



# Executive Summary

1

## 2 INTRODUCTION

3 The Montana Department of Natural Resources and Conservation (DNRC) has prepared a habitat  
4 conservation plan (HCP) for forest management activities on its forested state trust lands (forested  
5 trust lands) managed by the Trust Lands Management Division (TLMD). The mission of the  
6 TLMD is to manage trust land resources to produce revenues for the trust beneficiaries while  
7 considering environmental factors and protecting the future income-generating capacity of the land.  
8 Under its forest management program, the TLMD generates revenues for trust beneficiaries through  
9 timber harvest on classified forest trust lands. DNRC manages its forested trust lands in accordance  
10 with the State Forest Land Management Plan (SFLMP) (DNRC 1996) and the Administrative Rules  
11 of Montana (ARMs) for Forest Management Title 36, Chapter 11, Subchapter 4 (ARMs 36.11.401  
12 through 456) (Forest Management ARMs). DNRC's forested trust lands also support federally  
13 listed threatened species. The ARMs direct DNRC to confer with the United States Fish and  
14 Wildlife Service (USFWS) to develop habitat mitigation measures to address the needs of listed  
15 species. This proposed HCP is a programmatic plan that identifies DNRC's proposal for managing  
16 federally listed species on forested trust lands.

17 An HCP is a long-term management plan prepared under the Endangered Species Act (ESA) to  
18 conserve threatened and endangered species (16 United States Code [USC] 1531 et seq.). Section  
19 10 of the ESA authorizes a landowner to develop a conservation plan to minimize and mitigate, to  
20 the maximum extent practicable, any impact to threatened and endangered species while conducting  
21 lawful activities such as harvesting timber on state trust lands. The HCP is part of the application  
22 for obtaining an incidental take permit (Permit) from the USFWS in accordance with Section  
23 10(a)(1)(B) of the ESA. The Permit would authorize the Permit holder (DNRC) to take federally  
24 listed species that are covered under the HCP. The DNRC HCP covers forest management  
25 activities on forested trust lands that provide habitat for species currently listed or having the  
26 potential to be listed under the ESA (HCP species).

27 Issuance of the Permit in this circumstance by the USFWS is considered a major federal action that  
28 may affect the quality of the human environment, thus requiring preparation of an EIS under the  
29 National Environmental Policy Act (NEPA) (Section 101 [42 USC 4331]). The decision by DNRC,  
30 as the applicant, to develop and implement the HCP is considered a major state action that may  
31 affect the quality of the human environment under the Montana Environmental Policy Act (MEPA)  
32 (Montana Code Annotated [MCA] 75-1-201 (1)(b)(iv)), and therefore requires a MEPA EIS. This  
33 EIS has been prepared to comply with both NEPA and MEPA requirements, with the USFWS as  
34 the lead agency for the NEPA component and DNRC as the lead agency for the MEPA component.  
35 This EIS describes the potential effects of the proposed action (implementation of the HCP and  
36 issuance of the Permit) by evaluating the effects resulting from implementation of the HCP and  
37 other action alternatives over the Permit term.

1 **HCP SPECIES**

2 Five HCP species are included in the proposed HCP. Three of these species are listed as threatened  
3 under the ESA:

- 4 • grizzly bear (*Ursus arctos horribilis*),
- 5 • Canada lynx (*Lynx canadensis*), and
- 6 • bull trout (*Salvelinus confluentus*).

7 Two additional aquatic species are included as HCP species should these species become listed  
8 during the Permit term:

- 9 • westslope cutthroat trout (*Oncorhynchus clarkii lewisi*), and
- 10 • Columbia redband trout (*Oncorhynchus mykiss gairdneri*).

11 **PERMIT TERM**

12 DNRC has proposed that the Permit be issued by the USFWS for a period of 50 years. DNRC views  
13 the HCP as a long-term program for addressing and improving habitat needs across the landscape.  
14 This Permit term was selected by DNRC to ensure that it would have sufficient time and funding to  
15 implement the conservation strategies and make adjustments through adaptive management where  
16 needed. This period also helps ensure that the cost and effort of obtaining the Permit would be offset  
17 by the long-term advantage of ensuring that ESA regulatory requirements were met for those HCP  
18 species listed or likely to be listed over the next 50 years. ESA regulatory certainty will help DNRC  
19 plan forest management activities without concern that those activities might be subject to additional  
20 ESA regulatory restrictions due to the presence of a listed HCP species.

21 As part of its review of the Permit application, the USFWS will evaluate the proposed Permit term  
22 to ensure that it is an adequate timeframe in which to fully mitigate for the expected incidental take  
23 of listed species.

24 **HCP PROJECT AREA**

25 DNRC evaluated which trust lands to cover in the HCP by assessing where lands within the  
26 distribution of the HCP species overlapped with trust lands containing appreciable amounts of  
27 manageable forest acreage. This approach was adopted to meld the geographic area where risk to  
28 those species was deemed greatest with the lands where DNRC forest management activities are  
29 most likely to occur in the foreseeable future.

30 The HCP project area includes 548,500 acres of trust lands within three DNRC land offices  
31 (Figure ES-1), the Northwestern Land Office (NWLO), Southwestern Land Office (SWLO), and  
32 Central Land Office (CLO). The HCP project area includes primarily forested trust lands  
33 (446,100 acres), but it contains other non-forested trust lands (102,400 acres) that are portions of, or  
34 are needed to access, forested parcels included in the HCP project area.

35 The HCP project area occurs on both blocked and scattered parcels across the three land offices.  
36 Blocked lands refer to the two large, mostly contiguous blocks of DNRC ownership, specifically

1 identified as the Stillwater and Coal Creek State Forests (the Stillwater Block) and the Swan River  
2 State Forest. Scattered parcels refer to all other HCP project area lands outside of blocked lands  
3 (Figure ES-1).

#### 4 **COVERED ACTIVITIES**

5 The DNRC HCP would cover forest management activities on forested trust lands that provide  
6 habitat for the HCP species and include the following:

- 7 • **Timber Harvest.** Includes commercial timber, salvage harvest, and silvicultural treatments  
8 such as thinning.
- 9 • **Other Forest Management Activities.** Includes slash disposal, prescribed burning, site  
10 preparation, reforestation, fertilization, forest inventory, and access to forested lands for  
11 weed control.
- 12 • **Roads.** Includes forest management road construction, reconstruction, maintenance, use,  
13 and associated gravel quarrying for forest road surface materials, as well as installation,  
14 removal, and replacement of stream crossing structures.
- 15 • **Grazing.** Includes grazing licenses on classified forest trust lands.

#### 16 **PURPOSE AND NEED FOR ACTION**

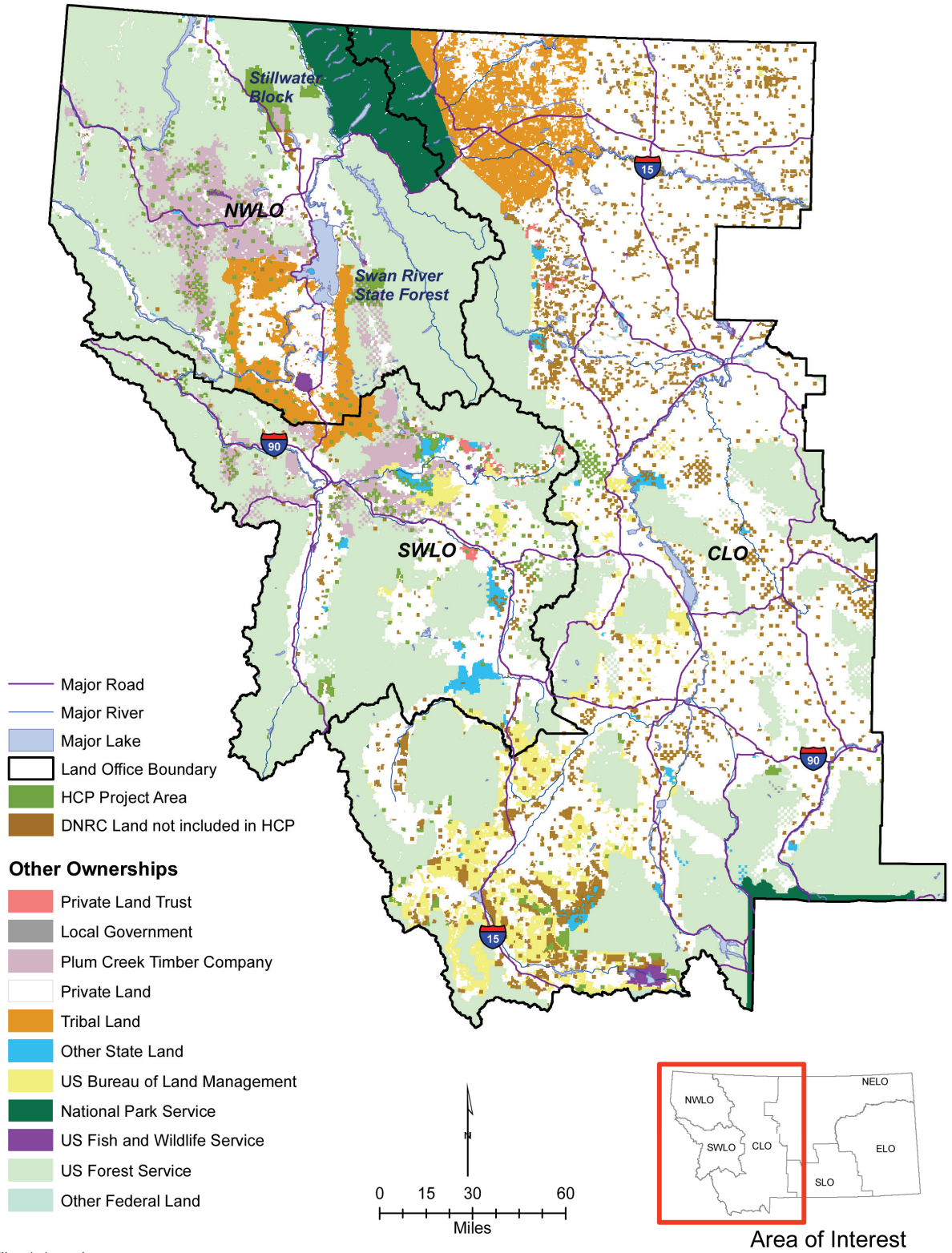
17 Since this EIS has been prepared to comply with both NEPA (USFWS) and MEPA (DNRC)  
18 requirements, each agency has identified its own purpose and need for action.

#### 19 **USFWS PURPOSE AND NEED FOR ACTION**

20 The purpose for which this EIS is being prepared is to

- 21 • Respond to DNRC's application for a Permit, which contains a proposed HCP for forest  
22 management activities on 548,500 acres of forested trust lands for 50 years. Issuance of the  
23 Permit would authorize incidental take, including modification of habitat, for three listed  
24 species (grizzly bear, Canada lynx, bull trout) and two non-listed species (westslope  
25 cutthroat trout and Columbia redband trout), and would require implementation of the HCP  
26 to minimize and mitigate the take of these HCP species to the maximum extent practicable.  
27 The Permit application will be evaluated pursuant to ESA Section 10(a)(1)(B) and its  
28 implementing regulations and policies.
- 29 • Protect, conserve, and enhance the covered species and their habitat for the continuing  
30 benefit of the people of the United States.
- 31 • Provide a means and take steps to conserve the ecosystems upon which the HCP species  
32 depend.
- 33 • Ensure the long-term survival of the covered species through protection and management of  
34 the species and their habitat.
- 35 • Ensure compliance with the ESA, NEPA, and other applicable federal laws and regulations.

36



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2 **FIGURE ES-1. LOCATION OF THE PLANNING AREA AND HCP PROJECT AREA**

3

1 The USFWS’ need for action is based on the potential that activities proposed by DNRC on covered  
2 state trust lands could result in the take of covered species; thus the need for an incidental take  
3 permit.

#### 4 **DNRC PURPOSE AND NEED FOR ACTION**

5 Under the HCP, project area lands would be managed in compliance with the conservation  
6 strategies contained in the HCP. The HCP would minimize take and conserve federally listed fish  
7 and wildlife species while providing long-term regulatory certainty and flexibility for DNRC’s  
8 forest management practices on its HCP project area lands. The HCP and associated Implementing  
9 Agreement demonstrate how DNRC would minimize and mitigate impacts on the HCP species  
10 resulting from otherwise lawful activities DNRC conducts while managing these trust lands. The  
11 HCP would provide a significant contribution to the conservation of HCP species and would allow  
12 for, or not preclude, the recovery of listed HCP species. If either of the non-listed HCP species  
13 becomes listed during the Permit term, the HCP conservation commitments would be sufficient and  
14 provide adequate protection under the ESA. The Permit would thus provide long-term regulatory  
15 certainty for DNRC.

16 Forest management activities can alter habitats essential to species listed under the ESA.  
17 Significant alteration of essential habitat might constitute take of listed species, which would be  
18 prohibited under Section 9 of the ESA, unless otherwise exempted through a Permit. Section  
19 10(a)(1)(B) of the ESA provides non-federal entities, including state agencies, with a legal  
20 mechanism to receive authorization to take listed species by obtaining a Permit from the USFWS.  
21 In addition, non-listed species can be covered under the Permit if their conservation needs are  
22 adequately addressed in the HCP.

23 The federally listed species that currently occur on state lands (grizzly bear, Canada lynx, and bull  
24 trout), as well as the two other non-listed HCP species (westslope cutthroat trout and Columbia  
25 redband trout), pose regulatory uncertainty for DNRC as the agency conducts forest management  
26 activities. This uncertainty could result in significant curtailment of timber harvest or could  
27 otherwise decrease management flexibility, which may reduce economic viability on trust lands and  
28 DNRC’s ability to meet its trust mandate. By obtaining a Permit and managing under the HCP,  
29 DNRC seeks to benefit the forest management program by increasing regulatory certainty and  
30 ensuring greater economic viability and management flexibility.

#### 31 **ALTERNATIVES**

32 DNRC and the Land Board are required by state law to secure the largest measure of legitimate and  
33 reasonable advantage and to provide for the long-term financial support of education when  
34 managing trust lands (MCA 77-1-202 (a) and (b)). DNRC is bound by this mandate in determining  
35 what is practicable when implementing conservation and forest management actions. Those actions  
36 that allow DNRC the management flexibility to best sustain its entrusted mandate at reasonable  
37 costs while meeting the needs and requirements of its conservation efforts are typically seen as the  
38 most practicable. All four alternatives analyzed in detail in the EIS were designed to be viable  
39 based on these requirements. These four alternatives are summarized below, and detailed  
40 information is provided in Chapter 3 (Alternatives).

1 **ALTERNATIVE 1 (NO ACTION)**

2 Alternative 1, the no-action alternative, reflects continued implementation of existing rules and  
3 regulations (Forest Management ARMs, Montana Forestry Best Management Practices [BMPs],  
4 and other conservation measures) pertaining to the five HCP species, and avoidance of take. Under  
5 this alternative, the USFWS would not issue a Permit covering DNRC's forest management and  
6 related activities. Although it is recognized that the ARMs and other conservation measures may be  
7 modified over the next 50 years, it is unknown what changes would occur to existing policies and  
8 regulations. Thus, given that future changes in the ARMs, BMPs, and other conservation measures  
9 are unknown, the comparison of the action alternatives to Alternative 1 are based on the existing  
10 rules and regulations. Alternative 1 includes conservation measures, monitoring, and adaptive  
11 management programs captured in the existing rules and regulations pertinent to the five HCP  
12 species.

13 Within the Stillwater State Forest, DNRC currently maintains grizzly bear security core area, which  
14 is referred to as the Stillwater Core. Within in this area of about 39,600 acres, all administrative or  
15 commercial activities are restricted to the denning period, and there are no salvage harvest  
16 allowances unless activities are conducted during the denning period or through helicopter harvest.  
17 Road closures are examined and repaired as needed in this area as well.

18 **ALTERNATIVE 2 (PROPOSED HCP)**

19 DNRC's proposed HCP consists of individual conservation strategies for grizzly bears, Canada  
20 lynx, and three aquatic species. The strategies are a series of commitments regulating DNRC forest  
21 management activities on forested trust lands that would be covered by the HCP. The strategies  
22 were developed to help conserve the HCP species and the habitats on which they depend. The  
23 conservation strategies were developed using background information compiled in the HCP species  
24 accounts and through collaborative agreement between the USFWS and DNRC on biological goals  
25 and objectives for HCP species. Conservation commitments were then developed that were  
26 supported by scientific data and rationale. These commitments address both known scientific  
27 information and uncertainties in scientific knowledge, as well as existing data gaps. The individual  
28 conservation commitments comprising the conservation strategies are presented in Chapter 2  
29 (Conservation Strategies) of the HCP (Appendix A of this EIS).

30 The proposed HCP also includes a transition lands strategy to address how lands would be moved  
31 into or out of the HCP project area, as well as a changed circumstances process to address natural  
32 and administrative events that can reasonably be anticipated by DNRC and the USFWS during the  
33 Permit term. These are also included as part of the HCPs for Alternatives 3 and 4.

34 For grizzly bears, DNRC would expand its existing grizzly bear conservation commitments to cover  
35 more geographic area and to more fully permeate its program (i.e., rather than just applying  
36 commitments at the project level, commitments would also be required in contracts and for agency  
37 staff working in the field). DNRC would tier its conservation commitments across a wider  
38 geographic area than is covered under the existing program. Some commitments would apply  
39 across the entire geographic area comprising the HCP project area, and others would apply within a  
40 specific subset of geographic areas. The geographic areas include program-wide, non-recovery  
41 occupied habitat (NROH), recovery zones (including the Stillwater Block, the Swan River State

1 Forest, and scattered parcels in recovery zones), the Stillwater Block, the Swan River State Forest,  
2 scattered parcels within recovery zones, and the Cabinet-Yaak Ecosystem (CYE).

3 The overall biological goal of the lynx conservation strategy is to support federal Canada lynx  
4 conservation efforts by managing for habitat elements important for lynx and their prey that  
5 contribute to the landscape-scale occurrence of lynx, particularly in key locations for resident  
6 populations. Similar to the grizzly bear, the lynx conservation strategy would have a tiered  
7 approach, where the degree of conservation commitments varies by geographic area, and is based  
8 on existing lynx range and habitat, need for conservation, and land ownership patterns. For this  
9 alternative, the geographic areas for specific lynx conservation commitments include lynx habitat in  
10 the HCP project area and designated lynx management areas (LMAs) in the HCP project area.

11 For the aquatic conservation strategies, the overall biological goal is to protect bull trout, westslope  
12 cutthroat trout, and Columbia redband trout populations and their habitat and to contribute to habitat  
13 restoration, as appropriate. Five aquatic strategies were developed as part of the proposed HCP:  
14 (1) riparian timber harvest, (2) sediment delivery reduction, (3) fish connectivity, (4) grazing, and  
15 (5) cumulative watershed effects. Most of the commitments would implement existing ARMs, as  
16 well as additional commitments developed under this alternative.

17 Under Alternative 2, the USFWS would be provided assurances that DNRC will implement  
18 appropriate minimization and mitigation measures that conserve and support the recovery of HCP  
19 species. DNRC has determined that it can implement Alternative 2 and meet its trust mandate, as  
20 well as secure the funding necessary to implement the commitments and achieve the timelines  
21 identified in this HCP. This level of commitment further provides the USFWS assurances that the  
22 conservation strategies can be successfully implemented and monitored and thus conserve and  
23 support the recovery of HCP species. DNRC is provided assurances that future management  
24 activities can be sustained over time on lands where management activities might affect HCP  
25 species. DNRC is also provided assurances that it can maximize the legitimate return to the trust  
26 beneficiaries while still responsibly managing the habitats of HCP species.

27 Under alternative 2, the Stillwater Core would be opened up to active forest management activities.  
28 DNRC would divide the area into subzones, which would then be individually rotated between  
29 active management and rest to provide grizzly bears with relatively quiet areas free from  
30 commercial activity after a period of active management. These areas would also be subject to  
31 restrictions on new roads, salvage harvest, gravel pits.

### 32 **ALTERNATIVE 3 (INCREASED CONSERVATION HCP)**

33 Alternative 3 includes additional mitigation measures beyond those proposed under Alternative 2.  
34 Differences from Alternative 2 are summarized below.

35 Compared to Alternatives 2, increased conservation commitments for grizzly bear under Alternative  
36 3 would include implementation of DNRC-wide food storage and sanitation rules for all  
37 departmental activities (not just forest management); more restrictions on motorized activities  
38 during the spring period in spring habitat within NROH; more restrictions on motorized activities in  
39 or near denning habitat during the spring period within NROH; shorter timeframe for repairing  
40 ineffective road closures within recovery zones; similar management as Alternative 1 for designated

1 security core areas within the Stillwater Block; participation in collaborative Section 7 planning for  
2 coordination of access management and activities in the Swan River State Forest; no net increase in  
3 baseline total road densities for forest management projects at the administrative unit level for  
4 scattered parcels in recovery zones; and restrictions on numbers of vehicle trips instead of  
5 management days, as well as more spring management restrictions, within the CYE.

6 For lynx, increased conservation commitments under Alternative 3 would include more restrictions  
7 on retention of denning habitat and sites; more restrictions on use of motorized forest management  
8 activities and burning near denning habitat within LMAs containing less than 10 percent denning  
9 habitat; increased limitations on contiguous occurrences of temporary non-suitable habitat within  
10 scattered parcels outside LMAs; requirements for breaks between harvest units of 100 yards of  
11 suitable habitat were possible within scattered parcels outside LMAs; and increased levels of  
12 potential lynx habitat maintained within LMAs and scattered parcels outside LMAs.

13 Several increased conservation commitments would also be included for aquatics species under  
14 Alternative 3, including more restrictions on harvest within Tier 1 RMZs for Class 1 streams and  
15 lakes supporting HCP species; shorter timeframes to complete road inventories on all HCP project  
16 area watersheds; shorter timeframes to complete corrective actions for all high-risk segments in  
17 HCP project area watersheds containing HCP fish species; shorter timeframes to complete  
18 connectivity improvements for streams supporting HCP fish species; shorter review cycle for  
19 grazing licenses; identification of measurable targets for desired future conditions as grazing license  
20 inspection criteria; and requirement of Level 3 watershed analysis whenever an estimated clearcut  
21 area on an HCP watershed exceeds 25 percent.

22 For Alternative 3, the Stillwater Core would be managed as discussed above for Alternative 1.

#### 23 **ALTERNATIVE 4 (INCREASED MANAGEMENT FLEXIBILITY HCP)**

24 Alternative 4 would increase DNRC's management flexibility to implement its program, as well as  
25 the conservation commitments when compared to Alternative 2. Increased management flexibility  
26 for grizzly bear would include fewer restrictions on motorized activities in spring habitat during the  
27 spring period within NROH; less restrictive visual screening requirements (same as Alternative 1) in  
28 recovery zones; and longer inspection cycle for road closures on scattered parcels, as well as longer  
29 timeframe to repair ineffective closures, on scattered lands within recovery zones. Lynx  
30 management would include less restrictive retention requirements for lynx habitat; decreased levels  
31 of potential lynx habitat maintained within LMAs and scattered parcels outside LMAs; and higher  
32 limits on conversion of lynx habitat to temporary non-suitable habitat within LMAs. For aquatic  
33 species, increased management flexibility would include decreased harvest restrictions within  
34 RMZs; less frequent monitoring of grazing effects; longer timeframe for correcting fish connectivity  
35 issues (same as Alternative 1); and longer timeframe for correcting sediment erosion from existing  
36 roads. As for Alternative 2, the Stillwater Core would be opened up to active forest management  
37 activities.



1 **ANTICIPATED EFFECTS**

2 The anticipated environmental effects associated with the alternatives analyzed for this EIS are  
3 summarized below by resource. They are also described in detail in Chapter 4 (Affected  
4 Environment and Environmental Consequences).

5 **SUMMARY OF EFFECTS BY RESOURCE**

6 **Forest Vegetation**

7 The effects on forest stand attributes would be similar and in most cases differences are not  
8 discernable among alternatives regarding individual stand attributes. Under all alternatives,  
9 progress toward DFCs would continue, with seral forest types increasing and late-successional  
10 forest types decreasing compared to current levels. Across the project area, the acreage in the  
11 seedling/sapling size class would increase compared to current conditions, and poletimber, young  
12 sawtimber, and mature sawtimber classes would decrease under each alternative. Changes in age  
13 class under each alternative would follow trends for size class: the amount of young stands would  
14 increase, and the amount of older stands would decrease. There are no discernable differences at the  
15 landscape scale in the potential effects on wildfire or insects and diseases among alternatives.

16 For Alternative 3, additional constraints associated with the conservation strategies reduce the  
17 sustainable yield under that alternative compared to Alternative 1 (Table ES-1. The greatest  
18 vegetation-related difference between alternatives would result from changes in how the Stillwater  
19 Core is managed. Under Alternatives 2 and 4, DNRC would move to an approach that incorporates  
20 a long-term transportation plan with various annual and seasonal road restrictions, and the area now  
21 identified as the Stillwater Core would be more available for management. The extra acres  
22 available for management in the Stillwater Core would increase the sustainable yield of timber in  
23 Alternatives 2 and 4, and increased management may reduce the chances of wildfire or insect or  
24 disease spread in managed stands. Additional constraints associated with the conservation strategies  
25 for Alternative 3 would reduce the sustainable yield under that alternative compared to  
26 Alternative 1.

27 **TABLE ES-1. SUSTAINABLE YIELD OF TIMBER FOR EACH ALTERNATIVE**  
28 **(MILLION BOARD FEET PER YEAR)**

Alternative 1 (No Action)	Alternative 2 (Proposed HCP)	Alternative 3 (Increased Conservation HCP)	Alternative 4 (Increased Management Flexibility HCP)
53.2	58.0	50.6	58.0

29 **Air Quality**

30 At the landscape scale, there would be no appreciable differences in terms of effects on air quality  
31 due to changes in forest management activities among the four alternatives.

1 **Transportation**

2 By the end of the Permit term, all four alternatives would result in more roads on trust lands within  
3 the HCP project area. At the land office scale, as well as for scattered parcels, new road miles  
4 would be highest under Alternative 1 and lowest under Alternative 3, although differences are  
5 relatively small (ranging between 1,322 and 1,408 miles of new road).

6 In the Stillwater Block, Alternatives 2 and 4 would result in more new road miles than Alternatives  
7 1 and 3, reflecting an increase in roads to support forest management activities in the Stillwater  
8 Core. Under a 50-year transportation plan, Alternatives 2 and 4 would result in a decrease in roads  
9 open year-round and roads restricted year-round, while miles of road restricted seasonally would  
10 increase. Public access to roads, at least on a seasonal basis, would increase under Alternatives 2  
11 and 4.

12 If the Swan Agreement remains in effect for the entire Permit term, there would be no differences in  
13 road miles and classifications between the four alternatives for the Swan River State Forest. Should  
14 this agreement terminate, road management for these blocked lands under Alternatives 2, 3, and 4  
15 would be subject to a 50-year transportation management plan. Up to 23 miles of road could be  
16 converted from restricted year-round to open year-round or seasonally restricted, depending on  
17 DNRC's ability to negotiate reciprocal access agreements after land ownership changes or  
18 termination of the Swan Agreement.

19 On scattered parcels in the HCP project area, most new roads under all four alternatives would be  
20 classified as restricted year-round. The largest increases in roads open to the public, at least on a  
21 seasonal basis, would occur under Alternative 1, while miles of open roads would be the same  
22 between Alternatives 2, 3, and 4. Miles of road restricted year-round would be the same for  
23 Alternatives 1, 2, and 4, and lower for Alternative 3.

24 **Geology and Soils**

25 By implementing existing BMPs and complying with the existing regulatory framework, all four  
26 alternatives would minimize the risk of effects on soil productivity and provide adequate protection  
27 from erosion effects. The existing SMZ Law and Rules, Forest Management ARMs, Montana  
28 Forestry BMPs, and DNRC forest management policies are generally effective at minimizing soil  
29 disturbance activities (DNRC 2006b). However, additional conservation commitments specified by  
30 the action alternatives would decrease risks associated with specific activities (e.g., harvest, grazing)  
31 and locations (e.g., riparian areas) and require some level of identifying, prioritizing, and correcting  
32 road and stream crossing problems to reduced sediment delivery to streams. Alternative 3 would  
33 result in the least potential for adverse effects from forest management activities and provide the  
34 greatest benefit in terms of reducing ongoing sediment delivery to streams. Alternatives 2, 4, and 1  
35 would have increasingly higher potential for adverse effects and decreasing benefits for reducing  
36 sediment delivery to streams.

37 **Water Resources**

38 DNRC has achieved a high level of success with protection and mitigation efforts under its current  
39 forest management program, resulting in 97 to 98 percent application and effectiveness of BMPs to  
40 limit sediment delivery to streams (DNRC 2006b). DNRC's existing program would continue

1 under Alternative 1, so this level of success would be expected to continue during the Permit term.  
2 However, compared to the action alternatives, Alternative 1 would not provide any additional  
3 protection of streamside buffers, additional commitments for road and harvest area practices that  
4 protect water quality, more formal documentation of cumulative watershed effects thresholds and  
5 mitigation requirements, or enhanced coarse-filter reviews of grazing effects. All three action  
6 alternatives would provide some level of these additional commitments, with Alternative 3  
7 providing the most protective measures and least risk of adverse effects on water quality, followed  
8 by Alternative 2, then Alternative 4.

9 Changes in water quantity effects would generally be similar among all alternatives. Potential to  
10 measurably change water quantity would be highest under Alternatives 2 and 4 because these  
11 alternatives have the highest levels of planned timber harvest and include opening the Stillwater  
12 Core to active forest management. However, differences among alternatives would have the  
13 potential to result in measurable changes in water quantity only where more timber harvest is  
14 concentrated in small watersheds, particularly within the rain-on-snow elevation zone.

### 15 **Plant Species of Concern, Noxious Weeds, and Wetlands**

16 All alternatives would implement current practices (ARMs and MCA) that address identified plant  
17 SOC, noxious weeds, and wetlands. However, under the action alternatives, some conservation  
18 commitments would potentially result in greater protection of potential plant SOC habitat (where  
19 unknown populations may exist), reduced spread of noxious weeds, and enhanced wetland  
20 protection over Alternative 1. All action alternatives offer some increase level of benefit over the  
21 no-action alternative, with Alternative 3 providing slightly higher levels of protection due to more  
22 restrictive commitments related to forest management activities and shorter timeframes for  
23 identifying and correcting problems.

### 24 **Fish and Fish Habitat**

25 Overall, the alternative analysis indicates that all of the alternatives are generally effective at  
26 maintaining the key habitat components (sediment delivery, stream temperature, in-stream habitat  
27 complexity, and connectivity among sub-populations of fish species) at a level that provides for  
28 healthy fish populations, including the HCP fish species. However, there are some substantial  
29 differences between the alternatives. Most significant is the general differences between the three  
30 action alternatives and the no-action alternative. For most instances, Alternative 1 provides the  
31 smallest degree of improvement in the individual habitat components during the Permit term. In  
32 some cases, such as stream temperature and shading, Alternative 1 could lead to some negative  
33 short-term effects on fish populations, although the magnitude of any such effect would be  
34 relatively small. In addition, any risk of effects from Alternative 1 would apply equally to all fish  
35 species, including HCP fish species, because the existing policies, procedures, and corrective  
36 actions are not prioritized for any particular species. However, Alternative 1 would still maintain or  
37 slightly improve habitat conditions that would support native cold-water and warm-water fish  
38 populations.

39 All of the action alternatives have a greater potential to improve aquatic habitat conditions, based  
40 either on overall scale or rate of change. In addition, the action alternatives have some specific  
41 mechanisms for monitoring and adaptive management to help to ensure proper implementation and

1 effectiveness of the various conservation strategies. The risk of adverse effects to HCP fish species  
2 is reduced with the action alternatives, compared to Alternative 1.

3 Although the action alternatives would all benefit aquatic species, including the HCP fish species.  
4 Alternative 3 would provide the greatest potential benefits, followed by Alternatives 2 and 4. This  
5 is generally due to an increased rate of conservation commitment implementation under Alternative  
6 3. In the case of those habitat components affected by riparian buffer width (stream temperature  
7 and LWD frequencies), Alternative 3 is roughly equivalent to a “no management” alternative in  
8 areas adjacent to HCP fish species habitat. This alternative would provide for the maximum levels  
9 of LWD recruitment and shade within the riparian zones of the HCP project area, unless LWD  
10 frequency was increased through the active placement of LWD through tree falling or manual  
11 installation.

## 12 **Wildlife and Wildlife Habitat**

13 None of the alternatives is expected to result in substantial changes in the distribution or amount of  
14 wildlife habitat in the HCP project area. Compared to the no-action alternative, increased  
15 restrictions on new road construction and access easements under the action alternatives, along with  
16 restrictions on activities in spring habitat, post-denning habitat, and near den sites, would reduce the  
17 risk of effects on grizzly bears due to the presence of roads and human activity in key habitat areas.  
18 Canada lynx would be expected to benefit from HCP conservation commitments to maintain  
19 suitable habitat and foraging habitat in key areas of known importance for the species in western  
20 Montana.

## 21 **Recreation**

22 Under all four alternatives, increases in the amount of roads open to non-motorized public access  
23 would result in expanded opportunities for hiking, mountain biking, berry picking, and other such  
24 activities throughout the HCP project area. Under Alternatives 2 and 4, implementation of a  
25 transportation plan in the Stillwater Block would result in increased opportunities for motorized  
26 public access as compared to Alternatives 1 and 3 due to greater access to the Stillwater Core. In  
27 the Swan River State Forest, access would remain the same for all alternatives if the Swan  
28 Agreement remains in effect; otherwise, opportunities for motorized public access could increase  
29 under the action alternatives. As a result of timber harvest under all alternatives, opportunities for  
30 hunting, berry picking, and other activities in young, open-canopy forest would likely increase. On  
31 the other hand, opportunities for recreation in unmanaged areas would be reduced, and the quality of  
32 the recreational experience for some users may decrease due to the increased visibility of managed  
33 stands. Under the action alternatives, increases in the amount of roads available for motorized  
34 public access would likely reduce the amount of wild, backcountry areas available for recreation,  
35 particularly in the Stillwater Block.

## 36 **Visual Resources**

37 Under all four alternatives, increases in the amount of roaded areas and forest in the non-stocked  
38 and seedling/sapling size classes would result in decreases in the amount of natural-appearing  
39 forested landscape. Such changes would be visible from roads (including scenic drives), trails,  
40 recreation areas, and viewpoints in the planning area. Under Alternatives 2 and 4, increased access  
41 in the Stillwater Core would result in more timber management (largely even-aged harvest),

1 resulting in greater visual impacts than under Alternatives 1 or 3. Compared to Alternative 1, all  
2 three action alternatives would result in slightly smaller increases in total road length at the end of  
3 the Permit term, with the smallest increases expected to occur under Alternative 3. In all parts of  
4 the HCP project area, the visual impacts of roads would not be expected to differ substantially  
5 among the alternatives.

## 6 **Archaeological, Historical, Cultural, and Trust Resources**

7 Within DNRC's existing forest management program, activities associated with timber harvest and  
8 road construction are the primary sources of potential adverse effects on non-renewable cultural and  
9 paleontological resources and TCPs or cultural use areas on trust lands. For the four alternatives,  
10 annual timber harvest would range from just under 51 to 58 million board feet per year, and there  
11 would be between 1,322 and 1,408 miles of new road constructed on HCP project area lands. The  
12 one indirect benefit to cultural and paleontological resources and TCPs under all the alternatives  
13 would be the large amounts of road with restricted motorized public access year-round.

14 Alternative 3 would result in the least amount of annual timber harvest, the lowest amount of new  
15 roads at the end of the Permit term, the widest buffers for stream systems supporting HCP fish  
16 species, and retention of the Stillwater Core. Thus, this alternative would be expected to have the  
17 lowest likelihood of adversely affecting cultural and paleontological resources and TCPs or cultural  
18 use areas. Alternative 1 would be expected to have a lower likelihood of adverse effects resulting  
19 from timber harvest as compared to Alternatives 2 and 4. Conversely, Alternatives 2 and 4 would  
20 be expected to have a lower likelihood of adverse effects from road construction than Alternative 1  
21 and lower likelihood of adverse effects from timber harvest along streams supporting HCP fish  
22 species due to the 25-foot no-harvest buffer that would be implemented for those alternatives.  
23 However, within the Stillwater Block, Alternatives 2 and 4 would result in a higher likelihood of  
24 adverse effects to cultural and paleontological resources and TCPs or cultural use areas because  
25 there would be increased flexibility to manage in the Stillwater Core. Additional harvest activities,  
26 as well as increased public access to the Stillwater Core, would increase risks to existing resources  
27 in the area.

## 28 **Socioeconomics**

29 Alternatives 2 and 4 would result in more forestry sector jobs and associated wages than  
30 Alternatives 1 and 3. Other jobs that support the forest industry or workers would be expected to  
31 follow the same pattern. Similarly, net revenues generated for trust beneficiaries would be highest  
32 for Alternative 4 and slightly less for Alternative 2 due to higher costs associated with more  
33 restrictive HCP commitments. Alternative 3 would likely generate the lowest net revenues.

34 Revenues from recreational licenses would likely be higher for Alternatives 2 and 4 due to increased  
35 access to the Stillwater Core after it is opened up for active management. Similarly, increases in  
36 forest-related recreation jobs would also likely be higher for these two alternatives.

37 Natural amenities and non-use values would likely be least affected under Alternative 3 because it  
38 provides protection to sensitive areas and species. Opening the Stillwater Core under Alternatives 2  
39 and 4 would affect the natural amenities and non-use values in that area versus what they currently  
40 are and would be during the Permit term under Alternatives 1 and 3.

1 DNRC's current program does not disproportionately affect minority or low-income populations.  
2 There would be differences among the alternatives regarding changes to the availability of salmonid  
3 species or other recreational, subsistence, or ceremonial plant or wildlife species; access to TCPs; or  
4 numbers of forestry jobs and associated income. However, these effects are not expected to fall  
5 disproportionately on minority or low-income populations for any of the alternatives.

## 6 **PREFERRED ALTERNATIVE**

7 Since this EIS has been prepared to comply with both NEPA (USFWS) and MEPA (DNRC)  
8 requirements, each agency has identified its own preferred alternative.

### 9 **USFWS Preferred Alternative**

10 While development of the HCP was driven by the DNRC, USFWS personnel provided guidance  
11 and technical assistance throughout the process. Therefore, the USFWS supports the selection of  
12 the proposed action (Alternative 2) as its preferred alternative and does not anticipate permit  
13 conditions beyond those already included in the proposed action. Prior to finalizing its selection of  
14 the preferred alternative, USFWS will review the HCP relative to the requirements of Sections 7  
15 and 10 of the ESA and NEPA.

### 16 **DNRC Preferred Alternative**

17 The proposed action (Alternative 2) is DNRC's preferred alternative. This alternative provides the  
18 best balance between providing for HCP species conservation and allowing for DNRC management  
19 flexibility to fulfill its trust mandate. DNRC believes that Alternative 2 best represents the methods  
20 and processes for avoiding, minimizing, and mitigating the impacts of forest management activities  
21 on HCP species to the maximum extent practicable.

## 22 **ENVIRONMENTALLY PREFERRED ALTERNATIVE**

23 Alternative 3, HCP with Increased Conservation, is the environmentally preferred alternative. This  
24 alternative includes more protective measures than those required under the current forest  
25 management program or proposed under the other two action alternatives. This alternative would  
26 also retain the grizzly bear secure habitat within the Stillwater Core and not increase the level of  
27 active forest management in that area. The more protective measures under Alternative 3 include  
28 greater restrictions on forest management activities in habitats and during seasons important to HCP  
29 species. This alternative would also require shorter timeframes to identify the need for and  
30 implement correcting actions, resulting in the fastest rate of habitat improvement over existing  
31 conditions versus the other alternatives.