APPENDIX F

ESA AND ~~KOOTENAI NATIONAL FOREST PLAN~~U.S. FOREST SERVICE REGIONAL FORESTER DETERMINATIONS FOR THE PROPOSED LIBBY TO TROY REBUILD PROJECT

Introduction

This appendix identifies the determinations made by the Bonneville Power Administration (BPA), based on input and analysis provided by the U.S. Forest Service (USFS), Kootenai National Forest, for the proposed Libby to Troy Rebuild Project related to certain species listed under the Endangered Species Act (ESA) of 1973, as amended, as well as species identified as Forest Service Sensitive Species ~~under the Kootenai National Forest Plan~~ by the Regional Forester. The species discussed in this appendix are those identified in Chapters 3.5, Wildlife and 3.6, Fish, Amphibians, and Reptiles of this EIS as possibly present in the project corridor.

Under the ESA and its implementing regulations, federal agencies are required to ensure that their actions would not likely jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. When required, federal agencies must consult with the U.S. Fish and Wildlife Service (USFWS) and/or NOAA Fisheries prior to taking an action, and must submit a Biological Assessment (BA) that identifies the federal agency's determination of whether any listed and proposed species and designated and proposed critical habitat are likely to be adversely affected by the federal action. BPA is in the process of consulting with the USFWS concerning its Proposed Action, and the determinations for ESA-listed species are listed in this appendix.

As part of its implementation of the Kootenai National Forest Plan, the USFS is required to assess the potential impact of proposed actions on the Forest on species ~~identified in the Plan~~designated by the Regional Forester as a Forest Service Sensitive Species. As part of this assessment, the USFS is required to make a determination of species viability for each Forest Service Sensitive Species. This determination is based on whether implementation of the proposed project, including mitigation measures, would contribute to the loss or viability of the species or cause a trend toward federal listing of any species.

ESA Determinations

Table F-1 identifies species listed under the ESA that are possibly present in the project corridor and provides an ESA determination of effect of the proposed action on each species. The following discussion further describes the basis for the determination made for each species. These determinations are based on the analyses for each species contained in the BA for the proposed action.

Table F-1. Federally Protected Species Possibly Present in the Project Corridor

Species	Federal Status[1]	Determination of Effect[2]				
		Proposed Action	Alternative 1	Pipe Creek Realignment	Quartz Creek Realignment	Kootenai River Crossing Realignment
~~**Gray Wolf** *(Canis lupus)*~~	~~Endangered~~	~~MA~~	~~MA~~	~~MA~~	~~MA~~	~~MA~~
Grizzly Bear (*Ursus arctos*)	Threatened	NLAA	NLAA	NE	NLAA	NLAA
~~**Bald Eagle** *(Haliaeetus leucocephalus)*~~	~~Threatened~~	~~MA~~	~~MA~~	~~A~~	~~A~~	~~A~~
White Sturgeon *(Acipenser transmontanus)*	Endangered	NE	NE	NE	NE	NE
Bull Trout *(Salvelinus confluentus)*	Threatened	NE	NE	NE	NE	NE

1. From USFWS website: http://www.fws.gov/montanafieldoffice/Endangered_Species/Listed_Species/countylist.pdf
2. LAA= May ~~adversely~~ affect, likely to adversely affect; NLAA = May affect, not likely to adversely affect; NE = No effect.

Gray Wolf (Delisted; Currently a Forest Sensitive and Management Indicator Species as shown on Table F-2)

The Proposed Action, Alternative 1, and the three proposed realignment options ~~**may affect, but are not likely to adversely affect**~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the gray wolf. This determination is based on:

1. Existing habitat conditions would be maintained for big game animals, the primary prey base for wolves.
2. Mortality risk to the wolf is not expected to measurably increase during proposed activities, and would decrease slightly after project activities due to proposed mitigation.
3. Known den and rendezvous sites would not be impacted.
4. There may be a short-term avoidance of areas during the project construction period, however transient use by wolves would still continue.
5. Alternatives meet Forest Plan big game management recommendations.

Grizzly Bear

The Proposed Action and Alternative 1 **may affect, but are not likely to adversely affect** the grizzly bear. This determination is based on:

1. In BMU 10, a 4% increase in core habitat, and a 4% decrease (improvement) in TMRD would occur as a result of project activities.
2. In BMU 1, a 1% increase in core habitat would result from project activities.
3. Potential displacement of bears as a result of helicopter activity is expected to be minimal due to timing restrictions on periods of operation within BMUs 10 and 1.
4. The potential for undesirable human/bear encounters and subsequent human-caused mortality risk would be minimal during project activities.
5. Denning habitat would not be impacted.
6. Linear O~~M~~RD and linear T~~M~~RD would remain unchanged (numerically) within the West Kootenai and Troy BORZ polygons.

Of the proposed realignment options, the Pipe Creek realignment would have **no effect** on grizzly bear since this realignment would not be located within identified grizzly bear recovery zones or BORZs. The Quartz Creek and Kootenai River crossing realignments **may affect, but are not likely to adversely affect** the grizzly bear. This determination is based on the same six factors as described for the Proposed Action and Alternative 1 above.

Bald Eagle (Delisted; Currently a Forest Sensitive and Management Indicator Species as shown on Table F-2)

The Proposed Action ~~**may affect, but are not likely to adversely affect**~~ may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the bald eagle. This determination is based on:

1. No canopy removal would occur within Management Zones I and II of the ~~four~~three nests crossed by the existing transmission line, with the exception of hazard trees removed as part of normal maintenance operations.
2. Mitigation measures are proposed to reduce bald eagle mortality risk due to electrocution and/or line collision. The overall mortality risk is expected to be low.
3. Mitigation measures are proposed that would prohibit any high intensity disturbance (heavy equipment use) within the Management Zones I and II of the ~~four~~three nests during the nesting season (February 1 to August 15).
4. The Proposed Action is within the present transmission line corridor which would have less impact than if the line was placed in a new corridor where no line currently exists.
5. The Proposed Action may include mitigation for habitat acquisition to replace habitat removed or influenced by the Proposed Action.

Alternative 1 ~~**may affect, but is not likely to adversely affect**~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the bald eagle. This determination is based on the same factors as described for the Proposed Action, except that Alternative 1 would involve a limited amount of canopy removal (about 10 acres) within the ~~four~~three nest Management Zones I and II.

All three of the proposed realignment options ~~**may adversely affect**~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the bald eagle. This determination is based on:

1. The quantity and quality of habitat being removed, especially within Management Zones I and II.
2. The location of the proposed realignment option in relation to the existing or historic nest tree.
3. The location of the realignment option in an area where no lines currently exist, likely increasing the mortality risk due to line collision.

White Sturgeon

The Proposed Action, Alternative 1, and the three proposed realignment options would have **no effect** on white sturgeon. This determination is based on:

1. Project activities would not occur in the Kootenai River, which is the only known habitat of this species in the project area. The potential for any direct effect to this species is further reduced by the extreme rarity of the species in the project area.
2. In addition, because timber clearing is not a primary cause of the decline of this species, the timber clearing associated with the proposed action would not be expected to affect sturgeon viability.

Bull Trout

The Proposed Action, Alternative 1, and the three proposed realignment options would have **no effect** on bull trout. This determination is based on:

1. There would be no new roads constructed within the RHCAs for Pipe and Quartz creeks.
2. Construction of 0.6 miles of new road within the Kootenai River RHCA would not impact bull trout or their habitat within the Kootenai River because the road would not be located near a tributary to the river and best management practices would be implemented to prevent movement of construction generated sediment during a rain event.

Kootenai National Forest Plan Determinations

Table F-2 identifies species considered to be Forest Service Sensitive Species ~~under the Kootenai National Forest Plan~~as designated by the Regional Forester that are possibly present in the project corridor and provides a determination of species viability for each species. The following discussion further describes the basis for the determination made for each species, based on the potential effect of the Proposed Action on the species.

Table F-2: Forest Sensitive Species Possibly Present in the Project Corridor

Species[1]	Determination of Species Viability[2]				
	Proposed Action	Alternative 1	Pipe Creek Realignment	Quartz Creek Realignment	Kootenai River Crossing Realignment
Gray Wolf *(Canis lupus)*	A	A	A	A	A
Bald Eagle (*Haliaeetus leucocephalus*)	A	A	A	A	A
Peregrine Falcon (*Falco peregrinus*)	A	A	C	C	C
~~**Northern Goshawk** *(Accipiter gentiles)*~~	~~A~~	~~A~~	~~A~~	~~A~~	~~B~~
Flammulated Owl *(Otus flammeolus)*	A	A	A	A	A
Harlequin Duck *(Histrionicus histrionicus)*	A	A	C	A	A
Westslope Cutthroat Trout *(Oncorhynchus clarki lewisi)*	C	C	C	C	C
Redband Rainbow Trout *(Oncorhynchus mykiss gairdneri)*	C	C	C	C	C
Boreal Toad *(Bufo boreas)*	A	A	A	A	A
Coeur d'Alene Salamander *(Plethodon idahoensis)*	A	A	A	A	A
Northern Leopard Frog	A	A	A	A	A

(Rana pipiens)					
Geyer's Biscuit-root *(Lomatium geyeri)*	A	A	A	A	A
Common Clarkia *(Clarkia rhomboidea)*	A	A	A	A	A
Moonwort *(Botrychium ascendens,* *Botrychium crenulatum,* *Botrychium pedunculosum)*	~~A~~	~~A~~	~~A~~	~~A~~	~~A~~

1. From USFS Kootenai National Forest Plan, 1987
2. A= ~~likely to impact individuals or their habitat, but would not contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species
   B = ~~not likely to impact individuals or their habitat, and would not contribute to a trend toward federal listing or cause a loss of species viability~~will impact individuals or habitat with a consequence that the action may contribute to a trend towards federal listing or cause a loss of viability to the population or species
   C = no ~~effect~~impact

Peregrine Falcon

The Proposed Action and Alternative 1 ~~are likely to impact individuals or their habitat, but would not likely contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the peregrine falcon. This determination is based on:

1. Any high intensity disturbance (such as helicopter use) within one air mile of an active peregrine falcon nest site during the nesting season (February 1 to August 31) would be prohibited. This mitigation measure applies to segments of the transmission line located between structures Station 26/5 and 27/3.
2. The Proposed Action would be designed to reduce avian mortality risk due to electrocution and/or line collision.

Of the proposed realignment options, the Pipe Creek realignment would have no ~~effect~~impact on peregrine falcon because the known falcon nesting cliff is located west of Kootenai Falls, at least 7 miles west of the realignment. The Quartz Creek realignment, located about 5 miles east of the nesting cliff, also would have no ~~effect~~impact on peregrine falcon for the same reason. The

Kootenai River crossing realignment, located about 0.75 miles west of the nesting cliff, also would have no ~~effect~~impact on peregrine falcon.

~~Northern Goshawk~~ (No longer listed as a Forest Service Sensitive species)

~~The proposed action and Alternative 1 are likely to impact individuals or their habitat, but would not likely contribute to a trend toward federal listing or cause a loss of species viability for the northern goshawk. This determination is based on:~~

1. ~~Loss of goshawk habitat due to project activities within any individual PSU would not exceed 8.6 acres.~~
2. ~~Due to the limited amount of goshawk habitat that would be impacted within individual PSUs, the potential population index (PPI) (habitat acres divided by average territory acres) would not be expected to change within individual PSUs, or subsequently Forest-wide, as a result of project activities.~~
3. ~~Delineation of 277 acres (minimum) of old growth habitat by the Kootenai National Forest within the Sheep PSU to meet the Forest Plan direction of 10% per PSU would mitigate for any losses to goshawk habitat.~~

~~The Pipe Creek and Quartz Creek realignment options also are likely to impact individuals or their habitat, but would not likely contribute to a trend toward federal listing or cause a loss of species viability for the northern goshawk. This determination is based on:~~

1. ~~Loss of goshawk habitat within any individual PSU would not exceed 15.7 acres for the Pipe Creek realignment, and would not exceed 39.1 acres for the Quartz Creek realignment.~~
2. ~~The PPI for the Pipestone PSU, or subsequently Forest-wide, would not be expected to change due to the limited amount of goshawk habitat that would be impacted within this PSU.~~
3. ~~Delineation of 277 acres (minimum) of old growth habitat by the Kootenai National Forest within the Sheep PSU to meet the Forest Plan direction of 10% per PSU would mitigate for any losses to goshawk habitat.~~

~~The Kootenai River crossing realignment option is not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability for the northern goshawk. This determination is based on:~~

1. ~~Approximately 15 suitable goshawk nesting trees would be removed for the Kootenai River crossing realignment within the Lake PSU, a small amount of the total suitable habitat available.~~

Flammulated Owl

The Proposed Action and Alternative 1 ~~are likely to impact individuals or their habitat, but would not likely contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the flammulated owl. This determination is based on:

1. Project activities would require hazard tree removal within the edge affect area. Potential flammulated owl nest trees could be removed as a result of line maintenance.
2. Loss of flammulated owl habitat within any individual PSU due to project activities would not exceed 0.7 acres.
3. The PPI within individual PSUs, or subsequently Forest-wide, would not be expected to change due to the limited amount of flammulated owl habitat that would be impacted within the PSUs.
4. Delineation of 277 acres (minimum) of old growth habitat by the Kootenai National Forest within the Sheep PSU to meet the Forest Plan direction of 10% per PSU would mitigate for any losses to flammulated owl habitat.

The Pipe Creek and Quartz Creek realignment options also ~~are likely to impact individuals or their habitat, but would not likely contribute to a trend toward federal listing or cause a loss of species viability~~ may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the flammulated owl. This determination is based on the same factors discussed above for The Proposed Action and Alternative 1, except loss of flammulated owl habitat within any individual PSU would not exceed 15.7 acres under the Pipe Creek realignment, and loss of this habitat would not exceed 39.1 acres under the Quartz Creek realignment.

The Kootenai River crossing realignment ~~is not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~ may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for flammulated owl because no suitable nesting trees would be removed within the Lake PSU.

Harlequin Duck

The Proposed Action and Alternative 1 ~~are not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~ may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the harlequin duck. This determination is based on the analysis showing that harlequin duck nesting and foraging habitat would not be directly impacted by project activities.

Of the proposed realignment options, the Pipe Creek realignment would have no ~~effect~~impact on harlequin duck because the ducks are found primarily along the Kootenai River west of its confluence with Pipe Creek. Additionally, construction of the realignment would not include placement of structures within the riparian zone of Pipe Creek in the event that this species was found along Pipe Creek.

The Quartz Creek realignment ~~is not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~ may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the harlequin duck. Although the Quartz Creek

realignment would cross in the general vicinity where harlequins have been sighted in the past, the realignment would not require clearing of any vegetation in the Quartz Creek riparian area. In addition, harlequin duck nesting and foraging habitat would not be directly impacted by project activities for this realignment.

The Kootenai River crossing realignment ~~is not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the harlequin duck. Although this realignment would clear 80-100 feet of width in riparian habitat on the both the north and south banks of the Kootenai River, clearing would constitute a very small percentage of the total nesting habitat available to harlequins within the Kootenai River riparian area.

Westslope Cutthroat Trout

The Proposed Action, Alternative 1, and the three proposed realignment options ~~are not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~would have no impact on the westslope cutthroat trout. This determination is based on:

1. There would be no new roads constructed within the RHCAs for Pipe and Quartz creeks.
2. Construction of 0.6 miles of new road within the Kootenai River RHCA would not impact westslope cutthroat trout or their habitat within the Kootenai River because the road would not be located near a tributary to the river and best management practices would be implemented to prevent movement of construction generated sediment during a rain event.

Redband Rainbow Trout

The Proposed Action, Alternative 1, and the three proposed realignment options ~~are not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~would have no impact on the redband rainbow trout. This determination is based on:

1. There would be no new roads constructed within the RHCAs for Pipe and Quartz creeks.
2. Construction of 0.6 miles of new road within the Kootenai River RHCA would not impact westslope cutthroat trout or their habitat within the Kootenai River because the road would not be located near a tributary to the river and best management practices would be implemented to prevent movement of construction generated sediment during a rain event.

Boreal Toad

The Proposed Action, Alternative 1, and the three proposed realignment options ~~are not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the boreal toad. Although suitable habitat for boreal toads does exist within the

project area, structure placement or road construction along Sheep Range near structure 22/4 and 23/8 or near historic Highway 2 would not occur within wetlands or riparian wetland areas.

Coeur d'Alene Salamander

The Proposed Action, Alternative 1, and the Pipe and Quartz Creek realignment options ~~are not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the Coeur d'Alene salamander. Under the Proposed Action, there is a risk that individual Coeur d'Alene salamanders could be displaced from their habitat or killed where the existing corridor runs parallel to the historic Highway, however, the overall population numbers would not be affected.

The Kootenai River crossing realignment ~~is likely to impact individuals or their habitat, but would not likely contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the Coeur d'Alene salamander. This realignment option regardless of voltage would disturb the Coeur d'Alene salamander, because it requires new structures to be installed on talus slopes covered in bryophytes. Mitigation measures as described under Section 3.6.3 "Mitigation" would help reduce or eliminate direct mortality associated with surface disturbance in salamander habitat.

Northern Leopard Frog

The Proposed Action, Alternative 1, and the three proposed realignment options ~~are not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for the northern leopard frog. The northern leopard frog is not found within the project area.

Geyer's Biscuit-root

The Proposed Action, Alternative 1, and the three proposed realignment options ~~is likely to impact individuals or their habitat, but would not likely contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for Geyer's biscuit-root. This determination is based on:

1. The amount of plants that would be disturbed is a relatively small percentage compared to the overall number.
2. There is also a likelihood that there are more populations along the Kootenai River corridor that have not been observed because this type of dry habitat is common.

The three proposed realignment options ~~are not likely to impact individuals or their habitat, and would not contribute to a trend toward federal listing or loss of species viability~~may impact

individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for Geyer's biscuit-root because no individuals or sub-populations were found.

Common Clarkia

The Proposed Action, Alternative 1, and the three proposed realignment options ~~are not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for common clarkia. Common clarkia habitat is found within the area but none were identified during field surveys.

Moonwort Species

The Proposed Action, Alternative 1, and the three proposed realignment options ~~are not likely to impact individuals or their habitat, and would not likely contribute to a trend toward federal listing or cause a loss of species viability~~may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species for upswept moonwort, wavy moonwort, or stalked moonwort. Habitat is found within the area but none were identified during field surveys.