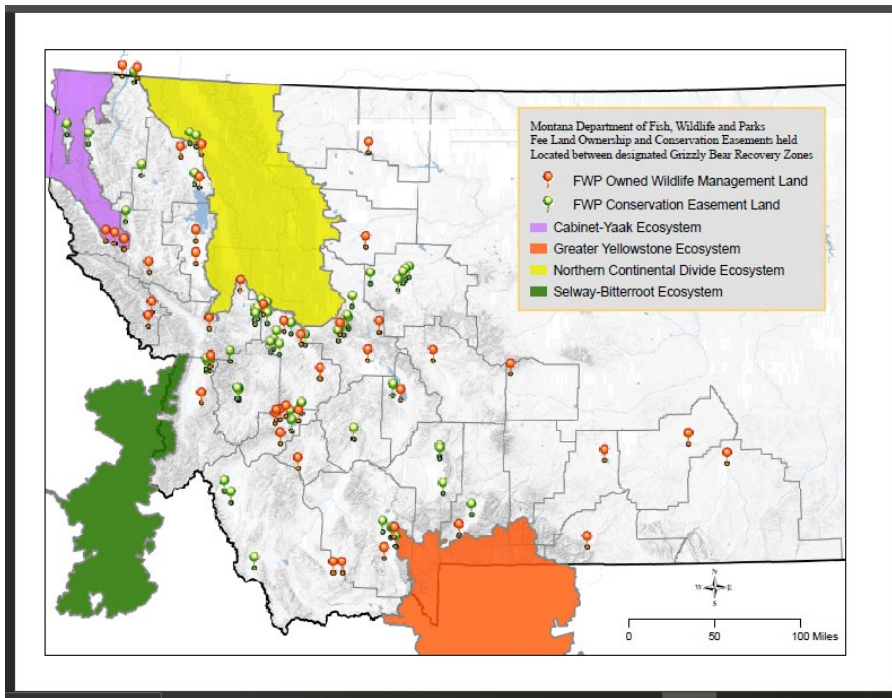


Figure 7: State and federal protected land acreage within the 30-county project area.



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 of 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 (Table 3, Figure 8.)

County ¹	Population 2000	Population 2021	Annual Growth Rate (2000-2019)	Area ² (mi ²)	Population Density
Yellowstone	129,352	161,300	1.30%	2,635	61.21
Missoula	95,802	119,600	1.31%	2,598	46.04
Gallatin	67,831	114,434	3.62%	2,608	43.88
Flathead	74,471	103,806	2.07%	5,099	20.36
Cascade	80,357	91,366	0.72%	2,688	33.99
Lewis and Clark	55,716	69,432	1.30%	3,459	20.07
Ravalli	36,070	43,806	1.13%	2,394	18.30
Silver Bow	34,606	34,915	0.05%	718	48.63
Lake	26,507	30,438	0.78%	1,493	20.39
Lincoln	18,837	19,980	0.32%	3,619	5.52
Park	15,694	16,606	0.31%	2,802	5.93
Glacier	13,237	13,753	0.21%	2,991	4.60
Bighorn	12,671	13,319	0.27%	4,995	2.67
Jefferson	10,049	12,221	1.14%	1,657	7.38
Sanders	10,227	12,113	0.97%	2,761	4.39
Carbon	9,552	10,725	0.65%	2,047	5.24
Stillwater	8,195	9,642	0.93%	1,790	5.39
Beaverhead	9,202	9,453	0.14%	5,542	1.71
Deer Lodge	9,417	9,140	-0.15%	731	12.50
Madison	6,851	8,600	1.34%	3,587	2.40
Powell	7,180	6,890	-0.21%	2,326	2.96
Broadwater	4,385	6,237	2.22%	1,189	5.25
Teton	6,445	6,147	-0.24%	2,271	2.71
Pondera	6,424	5,911	-0.42%	1,626	3.64
Toole	5,267	4,736	-0.53%	1,916	2.47
Mineral	3,884	4,397	0.70%	1,220	3.60
Sweet Grass	3,609	3,737	0.19%	1,855	2.01
Granite	2,830	3,379	1.02%	1,727	1.96
Wheatland	2,259	2,126	-0.31%	1,422	1.50
Meagher	1,932	1,862	-0.19%	2,392	0.78

Table 3. Population, area, and population density of the 30-counties constituting the project area. Counties are listed in descending order by 2021 human population (1Montana.gov (January 25, 2021).
² Excluding large water bodies.

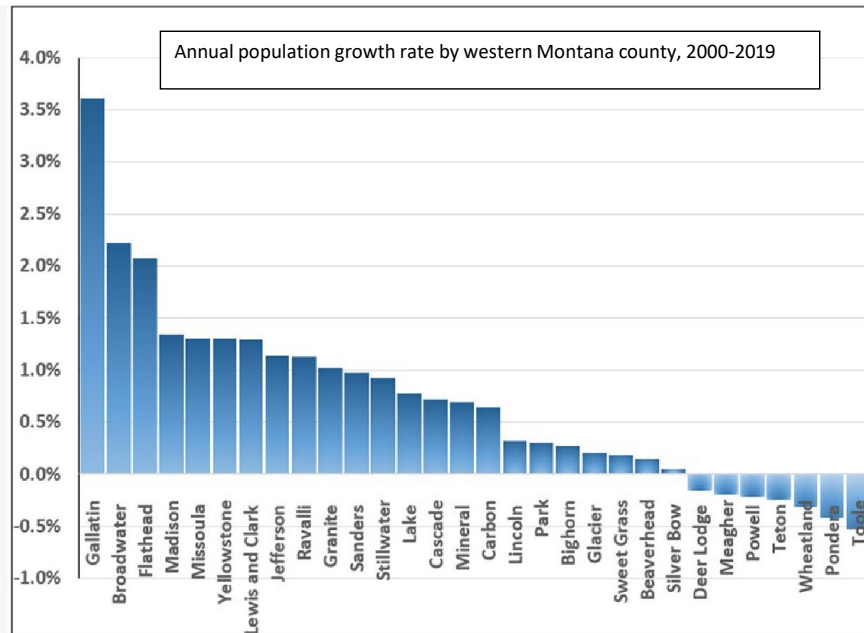


Figure 8. Annual population growth rate by western Montana county, 2000-2019 (Montana.gov, January 2021.)

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 9), although all counties contributed.

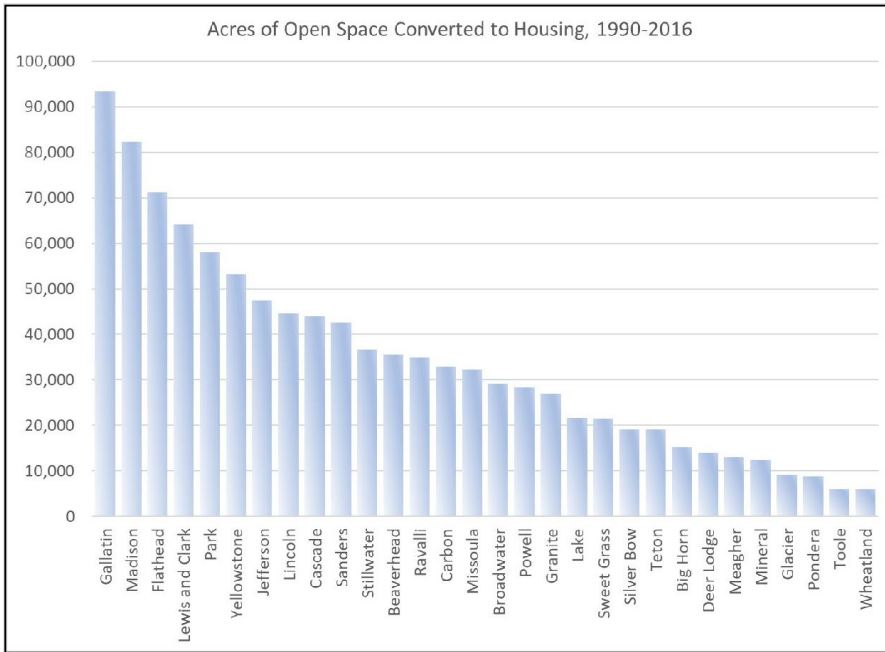


Figure 9. Acres of Open Space Converted to Housing, 1990-2016 (Headwaters Economics, 2020).

Economics

In 2010, the median per capita income in the United States was \$27,334, and the median household income was \$51,914². 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 (Table 4).

1. ² ["SELECTED ECONOMIC CHARACTERISTICS 2006-2010 American Community Survey 5-Year Estimates"](#). U.S. Census Bureau. Archived from [the original](#) on 2020-02-12. Retrieved 2012-11-25.
 2. [^] ["Profile of General Population and Housing Characteristics: 2010 Demographic Profile Data"](#). U.S. Census Bureau. Archived from [the original](#) on 2019-05-21. Retrieved 2012-11-25.

County	Per capita income	Median household income	Percent of population below poverty line
Gallatin	\$27,423	\$50,136	13.5%
Stillwater	\$27,168	\$57,227	9.5%
Jefferson	\$26,437	\$56,596	12.8%
Yellowstone	\$26,152	\$48,641	11.2%
Lewis and Clark	\$25,894	\$50,238	9.7%
Carbon	\$24,983	\$49,010	12.2%
Flathead	\$24,721	\$44,998	11.7%
Park	\$24,717	\$38,830	13.6%
Missoula	\$24,343	\$42,887	17.3%
Ravalli	\$23,908	\$43,000	15.0%
Madison	\$23,265	\$42,998	11.6%
Granite	\$23,222	\$36,052	12.1%
Cascade	\$22,963	\$42,389	13.5%
Sweet Grass	\$22,785	\$43,723	12.1%
Deer Lodge	\$21,921	\$35,310	21.2%
Silver Bow	\$21,357	\$37,986	17.8%
Beaverhead	\$21,110	\$38,264	10.8%
Teton	\$20,509	\$39,516	12.8%
Toole	\$20,464	\$42,949	15.7%
Lake	\$20,164	\$37,274	21.6%
Lincoln	\$19,626	\$30,823	18.6%
Broadwater	\$19,606	\$44,667	10.1%
Mineral	\$19,209	\$37,256	19.0%
Pondera	\$18,989	\$36,419	21.5%
Wheatland	\$18,474	\$30,321	11.5%
Sanders	\$18,472	\$30,622	21.3%
Powell	\$17,849	\$39,851	17.3%
Meagher	\$17,318	\$31,577	19.0%
Glacier	\$17,053	\$38,075	25.4%
Bighorn	\$15,066	\$36,550	20.7%

Table 4. Per capita and mean household incomes, as well as percentage of population below poverty line, for the 30 Montana counties considered in this plan, listed in descending order of per capita income (data from 2010).

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 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 (Montana Department of Natural Resources and Conservation [DNRC]). The Blackfoot 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

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 (Table 5). 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).

County	Farms and Ranches (2017)	Average size (acres)	Land in agriculture (acres)	% Crops	% Pasture
Bighorn	353	9,032	3,188,296	7	82
Yellowstone	1,314	1,220	1,603,080	19	76
Cascade	1,027	1,237	1,270,399	33	61
Beaverhead	494	2,498	1,234,012	13	86
Glacier	637	1,862	1,186,094	42	56
Toole	362	3,025	1,095,050	67	31
Madison	605	1,526	923,230	16	80
Teton	686	1,294	887,684	52	46
Meagher	145	6,084	882,180	10	83
Wheatland	174	4,944	860,256	16	80
Sweet Grass	301	2,745	826,245	7	90
Carbon	725	1,125	815,625	17	78
Pondera	486	1,656	804,816	69	30
Lewis and Clark	707	1,132	800,324	10	81
Stillwater	562	1,357	762,634	23	72
Park	575	1,238	711,850	16	76
Gallatin	1,123	624	700,752	30	63
Sanders	521	1,233	642,393	7	29
Lake	1,170	548	641,160	15	39
Powell	254	2,253	572,262	10	62
Broadwater	296	1,577	466,792	24	69
Jefferson	370	952	352,240	16	78
Granite	151	1,892	285,692	10	71
Missoula	576	452	260,352	8	16
Ravalli	1,576	153	241,128	22	53
Flathead	1,146	159	182,214	51	24
Deer Lodge	77	962	74,074	16	73
Silver Bow	142	425	60,350	6	74
Lincoln	345	139	47,955	26	27
Mineral	93	198	18,414	30	13

Table 5. Agricultural land, number of farms or ranches, average size, percentage in crops, and percentage in pasture of the 30 Montana counties considered in this document (date from 2017, https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Montana/cp30001.pdf).

Sheep, hogs, 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 high-elevation 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 10).

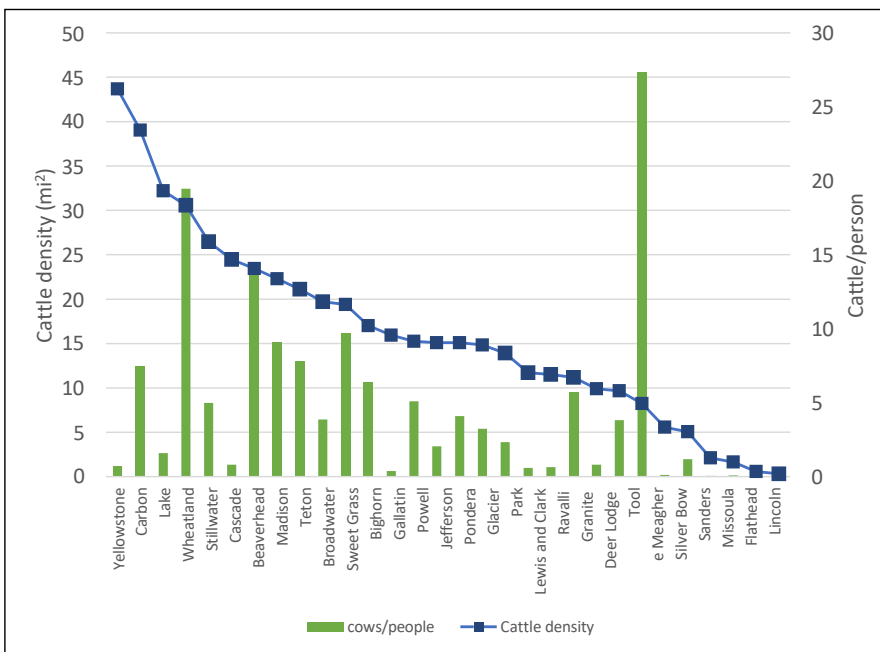


Figure 10. Density of cattle (blue squares) and ratio of cows to people (green bars) in the 30 counties considered in this document.

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 11). Most chicken producers are small scale, but even a few chickens can attract grizzly bears, resulting in conflicts.

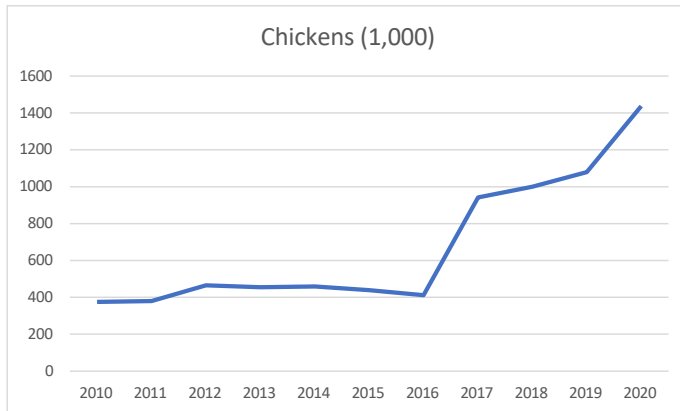


Figure 11. Chickens reported as raised in Montana during 2010-2020. Source: USDA 2020

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.mbmг.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 6 million acres, with 2 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.umn.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 (Figure12).

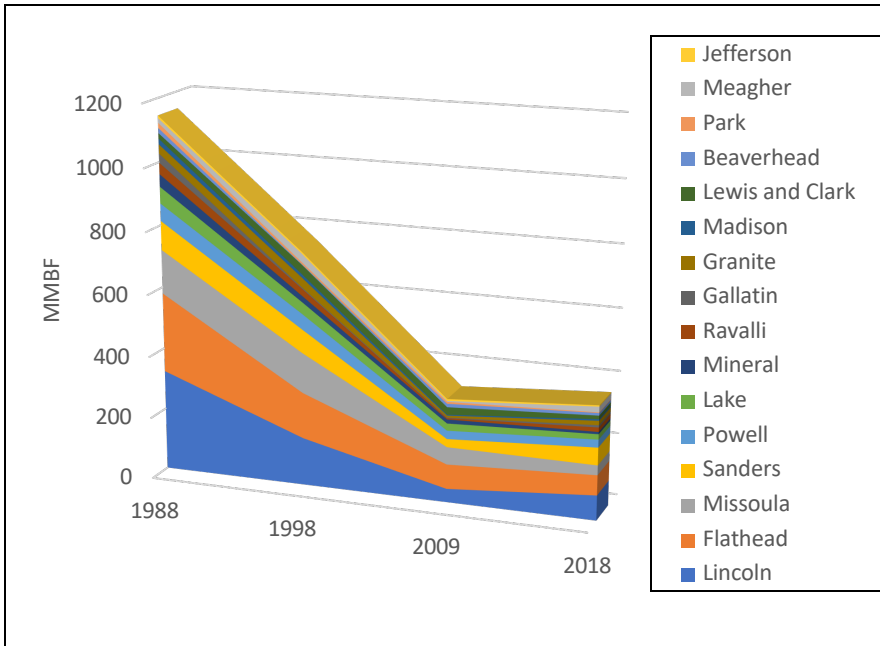


Figure 12. Gross wood products output from primary wood-producing counties in western and west-central Montana, 1988-2018 (in million board feet [MMBF]/year).

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 (Figure 13). 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.

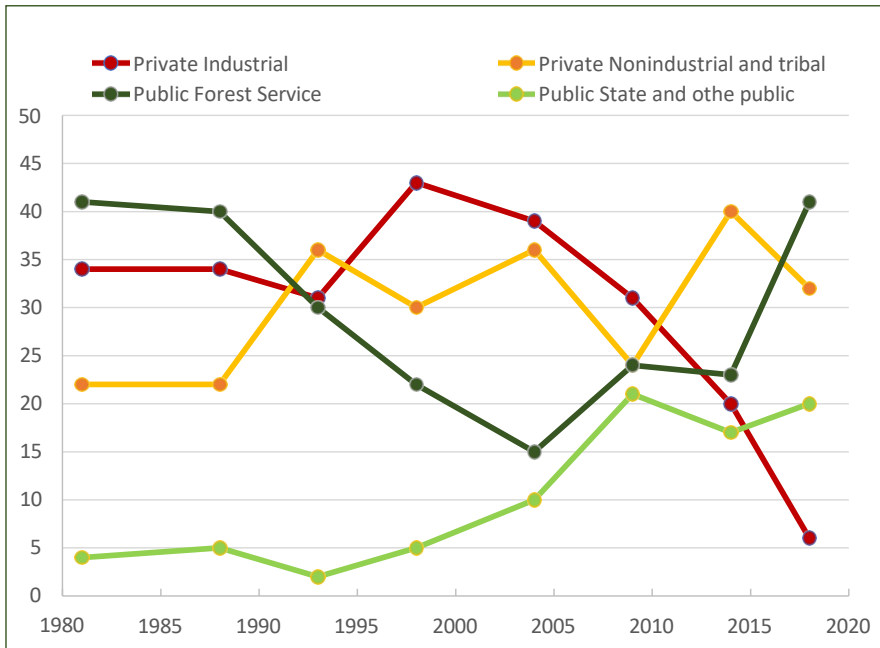


Figure 13. Percentage of wood products coming from four categories of forest producing lands, 1985-2020. Source: UM Bureau of Business and Economic Research 2020. <http://www.bber.umt.edu/pubs/forest/fidacs/MT2018%20Tables.pdf>

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 (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 with 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), 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 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. 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 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%)³. “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”

³ 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”.

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 (Figure 14).

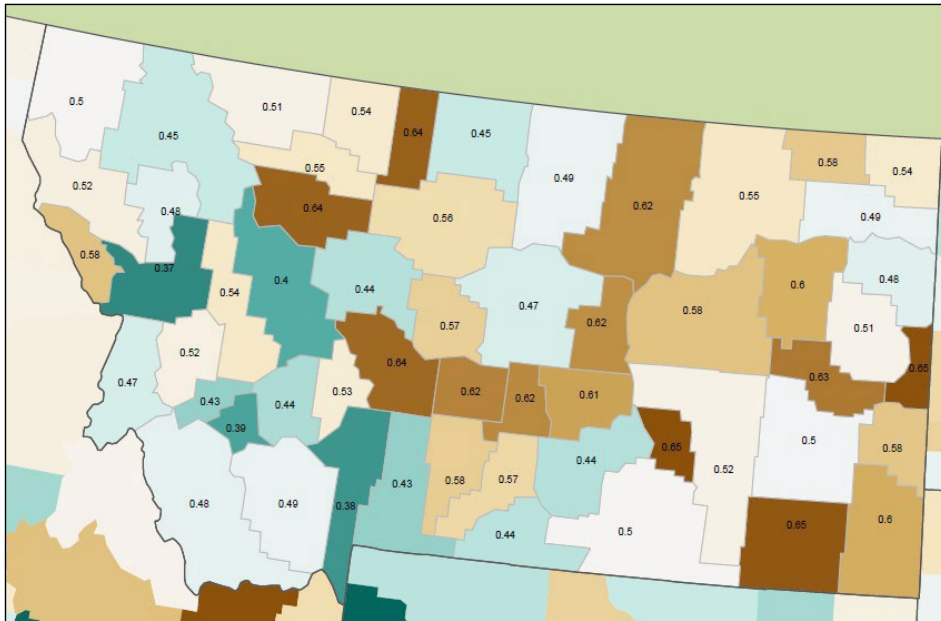
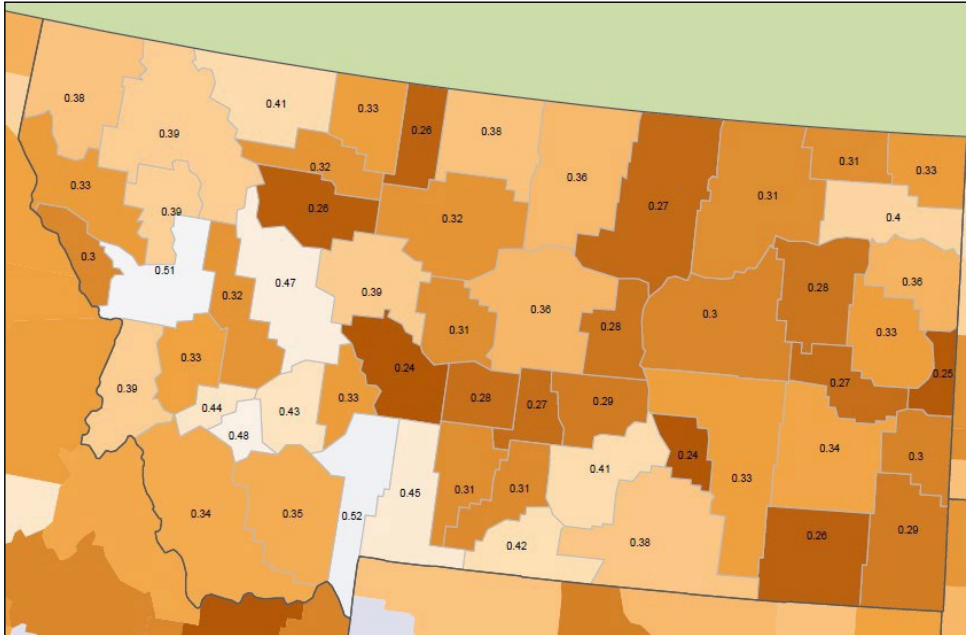


Figure 14. County-level support for lethal control of black bears that attack humans, predicted by a statistical model using data from a nationwide survey. See also Manfredo et al. (2021).

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.

Figure 15. 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 Manfredro et al. (2021).

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; Figure 15). 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.

Manfredro 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.”

3.1.4. ACTIONS CONSIDERED IN CUMULATIVE IMPACTS ANALYSES

MEPA requires an analysis of cumulative impacts, which are defined as “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 preimpact statement studies, separate impact statement evaluation, or permit-processing procedures” as set forth in the ARM 12.2.429(7).

The sections below identify past, present, and related future actions. Actions considered in these analyses were identified by FWP, other subject matter experts, as well as public scoping. Past and present actions are accounted for as part of the existing, or “baseline,” environmental conditions. MEPA is forward-looking, with analyses focused on the potential impacts of the proposed action that FWP is considering.

The type and timing of impact for the proposed action are key to the cumulative impacts analyses. To be considered for cumulative impacts, prior, present and future actions must affect the environment in a similar manner and at a similar time as the proposed action and alternatives. For these analyses, the time-period includes 10 years, which is two grizzly bear generations.

Related Past and Present Actions

The following is a summary of past and present actions with the potential to contribute to cumulative impacts. A discussion of past and present actions is included in the cumulative impacts analysis for each resource.

Grizzly bears are listed under the ESA of 1973 as a “threatened” species within their entire range in the lower 48 contiguous states. Ultimate management authority thus rests with the USFWS for recovering the species. A Grizzly Bear Recovery Plan (USFWS 1993) recognizes six recovery areas, four of which are partly or entirely within Montana. The recovery plan states 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, grizzly bears in two of the recovery areas that are partly or entirely located within Montana have been found by the USFWS to have met existing recovery criteria (NCDE and GYE). In 2007, the USFWS designated the grizzly bear population in the GYE as a distinct population segment for the purpose of delisting and delineated a geographic boundary within which this designation applies, and delisting would occur. USFWS decisions to delist the GYE population in 2007 and 2017 were overturned due to legal challenges. Federal oversight would continue outside the DPS boundaries of these populations until recovery targets outlined in the recovery plan (1993) are met.

A requirement of delisting a population segment by the USFWS is for state management agencies to have in place a conservation strategy for that population segment that provides for post-delisting management, and commitments in place to ensure a recovered population remains recovered. Conservation strategies have been prepared for the NCDE and GYE and are in place. These are described in greater detail in Section 2.2.

An FWP-developed management plan for grizzly bears in western Montana was prepared in 2006, and a similar plan for management of grizzly bears in southwest Montana was prepared in 2002 and revised in 2013. This statewide management plan incorporates relevant parts of those two plans into a single plan. Personal preferences based in history, lifestyle, and beliefs as identified in the public scoping process outlined and summarized in Section 1.4.1 of this EIS, 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. Personal preferences have the potential to contribute to cumulative impacts.

Actions by Federal Land Management Agencies

U.S. Department of Agriculture – Forest Service

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. Within the core habitat (i.e., cornerstone areas) in the NCDE and GYE, the majority of habitat is managed by the USFS and NPS. They have specific habitat standards in place, as documented in the respective NCDE and GYE Conservation Strategies. Those habitat standards will remain in place under both alternatives considered, so no additional cumulative impacts are expected as a result of adoption and implementation of the statewide management plan.

U.S. Department of Interior – National Park Service

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. Within the core habitat (i.e., cornerstone areas) in the NCDE and GYE, the majority of habitat is managed by the USFS and NPS. They have specific habitat standards in place, as documented in the respective NCDE and GYE Conservation Strategies. Those habitat standards will remain in place under both alternatives considered, so no additional cumulative impacts are expected as a result of adoption and implementation of the statewide management plan.

U.S. Department of Interior – U.S. Fish & Wildlife Service

Grizzly bears are listed under the U.S. Endangered Species Act (ESA) of 1973 as a “threatened” species within their entire range in the lower 48 contiguous states. Ultimate management authority thus rests with the U.S. Fish & 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 allocations of resources. Potential changes in status of 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 (USFWS 1993) states 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, grizzly bears in two of the recovery areas that are partly or entirely located within Montana have been found by the USFWS to have met existing recovery criteria (NCDE and GYE). In 2007, the USFWS designated the grizzly bear population in the GYE as a distinct population segment 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. Although USFWS decisions to delist the GYE population in 2007 and 2017 were overturned due to legal challenges, delisting of the GYE and NCDE populations within the time frame typically considered for FWP management plans could occur, 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 recovery targets outlined in the recovery plan (1993) are met. This potential multi-jurisdictional future provides an additional rationale for a comprehensive, statewide plan for Montana. This multi-jurisdictional future poses no additional cumulative impacts as a result of adoption and implementation of the statewide management plan.

Related Future Actions

Under ARM 12.2.429(7), related future actions must also be considered in a cumulative impacts analysis when those actions are under concurrent consideration by any state agency through preimpact statement studies, separate impact statement evaluation, or permit processing procedures. The following is a summary of future actions that were considered. A discussion of related future actions under concurrent consideration is included in the cumulative impacts analysis for each resource.

There are no known related future actions as defined in ARM 12.2.429(7) associated with adoption and implementation of the statewide grizzly bear management plan that will impact key issues analyzed below.

3.2 RESOURCE 1: TERRESTRIAL, AVIAN, AND AQUATIC LIFE AND HABITATS

3.2.1 INTRODUCTION

This section provides an overview of the *Terrestrial, Avian, and Aquatic Life and Habitats* within the analysis area and the governing regulatory authorities.

Grizzly bear management can have impacts to *Terrestrial, Avian, and 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 *Terrestrial, Avian, and Aquatic Life and Habitats*.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Terrestrial, Avian, and Aquatic Life and Habitats* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction and, in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers (MCA 87-5-103).

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.2.2 ANALYSIS AREA

The analysis area for direct, secondary, and cumulative impacts on *Terrestrial, Avian, and Aquatic Life and Habitats* is the 30 counties of western and central Montana (Figure 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.2.3 ENVIRONMENTAL CONSEQUENCES

3.2.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no Project impacts on the pre-project *Terrestrial, Avian, and Aquatic Life and Habitats* of the analysis area described in **Section 3.1.3**. because none of the disturbances associated with the project would occur.

Under the No Action Alternative, there would be no changes to grizzly bear management, except the geographic area of applied management would likely grow within the affected environment as grizzly

bear distribution would likely continue to expand outside secure core habitats with already recovered grizzly bear populations. This expansion would result in additional potential for conflicts including local loss of crops and livestock. Grizzly bears could potentially impact local recruitment of wild ungulates. FWP would continue to provide outreach and education in new areas to avoid conflict with agriculture and would continue conflict response to prevent further damage or loss. Where natural movement of bears between secure core areas is absent, FWP would translocate non-conflict grizzly bears at appropriate intervals to enhance connectivity between populations. Scientifically based regulated hunting of delisted grizzly bears, consistent with delisted population management, could occur if approved by the commission.

The No Action Alternative would not change the status of the existing area. Impacts on *Terrestrial, Avian, and Aquatic Life and Habitats* due to current and future activities in the existing area would continue. Grizzly bears will continue to inhabit the analysis area at low density and will have no impact on *Terrestrial, Avian, and Aquatic Life and Habitats* in the areas where they occur.

Grizzly bear management can have positive secondary impacts to *Terrestrial, Avian, and Aquatic Life and Habitats* because habitat management for grizzly bears limits human uses and disturbance of habitats for all species. Management to limit open road densities and new developments ensure there is protected habitat for a diversity of wildlife. The enforcement of attractant storage orders and rules ensures other animals such as black bears and mountain lions, do not gain access and become conflict animals and generally results in greater public awareness of the risks of feeding wildlife.

Continued focus on habitat management, food storage, and conflict prevention actions as described in this plan can provide a positive secondary impact to black bear populations because black bear conservation and management issues are similar to grizzly bear issues. The careful management of road densities, off-road vehicle use, and seasonal area closures is beneficial to other species, such as elk. Road density standards as recommended have been in place for years and have allowed for expansion of the bear population while maintaining secure elk habitat. Reasonable limitations on subdivision or energy development are also beneficial to many of the wide ranging or migratory species. Increasingly smart development and recommendations as seen in the FWP subdivision recommendations (FWP 2012) will help maintain habitat for a diversity of species.

3.2.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action, there would be no direct impacts on *Terrestrial, Avian, and Aquatic Life and Habitats*. Grizzly bears will continue to inhabit the analysis area ~~at low density~~ and will have no impact on *Terrestrial, Avian, and Aquatic Life and Habitats* in the areas where they occur. Under the proposed action, grizzly bear management would look mostly the same as with the No Action Alternative 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. This may reduce recurring conflicts by single individual bears, which would benefit agricultural producers and other stakeholders impacted by conflict.

The proposed action would not change the status of the existing area. Impacts on *Terrestrial, Avian, and Aquatic Life and Habitats* due to current and future activities in the existing area would continue.

Secondary Impacts

Under the proposed action, there would be short-term, minor, beneficial secondary impacts on *Terrestrial, Avian, and Aquatic Life and Habitats*. Grizzly bear management can have positive secondary impacts to *Terrestrial, Avian, and Aquatic Life and Habitats* because habitat management for grizzly bears in core habitats limits human uses and disturbance of habitats for all species. Per the NCDE CS, which currently guides management in that ecosystem, and which will continue to do so post-delisting, the PCA is where the most conservative habitat protections would remain, with maintenance of habitat conditions on federal lands that were compatible with the increasing grizzly bear population from 2004–2011. Federal lands comprise approximately 80% of the 21,118 square mile PCA. The most rigorous habitat protections will apply to the PCA to achieve the goal of continued occupancy by a source population of grizzly bears. Habitat conditions that are compatible with long-term population stability will be maintained. Habitat management in the PCA will be focused on secure core and motorized route density, developed recreation sites, vegetation management, livestock grazing, and mineral and energy development. Attractant storage rules will be in place on federal, state, and tribal lands in the PCA. Nearly 68% of all lands inside the PCA are considered “protected lands” because of their status as congressionally designated wilderness areas (30%) or other areas that restrict motorized use during the non-denning season. Altogether, approximately 8,900 mi² (21,100 km²) of lands within the PCA, Zone 1, and Zone 2 are considered “protected lands” in ways that benefit grizzly bears (i.e., some restrictions on motorized access and/or new road construction).

Per the GYE CS, habitat standards in the GYE PCA include maintenance of secure habitat at or above 1998 levels in each BMU sub-unit through management of motorized access route building and density, with specific exceptions and short-term deviations allowed under specific conditions. Secure habitat is defined as any contiguous area ≥10 acres and more than 500 meters from an open or gated motorized access route, prescribed footprint of a developed site, or recurring low-level helicopter flight line during the non-denning period. The number and acreage of commercial livestock allotments and number of permitted domestic sheep animal months will not exceed 1998 levels inside the PCA. Existing sheep allotments will be phased out as the opportunity arises with willing permittees. Maintenance of developed sites and their capacity for overnight visitor use on federal lands within the PCA, will remain at or below 1998 levels, with limited exceptions for administrative and maintenance needs meeting specific conditions.

Management to limit open road densities and new developments ensure there is protected habitat for a diversity of wildlife. Continued focus on habitat management, food storage, and conflict prevention actions as described in the statewide plan can provide a positive secondary impact to black bear populations because black bear conservation and management issues are similar to grizzly bear issues. The careful management of road densities, off road vehicle use, and seasonal area closures is beneficial to other species, such as elk. Road density standards, as recommended, have been in place for years and have allowed for expansion of the grizzly bear population while maintaining secure elk habitat. Reasonable limitations on subdivision or energy development are also beneficial to many of the wide-ranging or migratory species. Increasingly, smart development and recommendations as seen in the FWP subdivision recommendations (FWP 2012) will help maintain habitat for a diversity of species. The enforcement of attractant storage orders and rules ensures other animals, such as black bears and mountain lions, do not gain access and become conflict animals and generally results in greater public awareness of the risks of feeding wildlife.

The following Montana Species of Concern (rank 1 or 2) and federally listed ESA species that benefit from the same habitat management practices provided by the proposed action, as they require habitat security, forage, cover, denning habitat, winter range, and linkage zones to move between resources similar to grizzly bears:

Reptiles	Birds	Mammals	Fish
Idaho giant salamander	Black-rosy finch	Northern bog lemming	Arctic grayling
Coeur d'Alene salamander	Gray-crowned rosy finch	Canada lynx	Bull trout
Northern leopard frog	Harlequin duck		Columbia River redband trout
Western toad	Black swift		Lake trout
	Lewis's woodpecker		Westslope cutthroat trout
			Yellowstone cutthroat trout

Montana Natural Heritage Program (<https://mtnhp.org/SpeciesOfConcern/>)

The following game and furbearer species also benefit from the same management practices provided by the proposed action as they require habitat security, forage, cover, denning habitat, winter range, and linkage zones to move between resources similar to grizzly bears:

Elk	Mountain goat	Pine marten	Beaver	Black bear
Mule deer	Bighorn sheep	Fisher	Muskrat	Mountain lion
White-tailed deer	Mink	Wolverine	Bobcat	Gray wolves
Moose	Otter	Dusky grouse	Turkeys	Ruffed grouse

The following Community Types of Greatest Conservation Need (FWP State Wildlife Action Plan, 2015) benefit from the same management practices provided by the proposed action as they benefit from limited disturbance and development that comes with the conservation of grizzly bear habitat:

Intermountain streams	Floodplain and riparian	Conifer-dominated forest and woodland	Lakes and reservoirs
Mountain streams	Wetlands	Montane grassland	Alpine

Cumulative Impacts

Under the proposed action, there would be short-term, minor, beneficial cumulative impacts on *Terrestrial, Avian, and Aquatic Life and Habitats*. Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter),
- 2019 Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem (NCDE CS, hereafter).

Grizzly bears inhabit the analysis area in low density and would continue to inhabit the analysis area at low density under the proposed action. The proposed action, with consideration for impacts associated with the management strategies listed above, will result in further protection of *Terrestrial, Avian, and Aquatic Life and Habitats in the affected area*. Therefore, cumulative impacts on *Terrestrial, Avian, and Aquatic Life and Habitats* would be minor and consistent with current impacts in the areas where they occur.

Endangered Species Act

Federally listed threatened and endangered (T&E) species are protected under the ESA of 1973 under 16 USC 1531–1543 (Supp. 1996), as amended, and implemented by USFWS and NOAA. The ESA defines an endangered species as “a species in danger of becoming extinct throughout all or a portion of its range” and a threatened species as “a species likely to become endangered in the foreseeable future” (50 CFR 17.3). Candidate species are plants and animals for which there is sufficient information on their biological vulnerability to support federal listing as threatened or endangered (63 FR 13347), but listing is precluded by other higher-priority listing activities. Potential impacts on a federally listed species or its habitat resulting from a project with a federal action require consultation with USFWS under Section 7 of the ESA. Potential impacts on a federally listed species or its habitat resulting from a project with a nonfederal action require preparation of an incidental take permit under Section 10 of the ESA.

CURRENT FWP GRIZZLY BEAR MANAGEMENT PLANS

Two existing FWP documents currently guide discretionary activities (overall management) regarding grizzly bears: 1) the Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016, and 2) the Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement. Upon evaluation and approval of the statewide management plan, the statewide management plan will supplant these preexisting management plans.

INTERAGENCY CONSERVATION STRATEGIES (GYE AND NCDE)

These two documents provide comprehensive and inter-jurisdictional guidance on how grizzly bears will continue to be conserved and managed after delisting in the two respective areas. (“ecosystems”). They summarize and describe strategies, standards, and guidelines to be coordinated among state, federal, and tribal entities for managing grizzly bear populations, human-bear conflicts, and grizzly bear habitats after federal protection (under the ESA) is removed in each ecosystem. They thus simultaneously support delisting by providing additional assurance that doing so will not re-threaten the species thereby requiring re-listing (i.e., they document regulatory mechanisms, as required under the ESA), and prefigure management after delisting. However, neither CS provides explicit guidance for managing and conserving grizzly bears outside the boundaries of the respective “ecosystems” (formalized therein as “Demographic Monitoring Areas,” DMAs).

The GYE CS documents and cross-references FWP’s Grizzly Bear Management Plan for Southwest Montana (2013); the NCDE CS documents and cross-references FWP’s Grizzly Bear Management Plan for Western Montana (Dood et al., 2006). Both documents also include Memoranda of Understanding (MOU) between impacted federal, state, and tribal parties to include USFWS, FWP, DNRC (NCDE CS only), BLM, USFS, NPS, USDS APHIS (NCDE CS only), Wyoming Game and Fish Dept (GYE CS only), Idaho Department of Fish and Game (GYE only), Bureau of Indian Affairs (NCDE CS only), Blackfeet Nation (NCDE CS only), and Confederated Salish and Kootenai tribes (NCDE CS only). Under the MOUs, each agency agrees to use their authorities to implement the measures for conservation, monitoring, and cooperation, while respecting statutory responsibilities that differ among each signatory. The demographic objectives of the NCDE CS were also formally adopted by the commission in ARM 12.9.1403.

Because both CSs are considered components of any future delisting rule for the impacted populations, the proposed plan takes the view that FWP policy should continue to support the commitments made in both the GYE and NCDE CS documents. Thus, in brief, FWP is committed to the grizzly bear population objectives contained in these two CS documents, and both of the Alternatives articulated herein reflect that commitment.

NCDE Conservation Strategy

The majority of the NCDE grizzly population is expected to occupy the recovery zone or RZ (which would be renamed the Primary Conservation Area [PCA] after delisting), as well as a buffer surrounding it called Management Zone 1 (the two of which, together, form the DMA). Two Demographic Connectivity Areas (DCA) are intended to provide sufficient security for female grizzly bear occupancy, potentially providing demographic “stepping-stones” from the NCDE to the GYE (via the Salish DCA) and the Bitterroot (via the Ninemile DCA). The NCDE CS also identifies a Management Zone 2, which is intended to provide sufficient habitat protection to allow for occasional occupancy and movement of male bears toward the GYE.

FWP is a signatory to the inter-agency MOU implementing the NCDE CS (NCDE Subcommittee 2019), which serves as an interagency management plan for the NCDE and surrounding lands. The NCDE CS (NCDE Subcommittee 2019) is not a regulatory or statutorily required document, but rather a summary of commitments and regulatory mechanisms made by each government entity that would take formal effect upon delisting of grizzly bears within the NCDE DPS and is considered a requirement for eventual delisting by the USFWS. If delisting occurs, the ESA requires the USFWS, in cooperation with the state of Montana, to monitor the species for at least five years afterwards to assure that recovery is sustainable

(a separate monitoring strategy would be developed by the USFWS). The CS monitoring strategy, unlike USFWS monitoring, is not considered to be time-limited, but rather to be in effect indefinitely (although reviewed and potentially revised by participants at five-year intervals).

The NCDE CS categorizes the commitments made by each signatory for Demographic Monitoring and Management (i.e., population management), Habitat Management and Monitoring, and Conflict Prevention and Response. FWP is primarily involved with the first and third of these, and tangentially involved with the second. Commitments made by FWP related to Demographic Monitoring and Management (which apply within the NCDE Demographic Monitoring Area) formalized by a public process and written into rule by the commission in ARM 12.9.1403.

In the NCDE, this means FWP, working with partners, will:

(a) maintain a well-distributed grizzly population within the NCDE DMA; specifically, that females with dependent offspring will be documented as present in at least 21 of the 23 bear management units (BMUs) and six of the seven occupancy units will be documented at least every six years. Adherence to this objective will be evaluated by monitoring the presence of females with offspring (cubs, yearlings, or 2-year-olds) within defined geographic units of the NCDE.

(b) manage mortalities from all sources, including hunting and the loss of grizzly bears by translocation out of the NCDE, to support an estimated probability of at least 90% that the grizzly bear population within the demographic monitoring area remains above 800 bears, considering the uncertainty associated with all of the demographic parameters and further manage mortality against a six-year running average.

(c) monitor demographic and genetic connectivity among populations.

Additionally, should delisting the NCDE occur, and a hunting season be authorized by the commission:

(d) hunting would cease if the probability that the grizzly bear population remains above 800 within the DMA falls below 90% and would not resume until the probability is 90% or greater that the population of bears would remain above 800.

(e) hunting will not be allowed in a year if mortality thresholds as outlined in ARM 12.9.1403 (b)(ii) and (b)(iii) were exceeded in the previous year.

The goal of the NCDE Conservation Strategy (NCDE 2019) and, by reference, its signatory agencies is “to maintain a recovered, genetically diverse grizzly bear population throughout the Demographic Monitoring Area (DMA: the Primary Conservation Area (PCA) and Zone 1) while maintaining demographic and genetic connections with Canadian populations and providing the opportunity for demographic and/or genetic connectivity with other ecosystems (Cabinet-Yaak, Bitterroot, Greater Yellowstone).” Per the NCDE Conservation Strategy, which currently guides management in that ecosystem, and which will continue to do so post-delisting, the PCA is where the most conservative habitat protections would remain, with maintenance of habitat conditions on federal lands that were compatible with the increasing grizzly bear population from 2004–2011.

Federal lands comprise approximately 80% of the 21,118 square mile PCA. The most rigorous habitat protections will apply to the PCA to achieve the goal of continued occupancy by a source population of grizzly bears. Habitat conditions that are compatible with long-term population stability will be

maintained. Habitat management in the PCA will be focused on secure core and motorized route density, developed recreation sites, vegetation management, livestock grazing, and mineral and energy development. Attractant storage rules will be in place on federal, state, and tribal lands in the PCA. Nearly 68% of all lands inside the PCA are considered "protected lands" because of their status as congressionally designated Wilderness Areas (30%) or other areas that restrict motorized use during the non-denning season. Altogether, approximately 8,900 mi² (21,100 km²) of lands within the PCA, Zone 1, and Zone 2 are considered "protected lands" in ways that benefit grizzly bears (i.e., some restrictions on motorized access and/or new road construction).

GYE Conservation Strategy

The GYE CS *"was developed to be the document guiding management and monitoring of the GYE grizzly bear population and its habitat upon recovery and delisting."* The vision espoused by the GYE CS is that the Primary Conservation Areas (PCA, under listed status the Recovery Zones) *"will be a secure area for grizzly bears, with population and habitat conditions maintained to ensure a recovered population is maintained for the foreseeable future and to allow bears to continue to expand outside the PCA. Outside of the PCA, grizzly bears will be allowed to expand into biologically suitable and socially acceptable areas... [but the objective outside the PCA]... is to maintain existing resource management and recreational uses and to allow agencies to respond to demonstrated problems with appropriate management actions."*

In the GYE, this means FWP, working with partners will:

(a) maintain a well-distributed grizzly population within the GYE DMA: specifically with a target of at least 16 or 18 bear management units (BMU) within the PCA occupied at least one year in every six, and no two adjacent BMUs can be unoccupied over any six-year period.

(b) monitor all sources of mortality for independent females and males (> 2 years old) and dependent young (<2 years old) within the GYE DMA, while limiting mortality to annual mortality percentages on a sliding scale depending on the annual population size estimate using model-averaged Chao2 (per Demographic Criterion 3).

Additionally, should delisting in the GYE occur, and a hunting season be authorized by the commission:

(c) maintain approximately 932 bears within the GYE DMA as estimated by the revised population estimation protocol. Should the estimated population within the DMA decline to 831 bears, any recreational hunting that had been authorized by any of the states post-delisting would be closed.

Per the GYE CS, habitat standards in the GYE PCA include maintenance of secure habitat at or above 1998 levels in each BMU sub-unit through management of motorized access route building and density, with specific exceptions and short-term deviations allowed under specific conditions. Secure habitat is defined as any contiguous area ≥ 10 acres and more than 500 meters from an open or gated motorized access route, prescribed footprint of a developed site, or recurring low-level helicopter flight line during the non-denning period. The number and acreage of commercial livestock allotments and the number of permitted domestic sheep animal months will not exceed 1998 levels inside the PCA. Existing sheep allotments will be phased out as the opportunity arises with willing permittees. Maintenance of developed sites and their capacity for overnight visitor use on federal lands within the PCA, will remain at or below 1998 levels, with limited exceptions for administrative and maintenance needs meeting specific conditions.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact *Terrestrial, Avian, and Aquatic Life and Habitats Resources* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National park, wilderness, and national forest area designations
- Wildland fire

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 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.

Federal land managers have jurisdiction over national parks, wilderness areas, and national forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact *Terrestrial, Avian, and Aquatic Life and Habitats* in the affected areas (Table 6.)

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-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

Table 6: State and federal protected land acreage within the 30-county project area.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced (Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take

longer to mend post-severe-fires and burn. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned across the core of the Greater Yellowstone Ecosystem (GYE), burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988 but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Terrestrial, Avian, and Aquatic Life and Habitats* would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land management specific to grizzly bears in secure core habitats is already in place and is represented as formal commitments within conservation strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas, but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action, there would be no unavoidable adverse impacts on *Terrestrial, Avian, and Aquatic Life and Habitats* because grizzly bears occurring and being managed in their native habitat will not adversely impact the *Terrestrial, Avian, and Aquatic Life and Habitats* with which they co-occur. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts, such as reduction of the local population creating the adverse impact.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing the statewide plan, there would be no irreversible and irretrievable impacts on *Terrestrial, Avian, and Aquatic Life and Habitats*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, or to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production, or restrictions on resource use.

The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even a short time basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.3 RESOURCE 2: WATER QUALITY, QUANTITY, AND DISTRIBUTION

3.3.1 INTRODUCTION

This section provides an overview of the *Water Quality, Quantity, and Distribution* within the analysis area and the governing regulatory authorities.

Grizzly bear management can have 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 PCAs provide benefits for a diversity of fish and wildlife and their habitat, including *Water Quality, Quantity, and Distribution*.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Water Quality, Quantity, and Distribution* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The Recovery Plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Water Quality, Quantity, and Distribution* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (Administrative Rules of Montana, ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to

the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Water Quality, Quantity, and Distribution* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state-managed wildlife per MCA 7-1-111 that prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the Code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.3.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on Water Quality, Quantity, and Distribution is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.3.3 ENVIRONMENTAL CONSEQUENCES

3.3.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Water Quality, Quantity, and Distribution* of the analysis area described in **Section 3.1.3**, because none of the disturbances associated with the project would occur.

The No Action Alternative would not change the status of the existing area. Impacts on *Water Quality, Quantity, and Distribution* due to current and future activities in the existing area would continue. Under the CS agreements for the GYE and NCDE, federal land management agencies have committed to limiting habitat development to 1998 levels (GYE) and 2011 levels (NCDE) in the PCAs within those ecosystems. This commitment to ~~limit~~ new developments on the public lands in these areas will help maintain water quality and quantity on public lands in these PCAs.

3.3.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Water Quality, Quantity, and Distribution*. Grizzly bears will continue to inhabit the analysis area at low density and will have no impact on water quality, quantity, and distribution in the areas where they occur. Water quality, quantity, and distribution in those portions of the project area, known as the Primary Conservation Areas, would continue to be protected by limits on open road densities and new developments on public lands in those areas, which will continue to limit impacts to the PCA portion of the project area.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan there would be short-term, negligible, beneficial secondary impacts on *Water Quality, Quantity, and Distribution*. Grizzly bear

management can have positive secondary impacts to *Water Quality, Quantity, and Distribution* because grizzly bear presence and conservation can limit human uses and disturbance of core habitats. Water quality, quantity, and distribution in those portions of the project area, known as the PCAs, would continue to be protected by limits on open road densities and new developments on public lands in those areas.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, negligible, beneficial cumulative impacts on *Water Quality, Quantity, and Distribution*. Grizzly bear management can have positive impacts to water quality and quantity because grizzly bear presence and conservation can limit human uses and disturbance of core habitats. *Water Quality, Quantity, and Distribution* in those portions of the project area, known as the PCAs, would continue to be protected by limits on open road densities and new developments on public lands in those areas.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Water Quality, Quantity, and Distribution* would be consistent with current impacts in the areas where they occur.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact *Water Quality, Quantity, and Distribution* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National Park, Wilderness, and National Forest Area Designations
- Wildland fire

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 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.

Federal land managers have jurisdiction over national parks, wilderness areas, and national forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact *Water Quality, Quantity, and Distribution* in the affected areas.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced (Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take longer to mend post-severe-fires and burn. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned the core of the GYE, burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988, but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Water Quality, Quantity, and Distribution* would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land management specific to grizzly bears in secure core habitats is already in place and is represented as formal commitments within conservation strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP would work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Water Quality, Quantity, and Distribution* because grizzly bears occurring and being managed in their native habitat will not adversely impact the *Water Quality, Quantity, and Distribution* where they occur. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irretrievable Impacts

Under the proposed action of adopting and implementing a statewide plan there would be no irreversible and irretrievable impacts on *Water Quality, Quantity, and Distribution*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production, or restrictions on resource use.

The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even a short time basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.4 RESOURCE 3: GEOLOGY; SOIL QUALITY, STABILITY, AND MOISTURE

3.4.1 INTRODUCTION

This section provides an overview of the *Geology; Soil Quality, Stability and Moisture* within the analysis area and the governing regulatory authorities.

Grizzly bear management can have impacts to *Soil Quality, Stability and Moisture* 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*.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Soil Quality, Stability and Moisture* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The Recovery Plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Soil Quality, Stability and Moisture* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (Administrative Rules of Montana, ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no applicable state requirements associated with *Soil Quality, Stability and Moisture* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state-managed wildlife per MCA 7-1-111, that prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.4.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on Soil Quality, Stability and Moisture is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.4.3 ENVIRONMENTAL CONSEQUENCES

3.4.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Soil Quality, Stability, and Moisture* of the analysis area described in **Section 3.1.3** because none of the disturbances associated with the project would occur. Under the CS agreements for the GYE and NCDE, federal land management agencies have committed to limiting habitat development to 1998 levels (GYE) and 2011 levels (NCDE) in the PCAs within those ecosystems. This commitment to limit new developments on the public lands in these areas will help maintain *Soil Quality, Stability, and Moisture* on public lands in these PCAs.

The No Action Alternative would not change the status of the existing area. Impacts on *Soil Quality, Stability, and Moisture* due to current and future activities in the existing area would continue.

3.4.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan there would be no direct impacts on *Soil Quality, Stability, and Moisture*. Grizzly bears will continue to inhabit the analysis area at low density and will have no impact on *Soil Quality, Stability, and Moisture* in the areas where they occur.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan there would be short-term, negligible, beneficial secondary impacts on *Soil Quality, Stability, and Moisture*. Grizzly bears will continue to inhabit the analysis area at low density and will have little impact on *Soil Quality, Stability, and Moisture* in the areas where they occur. Grizzly bear management can have positive secondary impacts to *Soil Quality, Stability, and Moisture* because grizzly bear presence and conservation can limit human uses and disturbance of core habitats. *Soil Quality, Stability, and Moisture* in those portions of the project area known as the PCAs would continue to be protected by limits on open road densities and new developments on public lands in those areas.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, negligible, beneficial cumulative impacts on *Soil Quality, Stability, and Moisture*. Grizzly bear management can have positive impacts to *Soil Quality, Stability, and Moisture* because grizzly bear presence and conservation can limit human uses and disturbance of core habitats. *Soil Quality, Stability, and Moisture* in those portions of the project area known as the PCAs would continue to be protected by limits on open road densities and new developments on public lands in those areas.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),

- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Soil Quality, Stability, and Moisture* would be consistent with current impacts in the areas where they occur.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact *Soil Quality, Stability, and Moisture* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National Park, Wilderness, and National Forest Area Designations
- Wildland fire

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 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.

Federal land managers have jurisdiction over national parks, wilderness areas, and national forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact water quality, quantity, and distribution in the affected areas.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced (Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take longer to mend post-severe-fires and burn. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned across the core of the GYE, burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988, but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Soil Quality, Stability and Moisture* would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land management specific to grizzly bears in secure core habitats is already in place and is represented as formal commitments within conservation strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan there would be no unavoidable adverse impacts on *Soil Quality, Stability, and Moisture* because grizzly bears occurring and being managed in their native habitat will not adversely impact the habitats in which they occur. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing a statewide plan there would be no irreversible and irretrievable impacts on *Soil Quality, Stability, and Moisture*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production, or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even

short time basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.5 RESOURCE 4: VEGETATION COVER, QUANTITY, AND QUALITY

3.5.1 INTRODUCTION

This section provides an overview of the *Vegetation Cover, Quantity, and Quality* within the analysis area and the governing regulatory authorities.

Under the CS agreements for the GYE and NCDE, federal land management agencies have committed to limiting habitat development to 1998 levels (GYE) and 2011 levels (NCDE) in the PCAs within those ecosystems. This commitment to ~~no~~ **limit** new developments on the public lands in these areas will help maintain *Vegetation Cover, Quantity, and Quality* on public lands in these PCAs.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Vegetation Cover, Quantity, and Quality* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction and, in some cases, restrict actions that can be taken. The Recovery Plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no applicable federal requirements associated with *Vegetation Cover, Quantity, and Quality* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no applicable state requirements associated with *Vegetation Cover, Quantity, and Quality* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state-managed wildlife per MCA 7-1-111 that prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the Code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.5.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on Vegetation Cover, Quantity, and Quality is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.5.3 ENVIRONMENTAL CONSEQUENCES

3.5.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Vegetation Cover, Quantity, and Quality* of the analysis area described in **Section 3.1.3**, because none of the disturbances associated with the project would occur.

The No Action Alternative would not change the status of the existing area. Impacts on *Vegetation Cover, Quantity, and Quality* due to current and future activities in the existing area would continue.

3.5.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Vegetation Cover, Quantity, and Quality*. 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.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, negligible, beneficial secondary impacts on *Vegetation Cover, Quantity, and Quality*. Grizzly bears will continue to inhabit the analysis area at low density and will have little impact on *Vegetation Cover, Quantity, and Quality* in the areas where they occur. Grizzly bear management can have positive secondary impacts to *Vegetation Cover, Quantity, and Quality* because grizzly bear presence and conservation can limit human uses and disturbance of core habitats. *Vegetation Cover, Quantity, and Quality* in those portions of the project area known as the PCAs would continue to be protected by limits on open road densities and new developments on public lands in those areas.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, negligible, beneficial cumulative impacts on *Vegetation Cover, Quantity, and Quality*. Grizzly bear management can have positive impacts to *Vegetation Cover, Quantity, and Quality* because grizzly bear presence and conservation can limit human uses and disturbance of core habitats. *Vegetation Cover, Quantity, and Quality* in those portions of the project area known as the PCAs would continue to be protected by limits on open road densities and new developments on public lands in those areas.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Vegetation Cover, Quantity, and Quality* would be consistent with current impacts in the areas where they occur.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact *Vegetation Cover, Quantity, and Quality* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National Park, Wilderness, and National Forest Area Designations
- Wildland fire

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 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.

Federal land managers have jurisdiction over national parks, wilderness areas, and national forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact *Vegetation Cover, Quantity, and Quality* in the affected areas.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced (Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take longer to mend post-severe-fires and burns. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned across the core of the GYE, burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988, but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Vegetation Cover, Quantity, and Quality* would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land management specific to grizzly bears in secure core habitats is already in place and is represented as formal commitments within conservation strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas, but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Vegetation Cover, Quantity and Quality* because grizzly bears occurring and being managed in their native habitat will not adversely impact the habitats in which they co-occur. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Vegetation Cover, Quantity, and Quality*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short-term basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.6 RESOURCE 5: AESTHETICS

3.6.1 INTRODUCTION

This section provides an overview of the *Aesthetics* within the analysis area and the governing regulatory authorities.

Many people find intrinsic value in knowing grizzly bears are present. Some may see a grizzly bear in the wild and find that aesthetically pleasing. Others may have the opposite reaction and feel that grizzly bear presence is unacceptable. The statewide management plan and its implementation do not affect the overall aesthetics of an area since grizzly bears occur at low densities and are rarely seen.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Aesthetics* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The Recovery Plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Aesthetics* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Aesthetics* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111 that prohibits counties from exercising "any power that applies to or affects Title 87." Title 87 is the fish and wildlife title of the Code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.6.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on *Aesthetics* is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana's total area. A description of the area is provided above in Section 3.1.3.

3.6.3 ENVIRONMENTAL CONSEQUENCES

3.6.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Aesthetics* of the analysis area described in 3.1.3. because none of the disturbances associated with the project would occur.

Under the No Action Alternative, there would be no changes to grizzly bear management except the geographic area of applied management would grow within the affected environment as grizzly bear distribution would likely continue to expand outside secure core habitats with recovered grizzly bear populations. This expansion would result in additional potential for conflicts including local loss of crops and livestock. Grizzly bears could potentially impact local recruitment of wild ungulates. FWP would continue to provide outreach and education in new areas to avoid conflict with agriculture and would continue conflict response to prevent further damage or loss. Where natural movement of bears between secure core areas is absent, FWP would translocate non-conflict grizzly bears at appropriate intervals to enhance connectivity between populations. Scientifically based regulated hunting of delisted grizzly bears, consistent with delisted population management, could occur if approved by the commission.

The No Action Alternative would not change the status of the existing area. Impacts on *Aesthetics* due to current and future activities in the existing area would continue.

3.6.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing the statewide plan, there would be no direct impacts on *Aesthetics*. Under this alternative, grizzly bear management would look mostly the same as with the No Action Alternative.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, negligible, adverse and/or beneficial secondary impacts on *Aesthetics*. Under this alternative, grizzly bear management would look mostly the same as with the No Action Alternative 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, which could adversely impact *Aesthetics* for some people. Conservation of grizzly bears and their habitat, particularly in the PCAs, will benefit multiple species and landscapes that contribute to the *Aesthetics* of the analysis area for some people, as some people value the potential to view grizzly bears in the wild or knowing they are there. Some people will never accept grizzly bears being present in an area and will be unwilling to adjust their behaviors as a result. Others feel strongly that everyone must adjust as necessary to cohabitate with grizzly bears.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, minor, adverse and/or cumulative impacts on *Aesthetics*. Some people value the potential to view grizzly bears in the wild or know they are there. FWP decisions or actions made within the sideboards of the statewide plan could impact *Aesthetics* for some people. The following summarizes the general views of 1,758 Montanans about grizzly bears and their attitudes toward grizzly management (Statewide Survey of Montanan's Attitudes Toward Grizzly Bears, Nesbitt et al. 2020):

<https://www.cfc.umt.edu/research/humandimensions/news/human-dimensions-grizzly-bear.php>

- 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 substantial 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.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Aesthetics* would be consistent with current impacts in the areas where they occur.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact *Aesthetics* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National park, wilderness, and national forest area designations
- Wildland fire

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 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.

Federal land managers have jurisdiction over national parks, wilderness areas, and national forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact water quality, quantity, and distribution in the affected areas.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced (Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take longer to mend post-severe-fires and burns. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned across the core of the GYE, burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988, but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Aesthetics* would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land management specific to grizzly bears in secure core habitats is already in place and is represented as formal commitments within conservation strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas, but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Aesthetics* because grizzly bears occurring and being managed in their native habitat will continue to be divisive. Some people will never accept grizzly bears being present in an area and will be unwilling to adjust their behaviors as a result. Others feel strongly that everyone must adjust as necessary to cohabitate with grizzly bears. Grizzly bears occurring and being managed in their native habitat will not adversely impact the aesthetics where they occur. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Aesthetics*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production, or restrictions on resource use.

The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short-term basis (should data indicate that to be prudent), the management program poses no threat to the species

3.7 RESOURCE 6: AIR QUALITY

3.7.1 INTRODUCTION

This section provides an overview of the *Air Quality* within the analysis area and the governing regulatory authorities.

Grizzly bear management can have impacts to *Air Quality* 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.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Air Quality* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The Recovery Plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Air Quality* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Air Quality* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state-managed wildlife per MCA 7-1-111, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the Code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.7.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on Air Quality is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.7.3 ENVIRONMENTAL CONSEQUENCES

3.7.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Air Quality* of the analysis area described in **Section 3.1.3** because none of the disturbances associated with the project would occur.

The No Action Alternative would not change the status of the existing area. Impacts on *Air Quality* due to current and future activities in the existing area would continue. Under the Conservation Strategy agreements for the GYE and NCDE, federal land management agencies have committed to limiting habitat development to 1998 levels (GYE) and 2011 levels (NCDE) in the PCAs within those ecosystems. This commitment to ~~limit~~ new developments on the public lands in these areas will help maintain air quality in these PCAs.

3.7.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Air Quality*. 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. Under this alternative, grizzly bear management would look mostly the same as with the No Action Alternative 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.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan there would be short-term, negligible, beneficial secondary impacts on *Air Quality*. Conservation of grizzly bears and their habitat,

particularly in the PCAs, will benefit multiple species and landscapes that will be beneficial to air quality of the analysis area.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, negligible, beneficial cumulative impacts on *Air Quality*. Conservation of grizzly bears and their habitat, particularly in the PCAs, will benefit multiple species and landscapes that will be beneficial to air quality of the analysis area.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Air Quality* would be consistent with current impacts in the areas where they occur.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact *Air Quality* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National Park, Wilderness, and National Forest Area Designations
- Wildland fire

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 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.

Federal land managers have jurisdiction over National Parks, Wilderness Areas, and National Forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact water quality, quantity and distribution in the affected areas.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced (Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take longer to mend post-severe-fires and burns. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned across the core of the GYE, burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988, but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Air Quality* would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land management specific to grizzly bears in secure core habitats is already in place and is represented as formal commitments within conservation strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas, but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Air Quality* because grizzly bears occurring and being managed in their native habitat will not adversely impact the air quality where they occur. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted

in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irretrievable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Air Quality*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production, or restrictions on resource use.

The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short-term basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.8 RESOURCE 7: UNIQUE, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES

3.8.1 INTRODUCTION

This section provides an overview of the *Unique, Fragile, or Limited Environmental Resources* within the analysis area and the governing regulatory authorities.

Grizzly bears are considered to be conservation reliant and could be considered a unique, fragile, or limited environmental resource. The statewide management plan and its implementation will help ensure long-term recovery and sustainability in Montana and will provide predictability about management of grizzly bears. Under both alternatives, the geographic area of applied management would grow within the affected environment as grizzly bear distribution would likely continue to expand outside secure core habitats with recovered grizzly bear populations.

Grizzly bears, a unique and limited environmental resource, will be managed as protected wildlife at levels sufficient to maintain recovered populations under either alternative. The preferred alternative clarifies that in areas where grizzly bears that contribute to long-term persistence and connectivity, FWP would make all reasonable efforts to recommend (or implement, if appropriate) actions that minimize bear removal. This would enhance the overall grizzly bear "metapopulation." 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. This would have minimal impact on the population.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Unique, Fragile, or Limited Environmental Resources* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction and, in some cases, restrict actions that can be taken. The Recovery Plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Unique, Fragile, or Limited Environmental Resources* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Unique, Fragile, or Limited Environmental Resources* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state-managed wildlife per MCA 7-1-111, MCA, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.8.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on *Unique, Fragile, or Limited Environmental Resources* is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.8.3 ENVIRONMENTAL CONSEQUENCES

3.8.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Unique, Fragile, or Limited Environmental Resources* of the analysis area

described in **Section 3.1.3.**, because the disturbance associated with the project would occur. Under the No Action Alternative, there would be no changes to grizzly bear management except the geographic area of applied management would grow within the affected environment as grizzly bear distribution would likely continue to expand outside secure core habitats with recovered grizzly bear populations. This expansion would result in additional potential for conflicts including local loss of crops and livestock. Grizzly bears could potentially impact local recruitment of wild ungulates. FWP would continue to provide outreach and education in new areas to avoid conflict with agriculture and would continue conflict response to prevent further damage or loss. Where natural movement of bears between secure core areas is absent, FWP would translocate non-conflict grizzly bears at appropriate intervals to enhance connectivity between populations. Scientifically based regulated hunting of delisted grizzly bears, consistent with delisted population management, could occur if approved by the commission.

The No Action Alternative would not change the status of the existing area. Impacts on *Unique, Fragile, or Limited Environmental Resources* due to current and future activities in the existing area would continue.

3.8.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Unique, Fragile, or Limited Environmental Resources*. Grizzly bears will continue to inhabit the analysis area at low density. Adoption and implementation of the statewide plan would have no impact on other *Unique, Fragile, or Limited Environmental Resources*.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, negligible, beneficial secondary impacts on *Unique, Fragile, or Limited Environmental Resources*. Under the Conservation Strategy agreements for the GYE and NCDE, federal land management agencies have committed to limiting habitat development to 1998 levels (GYE) and 2011 levels (NCDE) in the PCAs within those ecosystems. This commitment to ~~limit~~-new developments on the public lands in these areas will maintain the *Unique, Fragile, or Limited Environmental Resources* on public lands in these PCAs.

There are three federally listed ESA plants within the project area that could benefit from habitat conservation actions implemented by the statewide plan. Two species are unique in that they are found in very specific habitats and exist in very few, small pockets.

Spalding's catchfly (*Silene spaldingii*) exists in only a few locations in the northwest corner of the state. Extant occurrences are known in the following areas: Tobacco Plains area, Lost Trail National Wildlife Refuge, the Niarada area, and Wild Horse Island. The majority of occurrences have less than 100 individuals, though three sites are each known to contain over 1,000 individuals and the total population size in Montana is likely 20,000+ mature plants based upon 2011 data (Montana Natural Heritage Program.)

Ute ladies'-tresses (*Spiranthes diluvialis*) is known from a small number of occurrences in southwest and south-central Montana. Plants occur in the valleys of the Missouri, Jefferson, Beaverhead, Ruby, and Madison river drainages, where it is restricted in area by specific hydrologic requirements. Many

populations have less than 100 individuals, though a couple have over 500 plants (Montana Natural Heritage Program).

The third federally listed plant species, whitebark pine, is found throughout the range of the grizzly bear and the project area and is not unique, fragile, or limited. Whitebark pine is a common component of subalpine forests and a dominant species of treeline and krummholz habitats. It occurs in almost all major mountain ranges of western and central Montana (Montana Natural Heritage Program). As whitebark pine overlaps grizzly bear habitat there will no adverse secondary impacts to the species; rather, the conservation of grizzly bear habitat is beneficial to whitebark pine.

Twenty other plant species within the project area are Species of Concern (rank 1 or 2), primarily because of their rarity or habitat specificity. These species benefit from the same management practices provided by the proposed action as they benefit from limited disturbance and development that comes with the conservation of grizzly bear habitat:

Spoon-leaf moonwort	Prairie moonwort	Mountain swordfern	Meadow horsetail	Pepperwort
Moosewort	Wishbone moonwort	Michigan moonwort	Treelike clubmoss	Northern beechfern
Yakutat moonwort	Frenchman's bluff moonwort	Stalked moonwort	Northern bog clubmoss	Kruckeberg's swordfern
Western quillwort	Linearleaf moonwort	Least moonwort	Running-pine	Northern spikemoss

<https://mtnhp.org/SpeciesOfConcern/>

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan there would be short-term, negligible, beneficial cumulative impacts on *Unique, Fragile, or Limited Environmental Resources* in the analysis area. Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- 2019 Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Unique, Fragile, or Limited Environmental Resources* would be consistent with current impacts in the areas where they occur.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact *Unique, Fragile, or Limited Environmental Resources* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National Park, Wilderness, and National Forest Area Designations
- Wildland fire

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, but impacts would be consistent with current practices. The proposed action does not propose 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 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.

Federal land managers have jurisdiction over national parks, wilderness areas, and national forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact *Unique, Fragile, or Limited Environmental Resources* in the affected areas.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly quickly and immediately thrive 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced (Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take longer to mend post-severe-fires and burns. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned across the core of the GYE, burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988, but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Unique, Fragile, or Limited Environmental Resources* from adoption and implementation of the statewide management plan would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land

management specific to grizzly bears in secure core habitats is already in place and represented as formal commitments within the NCDE and GYE Conservation Strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas, but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan there would be no unavoidable adverse impacts on *Unique, Fragile, or Limited Environmental Resources* because grizzly bears occurring and being managed in their native habitat will not adversely impact *Unique, Fragile or Limited Environmental Resources* where they occur. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at naturally low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Unique, Fragile, or Limited Environmental Resources*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short-term basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.9 RESOURCE 8: HISTORICAL AND ARCHAEOLOGICAL SITES

3.9.1 INTRODUCTION

This section provides an overview of the *Historical and Archaeological Sites* within the analysis area and the governing regulatory authorities.

While historical and archaeological sites occur throughout the analysis area, the statewide management plan and its implementation do not affect historical or archaeological sites as there is no development or ground disturbance of such sites resulting from the plan or its implementation.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the *No Action Alternative* (Alternative 1) and the proposed action (Alternative 2) with respect to *Historical and Archaeological Sites* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The 1993 recovery plan (USFWS) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Historical and Archaeological Sites* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management. Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Historical and Archaeological Sites* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111, that prohibits counties from exercising "any power that applies to or affects Title 87." Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.9.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on Historical and Archaeological Sites is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana's total area. A description of the area is provided above in Section 3.1.3.

3.9.3 ENVIRONMENTAL CONSEQUENCES

3.9.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Historical and Archaeological Sites* of the analysis area described in **Section 3.1.3**, because none of the disturbances associated with the project would occur.

The No Action Alternative would not change the status of the existing area. Impacts on *Historical and Archaeological Sites* due to current and future activities in the existing area would continue.

3.9.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Historical and Archaeological Sites*. Grizzly bears will continue to inhabit the analysis area at low density and will have no impact on historical or archaeological sites as there will be no ground disturbance or development as a result of implementation of the statewide management plan. Under this alternative, grizzly bear management would look mostly the same as with the No Action Alternative, 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.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no secondary impacts on *Historical and Archaeological Sites*.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, negligible, beneficial impacts on *Historical and Archaeological Sites*. Under the conservation strategy agreements for the GYE and NCDE, federal land management agencies have committed to limiting habitat development to 1998 levels (GYE) and 2011 levels (NCDE) in the PCAs within those ecosystems. This commitment to ~~limit new~~ new developments on the public lands in these areas will help limit disturbance to historical and archaeological sites on public lands in these PCAs.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)

- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Historical and Archaeological Sites* would be consistent with current impacts in the areas where they occur.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact *Historical and Archaeological Sites* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National Park, Wilderness, and National Forest Area Designations
- Wildland fire

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 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.

Federal land managers have jurisdiction over national parks, wilderness areas, and national forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact water quality, quantity, and distribution in the affected areas.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced

(Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take longer to mend post-severe-fires and burns. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned across the core of the GYE, burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988, but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Historical and Archaeological Sites* would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land management specific to grizzly bears in secure core habitats is already in place and is represented as formal commitments within conservation strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas, but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Historical and Archaeological Sites* because grizzly bears occurring and being managed in their native habitat will not adversely impact historical or archaeological sites where they occur. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Historical and Archaeological Sites*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to

remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short-term basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.10 RESOURCE 9: ENERGY USE

3.10.1 INTRODUCTION

This section provides an overview of *Energy Use* within the analysis area and the governing regulatory authorities.

The statewide plan and its implementation will not affect energy use. The presence of grizzly bears may impact energy development if grizzlies are present in an area where energy development is proposed, especially while they remain listed under the ESA. Energy developers would have to consult with the USFWS to minimize and mitigate take.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Energy Use* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Energy Use* related to adoption and implementation of the statewide management plan. The presence of grizzly bears may impact energy development 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.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (87-2-101, MCA). FWP also has a statutory requirement to manage species to prevent the need for federal listing (87-5-107, MCA). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible,

enhance their numbers. There are no other applicable state requirements associated with Energy Use related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111 that prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.10.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on *Energy Use* is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.10.3 ENVIRONMENTAL CONSEQUENCES

3.10.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Energy Use* of the analysis area described in **Section 3.1.3** because none of the disturbances associated with the project would occur. The statewide management plan and its implementation requires no new sources of or use of energy.

The No Action Alternative would not change the status of the existing area. Impacts on *Energy Use* due to current and future activities in the existing area would continue.

3.10.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Energy Use*. Under this alternative, grizzly bear management would look mostly the same as with the No Action Alternative 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 and have no impact on *Energy Use*.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no secondary impacts on *Energy Use*.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no cumulative impacts on *Energy Use*.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Energy Use* because grizzly bears occurring and being managed in their native habitat will not adversely impact energy use where they occur. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irretrievable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Energy Use*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short-term basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.11 RESOURCE 10: SOCIAL STRUCTURES AND MORES

3.11.1 INTRODUCTION

This section provides an overview of the *Social Structures and Mores* within the analysis area and the governing regulatory authorities.

Grizzly bears generally avoid people but come into conflict as they move through communities (usually rural communities) that are part of their home range in search of food or as they disperse. Their presence elicits fear and concern because of potential danger they represent. ~~Most residents of inhabited communities feel that grizzly bears do not belong in or around a community—that they should only be in remote, public land areas. As a result, many do not feel they should have to adjust their lifestyle to accommodate an animal they do not feel should be there.~~ However, because it is unknown when or if a bear may show up in grizzly bear distributional range, it is necessary to at least minimally adjust lifestyles to be “bear aware.” As communities become more experienced with grizzly bear presence, those adjusted lifestyles become more of the norm.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Social Structures and Mores* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Social Structures and Mores* related to adoption and implementation of the statewide management plan. Federal land management agencies can and do impose regulations on food storage requirements on federal lands to prevent bears from obtaining human foods or garbage and becoming human habituated.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Social Structures and Mores* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state-managed wildlife per MCA 7-1-111, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.11.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on *Social Structures and Mores* is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.11.3 ENVIRONMENTAL CONSEQUENCES

3.11.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Social Structures and Mores* of the analysis area described in **Section 3.1.3**, because none of the disturbances associated with the project would occur. Under the No Action Alternative, there would be no changes to grizzly bear management except the geographic area of applied management would grow within the affected environment as grizzly bear distribution would likely continue to expand outside secure core habitats with recovered grizzly bear populations. This expansion would result in additional potential for conflicts including local loss of crops and livestock. Grizzly bears could potentially impact local recruitment of wild ungulates. FWP would continue to provide outreach and education in new areas to avoid conflict with agriculture and would continue conflict response to prevent further damage or loss. Where natural movement of bears between secure core areas is absent, FWP would translocate non-conflict grizzly bears at appropriate intervals to enhance connectivity between populations. Scientifically based regulated hunting of delisted grizzly bears, consistent with delisted population management, could occur if approved by the commission.

The No Action Alternative would not change the status of the existing area. Impacts on *Social Structures and Mores* due to current and future activities in the existing area would continue. Adjustments to *Social Structures and Mores* will be necessary under either alternative in areas where grizzly bears occur and as grizzly bear distribution expands.

3.11.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, minor direct impacts on *Social Structures and Mores* that could be beneficial or adverse depending on the individual. Some impacts could be short-term and significant, beneficial or adverse depending on a particular individual's 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. As identified in the public scoping process outlined and summarized in Section 1.4.1 of the EIS, 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.

Under the proposed action, grizzly bear management would look mostly the same as with the No Action Alternative 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. That predictability may impact *Social Structures and Mores* in those affected communities. Bears in these areas are not critical to reaching or maintaining recovery. This may reduce recurring conflicts by single individual bears, which would benefit agricultural producers and other stakeholders impacted by conflict. Conversely, as bears move closer to communities in connectivity areas, *Social Structures and Mores* may be impacted, particularly until the potential presence of bears becomes more of the norm.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, minor, secondary impacts on *Social Structures and Mores* as adjustments to *Social Structures and Mores* will be necessary in areas where grizzly bears occur and as grizzly bear distribution expands. As bears move closer to communities in connectivity areas and areas where grizzly bear presence is new, people may need to implement new food, garbage, and livestock feed storage practices. Bear resistant storage containers are widely available but can be costly depending on the size of a homesite or operation. People may also need to implement new techniques for containing livestock that prevents loss or damage from grizzly bears. Bear resistant livestock containment can be costly depending on the size of the operation. People recreating in areas with new grizzly bear presence may need to adjust their operations by knowing how to safely recreate in bear country and carrying bear spray. Landowners and homeowners may need to adjust their daily routines when grizzly bears are in the area.

Cumulative Impacts

Under the proposed action of adopting and implementing the statewide plan, there would be short-term, minor, cumulative impacts, positive or adverse, on *Social Structures and Mores* when FWP operations and decisions made within the sideboards of the statewide plan are perceived contrary or in opposition to the advice of the GBAC or a person's personal preference based on history, lifestyle, and beliefs. FWP decisions or actions made within the sideboards of the statewide plan but contrary to or in opposition to one's understanding or agreement with the following advice could impact *Social Structures and Mores*:

Summary of advice received from the Citizen Grizzly Bear Advisory Council

- (a) In Guiding Principle 1, the GBAC advised that "all those living in or visiting Montana should expect the potential presence of grizzly bears on the landscape."
- (b) In Guiding Principle 2, the GBAC advised that "the identification of areas between established recovery zones that best contribute to genetic and demographic connectivity is necessary to prioritize resource allocation, focus outreach and education efforts, build social tolerance, and proactively engage local communities and landowners."
- (c) In Guiding Principle 3, the GBAC advised that "As expansion occurs outside the four recovery ecosystems and the landscapes in-between them in Montana, FWP and relevant agencies will have to balance this expansion with the need to prioritize resources that support both public and private lands."
- (d) In Guiding Principle 13, the GBAC advised that "Both genetic and demographic connectivity are important to the long-term sustainability, persistence, and resiliency of grizzly bears. Connectivity areas will exist in diverse social and environmental settings. Not all these settings are conducive to permanent habitation but should be managed to promote genetic and demographic connectivity in biologically suitable habitat, being mindful that biologically suitable does not always mean acceptable." In considering "grizzly bear distribution, 'relocation', and connectivity," the GBAC stated that "Genetic and demographic connectivity among Montana's four recovery zones is important to the long-term viability of grizzly bear populations in the continental United States." The GBAC added that their recommendations were intended to "balance the continued importance of public lands with the need for the involvement of private lands to support our vision for an interconnected metapopulation of grizzly bears in Montana." More specifically, in recommendation

- 19, the GBAC advised that “FWP should continue to allow natural movement to new areas between all four identified recovery zones in Montana.”
- (e) In recommendation 20, the GBAC advised that “FWP and all relevant agencies should clearly define the ‘landscapes in-between’ the four recovery zones in Montana that are important for genetic and demographic connectivity and the long-term sustainability of the grizzly bear.”
 - (f) In recommendation 21, the GBAC advised that “FWP, in coordination with relevant agencies and through a public process, should evaluate and identify those landscapes that can reasonably be considered important for grizzly bear recovery and connectivity from those that cannot, and clearly distinguish these in its management plan. Such a distinction is necessary for determining appropriate relocation sites between the four recovery zones, as well as for prioritizing resources for outreach and education, transportation upgrades, and conflict prevention, reduction, and response efforts. These decisions should be in accordance with current conservation strategies.”
 - (g) In Guiding Principal 5, the GBAC offered that “Strategies and tools aimed at proactively preventing or reducing conflicts are often effective and can be less expensive than compensating for conflict after the fact.”
 - (h) In Guiding Principle 10, the GBAC advised FWP to “strive to cultivate social tolerance through sound management decisions and conflict prevention measures.” In considering conflict prevention and reduction, the GBAC stated that “Preventing conflicts with grizzly bears is essential to the development of social acceptance and the continued conservation of grizzly bears. Proactive, inclusive efforts to mitigate conflict can engage communities, protect private property, maintain human safety, and be an efficient use of limited resources, while minimizing associated bear mortality.”
 - (i) More specifically, in recommendation 11 dealing with human/grizzly bear conflicts in and around developed areas, the GBAC advised FWP to “provide guidance for land use planning to prevent human/grizzly conflicts,” to “recommend actions to governing bodies on how to minimize grizzly bear conflicts,” to “help local communities identify and use available local grants for conflict prevention,” to “prioritize....research, development, and funding of new and innovative tools and techniques for conflict prevention and aversive conditioning.”
 - (j) In recommendation 12 dealing with conflicts in the agricultural domain, the GBAC advised FWP to “research and make recommendations on best management practices that help reduce depredations on livestock and non-livestock commercial losses,” to “integrate technology to allow for timely reporting of agricultural conflicts to neighboring farms and ranches,” and to “increase and diversify partnerships, funding, and support for community-based groups and other organizations” working on preventing or reducing human/grizzly bear conflicts. Additionally, in recommendation 3, the GBAC advised FWP to “provide residents and landowners with accurate information on the effective use of non-lethal methods to haze grizzly bears.”
 - (k) In considering conflict response and protocols, the GBAC stated that “Timely and consistent conflict response is necessary to build and maintain relationships between FWP and the communities where grizzly bears exist. Building these relationships prior to conflict will help to promote open communication and sharing of information if the need for response should occur.”
 - (l) More specifically, in recommendation 15, the GBAC advised FWP to “make bear management specialists full time equivalent (FTE) positions included in permanent base funding, provide each specialist with a year-round technician, and create more of these fully funded positions as needed,” to “clarify management protocols for conflict bears and continue to share them with landowners,

livestock producers, and communities to maximize transparency,” and to “periodically review interagency Memorandums of Understanding (MOUs) for opportunities to improve efficiency and capacity for conflict response.”

- (m) In recommendation 23, the GBAC advised FWP to “expedite work with landowners, agricultural producers, and communities to prioritize the creation of new suitable relocation areas inside and between recovery ecosystems which further the conservation, connection, and recovery of grizzly bears in Montana while ensuring existing land uses are supported.”
- (n) In Guiding Principle 1, the GBAC advised that “All those living in or visiting Montana...should have access to education, assistance, and resources involved with coexisting with grizzly bears.” In considering education and outreach, the GBAC stated that “Education and outreach should engage all Montanans and visitors in the shared responsibility of grizzly bear conservation.”
- (o) More specifically, in recommendation 2, the GBAC advised FWP to “provide easy access to education about hunting safely in grizzly bear country for resident and non-resident hunters in Montana,” in recommendation 3 to “provide residents and landowners with accurate information on the effective use of non-lethal methods to haze grizzly bears,” and in recommendation 5 to “create open and accessible communication channels between bear managers and the public to encourage communal efforts around bear awareness and conflict prevention.” Further, in recommendation 6, the GBAC advised FWP to work with other agencies to “create consistency and timeliness around public access to grizzly bear mortality data across recovery ecosystems,” in recommendation 7 to “explore ways to inform, promote, and incentivize Bear Aware programs in communities,” in recommendation 8 to “support educational efforts to build a common understanding of perspectives between agricultural producers and urban communities,” and in recommendation 9 to “create and use consistent messaging around the use and effectiveness of bear spray.” In recommendation 10, the GBAC supported the creation of a “a full time and permanent Grizzly Bear Information, Education, and Outreach Coordinator to support and contribute to the broader efforts of FWP’s Wildlife Stewardship Outreach Specialist.”
- (p) The GBAC reported to the governor that “Substantial deliberation was given to the role of hunting; however, because of the diversity of interpretations of available science, backgrounds, values, and opinions individually held by Council members, we cannot reach consensus that hunting has a role in grizzly bear management.” Further considerations were contained in a non-consensus section of the GBAC document.

FWP decisions or actions made within the sideboards of the statewide plan but contrary to a person’s personal beliefs could impact Social Structures and Mores. The following summarizes the general views of 1,758 Montanans about grizzly bears and attitudes toward grizzly bear management (Statewide Survey of Montanan’s Attitudes Toward Grizzly Bears, Nesbitt et al. 2020):
<https://www.cfc.umt.edu/research/humandimensions/news/human-dimensions-grizzly-bear.php>

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 substantial 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 decisions or actions on hunting grizzly bears made within the sideboards of the statewide plan could impact *Social Structures and Mores*. One goal of grizzly bear recovery may be to allow for limited regulated harvest upon removing the species from federal ESA coverage. MCA and ARM (see applicable regulations in Section 1.3.1.1) acknowledge the potential for grizzly bear hunting if not federally listed, but no specific plans are laid out within the statewide plan. Any final decision on whether to hunt or not hunt would rest with the commission. Hunting would be implemented within a scientifically sound framework that maintains a viable and self-sustaining population. Hunting could be used to limit population 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 ecosystem DMAs would be counted against DMA mortality limits as outlined in the GYE CS and NCDE CS. In no case would hunting compromise recovered populations.

FWP recognizes the strongly held views held by members of the public. There could be impact to *Social Structure and Mores* if hunting is not implemented but also if it is implemented. Many proponents of hunting feel that if a population is “recovered,” those animals should be available for hunting. Some proponents feel that hunting may increase social tolerance for bears by people, or that hunting may help bears become warier of humans. Others feel that hunting is a preferred population management tool for regulating the population and potentially addressing conflict bears. Many opponents, on the other hand, consider grizzly bear hunting to be trophy hunting. Other opponents are concerned that the populations will be overharvested and would rather see “excess” animals used for expanding distribution into other areas. Many opponents simply do not support harvesting an iconic and, for some, spiritual animal. The potential for hunting is a key reason some grizzly bear advocates oppose delisting.

If delisting occurs and a decision is made that recreational hunting has a role to play, there remains considerable discretion to consider the magnitude, specific objectives, geographic scope, and other constraints that would direct such a hunt.

- (a) Any hunt considered to be sustainable would be designed such that, even if all licenses sold resulted in harvested bears and that harvest occurred indefinitely, the portion of the population affected would be expected to remain stable (or, if changing, increasing).
- (b) Any such hunts would be structured so as to strongly bias take in favor of males and away from females.
- (c) Any hunt considered a population growth reduction hunt would have the potential, although not necessarily the objective, of reducing the rate of growth of the demographic portion of the Montana grizzly bear population affected by it.

- (d) Any such hunts would be structured so as to bias take in favor of males, but would allow for slightly higher probability of removing females not raising offspring in that year.
- (e) Under delisted status, any grizzly bear hunt would only be authorized after thorough consideration by the commission, and public input prior to that decision would be considered.
- (f) FWP does not envision offering hunts within the planning horizon in hunting units in, or near, the Cabinet-Yaak or Bitterroot grizzly bear areas.
- (g) FWP would, prior to developing recommendations for the commission, consult with relevant tribes to reduce cultural objections to hunts occurring near reservation boundaries.
- (h) Under the preferred alternative, hunts would be sustainable (i.e., not intended to reduce population abundance) while providing for connectivity between the current NCDE, GYE, CYE, and/or BE populations would be a high priority.
- (i) Pursuant to MCA 87-2-702, grizzly bear hunts would be once-in-a-lifetime opportunities for successful applicants.
- (j) As with all hunts of animals classified as a game animal, no edible portion of the carcass could be left in the field or wasted, as per MCA 87-6-205(4).
- (k) Sale or purchase of the head, hide, or mounts of a grizzly bear legally taken by a hunter would be prohibited, as per MCA 87-6-206.
- (l) Pursuant to MCA 87-2-701, any successful applicant for a grizzly bear hunting license would pay the applicable license fee; in addition, any successful hunter over 12 years of age would be required to purchase a trophy license within 10 days after the date of kill.
- (m) A mandatory orientation session would be required of all hunters licensed to kill grizzly bears.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore,

cumulative impacts on *Social Structures and Mores* would be consistent with current impacts in the areas where they occur.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Social Structures and Mores* because grizzly bears occurring and being managed in their native habitat will continue to be divisive. Some people will never accept grizzly bears being present in an area and will be unwilling to adjust their behaviors as a result. Others feel strongly that everyone must adjust as necessary to cohabitate with grizzly bears. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at naturally low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irretrievable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Social Structures and Mores*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production, or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short time basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.12 RESOURCE 11: CULTURAL UNIQUENESS AND DIVERSITY

3.12.1 INTRODUCTION

This section provides an overview of the *Cultural Uniqueness and Diversity* within the analysis area and the governing regulatory authorities.

The statewide grizzly bear plan and its implementation may have minor impact on cultural uniqueness and diversity of people in the analysis area as the grizzly bear is native to the analysis area and the proposed plan helps ensure recovered populations of grizzly bears in the analysis area. Grizzly bears are considered sacred by many Native American Tribes. This alternative will ensure grizzly bears remain at

recovered levels and connect cornerstone areas, and therefore should have a positive impact. In areas that do not contribute to connectivity grizzly bears would be tolerated less. Tribes have gone on record as opposing sport hunting of grizzly bears, which could be allowed if delisted. This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Cultural Uniqueness and Diversity* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Cultural Uniqueness and Diversity* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Cultural Uniqueness and Diversity* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the Code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.12.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on Cultural Uniqueness and Diversity is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.12.3 ENVIRONMENTAL CONSEQUENCES

3.12.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Cultural Uniqueness and Diversity* of the analysis area described in **Section 3.1.3**, because none of the disturbances associated with the project would occur. Under the No Action Alternative, there would be no changes to grizzly bear management except the geographic area of applied management would grow within the affected environment as grizzly bear distribution would likely continue to expand outside secure core habitats with recovered grizzly bear populations. This expansion would result in additional potential for conflicts including local loss of crops and livestock. Grizzly bears could potentially impact local recruitment of wild ungulates. FWP would continue to provide outreach and education in new areas to avoid conflict with agriculture and would continue conflict response to prevent further damage or loss. Where natural movement of bears between secure core areas is absent, FWP would translocate non-conflict grizzly bears at appropriate intervals to enhance connectivity between populations. Scientifically based regulated hunting of delisted grizzly bears, consistent with delisted population management, could occur if approved by the commission.

The No Action Alternative would not change the status of the existing area. Impacts on *Cultural Uniqueness and Diversity* due to current and future activities in the existing area would continue.

3.12.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan there would be short-term, negligible direct impacts to *Cultural Uniqueness and Diversity*. Under the proposed action grizzly bear management would look mostly the same as with the No Action Alternative 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. This may reduce recurring conflicts by single individual bears, which would benefit agricultural producers and other stakeholders impacted by conflict and potentially lead to greater tolerance for grizzly bears overall. Bears in these areas are not critical to reaching or maintaining recovery but remain important to tribes. This alternative will result in more predictable management of grizzly bears in different parts of the analysis area and commitment to their recovery and sustainability.

A statewide management plan will help demonstrate the adequacy of regulatory mechanisms that would be a consideration of delisting. With delisting, hunting becomes a viable management tool, although if hunting were to occur, those mortalities would count against established mortality thresholds in the GYE and NCDE. Tribes have gone on record as opposing sport hunting of grizzly bears, which could be allowed if delisted. More than 170 tribes, including most Montana tribes, signed a treaty in 2016 opposing delisting, primarily because of opposition to sport hunting.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, secondary impacts on *Cultural Uniqueness and Diversity* would not occur as grizzly bear management would look mostly the same as it has.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, minor to significant cumulative impacts on *Cultural Uniqueness and Diversity*. Implementation of the statewide plan could be viewed by the USFWS as a commitment to adequate regulatory mechanisms, necessary for federal delisting of the grizzly bear. Implementation of a hunting season for delisted grizzly bears would have impacts to both proponents and opponents of grizzly bear hunting. Many proponents of hunting feel that if a population is “recovered,” those animals should be available for hunting. Some proponents feel that hunting may increase social tolerance for bears by people, or that hunting may help bears become warier of humans. Others feel that hunting is a preferred population management tool for regulating the population and potentially addressing conflict bears. Many opponents, on the other hand, consider grizzly bear hunting to be trophy hunting. Yet other opponents are concerned that the populations will be over-harvested and would rather see “excess” animals used for expanding distribution into other areas. Many opponents simply do not support harvesting an iconic and, for some, spiritual animal. The potential for hunting is a key reason some grizzly bear advocates, particularly tribes, oppose delisting. “The sovereignty and spiritual rights of tribal nations in Montana and Wyoming are threatened by the proposed delisting,” Ivan Posey said in a 2015 open letter from the Montana and Wyoming Tribal Leaders Council to the USFWS. The tribes fear that delisting will lead to sport hunting under state management. Hunting off tribal reservations could redistribute bears onto tribal lands where hunting would not be allowed, leading to an increase in human-bear conflicts.

<http://www.indianz.com/News/2015/01/09/mtwytletter.pdf>

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Cultural Uniqueness and Diversity* would be consistent with current impacts in the areas where they occur.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact *Cultural Uniqueness and Diversity* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National park, wilderness, and national forest area designations
- Wildland fire

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 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.

Federal land managers have jurisdiction over National Parks, Wilderness Areas, and National Forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact water quality, quantity and distribution in the affected areas.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced (Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take longer to mend post-severe-fires and burns. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned across the core of the GYE, burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988 but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Cultural Uniqueness and Diversity* would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land management specific to grizzly bears in secure core habitats is already in place

and is represented as formal commitments within conservation strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas, but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Cultural Uniqueness and Diversity* because grizzly bears occurring and being managed in their native habitat will continue to be divisive. Some people will never accept grizzly bears being present in an area and will be unwilling to adjust their behaviors as a result. Others feel strongly that everyone must adjust as necessary to cohabitate with grizzly bears. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at naturally low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Cultural Uniqueness and Diversity*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short time basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.13 RESOURCE 12: ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES

3.13.1 INTRODUCTION

This section provides an overview of the *Access to and Quality of Recreational and Wilderness Activities* within the analysis area and the governing regulatory authorities.

Grizzly bears occur in many areas where humans recreate, including hiking, camping, fishing, and hunting. The proposed project does not restrict access to recreational and wilderness activities, so has no impact on access to recreational and wilderness activities. To some the presence of grizzly bears adds to the quality of wilderness experience, while to others they detract from it because of the potential threat they represent. 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 grizzly bear distribution in connectivity areas will increase the area where grizzly bears overlap with recreationists, resulting in potential impacts to those recreationists' experience.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Access to and Quality of Recreational and Wilderness Activities* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Access to and Quality of Recreational and Wilderness Activities* related to adoption and implementation of the statewide management plan. Federal land management agencies can and do impose regulations on food storage requirements on federal lands to prevent bears from obtaining human foods or garbage and becoming human habituated.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Access to and Quality of Recreational and Wilderness Activities* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the Code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.13.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on Cultural Uniqueness and Diversity is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.13.3 ENVIRONMENTAL CONSEQUENCES

3.13.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Access to and Quality of Recreational and Wilderness Activities* of the analysis area described in **Section 3.1.3**, because none of the disturbances associated with the project would occur. Under the No Action Alternative, there would be no changes to grizzly bear management except the geographic area of applied management would grow within the affected environment as grizzly bear distribution would likely continue to expand outside secure core habitats with recovered grizzly bear populations. This expansion would result in additional potential for conflicts including local loss of crops and livestock. Grizzly bears could potentially impact local recruitment of wild ungulates. FWP would continue to provide outreach and education in new areas to avoid conflict with agriculture and would continue conflict response to prevent further damage or loss. Where natural movement of bears between secure core areas is absent, FWP would translocate non-conflict grizzly bears at appropriate intervals to enhance connectivity between populations. Scientifically based regulated hunting of delisted grizzly bears, consistent with delisted population management, could occur if approved by the commission creating a new recreational opportunity. This alternative doesn’t restrict access to recreational and wilderness activities, so has no impact on access to recreational and wilderness activities.

The No Action Alternative would not change the status of the existing area. Impacts on *Access to and Quality of Recreational and Wilderness Activities* due to current and future activities in the existing area would continue.

3.13.3.1 Alternative 2 – Proposed Action

Direct Impacts

This alternative doesn't restrict access to recreational and wilderness activities, so has no direct impacts on access to recreational and wilderness activities. Under this alternative, grizzly bear management would look mostly the same as with the No Action Alternative 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. This may reduce recurring conflicts by single individual bears, which would benefit agricultural producers and other stakeholders impacted by conflict and potentially lead to greater tolerance for grizzly bears overall. Grizzly bears will continue to inhabit the analysis area at naturally low density. The statewide management plan will not impact access to recreational and wilderness activities. The presence of grizzly bears on public lands in the analysis area enhances the quality of recreational and wilderness activities for some who have an intrinsic appreciation of knowing grizzly bears are present. The presence of grizzly bears may detract from the recreational and wilderness activities of others who are concerned about safety or who have to implement additional practices such as food storage in occupied grizzly bear habitat. Scientifically based regulated hunting of delisted grizzly bears, consistent with delisted population management, could occur if approved by the commission creating a new recreational opportunity.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, minor, secondary, adverse and/or beneficial, impacts on *Access to Recreational and Wilderness Activities*. Impacts on quality of recreational and wilderness activities will be dependent on the individual person and how they view the presence of grizzly bears. To some there is an intrinsic value of just knowing grizzly bears are on the landscape, which enhances the quality of their recreational and wilderness activities. To others, the potential threat represented by grizzly bears detracts from their experience, and to some it results in their no longer visiting an area because of that threat.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, minor, adverse and/or beneficial, 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. Impacts on quality of recreational and wilderness activities will be dependent on the individual person and how they view the presence of grizzly bears based on their personal preferences based in history, lifestyle, and beliefs. 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 proponents and opponents of grizzly bear hunting.

The following summarizes the general views about grizzly bears and attitudes toward their management, specifically tied to recreation and hunting, of 1,758 Montanans (Statewide Survey of Montanan's Attitudes Toward Grizzly Bears, Nesbitt et al. 2020):<https://www.cfc.umt.edu/research/humandimensions/news/human-dimensions-grizzly-bear.php>

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.

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 recognizes the strongly held views held by many members of the public. There could be impact to *Access to and Quality of Recreational and Wilderness Activities* if hunting is not implemented but also if it is implemented. Many proponents of hunting feel that if a population is "recovered," those animals should be available for hunting. Some proponents feel that hunting may increase social tolerance for bears by people, or that hunting may help bears become warier of humans. Others feel that hunting is a preferred population management tool for regulating the population and potentially addressing conflict bears. Many opponents, on the other hand, consider grizzly bear hunting to be trophy hunting. Other opponents are concerned that the populations will be over-harvested and would rather see "excess" animals used for expanding distribution into other areas. Many opponents simply do not support harvesting an iconic, and for some, spiritual animal. The potential for hunting is a key reason some grizzly bear advocates, particularly tribes, oppose delisting.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore,

cumulative impacts on *Access to and Quality of Recreational and Wilderness Activities* would be consistent with current impacts in the areas where they occur.

Other Related, Past, Present, and Future Actions

The following activities have impacted or may impact *Access to and Quality of Recreational and Wilderness Activities* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National park, wilderness, and national forest area designations
- Wildland fire

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 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.

Federal land managers have jurisdiction over National Parks, Wilderness Areas, and National Forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact water quality, quantity and distribution in the affected areas.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced (Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take longer to mend post-severe-fires and burns. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned across the core of the GYE, burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988 but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Water Quality, Quantity, and Distribution* would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land management specific to grizzly bears in secure core habitats is already in place and is represented as formal commitments within conservation strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas, but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Access to and Quality of Recreational and Wilderness Activities* because grizzly bears occurring and being managed in their native habitat will continue to be divisive. Some people will never accept grizzly bears being present in an area and will be unwilling to adjust their behaviors as a result. Others feel strongly that everyone must adjust as necessary to cohabitate with grizzly bears. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at naturally low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Access to and Quality of Recreational and Wilderness Activities*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short time basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.14 RESOURCE 13: LOCAL AND STATE TAX BASE AND TAX REVENUE

3.14.1 INTRODUCTION

This section provides an overview of the *Local and State Tax Base and Tax Revenue* within the analysis area and the governing regulatory authorities.

Grizzly bear presence may impact tax base and tax revenue if bears occur in an area where development is proposed, employees are needed for bear management, or businesses such as restaurants and hotels are used by wildlife viewers or grizzly bear hunters. Grizzly bears prey on livestock opportunistically, resulting in impacts to agricultural producers from loss of livestock. While listed under the ESA, the decision on the response to livestock conflict rests with the USFWS. If a population segment were delisted, that decision would rest with FWP. While the state management plan does not directly affect tax base and revenue, it does provide some predictability as to areas more likely to be impacted by an expanding grizzly bear population.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Local and State Tax Base and Tax Revenue* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Local and State Tax Base and Tax Revenue* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Local and State Tax Base and Tax Revenue* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.14.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on Local and State Tax Base and Tax Revenue is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.14.3 ENVIRONMENTAL CONSEQUENCES

3.14.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Local and State Tax Base and Tax Revenue* of the analysis area described in **Section 3.1.3** because none of the disturbances associated with the project would occur. Under the No Action Alternative, there would be no changes to grizzly bear management except the geographic area of applied management would grow within the affected environment as grizzly bear distribution would likely continue to expand outside secure core habitats with recovered grizzly bear populations. This expansion would result in additional potential for conflicts including local loss of crops and livestock. Grizzly bears could potentially impact local recruitment of wild ungulates. FWP would continue to provide outreach and education in new areas to avoid conflict with agriculture and would continue conflict response to prevent further damage or loss. Where natural movement of bears between secure core areas is absent, FWP would translocate non-conflict grizzly bears at appropriate intervals to enhance connectivity between populations. Scientifically based regulated hunting of delisted grizzly bears, consistent with delisted population management, could occur if approved by the commission.

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.

3.14.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Local and State Tax Base and Tax Revenue*. Under the proposed action, grizzly bear management would look mostly the same as with the No Action Alternative.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no secondary impacts on *Local and State Tax Base and Tax Revenue*.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, minor, adverse and/or beneficial, cumulative impacts on *Local and State Tax Base and Tax Revenue*. Wildlife viewing and appreciation can bring visitors to Montana, but wildlife can also decrease profitability and tolerance of local agricultural businesses, particularly livestock operations. Livestock losses from grizzly bears 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.

Under the proposed alternative, 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. The latter (e.g., primarily private agricultural lands east of the Rocky Mountain Front) is where the habitat is more private agricultural land and where livestock conflicts are more common. Bears in these areas are not critical to reaching or maintaining recovery. Removing conflict bears may reduce recurring conflicts by single individual bears, which would benefit agricultural producers and other stakeholders impacted by conflict.

There may also be cumulative positive economic benefits to local and state tax bases from a recovered and sustainable bear population. Many people visit and move to Montana because of our diverse and abundant wildlife resources. FWP's successful education and outreach programs have made it possible for people to live and recreate in grizzly country, in essence, adding to the value of many Montana properties and therefore property taxes collected on them.

Grizzly bear presence in new areas could bring wildlife enthusiasts or hunters who would contribute to local economies. 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 and subsequent approval of a hunting season by the commission. Hunters in Montana contribute millions of dollars each year to small community restaurants and motels. While grizzly bear hunting opportunities would be limited, hunters could have short-term minor impacts on local business.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)

- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Local and State Tax Base and Tax Revenue* would be consistent with current impacts in the areas where they occur.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Local and State Tax Base and Tax Revenue* because grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna ~~at naturally low density~~ and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

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 and subsequent approval of a hunting season by the commission. Hunters in Montana contribute millions of dollars each year to small community restaurants and motels. While grizzly bear hunting opportunities would be limited, hunters could have short-term minor impacts on local business. If a grizzly bear hunting season was closed because of a federal re-listing of the species under ESA protection or a decrease in population numbers warranting closure, businesses that once relied on income from grizzly bear hunters could be unavoidably and adversely impacted. This could be an impact on *Local and State Tax Base and Tax Revenue*.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Local and State Tax Base and Tax Revenue*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in

some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short-term basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.15 RESOURCE 14: AGRICULTURE, INDUSTRIAL, OR COMMERCIAL PRODUCTION

3.15.1 INTRODUCTION

This section provides an overview of the *Agriculture, Industrial, or Commercial Production* within the analysis area and the governing regulatory authorities.

Grizzly bear presence may impact industrial and commercial activity if bears occur in an area where industrial or commercial development is proposed, especially if they remain listed under the ESA. Developers would have to consult with the USFWS to minimize and mitigate take for activities such as energy development, timber management, and manufacturing. For some that would preclude development. Grizzly bears prey on livestock opportunistically, resulting in impacts to agricultural producers from loss of livestock and often removal of the offending bear(s). While listed under the ESA, the decision on the response to livestock conflict rests with the USFWS. If a population segment were delisted, that decision would rest with FWP. In expansion areas, additional restrictions may occur as bears colonize new areas. While the plan does not directly affect *Agriculture, Industrial, or Commercial Production*, it does provide some predictability as to areas more likely to be impacted. Under the proposed alternative, where discretion is possible, FWP would attempt to minimize removal (moving bears or euthanizing them) where connectivity between core populations is likely (while still considering all options) but be quicker to recommend and/or implement removal where connectivity is unlikely.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Agriculture, Industrial, or Commercial Production* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Agriculture, Industrial, or Commercial Production* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Agriculture, Industrial, or Commercial Production* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.15.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on Agriculture, Industrial, or Commercial Production is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.15.3 ENVIRONMENTAL CONSEQUENCES

3.15.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Agriculture, Industrial, or Commercial Production* of the analysis area described in 3.1.3, because none of the disturbances associated with the project would occur. Under the No Action Alternative, there would be no changes to grizzly bear management except the geographic area of applied management would grow within the affected environment as grizzly bear distribution would likely continue to expand outside secure core habitats with recovered grizzly bear populations. This expansion would result in additional potential for conflicts including local loss of crops and livestock. Grizzly bears could potentially impact local recruitment of wild ungulates. FWP would continue to provide outreach and education in new areas to avoid conflict with agriculture and would continue conflict response to prevent further damage or loss. Where natural movement of bears between secure core areas is absent, FWP would translocate non-conflict grizzly bears at appropriate intervals to enhance connectivity between populations. Scientifically based regulated hunting of delisted grizzly bears, consistent with delisted population management, could occur if approved by the commission.

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.

3.15.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Agriculture Industrial, or Commercial Production*. Grizzly bear management would look mostly the same as with the No Action Alternative 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.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, minor, adverse and/or beneficial, secondary impacts on *Agriculture, Industrial, or Commercial Production*. Grizzly bear presence may impact industrial and commercial activity if bears occur in an area where industrial or commercial development is proposed, especially if they remain listed under the ESA. Developers would have to consult with the USFWS to minimize and mitigate take for activities such as energy development, timber management, and manufacturing. If on federal lands or if there is a federal nexus, the federal agency would be required to complete Section 7 consultation with the USFWS and implement required minimization and mitigation actions. For some that would preclude development.

Grizzly bears prey on livestock opportunistically, resulting in impacts to agricultural producers from loss of livestock and often removal of the offending bear(s). An average of 92 livestock were known to be lost to grizzly bears in the five-year period of 2016-2022. Expansion of grizzly bear distribution will likely lead to an increase in livestock losses in places like the lands east of the Rocky Mountain Front where the land is more private agricultural land and where livestock conflicts are more common. Under the proposed alternative, grizzly bears in areas that do not connect with cornerstone areas, which are primarily private, agricultural lands, would be more aggressively addressed which could reduce overall livestock losses. This may reduce recurring conflicts by single individual bears, which would benefit agricultural producers and other stakeholders impacted by conflict.

While listed, the decision on the response to livestock conflict rests with the USFWS. If a population segment were delisted, that decision would rest with FWP. In either scenario, the removal of a bear would count against agreed upon mortality thresholds in the GYE and NCDE conservation strategies. In core areas, this is already occurring and is understood. In expansion areas, additional restrictions on industrial production may occur as bears colonize new areas. While the statewide management plan does not directly affect *Agriculture Industrial, or Commercial Production*, it does provide some predictability as to areas more likely to be impacted.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, minor cumulative, adverse and/or beneficial, impacts on *Agriculture, Industrial, or Commercial Production*. Restrictions on land uses at least in cornerstone areas will continue, so activities like timber management will be limited to agreed-upon thresholds in the GYE and NCDE conservation strategies and

forest management plans. Future federal USFS, BLM, and NPS land management plans are subject to NEPA. Any updates to the NCDE and GYE CSs are also subject to NEPA.

Wherever grizzly bears are listed under the ESA, that federal law and its prohibitions on take will also cumulatively impact industrial development and production. Expansion of grizzly bears into new areas will have a similar impact. On the other hand, the statewide management plan may demonstrate adequacy of regulatory mechanisms as part of the evaluation of whether or not grizzly bears or grizzly bear population segments continue to be warranted for ESA protection.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Other Related, Past, Present, and Future Actions

Under these 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. Therefore, cumulative impacts on *Agriculture, Industrial, or Commercial Production* would be consistent with current impacts in the areas where they occur.

The following activities have impacted or may impact *Agriculture, Industrial, or Commercial Production* in the analysis area:

- Agriculture and livestock operations
- Road right-of-way and related construction
- National park, wilderness, and national forest area designations
- Wildland fire

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 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.

Federal land managers have jurisdiction over National Parks, Wilderness Areas, and National Forests. Approximately 36% of the 30-county analysis 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. These areas are protected from certain activities that could impact water quality, quantity and distribution in the affected areas.

Wildland fires directly influence grizzly bear food sources in various ways. Forbs, grasses, and other undergrowth may respond fairly 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. Berry- or fruit-producing shrubs may thrive post-fire if canopy cover is reduced (Martin, 1983; Zager et al., 1983; Holland, 1986). Some berries, like *Vaccinium scoparium*, may take longer to mend post-severe-fires and burns. Ungulate distribution and thus carrion in the spring can also be altered following fire events.

The historic 1988 wildfires, which spanned across the core of the GYE, burned nearly 793,880 acres of the national park (1.4 million acres in the GYE). The core of the GYE grizzly bear population was within the border of the park in 1988 but the population has steadily grown within the park and expanded widely outside the park since the wildfires of 1988. Grizzly bears 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 fire; therefore, the project does not contribute to cumulative impacts associated with wildland fire.

Under the proposed action, cumulative impacts on *Agriculture, Industrial, or Commercial Production* would not be limited to grizzly bear secure core habitats and connectivity areas. As a necessary component of delisting, federal land management specific to grizzly bears in secure core habitats is already in place and is represented as formal commitments within conservation strategies. While FWP would continue to recommend similar public land management in connectivity areas, the federal land management commitments are less formalized in those areas but at large scales would likely look similar to current management. FWP would work with federal land management entities via NEPA planning processes, e.g., USFS forest plan revisions and BLM resource management plans, when recommending conservation action. FWP work with private landowners in consideration of additional or new conservation measures on private land is landowner led. All lands projects between FWP and private landowners go through rigorous review and approval processes.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Agriculture, Industrial, or Commercial Production* because grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna ~~at naturally low density~~ and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing a statewide plan there would be no irreversible and irretrievable impacts on *Agriculture, Industrial, or Commercial Production*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short time basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.16 RESOURCE 15: HUMAN HEALTH

3.16.1 INTRODUCTION

This section provides an overview of the *Human Health* within the analysis area and the governing regulatory authorities.

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 and impacts to individual human health.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Human Health* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Human Health* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Human Health* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.16.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on *Human Health* is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.16.3 ENVIRONMENTAL CONSEQUENCES

3.16.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Human Health* of the analysis area described in **Section 3.1.3**, because none of the disturbances associated with the project would occur. Under the No Action Alternative, there would be no changes to grizzly bear management except the geographic area of applied management would grow within the affected environment as grizzly bear distribution would likely continue to expand outside secure core habitats with recovered grizzly bear populations. This expansion would result in additional potential for conflicts including local loss of crops and livestock. FWP would continue to

provide outreach and education in new areas to avoid conflict with agriculture and would continue conflict response to prevent further damage or loss. FWP would also continue to provide outreach and education to recreationists in areas where grizzly bear presence may be new.

The No Action Alternative would not change the status of the existing area. Impacts on *Human Health* due to current and future activities in the existing area would continue.

3.16.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Human Health*. Grizzly bear management would look mostly the same as with the No Action Alternative 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.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no secondary impacts on *Human Health*. 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 and impacts to individual human health. Those would occur under either alternative.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, 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 bears move closer to communities in connectivity areas and areas where grizzly bear presence is new, people may need to implement new food, garbage, and livestock feed storage practices. Bear-resistant storage containers are widely available but can be costly depending on the size of a homesite or operation. People may also need to implement new techniques for containing livestock that prevents loss or damage from grizzly bears. Bear resistant livestock containment can be costly depending on the size of the operation. People recreating in areas with new grizzly bear presence may need to adjust their operations by knowing how to safely recreate in bear country and carrying bear spray. Landowners and homeowners may need to adjust their daily routines when grizzly bears are in an area.

FWP decisions or actions made within the sideboards of the statewide plan but contrary to a person's personal beliefs could impact *Human Health* particularly for those individuals uncomfortable with the presence of grizzly bears and those who believe grizzly bears pose a safety risk. The following summarizes the general views about grizzly bears and attitudes toward their management of 1,758 Montanans (Statewide Survey of Montanan's Attitudes Toward Grizzly Bears, Nesbitt et al. 2020):

<https://www.cfc.umt.edu/research/humandimensions/news/human-dimensions-grizzly-bear.php>

- 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 substantial 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%).

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Human Health* would be consistent with current impacts in the areas where they occur.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Human Health* because grizzly bears occurring and being managed in their native habitat will continue to be divisive. Some people will never accept grizzly bears being present in an area and will be unwilling to adjust their behaviors as a result. Others feel strongly that everyone must adjust as necessary to cohabitate with grizzly bears. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at naturally low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irretrievable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Human Health*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use.

The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short-term basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.17 RESOURCE 16: QUANTITY AND DISTRIBUTION OF EMPLOYMENT

3.17.1 INTRODUCTION

This section provides an overview of the *Quantity and Distribution of Employment* within the analysis area and the governing regulatory authorities.

Land protection for grizzly bear conservation in some areas limits certain types of employment. FWP employs staff for wildlife and conflict management. Overall, implementation of the proposed action would have little impact on the *Quantity and Distribution of Employment*.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Quantity and Distribution of Employment* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Quantity and Distribution of Employment* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Quantity and Distribution of Employment* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.17.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on Quantity and Distribution of Employment is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.17.3 ENVIRONMENTAL CONSEQUENCES

3.17.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Quantity and Distribution of Employment* of the analysis area described in **Section 3.1.3**, because none of the disturbances associated with the project would occur. Under the No Action Alternative, there would be no changes to grizzly bear management except the geographic area of applied management would grow within the affected environment as grizzly bear distribution would likely continue to expand outside secure core habitats with recovered grizzly bear populations. This expansion would result in additional potential for conflicts including local loss of crops and livestock. Grizzly bears could potentially impact local recruitment of wild ungulates. FWP would continue to provide outreach and education in new areas to avoid conflict with agriculture and would continue conflict response to prevent further damage or loss. Where natural movement of bears between secure core areas is absent, FWP would translocate non-conflict grizzly bears at appropriate intervals to enhance connectivity between populations. Scientifically based regulated hunting of delisted grizzly bears, consistent with delisted population management, could occur if approved by the commission.

The No Action Alternative would not change the status of the existing area. Impacts on *Quantity and Distribution of Employment* due to current and future activities in the existing area would continue.

3.17.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan there would be no direct impacts on *Quantity and Distribution of Employment* from adoption and implementation of the statewide plan as grizzly bear management would look mostly the same as with the No Action Alternative.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan there would be no secondary impacts on *Quantity and Distribution of Employment*.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, negligible, adverse and/or beneficial, cumulative impacts on *Quantity and Distribution of Employment*. Under the conservation agreements for the GYE and NCDE, federal land management agencies have committed to limiting habitat development to 1998 levels (GYE) and 2011 levels (NCDE) in the PCAs within those ecosystems. This commitment to ~~limit new~~ developments on the public lands in these areas could limit *Quantity and Distribution of Employment* on public lands in these PCAs. 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.

Grizzly bear presence in new areas and/or increased removal of individual bears of lower management priority could require an increase in FWP staff. The impact of staff needing housing would be negligible as few new staff would be needed to manage grizzly bears in new areas. 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 FTE where expanding grizzly bear populations present the need for conflict management and also opportunities for connectivity while maintaining efforts in the three occupied core areas.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Quantity and Distribution of Employment* would be consistent with current impacts in the areas where they occur.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Quantity and Distribution of Employment*. Grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna at naturally low density and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irrecoverable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Quantity and Distribution of Employment*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use.

The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short time basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.18 RESOURCE 17: DISTRIBUTION AND DENSITY OF POPULATION AND HOUSING

3.18.1 INTRODUCTION

This section provides an overview of the *Distribution and Density of Population and Housing* within the analysis area and the governing regulatory authorities.

Planning and zoning laws based on the needs of humans, wildlife and the environment generally drive housing development. Implementation of the proposed action would have little impact on the *Distribution and Density of Population and Housing*.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Distribution and Density of Population and Housing* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Distribution and Density of Population and Housing* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Distribution and Density of Population and Housing* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111, which prohibits counties from exercising “any power that applies to or affects Title 87.” Title 87 is the fish and wildlife title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.18.2 ANALYSIS AREA

The analysis area for direct and secondary impacts on *Distribution and Density of Population and Housing* is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana’s total area. A description of the area is provided above in Section 3.1.3.

3.18.3 ENVIRONMENTAL CONSEQUENCES

3.18.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Distribution and Density of Population and Housing* of the analysis area described in **Section 3.1.3**, because none of the disturbances associated with the project would occur.

The No Action Alternative would not change the status of the existing area. Impacts on *Distribution and Density of Population and Housing* due to current and future activities in the existing area would continue.

3.18.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Distribution and Density of Population and Housing*. Planning and zoning laws based on the needs of humans, wildlife and the environment generally drive housing development. Implementation of the proposed action would not directly impact housing development. Under this alternative, grizzly bear management would look mostly the same as with the No Action Alternative 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. This may reduce recurring conflicts by single individual bears, which would benefit agricultural producers and other stakeholders impacted by conflict and potentially lead to greater tolerance for grizzly bear overall. Grizzly bears will continue to inhabit the analysis area at naturally low density.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no secondary impacts on *Distribution and Density of Population and Housing*.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be short-term, negligible, adverse and/or beneficial, cumulative impacts on *Distribution and Density of Population and Housing*. Under the conservation agreements for the GYE and NCDE, federal land management agencies have committed to limiting habitat development to 1998 levels (GYE) and 2011 levels (NCDE) in the PCAs within those ecosystems. This commitment to ~~limit new~~ developments on the public lands in these areas could limit *Distribution and Density of Population and Housing* on public lands in these PCAs.

Grizzly bear presence in new areas and/or increased removal of individual bears of lower management priority could require an increase in FWP staff. The impact of staff needing housing would be negligible as few new staff would be needed to manage grizzly bears in new areas. 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 FTE where expanding grizzly bear populations present the need for conflict management and also opportunities for connectivity while maintaining efforts in the three occupied core areas.

Current grizzly bear management strategies within the analysis area are guided collectively by the following:

- The Endangered Species Act (ESA)
- Grizzly Bear Management Plan for Western Montana: Final Programmatic Environmental Impact Statement 2006-2016 (would be supplanted by proposed action),
- Grizzly Bear Management Plan for Southwestern Montana 2013: Final Programmatic Environmental Impact Statement (would be supplanted by proposed action),
- 2016 Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem (GYE CS, hereafter), and
- Conservation Strategy for the Grizzly Bear in the Northern Continental Divide Ecosystem 2019 (NCDE CS, hereafter).

Under these 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. Therefore, cumulative impacts on *Distribution and Density of Population and Housing* would be consistent with current impacts in the areas where they occur.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Distribution and Density of Population and Housing* because grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna ~~at naturally low density~~ and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irretrievable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Distribution and Density of Population and Housing*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use.

The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short time basis (should data indicate that to be prudent), the management program poses no threat to the species.

3.19 RESOURCE 18: LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS

3.19.1 INTRODUCTION

This section provides an overview of the *Locally Adopted Environmental Plans and Goals* within the analysis area and the governing regulatory authorities.

Grizzly bear management is driven by state and interagency plans that focus on the habitat needs of the bear and conflict management. The statewide management plan would honor existing environmental plans and goals related to other issues so long as they fall within the legal constraints of grizzly bear management, e.g., ESA regulation while the grizzly bear is federally listed as threatened or state hunting regulations if a hunting season is implemented following delisting.

This section also analyzes the environmental consequences, including the direct, secondary, and cumulative impacts, of the No Action Alternative (Alternative 1) and the proposed action (Alternative 2) with respect to *Locally Adopted Environmental Plans and Goals* in the analysis area.

Regulatory Framework

Federal Requirements

The grizzly bear is currently listed under the ESA as threatened throughout its range in the contiguous United States. As such, federal regulations pursuant to the ESA provide direction, and in some cases, restrict actions that can be taken. The recovery plan (USFWS 1993) and its supplements (USFWS 1997, 2007, 2017, and 2018) outline recovery goals and methods pursuant to populations in Montana. FWP is required to comply with ESA regulations for federally listed grizzly bears as long as they or subsets of their population remain federally listed. There are no other applicable federal requirements associated with *Locally Adopted Environmental Plans and Goals* related to adoption and implementation of the statewide management plan.

State Requirements

Where not superseded by federal law or regulation, Montana laws provide broad direction. Under the authority of the MCA, the commission develops more detailed regulations governing grizzly bear management (ARM). Grizzly bears are classified as a game animal in Montana statute (MCA 87-2-101). FWP also has a statutory requirement to manage species to prevent the need for federal listing (MCA 87-5-107). Species or subspecies of wildlife indigenous to this state that may be found to be endangered within the state should be protected in order to maintain and, to the extent possible, enhance their numbers. There are no other applicable state requirements associated with *Locally Adopted Environmental Plans and Goals* related to adoption and implementation of the statewide management plan.

Local Requirements

Local governments have no authority for state managed wildlife per MCA 7-1-111, which prohibits counties from exercising "any power that applies to or affects Title 87." Title 87 is the fish and wildlife

title of the code. However, local governments may enact regulations to reduce conflict, such as prohibiting feeding of wildlife.

3.19.2 ANALYSIS AREA

THE ANALYSIS AREA FOR DIRECT AND SECONDARY IMPACTS ON *Locally Adopted Environmental Plans and Goals* is the 30 counties of western and central Montana (Map 6). Together, these counties constitute 74,158 mi² (192,068 km²), about 51% of Montana's total area. A description of the area is provided above in Section 3.1.3.

3.19.3 ENVIRONMENTAL CONSEQUENCES

3.19.3.1 Alternative 1 – No Action

Under the No Action Alternative, the proposed project would not occur. There would be no project impacts on the pre-project *Locally Adopted Environmental Plans and Goals* of the analysis area described in **Section 3.1.3**, because none of the disturbances associated with the project would 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.

3.19.3.2 Alternative 2 – Proposed Action

Direct Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no direct impacts on *Locally Adopted Environmental Plans and Goals*. Under this alternative, grizzly bear management would look mostly the same as with the No Action Alternative 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. This may reduce recurring conflicts by single individual bears, which would benefit agricultural producers and other stakeholders impacted by conflict and potentially lead to greater tolerance for grizzly bear overall. Grizzly bears will continue to inhabit the analysis area at naturally low density.

Secondary Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no secondary impacts on *Locally Adopted Environmental Plans and Goals* because the adoption and implementation of the statewide plan would not influence or change other plans or goals of other plans.

Cumulative Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no cumulative impacts on *Locally Adopted Environmental Plans and Goals* because the adoption and implementation of the statewide plan would not influence or change other plans or goals of other plans.

Unavoidable Adverse Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no unavoidable adverse impacts on *Locally Adopted Environmental Plans and Goals* because grizzly bears will continue to inhabit the analysis area in which they are part of the native fauna ~~at naturally low density~~ and will function ecologically as a native inhabitant of that habitat. If, in the future, implementation of the plan resulted in unanticipated adverse impacts, management steps could be taken to address those impacts such as reduction of the local population creating the adverse impact.

Irreversible and Irretrievable Impacts

Under the proposed action of adopting and implementing a statewide plan, there would be no irreversible and irretrievable impacts on *Locally Adopted Environmental Plans and Goals*. A resource commitment is considered irreversible when impacts from its use limit future use options. Irreversible commitments apply primarily to nonrenewable resources, such as fossil fuels or minerals, and to those resources that are renewable only over long timespans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. In essence, irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the proposed action or preferred alternative. Such commitments include expenditure of funds, loss of production or restrictions on resource use. The programs considered under FWP's Preferred Alternative do not result in any irretrievable commitment of resources. If expansion of bears proves untenable in some areas, FWP has demonstrated the ability to remove bears. Similarly, habitat programs, hunting seasons, and access management can be reversed or revised if needed. Mortality of individual animals will not result in any irretrievable commitment of grizzly bear populations. Because removals can be regulated or eliminated on an annual basis, or even short time basis (should data indicate that to be prudent), the management program poses no threat to the species.

CHAPTER 4. REGULATORY RESTRICTIONS

4.1 REGULATORY RESTRICTIONS OF PRIVATE PROPERTY

MEPA requires state agencies to evaluate regulatory restrictions proposed to be imposed on private property rights as a result of actions of state agencies, including an analysis of alternatives that reduce, minimize, or eliminate the regulation of private property (MCA 75-1-201(1)(b)(iii)). Alternatives and mitigation measures required by federal or state laws and regulations to meet minimum environmental standards, as well as actions proposed by or consented to by the applicant, are not subject to a regulatory restrictions analysis.

The statewide management plan would create no additional regulatory restrictions on private property as it is a management plan that provides guidance to FWP on management of grizzly bears. Similar to the management of other species, FWP would respect private property rights and work with landowners only through voluntary agreements relative to wildlife or habitat management. Habitat conservation agreements such as habitat leases would be vetted through appropriate approval processes that involve the commission and State Board of Land Commissioners.

No Action Alternative

The statewide management plan would create no additional regulatory restrictions on private property as it is a management plan that provides guidance to FWP on management of grizzly bears. Under the *No Action Alternative*, grizzly bears would continue to expand from core areas into less occupied and currently unoccupied habitat. As long as they remain listed under the ESA they would be protected from take under the ESA, whether on private or public property. No explicit direction would be articulated for private lands, but FWP would recognize the pivotal role private landowner support plays in recovery and the significant contribution of private lands in the recovery effort.

Proposed Action

The statewide management plan would create no additional regulatory restrictions on private property as it is a management plan that provides guidance to FWP on management of grizzly bears. Under the proposed action, grizzly bears would continue to expand from core areas into less occupied and currently unoccupied habitat. If they remain listed under the ESA, they would be protected from take under the ESA, whether on private or public property. The adoption of statewide management plan may help support delisting which would remove the federal restrictions on take of grizzly bears, although they would still be protected under state regulations. Removal of ESA oversight could lead to more flexibility to landowners to address human-bear conflicts, especially in areas that do not provide connectivity between recovery zones. FWP would acknowledge the contribution that private lands make in providing habitat for grizzly bears beyond secure areas^[1], 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.

¹⁴¹ See ARM 12.9.1401. “Secure” is a general term meaning wild places where humans visit but do not live, where extractive activities are limited spatially and temporally, where roads are primitive and do not dominate the landscape, and where wildlife generally lives with minimal interaction with people. No specific standards are implied.

CHAPTER 5. COORDINATION AND CONSULTATION

5.1 CONSULTATION PROCESS

During the scoping process, as well as through consultation and coordination throughout the preparation of this DEIS, formal and informal efforts were made by the FWP to involve appropriate federal and state agencies, local governments, tribes, and members of the public. This consultation and coordination with multiple stakeholders is important to ensure the most appropriate data were gathered for analysis and to ensure agency and public interests were considered by decision-makers. This chapter provides a summary of the formal consultation processes that occurred during the preparation of the DEIS and provides the distribution list for the DEIS.

5.1.1 PUBLIC COMMENT PROCESS

The 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)), years of inter-agency collaboration on grizzly bear conservation, previous state and inter-agency plans, routine interactions with the public during FWP’s day-to-day management and research, a human dimensions public attitude survey, internal SDM process, and a public advisory committee (GBAC). These internal and public processes are considered to have fulfilled the scoping requirements of MEPA. **Chapter 1** provides a complete summary of the public scoping process for this DEIS. **Chapter 1** also describes the issue identification process and identifies key issues and nonsignificant issues eliminated from detailed analysis (Section 1.5.2, Scoping Issue Identification)

5.1.2 TRIBAL CONSULTATION

Completion of the statewide management plan required consulting and incorporating the guidance and rules from a variety of existing federal and state plans. At the ecosystem level, native American tribes possessing grizzly habitat within the recovery areas have been involved in development of those plans through the IGBC and other forums. (<http://igbconline.org/story-of-the-igbc/>).

5.1.3 FEDERAL, STATE, AND LOCAL AGENCY CONSULTATION

Completion of the statewide management plan required consulting and incorporating the guidance and rules from a variety of existing federal and state plans. Guidance from the GBAC, a group of 18 citizens selected and empaneled by then Gov. Steve Bullock of Montana via Executive Order 9-2019 (July 24, 2019) was used to inform direction of the management described within the statewide plan.

All actions FWP takes within the statewide plan must be consistent with protocols and procedures of the USFWS while the grizzly bear is a federally listed threatened species. That said, day-to-day management occurs in a cooperative setting, whereby land management agencies act according to plans that have been developed in consultation with, and approved by the USFWS, and in which states and tribes conduct conflict prevention and response activities (in conjunction with U.S. Department of Agriculture Wildlife Services (USDA WS) when livestock depredation is involved). The USFWS must approve of actions that affect individual grizzly bears, i.e., relocation, translocation, euthanasia. The USFWS does not typically require notification or involvement with day-to-day- conflict prevention, conflict response (except when capture of individual grizzly bears is contemplated), or education and information efforts on the part of states and tribes.

Montana Codes Annotated (MCA)

This DEIS and statewide management plan have been written to be compliant and consistent with MEPA (MCA, Title 75), following guidelines produced by Stockwell (2013). This DEIS and plan have been written to be compliant and consistent with elements of the Montana Code that refer to big game, predators, and grizzly bears specifically (MCA 1-1-508; MCA 87-1-201; 87-1-217; 87-1-304; 87-2-101; 87-2-701; 87-2-702; 87-3-131; 87-5-103; 87-5-301; 87-5-302; 87-5-725; 87-6-202; 87-6-205; 87-6-206; 87-7-413; 87-6-907.

Administrative Rules of Montana (ARM)

This DEIS and statewide plan have been written to be compliant and consistent with elements of the ARM with relevance to grizzly bears, specifically ARM 12.3.404; 12.8.806; 12.9.1401; 12.9.1403.

Relationship of this Plan to Interagency Cooperative Plans

1993 USFWS Recovery Plan

Grizzly bear populations listed under the ESA are broadly managed under the auspices of the Grizzly Bear Recovery Plan, initially published on Jan. 29, 1982, and revised and approved by the USFWS on Sept. 10, 1993. The 1993 recovery plan identified five “ecosystems” in which grizzly bears were present but in need or recovery: the Yellowstone Ecosystem (termed the YGBE in the 1993 recovery plan, but subsequently referred to at the Greater Yellowstone Ecosystem, GYE); the NCDE, the CYE, and the Selkirk Ecosystem (SE). Additionally, the 1993 recovery plan identified two “evaluation areas” where grizzly bears were not known to exist in 1993, but for which further planning would be conducted. These were the Bitterroot Ecosystem (BE), and the North Cascades Ecosystem (NCE). In March 2000, the USFWS published a final EIS detailing its plan to recovery grizzly bears in the BE, at which point, the BE “evaluation area” became recognized as a sixth recovery zone. The SE and NCE are located entirely outside of Montana, and thus enter consideration in this plan only tangentially. The other four “Ecosystems” are located entirely (in the case of the NCDE), primarily (CYE), or partly (GYE, BE) within Montana.

The 1993 recovery plan outlines general approaches the USFWS identified as fulfilling the ESA’s requirement that delisting only occur once the conditions that necessitated listing were resolved. However, detailed strategies and tactics for each ecosystem have evolved over time and have been superseded by various subsequent documents and agreements that have updated our understanding of the species’ status, monitoring protocols, and specific actions needed to achieve recovery. Thus, while the 1993 recovery plan remains the foundational document from which most others flow, its importance for day-to-day management has receded as federal, state and tribal authorities have produced newer, more relevant documents.

Interagency Grizzly Bear Committee

In 1983 the secretaries of the Departments of Interior and Agriculture and the governors of Idaho, Montana, Wyoming, and Washington signed a MOA to establish the IGBC. Their purpose for creating the IGBC was to “coordinate [federal and state] management and research actions to the greatest extent possible to ensure the best utilization of available resources and prevent duplication of effort.” The mission of the IGBC is “...to achieve recovery and delisting, and to support ongoing conservation of grizzly bear populations and their habitats after delisting in areas of the western United States through interagency coordination of policy, planning, management, research and communication” (IGBC 2019). Sub-committees for each of the six identified grizzly bear ecosystems were subsequently created. The IGBC consists of “...representatives from the USFWS, NPS, BLM, USGS and representatives of the state wildlife agencies of Idaho, Montana, Washington and Wyoming. In the interest of international coordination and cooperation, the Canadian Wildlife Service is also represented. At the ecosystem level, native American tribes possessing grizzly habitat within the recovery areas have also been involved.” (<https://igbconline.org/about-us/><https://igbconline.org/story-of-the-igbc/>). FWP has been a full member of both the IGBC Executive Committee, and of the GYE, NCDE, and CYE sub-committees from the outset.

The IGBC is not a governing body or legal entity. IGBC member agencies retain their individual authority and autonomy. Rather it exists to provide and coordinate policy-level oversight and direction among its various members. Various documents produced or sanctioned by the IGBC have relevance to the statewide management plan, and are referenced as appropriate. The intention is the statewide management plan be fully consistent with, and build upon, documents produced by the IGBC.

IGBC Guidelines

An early, important, and still used document is called the Interagency Grizzly Bear Guidelines (1986). In Section III of the statewide management plan, this document put forth general goals for NPS and USFS lands.

GYE Conservation Strategy

FWP is a signatory to the inter-agency MOU implanting the GYE CS (GYE Subcommittee 2019), which serves as an interagency management plan for the GYE and surrounding lands. The GYE CS is not a regulatory or statutory document, but rather a summary of commitments and regulatory mechanisms made by each government entity. The GYE CS would take formal effect upon delisting of bears within the GYE recovery zone. If delisting occurs, the ESA requires the USFWS, in cooperation with the state of Montana, to monitor the species for at least five years afterwards to assure that recovery is sustainable (a separate monitoring strategy would be developed by the USFWS). The CS however, is not considered to be time-limited, but rather to be in effect indefinitely and reviewed by participants at 5-year intervals.

The GYE CS summarizes strategies and actions that federal, state, and tribal authorities have pledged to undertake within the DMA that includes and surrounds the GYE recovery zone (which would be renamed the PCA after delisting). The CS categorizes these commitments as demographic monitoring and management (i.e., population management), habitat management and monitoring, and conflict prevention and response. FWP is primarily involved with the first and third of these, tangentially involved with the second.

NCDE Conservation Strategy

FWP is a signatory to the inter-agency MOU implementing the NCDE CS (NCDE Subcommittee 2019), which serves as an interagency management plan for the NCDE and surrounding lands. The NCDE CS (NCDE Subcommittee 2019) is not a regulatory or statutory document, but rather a summary of

commitments and regulatory mechanisms made by each government entity. The NCDE CS would take formal effect upon delisting of bears within the NCDE recovery zone. If delisting occurs, the ESA requires the USFWS, in cooperation with the state of Montana, to monitor the species for at least five years afterwards to assure that recovery is sustainable (a separate monitoring strategy would be developed by the USFWS). The CS however, is not considered to be time-limited, but rather to be in effect indefinitely and reviewed by participants at 5-year intervals.

The NCDE CS summarizes strategies and actions that federal, state, and tribal authorities have pledged to undertake within the DMA that includes and surrounds the NCDE recovery zones (which would be renamed the PCA after delisting). The CS categorizes these commitments as demographic monitoring and management (i.e., population management), habitat management and monitoring, and conflict prevention and response. FWP is primarily involved with the first and third of these, tangentially involved with the second. Commitments made by FWP related to demographic monitoring and management were formalized by a public process and written into regulation by the commission in ARM 12.9.1403.

Tri-state MOA

In December 2021, the commission entered into a MOA with the wildlife commissions of Wyoming and Idaho regarding the management of genetic health, and allocation of discretionary mortality of grizzly bears in the GYE (see Appendix C). The purpose of the MOA was to define a process to coordinate management of grizzly bears across state lines, largely anticipating a possible future delisting of these animals. This EIS and statewide management plan are fully consistent with that MOA.

FWP-USDA-WS MOU

In November 2022, FWP renewed a MOU with (USDA WS) outlining a cooperative program for management of wildlife damage from grizzly bears, wolves, black bears, and mountain lions in Montana. For grizzly bears, the import of this MOU is largely to clarify that investigations of possible livestock depredations will be the responsibility of WS (in cooperation with FWP when possible).

U.S. Forest Service Plans

As the USFS is the manager of the largest single land-ownership category in western Montana, decisions made by the USFS have great influence on grizzly bear management and conservation. Forests with lands in the NCDE and GYE area are incorporated by reference in the two respective CSs.

Relationship of this Plan to Existing State Plans

Western Montana Plan (2006). This statewide management plan, when formally adopted, will supersede the Grizzly Bear Plan for Western Montana (Dood et al. 2006).

Southwest Montana Plan (2013). This statewide management plan, when formally adopted, will supersede the Grizzly Bear Plan for Southwestern Montana (FWP 2013).

5.2 DEIS DISTRIBUTION

This DEIS has been prepared by FWP to analyze and disclose the potential environmental impacts of adopting and implementing the Montana Statewide Grizzly Bear Management Plan (Plan). According to the applicable requirements of ARM 12.2.439, following preparation of a DEIS, the agency shall distribute copies to persons who have requested copies and the general public affected by the proposed Plan. An EIS is a public document and may be inspected upon request. Any person may obtain a copy of an EIS by making a request to FWP.

To fulfill MEPA requirements, this DEIS has been distributed through the following methods:

- Public notice has been served on the Montana Fish, Wildlife & Parks website at: <https://fwp.mt.gov/aboutfwp/public-comment-opportunities/grizzly-bear-management-plan>
- Public notice has been served on the Montana Environmental Quality Council's MEPA Document List website at: <https://leg.mt.gov/mepa/search/>.
- FWP maintains a mailing list of persons interested in a particular action or type of action. FWP has notified all interested persons and alerted them to this public comment opportunity. The interested persons mailing list is available upon request from FWP.
- For more information on how to submit comments on this EIS electronically, visit: <https://fwp.mt.gov/aboutfwp/public-comment-opportunities/grizzly-bear-management-plan>
- FWP has also issued a press release for use by the media.

Copies of the DEIS have also been sent to the governor, other affected state agencies, and the Montana Environmental Quality Council for review.

CHAPTER 6. LIST OF PREPARERS

6.1 MONTANA FISH, WILDLIFE AND PARKS

NAME	RESPONSIBILITIES	EDUCATION	EXPERIENCE
Richard Harris	Primary drafter of plan and impact analysis	PhD Wildlife Biology	>40 years of wildlife management and federal lands management experience
Ken McDonald	Impact analysis	MS Wildlife Biology	>30 years of wildlife management experience
Lauri Hanauska-Brown	Impact analysis	MS Wildlife Biology	>25 years of wildlife management experience
Eric Merchant	MEPA Specialist	BS, Biology, MS, Public Health	23 years of public service

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CHAPTER 8 APPENDICES

Appendix A. Considerations for translocating NCDE grizzly bears to the GYE for genetic augmentation

Appendix B. Approved sites where grizzly bears can be released by FWP

Appendix C. Tri-State Memorandum of Agreement Regarding the Management, Genetic Health, and Allocation of Discretionary Mortality of Grizzly Bears in the Greater Yellowstone Ecosystem

APPENDIX A

Considerations for translocating NCDE grizzly bears to the GYE for genetic augmentation

For the rationale and overview of this initiative, please see the document “Genetic augmentation of grizzly bears in the Greater Yellowstone Ecosystem: Pilot program rationale and process,” dated March 18, 2022.

This working document was coordinated by Rich Harris (FWP), with considerable input from the editorial team of Cecily Costello (FWP), Frank van Manen (USFS), and Hillary Cooley (USFWS). Substantive input was received from Mark Haroldson (USGS), Dan Thompson (WDFG), Dan Bjornlie (WDFG), Jeremy Nicholson (IDFG), Jeremiah Smith (FWP), Tim Manley (FWP, retired), Wesley Sarmiento (FWP), Chad White (FWP), Kari Eneas (CSKT), Jennifer Fortin-Noreus (USFWS), Wayne Kasworm (USFWS), Scott Jackson (USFS) and Kerry Gunther (YNP). This or earlier drafts have been reviewed by Kim Annis (FWP), Jamie Jonkel (FWP), Lori Roberts (FWP), Camel Whisper-Means (CKST), Jeff Horn (Blackfoot Tribe Wildlife), Ken McDonald (FWP), Justin Schwabedissen (GTNP), Rory Trimbo (FWP), John Waller (GNP), Dan Tyers (USFS) and Kate Wilmot (GTNP).

Grizzly bears living in the Greater Yellowstone Ecosystem (GYE) have been isolated from other grizzly bear populations for possibly over 100 years, and their continued genetic isolation is a long-term conservation concern. The rate of inbreeding has been very low (0.2% over 25 years), and no inbreeding effects have been detected. Additionally, effective population size has increased well above the level where short-term genetic effects would be expected, and is approaching criteria for long-term population viability. Nonetheless, with lower genetic diversity than other North American grizzly bear populations, it is recognized that infusion of genetic material from other populations would enhance the adaptive capacity and long-term persistence of the GYE population. Although no evidence of immigration has been documented since genetic monitoring began, the potential for natural movement into the population by bears from the Northern Continental Divide Ecosystem (NCDE) is increasing over time. Due to population growth and expansion, distance between the nearest portions of estimated Occupied Ranges of these two populations to each other had diminished to only 57 km by 2020.

One option for increasing genetic diversity in the GYE is to assist the natural immigration process via occasional human-aided translocation of bears from the Northern Continental Divide Ecosystem. Grizzly bears have been successfully translocated from the NCDE to the Cabinet Mountains to provide genetic and demographic augmentation to the small Cabinet-Yaak Ecosystem population. However, long-distance translocation of bears, especially between populations separated by human-dominated landscapes, is not without risks. Not all bears translocated to the Cabinet Mountains bears survived or settled in the release area. Translocated bears often exhibit unusual movement patterns, likely motivated by their homing instinct or because of spatial competition from resident bears and difficulty in finding a vacant space to settle. Post-translocation movements of grizzly bears can be extensive, often increasing their mortality risk (e.g., vehicle collisions, poor nutrition) or the likelihood of encountering human settlements and engaging in human-bear conflict. If human-aided translocation is implemented, an imperative is to minimize the probability that translocated bears come into conflict with people.

If a translocation option is chosen by cooperating agencies and the Yellowstone Ecosystem Subcommittee, careful planning with respect to selection of candidate individuals, timing, and locations will help decrease these risks and increase the likelihood of successfully adding to the genetic diversity of the GYE population.

This working document is intended to guide field practitioners (and to inform wildlife managers, land managers, and the interested public) regarding our collected expertise on ‘best practices’ likely to result in success. Ultimately, successful implementation would entail translocated bear(s) staying within the GYE and producing or siring cubs that themselves survive long enough to attain survival rates comparable to resident bears. Documenting such success, however, is likely to be a difficult and long-term process, will require statistical procedures such as assignment tests based on DNA samples. More immediate metrics of success, such as documenting an individual’s fidelity to the new location, will help inform future translocation procedures (if needed).

We emphasize that the objective of any translocation of grizzly bears into the GYE is for ensuring that genetic diversity is sufficient to provide long-term evolutionary potential. The objective is not to increase population size in the GYE generally.

Acknowledging at the outset that ‘biological’ considerations are not entirely separable from ‘social’ considerations (and that both are important), we categorize biological issues into four: 1) characteristics of a candidate bear, 2) where captured, 3) where released, and 4) when captured/released.

1) Characteristics of bears being considered (sex/age/history)

a) Management history: Bears with a history of involvement in bear-human conflict, even as offspring, will not be considered candidates for translocation. Furthermore, bears captured away from human settlements will be the best candidates to minimize the likelihood of post-release bear-human conflict.

b) Age/sex of bear: Knowledge of bear behavior and information about post-release movements help inform which sex and age categories are most likely to result in success. Younger bears, primarily between the ages of 2 and 5, often undergo natal dispersal whereby they move away from their natal home range to settle in their own permanent home range. In general, male bears are very likely to disperse, tend to disperse large distances, and can be highly transient for more than a year. In contrast, female bears are more likely to remain near their natal range, rarely disperse large distances, and are less transient than males. Nonetheless, occasional long-distance female dispersal does occur. This natural tendency for movement by young bears of both sexes, in the pursuit of finding and establishing their own permanent home range, is associated with less frequent homing and higher fidelity to release areas when they are translocated. Continued transiency and wide-ranging movements following translocation are not uncommon until bears settle in their permanent home range. In the Cabinet Mountain augmentation program, all of the translocated bears known to have successfully bred were translocated when they were within this age group: three females and one male were translocated as 2-year-olds and one male was translocated as a 4-year-old. Overall, both female and male bears in this age class are good candidates for translocation, as long as evidence indicates they have not previously reproduced. It is likely that eventual reproduction by females would be easier to document via direct observations, whereas male reproduction will be detected through genetic analysis. Successful female

reproduction is constrained to litters every 3 years, but successful males have the potential, but certainly not the certainty, of breeding every year and fathering offspring with multiple females.

By the time bears reach 6 or 7 years of age, most have established a permanent home range and have become reproductively active. Consequently, when adult bears are translocated, they frequently return or attempt to return to their home range, even when moved distances >200 km and even when accompanied by offspring. Homing bears generally move in a linear fashion even though it may take them some time to determine the correct direction toward their home range. When translocated long distance, it is not unusual for bears to take more than a year to return home. Overall, reproductively active adult bears are not good candidates for translocation to augment the GYE population.

Cub and yearling bears are usually still dependent on their mother, however survival of orphaned or early independent bears in these age classes has been observed. When translocated independently of their mother, initial movements of cub and yearling bears are usually more restricted than those of older bears, but they can also become more transient over time, consistent with their natural dispersal behaviors. They likely have a good probability of settling in the release area, however their survival is likely to be lower than older bears. Their survival and ability to settle in a home range is probably most compromised where the resident bear population density is high. Orphaned cub or yearling bears may be good candidates for translocation, as long as their body size and condition suggest good potential for survival on their own. Given that these bears are unlikely to reproduce for at least 4 years, recapture or genetic analyses would likely be required to document any eventual reproduction. There are no sex/age combinations that would automatically disqualify a bear from consideration. However, evidence, and experience suggests that some are better choices than others given other considerations, and that each comes with unique sets of attributes:

i) **Sub-adult female (age ~ 2 to 5, as estimated in the field).** These bears are generally the strongest candidates because they are *relatively* likely to remain in the target area without conflict with humans. A 4-year-old female would likely be among the easiest to monitor (collar longevity is good) for survival and reproduction. If later bred, her offspring would most likely be hybrids (sired by a GYE male, i.e., she'd be an effective genetic migrant), but even if pregnant when moved, she and any surviving offspring could mate with GYE in future years. Downsides are that it may require 1-3 years before she is mature enough to breed (particularly if younger). If younger (i.e., <4), collar retention could be problematic. However, younger NCDE sub-adults (aged 2-3) that were translocated > 4 times their sex-specific home range radiuses displayed slightly greater fidelity to areas in which they were released than females aged 4 or 5. If it is possible to capture the independent offspring of females known to be free of conflict (e.g., if collared for trend monitoring), such an animal would probably be unfamiliar with human-related attractants, and thus likely to remain conflict-free. Both managers and the public should be aware, however, that even bears in this optimal sex/age group may display homing movements, or wander considerably before settling down.

ii) **Sub-adult male (age ~2 to 5, as estimated in the field).** These bears are generally less suitable candidates than females of similar ages (above), because a) they are more likely than females to get into conflict situations, b) they are more likely than females of similar age to suffer mortality, even without an obvious human-conflict, c) they are more likely than females of similar age to become displaced by larger males, and thus possibly leave the GYE entirely, d) it may require some time before they can establish themselves as breeders if they are not displaced, and e) collar retention is not as good

as among females. However, in the unlikely event that a subadult male can safely establish itself, it could breed at a younger age than a subadult female (have less time exposed to risk before it makes a genetic contribution). At least 2 male Cabinet augmentees are known to have later sired subs. Sub-adult males are an option if other considerations are strongly positive.

iii) **Orphaned cub of the year (either sex).** Although there is documentation that some orphaned cubs can survive without their mothers, our assessment is that the additional stress of putting them into a unique environment makes their survival unlikely. Orphaned cubs should not be considered candidates.

iv) **Orphaned yearling (either sex).** The likelihood of orphaned yearlings surviving and finding a new home in the GYE is probably higher than of orphaned cubs. Yearlings of a female that had a history of conflict would not be candidates due to the likelihood that they already learned unacceptable behavior. However, yearlings orphaned as a result of mortalities of non-conflict mothers could be considered candidates. If >1 yearling were captured and moved together, their survival would probably be higher than for a single animal and would also double the potential of ultimately producing an effective genetic migrant. However, yearlings would require more years (probably 4) before they could breed, and would be even more difficult to monitor long-term via telemetry than subadults.

v) **Adult female (age 5+, as estimated in the field).** An adult female unaccompanied by cubs in mid-summer has high likelihood of already being bred; thus, cubs she might produce overwinter in the GYE would not be genetically effective migrants (and would not constitute success). However, those cubs would carry NCDE genes, and thus any that survived to become breeders themselves would increase the pool of potential effective migrants. An adult female in mid-summer who'd lost a litter would be very likely to be bred by a GYE male the following spring, assuming she survives and stays in the target area that long. Adult females would offer the greatest opportunity for monitoring their genetic success, an important criterion because they are most amenable to long-term radio-monitoring, and can sometimes be observed visually (and if accompanied by cubs, reproduction documented). However, adult females generally are the most likely to exhibit homing movements (see above), and thus are poor candidates for this program.

vi) **Adult male (age 5+, as estimated in the field).** Although generally not considered an optimal choice due to concerns about potential human-bear conflicts and competition with resident adult males in the release area, there could occasionally be situations in which an adult male could be considered. An adult male that survived and avoided conflict could conceivably mate during the breeding season immediately following translocation, and if it became established, make a disproportionately large genetic contribution. A downside is that documenting effective migration of males would require long-term genetic data and not be assured; it is also difficult to keep collars on adult males. Consider if a) a translocation site can be found at which potential for conflict is low, and/or b) capture is very late in the season, such that the animal has already built-up fat reserves and dens shortly after release. Late-season releases would be contraindicated where big-game hunting is still occurring.

2) Areas for capture

i) Although habitat similarity to the GYE (another consideration) could be greatest for an animal captured at the southeastern extent of the NCDE distribution (and such bears might appear to be

“trying” to get to the GYE on their own), such an animal could have a higher likelihood of returning (i.e., not remaining within the target area).

ii) We take it as a given that habitat characteristics of the release site will differ from those at the capture site, and challenges translocated animals will face are factored into the expected probability of success. Although ‘matching’ habitat of the donor to recipient area would be ideal, it’s not a critical consideration given how adaptable bears are. That said, bears living in the relatively mesic, huckleberry-dominated areas in the northwest portion of the NCDE are probably not the best candidates, at least initially. As well, potential candidate bears in this area are high priorities for the Cabinet augmentation program.

iv) A likely constraint for capture areas is the need to use culvert traps (so that bears can easily be moved from the site), and thus road access (unless culverts could be flown into remote locations).

v) A female bear originating in a Bear Management Unit (BMU) or Occupancy Unit (OU) where meeting occupancy standards has been a concern should not be a strong candidate.

vi) As with any grizzly bear capture operation, good communication and close coordination with local land managers is critical.

3) Release areas

At this point in the process, we consider areas at a coarse geographic scale. Specific release sites should be well-vetted, and offer the lowest possible opportunity for released bears to find trouble, while recognizing that bears generally don’t stay in the immediate area where they are released. Appropriate sites would be within the GYE DMA, but not otherwise be constrained geographically at this coarse level of consideration. That said, bears released where a large expanse of relatively undeveloped landscape exists between the site and the bear’s original home range are less likely to engage in conflict behavior or exhibit homing.

We seek areas with enough bears that translocated animals can find (or be found by) mates, but not such a high density that competition or aggression from resident bears will increase the chance of intraspecific predation or displacement outside the GYE DMA. If possible, local density estimates such as produced by Bjornlie et al. (2014) and IGBST (unpublished data) should be consulted, but qualitative assessments made by locally based staff will be crucial as well. Expecting that translocated bears may not remain close to the release site, an important consideration is the spatial extent and configuration of habitat surrounding the release site where conflicts with humans are unlikely.

As with any grizzly bear translocation, good communication and close coordination with local land managers is critical.

i) **Yellowstone National Park.** Because livestock are absent and attractants generally well controlled, YNP should be strongly considered at the outset of this program. Challenges would be identifying areas where resident grizzly bears are not too dense (see above, e.g., not Hayden Valley), and where recreationists are not highly concentrated.

ii) **Wyoming, outside of YNP.** There may be areas, particularly in the northern portions of the BTNF, where attractants are rare or well-managed, and where a translocated bear would have a good chance to mate with other bears without coming into conflict. Potential areas include the southeastern

portions of Blackrock, Togwotee Pass, and Moccasin Basin, where cattle allotments have been bought out or retired, but there is still gated road access to move a bear far from any developed areas (but not further south where cattle density increases).

iii) **Montana, outside of YNP.** Generally, areas where an augmentee might be released in the Montana portion of the GYE are closer to humans (recreationists, livestock, homesites). Thus, we recommend gaining some experience with the program before considering sites in Montana. That said, a list of 32 potential release sites was recently approved by the Montana Fish and Wildlife Commission, about half of which are outside the Grizzly Bear Recovery Zone.

iv) **Idaho, outside of YNP.** Not a candidate translocation recipient at this time.

iv) **Grand Teton National Park.** Not a candidate translocation recipient at this time.

4) Time of year

i) Biologists have typically considered it unwise to transport animals early after den emergence, as bears that time of year are particularly hungry, many plants-based food sources are not yet available, and livestock young are small and vulnerable. Snow typically reduces road access early in the bear-year, which in turn means that capture and release sites are likely closer to people. Spring black bear hunting can also constrain grizzly bear captures.

ii) July and August are typically considered the optimal months to translocate bears, as plant-based food sources are peaking and bears are not yet in hyperphagia. Eighteen of the 22 Cabinet augmentees were moved in July or August to match the peak of huckleberry production. However, the mast peak seen in the Cabinets does not characterize the GYE, so a somewhat earlier time window should be considered.

iii) September through mid-October are generally avoided because i) some bears in hyperphagia descend to low elevations where human attractants are common, and ii) of overlap with big-game hunting. The latter concern would be lower if released centrally within YNP.

iv) Although few data are available to inform it, the possibility that grizzly bears might be successfully translocated very late in the active year, just prior to expected denning, holds promise. Such a bear should have already fattened up, and even in an unfamiliar place we do not expect it to have difficulty finding a place to den. Upon emergence, it may then be more likely to consider its denning area a new home.

In summary, we recommend that for the first few years of this program, managers adopt a conservative approach, moving only bears that are most likely to stay in the GYE, survive, and breed; moved only during the optimum time of year; and released where success is most likely. With time and experience, criteria for acceptable candidate bears, source locations, release locations, and timing of movements can all be revisited if new information becomes available, and this protocol updated and revised if appropriate.

Other considerations

1. FWP and USFWS are cooperating on a long-term project to augment the Cabinet Mountains population; since 2005, all bears have come from FWP Region 1 (Flathead, Swan, Stillwater drainages).

The objective is to move 2 subadult bears/year, although fewer have been moved in some years. GYE genetic augmentation would be a concurrent program but could transpire over a more relaxed time schedule. Ideally, appropriate bears can be found for both programs.

2. Bears removed (live) from the NCDE for augmentation are counted as “mortalities” following the NCDE Conservation Strategy when assessing whether thresholds have been exceeded. Typically, capture efforts for augmentation (either to the Cabinets or the GYE) would occur before that year’s total mortality has been documented; it’s thus possible for mortalities occurring later in the year to put that year’s total “over” the threshold. However, the threshold is calculated on a 6-year running average, and because the total reported and unreported estimate would be known for the previous 5 years, the likelihood of reaching the threshold because of live removals can be estimated (albeit with some uncertainty). Because this GYE augmentation is intended to produce 1 or 2 effective migrants per bear generation length (i.e., need not occur rapidly), it would be reasonable to hold off capture efforts in years in which removing more NCDE bears could cause the threshold to be exceeded.

3. Given considerations outlined in this document, we anticipate that trapping efforts for appropriate bears would be planned and deliberate, or be associated with ongoing research and monitoring efforts. It is very unlikely that an appropriate bear would be captured in the course of conflict response work. Thus, additional resources will be required from donor agencies.

4. If released in Montana by FWP (outside YNP), the release site would have to be one previously approved by the Montana Fish and Wildlife Commission. This constraint would not apply if released by USFWS.

5. If released in Wyoming (outside a NP), WGFD must notify the county sheriff of the county in which the release takes place within 5 days, and issue a press release (W.S. 86 § 1).

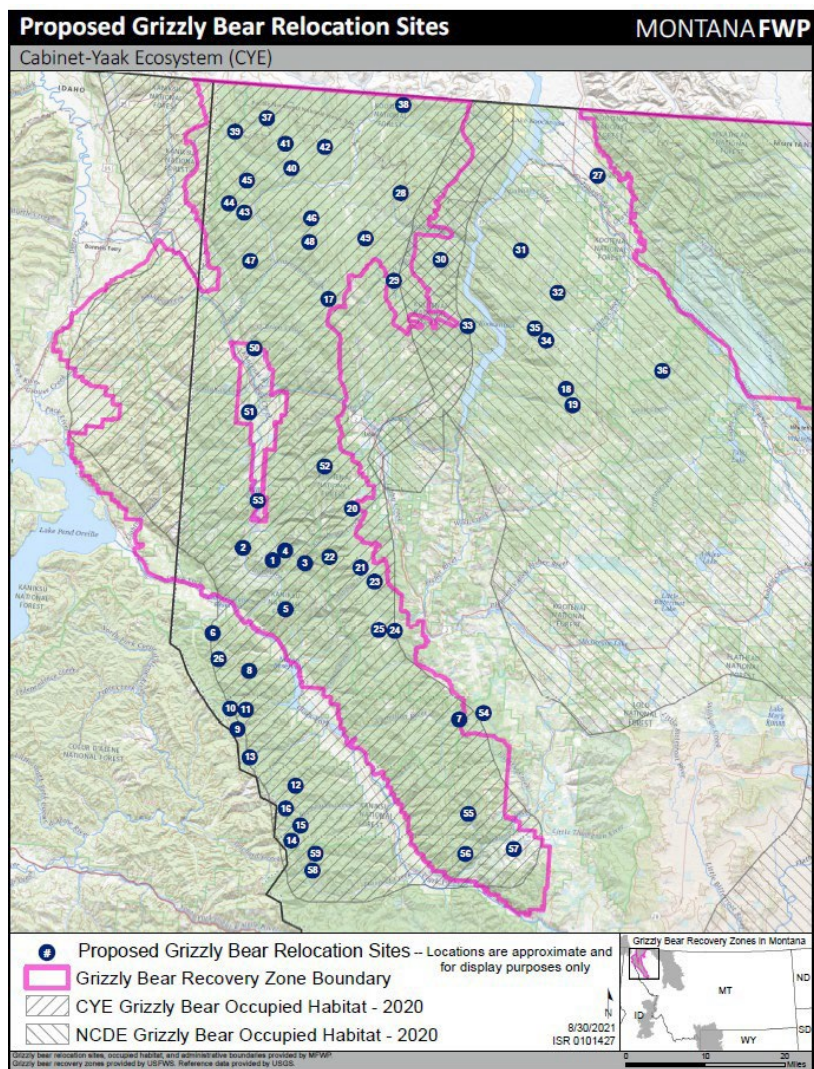
6. Released bears will undergo standard data collection and processing, including collection of genetic samples, and must be PIT-tagged, ear-tagged, and outfitted with a GPS telemetry device.

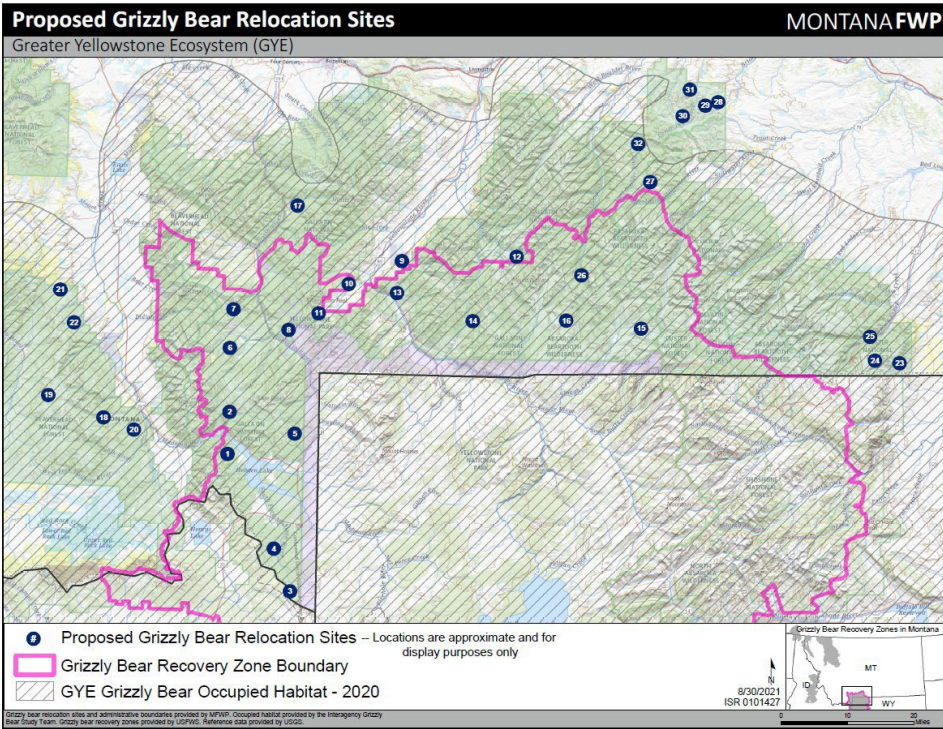
Literature Cited

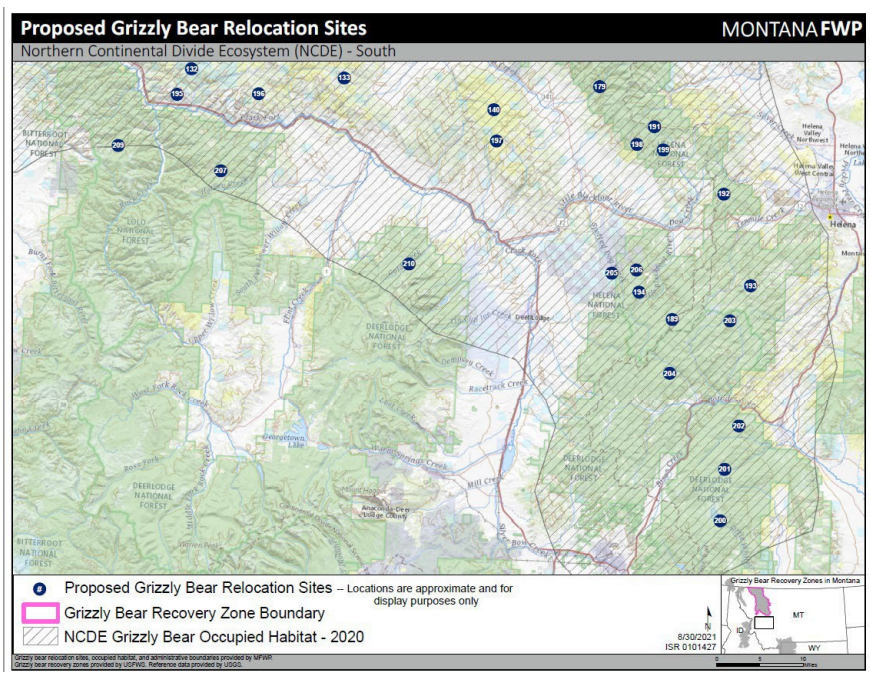
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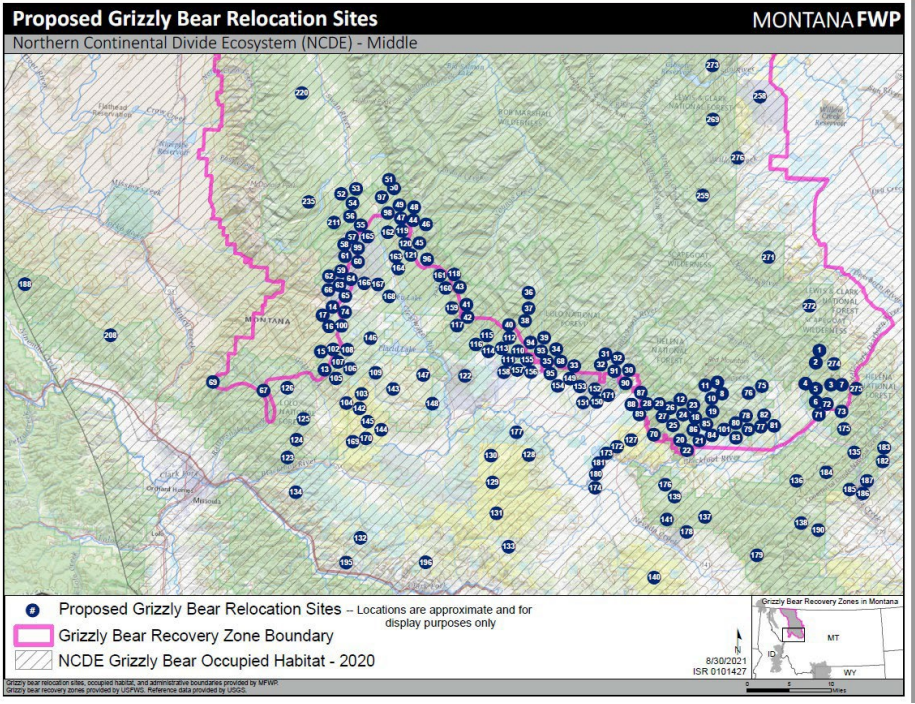
APPENDIX B

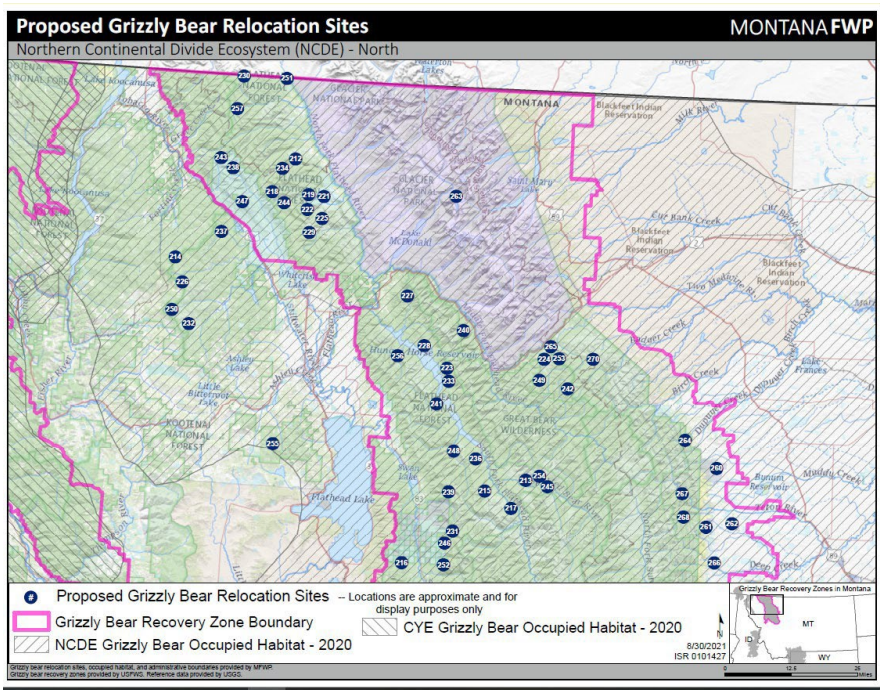
Approved sites where grizzly bears can be released by FWP (as approved by the Fish and Wildlife Commission for 2021-2026)











APPENDIX C

Tri-State Memorandum of Agreement Regarding the Management, Genetic Health, and Allocation of Discretionary Mortality of Grizzly Bears in the Greater Yellowstone Ecosystem

Among

Wyoming Game and Fish Commission, Wyoming Game and Fish Department, Montana Fish and Wildlife Commission, Montana Fish, Wildlife and Parks, Idaho Fish and Game Commission, and Idaho Department of Fish and Game

This Memorandum of Agreement (MOA) is made and entered into by and among the Wyoming Game and Fish Commission and the Wyoming Game and Fish Department (collectively WGFD), the Montana Fish and Wildlife Commission and Montana Fish, Wildlife and Parks (collectively MFWP), and the Idaho Fish and Game Commission and the Idaho Department of Fish and Game (collectively IDFG), collectively referred to as the Parties.

I. Purpose

The purpose of this MOA is to define the process by which the Parties will coordinate the management and allocation of discretionary mortality of grizzly bears in the Greater Yellowstone Ecosystem (GYE) to ensure the long-term genetic health, viability, and sustainability of the GYE grizzly bear population (GYE population). The Parties enter into this MOA in support of the designation of the Distinct Population Segment (DPS) of GYE grizzly bears and removal of the DPS from the Federal list of endangered and threatened wildlife under the Endangered Species Act. The Parties intend this MOA to be consistent with the *Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Ecosystem* (Strategy) and individual state management plans, as these documents may be revised in conjunction with the delisting process.

The Parties amend the 2016 version of their MOA to resolve items identified in the July 2020 Ninth Circuit Court decision warranting vacatur and remand of the U.S. Fish and Wildlife Service (USFWS) 2017 final rule designating and delisting the GYE DPS of grizzly bears: (1) to ensure long-term genetic diversity of the GYE population, Parties commit to mechanisms for genetic augmentation through translocation; and (2) should a new population estimation method be incorporated to estimate abundance and evaluate survival/mortality of the GYE population, the Parties commit to recalibrate GYE population metrics and mortality limits.

II. Background

The GYE Interagency Conservation Strategy Team, with the participation of the Parties and various federal agencies, developed the Strategy to implement regulatory mechanisms, interagency cooperation, population and habitat management and monitoring, and other actions to ensure continued recovery and sustainable management of the GYE population post-delisting. The Strategy was subject to public comment and scientific peer review. The Strategy's key mechanisms for maintaining a recovered GYE population are its population and habitat standards, which are based on USFWS recovery criteria for the GYE population. The Strategy incorporated the Parties' individual state management plans that have different, but compatible, management objectives.

For purposes of this MOA, the Parties adopt the Demographic Monitoring Area (DMA) identified in the USFWS 2017 Supplement to the Grizzly Bear Recovery Plan (Supplement) as the geographic area used to monitor continued achievement of population and distribution objectives for the GYE population. The Interagency Grizzly Bear Study Team (IGBST) and the Yellowstone Ecosystem Subcommittee (YES) of the Interagency Grizzly Bear Committee (IGBC) have recommended the use of the DMA for monitoring GYE population demographics.

The demographics and vital rates of the GYE population have changed over time, and the IGBST has periodically reviewed and adjusted mortality limits to ensure a total GYE population of at least 500 bears and to meet the occupancy criterion for female bears. The GYE population has far surpassed the minimum requirement for genetic diversity represented by 500 bears.

For purposes of this MOA, the Parties identified tiered limits (based on population size) for human-caused mortality to support managing the GYE population within the DMA at levels around 932 grizzly bears (the tri-state management objective for the DMA, based on the refined Chao2 average population estimate for 2002-2019; 95% Confidence Intervals = 831 to 1,033 grizzly bears) (see Paragraph IV below). Tiered mortality rates enable the Parties to address higher grizzly bear densities and human-bear conflict levels that may occur when the GYE population is above 932 grizzly bears in the DMA, which is well above the recovery criterion of a minimum population size of 500 animals in the GYE.

The IGBST uses the Chao2 estimator and a model averaging process to calculate GYE population size on an annual basis. As the GYE population has grown, the model-averaged Chao2 estimates have become increasingly conservative (*i.e.*, prone to underestimation). IGBST has recently conducted an in-depth analysis that revises ruleset parameters and averaging techniques based on current empirical data to derive a more accurate estimate of the GYE population while still using approved Chao2 methodologies. For purposes of this MOA, the Parties assume that USFWS will, as a matter of best available science, rely on the refined Chao2⁴ population estimates. The Parties commit to implementing appropriate revisions to methods for GYE population estimation as new methods are scientifically vetted and accepted.

III. Definitions

1. “Discretionary mortality” is the amount of human-caused grizzly bear mortality over which agencies have discretionary authority, such as management removals and regulated harvest.
2. “Non-Discretionary mortality” is documented loss over which agencies do not have discretionary authority, such as naturally occurring mortality or human-caused mortality such as illegal shootings, defense-of-human-life shootings, and vehicle collisions.
3. “Greater Yellowstone Ecosystem” (GYE) is defined as that portion of Idaho that is east

⁴ In 2021, the IGBST refined the Chao2 population estimator based on information from the report entitled *A reassessment of Chao2 estimates for population monitoring of grizzly bears in the Greater Yellowstone Ecosystem*. For the sake of this MOA, the 2002-2019 timeframe was chosen to reflect the period when population trajectory decreased and to reflect the data provided in the report.

of Interstate Highway 15 and north of U.S. Highway 30; that portion of Montana that is east of Interstate Highway 15 and south of Interstate Highway 90; that portion of Wyoming south of Interstate Highway 90, west of Interstate Highway 25, Wyoming State Highway 220, and U.S. Highway 287 south of Three Forks (at the 220 and 287 intersection), and north of Interstate Highway 80 and U.S. Highway 30. This is the same GYE definition that USFWS used in its 2007 and 2017 rules to designate and delist a DPS of grizzly bears under the Endangered Species Act, both of which rules USFWS vacated in response to court decisions based on grounds other than the DPS designation. The Parties assume USFWS will re-designate a grizzly bear DPS for the GYE geographic area as defined herein.

4. The “Primary Conservation Area” (PCA) is the area whose boundaries are approximately depicted on the map attached hereto as Attachment A; the PCA is divided into 18 Bear Management Units.

5. The “Demographic Monitoring Area” (DMA) is the area that includes the PCA and an additional area surrounding the PCA. The DMA is approximately 19,279 square miles in area, whose boundaries are depicted on the map attached hereto as Attachment A. The DMA is based on suitable habitat. The DMA is the area within which the GYE population is annually surveyed and estimated and within which the total mortality limits will apply.

6. “Chao2” is the population estimation technique currently used for the GYE population. IGBST recently conducted an in-depth analysis that revises ruleset parameters and averaging techniques based on current empirical data to derive a more accurate “refined Chao2” estimate of the GYE population while still using approved Chao2 methodologies.

IV. Responsibilities

1. **Science-based Adaptive Management.** The Parties will use best available science and adaptive management approaches to manage the GYE population collectively and cooperatively.

2. **Tri-State Population Management Objectives.** The Parties agree to monitor and manage the GYE population to ensure achievement of the three USFWS demographic recovery criteria (minimum population size, breeding female occupancy, and mortality limits).

As an additional level of protection, the Parties will manage the GYE population within the DMA to maintain a relatively stable population around 932 grizzly bears. This management objective is consistent with the refined Chao2 average grizzly bear population estimates in the DMA from 2002-2019 (associated 95% confidence intervals from 831 to 1,033 grizzly bears). To achieve this population objective for the DMA, the Parties will apply mortality limits (described in subparagraph 3c below) developed by the IGBST to maintain a relatively stable population around the 2002-2019 average population estimates in the DMA. If the estimated population falls below 932 bears, the mortality limits become more conservative, and should result in a population increase. If the annual population estimate within the DMA falls below 831 (the lower bounds of the 95% confidence interval), the Parties will request IGBST biology and monitoring review, and the

Parties will close the DMA within their respective jurisdictions to hunting until the population increases. The Parties will consider the results of the IGBST review in determining appropriate changes to the management framework.

3. Relationship of Tri-State Management Objectives to USFWS Demographic Recovery Criteria.

a. **USFWS Demographic Recovery Criterion 1 (Minimum Population Size)** is to maintain a minimum population size of at least 500 bears within the DMA (for genetic fitness). The Parties' agreement in Paragraph IV.2 to manage the GYE population within the DMA around 932 grizzly bears, based on the refined Chao2 average GYE population estimates from 2002-2019 (95% CI = 831-1,033), provides an additional level of protection above USFWS Demographic Recovery Criterion 1 and will ensure this criterion is met.

b. **USFWS Demographic Recovery Criterion 2 (Breeding Female Occupancy)** is to ensure that 16 of the 18 Bear Management Units within the PCA are occupied by at least one female with offspring over a six-year period, with no two adjacent Bear Management Units unoccupied over a six-year period. The Parties' agreement in Paragraph IV.2. to monitor and manage for breeding female occupancy will ensure it is met.

c. **USFWS Demographic Recovery Criterion 3 (Mortality Limits)**⁵ is to ensure annual total mortality rates are not exceeded within the DMA for independent males, independent females and dependent young. In addition to the Parties' agreement in Paragraph IV.2 to manage the GYE population within the DMA around 932 grizzly bears (95% CI = 831 - 1,033), the Parties agree to apply mortality limits as set forth in the following table to ensure achievement of this management objective.

Should the Parties adopt a new population estimation method to estimate abundance and evaluate survival/mortality of the GYE population, the Parties commit to recalibrate population metrics and mortality limits therein.

Total Grizzly Bear Population Estimate in the DMA			
	≤ 932 (note: hunting closure < 831)	932-1033	> 1033
Total mortality rate for independent FEMALES.	<7.6%	9%	10%
Total mortality rate for independent MALES.	<15%	20%	22%
Total mortality rate for dependent young.	<7.6%	9%	10%

4. Additional Mortality Management. In addition, the Parties' management will include, but not be limited to, the following:

⁵The GYE population estimates identified in this subparagraph applies the IGBST's revised population estimates (refined Chao2 estimator) for 2002-2019; the 2017 USFWS Recovery Criterion 3 and Strategy have not yet been revised to incorporate these estimates.

- At a minimum of every 5 years, the Parties will coordinate with IGBST to review vital rates and demographics for the GYE population and make any appropriate adjustments to mortality rates (as presented in Paragraph IV.3 above).
- The Parties will prohibit hunting of females accompanied by young, and young accompanied by females, and discretionary mortality of such animals will only occur for management removals. • At any population level greater than 831, if total allowable independent male or female mortality is exceeded, the number exceeding the total allowable mortality will be subtracted from the next year's discretionary mortality available for harvest for that sex.
- If a state meets any of its allocated regulated harvest limits at any time of the year (see IV.7 below), the respective state will close that state's portion of the DMA to hunting for the remainder of the year.
- If the population within the DMA is less than 600, which the Parties do not expect to occur based on their commitments under this MOA and other interagency commitments such as those described in the Strategy, discretionary mortality under the Parties' respective authorities will not occur, except for management removals to address human safety issues.

5. **Genetic Fitness.** The Parties agree to translocate grizzly bears between the GYE and other grizzly bear populations, when necessary for genetic fitness of a distinct grizzly bear population occurring within the three states, and subject to applicable requirements of federal, state, or tribal law and to consistency with applicable demographic recovery criteria for a population listed or previously listed under the ESA.

a. As a cooperative effort of the IGBST, the Parties will continue to conduct genetic sampling of GYE grizzly bears (*i.e.*, biological samples will be acquired from grizzly bear captures, mortality investigations, or other methods), and will analyze these samples to evaluate genetic diversity and connectivity with other grizzly bear populations.

b. To further ensure genetic viability of the GYE population, the Parties adopt the following mechanisms to provide for genetic augmentation through translocation:
By 2025, the Parties will translocate at least two grizzly bears from outside the GYE into the GYE, unless migration from outside the GYE is detected in the interim. Genetic monitoring of the GYE population will continue, and genetic diversity and effective population size (N_e) will be re-assessed at least every 14 years (*i.e.*, one generation). If effective migration is not detected, the Parties will continue to make additional translocations from outside the GYE.

6. **Monitoring.** The Parties will support the IGBST in the annual monitoring of the GYE population.

7. **Coordination and Allocation of Discretionary Mortality.**

a. The Parties will meet annually (preferably in the month of January) to review population monitoring data supplied by IGBST and collectively establish discretionary mortality limits for maximum regulated harvest for each jurisdiction (MT, ID, WY) in the DMA, so DMA mortality limits not exceeded, based upon the following allocation protocol:

- i. Begin with the refined Chao2 total population estimate and estimates for independent males, independent females, and dependent young (demographic classes) in the DMA for the previous calendar year, as reported by the IGBST.
- ii. Determine the maximum allowable mortality limit for each demographic class based on the mortality rates identified in the table above (IV.3).
- iii. Determine total mortality during the previous calendar year for each demographic class.
- iv. Subtract the previous year's total mortality from the maximum allowable mortality limit for each demographic class. If the difference is negative (*i.e.*, a DMA annual mortality limit is exceeded for any of the three classes), the number of mortalities above the limit will be subtracted from the corresponding DMA discretionary mortality limit for that class for the current year.
- v. Allocate maximum discretionary mortality available for regulated harvest for independent males and females to each management jurisdiction as provided in the following table.

Management Jurisdiction*	% of DMA outside NPS lands
WY inside DMA	58%*
MT inside DMA	34%
ID inside DMA	8%

- *Four percent (4%) of the DMA outside of National Park System lands in Wyoming is under the jurisdiction of the Tribes governing the Wind River Reservation.
- b. The Parties may agree to adjust their respective individual allocation of discretionary mortality based on management objectives and spatial and temporal circumstances. Each party has discretion as to how it applies its allocation of discretionary mortality pursuant to its respective regulatory processes and management plan.
- c. If, for any reason, a state opts not to implement some or all of its allocation for regulated harvest, that harvest is not available to another state for additional harvest unless agreed to by the state with unused allocation.
- d. The Parties will confer with the National Park Service (NPS) and United States Forest Service (USFS) annually. The Parties will invite representatives of both GYE National Parks, the NPS regional office, GYE USFS Forest Supervisors, and the Wind River Reservation to attend the states' annual meeting.
- e. The Parties will monitor mortality throughout the year, and will communicate and coordinate with each other, tribal and federal land management agencies as appropriate to minimize the likelihood of exceeding mortality limits.
- f. Each Party will designate one representative as a respective Point of Contact for purposes of achieving the objectives of this MOA.

V. Authorities and Regulatory Mechanisms

The Parties enter into this MOA pursuant to their respective state authorities as set forth in Title 87, Montana Code Annotated; Title 23, Wyoming Statutes Annotated; and Title 36, Idaho Code.

The Parties have the authority, capability and biological data to implement appropriate hunting restrictions, management relocations and removals, and population management. The Parties will use their respective individual authorities to regulate discretionary mortality as allocated to their jurisdictions under this MOA. The Parties' respective regulatory mechanisms to manage, monitor, restrict, and adjust mortality include, but are not limited to, those identified in Attachment B. This MOA in no way restricts the Parties from participating in similar activities with other states, agencies, tribes, local governments, or private entities.

Each Party has discretion to manage grizzly bears within its jurisdiction of the GYE that are outside the DMA pursuant to its respective regulatory processes and state management plan.

VI. No Obligation of Funds

This MOA is neither a fiscal nor a funds obligation document. Any endeavor or transfer of anything of value involving reimbursement or contribution of funds among the Parties will be handled in accordance with applicable laws, regulations, and procedures and such endeavors will be outlined in separate agreements or contracts made in writing by representatives of the Parties. This MOA does not provide such authority.

VII. Term, Termination and Effective Date

This MOA will become effective upon the date of signature of all Parties. It will remain in effect until it is terminated by the Parties. Any Party may terminate its participation in the MOA by providing one hundred-eighty (180) days' written notice to the other Parties, which notice shall be transmitted by hand or other means of delivery confirmation.

VIII. Amendment

The Parties will meet annually to review implementation of the MOA and to recommend any appropriate modifications to the MOA based on changes to the Strategy, state management plans or other pertinent regulatory documents. Any modification to the MOA will only become effective upon the written consent of all Parties.

IX. No Third-Party Beneficiary

Nothing contained herein shall be construed as granting, vesting, creating or conferring any right of action or any other right or benefit upon any third party.

X. Severability

Should any portion of this MOA be judicially determined to be illegal or unenforceable, the remainder of the MOA will continue in full force and effect.

XI. Sovereign Immunity

The states of Wyoming, Montana, and Idaho do not waive their sovereign immunity by entering into this MOA, and each fully retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of this MOA.