Evaluation Report: Terrestrial Wildlife Species Diversity

Threatened & Endangered Species, and Species of Concern and Interest

DRAFT: 8/2006

Prepared for:

USDA Forest Service, Northern Region

Clearwater National Forest

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Executive Summary

The Clearwater National Forest supports many rare and uncommon species, as well as more familiar species within the Northern Region.

A multi-step process was developed by the Northern Region Wildlife Revision Team to provide a consistent context and sequence, as per the interim planning directives, to identify and manage for terrestrial wildlife Species of Concern and potential Species of Interest (SOCI) until the release of the final planning directives. While this report follows the sequence outlined in the Northern Region process, it primarily follows the direction established in the final planning directives published in the Federal Register on January 31, 2006.

The identification of terrestrial wildlife vertebrate and invertebrate species that occur on the National Forest was completed using criteria 43.22a-c from the final planning directives and information from a number of sources. The Idaho "Comprehensive Wildlife Conservation Strategy" (CWCS) was the best available source of information for vertebrate and invertebrate species in Idaho. Other important sources of information are as follows: USFWS, Northwest Power and Conservation Council Clearwater Sub-basin Management Plans, USFS mid-scale, watershed-oriented sub-basins or watershed assessments, other USFS files, NatureServe and Birds of North America databases.

Species were then screened for further consideration in the planning process using criteria 43.22d from the final planning directives, and based on existing species ecology and habitat information collected and summarized as per 43.23. Several species of concern or potential species of interest were dropped from further consideration based on this identification and screening criteria.

As per direction in 43.24 the remaining species were grouped into landform-based and other habitat groups. No surrogate species were identified.

Forest Plan components for species diversity are summarized by species. These plan components address habitat related risk factors, specialized habitats, and rare or unique species. The evaluation of plan components as per direction in 43.26 uses habitat and species information displayed in previous sections, and summarizes short and long-term risks, as well as past, present and desired future conditions.

This assessment identifies information needs to better understand the ecology and distribution of certain terrestrial species. Coordination with the Idaho CDC and other interested parties to gather additional distribution and modeling data could provide a basis to prioritize collection needs, and address conservation needs proactively.

In conclusion, strategic and detailed Forest Plan components have been developed to address species needs, including federally listed species, and those evaluated for species of concern and species of interest. Projects implementing the Forest Plan, moving toward DFC would be designed to address those species needs.

Thus, all known species habitat needs have been accounted for and there is no listing of species of concern or interest that needs to be addressed at the project level for the Clearwater National Forest.

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1. Introduction

This report documents the identification and evaluation for terrestrial wildlife species of concern and interest for the Clearwater National Forest. This evaluation supports the conclusion of the Clearwater N.F. Forest Supervisor that habitat needs for all known species have been accounted for, therefore there is no listing that needs to be addressed at the project level of species of concern (SOC) or species of interest (SOI) for the Clearwater National Forest (the plan area).

This report reflects various discussions and works done by the Northern Region Wildlife Revision Team. At the present time the Northern Region Wildlife Revision Team consists of Regional Office and planning team wildlife biologists involved in Forest Plan revisions to develop a consistent approach. Currently three planning zones (Clearwater/Nez Perce, Kootenai/Idaho Panhandle, and Western Montana) are revising forest plans under the 2005 Planning Rule. The information and process described in this technical paper is intended as supporting documentation for the planning record for the Clearwater National Forest Land and Resource Management Plan (LRMP).

Because of potential changes in the status of federally listed species and NatureServe global ranks this is a working document intended to be “draft” until the Forest Plan revisions are signed, After which the document should be considered a “living” document for the same reasons.

Area of Consideration

The Clearwater National Forest (CNF) is responsible for the resource management of 1.8 million acres on the Clearwater. The majority of the land administered by the Clearwater National Forest is located in Latah, Clearwater and Idaho counties with small portions in Shoshone and Benewah counties in Idaho. The National Forest System lands within these counties make up the area for this analysis.

The Clearwater National Forest is bordered on the east by Montana and by Washington State to the west.

2. 2005 Planning Rule

The National Forest Management Act (NFMA) requires the Secretary of Agriculture to specify "guidelines for land management plans developed to achieve the goals of the RPA Program which provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives" (16 U.S.C. 1604(g)(3)(B)). In accord with this diversity provision, the Secretary promulgated a regulation that provides in part: "fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area" (36 CFR 219.19, 1982 edition).

The scientific community and judicial courts recognize that NFMA does not create a concrete, precise standard for diversity. The Committee of Scientists that provided scientific advice to the Forest Service on the drafting of the 1979 NFMA regulations stated that "it is impossible to write specific regulations to 'provide for' diversity" and "there remains a great deal of room for honest debate on the translation of policy into management planning requirements and into management programs" (44 Federal Register 26600-01 & 26608).

Under the 2005 National Forest Systems Land Management Planning Rule (2005 Rule) released in January 2005, the USDA-Forest Service is directed to “Focus evaluation and development of plan

components for species diversity on those species for which the Responsible Official determines that provisions in plan components are needed" (36 CFR 219).

The 2005 planning rule and associated directives (FSH 1909.12, Chapter 40) contain direction for ecological sustainability, in terms of ecosystem diversity and species diversity. This is similar to the past Region 1 coarse and fine filter approach used to develop direction in the Forest Plan Revision process. The provision to provide for the diversity of plant and animal communities, as per the National Forest Management Act, is accomplished through this hierarchical approach that evaluates and provides guidance for ecosystem and species diversity.

In August 2005 the Northern Region Wildlife Revision Team (Samson 2005) developed a multi-step process (Appendix C and D) to provide a consistent context and sequence, as per the draft planning directives, to identify and manage for wildlife SOCI until a regionally consistent approach was approved for use. On January 31, 2006 the planning directives were published in the Federal Register. This report follows the sequence outlined in the Northern Region process, and incorporates the direction established in the final planning directives published in the Federal Register (FSH 1909.12, Chapter 40 – Science and Sustainability).

3. 43.1 - Ecosystem Diversity

The initial focus is to provide broad landscape-level ecological conditions for ecosystem diversity within the plan area (coarse filter), and for plant and animal species diversity within their expected landforms in the plan area (fine filter). Through an ecosystem approach, the forest plan will provide a framework for restoring and maintaining ecosystem conditions and function necessary to conserve most species.

The primary approach to evaluating ecosystem diversity involves identifying key ecosystem characteristics. (Chapter 40 - Ecosystem Diversity: 43.1). The Clearwater/Nez Perce Planning Zone has identified the vegetative composition and structure (forested and non-forested) conditions for three biophysical settings (breaklands, uplands and subalpine landforms), and their natural variation based on a comparison with historical vegetation data within the primary subdivisions of Bailey's Eco-sections (Bitterroot Mountains and Idaho Batholith) that exist on the Forest

Existing vegetative composition and structure, based on current FIA data, were described and compared to desired levels, based on historic inventories. Acceptable levels of change in vegetative conditions (habitat) were determined for the biophysical settings by various vegetative dominance types and size classes similar to the vegetative diversity matrix developed by the regional office for each forest. Desired conditions and other plan components were developed to maintain or restore those vegetative conditions and processes to within acceptable levels of what is considered to be a historic range of variation. A more complete description of this process can be found in the evaluation report for forest vegetation.

Relationship to Terrestrial Wildlife

Historically, the direct loss of habitat is considered to be the greatest impact on the sustainability of wildlife species and populations. The variety of wildlife species relies on the availability of suitable habitat conditions. The abundance and distribution of wildlife species are linked to the mosaic of habitat conditions or features that continually shift in response to ecosystem processes, such as forest succession and natural or man-caused disturbances, like fire, timber harvest or invasive weed invasion. Typically, the variety of wildlife populations are maintained throughout their expected

ranges because these disturbances are random, allowing adequate habitat diversity to remain distributed across the landscape. These factors characterize the biological potential of the habitat to support an overall or local population of a given species.

Forest and non-forest vegetation data is used to make relative conclusions on the amount and distribution of available habitats for the species assessed in this report. The combination of vegetative and structural diversity defines habitat diversity for wildlife. A comparison of current and historical vegetative and structural diversity may indicate if a habitat category or age class deviates from historical conditions. A deviation below historical amounts may indicate a habitat, or habitats, is in short supply compared to its historical availability. In this case a Forest, or biophysical setting may be below it's biological potential for one or more habitats. For species that are "closely-associated" with a habitat category this may indicate those species are below their potential on a Forest or biophysical setting. However, because many terrestrial wildlife species use a combination of habitat conditions for life-cycle needs, this concern may be lessened. In addition, the relative security of habitats from roads and motorized trails was assessed and mapped.

The amount of available habitats forest-wide, by vegetation groups, is depicted in the Appendices. Maps showing the relative distribution and security of these habitats are located in the project file. A comparison between historic and existing vegetation conditions is located in the vegetation section of the Forest Plan.

This information was used as a complementary and necessary approach to focus on programmatic and strategic provisions for specific threatened and endangered species, species of concern or interest (36 CFR 219.10(b)(2)) at the Forest Plan level. If needed a species-specific (fine filter) approach to evaluation and establishment of plan components may be necessary (FSM 1921.7) at the watershed or project-levels.

4. 43.2 - Species Diversity

The Directives (FSH 1909.12, Chapter 40 – Science and Sustainability) recommend that agency managers concentrate their efforts on contributing to the persistence of species where Forest Service management activities may affect their habitat rather than on species-specific management where the overall status of species are outside the limits of the agency authority or the capability of the plan area. It is FSM 1921.7 policy that consistent with overall multiple use objectives that plan components provide for appropriate ecological conditions contributing to: conserving federally listed species, supporting self-sustaining populations of species of concern, and supporting species of interest as deemed appropriate by the Responsible Official (FSH 1909.12, 43.21). The Forest Supervisor is the responsible official.

FSH 1909.12, 43.22 directs the forest supervisor to identify federally threatened and endangered species, species of concern, and species of interest whose ranges include the plan area, taking into account limitations that exist at the edge of a species range.

A. 43.22a-c - Identification of Species: Threatened and endangered species, species of concern, and species of interest

The following process was used to identify species which merit consideration as Species of Concern and Species of Interest, determine which species or groups of species are adequately conserved by plan components for ecosystem diversity and develop plan components for those species or groups of species that are not. One of the criteria used in the selection of species was

"will the plan components for ecosystem diversity provide ecological conditions to provide species diversity". Where it is determined that the ecosystem approach does not provide an adequate framework for maintaining and restoring conditions to support specific federally listed threatened or endangered species, species of concern and species of interest then the plan must include additional provisions for these species.

Information Sources

The identification of terrestrial wildlife vertebrate and invertebrate species that occur on the National Forest was completed using data collected from a number of sources.

The Idaho "Comprehensive Wildlife Conservation Strategy" (CWCS) is considered the best available source of information for vertebrate and invertebrate species in Idaho. In 2001, Congress established a new Wildlife Conservation and Restoration Program (WCRP) to help state and tribal wildlife agencies address the unmet needs of wildlife and associated habitats for conservation, education and wildlife-associated recreation. Congress also established the State Wildlife Grants (SWG) Program in 2001. These grants are available for wildlife planning and for implementation of wildlife and habitat conservation programs. To be eligible for these grants, each state agency has developed a State Comprehensive Wildlife Conservation Strategy (CWCS) and submitted it to the US Fish and Wildlife Service (USFWS) by October 2005. The USFWS National Advisory Acceptance Team approved the Idaho CWCS in 2005.

Other important information sources include the Region 1 Regional Forester Sensitive Species list (RFSS), USFWS Birds of Conservation Concern: North American Bird Conservation Initiative (NABI) Bird Conservation Region 10 (BCR10), recent sub-basin reports such as the Northwest Power and Conservation Council (NWPCC) Clearwater Sub-basin Management Plan, several USFS mid-scale, watershed-oriented sub-basins or watershed assessments from both forests, and other available information, as well as the NatureServe and Birds of North America databases.

References cited, key contacts, links to information sources and a summary of various data sources are located below and at the end of this report.

See http://www.natureserve.org/explorer for a list of species for the state of Idaho.

See http://fishandgame.idaho.gov/cms/tech/CDC/cwcs_table_of_contents.cfm for a list of species of greatest conservation need for the state of Idaho.

See http://www.fws.gov/migratorybirds/reports/BCC2002.pdf for a list of USFWS birds of conservation concern.

See http://www.fs.fed.us/r1/projects/wwfrp/sens-species/index.shtml for a list of Regional Forester sensitive species for the Clearwater and Nez Perce National Forests in Idaho.

See http://www.nwcouncil.org/fw/subbasinplanning/clearwater/plan/a06_wildlife.pdf for a list of wildlife species for the Clearwater sub-basin in Idaho.

See http://www.nwcouncil.org/fw/subbasinplanning/salmon/plan/SalmonAssessment.pdf for a list of wildlife species for the lower and middle portions of the Salmon sub-basin in Idaho.

43.22a: Federally-listed Species

The Forest Service has a regulatory requirement to maintain or improve habitat conditions for threatened, endangered, proposed and candidate species under the Endangered Species Act (ESA). Species listed under the ESA fall into four categories based on viability concerns: threatened, endangered, proposed, and candidate. Threatened and endangered species that occur on the CNF and their status are described in Table 1. FSH 1909.12 (43.22a) states that species identified as candidate and proposed species under the ESA should be considered as species of concern. Species that are candidate or proposed for listing under ESA are included in the discussion of species of concern and displayed in Table 2.

Results

Table 1 displays the threatened, endangered and candidate species known to occur on the Clearwater National Forest (CNF).

Table 1. Threatened, endangered and candidate species status.

Species common name	Scientific name	Status
Bald eagle	*Haliaeetis leucocephalus*	Threatened
Canada lynx	*Lynx canadensis*	Threatened
Gray wolf	*Canis lupus*	Experimental/non-essential

See http://www.fws.gov/endangered/wildlife.html for a list of all threatened and endangered species in the U.S. Fish and Wildlife Service database.

See http://fishandgame.idaho.gov/cms/tech/CDC/t&e.cfm - te for a list of all threatened, endangered and candidate species in the Idaho Department of Fish and Game database for Idaho.

With the exception of the Canada lynx all other federally listed species are regulated by USFWS recovery plans that provide direction for recovery of that particular species. In addition, direction may also be found in State recovery plans (i.e. gray wolf, bald eagle), terms and conditions from Biological Opinions and other pertinent regulatory documents.

Canada lynx are managed under direction found in the Canada Lynx Conservation Assessment and Strategy (LCAS). A Draft Environmental Impact Statement has been completed for the Northern Rockies Lynx Amendment and a biological assessment has been completed and submitted to the U.S. Fish and Wildlife Service. The goal is to have the consultation and final EIS completed in 2006.

There is a potential that species may be delisted over the life of the plan. In the past when a species was delisted it remained on the Regional Foresters “sensitive” species list for a period of 5 years. The most recent example is the delisting of the peregrine falcon.

43.22b: Species of concern

The 2005 planning rule and directives (FSH 1909.12, Chapter 40) contain information and direction for identifying species of concern and species of interest. The directives state “lists of species should be developed by an objective and scientifically credible third party, such as the U.S. Fish and Wildlife Service or NatureServe”. Species lists from various databases or information sources was also used, and is discussed under the categories of species of concern and species of interest below.

To aid in identifying potential species of concern/species of interest the directives identify several categories of species to review (i.e. T&E, global ranking, state ranking). This analysis follows four basic steps to identify potential species of concern and potential species of interest.

1. Collect and review the appropriate information sources for each of the identified categories of potential species of concern and species of interest. (43.22)
2. From these lists identify those species known to occur on the CNF.
3. Using the information from FSH 1909.12, 43.22C and 43.23 screen each species to be considered further in planning the process.
4. Document why species would not be considered further.
5. Look at the possibility of placing species into groups and/or identifying surrogate species. (43.24)
6. Develop plan components for species diversity (43.25)

Identification Criteria

Species of concern are species for which the Forest Supervisor determines that management actions may be necessary to prevent listing under the Endangered Species Act (ESA). The Forest Supervisor, as appropriate, may identify the following animal and plant species as species of concern.

1. Candidate and proposed species under the ESA (1973).
2. Species with ranks of G-1 through G-3 on the NatureServe ranking system.
3. Infraspecific (subspecific) taxa with ranks of T-1 through T-3 on the NatureServe ranking system.
4. Species that have been petitioned for Federal listing and for which a positive 90-day finding has been made.
5. Species that have been recently delisted (these include species delisted within the past five years and other delisted species for which regulatory agency monitoring is still considered necessary).

(A 90-day finding is a preliminary finding that substantive information was provided indicating that the petition listing may be warranted and a full status review is conducted).

A series of "wildlife working group" meetings during the late winter and spring of 2005 of USFS, USFWS, IDFG and Nez Perce Tribal wildlife biologists reviewed information and developed a preliminary list of species and discussed habitat relationships based on the interim directives.

The list of terrestrial species was categorized for the Clearwater National Forest and the season of use for each species. For some species (such as birds) a determination was made whether the species occurred yearlong, seasonally or for a short duration (i.e. transient, accidental), for each forest. Definitions for each determination are found in the glossary. This information was reviewed and updated based after the release of the final directives on 1/31/2006. All "potential" species of concern, suspected or known to occur on the CNF was identified and is displayed in Table 2.

Further discussions on the species information in the Idaho CWCS were been held with biologists from the USFS Regional Office, Zone Biologists, and Idaho Dept. of Fish and Game and CDC personnel Kevin Church and Charles Harris in 2006.

In the past, emphasis and efforts for wildlife species were generally applied to vertebrate species only. The inclusion of invertebrate species is a relatively new concept for the CNF with less information existing for invertebrate species. To help in identifying invertebrate species known to occur on the CNF three other information sources were reviewed: Land Mollusk Surveys on USFS Northern Region Lands (Hendricks et al. 2006), Interior Columbia Basin Mollusks of Species of Concern (Frest and Johannes 1995), and the Land Snail Survey of the Lower Salmon River Drainage, Idaho (Frest and Johannes 1997).

1. Candidate and proposed species: The USFWS has identified the yellow-billed cuckoo as a candidate species for the Clearwater National Forest (USFWS 2006), but there are no known occurrences on the Clearwater National Forest. There are no USFWS other candidate or proposed species on the CNF.

See http://www.fws.gov/endangered/wildlife.html for a list of all candidate and proposed species in the U.S. Fish and Wildlife Service database.

See http://www.natureserve.org/explorer for a list of candidate and proposed species that could possibly occur on CNPZ.

2. G-1 thru G-3 and T-1 thru T-3: The Idaho CWCS contained a comprehensive list of G-1 thru G-3 and T-1 thru T-3 terrestrial wildlife species, for the state of Idaho. This information was cross-referenced with the NatureServe database (2005/2006). Those species known or suspected to occur on CNF were identified and considered as "potential species of concern", based on the NatureServe G and Idaho S-ranks, Idaho CWCS point locations and/or Forest Records information is displayed in Table 2.

Table 2. Species evaluated for the CNF.

Species common name	Scientific name	Status	Occurrence
Vertebrates			
Yellow-billed cuckoo	*Ciccyzus americanus*	G5/S2B	No records
Idaho giant salamander	*Dicamptodon aterrimus*	G3/S3	Yes
Invertebrates			
An Oregonian (Lower Salmon River)	*Cryptomastix mullani latilabris*	G3G4T1/SNR	No records
An Oregonian (Lower Clearwater River)	*Cryptomastix mullani tuckeri*	G3G4T1/SNR	Yes
River of No Return Oregonian	*Cryptomastix mullani clappi*	G3G4T1/SNR	No records
Humped coin	*Polygyrella polygyrella*	G3/S1	Yes
Lyrate mountainsnail	*Oreohelix haydeni*	G2G3/S1	No records
Seven Devils mountainsnail	*Oreohelix hammeri*	G1/S1	No records
Striate mountainsnail	*Oreohelix strigosa goniogyra*	G5T1/S1	No records
Selway forestsnail	*Allogona lombardii*	G1/S1	Yes
Nimapuna tigersnail	*Anguispira nimapuna*	G1/S1	Yes
Lyre mantleslug	*Udosarx lyrata lyrata*	G2/S1	Yes
Sheathed slug	*Zacoleus idahoensis*	G3G4/S2	Yes
Smokey taildropper	*Prophysaon humile*	G3/S2	Yes
Magnum mantleslug	*Magnipelta mycophaga*	G2G3/SH	Yes
Thinlip tightcoil	*Pristiloma idahoense*	G2/S1	No records
Marbled disc	*Discus marmorensis*	G1G3/S1	No records
Salmon coil	*Helicodiscus salmonaceus*	G1G2/S2	No records
Western Flat-whorl	*Pristiloma wascoense*	G3G4/S1	No records
Columbia River tiger beetle	*Cicindela columbica*	G2	No records
Gillette's checkerspot butterfly	*Euphydryas gillettii*	G2	No records (1)
A Spur-throat grasshopper (digitifer)	*Melanoplus digitifer*	G2G3/S2	Yes
A Spur-throat grasshopper (payettei)	*Melanoplus payettei*	G2G4/S2	No records
(1) – Species host plant and suitable environments occur on the forest.			

43.22c: Species of Interest

Species of Interest are those species for which the Forest Supervisor(Responsible Official) determines that management actions may be necessary or desirable to achieve ecological or other multiple use objectives.

Identification Criteria

1. Species with rank of S-1, S-2, N-1 or N-2 on the NatureServe ranking system.
2. State listed threatened and endangered species that do not meet the criteria as species of concern. (IDFG Classification)
3. Species identified as species of conservation concern in State Comprehensive Wildlife Strategies. (Idaho Comprehensive Wildlife Conservation Strategy – CWCS)
4. Bird species on the U.S. Fish and Wildlife Birds of Conservation Concern National Priority List. http://www.fws.gov/migratorybirds/reports/BCC2002.pdf (Bird Conservation Region 10)

Additional species where valid, existing information is available that indicates species are of regional or local conservation concern due to factors that may include:

1. Significant threats to populations or habitat.
2. Declining trends in populations or habitat.
3. Rarity.
4. Restricted ranges (for example, narrow endemics, disjunct populations, or species at the edge of their range).
5. Species that are hunted, fished, and other species of public interest. Invasive species may also be considered.

1. S-1, S-2, N-1 and N-2 species

The N-1/S-1 and N-2/S-2 rankings represent the nation-wide and sub-national status of species either as "Critically-imperiled or imperiled", respectively. In some cases there are discrepancies in species S-rankings between the individual states lists and the NatureServe list. The S-rankings on the Idaho CWCS list are considered the most up-to-date. The identified S1-S2 species are those species that the state considers to be species of the greatest conservation need for Idaho.

The Idaho CWCS, USFWS Birds of Conservation Concern National Priority list, and the NatureServe database were accessed, and questions posed to Forest Service and non-Forest Service biologists, using the above criteria, to identify potential species of interest for the CNPZ. The primary focus was on identifying those species that breed on the CNF as residents or seasonally because of the potential for Forest Service management activities to affect nesting, denning, the rearing of young, and other life cycle needs.
Terrestrial T&E species and other species included on the potential species of concern list were removed as potential species of interest.

In a series of "wildlife working group" meetings during the late winter and spring of 2005 USFS, USFWS, IDFG and Nez Perce Tribal wildlife biologists developed and reviewed this preliminary list and discussed habitat relationships. All "potential" species of interest, that met the 2005

Planning Rule criteria, and are suspected or known to occur on the CNF were identified and are displayed in Table 3.

Table 3 also displays both the NatureServe and individual state lists of S1-S2 species known to occur on CNF, whether they are N-1 or 2 ranked, and if they have a birds of conservation concern status.

See http://fishandgame.idaho.gov/cms/tech/CDC/cwcs_table_of_contents.cfm for a list of all S1 and S2 species for Idaho.

See http://www.natureserve.org/explorer for the NatureServe database list of all S1 and S2 species for Idaho, Clearwater, Shoshone, Latah and Benewah Counties in Idaho.

See http://www.fs.fed.us/r1/projects/wwfrp/sens-species/index.shtml for Region 1 at-risk species.

2. State threatened or endangered species

A review of the individual state lists identified one state-listed threatened species, the peregrine falcon, and endangered species beyond those listed under the Endangered Species Act (Table 1). The peregrine falcon is accounted for as a potential species of concern. There are no potential species of interest that are state-listed threatened or endangered species.

See http://fishandgame.idaho.gov/cms/tech/CDC/cwcs_pdf/appendix%20b.pdf for Idaho threatened or endangered species.

3. USFWS Birds of Conservation Concern

The U.S. Fish and Wildlife Service (USFWS) determine the national Birds of Conservation Concern list. The last update occurred in 2002. CNF is within Bird Conservation Region (BCR) 10, which includes the Northern Rockies. Bird species of conservation concern known to occur on CNF are displayed in Table 3..

See http://www.fws.gov/migratorybirds/reports/BCC2002.pdf for a list of USFWS birds of conservation concern.

4. Species of Regional and Local Concern

USFS Sensitive Species

Regional species of concern are listed as sensitive species (Kimbell 2005) and species at risk (Samson et al. 2004). Table 3 displays the sensitive species and the species at risk that are found on the Clearwater National Forest.

5. Species on Non-USFS lists or otherwise identified.

Local species of concern include those species identified by the state of Idaho as species of greatest conservation concern, other large-scale analyses, or non-government organizations. Currently the state of Idaho has three lists. Additional species of local concern were identified during public scoping, and in meetings or conversations with biologists from the Idaho Conservation Data Center (CDC), IDFG Clearwater region and the Nez Perce tribe of Idaho, a review of focal wildlife species

from the NWPCC Salmon and Clearwater Sub-basin Plans, a review of the Idaho Partners in Flight Bird Conservation Plan (BCP), that have the potential to occur on the Clearwater NF.

Table 3 displays the species evaluated for the Clearwater National Forest.

Table 3. Species Evaluated for the Clearwater N.F. .

Species name	Scientific name	NatureServe N1/N2 ranks	Idaho CWCS S1/S2	Northern Region Sensitive Species	USFWS Birds of Conservation Concern (BCR10)	Samson Species at Risk	NWPCC Focal Species – Salmon &Clearwater SBAs	Idaho Bird Conservation Plan (priority)	Existing MIS (2006)
Invertebrates									
Fir pinwheel	*Radiodiscus abietum*	-	S2	-	-	Yes	-	-	-
Pale jumping slug	*Hemphillia camelus*	-	S2	-	-	-	-	-	-
Vertebrates									
Reptiles/Amphibians									
Coeur d'Alene salamander	*Plethodon idahoensis*	-	S2	Yes	-	Yes	Yes (Clearwater)	-	-
Columbia spotted frog	*Rana luteiventris*			-			-		-
Northern alligator lizard	*Elgaria coerulea*	-	S2	-	-	Yes	-	-	-
Ringneck snake	*Diadophis punctatus*	-	S2	Yes	-	Yes	-	-	-
Western (boreal) toad	*Bufo boreas boreas*	-	-	Yes	-	Yes	Yes (Clearwater)	-	-
Mammals									
American peregrine falcon	*Falco peregrinus anatum*	-	S2B	-	Yes	-	-	-	-
American marten	*Martes americana*	-	-	-	-	-	-	-	Yes
Beaver	*Castor canadensis*	-	-	-	-	-	-	-	-
Bighorn sheep	*Ovis canadensis canadensis*	-	-	-	-	-	-	-	-
Black bear	*Ursus americanus*	-	-	-	-	-	-	-	-
California myotis	*Myotis californicus*	-	S2	-	-	-	-	-	-
Fisher	*Martes pennanti columbiana*	-	S1	Yes	-	Yes	Yes (Clearwater)	-	-
Fringed myotis	*Myotis thysanodes*	-	S2	-	-	Yes	Yes (Clearwater)	-	-
Long-eared myotis	*Myotis evotis*	-	-	-	-	-	-	-	-
Long-legged myotis	*Myotis volans*	-	-	-	-	-	-	-	-
Merriam's shrew	*Sorex merriami*	-	S2	-	-	-	-	-	-
Moose	*Alces alces*	-	-	-	-	-	-	-	Yes
Mountain goat	*Oreamos americanus missoulae*	-	S2	-	-	-	-	-	-
Mule deer	*Odocoileus hemionus*	-	-		-	-	-	-	-
Pygmy shrew	*Sorex hoyi*	-	S1	-	-	Yes	-	-	-
Red-tailed chipmunk	*Neotamias ruficaudus*	-	-	-	-	-	-	-	-
River otter	*Lontra canadensis*	-	-	-	-	-	-	-	-
Rocky Mountain elk	*Cervus elaphus nelsoni*	-	-	-	-	-	-		Yes
Snowshoe hare	*Lepus americanus*	-	-	-	-	-	-	-	-
Townsend's big-eared bat	*Corynorhinus townsendii*	N2N3	-	Yes	-	-	-	-	-
Western pipistrelle	*Pipistrellus hesperus*	-	S2	-	-	-	-	-	-
Wolverine	*Gulo gulo luscus*	-	S2	Yes	-	Yes	Yes (Clearwater)	-	-

White-tailed deer	*Odocoileus virginianus*	-	-	-		-	-	-	Yes
Yuma myotis	*Myotis yumanensis*	-	-	-	-	-	-	-	-
Species name	**Scientific name**	**NatureServe N1/N2 ranks**	**Idaho CWCS S1/S2**	**Northern Region Sensitive Species**	**USFWS Birds of Conservation Concern**	**Samson et al Species at Risk**	**NWPCC Focal Species – Salmon &Clearwater SBAs**	**Idaho Bird Conservation Plan (priority)**	**Existing MIS (2006)**
Birds									
American peregrine falcon	*Falco peregrinus anatum*	-	S2B	-	Yes	-	-	-	-
American three-toed woodpecker	*Picoides tridactylus*	-	S2	-	-	-	-	-	-
Belted Kingfisher	*Ceryle alcyon*	-	-	-	-		-		Yes
Black-backed woodpecker	*Chrysocolaptes festivus*	-	-	Yes	-	Yes	Yes (Clearwater)	Yes	-
Barn owl	*Tyto alba*	-	-	-	-	-	-	-	-
Black rosy-finch	*Leucosticte atrata*	-	-	-	-	Yes	-	Yes	-
Black swift	*Cypseloides niger*	-	S1	-	Yes	Yes	-	Yes	-
Black tern	*Childonias niger*	-	S1	-	-	-	-	-	-
Black-throated sparrow	*Amphispiza bilineata*	-	S2	-	-	-	-	-	-
Blue grouse	*Dendragapus obscurus*	-	-	-	-	Yes	-	Yes	-
Bohemian waxwing	*Bombycilla garrulus*	-	S1	-	-	-	-	-	-
Boreal chickadee	*Poecile hudsonica*	-	S1	-	-	-	-	-	-
Boreal owl	*Aegolius funereus*	-	S2	-	-	-	Yes (Clearwater)	-	-
Brewer's sparrow	*Spizella breweri*	-	-	-	Yes	-	-	Yes	-
California gull	*Larus californicus*	-	S2	-	-	-	-	-	-
Canvasback	*Aythya valisineria*	-	S2	-		-	-	-	-
Common loon	*Gavia immer*	-	S1	-		Yes	-	-	-
Ferruginous hawk	*Buteo regalis*	-	-	-	Yes	-	-	Yes	-
Flammulated owl	*Otus flammeolus*	-	-	Yes	Yes	Yes	Yes (Clearwater)	Yes	-
Golden eagle	*Aquila chrysaetos*	-	-	-	Yes	-	-	Yes	-
Grasshopper sparrow	*Ammodramus savannarum*	-	S2	-	-	-	-	-	-
Harlequin duck	*Histrionicus histrionicus*	-	S1	Yes	-	Yes	-	-	-
Hooded merganser	*Lophodytes cucullatus*	-	S2	-	-	-	-	Yes	-
Lewis's woodpecker	*Melanerpes lewis*	-	-	-	Yes	Yes	-	Yes	-
Loggerhead shrike	*Lanius ludovicianus*	-	-	-	Yes	-	-	Yes	-
Long-billed curlew	*Numenius americanus*	-	S2	-	Yes	-	-	Yes	-
Marbled godwit	*Limosa fedoa*	-	-	-	Yes	-	-	-	-
Merlin	*Falco columbarius*	-	S2	-	-	-	-	-	-
McCown's Longspur	*Calcarius mccownii*	-	-	-	Yes	-	-	-	-
Northern goshawk	*Accipiter gentilis*	-	-	Yes	-	Yes	Yes (Clearwater)	-	Yes
Mountain plover	*Charadrius montanus*	N2	-	-	-	-	-	-	-
Northern pygmy owl	*Glaucidium gnoma*	-	-	-	-	-	-	-	-
Mountain quail	*Oreortyx pictus*	-	S1	-	-	Yes	-	Yes	-
Northern shoveler	*Anas clypeata*	-	S2	-	-	-	-	-	-
Northern mockingbird	*Mimus polyglottos*	-	S1	-	-	-	-	-	-

Olive-sided flycatcher	*Contopus cooperi*	-	-	-	-	-	-	Yes	-
Pileated woodpecker	*Dryocopus pileatus*	-	-	-	-	-	-	-	Yes
Species name	**Scientific name**	**NatureServe N1/N2 ranks**	**Idaho CWCS S1/S2**	**Northern Region Sensitive Species**	**USFWS Birds of Conservation Concern**	**Samson et al Species at Risk**	**NWPCC Focal Species – Salmon &Clearwater SBAs**	**Idaho Bird Conservation Plan (priority)**	**Existing MIS (2006)**
Birds (contin.)									
Prairie falcon	*Falco mexicanus*	-	-	-	Yes	-	-	Yes	-
Purple martin	*Progne subis*	-	-	-	-	-	-	-	-
Pygmy nuthatch	*Sitta pygmaea*	-	S1	Yes	Yes	Yes	-	-	-
Red-naped sapsucker	*Sphyrapicus nuchalis*	-	-	-	Yes	-	-	-	-
Red-necked grebe	*Podiceps grisegena*	-	S2B	-	-	-	-	-	-
Sanderling	*Calidris alba*	-	-	-	-	-	-	-	-
Short-eared owl	*Asio flammeus*	-		-	-	-	-	-	-
Snowy plover	*Charadrius alexandrinus*	-	-	-	-	-	-	-	-
Solitary sandpiper	*Tringa solitaria*	-	-	-	-	-	-	-	-
Swainson's hawk	*Buteo swainsoni*	-	-	-	Yes	-	-	Yes	-
Trumpeter swan	*Cygnus buccinator*	-	S1	-	-	-	-	Yes	-
Upland sandpiper	*Bartramia longicauda*	-	S1	-	Yes	-	-	-	-
Vaux's swift	*Chaeturea vauxi*	-	-	-	-	-	-	Yes	-
Virginia's warbler	*Vermivora virginiae*	-	S1B	-	Yes	-	-	Yes	-
Western grebe	*Aechmophorus occidentalis*	-	-	-	-	-	-	Yes	-
Whimbrel	*Numenius phaeopus*	-	-	-	Yes	-		-	-
White-headed woodpecker	*Picoides albolarvatus*	-	S2	-	Yes	-	Yes (Clearwater)	Yes	-
White-winged crossbill	*Loxia leucoptera*	-	S1	-	-	-	-	-	-
Wilson's Phalarope	*Phalaropus tricolor*	-	-	-	Yes	-	-	-	-
Williamson's sapsucker	*Sphyrapicus thyroideus*	-	-	-	Yes	-	-	Yes	-
Willow flycatcher	*Empidonax traillii*	-	-	-	-	-	-	Yes	-

SBA = Sub-basin Assessment
- = No.

Additional Sources for Potential Species of Interest

The Responsible Official should consider the following additional factors (43.22c(6)) when identifying species of interest. The presence of one or more factors would suggest, but not compel, that a species be included as a species of interest.

a. Species habitat or population has declined significantly in the plan area.
b. Species and its habitats are not well distributed in the plan area.
c. Species populations are low in the plan area.
d. Species is dependent on a specialized and/or limited habitat in the plan area.
e. Species is subject to some imminent threat (for example, invasion of exotic species into habitat or disturbance due to road systems).
f. Species habitat or population is not generally secure within its range and NFS lands act as an important refuge.
g. Species is of public interest, including those species identified cooperatively with State Fish and Wildlife Agencies consistent with the Sikes Act.
h. Species is invasive.
i. Species poses a threat to ecosystem or species diversity.

In addition, the following criteria were used to determine which species from the previous tables were to be considered for further consideration.

1. The best available science indicates the species is either common, does not occur on the CNPZ or doesn't meet the factors according to 43.22c(5a-d).

2. There are several species that were identified on the NatureServe database as S1-S2 or N1-N2 species for the state of Idaho, or are identified as USFS Region 1 sensitive species, or are identified as birds of conservation concern in the U.S. portion of Bird Conservation Region 10 by the USFWS. However, they are not considered to be species of the greatest conservation concern to the state of Idaho and not listed or addressed in the Idaho CWCS. Those species are dropped from further consideration.

3. There are several species with the potential for occurring on the Clearwater NF that are listed by non-USFS organizations in various large-scale assessments that do not meet various FSH 1909.12-2005-5, 43.22b and 43.22c criteria.

4. There are many bird species that are known to occur on the CNF only for very short timeframes and are not known to breed or winter on either forest. Some of these species pass through as they are migrating, others occur only accidentally as this is generally beyond their normal range, and still others are transient (see glossary for definitions of accidental and transient). In some cases USFS FAUNA or Idaho CDC records may indicate that a species may be considered accidental on one forest while there may be no record on the other forest. These species were dropped from further consideration.

5. Species with the potential for occurring on the CNF that did not meet FSH 1909.12-205-5 criteria 1-5, and there is little or no public interest.

The following Tables 4 and 5 display the species that were dropped from further consideration based on all these criteria.

Table 4. Evaluated species of concern or interest dropped from further consideration.

Species	Rationale
Western flat-whorl	No habitat on Clearwater NF
Lyrate mountainsnail	Not in Idaho CWCS.
A Spur-throat grasshopper (digitifer)	Insufficient information to complete a credible assessment
Western toad	Not in Idaho CWCS.
American bullfrog	Limited occurrence on NFS lands.
Columbia spotted frog	The CNF is not within the Great Basin Distinct Population Segment area
Moose	Not in Idaho CWCS. Managed by IDFG as a big game species.
Mule deer	Uncommon but widespread. Not in Idaho CWCS.
Mountain goat	Uncommon but widespread.
Black bear	Not in Idaho CWCS. Managed by IDFG as a big game species.
River otter	Not in Idaho CWCS. Managed by IDFG as a furbearer species.
Beaver	Not in Idaho CWCS. Managed by IDFG as a furbearer species.
American marten	Not in Idaho CWCS. Managed by IDFG as a furbearer species.
Snowshoe hare	Not in Idaho CWCS. Managed by IDFG as a small game species.
Long-eared myotis	Not in Idaho CWCS.
Long-legged myotis	Not in Idaho CWCS.
Western pipistrelle	Not in Idaho CWCS.
Yuma myotis	Not in Idaho CWCS.
Barn owl	Did not meet FSH 1909.12-205-5 criteria 1-5.
Black rosy-finch	Did not meet FSH 1909.12-205-5 criteria 1-6.
Black swift	Accidental.
Boreal chickadee	Did not meet FSH 1909.12-205-5 criteria 1-6. Not in Idaho CWCS.
Brewers sparrow	Accidental.
Common loon	Accidental.
Ferruginous hawk	No breeding habitat.
Grasshopper sparrow	Accidental.
Hooded merganser	No predicted habitat or point locations according to the Idaho CWCS
Loggerhead shrike	Accidental.
Long-billed curlew	Accidental.
Marbled godwit	No breeding habitat.
Merlin	Accidental.
Northern pygmy owl	Did not meet FSH 1909.12-205-5 criteria 1-5. Not in Idaho CWCS.
Olive-sided flycatcher	Did not meet FSH 1909.12-205-5 criteria 1-5. Not in Idaho CWCS.
Purple martin	Did not meet FSH 1909.12-205-5 criteria 1-5. Not in Idaho CWCS.
Red-necked grebe	Did not meet FSH 1909.12-205-5 criteria 1-5.
Short-eared owl	Did not meet FSH 1909.12-205-5 criteria 1-5. Not in Idaho CWCS.
Swainson's hawk	Accidental.
Trumpeter swan	No predicted habitat or point locations according to the Idaho CWCS
Upland sandpiper	Accidental.
Vaux's swift	Not in Idaho CWCS.
Western grebe	Accidental.
White-winged crossbill	Accidental.
Willow flycatcher	Did not meet FSH 1909.12-205-5 criteria 1-5. Not in Idaho CWCS.

Tables 5 and 6 displays the species that are retained based on the previous analysis and above criteria.

Table 5. Species retained for further evaluation as Species of Concern

Vertebrates	
Idaho giant salamander	*Dicamptodon aterrimus*
Yellow-billed cuckoo	*Ciccyzus americanus*
Invertebrates	
Insects	
Gillette's checkerspot	*Euphydryas gillettii*
Mollusks	
An Oregonian (lower Clearwater River)	*Cryptomastix mullani tuckeri*

Lyre mantleslug	*Udosarx lyrata lyrata*
Magnum mantleslug	*Magnipelta mycophaga*
Smokey taildropper	*Prophysaon humile*
Humped coin	*Polygyrella polygyrella*
Nimapuna tigersnail	*Anguispira nimapuna*
Sheathed slug	*Zacoleus idahoensis*
Selway forestsnail	*Allogona lombardii*

Table 6. Species retained for further evaluation as Species of Interest

Clearwater NF only	
Invertebrates	
Fir pinwheel	*Radiodiscus abietum*
Pale jumping slug	*Hemphillia camelus*
Herptiles	
Northern alligator lizard	*Elgaria coerulea*
Coeur d'Alene salamander	*Plethodon idahoensis*
Ringneck snake	*Diadophis punctatus*
Birds	
American three-toed woodpecker	*Picoides tridactylus*
Black-backed woodpecker	*Chrysocolaptes festivus*
Flammulated owl	*Otus flammeolus*
Harlequin duck	*Histrionicus histrionicus*
Lewis's woodpecker	*Melanerpes lewis*
Northern goshawk	*Accipiter gentilis*
Pygmy nuthatch	*Sitta pygmaea*
Mammals	
California myotis	*Myotis californicus*
Fisher	*Martes pennanti columbiana*
Fringed myotis	*Myotis thysanodes*
Pygmy shrew	*Sorex hoyi*
Rocky Mountain elk	*Cervus elaphus nelsoni*
Townsend's big-eared bat	*Corynorhinus townsendii*
Wolverine	*Gulo gulo luscus*

5. 43.22d - Screening Species-of-Concern and Screening Species-of-Interest for Further Consideration in the Planning Process and 43.23 – Information Collection

A. Screening Criteria: 43.22d.

Using the suggested criteria in Section 43.22a through c, some species may not require further consideration in the planning process because:

1. There are no known occurrences or suitable habitat of the species on the forest, grassland, prairie, or other comparable administrative unit.
2. They are secure within the plan area.
3. They are not affected by management or potential plan components.

In addition to the above criteria, the Responsible Official should consider the level of knowledge about species when determining those species of concern or species of interest that will be considered in detail in the planning process. In general, only those species about which enough information is known to complete a credible assessment should be carried forward for additional evaluation. It is likely that some of the information described in Section 43.23 will be needed to

complete this screening process, so the screening step and information step may be iterative. Grouping species as described in Section 43.24 may facilitate the screening process.

B. Information collection: 43.23

To understand potential threats and identify opportunities to manage those threats, collect and synthesize existing information on listed species, species of concern, and species of interest. The Responsible Official determines what additional provisions in plan components may be needed. Information may come from a variety of sources including literature, local information on occurrence and population status, sub-basin analyses, large-scale assessments, and information gathered from local species experts. The Responsible Official may consider the following types of information:

1) Current taxonomy,
2) Distribution (including historic and current trends)
3) Abundance (including historic and current trends)
4) Demographics and population trend
5) Diversity (phenotypic, genetic, and ecological)
6) Habitat requirements at appropriate spatial scales
7) Habitat amount, distribution, and trends
8) Ecological function
9) Key biological interactions
10) Limiting factors
11) Risk factors including various human disturbances (trails, roads, dams)
12) Population effects resulting from hunting, fishing, trapping and natural population fluctuations.

This step emphasizes the collection and summarization of existing information, but one of the key points should be to identify critical information that is currently lacking. Collection of such information as feasible or appropriate through monitoring programs should be a high priority.

Using the criteria identified in section 43.22d and information from 43.23 a determination was made if a species should be evaluated further as a species of concern or interest (Tables 7 & 8).

Table 7. Screening for Species of Concern

Common name	Known Occurrence *	Habitats	Habitat on Forest	Secure within Plan Area	Affected by Management or Potential Plan Components	Conservation needs	Recommendation to carry forward?
Vertebrates							
Yellow-billed cuckoo	No	Old & large riverine cottonwood gallery forests	Small stringers of cottonwood occur along streams and rivers.	No – Suitable habitat occurrence and distribution appears to be inadequate to support the species.	Riparian area development & extensive riparian grazing could result in the loss or degradation of cottonwood gallery forest habitat.	Perpetuate suitable habitat conditions.	No – NFS lands do not act as an important source of habitat or refuge. Suitable habitat conditions occur off NFS lands.
Idaho giant salamander	Yes -Yearlong	High quality aquatic habitat for larval form. High quality moist coniferous riparian forest for adults.	Yes - High quality riparian habitats.	Yes - High quality riparian habitats are available and well distributed.	Water quality and riparian cover degradation and increased sedimentation due to logging. Loss of down wood. Mortality due to riparian roads.	Watershed and riparian protective measures	Yes - NFS lands act as an important source of habitat or refuge.
Invertebrates – Land snails & Mollusks	**Known Occurrence***	**Habitats**	**Habitat on Forest**	**Secure within Plan Area**	**Affected by Management or Potential Plan Components**	**Conservation needs**	**Carry Forward?**
Humped coin	Yes -Yearlong	A variety of cover conditions including; western red cedar, grand fir, subalpine fir, some alder, black cottonwood, and mountain maple. Found or on ferns and bryophyte mats (Hendricks et al. 2006). Undisturbed open spruce and Douglas-fir forests having diverse forbs, mosses, and deciduous shrubs in the understory. Commonly near permanent or persistent water. Largest populations occur in forested talus (ID CWCS 2005).	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Loss and degradation of habitat. Logging, grazing roads and fires. Quarry development or expansion.	Additional survey and inventory of known and potential habitat areas.	Yes - NFS lands act as an important source of habitat or refuge.
Nimapuna tigersnail	Yes -Yearlong.	A variety of cover conditions including; western red cedar, grand fir, subalpine fir, some alder, birch, Douglas-fir and/or ponderosa pine. Found under wood or on/under bryophyte	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Talus removal. Grazing, timber harvest, road construction and roadside spraying are potential threats.	Surveys. Determine current population numbers, range and trends.	Yes – NFS lands act as an important source of habitat or refuge.

		mats (Hendricks et al. 2006). Streamside habitat in coniferous forests with deciduous shrub and diverse forb understories in excellent condition, generally undisturbed. Also shaded and mossy basalt talus (ID CWCS 2005).					
Selway forestsnail	Yes - Yearlong	A variety of cover conditions including; western red cedar, grand fir, subalpine fir, Englemann spruce, western hemlock, Pacific yew, alder, birch. Found on/under bryophyte mats (Hendricks et al. 2006). Edge of flood plains, well-shaded moist areas along medium to large streams with a diverse understory and substantial duff layer (ID CWCS 2005).	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Any form of habitat disturbance.	Additional research on species. Thereafter habitat and site protection after knowledge on species needs improves.	Yes – NFS lands act as an important source of habitat or refuge.
Sheathed slug	Yes - Yearlong	A variety of cover conditions including; Douglas fir, grand fir, western hemlock, subalpine fir, western red cedar, Englemann spruce, and ponderosa pine forests with a diverse understory of forbs and bryophytes. Found under wood or on bryophyte mats (Hendricks et al. 2006, ID CWCS 2005).	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Species sensitive to alteration of diverse intact habitats. Absent from sites disturbed by timber harvest and grazing.	Surveys need to determine current status, identify specific threats and conservation measures.	Yes – NFS lands act as an important source of habitat or refuge.
An Oregonian (lower Clearwater River)	Yes - Yearlong	Intact ponderosa pine forests along Clearwater River with moist shaded areas with well-developed understory vegetation at the base of steep slopes with exposed bedrock (ID CWCS 2005).	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Vulnerable to habitat loss and surface disturbance including removal of surface debris or understory plants, reduction of canopy coverage or changes in soil moisture. Threats can include timber harvest, mining, road construction, development and concentrated human activities.	Information on current status and trends of subspecies. Limit surface disturbance at known sites.	Yes – NFS lands act as an important source of habitat or refuge.

Lyre mantleslug	Yes - Yearlong	A variety of cover conditions including; western red cedar, grand fir, alder. Found under down wood or wet bark (Hendricks et al. 2006), and mesic environments in valleys, ravines, gorges, or talus fields (ID CWCS 2005).	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Thought to be intolerant of habitat alteration. Species absent from sites disturbed by timber harvest and grazing.	Lack of information on species, habitat and conservation measures suggest further research is needed. Surveys need to determine current status.	Yes – NFS lands act as an important source of habitat or refuge.
Magnum mantleslug	Yes - Yearlong	Mesic subalpine fir, spruce and white-bark pine forests with a diverse plant understory and duff layer.	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Species thought to be intolerant of habitat alteration. Logging and grazing are potential threats.	Surveys and research	Yes – NFS lands act as an important source of habitat or refuge.
Smokey tail dropper	Yes - Yearlong	A variety of cover conditions including; western red cedar, grand fir, subalpine fir, Englemann spruce, Douglas-fir, subalpine fir, western hemlock, lodgepole pine, alder, paper birch, and cottonwood (Hendricks et al. 2006). Low to mid-elevation mesic pine and spruce forests in large stream or river valleys near perennial water, major slope bases with down wood, diverse deciduous woody plant and forb understories (ID CWCS 2005).	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Populations are vulnerable to surface disturbance. Riparian road construction.	Actions that promote the maintenance and development of suitable habitat. Additional information on species occurrence.	Yes – NFS lands act as an important source of habitat or refuge.
Invertebrates - Insects	**Known Occurrence***	**Habitats**	**Habitat on Forest**	**Secure within Plan Area**	**Affected by Management or Potential Plan Components**	**Conservation needs**	**Carry Forward?**
Gillette's checkerspot	Yes - Yearlong	Mesic mountain meadow habitats and fire-created openings that are open and sunny containing twinberry honeysuckle, western valeriana, lousewort and snowberry as primary and secondary larval host plants.	Yes	Yes - Meadow habitats are available and distributed across the Forest. Meadows with primary and secondary host plants populations need to be identified at the watershed or project-levels.	Yes - Fire suppression that causes forest succession and encroachment in to meadow habitat.	Actions that promote the maintenance and development of suitable habitat. Additional information on species occurrence.	Yes – NFS lands act as an important source of habitat or refuge.
*** = (CDC Point locations or other info)**							

Table 8. Screening for Species of Interest

Common name	Known Occurrence*	Habitats	Habitat on Forest	Secure within Plan Area	Affected by Management or Potential Plan Components	Conservation needs	Carry Forward?
Invertebrates							
Fir pinwheel	Yes -Yearlong	A variety of cover conditions including; western red cedar, grand fir, subalpine fir, Douglas-fir, subalpine fir, western hemlock, western larch, cottonwood, Pacific yew, alder, water birch. Found under down wood, bryophyte mats, or rocks (Hendricks et al. 2006). Douglas-fir forests at mid elevations in valleys and ravines. A rich understory of forbs, shrubs, and bryophytes are present (ID CWCS 2005).	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Loss and degradation of habitat. Logging, grazing, roads and fires.	Additional survey and inventory of known and potential habitat areas.	Yes - NFS lands act as an important source of habitat or refuge.
Pale jumping slug	Yes - Yearlong	A variety of cover conditions including; western red cedar, grand fir, subalpine fir, Englemann spruce, western hemlock, Pacific yew, alder, birch. Found on/under down wood, and on bryophyte mats among ferns and dogwood (Hendricks et al. 2006). In intact closed to nearly close canopy ponderosa pine-Douglas-fir forests adjacent to major streams with relatively moist areas having a diverse plant understory and a duff layer (ID CWCS 2005).	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Logging, grazing, wildfire and roads are thought to have encroached on historical habitat. Surface disturbance and pollution from mining.	Surveys to determine population status, habitat conditions and identify specific threats and conservation measures.	Yes – NFS lands act as an important source of habitat or refuge.
Vertebrates - Herptiles							
Northern Alligator lizard	Yes – yearlong	Coniferous forests, often in clearing or along forest edges. Understory with grasses and shrubs with litter.	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Surface disturbance activities such as mining, quarrying and timber harvest. Biocontrols for tansy ragweed can be fatal	Surveys and studies. Protect impacts to occupied habitats that would impact the invertebrate prey base.	Yes - NFS lands act as an important source of breeding habitat or refuge.

Coeur d'Alene salamander	Yes - yearlong	Riparian corridors along stream, talus in spray zone of waterfalls, and in seeps or springs.	Yes	Yes - High quality riparian habitats are available and well distributed.	Habitat loss and fragmentation due to chemical pollution, flow alteration and sedimentation.	Riparian and wet rocky area conservation	Yes - NFS lands act as an important source of breeding habitat or refuge.
Ringneck snake	Suspected yearlong	Generally adjacent to perennial rivers or streams in grassland or low-elevation forested habitats.	Yes	Yes - Vegetation groups that provide habitat are available and well distributed across the forest.	Yes - Habitat loss and changes in the prey base arising from habitat changes and species introductions.	Protect occupied habitats from impacts that would impact the prey base.	No - NFS lands with potential for species may be limited
Vertebrates - Birds	**Known Occurrence***	**Habitats**	**Habitat on Forest**	**Secure within Plan Area**	**Affected by Management or Potential Plan Components**	**Conservation needs**	**Carry Forward?**
American three-toed woodpecker	Yes – Yearlong	Associated with mature and older subalpine/spruce forests, and montane lodgepole pine forests. Attracted to areas with large fire, disease or insect-outbreaks that cause high levels of tree mortality. Habitat requirements are more restricted than BBWP.	Yes	Yes - Subalpine and other preferred habitats are available and well distributed in suitable areas.	Timber and fire salvage management affects availability of snag habitat, but overall effects may be insignificant.	Retention of snag habitat during salvage operations. Nest site protection	Yes - NFS lands act as an important source of breeding habitat or refuge. Preferred habitats are available and well distributed in suitable high elevation areas. Many wildfire areas are not salvaged.
Black-backed woodpecker	Yes – Yearlong	Associated with alpine and montane coniferous forests, less so with mixed conifer forests. Attracted to areas with large fire, disease or insect-outbreaks that cause high levels of tree mortality.	Yes	Yes – Samson (2006a) indicates species habitat is abundant & well distributed. Samson (2006b) indicates the amount of available habitat is above minimum habitat thresholds.	Timber and fire salvage management may affect the availability of snag habitat, but overall effects may be insignificant.	Retention of snag habitat during salvage operations. Nest site protection	No – Species is not listed in the Idaho CWCS. Preferred habitats are available and well distributed in suitable areas. Many wildfire areas are not salvaged.
Boreal owl	Yes – Yearlong	Associated with high-elevation mixed stands of mature and older subalpine fir and spruce forests, and mixed deciduous and conifer Douglas-fir, lodgepole pine forests.	Yes	Yes - Subalpine and other preferred habitats are available and well distributed in suitable high elevation areas.	Timber and fire salvage management may affect the availability of snag habitat, but overall effects may be low because preferred habitats are at higher elevations.	Retention of snag habitat during salvage operations. Nest site protection	Yes - NFS lands act as an important source of breeding habitat or refuge.
Flammulated owl	Yes – seasonal	Closely associated with mature and older ponderosa pine and Douglas-fir habitats with large-diameter trees.	Yes	Yes – Samson (2006a) indicates species habitat is abundant & well distributed. Samson (2006b) indicates the amount of available habitat is above minimum habitat	Habitat and snag loss.	Restoration of properly functioning mature and older ponderosa pine/dry mixed conifer forests. Suitable snag retention, Nest site protection	Yes - NFS lands act as an important source of breeding habitat or refuge. Species is listed in the Idaho CWCS.

				thresholds. Ponderosa pine and PP/DF forests are available and well distributed in suitable areas.			
Harlequin duck	Yes – seasonal	Clear, swift moving mountain streams and rivers that are relatively undisturbed.	Yes - High quality riparian habitats.	Yes - High quality riparian habitats are available and well distributed.	Habitat loss and disturbance in riparian areas.	Mgt of water quality and riparian habitat conditions based on aquatic conservation needs.	Yes - NFS lands act as an important source of breeding habitat or refuge.
Lewis's woodpecker	Yes -Yearlong	Closely associated with low-mid elevation mature and older deciduous riparian and ponderosa pine forests. Attracted to high-elevation mixed conifer forests where large fire, disease or insect-outbreaks have high levels of decaying trees.	Yes	Yes - Ponderosa pine forests are available and well distributed in suitable areas. Riparian cottonwood stringers occur at lower elevations. Many wildfire areas are not salvaged.	Habitat loss and degradation. Snag loss	Restoration of properly functioning mature and older ponderosa pine/dry mixed conifer forests. Suitable snag retention, Nest site protection	Yes - NFS lands act as an important source of breeding habitat or refuge. Species shares the need for healthy and resilient ponderosa pine and PP/DF forests with other species associated with these ecosystems.
Northern goshawk	Yes - Yearlong	Mature and older mixed conifer forests with closed canopies and relatively open understories for nesting. Territory contains a mosaic of forested and non-forested habitats.	Yes	Yes – Samson (2006a) indicates species habitat is abundant & well distributed. Samson (2006b) indicates the amount of available habitat is above minimum habitat thresholds.	Yes -Nest disruption.	Nest site protection	No – Species is not listed in the Idaho CWCS. Samson (2006a) indicates species habitat is abundant & well distributed.
Pygmy nuthatch	Yes – Yearlong	Closely associated with mature and older ponderosa pine and Douglas-fir habitats with large-diameter trees.	Yes	Yes - Ponderosa pine/DF forests are available and well distributed in suitable areas. Many wildfire areas are not salvaged. Snag habitat is available and well-distributed, especially beyond the open road network.	Habitat and snag loss.	Restoration of properly functioning mature and older ponderosa pine/dry mixed conifer forests. Suitable snag retention, Nest site protection	Yes - NFS lands act as an important source of breeding habitat or refuge. Species shares the need for healthy and resilient ponderosa pine and PP/DF forests with other species associated with these ecosystems.

Mammals	Known Occurrence*	Habitats	Habitat on Forest	Secure within Plan Area	Affected by Management or Potential Plan Components	Conservation needs	Carry Forward?
California myotis	Yes	Western lowlands, cliffs, grasslands, mixed conifer forests, riparian woodlands. Caves, mines, tunnels and buildings.	Yes	Yes - Vegetation groups that provide foraging habitat are available and well distributed across the forest. Snag habitat is available and well-distributed, especially beyond the open road network. Suitable maternal and winter Hibernaculum roost may be limited across the Forest.	Roost and hibernaculum loss. Recreational caving causing disturbances at roosts.	Retain roost habitat or structures.	Yes - NFS lands act as an important source of breeding habitat or refuge.
Fisher	Yes	Mosaic of mesic, dry and subalpine forests in young, mature and older age classes are used seasonally or year-round. Intact riparian areas.	Yes	Yes - Samson (2006b) indicates the amount of available habitat is above minimum habitat thresholds.	Habitat loss or degradation can impact the species.	Retain large down wood and intact riparian habitat	Yes - NFS lands act as an important source of breeding habitat or refuge.
Fringed myotis	Yes	Low to mid-elevation steep river valleys, large canyons or areas with step rocky terrain. Dominant vegetation includes sagebrush, mountain mahogany or ponderosa pine.	Yes	Yes - Vegetation groups that provide foraging habitat are available and well distributed across the forest. Snag habitat is available and well-distributed, especially beyond the open road network. Suitable maternal and winter Hibernaculum roost may be limited across the Forest.	Roost and hibernaculum loss. Recreational caving causing disturbances at roosts.	Retain hibernacula in mines or buildings.	Yes - NFS lands act as an important source of breeding habitat or refuge.
Pygmy shrew	Yes –Yearlong	Mesic and subalpine coniferous forests. Riparian habitats	Yes	Yes - Subalpine and other preferred habitats are available and well distributed in suitable areas. Down wood habitat is available and well-distributed, especially beyond the open road network.	Unknown - Lack of info on the ecology and status of the species.	Retain down wood and intact riparian habitat	Yes
Rocky Mountain elk	Yes –Yearlong	Habitat generalist. Occurs on breaklands to subalpine landforms.	Yes	Yes - Managed big game species.	FS mgt of habitat conditions and transportation network influence habitat suitability.	Manage habitat security and quality winter range	Yes – Key public interest species

Townsend's big-eared bat	Yes	Suitable geology that provides large cavities or caves. Historic mining districts.	Yes	Yes - Vegetation groups that provide foraging habitat are available and well distributed across the forest. Snag habitat is available and well-distributed, especially beyond the open road network. Suitable maternal and winter Hibernaculum roost may be limited across the Forest.	Roost and hibernaculum loss. Recreational caving causing disturbances at roosts.	Retain roost habitat or structures.	Yes - NFS lands act as an important source of breeding habitat or refuge.
Wolverine	Yes – Yearlong	Winter habitat is primarily mid elevation conifer forests, and summer habitat being subalpine forests with high-elevation cirque basins. Secure denning habitat may be a limiting factor.	Yes	Yes - Large areas of remote and undeveloped habitat exist in unroaded areas. High-elevation cirque basins are generally secure from winter recreation due to their locations.	Human-related disturbance is among the most important causes that can impact the species.	Secure cirque basin denning habitat	Yes - NFS lands act as an important source of breeding habitat or refuge.
*** = (CDC Point locations or other info)**							

Species eliminated from further consideration as Species of Concern or Species of Interest

Based on using the three 43.22d screening criteria the following species are eliminated from further evaluation. The rationale for elimination is contained in Tables 7 and 8.

Species of Concern

1. Yellow-billed cuckoo

Species of Interest

1. Northern goshawk
2. Black-backed woodpecker
3. Ringneck snake

Based on using the three 43.22d screening criteria the following species are retained for further evaluation as Species of Concern. The rationale for retention is contained in the previous Tables 7 and 8. Tables 9 and 10 displays the species retained for further evaluation

Table 9. Species retained for further evaluation as Species of Concern

Vertebrates	
Idaho giant salamander	*Dicamptodon aterrimus*
Invertebrates	
Insects	
Gillette's checkerspot	*Euphydryas gillettii*
Mollusks	
An Oregonian (lower Clearwater River)	*Cryptomastix mullani tuckeri*
Lyre mantleslug	*Udosarx lyrata lyrata*
Magnum mantleslug	*Magnipelta mycophaga*
Smokey taildropper	*Prophysaon humile*
Humped coin	*Polygyrella polygyrella*
Nimapuna tigersnail	*Anguispira nimapuna*
Sheathed slug	*Zacoleus idahoensis*
Selway forestsnail	*Allogona lombardii*

Table 10. Species retained for further evaluation as Species of Interest

Invertebrates	
Fir pinwheel	*Radiodiscus abietum*
Pale jumping slug	*Hemphillia camelus*
Herptiles	
Northern alligator lizard	*Elgaria coerulea*
Coeur d'Alene salamander	*Plethodon idahoensis*
Birds	
American three-toed woodpecker	*Picoides tridactylus*
Flammulated owl	*Otus flammeolus*
Harlequin duck	*Histrionicus histrionicus*
Lewis's woodpecker	*Melanerpes lewis*
Pygmy nuthatch	*Sitta pygmaea*
Mammals	
California myotis	*Myotis californicus*
Fisher	*Martes pennanti columbiana*
Fringed myotis	*Myotis thysanodes*
Pygmy shrew	*Sorex hoyi*
Rocky Mountain elk	*Cervus elaphus nelsoni*
Townsend's big-eared bat	*Corynorhinus townsendii*
Wolverine	*Gulo gulo luscus*

6. 43.24 - Species Groups and Surrogate Species

Species Groups

In many cases, the ecological understanding and resources needed to manage all species on an individual basis is not available. Efficiencies can be gained from managing groups of species based similar or common habitat associations, other ecological needs, and identified risk factors or threats in order to facilitate fine-scale species evaluations, and develop conservation measures and plan components.

In order to identify species groups the candidate species of concern and interest were initially grouped, where possible, into habitat associations based on habitat requirements. The appropriate proposed Forest Plan components for vegetation were reviewed and the appropriate landform (biophysical) settings were assigned to these habitat associations where possible. The Northern Region vegetation matrix, broad-scale information from the Interior Columbia Basin Ecosystem Management Project (Wisdom et al. 2000) and other available science were reviewed and, where possible, used in this grouping process.

Table 11: Species of Concern Habitat Associations and Grouping

Species	Breakland, Upland and Subalpine Landform Settings Moist Mixed-conifer Forest				Breakland Landform Setting Dry Mixed-conifer Forest			Limestone Talus*	Riparian	Snag/Down Wood	Specialized Habitats+
	Cedar-hemlock, Douglas-fir, grand fir	Spruce-fir	Talus-rocky ground*	Other forested	Ponderosa pine, Douglas-fir	Talus-rocky ground*	Other forested				
Idaho giant salamander	x								x	x	
Gillette's checkerspot									x		x
Humped coin	x	x	x			x					
Nimapuna tigersnail	x		x	x	x	x				x	
Sheathed slug	x	x									
Selway forestsnail	x								x	x	
An Oregonian (lower Clearwater River)					x				x		
Lyre mantleslug	x	x							x		
Magnum mantleslug	x	x	x		x						
Smokey taildropper	x	x	x		x				x	x	

Table 12: Species of Interest Habitat Associations and Grouping

Species	Breakland, Upland and Subalpine Landform Settings Moist Mixed-conifer Forest				Breakland Landform settings Dry Mixed-conifer Forest			Limestone Talus*	Riparian	Snag/Down Wood	Specialized Habitats+
	Cedar-hemlock, Douglas-fir, grand fir	Spruce-fir	Talus-rocky ground*	Other habitats	Ponderosa pine or Douglas-fir	Talus-rocky ground*	Other habitats				
Fir pinwheel	x	x	x	x					x	x	
Pale jumping slug	x	x		x					x	x	
Northern Alligator lizard	x			x			x				
Coeur d'Alene salamander									x		x
American three-toed woodpecker		x								x	x
Flammulated owl					x					x	
Harlequin duck									x		x
Lewis's woodpecker				x	x		x			x	x
Pygmy nuthatch					x					x	

California myotis					x		x		x		x
Fisher	x			x					x	x	
Fringed myotis					x						x
Pygmy shrew	x	x		x					x	x	
Rocky Mountain elk	x	x		x	x		x		x		x
Townsend's big-eared bat							x				x
Wolverine	x	x		x	x		x		x		x
Bighorn sheep	x	x		x	x		x				x
* = Limestone geology associates may occur in either dry or moist sites, but are most often limestone or limestone-derived soil obligates.											
+ = Burned forests for woodpeckers; caves, mines, adits or buildings for bat roosts; montane or riparian meadows with host plants for Gillette's checkerspot butterfly; riparian shrub communities for mountain quail; high-elevation cirque basins for wolverine; dry, open sage and other shrub areas for the Salmon coil.											

Based on these associations groups were identified using a hierarchical landform setting approach. Key features within landform settings were identified as the primary habitats or as specific habitat requirements. Some species also had specialized habitat requirements. Tables 13 and 14 display the primary landform and associated other candidate species groups.

Table 13: Evaluated Species of Concern and Groups

Species	Groups – Key features
Idaho giant salamander	Breakland/Upland - Riparian habitats with high water quality, Snag/down wood
Gillette's checkerspot butterfly	Upland – moist & open meadows, Riparian – open & sunny clearings
Humped coin	Upland/ Subalpine – moderate elevation Moist mixed conifer, talus/rock, Breakland – Mesic talus/rock in dry forest areas
Nimapuna Tigersnail	Breakland – Dry & Moist mixed conifer, Upland – Moist mixed conifer, Riparian, Snag/down wood
Sheathed slug	Upland/ Subalpine – moderate elevation Moist mixed conifer
Selway Forestsnail	Breakland/Upland – Moist mixed conifer, Riparian, Snag/down wood
An Oregonian (lower Clearwater River)	Breakland - Mesic ponderosa pine with talus/rock in dry forest areas, Riparian
Lyre Mantleslug	Upland/ Subalpine – moderate elevation moist/mixed conifer, Riparian
Magnum Mantleslug	Breakland – Dry & Moist forest areas, Upland/ Subalpine – moderate elevation moist/mixed conifer
Smokey traildropper	Breakland - Mesic mixed conifer & talus/rock, Riparian, Snag/down wood

Table 14: Evaluated Species of Interest and Groups

Species	Groups – Key features
Fir pinwheel	Breakland/Upland/Subalpine – Moist mixed conifer, other forest types in dry & moist settings, Talus/rock in moist settings, Riparian, Snags/Down wood
Pale jumping slug	Breakland/Upland/Subalpine – Moist mixed conifer, other forest types in dry & moist settings, Riparian, Snags/Down wood
Northern Alligator lizard	Breakland/Upland – Moist mixed conifer, other forest types in dry & moist settings
Coeur d'Alene salamander	Breakland/Upland: Riparian - wet fractured rock sites or spray/seep zones.
American three-toed woodpecker	Subalpine – Moist mixed conifer, Snags/down wood, Burned forest
Flammulated owl	Breakland - Dry mixed conifer, Snags/down wood
Harlequin duck	Breakland/Upland - Riparian habitats with low disturbance/high water quality.
Lewis's woodpecker	Breakland – Dry mixed conifer, moist other forested sites, Snags/down wood, Burned forest
Pygmy nuthatch	Breakland – Dry mixed conifer, Snags/down wood
California myotis	Breakland – Dry mixed conifer, Riparian
Fisher	Breakland/Upland – Moist mixed conifer, Riparian, Snags/down wood
Fringed myotis	Breakland – Dry mixed conifer, sagebrush, Riparian, caves/mines/buildings
Pygmy shrew	Upland/Subalpine – Moist Mixed Conifer, Snags/Down Wood, subnivean habitats
Rocky Mountain elk	Breakland/Upland/Subalpine – Moist and Dry mixed conifer, moist & open meadows, other forest types in dry & moist settings, winter habitats, security.
Townsend's big-eared bat	Breaklands/Unique habitats - caves/mines
Wolverine	Breakland/Upland/Subalpine – Moist and Dry mixed conifer, other forest types in dry & moist settings. Winter habitats. Remote secure areas.

While all species could be grouped into the three landform settings based on where their primary habitats occur, some species are associated or dependent on more specific habitats, yearlong or for some critical portion of their life cycle (i.e. nesting, roosting, etc.). Some specific or unique habitats are associated with specific landforms, while others occur in any landform setting.

1) Breakland Group – Breaklands support more species than any other landform setting. Seven evaluated species of concern (SOC) and fourteen evaluated species of interest (SOI) are associated with dry mixed conifer or other forest cover types and other habitats, such as typically found on breaklands. Many of the species in this group are associated with warm and dry ponderosa pine or dry Douglas fir habitat

conditions, however some warm and moist north-facing slopes may provide conditions that would support species associated with uplands. Some species are associated with older forest and large snags, logs and are also directly associated with unique habitats or areas such as big game winter ranges, talus and rocky areas, burned forests, and caves.

2) Upland Group – Six evaluated SOC and nine evaluated SOI are associated with moist Douglas-fir and grand fir or western red cedar habitat conditions, while others are generalists in nature but need secure habitats. Some species are associated with large older forests and require large snags and down logs. Some species are associated with unique habitats such as talus and rocky areas, big game winter ranges and meadows.

3) Subalpine Group – Three evaluated SOC and six evaluated SOI are associated with subalpine forest cover types and other habitats. Some species require large snags and down logs. Some species are associated with unique habitats such as subnivean habitat, cirque basins and parkland meadows. The subalpine group typically contains remote and secure habitats.

4) Limestone Talus Group –No evaluated SOC or SOI are associated with the limestone talus group.

5) Riparian Group – One amphibian and five terrestrial mollusk evaluated SOC and seven various evaluated SOI are strongly associated with or dependent on stream and adjacent riparian habitats yearlong or for some critical portion of their life cycle. One butterfly species is strongly associated with moist, open and sunny clearings that contain host plants that it is dependent on.

6) Snag/Down Wood Group – Four evaluated SOC and eight evaluated SOI are strongly associated with or dependent on snags and down wood. Woodpecker species are directly associated with burned forest or insect and disease-impacted forests.

7) Specialized Habitat Group –The degree that species occur in these habitats may vary. One SOC butterfly species is strongly associated with moist, open and sunny meadows and clearings that contain host plants that it is dependent on. Seven evaluated SOI are dependent or associated with unique habitats. Caves/mines or old buildings are critical year-round or seasonal roosting habitat for bats. High quality winter ranges are important for two big game species, and wolverine utilize remote and secure backcountry habitats.

Surrogate Species

Species in these groups were reviewed to determine if a surrogate species could be selected to represent that group. No surrogate species were selected because of the diversity of habitat requirements between species or that a generalist species could not adequately represent the needs of rare or uncommon species.

7. 43.25 - Plan Components for Species Diversity

The proposed Forest Plans contains a strategic and programmatic strategy and ecosystem plan components to maintain or trend desired vegetative conditions towards more natural levels for various vegetative dominance types and size classes as well as more specific vegetative conditions or components.

Where it was determined that plan components for ecosystem diversity would not fully address a species or group of species requirements, forest plan components were developed to provide

habitats and reduce risks or threats. Examples of providing for individual or groups of species could include the following:

1. Managing for appropriate amounts and distribution of habitats used by the species, including habitat restoration, if necessary.
2. Managing natural and human disturbance factors (wildland fire, roads, trails, dams, etc.)
3. Managing biotic interaction.
4. Managing for disturbances that are key to species survival.
5. Managing currently known species locations. This may involve all locations or a subset of locations.
6. Managing newly discovered locations. This could involve all or a subset of locations.
7. Maintaining suitable habitat that is not currently occupied but has a high likelihood of being occupied in the near future.

Forest plan components have been developed that address the above factors at the broad and more specific scales. Broad-scale plan components are:

1. Generally, forest-wide vegetation provides a mosaic of diverse and sustainable wildlife habitats, as vegetation and watershed desired conditions are achieved.
2. Riparian wildlife habitats contain of a mosaic of tree age and size classes, healthy riparian shrubs and grasses and standing dead and down wood commensurate with their placement in the landform setting.
3. Security areas are available for species that are vulnerable to disturbance and displacement. Generally, motorized human access does not displace or disturb wildlife from preferred habitats. Secure travel ways occur between riparian areas.

Tables 15-17 displays the related plan components for federally-listed, and candidate species of concern and interest.

Federally-listed Species

With the exception of the Canada lynx, all threatened and endangered species are regulated by USFWS Recovery Plans that include direction for the recovery of specific species. In addition to USFWS recovery plans, management direction may also be found in State recovery plans, terms and conditions from Biological Opinions and other pertinent regulatory documents.

These plan components are supported by other design criteria that are incorporated by reference (Appendix A). All this direction should be considered as other design criteria for managing species habitat even though they are not listed or repeated in the proposed Forest Plans.

Table 15: Federally-listed Species and Related Proposed Forest Plan Components

Species	Plan Components
Canada lynx	Current management direction for lynx (Lynx Conservation Assessment and Strategy) will continue to be used for management of lynx habitat until such time as the Northern Rockies Lynx Amendment is complete.
Bald eagle	Current habitat management direction will continue to minimize disturbance to winter roost sites or nest sites where necessary.
Grey wolf	Current management direction will continue to minimize disturbance to den sites where necessary.

Species of Concern and Interest

One or more of the following plan components as displayed in Tables 16 and 17 are expected to adequately protect many evaluated Species of Concern and Species of Interest.

Table 16: Forest Plan Components for the Evaluation of Species of Concern.

Species & Distribution	Plan Components
Idaho giant salamander (Limited distribution)	Aquatic habitats DCs - Native species have access to historically occupied habitats. Habitat is provided within expected normal ranges. Near-natural sizes, amount and distribution of in-channel large woody debris and potential wood on stream banks and flood plains. Riparian Vegetation DCs: Vegetation in riparian conservation areas is composed of a diverse structure of native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Wildlife DCs - Secure travel ways occur between riparian areas.
Gillette's checkerspot butterfly (Limited distribution)	Grassland and Shrubland Vegetation DCs: Riparian meadows are dominated by native species. They are primarily maintained in an open condition by seasonally high water tables, but also by fire or harvest of encroaching trees. Wildlife DCs - Meadow habitats are maintained consistent with natural disturbance processes and frequencies, and hydrologic function. Generally, meadows are not selected for logging and fire suppression activities such as helicopter logging landings, heli-bases, dipping sites, fire camps, and fire-line construction. Protective measures maintain known or high probability special habitats or sites.
Humped coin (Limited distribution)	Forest Vegetation DCs - Maintain moist grand fir, western red cedar, and spruce upland and subalpine dominance types and size distribution in desired ranges. Desired levels of dead wood are retained on various cover types. Old forest development. Riparian Vegetation DCs: Vegetation in riparian conservation areas is composed of a diverse structure of native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Wildlife DCs - Habitats such as talus are maintained. Protective measures maintain known or high probability special habitats or sites.
Nimapuna Tigersnail (Limited distribution)	Forest Vegetation DCs - Maintain moist grand fir, western red cedar, ponderosa pine and Douglas-fir breakland and upland dominance types and size distribution in desired ranges. Desired levels of dead wood are retained on various cover types. Old forest development. Riparian Vegetation DCs: Vegetation in riparian conservation areas is composed of a diverse structure of native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Wildlife DCs - Habitats such as talus are maintained. Protective measures maintain known or high probability special habitats or sites.
Sheathed slug (Limited distribution)	Forest Vegetation DCs - Maintain moist grand fir and western red cedar breakland and upland dominance types and size distribution in desired ranges. Desired levels of dead wood are retained on various cover types. Old forest development. Riparian Vegetation DCs: Vegetation in riparian conservation areas is composed of a diverse structure of native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Livestock Management DCs - Livestock grazing is consistent with the protection, restoration and management of healthy and self-sustaining native and desired non-native vegetation communities, and other natural resource management strategies. Livestock use is adjusted to meet resource management objectives. Wildlife DCs - Old forests contain the vegetative composition and structural desired

	conditions. Riparian habitats contain of a mosaic of tree age and size classes, healthy riparian shrubs and grasses and standing dead and down wood. Protective measures maintain known or high probability special habitats or sites.
Selway Forestsnail (Limited distribution)	Forest Vegetation DCs - Maintain moist grand fir and western red cedar breakland and upland dominance types and size distribution in desired ranges. Desired levels of dead wood are retained on various cover types. Old forest development. Riparian Vegetation DCs: Vegetation in riparian conservation areas is composed of a diverse structure of native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Wildlife DCs - Old forests contain the vegetative composition and structural desired conditions. Riparian habitats contain of a mosaic of tree age and size classes, healthy riparian shrubs and grasses and standing dead and down wood. Protective measures maintain known or high probability special habitats or sites.
An Oregonian (lower Salmon River) (Limited distribution)	Forest Vegetation DCs – Move towards or maintain moist ponderosa pine breakland dominance types and size distribution in desired ranges. Desired levels of dead wood are retained on various cover types. Old forest development. Riparian Vegetation DCs: Riparian conservation areas consist of diverse native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Wildlife DCs - Habitats such as talus are maintained. Protective measures maintain known or high probability special habitats or sites.
An Oregonian (lower Clearwater River) (Limited distribution)	Forest Vegetation DCs – Move towards or maintain moist ponderosa pine breakland dominance types and size distribution in desired ranges. Desired levels of dead wood are retained on various cover types. Old forest development. Wildlife DCs - Habitats such as talus are maintained. Protective measures maintain known or high probability special habitats or sites.
Lyre Mantleslug (Limited distribution)	Forest Vegetation DCs – Move towards or maintain moist subalpine forest (spruce, subalpine fir) dominance types in desired ranges. Desired levels of dead wood are retained on various cover types. Old forest development. Riparian Vegetation DCs: Riparian conservation areas consist of diverse native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Wildlife DCs - Protective measures maintain known or high probability special habitats or sites.
Magnum Mantleslug (Limited distribution)	Forest Vegetation DCs – Move towards or maintain subalpine forest (spruce, subalpine fir) dominance types in desired ranges. Desired levels of dead wood are retained on various cover types. Old forest development. Wildlife DCs - Protective measures maintain known or high probability special habitats or sites.
Smokey taildropper (Limited distribution)	Forest Vegetation DCs - Maintain moist grand fir and western red cedar breakland and upland dominance types and size distribution in desired ranges. Desired levels of dead wood are retained on various cover types. Old forest development. Riparian Vegetation DCs: Riparian conservation areas consist of diverse native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Wildlife DCs - Talus areas and rocky outcrops are maintained. Protective measures maintain known or high probability special habitats or sites.

Table 17: Forest Plan Components for the Evaluation of Species of Interest

Species	Plan Components
Fir pinwheel (Limited distribution)	Forest Vegetation DCs – Forest-wide vegetation reflects native forest diversity for species composition in their ecologically appropriate settings. Move towards or maintain moist mixed conifer breakland, upland and subalpine forest dominance types in desired ranges. Wildlife DCs - Habitat sites are identified and maintained from human-related disturbances. Habitats such as talus are maintained. Down wood occurs consistent with vegetative desired conditions. Protective measures maintain known or high probability special habitats or sites.
Pale jumping slug (Limited distribution)	Forest Vegetation DCs – Move towards or maintain breakland and upland forest dominance types in desired ranges. Desired levels of dead wood are retained on various cover types. Recommended numbers of snags per acre are retained. Old forest development. Riparian Vegetation DCs: Vegetation in riparian conservation areas is composed of a diverse structure of native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Wildlife DCs - Old forests contain the vegetative composition and structural desired conditions. Riparian habitats contain of a mosaic of tree age and size classes, healthy riparian shrubs and grasses and standing dead and down wood. Protective measures maintain known or high probability special habitats or sites.
Northern Alligator lizard (Limited distribution)	Forest Vegetation DCs – Move towards or maintain breakland and upland forest dominance types in desired ranges. Desired levels of dead wood are retained on various cover types types. Wildlife DCs - Standing dead (snags) and down wood occurs consistent with vegetative desired conditions, and in post-disturbance burned areas. Habitats such as talus are maintained. Native plants are maintained consistent with natural disturbance regimes and frequencies.
Coeur d'Alene salamander (Limited distribution)	Riparian Vegetation DCs: Vegetation in riparian conservation areas is composed of a diverse structure of native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Wildlife DCs - Protective measures maintain known or high probability special habitats or sites such as talus areas, wet fractured bedrock or rocky outcrops.
American three-toed woodpecker (Subalpine habitat)	Forest Vegetation DCs – Maintain subalpine forest dominance types in desired range. Move towards or maintain desired 5"-15" and 15"+ size classes. Disturbances occur frequently. Snag presence is dynamic with large expanses of snags created about evey 100 years. Wildlife DCs – Burned and other disturbed areas provide habitat components or remain untreated during post-disturbance salvage activities. Standing dead and down wood is present in various decay classes in the tree species, and largest size classes, heights and lengths possible. Snags and green trees designated as wildlife trees are left on site if felled for safety reasons or blown over by natural events.
Flammulated owl (Ponderosa pine habitat)	Forest Vegetation DCs - Maintain ponderosa pine/mix dominance type in desired range. Move towards or maintain desired 5"-15" and 15"+ size classes. Large and old-growth open-grown ponderosa pine are common, and disturbances promote an open canopy of large old trees. Larger sizes of snags are preferred, and recommended numbers of snags per acre are 1-5 over 20" in diameter. Low severity disturbances (fire or harvest) retain larger trees. Wildlife DCs - Ponderosa pine habitats on warmer and drier south-facing slopes consist of single or two-storied stand structure, varied canopy closure, open understories and contain scattered large snags. Standing dead and down wood is present in various decay classes in the tree species, and largest size classes, heights and lengths possible. Nesting, denning, and rearing areas are secure and available for use by species during the reproductive seasons.
Harlequin duck	Forest Vegetation DCs – Move towards or maintain breakland and upland forest

(Limited distribution)	dominance types in desired ranges. Desired levels of dead wood are retained on various cover types. Old forest development. Aquatic habitats DCs - Native species have access to historically occupied habitats. Habitat is provided within expected normal ranges. Near-natural patterns of size and amount of in-channel large woody debris and potential wood on stream banks and flood plains. Riparian Vegetation DCs: Vegetation in riparian conservation areas is composed of a diverse structure of native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control. Wildlife DCs - Old forests contain the vegetative composition and structural desired conditions. Riparian habitats contain of a mosaic of tree age and size classes, healthy riparian shrubs and grasses and standing dead and down wood. Protective measures maintain known or high probability special habitats or sites.
Lewis's woodpecker (ponderosa pine & other habitat)	Forest Vegetation DCs - Maintain ponderosa pine/mix dominance type in desired range. Move towards or maintain desired 5"-15" and 15"+size classes. Large and old-growth open-grown ponderosa pine are common, and disturbances promote an open canopy of large old trees. Larger sizes of snags are preferred, and recommended numbers of snags per acre are 1-5 over 20" in diameter. Low severity disturbances (fire or harvest) retain larger trees. Wildlife DCs - Burned and other disturbed areas provide habitat components or remain untreated during post-disturbance salvage activities. Standing dead and down wood is present in various decay classes in the tree species, and largest size classes, heights and lengths possible. Snags and green trees designated as wildlife trees are left on site if felled for safety reasons or blown over by natural events.
Pygmy nuthatch (ponderosa pine habitat)	Forest Vegetation DCs - Maintain ponderosa pine/mix dominance type in desired range. Move towards or maintain desired 5"-15" and 15"+size classes. Large and old-growth open-grown ponderosa pine are common, and disturbances promote an open canopy of large old trees. Larger sizes of snags are preferred, and recommended numbers of snags per acre are 1-5 over 20" in diameter. Low severity disturbances (fire or harvest) retain larger trees. Wildlife DCs - Ponderosa pine habitats on warmer and drier south-facing slopes consist of single or two-storied stand structure, relatively open canopies, open understories and contain scattered large snags. Standing dead and down wood is present in various decay classes in the tree species, and largest size classes, heights and lengths possible. Nesting, denning, and rearing areas are secure and available for use by species during the reproductive seasons.
California myotis (Limited distribution)	Wildlife DCs - Protective measures maintain known or high probability special habitats or sites. Caves, abandoned mines and buildings that support roosting bats are conserved and meet human safety requirements. Human access to occupied bat summer, winter and maternal roosts (i.e. caves or mines) is restricted with limited exceptions.
Fisher	Forest Vegetation DCs – Move towards or maintain moist breakland and upland forest dominance types in desired ranges. Moist aspects have complex stand structures with two or multi-storied forests. Desired levels of dead wood are retained on various cover types. Old forest development. Wildlife DCs - Old forests contain the vegetative composition and structural desired conditions. Patches of vegetation occur in a variety of sizes and reflect the disturbance dynamics. Riparian habitats contain of a mosaic of tree age and size classes, healthy riparian shrubs and grasses and standing dead and down wood. Standing dead and down wood is present in various decay classes in the tree species, and largest size classes, heights and lengths possible. Denning and rearing areas are secure and available for use during the reproductive seasons. Snags and green trees designated as wildlife trees are left on site if felled for safety reasons or blown over by natural events. Protective measures maintain known or high probability special habitats or sites.
Fringed myotis	Wildlife DCs - Protective measures maintain known or high probability special habitats or sites. Caves, abandoned mines and buildings that support roosting bats are conserved and meet human safety requirements. Human access to occupied bat summer, winter and

	maternal roosts (i.e. caves or mines) is restricted with limited exceptions. Guideline - Caves or abandoned mines with known bat use are evaluated for gate installation. Mine closures are designed to facilitate bat passage.
Pygmy shrew	Forest Vegetation DCs - Move towards or maintain moist upland and subalpine forest dominance types and size distribution in desired ranges. Old forest development. Large down wood amounts in riparian and non-riparian areas provide habitat. Wildlife DCs - Standing dead and down wood is present in various decay classes in the tree species, and largest size classes, heights and lengths possible. Snags and green trees designated as wildlife trees are left on site if felled for safety reasons or blown over by natural events.
Rocky Mountain elk (Well distributed within preferred habitat)	Forest Vegetation DCs - Forest-wide vegetation provides a mosaic of diverse and sustainable habitats. A mosaic of age and size classes is available. Native plants dominate available forage or browse species. Sufficient vegetation provides cover around wallows, mineral licks, riparian areas, and wildlife travel routes on ridge-tops and saddles. Wildlife DCs – Protective measures maintain known or high probability special habitats or sites. Patches of vegetation occur in a variety of sizes and reflect the disturbance dynamics expected on landform settings. Patches of mature and older forest are present to provide snow intercept cover and a source of winter forage on winter ranges. Security areas for wide-ranging species are large (equal to or greater than 250 acres) in size, provide sufficient cover, and are outside the influence of the motorized routes. Adequate security is provided in the wintering season from motorized access.
Townsend's big-eared bat	Wildlife DCs - Protective measures maintain known or high probability special habitats or sites. Caves, abandoned mines and buildings that support roosting bats are conserved and meet human safety requirements. Human access to occupied bat summer, winter and maternal roosts (i.e. caves or mines) is restricted with limited exceptions. Guideline - Caves or abandoned mines with known bat use are evaluated for gate installation. Mine closures are designed to facilitate bat passage.
Wolverine	Wildlife DCs - Adequate security is provided in all seasons from motorized access. Security areas for wide-ranging species are large (equal to or greater than 250 acres) in size, provide sufficient cover, and are outside the influence of the motorized routes. Protective measures maintain known or high probability special habitats or sites.
DCs = Desired Condition(s)s. G = Guideline(s)	

8. 43.26 - Evaluation of Plan Components on Species Diversity

Risk and Uncertainty Assessment

The Idaho CWCS is considered to be the most specific species assessment available and was used as the primary tool in the evaluation of plan components on species diversity. Other referenced best available science was also used in the evaluation process. Much of the criteria (e.g. primary habitat needs and threats/risks) to evaluate plan components, from these sources, are disclosed in previous sections and tables for the identified candidate species of concern or interest.

In evaluating the variety of species there is more information on the biology, occurrence, distribution and abundance for more common or well-studied species (e.g. elk, northern goshawk, etc.) than rare or poorly studied species (e.g. terrestrial invertebrates, some woodpeckers, small mammals or birds). The Idaho CWCS also acknowledges that information is lacking for many species and considers species that are better known or common as not species of the greatest conservation concern. Broad and more specific plan components were developed using general ecological principals due to the lack of knowledge for some species, and reduce or eliminate known risks or threats.

The Forest Plan components listed in Tables 15-17 indicate that these provisions are consistent with the limits of agency authorities, the capabilities of the Plan area, the best available science for the species assessed, and overall multiple use objectives. The combination of components for ecosystem diversity and components for species diversity have been designed to help provide appropriate ecological conditions for all species that have been identified as federally-listed species, species of concern and species of interest. Recovery plans, existing conservation strategies and agreements, best available science were considered in developing strategic and programmatic plan components, these sources should still be referenced for more specific species management direction. As new information and science becomes available periodically update plan components and amend or revise Forest Plans.

While broad- or more specific ecosystem management-based plan components have been developed the understanding of the ecology and distribution of many rare, uncommon, or poorly studied species is incomplete. Based on the number of species a species by species evaluation is problematic. The following summarizes the evaluation of plan components.

1. Short and Long-term Risks

    a. Forest Vegetation Desired Conditions – In the short-term the implementation of the Forest Plans should trend forest dominance types towards desired landform conditions as projects are developed, planned and implemented.

        In the long-term achieving desired ranges in dominance types could take 100 to 200 years because of the scope and scale of the landscape, the ability to access the landscape, and the rate of accomplishments.

        In the short-tern maintaining or achieving desired tree size distribution changes can be accomplished through design criteria at the project-level or by managing naturally occurring disturbances to allow early seral sizes to be improved when larger size classes are above desired conditions.

        Recruitment into larger size classes is expected to occur in 10-20 years. Reduced timber harvest and continued fire suppression makes achieving smaller size class distribution more difficult with continuous recruitment of non-forested areas into the lower size classes in areas without disturbance.

    b. Other Desired Conditions – In the short-term project development and design can specify the site-specific habitat needs to support species diversity. Over the long-term achieving landscape-level desired conditions could take years or decades beyond the projected lifespan of the Forest Plan. However, some desired conditions could be realized within this timeframe based on the proximity of current conditions to desired conditions.

2. Distribution – Tables 7 and 8 and 11 through 14 disclose the expected distribution of species based on the distribution of habitat across the Forest.

3. Past Conditions – It is assumed that most if not all species fully occupied available habitat during conditions prior to the active exploitation of natural resources after Euro-American settlement. Past management practices (e.g. timber harvest, mining, grazing) in addition to consumptive use, persecution and resource exploitation impacted species and their habitats. Past large-scale high severity wildfires is expected to have had short-term impacts to most

species. Habitat recovery has allowed for the recolonization by many species of suited habitats.

4. Present and Projected Future Conditions – National Forest management has pursued an ecosystem management approach for the past two decades. Artifacts from past landscape events (e.g. wildfire and timber harvest) still influence current conditions. Managed wild and prescribed fire is used to achieve resource management goals and objectives.

   Current and projected future ecosystem management practices are expected to continue to maintain or achieve desired conditions for vegetation, watershed and other resources that in turn support terrestrial wildlife species.

   Samson (2006b) indicates…"below (and not above) a threshold of 20-30 % of habitat amounts, effects of fragmentation (i.e., patch size and isolation) are suggested to have a negative impact on species persistence. …No indication exists that forested ecosystems in the Northern Region have reached the 20 to 30% threshold of historic. Forested ecosystems in the Northern Region are more extensive than in historic (~1800) times.

9. Monitoring Strategy

Section 43.23 - Information Collection emphasizes the collection and summarization of existing information to identify critical information that is essential to management, and currently lacking, especially for the evaluation of species of concern and species of interest. This evaluation, and the current sources of information that have been used, shows that even among "familiar" species the state of knowledge varies widely.

FSH 1909.12, Chapter 40 states that Section 43.23 states that while there are no population monitoring or inventory requirements for surrogate species the collection of such information, as feasible or appropriate, should be a high priority throughout monitoring programs.

Currently, ongoing monitoring or survey programs exist for bat species and northern goshawk in the Northern Region, for numerous migratory landbirds through the Northern Region Landbird Monitoring Program, through the Idaho Dept of Fish and Game for game and non-game species such as the Idaho Bird Inventory and Survey (IBIS) program, and planned inventory and model development for terrestrial invertebrates by the Idaho Conservation Data Center (CDC).

The Idaho CWCS describes a monitoring and adaptive management approach for species of greatest conservation concern that would involve the formation of a Monitoring Oversight Team involving private entities, state and federal agencies and universities.

At this point in time USDA-Forest Service limited funding and staffing resources makes an exclusive U.S. Forest Service information collection and survey program for rare or uncommon species of concern and interest problematic. In addition, the Bureau of Land Management manages lands that may/do support rare and uncommon species, and that the Nez Perce and Coeur d'Alene Tribes, U.S. Fish and Wildlife Service and Non-Governmental Organizations have a vested interest in the conservation of wildlife species on the Clearwater National Forest.

The need exists for a conservation partnership to be established a coordinated effort to define, plan, prioritize, leverage funding and pursue the collection of information to better understand the ecology and distribution of rare and uncommon terrestrial species. These types of partnerships

exist at various levels on the CNF such as the Northern Region Landbird Monitoring program, and for invasive weed control through the Cooperative Weed Management Area (CWMA) management programs, with county, federal, state agencies, and private groups. The implementation of plan components could be monitored through the Environmental Management System at the Forest and Regional levels.

Conclusions

The Clearwater/Nez Perce Planning Zone has identified the vegetative composition and structure conditions and disturbance dynamics for biophysical settings, and their range of variation under historical disturbance regimes within eco-sections on the Zone. The combination of vegetative and structural diversity defines habitat diversity for wildlife. A comparison of current and historical vegetative and structural diversity may indicate if a habitat category or age class deviates is below historical amounts. In this case a biophysical setting or habitat category may be below its biological potential, and associated species may be below their potential.

The Forest Supervisor has identified and evaluated species as Species of Concern and Species of Interest based on their occurrence on the Forest and to determine whether they are adequately conserved by plan components for ecosystem diversity. Plan components were developed for those species or groups of species that were not covered by ecosystem diversity components.

All species of concern contained in this report have been accounted for. Projects implementing the Forest Plan, moving toward DFC would be designed to address those species needs. Thus, all known species habitat needs have been accounted for and there is no listing of species of concern or interest that needs to be addressed at the project level for the Nez Perce National Forest.

Table 18 summarizes the criteria used in this assessment to account for each identified species of concern.

Table 18: Species of Concern Accounting.

Species	Occurrence and status screens				Ecosystem Diversity provisions[5]	Species Diversity provisions	
	No sites or habitat[1]	Secure in Plan Area[2]	No potential for management effects[3]	Inadequate knowledge[4]		Group or surrogate species[6]	Individual species[7]
Yellow-billed cuckoo	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
Idaho giant salamander	No	Yes	No	No	Yes	Yes	No species-specific provisions
An Oregonian (Lower Salmon River)	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
An Oregonian (Lower Clearwater River)	No	Yes	No	No	Yes	Yes	No species-specific provisions
River of No Return Oregonian	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
Humped coin	No	Yes	No	No	Yes	Yes	No species-specific provisions
Lyrate mountainsnail	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
Seven Devils mountainsnail	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
Striate mountainsnail	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
Selway forestsnail	No	Yes	No	No	Yes	Yes	No species-specific provisions
Nimapuna tigersnail	No	Yes	No	No	Yes	Yes	No species-specific provisions

Lyre mantleslug	No	Yes	No	No	Yes	Yes	No species-specific provisions
Sheathed slug	No	Yes	No	No	Yes	Yes	No species-specific provisions
Smokey taildropper	No	Yes	No	No	Yes	Yes	No species-specific provisions
Magnum mantleslug	No	Yes	No	No	Yes	Yes	No species-specific provisions
Thinlip tightcoil	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
Marbled disc	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
Salmon coil	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
Western Flat-whorl	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
Columbia River tiger beetle	Yes	N/a	No	No	Yes	Yes	No species-specific provisions
Gillette's checkerspot butterfly	No	Yes	No	No	Yes	Yes	No species-specific provisions
A Spur-throat grasshopper (digitifer)	No	N/a	No	Yes	Yes	Yes	No species-specific provisions
A Spur-throat grasshopper (payettei)	No	N/a	No	No	Yes	Yes	No species-specific provisions
[1] There are no known species occurrences or habitat on the National Forest (Idaho CWCS and this report)							
[2] Species is considered secure on the Forest based on habitat amount and distribution (Veg Report, This report & maps)							
[3] There is no potential for management activities to affect the species or its habitat. (This report)							
[4] There is inadequate knowledge to complete a credible assessment of the species (This report)							
[5] Plan components for ecosystem diversity provide conditions that will support self-sustaining populations of the species (Forest Plan)							
[6] The combination of plan components for ecosystem diversity and for a species group or a surrogate for this species provide conditions that will support self-sustaining populations of the species (Forest Plan)							
[7] The combination of plan components for ecosystem diversity and for this individual species provide conditions that will support self-sustaining populations of the species (Forest Plan)							
Criteria for identifying SOC and further information is contained within this assessment.							

The development of a coordinated monitoring strategy with key partners would provide a basis for resource managers and decision-makers to direct limited resources to priority data collection needs and address conservation needs proactively. The implementation of plan components could be monitored through the Environmental Management System at the Forest and Regional levels.

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Sweeney, Pat. Western Montana Planning Zone Wildlife Biologist – U.S. Forest Service. Missoula, Montana. Personal communications with Alan Dohmen. 2005/2006, and R1 Terrestrial Wildlife Revision Team member.

Hyperlinks to Information Sources used in this Report

See http://fishandgame.idaho.gov/cms/tech/CDC/cwcs_table_of_contents.cfm to access the Idaho Fish and Game website for the Idaho CWCS list of species of greatest conservation need.

Bird species on the U.S. Fish and Wildlife Birds of Conservation Concern National Priority List. http://www.fws.gov/migratorybirds/reports/BCC2002.pdf (Bird Conservation Region 10)

See http://www.fs.fed.us/r1/projects/wwfrp/sens-species/index.shtml for a list of Regional Forester sensitive species for the Clearwater and Nez Perce National Forests, and Northern Region at-risk species.

See http://www.nwcouncil.org/fw/subbasinplanning/clearwater/plan/a06_wildlife.pdf for a list of wildlife species for the Clearwater sub-basin in Idaho.

See http://www.nwcouncil.org/fw/subbasinplanning/salmon/plan/SalmonAssessment.pdf for a list of wildlife species for the lower and middle portions of the Salmon sub-basin in Idaho.

See http://fishandgame.idaho.gov/cms/tech/CDC/t&e.cfm - te for a list of all threatened, endangered and candidate species in the IDFG database for Idaho.

See http://www.fws.gov/endangered/wildlife.html for a list of all threatened and endangered species in the U.S. Fish and Wildlife Service database.

See http://www.natureserve.org/explorer for a list of species for the state of Idaho, a list of candidate and proposed species that could occur on CNPZ, a list of all S1 and S2 species for Idaho, Clearwater, Shoshone, Latah and Benewah Counties in Idaho.

Appendix A: Sources of Other Design Criteria

Habitat

General

Other Sources of Design Criteria: FSM 2600-Wildlife, Fish and Sensitive Plant Habitat Management; FSH 2609.13-Wildlife and Fisheries Program Management; FSM 2550-Soil Management; FSM 5150-Fuel Management; FSH 2509.18-Soil Management; the Endangered Species Act (1973); and Wildland Fire in Ecosystems: Effects of Fire on Fauna (2000).

Wildlife Security/Connectivity

Sources of Design Criteria: Identifying and Managing Wildlife Linkage Approach Areas on Public Lands (2004); Identification and Management of Linkage zones for Wildlife Between the Large Blocks of Public Land in the Northern Rocky Mountains (2003); and Lynx Linkages Areas (2003), Assessing the Cumulative Effects of Linear Recreation Routes on Wildlife Habitats on the Okanogan and Wenatchee National Forests (2003).

Threatened and Endangered Wildlife Species

Grizzly Bear

Other Sources of Design Criteria: Grizzly Bear Recovery Plan (1993); the Interagency Grizzly Bear Committee Guidelines (1986).

Bald Eagle

Other Sources of Design Criteria: Habitat Management Guide for Bald Eagles in Northwestern Montana (1991); Pacific States Bald Eagle Recovery Plan (1986); and the Bald and Golden Eagle Protection Act (1940).

Gray Wolf

Other Sources of Design Criteria: Northern Rocky Mountain Wolf Recovery Plan (1987); and Idaho Wolf Conservation and Management Plan (2002), Wolves: Behavior, Ecology and Conservation (2003).

Canada Lynx
Sources of Design Criteria: The Lynx Conservation Assessment and Strategy (LCAS), Ecology and Conservation of Lynx in the United States (1999) and Lynx Conservation Assessment and Strategy (LCAS) (2000).

Species of Concern and Species of Interest

General
Other Sources of Design Criteria: FSH 1909.12, Chapter 40-Land Management Planning Handbook; FSM 2600-Wildlife, Fish, and Sensitive Plant Habitat Management; FSH 2609.13-Wildlife and Fisheries Program Management Handbook; Source Habitats for Terrestrial Vertebrates of focus in the Interior Columbia River Basin (2000); Wildlife Habitat Relationships in Oregon and Washington (2001); and Idaho Comprehensive Wildlife Conservation Strategy (2005); and Old-growth Habitats and Associated Wildlife Species in the Northern Rocky Mountains (1990).

Invertebrates
Other Sources of Design Criteria: Land Mollusk Surveys on USFS Northern Region Lands (2006); and Land Snail Survey of the Lower Salmon River Drainage, Idaho (1997).

Birds
Other Sources of Design Criteria: The harlequin duck conservation assessment and strategy (1996); Flammulated, boreal, and great gray owls in the United States: A technical conservation assessment (1994); Habitat conservation assessment for Mountain Quail (1995); Mountain quail (*Oreortyx pictus*) distribution and conservation in the eastern part of its range (2002); and A Conservation Assessment of the Northern Goshawk Black-backed Woodpecker, Flammulated Owl, and Pileated Woodpecker in the Northern Region (2006).

Forest Carnivores
Other Sources of Design Criteria: The Scientific basis for Conserving Forest Carnivores: American Marten, Fisher, Lynx and Wolverine in the Western United States (1994); Conservation Assessment for Fisher in Idaho (1995); Forest Carnivores in Idaho: Habitat conservation assessments and conservation strategies (1995); and Conservation Assessment for wolverine in Idaho (1995).

Snag-associated Species
Other Sources of Design Criteria: Trees and Logs Important to Wildlife in the Interior Columbia River Basin (1997).

Bats
Other Sources of Design Criteria: Habitat conservation assessment and conservation strategy for the Townsend's big-eared bat (1995); and Idaho Bat Conservation Plan (Draft 2005).

Migratory Landbirds
Sources of Design Criteria: Migratory Bird Treaty Act (1918); Migratory Bird Conservation Act (1929); Neo-tropical Migratory Bird Conservation Act; Executive Order (EO) 13186 (2001); Montana Partners in Flight Bird Conservation Plan (2000); and Idaho Partners in Flight Bird Conservation Plan (2000).

Big game

Other Sources of Design Criteria: North American Elk Ecology and Management (2002); Evaluating and Managing Elk Habitats and Populations in Central Idaho (1997); The Starkey Project: A synthesis of long-term studies of elk and mule deer (2005); Coordinating Elk and Timber Management/The Montana Cooperative Elk Logging Study (1985); Defining Elk Security; and Hillis Paradigm (1991); and A Process for Finding Management Solutions to the incompatibility between Domestic and Bighorn Sheep (2001)

Appendix B: Summary of Data Sources Reviewed

Data Sources	Data Description	Data Quality[1]	Missing Data[2]	Age of Data
Forest Inventory and Assessment (FIA)	Vegetation condition	High	Limited	2000 - 2002
Sub-basin assessments	Watershed and habitat conditions	Moderate	Moderate	1997 - 2006
Northwest Power Planning and Conservation Council Sub-basin Plans	Watershed and habitat conditions	Moderate	Moderate	2000 - 2006
Forest Watershed assessments	Watershed and habitat conditions	Moderate	Moderate	1997 - 2006
1987 Forest Plans	Management Direction	Low	Moderate	1987
Lynx Conservation Assessment and Strategy	Conservation and Management Direction	Moderate	Moderate	2000
Lynx Science Team	Lynx science	High	Limited	Ongoing
Forest Plan Monitoring Reports	Annual wildlife habitat accomplishments and trends	High	Limited	1988 - 2005
Biological Opinions	Conservation measures	High	Limited	1988 - present
Biological Assessments	Forest/project-level habitat conditions	High	Limited	1988 - present
Bald Eagle Recovery Plan	Management Direction	High	Limited	1986
Habitat Management Guide for Bald Eagles in NW Montana	Management Direction	High	Limited	1991
Northern Rocky Mountain Wolf Recovery Plan	Management Direction	High	Limited	1987
INFRA databases	Habitat improvements	Moderate	Moderate	Updated annually
Idaho Conservation Data Center – Comprehensive Wildlife Conservation Strategy	Status and conservation measures	High	Limited	2005
Nature Serve	Species Status & Information	Moderate	Moderate	Updated annually
ICBEMP	Broad scale status and methods	Moderate	Moderate	1997
Idaho Department of Fish and Game	Species distribution and status	High	Limited	Updated annually
Professional Peer Panel	Individual Professional Judgments	Moderate	Moderate	2003 - present
Nez Perce Tribe	Species distribution and status	High	Limited	Updated annually
Peer reviewed literature	Published and non-published contract reports	High	Limited	Varies

[1] High – peer reviewed; Moderate – some peer review, rigorous internal review; Low – observational data.
[2] Moderate – known to contain incomplete data, useful for broad-scale planning; Limited – repeatable results, rigorous internal review.

Appendix C: Northern Region Species of Concern 12-Step Process

Wildlife Revision Team
Northern Region
August 22, 2005

Identifying Wildlife Species-of-concern

Consideration of Species-of-concern (SOC) is a requirement in the 2004 planning rule for the Forest Service [http://www.fs.fed.us/emc/nfma/index.htm; 219.19 (b) (2)]. Specifically, "If the responsible official determines that provisions in plan components, in addition to those required by paragraph (b) (1) (i.e. Ecosystem diversity) of this section, then the plan must include additional provisions for these species, consistent with the limits of agency authorities, the capability of the plan area, and overall multiple use objectives."

The draft directives [http://www.fs.fed.us/emc/nfma/index.htm; (43.22)] note "The Responsible Official should identify federally threatened and endangered species, species-of-concern, and species-of-interest whose ranges include the plan area, taking into account limitations that exist at the edge of a species' range."

The Responsible Official, as appropriate, may identify the following animal and plant species as potential SOC.

1. Species identified as candidate and proposed under the Endangered Species Act.

2. Species with ranks of G-1 through G-3 on the NatureServe ranking system.

3. Intraspecific (subspecific) taxa with ranks of T-1 through T-3 on the NatureServe ranking system.

4. Species that have been petitioned for Federal listing and for which a positive "90 day finding" has been made.

The identified potential SOC may also include listable entities such as distinct population segments that may be listed under the ESA.

The following 12 steps provide a consistent context and sequence to identify and manage for wildlife SOC.

Step 1: Develop a comprehensive list of native extant [not listed as GX (extinct) or GH (possibly extinct) by NatureServe] taxa that are potential SOC. NatureServe, State Species of Concern lists, and State Strategic Plans are among the sources of information. This comprehensive potential SOC list includes invertebrates and vertebrates but

excludes aquatic insects and fish (Aquatic Revision Team responsibility). Amphibians will be included in the comprehensive list although management actions for their conservation may be developed by aquatic and fishery biologists or ecologists.

Step 2. Determine if a potential SOC occurs on Forest Service lands.

Step 3. Determine the role or function of Forest Service lands for the potential SOC including whether habitat is occupied, unoccupied, or peripheral. Such roles or functions may include breeding, wintering, migratory/seasonal, or year round habitat.

Step 4. Review where possible and feasible the potential SOC with the US Fish and Wildlife Service, State Fish and Game Departments, and Tribes.

Step 5. Evaluate the relative impact of Forest Service management on the SOC. This would include but is not limited to management actions such as fire suppression, grazing, recreation, timber harvest, road rehabilitation, and so on.

Step 6. Identify a candidate SOC list based on Steps 1 to 5 and recommend that list to the Responsible Official.

Step 7. The Responsible Official will determine the SOC list for the planning unit based on the above Steps and evaluations.

Step 8. Is conservation of the extant SOC possible through Ecosystem Diversity [http://www.fs.fed.us/emc/nfma/index.htmCFR 219.19 (b) (1)] both possible and defensible? Ecosystem Diversity should be based on the Regional Diversity Matrix of major cover types and structure types. The criteria to valuate whether Ecosystem Diversity can conserve SOC may include but is not limited to the following criteria.

A. Lack of knowledge.
B. Adequacy of conservation measures carried-through from past into the revised plan.
C. Direction in revision plans components.

Step 9. Determine whether it is possible to group species and incorporate into Ecosystem Diversity for conservation. Contribute to Desired Conditions and or proposed guidelines for Ecosystem Diversity in the Forest Plan.

Step 10. Develop conservation recommendations to ensure self-sustaining SOC populations not protected through Ecosystem Diversity and propose Desired Conditions and or guidelines in the Forest Plan.

Step 11. Recommend a monitoring requirement either at the ecosystem or for SOC self-sustaining populations into the Environmental Monitoring System or Plan level monitoring. Accomplishing the inventory of SOC is budget-dependent.

Step 12. Document the rationale for Step 1 to 12.

SOC Definitions

Breeding: evidence (nest, young, etc.) of reproduction.

G1: at very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2: at high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

G3: at moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

Native/exotic: native species reflect their evolutionary center of origin in distribution. Exotic species are those taxa introduced by man either by accident or intent into an area with no known occurrence or relation to their evolutionary center of origin.

Occupied habitat: evidence of use for reproduction (nest site, tracks of young, etc.) and or regular observations in a habitat over time (e.g., 3 to 4 years) for seasonal, wintering, or year-long use.

Seasonal: species migrate into the Region and is normally expected to be present part of the year.

Self-sustaining population: habitat exists for a breeding population which has sufficient numbers to replace itself through time without supplementation. It does not necessarily produce surplus for harvest. Protecting the existing population (s) and identification of unoccupied habitat for re-introduction may be required. Species protected under ESA will follow Recovery Plans/related guidance.

T: rank (G1, G2 and G3) applies to a subspecies or variety.

Transients: habitat use is random.

Unoccupied habitat: may be suitable if major vegetation types and habitat structures are similar to that observed in occupied habitat or can be achieved through restoration.

Wintering: evidence of use of specific habitats or habitat structure on Forest Service lands during the non-breeding season/migration.

Yearlong: present yearlong yet may be inactive or rarely detected during some seasons.

Appendix D: Northern Region Species of Interest 6-Step Process

Wildlife Revision Team
Northern Region
August 15, 2005

Identifying Wildlife Species-of-interest

Species-of-interest (SOI) are species for which the Responsible Official determines that management actions may be necessary or desirable to achieve ecological or other multiple use objectives. SOI are distinct from the concept of Management Indicator Species as required in the regulations which implement the 1982 planning rule. This distinction includes deleting the requirement to monitor population trend.

The following six steps provide a consistent context and sequence to identify and manage for SOI in Forest plan revisions.

Step 1. Identify potential SOI.

The Responsible Official, as appropriate, may identify the following animal and plant species as SOI.

A. Species with ranks of S-1 and S-2 on the NatureServe system.

B. State listed threatened and endangered species that are not within the criteria of Species-of-Concern.

C. Bird species on the US Fish and Wildlife Service birds of conservation concern national priority list for the United States portion of the Northern Rocky Mountains.

D. Additional species that valid, existing information indicates are of regional or local conservation concern due to factors that may include significant threats to populations or habitat, declining trends in populations or habitat, rarity, or restricted ranges (for example, narrow endemics, disjunct populations, or species at the edge of their range).

E. Additional species that need plan components established for them. These should include species of public interest including hunted. fished, or other species. Such species may be identified from among the following sources.

State Strategic Plans
State Species of Concern
Forest Service Sensitive Species List
State Management Plans/Population Objectives
Non-Government Organization plans or objectives

F. Consider the following factors and general factors in identifying SOI. Existence of one or more of the following factors *does not* compel the species to be included as a SOI.

a. Species habitat or population has declined significantly in the plan area, or plan components for ecosystem diversity are not adequate, resulting in potential risk to the species.

b. Species and their habitats are not well-distributed in the plan area, and plan components for ecosystem diversity are not adequate to maintain that distribution, resulting in potential risk to the species.

c. Species population numbers are low in the plan area, and plan components for ecosystem diversity are not adequate to maintain that distribution, resulting in potential risk to the species.

Step 2. Apply the following criteria to identify candidate SOI list

A. Determine if a SOI occurs on Forest Service lands.

B. Determine if risk to the SOI is outside of Forest Service management or control (e.g., Forest Service management does not affect SOI).

C. Risk factors are high (e.g., loss of fire).

D. Specialized habitat (e.g., caves).

E. Rare or unique species not widespread in the Northern Region (e.g., white-headed woodpecker).

F. Species of high social or economic value (e.g., elk).

G. Review the candidate SOI list where appropriate and needed with the US Fish and Wildlife Service, State Fish and Game Departments, and Tribes.

Step 3. Identify a candidate SOI list based on Steps 1 and 2 and recommend that list to the Responsible Official.

Step 4. The Responsible Official will determine the SOI list for the planning unit based on the above Steps and evaluations.

Step 5. Evaluate SOI to determine if grouping is possible

Grouping possible. Determine based on the best available information as to whether SOI can be grouped using the Regional Diversity Matrix or a matrix that represents aggregations of the elements in the Regional Diversity Matrix. Contribute to proposed

Desired Conditions and or secondarily guidelines for Ecosystem Diversity in the Forest Plan for those habitat and structure categories that include SOI.

Grouping impossible. If unable to group SOI using the Regional Diversity Matrix, develop objectives that match the rationale for including the species as a SOI, e.g., risk factors are high, (e.g., loss of fire), specialized habitat (e.g., caves), rare or unique species not widespread in the Northern Region (e.g., white-headed woodpecker), and species of high social or economic value (e.g., elk). Propose Desired Conditions and or guidelines in the Forest Plan for individual SOI not managed through Ecosystem Diversity.

Step 6. Recommend a monitoring requirement either at the ecosystem or for SOI self-sustaining populations into the Environmental Monitoring System, Plan level monitoring, or in cooperation with a State Fish and Game agency, university, or non-governmental organization. Accomplishing the inventory of SOC is budget-dependent.

Appendix E: Ecosystem Diversity/Coarse Filter Matrix

Ecosystem Diversity/Coarse Filter Matrix Clearwater NF Inventory Year 1998-2002						
COARSE FILTER STRATA - DESCRIPTIONS						TOTAL[1]
Forested Types	*R1 FIA Database Name*	*Dominance Groups (FIA data derived)*	*Tree Size Classes %*			*Total %*
			0-5”	5-10”	10”+	
Early seral, non-stocked[2]	EARLY	None & all seedling size classes	5.0	N/A	N/A	5.0
Recent Burn[3]	RBURN	N/A	N/A	N/A	N/A	-
Tolerant Cold Species	TCOLD	ABLA, ABLA-1MIX, PIEN, PIEN-1MIX, TSME, TSME-1MIX, TASH	0.0	6.0	21.7	27.7
Intolerant Cold	ICOLD	PIAL, PIAL-1MIX, LALY, LALY-1MIX	0.0	0.0	0.0	0.0
Tolerant Montane	TMONT	ABGR, ABGR-1MIX, THPL, THPL-1MIX, TSHE, TSHE-1MIX, TABR, TABR-1MIX, TGCH	1.0	4.0	30.0	35.0
Intolerant Montane	IMONT	IMXS	1.0	0.7	6.7	8.3
Western White pine	MXPIMO	PIMO3 & PIMO-1MIX	0.0	0.0	0.0	0.0
Limber pine	MXPIFL	PIFL2 & PIL2-1MIX	0.0	0.0	0.0	0.0
Douglas-fir	MXPSME	PSME & PSME-1MIX	0.7	1.3	10.0	12.0
Lodgepole pine	MXPICO	PICO & PICO-1MIX	0.0	4.0	7.0	11.0
Ponderosa pine	MXPIPO	PIPO & PIPO-1MIX	0.0	0.0	0.3	0.3
Western larch	MXLAOC	LAOC & LAOC-1MIX	0.3	0.0	0.0	0.3
Upland mixed hardwoods	MHDWD	POTR5, POTR5-1MIX, BEPA, BEPA-1MIX	0.0	0.0	0.0	0.3
Riparian hardwoods	RHDWD	POPUL, POPUL-1MIX	0.0	0.0	0.0	0.0
Juniper & mountain mahogany	OTHER	2TREE, JUNIP, JUNIP-1MIX	0.0	0.0	0.0	0.0
		FIA TOTALS	8.0	16.0	76.0	99.9
[1] TOTAL – The total column should equal 100% for the Forest.						
[2] Early seral, non-stocked – This stratum includes plots with dominance group of “none”, plots identified as harvested.						
[3] Recent Burn – This stratum is defined as burned within 5 years of the analysis year.						

FIA data only covers forested types and not non-forested and non-veg types.

Appendix F: Distribution of Vegetation Groups

In progress

GLOSSARY

(From Idaho CWCS 2005 and other sources with noted additions)

Abundance: The number of individuals; contrast with density.

Adaptive management: A cyclical process (plan, act, monitor, assess, repeat) in which managers treat actions as experiments, from which they improve management actions.

Alpine: Barren substrate or herbaceous and low shrubby vegetation above mountain Timberline.

Aquatic habitat: Habitat that occurs in free water.

Aspect: A position facing a particular direction.

Breaklands: Breaklands are mostly steep slopes at lower elevations, with warmer temperature regimes compared to uplands and subalpine areas. Disturbance regimes are more frequent, with less severe fire most common on the breaklands (Clearwater/Nez Perce Revision Team).

BLM: Bureau of Land Management.

Broad scale: Coarse–grained level of assessment. Integrated in a hierarchical approach with mid– and fine–scale assessment.

Bryophyte: Any of a division (Bryophyta) of plants consisting of the mosses and liverworts.

Candidate species (ESA): Plant and animal taxa for which the U.S. Fish and Wildlife Service has enough scientific information to support proposing them for listing under the Endangered Species Act (ESA); these species have no legal protection under the ESA.

Candidate species (of concern or interest): Species that have been retained for further consideration in the planning process. Northern Region Wildlife Revision Team terminology only - not to be confused with USFWS ESA terminology.

Canopy: A layer of foliage in a forest stand. This most often refers to the uppermost layer of foliage, but it can be used to describe lower layers in a multistoried stand. Leaves, branches and vegetation that are above ground and/or water that provide shade and cover for fish and wildlife.

Carnivore: Restricted to animals that eat mammals, birds, reptiles, or amphibians.

Cavity–nester: Species that nests in cavities in the trunk of a tree or snag.

Cirque: A deep steep–walled half–bowl–like recess or hollow situated high on the side of a mountain and commonly at the head of a glacial valley, and produced by the erosive activity of a mountain glacier

Down woody debris: Fallen trees, snags, and decaying logs and large limbs distributed across the forest floor that are >10 cm (4 in) in diameter.

Colonization: The establishment of a species in an area not currently occupied by that species. Colonization may involve dispersal across an area of unsuitable habitat.

Community: The co–occurrence of individuals of several species during a specified time and space that are interacting and show some degree of interdependence.

Competition: Use or defense of a resource by one individual that reduces the availability of that resource to other individuals, whether of the same species (intraspecific competition) or of other species (interspecific competition).

Coniferous: Pertaining to Conifers, which bear woody cones containing naked seeds.

Conservation: The use of natural resources in ways such that they may remain viable for future generations. Compare with preservation.

Conservation measure: A specific conservation tool (e.g., habitat improvement, mitigation, acquisition or restoration) employed in a specific location.

Conservation strategy: A management plan for a species, group of species, or ecosystem that prescribes standards and guidelines that if implemented provide a high likelihood that the species, groups of species, or ecosystem, with its full complement of species and processes, will continue to exist well–distributed throughout a planning area, i.e., a viable population.

Contiguous: Bordering upon or touching.

Corridor: A defined tract of land, usually linear, through which a species must travel to reach habitat suitable for reproduction and other life sustaining needs.

Conservation status ranks: Numbers between 1 and 5 (1= critically imperiled, 2 = imperiled, 3 = vulnerable, 4 = apparently secure, 5 = secure) and preceded by a letter reflecting the appropriate geographic scale (G = global, N = National, S = Subnational, T = Infraspecific taxa) assigned to species or communities (NatureServe 2006).

Current threats: Threats that are actively occurring.

Deciduous: Trees and plants that shed their leaves at the end of the growing season.

Delist: To remove an animal or plant species from the list of endangered and threatened wildlife and plants.

Density: The number of individuals per unit area.

Disturbance: A force that causes significant change in structure and/or composition through natural events such as fire, flood, wind, or earthquake, mortality caused by insect or disease outbreaks, or by human–caused events, e.g., the harvest of forest products.

Direct threats: Factors that immediately cause stress to conservation targets by physically causing their destruction or degrading their integrity. Synonymous with sources of stress or proximate pressures.

Distribution: The spatial arrangement or pattern of occurrence for a species or habitat throughout the state, generally more precise than range.

Disturbance regime: Natural pattern of periodic disturbances, such as fire or flood, followed by a period of recovery from the disturbance, e.g., regrowth of a forest after a fire.

Drainage: An area (basin) mostly bounded by ridges or other similar topographic features, encompassing part, most, or all of a watershed and enclosing some 5,000 acres.

Diversity: The number and relative abundance of species in a community. Diversity involves the number of species and species evenness.

Drought: Generally, the term is applied to periods of less than average or normal precipitation over a certain period of time sufficiently prolonged to cause a serious hydrological imbalance resulting in biological losses (impact flora and fauna ecosystems) and/or economic losses.

Early seral: Communities that occur early in the vegetation successional path and generally have less complex structural development than later successional communities.

Ecoregion: A scale of planning and analysis in the National Hierarchical Framework that has broad applicability for modeling and sampling, strategic planning and assessment, and international planning. Ecoregions include Domain, Division, and Province ecological units.

Ecosystem: A complete interacting system of organisms and their environment. Ecosystem approach A philosophy of resource management that focuses on protecting or restoring the function, structure, and species composition of an ecosystem, recognizing that all components are interrelated.

Endangered species: Any species of plant of animal defined through the Endangered Species Act as being in danger of extinction throughout all or a significant portion or its range, and published in the Federal Register.

Endangered Species Act (ESA): A 1973 Act of Congress that mandated that endangered and threatened species of fish, wildlife, and plants be protected and restored.

Endemic: Plants or animals that occur naturally in a certain region and whose distribution is limited to a particular locality.

ESA: Endangered Species Act.

Extirpated: Refers to a plant or animal or vegetation type that has been locally eliminated, but is not extinct.

Factors: Threats and opportunities together.

Fauna: (1) A term used to describe the animal species of a specific region or time. (2) All animal life associated with a given habitat, country, area, or period.

Federal Register: The official daily publication for actions taken by the Federal government, such as Rules, Proposed Rules, and Notices of Federal agencies and organizations, as well as Executive Orders and other Presidential Documents.

Feedback: Refers to a system whose output modifies input to the system.

Fen: Wetlands with peat or muck substrate resulting from unusual water chemistry; includes areas of highly mineralized groundwater discharge and other peat lands.

Forb: Herbaceous broad–leaved vegetation, such as clover, as distinguished from a grass or a woody plant.

Forest: Woody vegetation at least 6 m tall with fairly continuous and complete canopy closure.

Fragmentation: A condition in which a continuous area is reduced and divided into smaller sections

Geographic Information System (GIS): An organized assembly of people, data, techniques, computers, and programs for acquiring, analyzing, storing, retrieving, and displaying spatial information about the real world

Habitat fragmentation: The segmentation of habitat into discrete islands through modification or conversion of habitat.

Habitat: Where a given plant or animal species meets its requirements for food, cover, and water in both space and time; may or may not coincide with a single vegetation type.

Habitat availability: The accessibility and procurability of physical and biological components in a habitat.

Habitat or ecosystem management: A management focus that de–emphasizes individual species, focusing instead on maintaining habitat or ecosystem quality, including ecological processes important in maintaining the characteristic biodiversity of an area.

Habitat preference: Used to describe the relative use of different locations (habitats) by an individual or species.

Habitat quality: The ability of the area to provide conditions appropriate for individual and population persistence.

Habitat selection: A hierarchical process involving a series of innate and learned behavioral decisions made by an animal about what habitat it would use at different scales of the environment.

Habitat trend: Change in habitat status over time, measured by monitoring that habitat in a consistent and comparable manner.

Habitat use: The way an animal uses (or "consumes," in a generic sense) a collection of physical and biological entities in a habitat.

Hibernaculum: Habitat niches where certain animals (e.g., bats) over-winter, such as caves, mines, tree hollows, or loose bark.

Historic range: The geographic area where a species was known to or believed to occur within historic time.

Indicator: A measure that tracks goals, objectives, actions, and targets (or inputs, outputs, and outcomes) by stating them in specific and observable terms.

Indirect effect: An effect caused by a proposed action that takes place later in time than the action, but is still reasonably certain to occur.

Invasive: An introduced species which spreads rapidly once established and has the potential to cause environmental or economic harm. Not all introduced species are invasive.

Invertebrate: An animal without an internal skeleton. Examples are insects, spiders, clams, shrimp, and snails.

Issue: A matter of controversy or dispute over resource management activities that is well defined or topically discrete.

Landscape: A large area that includes one or more ecosystems.

Landscape diversity: The size, shape, and connectivity of different ecosystems across a large area.

Landscape feature: Widespread or characteristic features within the landscape (e.g., stand type, site, soil, patch).

Late seral: Vegetative communities that occur in the later stage of the successional path with mature, generally larger plants that dominate the overstory.

Listed: General term used for a taxon protected under the federal Endangered Species Act.

Listed species: A species, subspecies, or distinct population segment that has been added to the Federal list of endangered and threatened wildlife and plants.

Listing: The formal process through which USFWS or NOAA Fisheries adds species to the Federal list of endangered and threatened wildlife and plants.

Mesic: Referring to habitats with plentiful rainfall and well–drained soils.

Migratory: Refers to animals that travel seasonally. Migrations may be local or over long distances.

Model: Any formal representation of the real world. A model may be conceptual, diagrammatic, mathematical, or computational.

Mollusks: A taxonomic group of invertebrate organisms, which includes clams, mussels, snails, and slugs.

Monitoring: A repeated assessment of status of a species, habitat, or attribute within a defined area over a specified time period. The goal is to detect important changes in status.

Montane: A cool, moist environment usually timberline and usually dominated by conifers.

Mosaic: (1) A surface decoration made by inlaying small pieces of variously colored material to form pictures or patterns. (2) Something (for example, landscape) resembling a mosaic.

Natural Heritage Program: A member program in a network under NatureServe. These programs gather, manage, and distribute detailed information about the biological diversity found within their jurisdictions. Most United States natural heritage programs are within state government agencies, while others are within universities or field offices of The Nature Conservancy.

Neotropical migrant: A bird species that nests in Canada or the United States and winters in the Neotropics (between the Tropics of Cancer and Capricorn) in Mexico, the Caribbean Islands, or Central or South America

.

NEPA: National Environmental Policy Act.

NFMA: National Forest Management Act.

Nongame wildlife: All wild vertebrate and invertebrate animals not subject to sport hunting.

Obligate species: A plant or animal that occurs only in a narrowly defined habitat such as tree cavity, rock cave, or wet meadow.

Old–growth forest: A forest stand usually at least 180 – 220 years old with moderate to high canopy closure; a multi-layered, multi-species canopy dominated by large overstory trees; high incidence of large trees; some with broken tops and other indicators of old and decaying wood (decadence); numerous large snags; and heavy accumulations of wood, including large logs on the ground.

Objective: The proximate and measurable manifestation of a goal.

Outcrop: (1) A coming out of bedrock or of an unconsolidated deposit to the surface of the ground. (2) The part of a rock formation that appears at the surface of the ground. (3) To project from the surrounding soil.

Overstory: Trees that provide the uppermost layer of foliage in a forest with more that one roughly horizontal layer of foliage.

Partner: Any entity that voluntarily participates with another on a project.

Partnership: An informal or formal effort by two or more partners to achieve a shared objective or complete a project.

Patch: A recognizable area on the surface of the earth that contrasts with adjacent areas and has definable boundaries.

Plant community: A group of one or more populations of plants in a common spatial arrangement.

Population: Group of individuals of the same species occupying a defined locality during a given time that exhibit reproductive continuity from generation to generation.

Potential species (of concern or interest): Species that may occur on the Planning Zone but have not been screened. (Northern Region Wildlife Revision Team).

Primary excavator: A species that digs or chips out cavities in wood to provide itself or its mate with a site for nesting or roosting.

Proposed species: A species of animal or plant that is proposed in the Federal Register to be listed under section 4 of the Endangered Species Act.

Quarry: An open excavation usually for obtaining building stone, slate, or limestone.

Raptor: A bird of prey, adapted for seizing and tearing prey.

Range Defined here as the maximum geographic extent of a taxon or habitat; does not imply suitable conditions exist throughout the defined limits. Compare with distribution

Resident: Refers to animal taxa that remain in a given location throughout the year.

Resource: Any biotic and abiotic factor directly used by an organism.

Restoration: The renewing or repairing of a natural system so that its functions and qualities are comparable to its original, unaltered state.

Riparian habitat: The aquatic and terrestrial habitat adjacent to streams, lakes, estuaries, or other waterways.

Riparian vegetation: The plants that grows rooted in the water table of a nearby wetland area such as a river, stream, reservoir, pond, spring, marsh, bog, meadow, etc.

Riparian: A narrow zone, which may or may not be vegetated, directly associated with streamsides or lakeshores, or similar immediately adjacent habitat.

Riparian area: Area with distinctive soils and vegetation between a stream and other body of water and the adjacent upland; includes wetlands and those portions of flood plains and valley bottoms that support riparian vegetation.

River basin: See Watershed.

Roost: A place or feature where birds or bats rest, sit, sleep, etc.

Scientific name: A formal Latin or latinized name applied to a taxonomic group of animals or plants. A species' scientific name is a two–part combination consisting of the genus followed by the species. The name is italicized or underlined. For example, the scientific name of the little brown bat is Myotis lucifugus. The genus name is Myotis, and the species name is lucifugus. If an animal species has been further divided into subspecies, or a plant species further divided into varieties, a third part is added to the scientific name.

Section: An ecological unit in the sub region planning and analysis scale of the National

Hierarchical Framework corresponding to subdivisions of a Province having broad areas of similar geomorphic process, stratigraphy, geologic origin, drainage networks, topography, and regional climate. Such areas are often inferred by relating geologic maps to potential natural vegetation groupings as mapped by Kuchler.

Sensitive species: Those species that (1) have appeared in the Federal Register as proposed for classification and are under consideration for official listing as endangered or threatened species or (2) are on an official state list or (3) are recognized by the U.S. Forest Service or other management agency as needing special management to prevent their being placed on federal or state lists.

Shrub steppe: Habitats characterized in western North America by woody, mid-height shrubs and perennial bunchgrasses; typically arid, with annual precipitation averaging <36 cm (14 in) over much of the region.

Seral stage: The developmental stages of a plant community not including the climax community.

Slope: The side of a hill or mountain, the inclined face of a cutting, canal or embankment or an inclination from the horizontal.

Snag: Any standing dead, partially dead, or defective (cull) tree at least 10 inches in diameter at breast height and at least 6 feet tall.

Species: The highest level of biological classification from which organisms can breed and produce fertile offspring under natural conditions.

Species diversity: Usually synonymous with "species richness," but may also include the proportional distribution of species.

Stand–replacing fire: A high–intensity crown fire in which most of the trees are killed.

Stream: A general term for a body of flowing water; natural watercourse containing water at least part of the year.

Structural diversity: Diversity in a forest stand that results from layering or tiering of n the canopy.

Subalpine: Mountain regions just below timberline. The subalpine setting is above the uplands elevationally, with mixed topography, and generally colder temperatures. Disturbance regimes are mixed and with stand replacing fires typical on subalpine settings (Clearwater/Nez Perce Revision Team).

Subnivean: Habitat that occurs beneath the surface of the snow.

Subsection: An ecological unit in the sub region planning and analysis scale of the National Hierarchical Framework corresponding to subdivisions of a Section into areas with similar surficial geology, lithology, geomorphic process, soil groups, sub regional climate, and potential natural communities.

Subspecies: (1) A population of a species occupying a particular geographic area, or

less commonly, a distinct habitat, capable of interbreeding with other populations of the same species. (2) The level of biological classification below species; a genetically–distinct group.

Succession: A series of dynamic changes by which one group of organisms succeeds another through stages leading to potential natural community or climax.

Talus: Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

Terrestrial: Growing, living on, or frequenting land.

Threat: Any human activity or process that has caused, is causing, or may cause the destruction, degradation and/or impairment of biodiversity and natural processes. In systems that depend on human actions to maintain biodiversity such as the use of prescribed burns, the removal or alteration of these management activities may also constitute a threat. Includes both direct threats and underlying causes. Synonymous with pressures.

Threatened: A species officially designated by the U.S. Fish and Wildlife Service as having its existence threatened in a localized area, such as a state or smaller area, because its habitat is threatened with destruction, drastic modification, or severe curtailment, or because of overexploitation, disease, predation, or other factors

Trend: (1) A statistical term referring to the direction or rate of increase or decrease in magnitude of the individual members of a time series of data when random fluctuations of individual members are disregarded. (2) A unidirectional increasing or decreasing change in the average value of a variable.

Understory: An underlying layer of vegetation, specifically the vegetative layer and especially the trees and shrubs between the forest canopy and the ground cover.

Ungulate: Hoofed mammal; usually adapted for running on firm, open ground, herbivorous, living in herds.

Upland: A general term referring to species, habitats, or vegetation types in non–flooded or non–saturated areas. Uplands are generally above the breaklands in elevation, and have more rolling topography. They tend to be cooler and more mesic than the breaklands. Disturbance regimes are infrequent with mixed-severity or stand-replacing fires typical on the uplands (Clearwater/Nez Perce Revision Team).

USDA: U.S. Department of Agriculture.

USDI: U.S. Department of the Interior.

USFS: USDA Forest Service.

USFWS: U.S. Fish and Wildlife Service.

Vegetation type: A natural unit similar in definition to ecosystem, but defined primarily by the composition of plant species; compare also with habitat.

Vertebrate: An animal with an internal skeleton. Examples are birds, mammals, reptiles, amphibians, and fish.

Wet meadow: Areas where grasses predominate. Normally waterlogged within a few inches of the ground surface.

Watershed: A stream or river basin and the adjacent hills and peaks, which "shed," or drain, water into it.

Wetland: There are 3 important attributes of wetlands: (1) the hydrology is such that there is some degree of flooding or soil saturation; (2) the vegetation is composed of plants adapted to grow in water or in a soil or substrate that is occasionally oxygen deficient due to saturation (hydrophytes); (3) the soils are saturated long enough during the growing season to produce oxygen deficient conditions in the upper soil layer, which commonly includes the major part of the root zone of plants (hydric soils).

Wildlife: Game and non-game species that are not domesticated.