Appendix D. Supplemental Species Information

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Introduction

The Forest adopted an ecosystem and species-specific approach, known as a coarse-filter/fine-filter approach, to provide for the diversity of plant and animal communities and the long-term persistence of native species in the plan area. The coarse-filter plan components are designed to maintain or restore ecological conditions for ecosystem integrity and ecosystem diversity in the plan area within Agency authority and the inherent capability of the land. The habitat needs of most plant and animal species are provided by plan components associated with the coarse filter of terrestrial vegetation conditions. Fine filter plan components are also written to provide for the needs of some species due to their status (at-risk) or specific habitat needs that are not covered by the coarse filter.

At-risk species include those that are listed as threatened, endangered, proposed, or candidate species under the Endangered Species Act; as well as those identified as Species of Conservation Concern (SCC). For the HLC NF, this includes aquatic species (bull trout); terrestrial wildlife species (flammulated owl, Lewis's woodpecker, Canada lynx, grizzly bear, and wolverine); one tree (whitebark pine); and multiple plant species.

This appendix provides species lists and information on aquatic, wildlife, and plant species (including at-risk species) to supplement chapter 3 of the FEIS, including the habitat associations for each species and a guide to all of the plan components that contribute to the persistence and/or recovery of at-risk species.

Aquatic Species Supplemental Information

Species Habitat Associations

Freshwater habitat needs are similar for bull trout, westslope cutthroat trout and western pearlshell mussel and many other native fish species on the HLC NF. All salmonid life stages including those of western pearlshell mussel, require cold, well-oxygenated, unpolluted waters that are low in suspended sediment, connected, and retain structural diversity. The health of an aquatic ecosystem depends on terrestrial products and processes notably shade, soil erosion, large wood recruitment, and nutrient/detritus inputs. Although each aquatic life stage has slightly different critical habitat needs, a well-functioning riparian ecosystem should satisfy diverse habitat requirements. For example, water temperature is most critical for the growth and development of juvenile fish. Side channel and off-channel wetland habitat provide ideal rearing temperatures and are refuge for young fish during high spring flows while deep pools provide thermal refuge for adult fish during summer months, and optimal overwintering habitat. Meanwhile, maximum densities of western pearlshell mussel are found primarily in riffle reaches with diverse substrate. Western pearlshell inhabit small cobble and gravels stabilized by larger rock features and rely on dispersal by migrating cold water trout specifically, westslope cutthroat trout.

Plan Components and Monitoring Items for At-Risk Aquatic Species

The 2020 Forest Plan components in Table 1 provide management direction and monitoring that is relevant to at-risk aquatic species (bull trout, an ESA threatened species; westslope cutthroat trout and western pearlshell mussel, species of conservation concern on the HLC NF). Plan components

may apply at the forestwide scale (FW) or the geographic area scale (GA). In addition to the plan components described below, the Plan includes appendix E, which identifies the conservation watershed network for the HLC NF.

Table 1. Summary of plan components and monitoring that address at-risk aquatic species (bull trout, westslope cutthroat trout, and western pearlshell mussel)

Desired Conditions	Objectives and Goals	Standards and Guidelines	Suitability	Monitoring
FW-WTR-DC 01 to 13 FW-RMZ-DC 01 to 02 FW-FAH-DC 01 to 08 FW-CWN-DC-01 FW-SOIL-DC-01 FW-FIRE-DC-01 FW-VEGT-DC-01 FW-REC-DC-04 FW-WILD-DC-04 FW-IRA-DC-01 FW- LAND-DC-03 FW-RT-DC-02,04 FW-CONNECT-DC-02 FW-INV-DC-01,02 FW-WL-DC-01 FW-ACCESS-DC 03,04 FW-WSR-DC-01 FW-FWL-DC-05,06 DI-FAH-DC-01, 02 UB-FAH-DC-01, 02	FW-WTR-GO 01 to 04 FW-WTR-OBJ-01 to 03 FW-RMZ-OBJ-01 FW-FIRE-GO-02 FW-FAH-GO 01 to 06 FW-FAH-OBJ-01, 03 FW-CWN-OBJ-01, 02 FW-REC-OBJ-01,02 FW-RT-OBJ-01, 02 FW-WL-GO-01 FW-ACCESS-GO-01 DI-FAH-GO-01 UB-FAH-GO-01	FW-WTR-STD-01 to 03 FW-WTR-GDL- 01 to 03 FW-RMZ-STD-01 to 06 FW-RMZ-GDL-01 to 12 FW-FAH-STD-01 FW-FAH-GDL-01 to 05 FW-VEGT-GDL-01 to 04 FW-REC-GDL-01 to 06 FW-ACCESS-GDL-01 FW-CWN-GDL-01 to 03 FW-FIRE-GDL-01, 02 FW-WILD-GDL-01 FW-WSR-GDL-01 FW-LAND USE-GDL-03 to 06 FW-RT-STD-01 to 04 FW-RT-GDL-01 to 12 FW-BRDG-GDL-01 FW-GRAZ-GDL-01 to 07 FW-GRAZ-STD-01, 02 FW-EMIN-GDL-01, 02 FW-INV-STD-01 FW-INV-GDL-03,05 FW-WL-GDL 08,13	FW-RMZ-SUIT-01	MON-WTR-01 to 06 MON-FAH-01 to 02 MON-RMZ-01

Key Ecosystem Characteristics and Stressors for At-Risk Aquatic Species

Table 2 shows how key ecosystem characteristics and stressors for at-risk aquatic species are addressed by coarse-filter and species-specific plan components. Some plan components deal with stressors or threats relevant to populations in the plan area, and some deal with the ecological conditions or key ecosystem characteristics required. Plan components may apply at the forestwide scale (FW) or the geographic area scale (GA). The lists in Table 2 are not intended to be all inclusive.

Table 2. Summary of how plan components address stressors, key ecosystem characteristics, and ecological conditions for at-risk aquatic species (bull trout, westslope cutthroat trout and western pearlshell mussell)

Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components in the selected alternative	How stressors are addressed by species-specific plan components in the selected alternative
Cold water temperatures (<15°C), minimal substrate embeddedness (<35% fines), moderate streamflow, habitat connectivity, complex habitat: side channels, large wood complexes, undercut banks, pool quality and quantity similar to reference reach conditions.	• Livestock grazing • Vegetation management • Mining • Forest roads and undersized culverts • Climate change • Large wildfires/fire suppression • Nonnative fish • Habitat fragmentation • Recreational activities e.g. angling pressure	• Collectively, FW-WTR-DC 01 to 13, FW-WTR-GO-01 to 04, FW-WTR-GDL-01, FW-RMZ-DC 01 to 02, FW-FAH-DC 01 to 08, and FW-CWN-DC-01 describe the desirable coarse filter characteristics that would support watershed function and habitat for all aquatic species. FW-WILD-DC-04 and FW-IRA-DC-01 also express the desired condition for undisturbed and unfragmented habitat for aquatic species in those areas. In addition, FW-FAH-GO-03 and 05 broadly address working with other agencies and landowners to recover threatened and endangered species and meet objectives for native species. MON-WTR-01, 03, 04, and 05 and MON-RMZ-01 would monitor key characteristics of aquatic and riparian conditions over time. • Multiple stressors would be addressed by objectives that address the need to improve watershed function/resiliency and riparian habitat (FW-WTR-OBJ-02, FW-RMZ-OBJ-01, FW-FAH-OBJ-01); and plan components that require restoration to be prioritized in the CWN (FW-CWN-GDL-02, 03). • FW-FAH-STD-01 and FW-FAH-GDL-02 require that stream diversions, ditches, and pumps be screened to prevent fish capture. FW-LAND USE-GDL-04, 05, 06 ensure that permits hydropower facilities and other support facilities or land uses include mitigation	• FW-FAH-GO-01 specifically addresses the goal of contributing to the expansion of core populations of bull trout. • FW-FAH-GO-02 specifically addresses the goal of contributing the expansion of core populations of westslope cutthroat trout. • In GAs where bull trout are present, plan components are included that describe the desired habitat conditions (DI-FAH-DC-01, 02; UB-FAH-01, 02); as well as goals to contribute to population recovery (DI-FAH-GO-01; UB-FAH-GO-02). • FW-RT-OBJ-02 specifies that priorities for road improvement projects should include CWNs • MON-FAH-01 specifically addresses the status of westslope cutthroat trout through indicators such as fish per mile or miles of occupied reaches, and location of populations. • Some eligible WSRs were selected based an outstanding remarkable

Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components in the selected alternative	How stressors are addressed by species-specific plan components in the selected alternative
		measures that ensure adverse effects to fish and riparian resources are avoided or minimized. • The stressor of livestock grazing is addressed by FW-FAH-GDL-03, which requires that AMPs be designed to maintain or improve water quality. FW-WDL-GDL-01 specifies that in wilderness areas, grazing of livestock is not permitted within 100 feet of water sources. Further, FW-GRAZ-GDL 01, 03, 05, 06, and 07 would apply to all lands, and ensure that riparian conditions are maintained or improved by grazing practices. • The potential impact of vegetation management is impacted in part by FW-RMZ-SUIT-01, which specifies that RMZs are not suitable for timber production. Other plan components ensure that when harvest and other vegetation management occurs - as well as weed spraying - that those activities are compatible with RMZ desired conditions and protect aquatic habitat (FW-WTR-STD-01 to 03; FW-RMZ-STD-01 to 06; FW-RMZ-GDL-01 to 03, 05, 06, 08 to 12; FW-INV-STD-01; FW-INV-GDL-03,05). • Fire disturbance plays an essential and natural role in shaping riparian condition and aquatic habitat. Both wildlife and prescribed fire can play a key role in enhancing aquatic resources and watershed resiliency (FW-FIRE-DC-01). FW-FIRE-GDL-01,02 would promote desired vegetative conditions through the use of fuels/fire management and ensure ecosystems are more resilient to large wildfire disturbance. • The stressor of mining is addressed by FW-EMIN-01 and 02, which would ensure new authorizations or reauthorizations for mineral development would avoid RMZs and adverse effects to aquatic resources; or include measures to maintain, protect, rehabilitate fish habitat.	value based on bull trout and/or westslope cutthroat trout fisheries (as listed in the 2020 Forest Plan). On these streams, FW-WSR-GDL-01 prescribes interim protection measures that would further protect desirable aquatic habitat characteristics.

Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components in the selected alternative	How stressors are addressed by species-specific plan components in the selected alternative
		• The stressor of forest roads is addressed with multiple plan components. FW-RT-DC-04 expresses the desire that the transportation system has minimal impacts on aquatic species. FW-RMZ-GDL-04 requires that new road and landing construction is avoided in RMZs; and FW-RMZ-GDL-07 would result in new sand and gravel pits or gravel mining not occurring in RMZs. FW-FAH-GDL-04 would ensure construction activities within the high-water mark that have adverse impacts occur outside of spawning and incubation seasons. FW-CWN-OBJ-01 and 02 address the need to repair road/stream crossings and stormproof roads, prioritized in conservation watershed networks. FW-CWN-GDL-01 and 02 address the need to avoid increases in stream crossings and road lengths; and be prioritized for road decommissioning, relocation, and other strategies, to reduce sediment delivery. Collectively, FW-RT-STD-01 and FW-RT-GDL-01 to 06; 08 to 12 would limit sediment delivery, other pollutants, and impacts to aquatic habitat connectivity. MON-WTR-06 specifically monitors road and access improvements in CWNs. MON-FAH-02 would result in monitoring if culverts and bridges are being constructed/upgraded/removed to allow aquatic organism passage. • FW-FAH-GO-06 addresses nonnative fish by stating the goal of working with other MTDFWP to help prevent aquatic invasive species; as well as by FW-FAH-GDL-01 which requires inspection and cleaning to avoid introduction of invasive species. • Habitat fragmentation in part would also be addressed by FW-LAND-DC-03, which expresses the desire that land adjustments and acquisitions enhance riparian habitat. FW-FAH-GO-04 specifies working with other landowners to provide for fish habitat connectivity. FW-FAH-OBJ-03 specifies an objective of reconnecting at least 10 miles of	

Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components in the selected alternative	How stressors are addressed by species-specific plan components in the selected alternative
		habitat over the life of the plan. FW-FAH-GDL-05 requires that human-created migration barriers not be created unless needed to prevent invasion by nonnative species. FW-RT-GDL-02, 09, 10, and 11 as well as FW-BRDG-GDL-01 would ensure that road and bridge work has minimal impact to connectivity. • The stressor of recreation activities is addressed by REC-DC-04; FW-ACCESS-DC-03,04, which specifically enumerates the desire that recreation facilities and uses have minimal impacts on aquatic species or remove/restrict the ones that degrade aquatic resources. FW-FAH-GDL-01 addresses recreation activities that may introduce invasive species.	

Terrestrial Wildlife Supplemental Information

Species Habitat Associations

Table 3 lists wildlife species analyzed in the FEIS and their habitat associations; it is not an exhaustive list of all the species found on the HLC NF but includes many species that are not considered 'at-risk'. Habitat associations are groupings of vegetation types as referred to in the Terrestrial Wildlife Diversity section of the FEIS. Some species may use more habitat associations than indicated, which is intended only to provide a general overview of terrestrial wildlife diversity on the HLC NF. SCC would be adopted with the action alternatives. Under the no-action alternative, the designations for Regional Forester Sensitive Species (RFSS) would be retained. Management indicator species (MIS) are not identified in the table but would be included in the no action alternative.

Table 3. HLC NF wildlife species habitat associations

Species	Species Status	Grass-forb-shrub	Late-successional, old-growth, large trees	Snags	Coarse woody debris	Hard-wood forest	High elevation habitats	Aquatic, wetland, and/or riparian	Dry conifer (warm-dry PVT)	Mixed conifer (warm dry, cool moist, & cold PVTs)	Cave, cliff, rock, other geologic
Amphibians and reptiles											
Western toad	RFSS		X					X			
Northern leopard frog	RFSS							X			
Garter snake								X	X		
Salamander			X		X	X		X			
Birds											
Bald eagle	RFSS							X			
Barred owl			X	X						X	
Black rosy finch							X				
Black-backed woodpecker	RFSS		X	X							
Boreal Owl			X							X	
Brown Creeper			X	X						X	
Clark's nutcracker							X		X		
Cooper's hawk										X	
Flammulated owl	SCC, RFSS		X	X					X		
Golden eagle											X

Species	Species Status	Grass-forb-shrub	Late-successional, old-growth, large trees	Snags	Coarse woody debris	Hard-wood forest	High elevation habitats	Aquatic, wetland, and/or riparian	Dry conifer (warm-dry PVT)	Mixed conifer (warm dry, cool moist, & cold PVTs)	Cave, cliff, rock, other geologic
Gray-crowned rosy finch							X				
Great gray owl				X						X	
Harlequin duck	RFSS							X			
Hawk Owl				X						X	
Lewis's woodpecker	SCC		X	X		X			X		
Mountain bluebird				X					X		
Northern flicker				X		X		X		X	
Northern goshawk			X							X	
Northern (American) three-toed woodpecker				X						X	
Nuthatch				X		X		X	X	X	
Peregrine falcon		X									X
Pileated woodpecker			X	X					X	X	
Screech owl				X		X		X			
Sharp-shinned hawk										X	
Shorebirds and Waterfowl								X			
White-tailed ptarmigan							X				
Mammals											
Long-eared myotis	RFSS			X						X	X
Fringed myotis	RFSS								X	X	X
Silver-haired bat				X							
Townsend's big-eared bat	RFSS									X	X
Beaver						X		X			
Bighorn sheep	RFSS	X							X		X
Black bear		X				X		X	X	X	
Bobcat									X		
Bushy-tailed woodrat											X

Species	Species Status	Grass-forb-shrub	Late-successional, old-growth, large trees	Snags	Coarse woody debris	Hard-wood forest	High elevation habitats	Aquatic, wetland, and/or riparian	Dry conifer (warm-dry PVT)	Mixed conifer (warm dry, cool moist, & cold PVTs)	Cave, cliff, rock, other geologic
Canada lynx	TEPC		X		X					X	
Coyote		X				X		X	X	X	
Deer		X				X		X	X	X	
Elk		X				X			X	X	
Fisher	RFSS		X					X		X	
Golden-mantled ground squirrel					X		X				X
Gray wolf	RFSS	X							X		
Grizzly bear	TEPC	X				X	X	X	X	X	
Hoary marmot							X				X
Moose						X		X		X	
Mountain goat							X				X
Mountain lion					X				X		
Northern bog lemming	RFSS							X			
Northern flying squirrel			X	X	X	X				X	
Pika							X				X
Pine marten			X	X	X					X	
Red fox		X									
Red squirrel					X	X				X	
Short-tailed weasel				X	X						
Shrews					X			X			
Snowshoe hare										X	
Voles		X			X			X			
Wolverine	TEPC RFSS						X				X

Plan Components and Monitoring Items for At-Risk Wildlife Species

The plan components in Table 4 provide management direction and monitoring that is particularly relevant to at-risk wildlife species on the HLC NF (flammulated owl, Lewis's woodpecker, Canada lynx, grizzly bear, and wolverine). Plan components may apply at the forestwide scale (FW) or the geographic area scale (GA).

Table 4. Summary of plan components and monitoring that address at-risk wildlife species

Desired Conditions	Objectives and Goals	Standards and Guidelines	Suitability	Monitoring
Flammulated owl				
FW-VEGT-DC-01 to 04 FW-VEGF-DC-01 to 04, 08, 09 FW-VEGNF-DC-01, 03 FW-WL-DC-01 to 04 FW-REC-DC-04 FW-WILD-DC-02 FW-RECWILD-DC-02 FW-WSA-DC-01 FW-IRA-DC-01 FW-LAND-DC-03 FW-CONNECT-DC-02 BB, DI, EH, UB-VEGT-DC-01 BB, DI, EH, UB-VEGF-DC-01 to 03 BB, DI, UB-WL-DC-02 EH-WL-DC-01, 03 EH-ACCESS-DC-01 RM-CMA-DC-01	FW-WL-GO-01 to 06	FW-FIRE-GDL-02 FW-VEGF-GDL-01, 02 FW-REC-GDL-01 FW-RT-GDL-13 FW-TIM-GDL-02 EH-WL-GDL-01, 02, 03 EH-ACCESS-GDL-01		MON-VEGT-02 MON-VEGF-01, 02, 03, 04, 06 MON-WL-03
Lewis's woodpecker				
FW-VEGT-DC-01 to 04 FW-VEGF-DC-01 to 04, 06, 08, 09, 11 FW-WL-DC-01 to 04 FW-REC-DC-04 FW-WILD-DC-02	FW-WL-GO-01 to 06	FW-FIRE-GDL-02 FW-VEGF-GDL-01, 02 FW-REC-GDL-01 FW-RT-GDL-13 FW-TIM-GDL-02, 03		MON-FIRE-01 MON-VEGT-02 MON-VEGF-01, 02, 03, 04, 06

Desired Conditions	Objectives and Goals	Standards and Guidelines	Suitability	Monitoring
FW-RECWILD-DC-02 FW-WSA-DC-01 FW-IRA-DC-01 FW-LAND-DC-03 FW-CONNECT-DC-02 BB, CA, CR, DI, EH, HI, LB, RM, SN, UB-VEGT-DC-01 BB, CA, CR, DI, EH, HI, LB, RM, SN, UB -VEGF-DC-01 to 03 EH-WL-DC-01 EH-ACCESS-DC-01 RM-CMA-DC-01		EH-WL-GDL-01, 02, 03 EH-ACCESS-GDL-01		
Canada lynx				
FW-WTR-DC-02 FW-RMZ-DC-02 FW-FIRE-DC-01 FW-VEGT-DC-01 to 04 FW-VEGF-DC-01 to 03, 07 to 09 FW-WL-DC-01 to 04, 07 to 09 FW-ROS-DC-02 to 05 FW-REC-DC-04 FW-WILD-DC-02, 03 FW-RECWILD-DC-02 FW-WSA-DC-01 FW-IRA-DC-01, 02 FW-RNA-DC-01 FW-LAND-DC-03 FW-LAND USE-DC-03 FW-RT-DC-02, 04 FW-CONNECT-DC-02	FW-FAH-GO-04 FW-WL-GO-01 to 06 FW-LAND USE-GO-01 FW-RT-GO-03 DI-WL-GO-01	FW-RMZ-GDL-12 FW-VEGF-GDL-05 FW-REC-GDL-01 FW-LAND USE-GDL-03, 07 FW-ACCESS-GDL-01 FW-WL-GDL-06 FW-WSR-GDL-01 FW-WSA-STD-01 FW-RT-GDL-12, 13 FW-GRAZ-GDL-04 FW-TIM-STD-04 FW-TIM-GDL-02 FW-OFP-GDL-03 DI, UB-WL-GDL-01 EH-WL-GDL-01 to 03 EH-RT-STD-01, 02; GDL-01 EH-ACCESS-GDL-01 RM-CMA- STD-01, 02	FW-RECWILD-SUIT-01, 06 FW-WILD-SUIT-02, 03, 05 FW-RNA-SUIT-03 FW-WSA-SUIT-01 to 08 FW-IRA-SUIT-01, 02	MON-FIRE-01 MON-VEGT-02, 03 MON-VEGF-01, 02, 03, 07 MON-WL-01, 03

Desired Conditions	Objectives and Goals	Standards and Guidelines	Suitability	Monitoring
BB, CA, CR, DI, EH, LB, RM, SN, UB-VEGT-DC-01 BB, CA, CR, DI, EH, LB, RM, SN, UB -VEGF-DC-01 to 03 BB-WL-DC-03 CR, DI, RM, UB-WL-DC-01 EH-WL-DC-01, 02 EH-ACCESS-DC-01 RM-VEGF-DC-04 RM-BTM-DC-02 RM-CMA-DC-01, 03 UB-VEGF-DC-04 FW-CARB-DC-01				
Grizzly bear				
FW-RMZ-DC-02 FW-WTR-DC-02 FW-VEGT-DC-01 to 04 BB, CA, CR, DI, EH, HI, LB, RM, SN, UB-VEGT-DC-01 FW-VEGF-DC-08 FW-WL-DC-01 to 05, 07 FW-NCDE-DC-01 to 03 PCAZ1Z2-NCDE-DC-01 PCAZ1-NCDE-DC-01 Z1-NCDE-DC-01, 02 PCA-NCDE-DC-01 to 06 FW-ROS-DC-02 to 05 FW-REC-DC-04 FW-WILD-DC-02, 03 FW-RECWILD-DC-02 FW-WSA-DC-01	FW-FAH-GO-04 FW-WL-GO-01 to 06 FW-RT-GO-03 FW-LAND USE-GO-01 DI-WL-GO-01	FW-RMZ-STD-03 FW-RMZ-GDL-04, 07 to 09, 11, 12 FW-WL-GDL-02 FW-NCDE-STD-01, 02 PCAZ1Z2-NCDE-STD-01 PCAZ1Z2-NCDE-GDL-01, 02 PCAZ1-NCDE-STD-01 to 12 Z1-NCDE-STD-01 PCAZ1-NCDE-GDL-01 to 07 PCA-NCDE-STD-01 to 12 PCA-NCDE-GDL-01 to 10 FW-REC-GDL-01, 07 FW-WSA-STD-01 FW-WSR-GDL-01 FW-ACCESS-GDL-01 FW-RSUP-GDL-01	FW-WILD-SUIT-02, 03, 05 FW-RECWILD-SUIT-01, 06, 08 FW-WSA-SUIT-01 to 08 FW-IRA-SUIT-01, 02 FW-RNA-SUIT-03	MON-WL-01, 02, 04

Desired Conditions	Objectives and Goals	Standards and Guidelines	Suitability	Monitoring
FW-IRA-DC-01, 02 FW-RNA-DC-01 FW-LAND-DC-03 FW-LAND USE-DC-03 FW-RT-DC-01, 02, 04 FW-CONNECT-DC-02 BB-WL-DC-03 CR, DI, RM, UB-WL-DC-01 HI, LB-WL-DC-01 EH-WL-DC-01, 02 EH-ACCESS-DC-01 RM-BTM-DC-02 RM-CMA-DC-01, 03		FW-RT-GDL-12, 13 FW-LAND USE-GDL-03, 07 FW-GRAZ-GDL-04 FW-TIM-GDL-02 FW-OFP-GDL-03 DI, UB-WL-GDL-01 EH-WL-GDL-01 to 03 EH-ACCESS-GDL-01 EH-RT-STD-01, 02; GDL-01 RM-WL-STD-01 RM-CMA-STD-01, 02		
Wolverine				
FW-WTR-DC-02 FW-RMZ-DC-02 FW-VEGT-DC-01, 03, 04 FW-VEGF-DC-08 FW-WL-DC-01 to 05 FW-ROS-DC-02 to 05 FW-REC-DC-04 FW-WILD-DC-02, 03 FW-RECWILD-DC-02 FW-WSA-DC-01 FW-IRA-DC-01, 02 FW-RNA-DC-01 FW-LAND-DC-03 FW-LAND USE-DC-03 FW-RT-DC-01, 02, 04 FW-CONNECT-DC-02 BB-WL-DC-03	FW-WL-GO-01 to 06 FW-LAND USE-GO-01 DI-WL-GO-01 FW-FAH-GO-04 FW-RT-GO-03 FW-WL-GO-04	FW-RMZ-STD-03, FW-RMZ-GDL-04, 07 to 09, 11, 12 FW-REC-GDL-01 FW-WSA-STD-01 FW-WSR-GDL-01 FW-ACCESS-GDL-01 FW-RSUP-GDL-01 FW-RT-GDL-12, 13 FW-LAND USE-GDL-03, 07 FW-OFP-GDL-03 DI, UB-WL-GDL-01 EH-WL-GDL-01, 02 EH-ACCESS-GDL-01 EH-RT-STD-01, 02; GDL-01 RM-CMA-STD-01, 02	FW-WILD-SUIT-02, 03, 05 FW-RECWILD-SUIT-01, 06 FW-WSA-SUIT-01 to 08 FW-IRA-SUIT-01, 02 FW-RNA-SUIT-03	MON-WL-01

Desired Conditions	Objectives and Goals	Standards and Guidelines	Suitability	Monitoring
CR, DI, RM, UB-WL-DC-01 HI, LB-WL-DC-01 EH-WL-DC-01, 02 EH-ACCESS-DC-01 RM-BTM-DC-02 RM-CMA-DC-01, 03 FW-CARB-DC-01				

Key Ecosystem Characteristics and Stressors for At-risk Wildlife Species

Table 5 shows how key ecosystem characteristics and stressors for at-risk wildlife species (flammulated owl, Lewis's woodpecker, Canada lynx, grizzly bear, and wolverine) are addressed by coarse-filter and species-specific plan components. Some plan components deal with stressors or threats relevant to populations in the plan area, and some deal with the ecological conditions or key ecosystem characteristics required by the species. Plan components may apply at the forestwide scale (FW) or the geographic area scale (GA). The lists in Table 5 are not intended to be all inclusive.

Table 5. Summary of how plan components address stressors, key ecosystem characteristics, and ecological conditions for at-risk wildlife species

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
Flammulated owl	Large ponderosa pine and/or Douglas-fir with an open forest canopy, interspersed with nonforested areas for foraging	• Fire exclusion • Insect infestation • Logging • Human developments	• Several plan components provide for the habitat conditions needed for wildlife in general terms (FW-VEGT-DC-03 and 04; FW-WL-DC-01, 02, 03; FW-WL-GO-01 to 06; FW-LAND-DC-03; FW-CONNECT-DC-02; EH-WL-DC-01; EH-WL-GDL-01; RM-CMA-DC-01). • Coarse filter vegetation plan components provide for the general habitat requirements within the natural range of variation, including dry forests and savanna areas (FW-VEGT-DC-01 (warm dry PVT); FW-VEGT-DC-02, 04; FW-VEGF-DC-01 to 04, 08; FW-VEGNF-DC-01 and 03; as well GA-level	In occupied GAs (Big Belts, Divide, Elkhorns, and Upper Blackfoot), plan components are included that describe the habitat characteristics for flammulated owls (BB-WL-DC-02, DI-WL-DC-02, EH-WL-DC-03, and UB-WL-DC-02).

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			VEGT-DC-01 and VEGF-DC-01 to 03). These components emphasize increasing ponderosa pine and large trees, maintaining open savannas and nonforested vegetation types, and providing snags. These conditions help address the ongoing effects of fire exclusion, and are based on concepts of resiliency, to ensure that habitats are not vulnerable to wildfire and insect infestations. Several plan components emphasize resiliency of forest habitats and natural disturbance regimes, e.g. FW-FIRE-GDL-02 and FW-VEGF-DC-09. • Several guidelines ensure that large trees and snags are retained during vegetation management, including logging (FW-VEGF-GDL-01, 02; FW-TIM-GDL-02). • The preferred alternative also provides for abundant areas of land with limited human developments and influence (e.g., wilderness, recommended wilderness, wilderness study areas, inventoried roadless areas, and primitive ROS areas) and associated plan components that would ensure that natural processes and limited human developments occur in these areas (FW-WL-DC-04; FW-WILD-DC-02; FW-RECWILD-DC-02; FW-WSA-DC-01; FW-IRA-DC-01; EH-WL-GDL-02). • Several plan components also address potential stressors to wildlife and wildlife habitats associated with human developments and uses (FW-REC-DC-04; FW-REC-GDL-01; FW-RT-GDL-13; EH-WL-GDL-02, 03; EH-ACCESS-DC-01; EH-ACCESS-GDL-01). • Several monitoring elements would assess vegetation conditions relevant to flammulated owl habitat (MON-VEGT-02; MON-VEGF-01, 02, 03, 04, 06).	In addition, there is a monitoring element for flammulated owl habitat in these GAs (MON-WL-05).

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
Lewis's woodpecker	Large ponderosa pine, Douglas-fir, aspen, and cottonwood; Snags; Brushy understory	• Logging • Fire exclusion • Insect infestation • Human developments	• Several plan components provide for the habitat conditions needed for wildlife in general terms (FW-VEGT-DC-03 and 04; FW-WL-DC-01, 02, 03; FW-WL-GO-01 to 06; FW-LAND-DC-03; FW-CONNECT-DC-02; EH-WL-DC-01; EH-WL-GDL-01; RM-CMA-DC-01). • Coarse filter vegetation plan components provide for the general habitat requirements within the natural range of variation, including dry forests and aspen/hardwoods, snags, and understory species (FW-VEGT-DC-01 (primarily warm dry PVT); FW-VEGT-DC-02; FW-VEGF-DC-01 to 04, 06, 08; FW-VEGF-DC-11; as well GA-level VEGT-DC-01 and VEGF-DC-01 to 03). These components emphasize increasing ponderosa pine, aspen/cottonwood, large trees, and maintaining snags. These conditions help address the ongoing effects of fire exclusion, and are based on concepts of resiliency, to ensure that habitats are not vulnerable to the wildfire and insect infestations. Several plan components emphasize resiliency of forest habitats and natural disturbance regimes, e.g. FW-FIRE-GDL-02 and FW-VEGF-DC-09. • Several guidelines ensure that large trees and snags are retained during vegetation management (FW-VEGF-GDL-01, 02; FW-TIM-GDL-02). Further, FW-TIM-GDL-03 addresses the retention of snags in burned habitats. • The preferred alternative provides for abundant areas of land with limited human developments and influence (e.g., wilderness, recommended wilderness, wilderness study areas, inventoried roadless areas, and primitive ROS areas) and associated plan components that would ensure that natural processes dominate in these areas (FW-WL-DC-04; FW-	The coarse filter plan components are sufficient to provide for Lewis's woodpecker. The monitoring prescribed for flammulated owl would be informative for this species (FW-MON-WL-05).

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			WILD-DC-02; FW-RECWILD-DC-02; FW-WSA-DC-01; FW-IRA-DC-01; EH-WL-GDL-02). • Several plan components address potential stressors to wildlife and wildlife habitats associated with human developments (FW-REC-DC-04; FW-REC-GDL-01; FW-RT-GDL-13; EH-WL-GDL-02, 03; EH-ACCESS-DC-01; EH-ACCESS-GDL-01). • Several monitoring elements would assess vegetation conditions relevant to Lewis's woodpecker habitat (MON-FIRE-01; MON-VEGT-02; MON-VEGF-01 to 04, 06).	
Canada lynx	Boreal forest with gentle rolling topography, dense horizontal cover, deep snow, and moderate to high snowshoe hare densities Habitat security and connectivity Denning habitat	• Vegetation management • Wildland fire management • Climate change • Habitat fragmentation	• Several plan components provide for the habitat conditions needed for wildlife in general terms (FW-VEGT-DC-03 and 04; FW-WL-DC-01, 02, 03; FW-WL-GO-01 to 06; FW-LAND-DC-03; FW-CONNECT-DC-02; EH-WL-DC-01; EH-WL-GDL-01; RM-CMA-DC-01). • Coarse filter vegetation plan components provide for the general habitat requirements within the natural range of variation, including boreal forests (FW-WL-DC-07, 08; FW-WL-GDL-06; FW-VEGT-DC-01 (primarily the cool moist PVT); FW-VEGT-DC-02 (primarily the spruce/fir cover type); FW-VEGF-DC-01 to 03, 07, 08; as well as all GA-level VEGT-DC-01 and VEGF-DC-01, 02, 03). • Other components also emphasize the importance of natural disturbance regimes fulfilling their function on the landscape (FW-FIRE-DC-01; FW-VEGF-DC-09). • The coarse filter for habitat connectivity is provided for plan components that allow for the movement of wildlife species (FW-WTR-DC-02; FW-RMZ-DC-02; FW-RMZ-GDL-12; FW-FAH-GO-04; FW-VEGT-DC-04, 08; FW-VEGF-DC-08; DI-WL-GDL-01; DI-WL-GO-01; FW-RT-GO-03; EH-WL-DC-02; UB-	The 2020 Forest Plan retains the Northern Rockies Lynx Management Direction in its entirety, which addresses the stressors to lynx (Plan appendix F). FW-WL-DC-09 provides for lynx habitat forestwide. Several other plan components provide for lynx habitat to support recovery and persistence of lynx (DI-VEGF-DC-04; RM-VEGF-DC-04; UB-VEGF-DC-04) and connectivity (BB-WL-DC-03; CR-WL-DC-01;

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			WL-GDL-01). Connectivity in several GAs would also be monitored (MON-WL-01). • A variety of plan components establish large, undisturbed areas of land and limit access and human interventions within them (FW-WL-DC-04; FW-ROS-DC-02 to 05; FW-WILD-DC-02, 03; FW-WILD-SUIT-02, 03, 05; FW-WSA-DC-01; FW-WSA-STD-01; FW-WSA-SUIT-01 to 08; FW-IRA-DC-01, 02; FW-IRA-SUIT-01, 02; FW-RECWILD-DC-02; FW-RECWILD-SUIT-01, 06; FW-RNA-DC-01; FW-RNA-SUIT-03; FW-WSR-GDL-01; FW-LAND-DC-03; FW-LAND USE-GO-01, FW-LAND USE-DC-03, FW-LAND USE-GDL-03, 07; FW-RT-DC-01, 02, 04; FW-RT-GDL-12, 13; FW-ACCESS-GDL-01, EH-ACCESS-DC-01, EH-ACCESS-GDL-01, EH-RT-STD-01, 02; EH-RT-GDL-01; RM-BTM-DC-02; RM-CMA-DC-01, 03; RM-CMA-STD-01, 02). • Several plan components address potential stressors to wildlife and wildlife habitats associated with human developments and uses, including recreation, roads and access, livestock grazing, and timber harvest (FW-VEGF-GDL-05; FW-REC-DC-04; FW-REC-GDL-01; FW-RT-GDL-13; FW-GRAZ-GDL-04; FW-TIM-STD-04; FW-TIM-GDL-02; FW-OFP-GDL-03; EH-WL-GDL-02, 03; EH-ACCESS-DC-01; EH-ACCESS-GDL-01, 02). • The coarse filter vegetation components listed above incorporate concepts of resiliency in the face of climate change. Climate and change is also specifically addressed in FW-VEGT-DC-01; FW-VEGT-DC-04; FW-VEGF-DC-08; FW-WL-DC-03; and FW-CARB-DC-01.	DI-WL-DC-01; RM-WL-DC-01; UB-WL-DC-01). The monitoring plan includes an element for lynx (MON-WL-03) to assess any change that occurs to lynx habitat as a result of forest management.

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			• Several monitoring elements would assess vegetation conditions relevant to Canada lynx (MON-FIRE-01; MON-VEGT-02, 03; MON-VEGF-01, 02, 03, 07).	
Grizzly bear	Habitat security (unroaded landscapes; natural vegetation conditions) Habitat connectivity	• Motorized access & habitat fragmentation • Developed sites • Bear-human conflicts/direct mortality	• Several plan components provide for the habitat conditions needed for wildlife in general terms (FW-VEGT-DC-03 and 04; FW-WL-DC-01, 02, 03; FW-WL-GO-01 to 06; FW-LAND-DC-03; FW-CONNECT-DC-02; EH-WL-DC-01; EH-WL-GDL-01; RM-CMA-DC-01). • Coarse filter vegetation plan components provide for vegetation conditions within the natural range of variation (FW-VEGT-DC-01; FW-VEGF-DC-08; FW-WL-DC-07; as well GA-level VEGT-DC-01). • Habitat security is addressed by plan components that establish areas with limited human influence, and/or restrict motorized access and route densities (FW-WL-DC-04; FW-ROS-DC-02 to 05; FW-WILD-DC-02; FW-WILD-SUIT-02, 03, 05; FW-WSA-DC-01; FW-WSA-STD-01; FW-WSA-SUIT-01 to 08; FW-IRA-DC-01, 02; FW-IRA-SUIT-01, 02; FW-RECWILD-DC-02; FW-RECWILD-SUIT-01, 06, 08; FW-RNA-DC-01; FW-RNA-SUIT-03; FW-WSR-GDL-01; FW-LAND-DC-03; FW-LAND USE-GO-01, FW-LAND USE-DC-03, FW-LAND USE-GDL-03, 07; FW-RT-DC-01, 02, 04; FW-RT-GDL-12, 13; FW-ACCESS-GDL-01, EH-ACCESS-DC-01, EH-ACCESS-GDL-01, EH-RT-STD-01, 02; EH-RT-GDL-01; RM-BTM-DC-02; RM-CMA-DC-01, 03; RM-CMA-STD-01, 02). • Potential displacement or bear-human conflicts in developed sites, and potential for direct mortality, are addressed by FW-WL-GDL-02, FW-REC-DC-04, FW-REC-GDL-07; FW-RT-DC-04, FW-WL-DC-05, and FW-RSUP-GDL-01.	The 2020 Forest Plan incorporates all of the applicable direction from the Grizzly Bear Conservation Strategy, which addresses all of the stressors for grizzly bear (FW-NCDE-DC-01, 02, 03; FW-NCDE-STD-01, 02; PCAZ1Z2-NCDE-DC-01; PCAZ1Z2-NCDE-STD-01; PCAZ1Z2-NCDE-GDL-01, 02; PCAZ1-NCDE-DC-01; PCAZ1-NCDE-STD-01 to 12; PCAZ1-NCDE-GDL-01 to 07; Z1-NCDE-DC-01, 02; Z1-NCDE-STD-01; PCA-NCDE-DC-01 to 06; PCA-NCDE-STD-01 to 12; PCA-NCDE-GDL-01 to 10). In addition, other plan components call out the needs of grizzly bear, including avoiding human-bear conflicts (FW-WL-GDL-02; RM-WL-STD-01); providing

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			• Habitat connectivity is provided by plan components that apply to a variety of species (DI-WL-GO-01; DI-WL-GDL-01; EH-WL-DC-01; HI-WL-DC-01; LB-WL-DC-01; UB-WL-GDL-01; FW-WTR-DC-02, FW-RMZ-DC-02, FW-RMZ-STD-03, FW-RMZ-GDL-04, 07, 08, 09, 11, 12; FW-FAH-GO-04; FW-RT-GO-03, FW-WL-DC-03, FW-WL-GO-04, FW-VEGT-DC-04, 08). Connectivity in several GAs would also be monitored (MON-WL-01). • Several plan components address potential stressors to wildlife and wildlife habitats associated with human developments and uses, including recreation, roads and access, livestock grazing, and timber harvest (FW-REC-DC-04; FW-REC-GDL-01; FW-RT-GDL-13; FW-GRAZ-GDL-04; FW-TIM-GDL-02; FW-OFP-GDL-03; EH-WL-GDL-02, 03; EH-ACCESS-DC-01; EH-ACCESS-GDL-01).	large remote areas (FW-WILD-DC-03); and connectivity for grizzly bears (BB-WL-DC-03; CR-WL-DC-01; DI-WL-DC-01, EH-WL-DC-02; RM-WL-DC-01; and UB-WL-DC-01). Several monitoring items would be conducted for grizzly bear: MON-WL-02 would assess bear conflicts; and MON-WL-04 would assess changes to baseline habitat conditions.
Wolverine	Seclusion (unfragmented, unroaded) Persistent snow	• Climate change; loss of snowpack • Harvest/direct mortality • Recreational activities • Habitat fragmentation	• Several plan components provide for the habitat conditions needed for wildlife in general terms (FW-VEGT-DC-03 and 04; FW-WL-DC-01, 02, 03; FW-WL-GO-01 to 06; FW-LAND-DC-03; FW-CONNECT-DC-02; EH-WL-DC-01; EH-WL-GDL-01; RM-CMA-DC-01). • The 2020 Forest Plan establishes areas with limited human influence, and/or restrict motorized access and route densities (FW-WL-DC-04; FW-ROS-DC-02 to 05; FW-WILD-DC-02, 03; FW-WILD-SUIT-02, 03, 05; FW-WSA-DC-01; FW-WSA-STD-01; FW-WSA-SUIT-01 to 08; FW-IRA-DC-01, 02; FW-IRA-SUIT-01, 02; FW-RECWILD-DC-02; FW-RECWILD-SUIT-01, 06, 08; FW-RNA-DC-01; FW-RNA-SUIT-03; FW-WSR-GDL-01; FW-LAND-DC-03; FW-LAND USE-GO-01, FW-LAND USE-DC-03, FW-LAND USE-GDL-03, 07; FW-RT-DC-01, 02, 04; FW-RT-GDL-12, 13; FW-ACCESS-GDL-01, EH-ACCESS-	The coarse filter plan components are sufficient to provide for wolverine.

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			DC-01, EH-ACCESS-GDL-01, EH-RT-STD-01, 02; EH-RT-GDL-01; RM-BTM-DC-02; RM-CMA-DC-01, 03; RM-CMA-STD-01, 02). • The potential for direct mortality is addressed by FW-REC-DC-04, FW-RT-DC-04, FW-WL-DC-05, and FW-RSUP-GDL-01. • Habitat connectivity is provided by plan components that apply to a variety of species, including wolverine (BB-WL-DC-03; CR-WL-DC-01; DI-WL-DC-01, DI-WL-GO-01; DI-WL-GDL-01; EH-WL-DC-01, 02; HI-WL-DC-01; LB-WL-DC-01; RM-WL-DC-01; UB-WL-DC-01; UB-WL-GDL-01; FW-WTR-DC-02, FW-RMZ-DC-02, FW-RMZ-STD-03, FW-RMZ-GDL-04, 07, 08, 09, 11, 12; FW-FAH-GO-04; FW-RT-GO-03, FW-WL-DC-03, FW-WL-GO-04, FW-VEGT-DC-04, 08). Connectivity in several GAs would also be monitored (MON-WL-01). • Several other components address potential stressors to wildlife associated with human uses, including recreation, roads and access, livestock grazing, and timber harvest, which would apply to wolverine (FW-REC-GDL-01; FW-RT-GDL-13; FW-OFP-GDL-03; EH-WL-GDL-02; EH-ACCESS-DC-01; EH-ACCESS-GDL-01). • Climate and change is addressed in FW-VEGT-DC-01; FW-VEGT-DC-04; FW-VEGF-DC-08; FW-WL-DC-03; and FW-CARB-DC-01.	

Plants Supplemental Information

Species Habitat Associations

Table 6 lists the plant species that are listed under the Endangered Species Act, those that were determined to be SCC, as well as those that were Regional Forester Sensitive Species (RFSS) on the HLC NF prior to revising the Forest Plan and summarizes their habitat information. Not all RFSS were selected as SCC. SCC would be adopted with all of the action alternatives. If the no alternative were selected, SCC would not be adopted. Rather, RFSS would be managed for by 1986 plan components.

Table 6. HLC NF Plant Species and associated habitat

Plant species	Conservation categories	Habitat guild	Habitat description
Adoxa moschatellina	SCC, RFSS, SOC, G3	Mesic-Montane-Disturbance-Talus	Vernally moist places in the mountains at the bottom of undisturbed, open rock slides that have cold air drainage.
Amerorchis rotundifolia	SCC, RFSS, SOC, Adjacent SCC	Wetland-riparian	Spruce forest around seeps or along streams, often in soil derived from limestone. High fidelity to a very narrow range of ecological tolerance that typifies a stable or near climax community and does not tolerate disturbance.
Aquilegia brevistyla	SCC, RFSS, SOC, S2	Wetland-riparian	Open woods and stream banks at mid-elevations in the montane zone.
Astragalus convallarius	SCC, SOC	Grasslands	Grasslands and open ponderosa pine woodlands in the valley and foothills. *Festuca scabrella, Festuca idahoensis* and *Elymus spicatus* are common bunchgrass associates.
Astragalus lackschewitzii	SCC, SOC, RFSS, S2, G2	Alpine	Open, gravelly and rocky slopes and ridgetops with calcareous soil and talus; subalpine to alpine.
Botrychium ascendens	RFSS, G3	Wetland-riparian	Stream, floodplains of glaciated bottoms dominated by shrubs with lush cover by forbs, grasses, and mosses in NW Montana. Often associated with wetlands dominated by spruce and alder. Mostly in sub-irrigated habitats 2700-6000 (9500) ft elevation
Botrychium crenulatum	SCC, RFSS, SOC, G3	Wetland-riparian	Various mesic sites from low to moderate elevations, including roadsides and other disturbed habitats. Can occur in open habitats, but more often in closed canopy habitats.
Botrychium paradoxum	SCC, RFSS, SOC, G3, Adjacent SCC	Wetland-riparian	Mesic meadows associated with spruce and lodgepole pine forests in the montane and subalpine zones; also found in springy western red cedar forests.

Plant species	Conservation categories	Habitat guild	Habitat description
Braya humilis	SCC, SOC, S2 (S1 Nature Serve)	Mesic-Montane-Disturbance-Talus	*(Neotorularia humilis)* Sparsely vegetated, vernally moist, calcareous soil in the alpine zone and similar sites with sparse vegetation cover dominated by *Potentilla fruticosa, Carex scirpoidea, Phlox kelseyi* and *Zigadenus elegans* in montane settings along the Rocky Mountain Front.
Carex chordorrhiza	RFSS, Adjacent SCC, SOC	Peatlands	Wet, organic soil of fens in the montane zone
Carex rostrata	RFSS, SOC, S2	Peatlands	Wet, organic soils of fens in the montane zone, including floating peat mats
Castilleja kerryana	SCC, SOC, G3	Alpine	Rocky or gravelly limestone substrates of Cambrian origin; slopes and ridges from upper subalpine krummholz or turf communities in upper alpine fell fields
Cypripedium parviflorum	SCC, RFSS, S3	Wetland-riparian	Fens, damp mossy woods, seepage areas, and moist forest-meadow ecotones in the valley to lower montane zones.
Cypripedium passerinum	SCC, RFSS, SOC,S2, Adjacent SCC	Wetland-riparian	Fens, damp mossy woods, seepage areas, and moist forest-meadow ecotones in the valley to lower montane zones.
Delphinium bicolor ssp. *calcicola*	SCC, T3 (variety equivalent to G3)	Grasslands	Shortgrass prairie and grass-sagebrush communities on limestone-derived soils, usually with coarse fragments at the surface, or on limestone outcrops. 4000-7000 m elevation.
Draba densifolia	SCC, SOC, S2	Alpine	Gravelly, open soil of rocky slopes and exposed ridges in the montane to alpine zones.
Drosera anglica	SCC, RFSS, SOC	Peatlands	With sphagnum moss in wet, organic soils of fens in the montane zone.
Drosera linearis	SCC, RFSS, SOC, S2, Adjacent SCC	Peatlands	With sphagnum moss in wet, organic soils of fens in the montane zone.
Erigeron lackschewitzii	RFSS, SOC, G3	Alpine	Exposed alpine settings (gravelly talus) with water-retaining calcareous soil derived from a dolomite substrate, rock-covered surfaces impeding water loss from shallow soil beneath, exposed, windy sites (saddles, protruding outcrops, crests of updraft chutes), and areas with first snowmelt and late soil recharge above 6000 ft.
Eleocharis rostellata	SCC, RFSS, SOC, Adjacent SCC	Peatlands	Wet, often alkaline soils, associated with warm springs or fens in the valley and foothills zones.
Elymus innovatus	SCC, RFSS, SOC, S2	Grasslands	Moist meadows, forest margins and openings along rivers and streams in the valley and lower montane zones.
Epipactis gigantea	SCC, RFSS, SOC, S2, Adjacent SCC	Wetland-riparian	Stream banks, lake margins, fens with springs and seeps, often near thermal waters.

Plant species	Conservation categories	Habitat guild	Habitat description
Erigeron flabellifolius	SCC, SOC, G3	Mesic-Montane-Disturbance-Talus	Gravelly soil or talus in the subalpine and alpine zones.
Gentianopsis macounii	SCC, RFSS, SOC, S2	Peatlands	Wet, organic soil of calcareous fens in the valley and foothill zones.
Goodyera repens	SCC, RFSS, SOC	Mesic-Montane-Disturbance-Talus	North-facing, mossy forested slopes in the montane zone.
Grindelia howellii	SCC, SOC, RFSS, G3, S2, Adjacent SCC	Grasslands	Vernally moist, lightly disturbed soil adjacent to ponds and marshes, as well as similar human-created habitats, such as roadsides and grazed pastures.
Juncus hallii	RFSS	Wetland-riparian	Moist grassland and sedge meadows from the montane to alpine zones. Flats or benches on the gentle to mid-upper slopes (3500) 6000-8800 feet elevation
Lycopodium dendroideum	SCC, RFSS, SOC, S2	Mesic-Montane-Disturbance-Talus	Moist, coniferous forest in the valley and lower montane zones.
Micranthes tempestiva	RFSS, G2, S2, SOC	Mesic-Montane-Disturbance-Talus	Vernally moist, open soil in meadows and on rock ledges in subalpine and alpine zones 7500-9500 feet elevation
Oxytropis podocarpa	RFSS, SOC, S1	Alpine	Gravelly ridges and slopes, often on limestone, in the alpine zone. Basins or on steep slopes and ridges with limestone-derived soils, 6500-8500 feet elevation
Phlox kelseyi var. *missoulensis*	SCC, RFSS, SOC, G3	Grasslands	Open, exposed, limestone-derived slopes in the foothills to exposed ridges in the subalpine zone.
Pinus albicaulis	TES - Candidate	Alpine	High elevation, harsh, exposed slopes and ridgetops
Polygonum austiniae	SCC, RFSS, SOC	Mesic-Montane-Disturbance-Talus	*(Polygonum douglasii var. austiniae)* Gravelly, often shale-derived soil of open slopes and banks in the montane zone.
Potamogeton obtusifolius	SCC, RFSS, SOC	Aquatic	Open water; Shallow water of lakes, ponds, and sloughs in the valley, foothill, and montane zones.
Potentilla nivea var. pentaphylla	RFSS, SOC	Alpine	Dry, shallow, gravelly soil or talus and scree of exposed ridges, slopes, and summits in the montane to alpine zones 4600-10000 ft elevation
Ranunculus pedatifidus	SCC, SOC	Wetland-riparian	Moist meadows and open woodlands in the montane to alpine zones.
Salix barrattiana	RFSS, S2, SOC	Alpine	Alpine habitat, 6500 – 9500 ft elevation
Schoenoplectus subterminalis	SCC, RFSS, SOC	Aquatic	Open water and boggy margins of ponds, lakes, and sloughs at 0.1-3 m depth in the valley, foothill, and montane zones.

Plant species	Conservation categories	Habitat guild	Habitat description
Scorpidium scorpioides	SCC, RFSS, SOC, S2, Adjacent SCC	Peatlands	Exposed or submerged rocks in rivers and streams. Also found on wet soil in calcareous seeps and fens, and soil of bogs, ponds, and other wetlands. From low elevations to about 10,000 feet.
Sphagnum fimbriatum	SCC, SOC, S1	Peatlands	Nutrient-rich wet soil and peat, at the edges of bogs and poor fens on mineral soil, somewhat exposed to wooded fens. Elevation: low to high.
Stipa lettermanii	SCC, SOC, S1	Mesic-Montane-Disturbance-Talus	Coniferous forest (*Pinus contorta* and *Picea engelmannii*) with openings.
Thalictrum alpinum	RFSS, S2, SOC	Mesic-Montane-Disturbance-Talus	Typically, moist meadows or stony slopes in montane and lower subalpine areas. Can occur on drier, upper portions of hummocks. Sometimes along streams 4500-8500 feet elevation.
Trichophorum cespitosum	RFSS, S2, Adjacent SCC, SOC	Peatlands	Sphagnum-dominated fens and wet meadows in the montane to alpine zones. Rare in Montana.
Veratrum californicum	RFSS, S2, SOC	Wetland-Riparian	Wet meadows and streambanks in the montane and subalpine zones 5500-8000 feet elevation.

RFSS = Regional Forester Sensitive Species (alt A); SCC = Species of Conservation Concern (action alts); SOC = species of concern; S1 = state ranking 1; S2 = state ranking 2; G3 = global ranking 3.

Plan Components and Monitoring Items for At-Risk Plant Species

The plan components in Table 7 provide management direction and monitoring that is relevant to at-risk plant species or species guilds on the HLC NF. Plan components may apply at the forestwide scale (FW) or the geographic area scale (GA).

Table 7. Summary of plan components and monitoring that address at-risk plant species

Species	Desired Conditions	Objectives and Goals	Standards and Guidelines	Suitability	Monitoring
SCC Plant Species Peatlands Habitat Group	FW-WTR-DC-01 to 06, 11, 12 FW-RMZ-DC-01, 02 FW-VEGT-DC-01 to 04 FW-PLANT-DC-01 FW-POLL-DC-01 FW-INV-DC-01 to 03 FW-REC-DC-04 FW-WILD-DC-04 FW-IRA-DC-01, 02 FW-RNA-DC-01 FW-GRAZ-DC-03, 04	FW-RMZ-OBJ-01 FW-FAH-OBJ-01 FW-PLANT-GO-01	FW-WTR-STD-01, 02 FW-WTR-GDL-02 FW-RMZ-STD-01, 04 FW-RMZ-GDL-03 FW-VEGT-GDL-01, 02 FW-PLANT-GDL-01 FW-TIM-GDL-01 FW-TIM-STD-01, 03 FW-OFP-DC-01 FW-OFP-GDL-03 FW-EMIN-GDL-01, 02 FW-INV-GDL-01 to 05 FW-INV-STD-01 FW-REC-GDL-03, 06 FW-WILD-GDL-01 FW-RNA-GDL-01 FW-LAND-GDL-02 FW-GRAZ-STD-01, 02 FW-GRAZ-GDL-01 to 07		MON-PLANT-01 MON-INV-03
SCC Plant Species Alpine Habitat Group	FW-SOIL-DC-01, 02 FW-VEGT-DC-01 to 04 FW-VEGNF-DC-01 to 03 FW-PLANT-DC-01 FW-POLL-DC-01 FW-INV-DC-01, 02 FW-REC-DC-04	FW-PLANT-GO-01	FW-SOIL-STD-01, 03 FW-VEGT-GDL-01, 02, 04 FW-PLANT-GDL-01 FW-INV-STD-01 FW-INV-GDL-01 to 05 FW-NRT-GDL-01 FW-RNA-GDL-01		MON-PLANT-01 MON-INV-03

Species	Desired Conditions	Objectives and Goals	Standards and Guidelines	Suitability	Monitoring
	FW-IRA-DC-01, 02 FW-RNA-DC-01 FW-GRAZ-DC-03 FW-CARB-DC-01 FW-WILD-DC-02, 03.		FW-GRAZ-GDL-02, 04, 06 FW-OFP-DC-01 FW-OFP-GDL-03		
SCC Plant Species Wetland-Riparian Habitat Group	FW-WTR-DC-01 to 06, 11, 12 FW-RMZ-DC-01, 02 FW-VEGT-DC-01 to 03 FW-VEGF-DC-11 FW-VEGNF-DC-01 to 03 FW-PLANT-DC-01 FW-POLL-DC-01 FW-INV-DC-01 to 03 FW-REC-DC-04 FW-WILD-DC-04 FW-IRA-DC-01, 02 FW-RNA-DC-01 FW-GRAZ-DC-03, 04	FW-RMZ-OBJ-01 FW-FAH-OBJ-01 FW-PLANT-GO-01	FW-WTR-STD-01, 02 FW-WTR-GDL-02 FW-RMZ-STD-01, 04 FW-RMZ-GDL-03 FW-VEGT-GDL-01, 02, 04 FW-PLANT-GDL-01 FW-INV-STD-01 FW-INV-GDL-01 to 05 FW-REC-GDL-03, 06 FW-WILD-GDL-01 FW-RNA-GDL-01 FW-LAND-GDL-02 FW-GRAZ-STD-01, 02 FW-GRAZ-GDL-01 to 07 FW-TIM-GDL-01 FW-TIM-STD-01, 03 FW-OFP-DC-01 FW-OFP-GDL-03 FW-EMIN-GDL-01, 02		MON-PLANT-01; MON-INV-03
SCC Plant Species Grasslands Habitat Group	FW-WTR-DC-05 FW-SOIL-DC-01, 02 FW-FIRE-DC-01 FW-VEGT-DC-01 to 04 FW-VEGNF-DC-01 to 03 FW-PLANT-DC-01 FW-POLL-DC-01 FW-INV-DC-01 to 03	FW-PLANT-GO-01 FW-INV-OBJ-01	FW-SOIL-STD-01, 03 FW-FIRE-GDL-01 FW-WTR-GDL-02 FW-FIRE-GDL-04 FW-VEGT-GDL-01, 02, 04 FW-VEGNF-GDL-01 FW-PLANT-GDL-01 FW-INV-STD-01		MON-PLANT-01 MON-INV-03

Species	Desired Conditions	Objectives and Goals	Standards and Guidelines	Suitability	Monitoring
	FW-REC-DC-04 FW-IRA-DC-01, 02 FW-RNA-DC-01 FW-WILD-DC-04 FW-GRAZ-DC-01, 03		FW-INV-GDL-01 to 05 FW-WILD-GDL-01 FW-RNA-GDL-01 FW-GRAZ-STD-01, 02 FW-GRAZ-GDL-02, 04, 06 FW-TIM-GDL-01 FW-TIM-STD-01, 03 FW-OFP-DC-01 FW-OFP-GDL-03		
SCC Plant Species Aquatic Habitat Group	FW-WTR-DC-01 to 09, 11, 12 FW-RMZ-DC-01, 02 FW-VEGT-DC-01, 03, 08 FW-PLANT-DC-01 FW-POLL-DC-01 FW-INV-DC-01 to 03; FW-REC-DC-04 FW-WILD-DC-04 FW-IRA-DC-01, 02 FW-RNA-DC-01 FW-RT-STD-01 FW-GRAZ-DC-03, 04	FW-RMZ-OBJ-01 FW-FAH-OBJ-01 FW-PLANT-GO-01	FW-WTR-STD-01, 02 FW-WTR-GDL-02 FW-RMZ-STD-01, 04 FW-RMZ-GDL-03 FW-PLANT-GDL-01 FW-INV-STD-01 FW-INV-GDL-01 to 05 FW-REC-GDL-03, 06 FW-WILD-GDL-01 FW-RNA-GDL-01 FW-LAND-GDL-02 FW-GRAZ-STD-01, 02 FW-GRAZ-GDL-01 to 07 FW-EMIN-GDL-01, 02		MON-PLANT-01 MON-INV-03.
SCC Plant Species Mesic-Montane-Disturbance-Talus habitat Group	FW-SOIL-DC-01 FW-VEGT-DC-01 to 04 FW-PLANT-DC-01 FW-POLL-DC-01 FW-INV-DC-01, 02, 03 FW-REC-DC-04 FW-IRA-DC-01, 02 FW-RNA-DC-01 FW-GRAZ-DC-03	FW-PLANT-GO-01	FW-WTR-GDL-02 FW-SOIL-STD-01, 03 FW-VEGT-GDL-01, 02, 04 FW-PLANT-GDL-01 FW-INV-STD-01 FW-INV-GDL-01 to 05 FW-RNA-GDL-01 FW-GRAZ-STD-01, 02 FW-GRAZ-GDL-02, 04, 06		MON-PLANT-01 MON-INV-03

Species	Desired Conditions	Objectives and Goals	Standards and Guidelines	Suitability	Monitoring
			FW-TIM-GDL-01 FW-TIM-STD-01, 03 FW-OFP-DC-01 FW-OFP-GDL-03		
Whitebark Pine	FW-VEGT-DC-01 to 04 FW-FIRE-DC-01 FW-VEGF-DC-01, 09 FW-PLANT-DC-02 PCA-NCDE-DC-04 FW-WILD-DC-02 FW-RECWILD-DC-02 FW-WSA-DC-01	FW-PLANT-OBJ-01	FW-FIRE-GDL-01, 04 FW-VEGT-GDL-01, 03 FW-TIM-GDL-01 FW-VEGF-GDL-03 FW-TIM-STD-01, 03 FW-OFP-DC-01 FW-OFP-GDL-03	FW-WSA-SUIT-03 FW-IRA-SUIT-03 RM-BTM-SUIT-02	MON-PLANT-02, 03

Key Ecosystem Characteristics and Stressors for At-Risk Plant Species

Table 8 shows how key ecosystem characteristics and stressors for at-risk plants are addressed by coarse-filter and species-specific plan components. Some plan components deal with stressors or threats relevant to populations in the plan area, and some deal with the ecological conditions or key ecosystem characteristics required by the species. Plan components may apply at the forestwide scale (FW) or the geographic area scale (GA). The lists in Table 8 are not intended to be all inclusive.

Table 8. Summary of how plan components address stressors, key ecosystem characteristics, and ecological conditions for at-risk plants

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
SCC Plant Species Peatlands Habitat Group	Wet to moist soils in or in the ecotone areas adjacent to peatlands, fens, and sometimes seepy areas or other types of wetlands	Primarily vulnerable to activities that could change the hydrology of the groundwater-dependent fen and wetland habitats;	Watershed desired conditions support ecological conditions and habitat requirements (FW-WTR-DC-01, 02, 03, 04, 05, 06, 11, 12); Watershed projects promote long-term ecological integrity and native species in watershed habitats (FW-WTR-GDL-02); Riparian Management Zones support ecological conditions that support peatland habitat (FW-RMZ-DC-01, 02); RMZs are actively improved to improve habitat quality and increase available SCC habitat (FW-RMZ-OBJ-01; FW-FAH-OBJ-01); RMZs established around	Desired condition to provide ecological conditions that sustain plant SCC (FW-PLANT-DC-01). Recovery and long-term persistence of SCC is supported with groups of partners (FW-PLANT-GO-01). Activities affecting vegetation in known

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
		management activities that could impact habitat include livestock grazing, recreation, noxious weeds, timber harvest, development	all wetland features to reduce disturbance within the defined buffered areas and maintain habitat quality (FW-RMZ-STD-01, 04; FW-RMZ-GDL-03); Native vegetation is supported, and the natural range of variation is described (FW-VEGT-DC-01, 02, 04; FW-VEGT-GDL-01, 02); SCC, threatened and endangered species are supported (FW-VEGT-DC-03); Pollinator species and habitat needs are addressed and supported with support native plant communities (FW-POLL-DC-01). Management reduces the amount of invasive species and supports native species in all habitats (FW-INV-DC-01, 02, 03; FW-INV-GDL-01, 02, 03, 04, 05; FW-INV-STD-01). Threats from management activities related to recreation, timber harvest and mineral activities that could impact SCC species are minimized (FW-REC-DC-04; FW-TIM-GDL-01; FW-TIM-STD-01, 03; FW-OFP-DC-01; FW-OFP-GDL-03; FW-EMIN-GDL-01, 02; FW-REC-GDL-03, 06; FW-LAND-GDL-02). Habitats are undisturbed in wilderness, IRA and Research Natural Areas (FW-WILD-DC-04; FW-IRA-DC-01, 02; FW-RNA-DC-01; FW-WILD-GDL-01; FW-RNA-GDL-01). Native species are maintained in grazing allotments (FW-GRAZ-DC-03, 04). The threats and impacts from invasive species are reduced (FW-GRAZ-STD-02; FW-GRAZ-GDL-01, 02, 03, 04, 05, 06, 07).	occurrences or suspected habitat of plants is designed to support long-term persistence (FW-PLANT-GDL-01). These components support each SCC at a species-specific level.
SCC Plant Species Alpine Habitat Group	Open, gravelly and rocky slopes and ridgetops with various soil and talus; subalpine to alpine	Direct impacts to rocky habitats and habitat degradation are threats to known occurrences; recreation, noxious weeds, livestock grazing and climate change	Soil quality and productivity are not impaired and support native vegetation (FW-SOIL-DC-01; FW-SOIL-STD-01, 03) Biological soil crusts on dry sites are maintained (FW-SOIL-DC-02). Native vegetation is supported, and the natural range of variation is described (FW-VEGT-DC-01, 02, 04; FW-VEGT-GDL-01, 02, 04); SCC, threatened and endangered species are supported (FW-VEGT-DC-03). Native vegetation is supported, and the natural range of variation is described (FW-VEGNF-DC-01, 02, 03). Pollinator species and habitat needs are addressed and supported with support native plant communities (FW-POLL-DC-01). Management reduces the amount of	Desired condition to provide ecological conditions that sustain plant SCC (FW-PLANT-DC-01). Recovery and long-term persistence of SCC is supported with groups of partners (FW-PLANT-GO-01). Activities affecting vegetation in known occurrences or suspected habitat of plants is designed to support long-term

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			invasive species and supports native species in all habitats (FW-INV-DC-01, 02, 03; FW-INV-GDL-01, 02, 03, 04, 05; FW-INV-STD-01). Threats from management activities related to recreation that could impact SCC species are minimized (FW-REC-DC-04; FW-NRT-GDL-01). Habitats are undisturbed in wilderness, IRA and Research Natural Areas (FW-IRA-DC-01, 02; FW-RNA-DC-01; FW-WILD-DC-02, 03; FW-RNA-GDL-01). Native species are maintained in grazing allotments (FW-GRAZ-DC-03). The threats and impacts from invasive species are reduced (FW-GRAZ-STD-02; FW-GRAZ-GDL-02, 04, 06). Carbon storage and sequestration potential is sustained through maintenance or enhancement of ecosystem biodiversity and function, and forests are resilient to natural disturbance processes and changing climates (FW-CARB-DC-01). Forest products collection would occur in a sustainable way and consider impacts to at-risk species (FW-OFP-DC-01; FW-OFP-GDL-03).	persistence (FW-PLANT-GDL-01). These components support each SCC at a species-specific level.
SCC Plant Species Wetland-Riparian Habitat Group	Swamps, marshes, riparian seeps and springs, stream banks	Changes to canopy cover, changes to site hydrology and habitat degradation are threats to this species; recreation, livestock grazing, noxious weeds, and timber harvest can impact species	Watershed desired conditions support ecological conditions and habitat requirements (FW-WTR-DC-01, 02, 03, 04, 05, 06, 11, 12); Watershed projects promote long-term ecological integrity and native species in watershed habitats (FW-WTR-GDL-02); Riparian Management Zones support ecological conditions that support peatland habitat (FW-RMZ-DC-01, 02); RMZs are actively improved to improve habitat quality and increase available SCC habitat (FW-RMZ-OBJ-01; FW-FAH-OBJ-01); RMZs established around all wetland features to reduce disturbance within the defined buffered areas and maintain habitat quality (FW-RMZ-STD-01, 04; FW-RMZ-GDL-03). Native vegetation is supported, and the natural range of variation is described including understory vegetation (FW-VEGT-DC-01, 02, 04; FW-VEGT-GDL-01, 02; FW-VEGF-DC-11; FW-VEGNF-DC-01, 02, 03). SCC, threatened and endangered species are supported (FW-VEGT-DC-03). Pollinator species and	Desired condition to provide ecological conditions that sustain plant SCC (FW-PLANT-DC-01). Recovery and long-term persistence of SCC is supported with partners (FW-PLANT-GO-01). Activities affecting vegetation in known occurrences or suspected habitat of plants is designed to support long-term persistence (FW-PLANT-GDL-01). These components support each SCC at a species-specific level.

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			habitat needs are addressed and supported with support native plant communities (FW-POLL-DC-01). Management reduces the amount of invasive species and supports native species in all habitats (FW-INV-DC-01, 02, 03; FW-INV-GDL-01, 02, 03, 04, 05; FW-INV-STD-01). Threats from management activities related to recreation, timber harvest and mineral activities that could impact SCC species are minimized (FW-REC-DC-04; FW-TIM-GDL-01; FW-TIM-STD-01, 03; FW-OFP-DC-01; FW-OFP-GDL-03; FW-EMIN-GDL-01, 02; FW-REC-GDL-03, 06; FW-LAND-GDL-02). Habitats are undisturbed in wilderness, IRA and Research Natural Areas (FW-WILD-DC-04; FW-IRA-DC-01, 02; FW-RNA-DC-01; FW-WILD-GDL-01; FW-RNA-GDL-01). Native species are maintained in grazing allotments (FW-GRAZ-DC-03, 04). The threats and impacts from invasive species are reduced (FW-GRAZ-STD-02; FW-GRAZ-GDL-01, 02, 03, 04, 05, 06, 07).	
SCC Plant Species Grasslands Habitat Group	Nonforested areas dominated by grasses, forbs and/or shrubs	Habitat degradation through non-native grasses and noxious weeds are threats to this species; development, noxious weed invasion, livestock grazing, recreation, conifer encroachment, project activities, and change in fire regime can impact species	Watershed desired conditions support ecological conditions and habitat requirements (FW-WTR-DC-05); Watershed projects promote long-term ecological integrity and native species in watershed habitats (FW-WTR-GDL-02); Soil quality and productivity are not impaired and support native vegetation (FW-SOIL-DC-01; FW-SOIL-STD-01, 03) Biological soil crusts on dry sites are maintained (FW-SOIL-DC-02). Native vegetation is supported, and the natural range of variation is described (FW-VEGT-DC-01, 02, 04; FW-VEGT-GDL-01, 02, 04; FW-VEGNF-DC-01, 02, 03; FW-VEGNF-GDL-01); SCC, threatened and endangered species are supported (FW-VEGT-DC-03). Pollinator species and habitat needs are addressed and supported with support native plant communities (FW-POLL-DC-01). Wildfire maintains desired habitat conditions and operates in its natural role on the landscape as much as possible, it is used to create healthy resilient ecosystems (FW-FIRE-DC-01; FW-FIRE-GDL-01; FW-FIRE-GDL-04).	Desired condition to provide ecological conditions that sustain plant SCC (FW-PLANT-DC-01). Recovery and long-term persistence of SCC is supported with groups of partners (FW-PLANT-GO-01). Activities affecting vegetation in known occurrences or suspected habitat of plants is designed to support long-term persistence (FW-PLANT-GDL-01). These components support each SCC at a species-specific level.

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			Management reduces the amount of invasive species and supports native species in all habitats (FW-INV-DC-01, 02, 03; FW-INV-GDL-01, 02, 03, 04, 05; FW-INV-OBJ-01; FW-INV-STD-01). Threats from management activities related to recreation and timber harvest that could impact SCC species are minimized (FW-REC-DC-04; FW-TIM-GDL-01; FW-TIM-STD-01, 03; FW-OFP-DC-01; FW-OFP-GDL-03;). Habitats are undisturbed in wilderness, IRA and Research Natural Areas (FW-WILD-DC-04; FW-IRA-DC-01, 02; FW-RNA-DC-01; FW-WILD-GDL-01; FW-RNA-GDL-01). Native species are maintained in grazing allotments (FW-GRAZ-DC-01, 03). The threats and impacts from invasive species are reduced (FW-GRAZ-STD-02; FW-GRAZ-GDL-02, 04, 06).	
SCC Plant Species Aquatic Habitat Group	Shallow water of lakes, ponds, and sloughs and lotic streams in the valley, foothill, and montane zones	Habitat vulnerable to changes in water levels or increases in nutrient and sediment loads associated with development, agriculture, or adjacent timber harvesting	Watershed desired conditions support ecological conditions and habitat requirements (FW-WTR-DC-01, 02, 03, 04, 05, 06, 11, 12); Watershed projects promote long-term ecological integrity and native species in watershed habitats (FW-WTR-STD-01, 02; FW-WTR-GDL-02); Riparian Management Zones support ecological conditions that support peatland habitat (FW-RMZ-DC-01, 02); RMZs are actively improved to improve habitat quality and increase available SCC habitat (FW-RMZ-OBJ-01; FW-FAH-OBJ-01); RMZs established around all wetland features to reduce disturbance within the defined buffered areas and maintain habitat quality (FW-RMZ-STD-01, 04; FW-RMZ-GDL-03); Native vegetation is supported, and the natural range of variation is described (FW-VEGT-DC-01, 08); SCC, threatened and endangered species are supported (FW-VEGT-DC-03); Pollinator species and habitat needs are addressed and supported with support native plant communities (FW-POLL-DC-01). Management reduces the amount of invasive species and supports native species in all habitats (FW-INV-DC-01, 02, 03; FW-INV-GDL-01, 02, 03, 04, 05; FW-INV-STD-01). Threats from management	Desired condition to provide ecological conditions that sustain plant SCC (FW-PLANT-DC-01). Recovery and long-term persistence of SCC is supported with groups of partners (FW-PLANT-GO-01). Activities affecting vegetation in known occurrences or suspected habitat of plants is designed to support long-term persistence (FW-PLANT-GDL-01). These components support each SCC at a species-specific level.

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			activities related to recreation, timber harvest and mineral activities that could impact SCC species are minimized (FW-REC-DC-04; FW-RT-STD-01; FW-EMIN-GDL-01, 02; FW-REC-GDL-03, 06; FW-LAND-GDL-02). Habitats are undisturbed in wilderness, IRA and Research Natural Areas (FW-WILD-DC-04; FW-IRA-DC-01, 02; FW-RNA-DC-01; FW-WILD-GDL-01; FW-RNA-GDL-01). Native species are maintained in grazing allotments (FW-GRAZ-DC-03, 04). The threats and impacts from invasive species are reduced (FW-GRAZ-STD-02; FW-GRAZ-GDL-01, 02, 03, 04, 05, 06, 07).	
SCC Plant Species Mesic-Montane-Disturbance-Talus habitat Group	Occur in a wide range of ecological conditions, from vernally moist places in the mountains at the bottom of undisturbed, open rock slides that have cold air drainage; sparsely vegetated calcareous montane to alpine zone; talus sites; north-facing mossy slopes in the montane zone; moist coniferous forest in montane	Activities that disturb vegetation or soils in their habitats, such as grazing, trampling, off-road vehicle use, road construction, timber harvesting, recreational activities (such as camping). Fire exclusion/changes in fire regimes, and resulting changes in vegetation succession, may be an issue for species associated with non-forest, open, or disturbed	Soil quality and productivity are not impaired and support native vegetation (FW-SOIL-DC-01; FW-SOIL-STD-01, 03) Biological soil crusts on dry sites are maintained (FW-SOIL-DC-02). Watershed projects promote long-term ecological integrity and native species in watershed habitats (FW-WTR-GDL-02). Pollinator species and habitat needs are addressed and supported with support native plant communities (FW-POLL-DC-01). Native vegetation is supported, and the natural range of variation is described (FW-VEGT-DC-01, 02, 04; FW-VEGT-GDL-01, 02, 04); SCC, threatened and endangered species are supported (FW-VEGT-DC-03). Management reduces the amount of invasive species and supports native species in all habitats (FW-INV-DC-01, 02, 03; FW-INV-STD-01; FW-INV-GDL-01, 02, 03, 04, 05). Threats from management activities related to recreation and timber harvest that could impact SCC species are minimized (FW-REC-DC-04; FW-TIM-GDL-01; FW-TIM-STD-01, 03; FW-OFP-DC-01; FW-OFP-GDL-03;). Habitats are undisturbed in IRA and Research Natural Areas (FW-IRA-DC-01, 02; FW-RNA-DC-01; FW-RNA-GDL-01). Native species are maintained in grazing allotments (FW-GRAZ-DC-03). The threats and impacts from invasive species are reduced (FW-GRAZ-STD-02; FW-GRAZ-GDL-02, 04, 06).	Desired condition to provide ecological conditions that sustain plant SCC (FW-PLANT-DC-01). Recovery and long-term persistence of SCC is supported with groups of partners (FW-PLANT-GO-01). Activities affecting vegetation in known occurrences or suspected habitat of plants is designed to support long-term persistence (FW-PLANT-GDL-01). These components support each SCC at a species-specific level.

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
	zone; gravelly shale-derived soils on open slopes; and coniferous forest openings.	habitats. Non-native plant species are a threat where the SCC species occur.		
Whitebark Pine	Tolerates poor soils, steep slopes, windy exposures, and tree-line environments. Often found on warm, dry exposures in subalpine and alpine habitats.	White pine blister rust, mountain pine beetle, climate change, encroachment of other conifer species, fire exclusion	Desired condition to provide ecological conditions that sustain plant whitebark pine (FW-PLANT-DC-01). Recovery and long-term persistence of at-risk plants is supported with groups of partners (FW-PLANT-GO-01). Activities affecting vegetation in known occurrences or suspected habitat of at-risk plants is designed to support long-term persistence (FW-PLANT-GDL-01). Soil quality and productivity are not impaired and support native vegetation (FW-SOIL-DC-01; FW-SOIL-STD-01, 03) Biological soil crusts on dry sites are maintained (FW-SOIL-DC-02). Native vegetation is supported, and the natural range of variation is described (FW-VEGT-DC-01, 02, 04; FW-VEGT-GDL-01, 02, 04); SCC, threatened, endangered, candidate and proposed species are supported (FW-VEGT-DC-03). Native vegetation is supported, and the natural range of variation for forested areas supporting whitebark pine is described (FW-VEGF-DC-01, 02, 03). Vegetation within the grizzly bear primary conservation area supports the ecological needs of grizzly bears, which includes whitebark pine promotion as a valuable food source for bears (PCA-NCDE-DC-04). Wildfire maintains desired habitat conditions and operates in its natural role on the landscape as much as possible, it is used to create healthy resilient ecosystems with reduces a stressor to whitebark pine (FW-FIRE-DC-01; FW-FIRE-GDL-01; FW-FIRE-GDL-04). Management reduces the amount of invasive species and supports native species in all habitats (FW-INV-DC-01, 02, 03; FW-INV-GDL-01, 02, 03, 04, 05; FW-INV-STD-01). Threats from management activities related to recreation that could	Key whitebark pine sites are maintained on the landscape (FW-PLANT-DC-02) and 4,500 acres of whitebark pine would be restored over the life of the plan (FW-PLANT-OBJ-01).

Species	Key ecosystem characteristics or ecological conditions	Stressors	How stressors are addressed by coarse filter plan components	How stressors are addressed by species-specific plan components
			impact whitebark pine are minimized (FW-REC-DC-04; FW-TIM-GDL-01; FW-TIM-STD-01, 03; FW-OFP-DC-01; FW-OFP-GDL-03; FW-NRT-GDL-01). Habitats are undisturbed and natural processes are promoted in wilderness, wilderness study areas, IRA, recommended wilderness areas, and Research Natural Areas (FW-IRA-DC-01, 02; FW-WSA-DC-01; FW-RECWILD-DC-02; FW-RNA-DC-01; FW-WILD-DC-02, 03; FW-RNA-GDL-01) and restoration activities can occur in these areas, including the Badger-two medicine (FW-WSA-SUIT-03, 04; FW-IRA-SUIT-03; RM-BTM-SUIT-02). Native species are maintained in grazing allotments (FW-GRAZ-DC-03). The threats and impacts from invasive species are reduced (FW-GRAZ-STD-02; FW-GRAZ-GDL-02, 04, 06). Carbon storage and sequestration potential is sustained through maintenance or enhancement of ecosystem biodiversity and function, and forests are resilient to natural disturbance processes and changing climates (FW-CARB-DC-01).	