WILDLIFE

3.7.1 Scope of the Analysis

The elements addressed in this section include terrestrial wildlife habitat conditions and the
wildlife species found in project area and potentially affected by the project. The scale of analysis
for most wildlife species and habitats is the 3,815 acre project area, unless otherwise noted.
Effects to Canada lynx are evaluated at the Lynx Analysis Unit and elk at the elk habitat
effectiveness unit. Since most of the effects of proposed activities would be site-specific
changes, cumulative effects are also generally evaluated within the Antler Salvage project area
boundary unless otherwise noted. Species presence/absence determinations were based on
habitat presence, wildlife surveys, recorded wildlife sightings, observations made during field
reconnaissance, and literature.

The effects to wildlife species and habitat is primarily measured by the amount of habitat affected
and the degree of effects to threatened, endangered, sensitive, and management indicator
species.

3.7.2 Regulatory Framework and Management Direction

The principle policy document relevant to wildlife management on the Nez Perce National Forest
is the 1987 Nez Perce National Forest Plan (Forest Plan), which contains goals, objectives,
standards and guidelines for management of wildlife species and habitats on the Forest. Forest
Plan goals (pp. II-1-2) addressing wildlife and wildlife habitats are summarized below:

• Provide and maintain a diversity and quality of habitat to support viable populations of
  native and desirable non-native wildlife species.

• Provide habitat to contribute to the recovery of Threatened and Endangered plant and
  animal species in accordance with approved recovery plans. Provide habitat to ensure
  the viability of those species identified as sensitive.

• Recognize and promote the intrinsic ecological and economic value of wildlife and wildlife
  habitats. Provide high quality and quantity of wildlife habitat to ensure diversified
  recreational use and public satisfaction.

• Protect or enhance riparian-dependent resources.

FSM 2670 directs that all federal departments and agencies shall seek to conserve endangered
and threatened species and shall utilize their authorities in furtherance of the Endangered
Species Act and to avoid actions that may cause a species to become threatened or endangered.
FSM 2670 also calls for the Forest Service to maintain viable populations of all native and
desirable non-native wildlife, fish, and plant species in habitats distributed throughout their
geographic range on system lands.

The three principle laws relevant to wildlife management on lands managed by the Forest Service
are the Endangered Species Act of 1973, the National Forest Management Act of 1976, and its
implementing regulations at 36 CFR 219, and the National Environmental Policy Act (NEPA).
Regulations promulgated subsequent to passing the laws require the Forest Service to maintain
viable populations of all native and desirable non-native wildlife species with emphasis on
assuring that federally listed (threatened and endangered) species populations are allowed to
recover (36 CFR 219.9). Regional Foresters provide a list of sensitive species for each Forest.
Forests are required to assure sensitive species populations do not decline or trend towards
listing under the Endangered Species Act (FSM 2670.22).

This document incorporates the effects on terrestrial sensitive species (i.e., Biological
Evaluation), per direction pertaining to streamlining (USDA FS 1995). See the Table 3 titled,
“Nez Perce Forest Threatened, Endangered, Sensitive, and Management Indicator Wildlife
Species” (below), for a summary of environmental consequences and conclusions for this
analysis.
Executive Order (E.O.) 13186, “Responsibilities of Federal Agencies to Protect Migratory Birds” (January 10, 2001) pertains to conservation of migratory birds. A Memorandum of Understanding to carry out the mandate of the E.O was signed by the U.S. Forest Service and the U.S. Fish and Wildlife Service on January 7, 2001. In 1988, an amendment to the “Fish and Wildlife Conservation Act” required the U.S. Fish and Wildlife Service to “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973.” To carry out this mandate, the U.S. Fish and Wildlife Service published “Birds of Conservation Concern 2002”, which recommends that its lists be consulted in accordance with E.O. 13186. In addition, numerous birds are protected by Idaho Department of Fish and Game nongame status and the Migratory Bird Treaty Act. Currently, there are no Nez Perce Forest Plan standards specific to migratory birds.

3.7.3 Analysis Methods and Indicators

3.7.3.1 Analysis Methods

Photo Interpretation of cover type and size was used to describe abundance and distribution of wildlife habitat for the Antler Salvage Project Area and is the basis for the wildlife analysis. Fire severity ratings are overlaid on the vegetation data to get an estimate of burned forest and amount of harvest in various fire severity categories.

The Forest plan standard and existing condition for elk habitat effectiveness was reviewed for this project. Effects analysis centers on changes in cover and forage conditions.

Analysis of effects for species was done using relative comparisons of effects on the most limiting habitat factors, habitat components, or species sensitivities known for each species relative to the Antler Salvage project area. Threatened, endangered, sensitive, and management indicator wildlife species survey and monitoring efforts, incidental sighting records, and state and federal wildlife observation databases were reviewed to establish the presence of wildlife species in the project area.

The Forest’s fire GIS layers were used to estimate the amount of fires that have occurred on and immediately adjacent to the Forest over the last 5 years. The GIS layers include fire perimeters on State, Private and Public lands.

Region 1 vegetation mapping project (R1-VMP) was used to describe the abundance of burned habitat in the Black Butte Fire. This vegetation layer was used to identify the amount of habitat for the black-backed woodpecker and other wildlife species associated with snags beyond the project area boundary.

3.7.3.2 Indicators

Amount of habitat modified by treatments to determine effects to wildlife species habitat.

3.7.4 Conclusions

3.7.4.1 Existing Conditions

Native wildlife species have evolved with and adapted to natural fires, but they differ in their response to fire intensity and timing. The Black Butte wildfire that burned during the summer of 2006 varied in intensity depending on vegetation, weather, and topography. As a result of the 2006 fires, habitat has been created for those wildlife species that prefer early-seral, post-fire communities and snag rich environments, or reduced for those that prefer late-seral/old forest or mature, dry forest communities.

The overall low intensity of the Black Butte wildfire produced a mosaic of vegetative habitat conditions that probably created more suitable habitat than it destroyed. However, some negative effects have resulted from the fire. Some low elevation, ponderosa pine/Douglas-fir mature forests were severely burned, which within a historic fire regime would have been more of an underburn. Cover for big game and nesting or denning habitat for many wildlife species has been temporarily reduced as a result of the fire due to the loss of live vegetation and overstory
canopy cover. However, forage and browse species for big game and other early-seral wildlife species have benefited from the fire as a result of available nutrients and sunlight and are flourishing. The potential for spread of invasive weeds is a real threat and species like spotted knapweed and rush skeletonweed can outcompete the native vegetation.

Under Alternative 1, existing habitat conditions would remain for wildlife species.

Activities associated with the Antler Salvage project would be additive to effects of past activities within the project area. The size of forest openings would be enlarged creating openings that might too large for many wildlife species to use, except along the edges. Dead and dying trees that provide nesting and foraging substrate for snag associated species would be reduced under the action alternative, especially those that prefer larger diameter ponderosa pine and Douglas-fir snags. Big game cover would be further reduced due to the loss of cover that the bole of a tree provides. Unit 13 would harvest in an old growth patch that was designated as Forest Plan MA20 old growth under the 1993 Scott Fire Salvage project.

3.7.4.2 Existent Condition – Habitat – From the Black Butte Fire

Large stand-replacing fires create an abundance of snag habitat. Because of active fire suppression across the Forest since the early to mid 1900s, it is reasonable to assume that the quality and quantity of habitat for snag associated species like the woodpeckers is lower than it would have been historically (Hutto 1995), as well as for other snag associated species like bats. Fire suppression is still the most important impact affecting wildlife species (Smith 2000 pg 1, 31-33, 48, 59). Many studies suggest that black-backed woodpeckers are more abundant in unlogged vs. logged areas (Dixon and Saab 2000, Hejl and McFadzen 1999). Some species habitat is enhanced by post-fire logging while habitat is diminished for others (Mclver and Starr 2000).

Changes in composition and structure of dry forest communities have made these areas more vulnerable to stand replacing disturbances (fire and insect outbreaks) and the effects are greater (Hessburg and Agee 2003). Fires in dry forest communities have become more severe than what use to occur historically (Hessburg et al. 2005). It is inferred that post-fire snag habitat in dry forest communities may be more common on the landscape today than historically, thus dry forest, post fire snag habitat has increased.

Native wildlife species have adapted to natural fires, but they differ in their response to fire intensity and timing of a fire. The Black Butte fire that burned during the summer of 2006 varied in intensity depending on vegetation and topography. Fires can often cause a short-term increase in the productivity, availability, or nutrient content of forage and browse for many wildlife species (Smith 2000 pg iv). Stand-replacing fires also reduces habitat for those species that require dense cover, yet improves habitat for those that prefer more open vegetative conditions.

The Black Butte Fire burned approximately 33,380 acres, overall creating a mosaic of vegetation habitat conditions. The following table (3.7.1) displays the burn intensity within the fire area and the Antler Salvage project area.

**Table 3.7.1 Burn Intensities within the Black Butte Fire and Antler Salvage Project Area.**

<table>
<thead>
<tr>
<th>Severity</th>
<th>Black Butte Fire Area</th>
<th>%</th>
<th>Antler Salvage Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acres</td>
<td></td>
<td>Acres</td>
</tr>
<tr>
<td>High</td>
<td>2601</td>
<td>8</td>
<td>High</td>
</tr>
<tr>
<td>Mod/High</td>
<td>688</td>
<td>2</td>
<td>Mod/High</td>
</tr>
<tr>
<td>Moderate</td>
<td>2802</td>
<td>8</td>
<td>Moderate</td>
</tr>
<tr>
<td>Low/Mod</td>
<td>1692</td>
<td>5</td>
<td>Low/Mod</td>
</tr>
<tr>
<td>Low</td>
<td>13126</td>
<td>39</td>
<td>Low</td>
</tr>
<tr>
<td>Unburn/Low</td>
<td>11196</td>
<td>34</td>
<td>Unburn/Low</td>
</tr>
<tr>
<td>Unburn</td>
<td>1275</td>
<td>4</td>
<td>Unburn/Outside fire perimeter</td>
</tr>
<tr>
<td>Total</td>
<td>33380</td>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

Unburn/Outside fire perimeter 830 22
Approximately ten percent of the fire area and eleven percent of the Antler Salvage project area has a high/moderate high severity fire rating where there is more than eighty percent mortality in the trees. Approximately thirteen percent of the fire area and twelve percent of the Antler Salvage project area experienced moderate/low moderate fire severity where there is thirty to seventy percent mortality in the trees. Over fifty percent of the fire area and project area consists of less than thirty percent mortality of the trees or did not burned. Some low elevation, ponderosa pine/Douglas-fir forests were severely burned, which within a historic fire regime would be more of an underburn. Cover for big game and nesting habitat for birds has been temporarily reduced as a result of the fire due to the loss of live vegetation. However, big game would benefit from the fire as new vegetative growth occurs in the forage and browse species. Other early-seral and snag associated wildlife species benefit from fires, which has created new foraging, roosting, and nesting habitat in the fire-killed trees.

Table 2.7.2 illustrates the severity of the burn by cover type and size class using photo interpretation of the project area. The lower portion of the burn area occurred in a dry forest vegetative community, while the upper slopes contain more mesic, mixed conifer species.

### Table 3.7.2 Burn Severity by Photo Interpretation of Cover Type & Size Class for the Antler Salvage Project Area (Acres)

<table>
<thead>
<tr>
<th>Cover Type</th>
<th>Size</th>
<th>High</th>
<th>Mod</th>
<th>Low/Mod</th>
<th>Low</th>
<th>Low/Unburn</th>
<th>Unburn/outside fire Perimeter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrub Dominated Total</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Ponderosa Pine</td>
<td>Large &gt;15&quot;</td>
<td>157</td>
<td>118</td>
<td>93</td>
<td>50</td>
<td>611</td>
<td>14</td>
<td>1044</td>
</tr>
<tr>
<td></td>
<td>Medium 10-14.9&quot;</td>
<td>7</td>
<td>19</td>
<td>20</td>
<td>8</td>
<td>64</td>
<td>30</td>
<td>149</td>
</tr>
<tr>
<td></td>
<td>Small 5-9.9&quot;</td>
<td>0</td>
<td>7</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Seed/Sap &lt;5&quot;</td>
<td>0</td>
<td>6</td>
<td>51</td>
<td>24</td>
<td>26</td>
<td>0</td>
<td>107</td>
</tr>
<tr>
<td></td>
<td>Non-forest</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>Ponderosa Pine Total</td>
<td></td>
<td>166</td>
<td>151</td>
<td>172</td>
<td>104</td>
<td>701</td>
<td>44</td>
<td>1339</td>
</tr>
<tr>
<td>Ponderosa Pine/Douglas-fir Mix</td>
<td>Large &gt;15&quot;</td>
<td>89</td>
<td>12</td>
<td>3</td>
<td>397</td>
<td>81</td>
<td>11</td>
<td>582</td>
</tr>
<tr>
<td></td>
<td>Medium 10-14.9&quot;</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>40</td>
<td>0</td>
<td>4</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Small 5-9.9&quot;</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Seed/Sap &lt;5&quot;</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ponderosa pine/Douglas-fir Mix Total</td>
<td></td>
<td>94</td>
<td>12</td>
<td>3</td>
<td>437</td>
<td>81</td>
<td>62</td>
<td>627</td>
</tr>
<tr>
<td>Douglas-fir</td>
<td>Large &gt;15&quot;</td>
<td>104</td>
<td>37</td>
<td>0</td>
<td>42</td>
<td>187</td>
<td>27</td>
<td>397</td>
</tr>
<tr>
<td></td>
<td>Medium 10-14.9&quot;</td>
<td>1</td>
<td>32</td>
<td>0</td>
<td>10</td>
<td>46</td>
<td>1</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>Small 5-9.9&quot;</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Seed/Sap &lt;5&quot;</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>31</td>
<td>20</td>
<td>20</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Non-forest</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Douglas-fir Total</td>
<td></td>
<td>108</td>
<td>70</td>
<td>0</td>
<td>56</td>
<td>270</td>
<td>48</td>
<td>553</td>
</tr>
<tr>
<td>Grand fir/Grand fir mix</td>
<td>Large &gt;15&quot;</td>
<td>22</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>179</td>
<td>66</td>
<td>268</td>
</tr>
<tr>
<td></td>
<td>Medium 10-14.9&quot;</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>64</td>
<td>3</td>
<td>7</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>Small 5-9.9&quot;</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Seed/Sap &lt;5&quot;</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Grand fir/Grand fir mix Total</td>
<td></td>
<td>22</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>244</td>
<td>69</td>
<td>339</td>
</tr>
<tr>
<td>Subalpine fir/Subalpine fir Mix</td>
<td>Large &gt;15&quot;</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>34</td>
<td>136</td>
<td>221</td>
</tr>
<tr>
<td></td>
<td>Medium 10-14.9&quot;</td>
<td>0</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>27</td>
<td>7</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Small 5-9.9&quot;</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Seed/Sap &lt;5&quot;</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Subalpine fir/Subalpine fir Mix Total</td>
<td></td>
<td>0</td>
<td>62</td>
<td>0</td>
<td>0</td>
<td>61</td>
<td>154</td>
<td>278</td>
</tr>
<tr>
<td>Lodgepole Pine/Lodgepole Pine Mix</td>
<td>Large &gt;15&quot;</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>79</td>
<td>203</td>
<td>283</td>
</tr>
<tr>
<td></td>
<td>Medium 10-14.9&quot;</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>104</td>
<td>189</td>
<td>296</td>
</tr>
</tbody>
</table>
Within the project area, seventy-four percent of the project area contains large trees, eighteen percent in medium trees, three percent in the small tree, and four percent in seedling/sapling size classes. The majority of the large diameter, ponderosa pine and Douglas-fir trees are now snags due to the stand-replacing nature of the fire in the drier forest types. More mesic, upper elevation forests burned less intensely where the majority of the trees survived and contain small pockets of trees that burned during the fire.

The following table shows which species the Forest manages for, their status, guild, and whether fire salvage activities are expected to impact individuals or their habitat. A species was selected for detailed analysis if the species was present within the affected area or when known habitats for that species had a likelihood of being affected by the modified proposed actions. Old growth and snag habitats were analyzed because these habitat components are crucial to several species.

| Table 3.7.3 Nez Perce Forest Threatened, Endangered, Sensitive, and Management Indicator Wildlife Species. |
|---|---|---|---|---|---|---|---|---|
| Species | Status | Guild/ Priority Habitat | Potentially Impacted by Activities | Determination of Effects |
| Gray Wolf | T-NE, MIS | Early-seral, Security | Yes | Not Likely to Jeopardize |
| Bald Eagle | T, MIS | Early-seral, Rivers | No activities taking place within 0.5 mile of the Salmon River – Winter Habitat | No Effect |
| Canada Lynx | T | Mesic early-seral/late-seral, Security | Yes | May Affect, Not Likely to Adversely Affect |
| Northern Idaho Ground Squirrel | T | High elevation, subalpine fir/meadows | No | No Effect |
| Northern Goshawk | S, MIS | Mature to old forest | Yes | May Impact Individuals or habitat, but not cause trend towards listing |
| Boreal Toad | S | Riparian areas, ponds | Yes | May Impact Individuals or habitat, but not cause trend towards listing |
| Black Swift | S | Riparian-cliffs | No-lack of habitat | No Impact |
| Townsend’s Big-eared Bat | S | Mines, Caves, Snags | Yes | May Impact Individuals or habitat, but not cause trend towards listing |
| Peregrine Falcon | S, MIS | Cliffs, Early-seral | No-lack of habitat | No Impact |
| Ringneck Snake | S | Low elevation shrubs | No-lack of habitat | No Impact |
| Wolverine | S | Security, Winter Habitat | Yes | May Impact Individuals or habitat, but not cause trend towards listing |
| Harlequin Duck | S | Riparian | No-lack of habitat | No Impact |
| Fisher | S | Mesic Mature - Late successional, Security | Yes | May Impact Individuals or habitat, but not cause trend towards listing |
| Flammulated Owl | S | Ponderosa pine/Douglas-fir, Snags | Yes | May Impact Individuals or habitat, but not cause trend towards listing |
### Species Status

<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Guild/ Priority Habitat</th>
<th>Potentially Impacted by Activities</th>
<th>Determination of Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountain Quail</td>
<td>S</td>
<td>Ponderosa Pine, low elevation shrub</td>
<td>No-lack of habitat</td>
<td>No Impact</td>
</tr>
<tr>
<td>Fringed Myotis</td>
<td>S</td>
<td>Snags</td>
<td>Yes</td>
<td>May Impact Individuals or habitat, but not cause trend towards listing</td>
</tr>
<tr>
<td>White-headed Woodpecker</td>
<td>S</td>
<td>Ponderosa Pine, Snags</td>
<td>Yes</td>
<td>May Impact Individuals or habitat, but not cause trend towards listing</td>
</tr>
<tr>
<td>Black-backed Woodpecker</td>
<td>S</td>
<td>Snags (Fire, landscape disturbance)</td>
<td>Yes</td>
<td>May Impact Individuals or habitat, but not cause trend towards listing</td>
</tr>
<tr>
<td>Coeur d'Alene Salamander</td>
<td>S</td>
<td>Riparian</td>
<td>No-lack of habitat</td>
<td>No Impact</td>
</tr>
<tr>
<td>Pygmy Nuthatch</td>
<td>S</td>
<td>Ponderosa Pine</td>
<td>Yes</td>
<td>May Impact Individuals or habitat, but not cause trend towards listing</td>
</tr>
<tr>
<td>Elk</td>
<td>MIS</td>
<td>Early-seral, Security</td>
<td>Yes</td>
<td>Further reduction in cover, improved forage</td>
</tr>
<tr>
<td>Bighorn Sheep</td>
<td>MIS</td>
<td>Early-seral, Rock Outcrops, Security</td>
<td>No-lack of habitat</td>
<td>No Impacts anticipated</td>
</tr>
<tr>
<td>Shira’s Moose</td>
<td>MIS</td>
<td>Mesic late-seral</td>
<td>Yes</td>
<td>Very minimal impacts anticipated</td>
</tr>
<tr>
<td>Pileated woodpecker</td>
<td>MIS</td>
<td>Mature/Overmature</td>
<td>Yes</td>
<td>Reduction in nesting, foraging, roosting habitat</td>
</tr>
<tr>
<td>American Marten</td>
<td>MIS</td>
<td>Mature/Overmature, Security</td>
<td>Yes</td>
<td>Reduction in snag and down wood habitat</td>
</tr>
<tr>
<td>Neotropical Migratory Birds</td>
<td></td>
<td>Ponderosa Pine, late-seral, Snags, burned forests</td>
<td>Yes</td>
<td>Reduction in snag habitat</td>
</tr>
</tbody>
</table>

1 NE-Nonessential/Experimental; T-Threatened; E-Endangered; S-Sensitive; MIS-Management Indicator Species

### 3.7.4.3 ENVIRONMENTAL CONSEQUENCES

Those species potentially occurring in the project area could be displaced during salvage and associated activities. Potential for the greatest impacts of disturbance is during the nesting/denning periods and big game hunting and wintering seasons. Displacement of those species that require security, as well as other species, could potentially increase mortality.

The primary effect or alteration of wildlife habitat occurred as a result of the 2006 wildfire. Approximately 625 acres are identified for post-fire salvage harvest which amounts to 16% of the Antler Salvage project area and 2% of the fire area.

Salvage activities would remove some nesting and foraging habitat for species that prefer snags and activities would further reduce cover (what little hiding cover the bole of a tree provides) for big game species. Species most impacted by the action is the black-backed woodpecker and other species that prefer snags. However, with the influx of beetle attacks on stressed, live trees, additional habitat would become available as trees die. Leave trees and snags within units and additional acres that burned that are not being treated would mitigate these effects. Table 4 displays the fire severity by size and cover type for the treatment area. Approximately 17% of the large trees within the project area are identified for harvest, 17% percent of the medium trees and 31% of the small size class.

### Table 3.7.4 Burn Severity for Antler Salvage Units by Photo Interpretation Cover Type and Size Class (Acres)

<table>
<thead>
<tr>
<th>Cover Type</th>
<th>Size</th>
<th>High</th>
<th>Mod</th>
<th>Low/ Mod</th>
<th>Low</th>
<th>Low/Unburn</th>
<th>Unburn/Outside Fire Perimeter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponderosa Pine</td>
<td>Large &gt;15&quot;</td>
<td>62</td>
<td>41</td>
<td>12</td>
<td>14</td>
<td>25</td>
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<tr>
<td></td>
<td>Medium 10-14.9&quot;</td>
<td>3</td>
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<td>16</td>
<td>0</td>
<td>28</td>
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<tr>
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<td>0</td>
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<td>1</td>
<td>1</td>
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<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Cover Type</td>
<td>Size</td>
<td>High</td>
<td>Mod</td>
<td>Low/Mod</td>
<td>Low</td>
<td>Low/Unburn</td>
<td>Unburn/Outside Fire Perimeter</td>
<td>Total</td>
</tr>
<tr>
<td>------------------------------------</td>
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<td>Non-forest</td>
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<td>18</td>
<td>41</td>
<td>0</td>
<td>0</td>
<td>186</td>
</tr>
<tr>
<td>Ponderosa Pine/Douglas-fir Mix</td>
<td>Large &gt;15&quot;</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>60</td>
<td>0</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Medium 10-14.9&quot;</td>
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<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Ponderosa pine/Douglas-fir Mix Total</td>
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<td>2</td>
<td>0</td>
<td>60</td>
<td>0</td>
<td>0</td>
<td>63</td>
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<td>Douglas-fir</td>
<td>Large &gt;15&quot;</td>
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<td>6</td>
<td>62</td>
<td>0</td>
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<tr>
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<td>Small 5-9.9&quot;</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
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<tr>
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<td>10</td>
<td>65</td>
<td>0</td>
<td>0</td>
<td>186</td>
</tr>
<tr>
<td>Grand fir/Grand fir mix</td>
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<td>0</td>
<td>36</td>
<td>10</td>
<td>62</td>
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<tr>
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<tr>
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<td>0</td>
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<td>0</td>
</tr>
<tr>
<td></td>
<td>Seed/Sap &lt;5&quot;</td>
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<td>0</td>
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<td>82</td>
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<tr>
<td>Lodgepole Pine/Lodgepole Pine Mix</td>
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<tr>
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<td>Seed/Sap &lt;5&quot;</td>
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</tr>
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<td>Lodgepole Pine/Lodgepole Pine Mix Total</td>
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<td>0</td>
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<td>107</td>
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<td>Subalpine fir/Subalpine fir Mix Total</td>
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<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Grand Total</td>
<td>161</td>
<td>91</td>
<td>16</td>
<td>27</td>
<td>314</td>
<td>15</td>
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<td>625</td>
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</tbody>
</table>

Approximately, seventy-four percent of the treatment units contain large trees that are identified for harvest, nineteen percent in medium trees, six percent in the small tree size classes and the rest seedling/sapling or non-forest. Approximately, 44% of the treatment units are identified for complete removal of burned trees. The majority of this is large diameter ponderosa pine and Douglas-fir. The remaining 56% of the units would have some sort of partial removal of dead and dying trees in any given stand due to the lower severity, patchy burn in these areas.

**Alternative 1 (No Action)**

Alternative 1 would maintain existing snag habitat, canopy cover, and stand structure. Ground disturbing activities would not occur. The Black Butte wildfire of 2006 created a mosaic condition of burnt and unburned vegetation. Future insect outbreaks and root disease would create more habitat for those species associated with snags. Cover and forage within the project area would improve over time as trees start growing resulting from natural regeneration. Over time, the amount and distribution of available foraging would decline as the young trees would eventually grow out of the reach of small animals, and self pruning would reduce the amount of horizontal cover. As snags start to fall, they would provide cover, denning, roosting, and foraging sites for many species. Depending on the amount of down woody material on the ground at any given point in time, it can act as an impediment for animals traveling through the area.

**Alternative 2**

The action alternative affects potentially 625 acres of wildlife habitat. Salvage activities would remove nesting and foraging substrate for snag associated species and some hiding cover (what little hiding cover the bole of a tree provides) for big game. The primary effect or alteration of
habitat occurred because of the 2006 wildfires. Species most impacted by the action alternative are those species associated with snags and low elevation, dry forest communities. With the influx of beetle attacks on stressed trees, additional trees would die; therefore, additional snags would become available in untreated areas. Additional snags would be lost to firewood gathering activities in the more easily accessible areas.

The amount and height of the slash after harvest activities can impede the use of any given unit by wildlife. Burning of the slash would reduce these effects.

Activities associated with the Antler Salvage project would be additive to effects of past activities within the project area. In particular, several of the Antler Salvage units (144 acres) are the same as units previous harvested in the 1993 Scott Fire Salvage project. Harvest associated with this project would also increase the size of forested openings due to past fire salvage efforts from the 1992 Scott Fire. Several forest openings are already over several hundred acres in size and new harvest activities would increase the size of these openings. Dead and dying trees that provide nesting and foraging substrate for many wildlife species would be slightly reduced with this project. This is in addition to the amount of nesting and foraging habitat that was reduced from past projects.

The project proposal utilizes existing road systems and landings. The action alternative would construct less than 2.6 miles of temporary roads, which would be obliterated upon completion of harvest activities. No new road construction or obliteration of existing roads would occur as part of this project. Due to no changes in access in the project area, there would be no improvements to security for big game and furbearers.

3.7.4.4 CONCLUSIONS

3.7.4.4.1 GREY WOLF

Alternative 1 would have “no effect” on gray wolves or their habitat.

The salvage project proposal is consistent with the gray wolf management strategies and recovery efforts in that activities would help maintain ungulate populations and minimize risks of human-induced wolf mortality. It would be unlikely that individual wolves would be impacted by project activities, and effects on wolf populations are expected to be small to negligible at the project, watershed, and Forest levels.

Within Central Idaho, total confirmed wolf packs now easily exceed 15 (http://westerngraywolf.fws.gov/annualrpt04/index.htm). The Rocky Mountain Wolf Recovery 2006 Annual report states that 673 wolves occupy the state of Idaho. Based on local sightings, sign and formal monitoring results, wolves are abundant, widely distributed on the Forest, and increasing numbers of reports suggest local populations of wolves continue growing.

Wolves have an extremely high fecundity rate, are highly mobile, and have sustained some habitat connectivity with large populations in Canada. While other factors outside of the Forest Service’s control (poaching, illegal poisoning, ungulate availability, etc.) may have negative effects on wolves, the actions taken on the Nez Perce National Forest are consistent with maintaining habitat for wolves at all scales. Based on all of the information presented above, there appears to be little risk of loss of population viability on the Nez Perce National Forest. An effects determination for the gray wolf would be “Not Likely to Jeopardize the Continued Existence”.

3.7.4.4.2 CANADA LYNX

The project would not result in a net increase of groomed or designated over-the-snow routes or snowmobile play areas. Should lynx be present in nearby areas when tree removals and other activities take place, minor disturbance impacts are possible. Removing dead and dying trees would reduce the amount of future denning sites. Planting of old units and units associated with this project would improve foraging habitat quicker than if left to the area regenerating naturally.
Project related impacts are considered to be minor in terms of the amount of lynx habitat being treated within the LAU and the lack of sightings in the project area.

The Antler Salvage project is consistent with the standards and guidelines in the Lynx Conservation Assessment and Strategy. There appears to be little risk to lynx populations on the Nez Perce National Forest resulting from implementation of the Antler Salvage project. The actions taken in the project are fully compatible with recovering lynx and consistent with maintaining habitat. The project would have few adverse effects at the project and watershed levels and lynx habitat may improve through time. At the Forest level and across the range of the species, project effects would be expected to be negligible. It is concluded that the proposed project is "Not Likely to Adversely Affect" lynx.

3.7.4.4.3 WOLVERINE

Human disturbance related to proposed salvage activities could have short-term effects on wolverines if activities were to occur during the winter when wolverines might be in the area scavenging for food. The impacts from this disturbance are considered to be very low as the winter range is below harvest activities. None of the treatment areas include denning habitat. Although individual wolverines could be impacted at the project level, populations are not likely to be affected at the Forest level or across the range of the species. Therefore, it is determined that this project "May impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the populations or species".

3.7.4.4.4 NORTHERN GOSHAWK (ACCIPITER GENTILIS)

It is unlikely that the proposed timber harvest activities would contribute to cumulative effects of past, present, and future management actions on goshawk populations or their viability in general. Project activities may reduce some of the components that this species prefers. However, most effects to goshawk habitat occurred as a result of the fire. Forest plan direction appears to be adequate to ensure that key habitat features, including snags, down logs, and interspersion of habitat, would be maintained. Severe stand-replacement fire or insect epidemics may reduce habitat suitability in the short term by reducing canopy cover. For the long term, these disturbance events create foraging habitat components such as snags, down logs, and openings.

Goshawk habitat is well distributed across the Northern Region and Nez Perce National Forest. Based on formal monitoring results, widely scattered incidental sightings, and inventoried habitat information, local goshawk population trends remain relatively stable on the Forest. As field work continues for inventorying for goshawks, additional nests and sightings continue to be discovered.

The northern goshawk is globally secure and in Idaho the population is considered secure. There is no evidence that the northern goshawk is declining in numbers in the western United States (Kennedy 1997). The U.S. Fish and Wildlife Service (1998) found “no evidence that goshawk habitat is limiting the population, or that a significant curtailment of the species habitat or range is occurring. Goshawks remain widely distributed throughout their historic range in the western United States” (U.S. Fish and Wildlife Service 1998).

Based on the presented information there appears to be little risk of loss of population viability on the Nez Perce National Forest. At the Forest level and across the range of the species, the effects of past, present, and reasonably foreseeable future actions appear small to negligible. It is determined that salvage activities “May impact individual goshawks or habitat, but would not likely result in a trend toward federal listing or reduced viability for the populations or species”. Forest Plan (1987) standards would be met for this species.

3.7.4.4.5 FISHER

Project activities may reduce some of the components that this species prefers. However, most effects to fisher habitat occurred as a result of the fire. Adherence to snag and down woody debris design criteria reduces the impacts to this species and retains future denning sites.
Conifer planting proposed in the action alternative, as well as old harvest units burned from the 2006 fire, would increase habitat for various prey species.

Fisher habitat is well distributed across the Northern Region and Nez Perce National Forest. Based on monitoring results and widely scattered incidental sightings, local fisher population trends remain relatively stable on the Forest. At the project level, fisher could be affected. However, at the Forest level and across the range of the species, the effects of past, present, and reasonably foreseeable future actions appear small to negligible. It is determined that salvage activities "May impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the populations or species".

3.7.4.4.6 **TOWNSEND’S BIG-EARED BAT (CORYNORHINUS TOWNSENDII)**

None of the existing structures within the project area would be disturbed by this or other projects within the project area. No known current or historical communal roosts, or potential communal roosting habitat occurs in the project area. The action alternative provides full protection to potential riparian roosting and feeding habitat through a combination of project design and protective measures. There are no documented occurrences of this species in or near the proposed project areas.

Implementation of this project cumulatively with other past or ongoing activities would not be expected to produce any adverse cumulative effects. Although some roosting habitat may be lost, ample habitat occurs outside of the treatment units. Although individual Townsend’s could be impacted at the project level, populations are not likely to be affected at the Forest level or across the range of the species. Based on this information, the modified proposed action "May impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the populations or species".

3.7.4.4.6 **Boreal toad (Bufo boreas)**

Given that the treatment areas are not considered to be habitat, no suitable breeding habitat would be affected, that use of these areas by amphibians is minimal, and there is potential for individual mortality due to harvest activities and broadcast burning, it is concluded that this project "May impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the populations or species". Forest Plan (1987) standards would be met for this species. Based on the information there appears to be little risk to boreal toad population viability on the Nez Perce National Forest.

3.7.4.4.7 **BLACK-BACKED WOODPECKER (PICOIDES ARCTICUS)**

Activities that reduce the potential for wildfire and epidemics or outbreaks of insect populations also reduces habitat for black-backed woodpeckers. At the forest scale and across the species range, impacts of the project appear to be negligible. Across the forest and the range of this species, there appears to be a considerable amount of potential habitat. Populations are capable of responding fairly quickly to favorable conditions created by large, intense fires and insect outbreaks (which is occurring on the Forest) where these birds exploit the insect populations that develop in fire killed and stressed trees.

Based on widely scattered incidental sightings, the number of black-backed woodpeckers seems to be increasing on the Nez Perce National Forest. Evidence also suggests that the number of black-backed woodpeckers in the United States appear to be increasing (as cited in Dixon and Saab 2000).

Literature suggests that the quantity of black-backed woodpecker habitat has likely declined over historic levels due to fire suppression (Hutto 1995). Based on the current level of insect and natural fire activity on the Nez Perce National Forest and in the Region (Samson 2006a, 2006b), habitat for the black-backed woodpecker is abundant and well distributed on the Forest and within the Region. There is sufficient habitat to support viable populations of black-backed woodpeckers in the Salmon River drainage and Forest-wide.
There have been substantial increases in apparent rates of tree death by natural agents across the Forest. Given the current mountain pine beetle epidemic and risk of fires in the next decade, black-backed woodpecker habitat abundance and distribution is increasing across the Forest.

Even with the loss of some fire-killed trees and potential snags through salvage activities (625 acres out of a 33,380-acre fire), the amount of habitat left on the landscape is sufficient in meeting the needs of black-backed woodpeckers, as well as many other wildlife species. Although individual species may be impacted by implementing this project, populations are not likely to be affected at the Forest level or across the range of the species. Therefore, it is determined that salvage activities “May impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the populations or species”. Forest Plan (1987) standards would be met.

3.7.4.4.8 WHITE-HEADED WOODPECKER (*Picoides albolarvatus*)

Fire salvage may reduce some of the components that this species prefers. However, most effects to white-headed woodpecker habitat occurred as a result of the fire. Conifer planting proposed in the action alternative, as well as old harvest units burned from the 2006 fire, would improve future nesting and foraging habitat. Although individual white-headed woodpeckers could be impacted at the project level, populations are not likely to be affected at the Forest level or across the range of the species. Therefore, it is determined that salvage activities “May impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the populations or species”. Forest Plan (1987) standards would be met.

3.7.4.4.9 FRINGED MYOTIS (*Myotis thysanodes*)

None of the existing structures within the project area would be disturbed by this or other projects within the project area. Prior to the fire, the fringed myotis was known to occur in the project area. The action alternative provides full protection to potential riparian roosting and feeding habitat through a combination of project design and protective measures. Implementation of this project cumulatively with other past or ongoing activities would not be expected to produce any adverse cumulative effects. Although some roosting habitat may be lost, ample habitat occurs outside of the treatment units. Based on this information, the modified proposed action “May impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the populations or species”. Forest Plan (1987) standards would be met.

Forest Plan objectives and standards for snag retention, and protection of water quality and riparian habitat benefit this species. Efforts are underway on the Nez Perce National Forest to survey old mine adits for bats, primarily in conjunction with adit closures. In addition, the Northern Region has continued to fund another year of bat inventories on several Forests within the Region. Based on the information presented there appears to be little risk of loss of population viability on the Nez Perce National Forest.

3.7.4.4.10 FLAMMULATED OWL (*Otus flammeolus*)

Proposed fire salvage harvest would contribute to cumulative effects of past, present, and future management actions on flammulated owls and their habitat. Project activities would reduce some of the components that this species prefers. However, most effects to flammulated owl habitat occurred as a result of the fire. Conifer planting proposed in the action alternative, as well as old harvest units burned from the 2006 fire, would improve habitat conditions. Based on the work presented by Samson (2006a) the current amount of flammulated owl habitat is more prevalent today than historically. Flammulated owl habitat has increased over historic levels due to fire suppression and forest succession. The quality of that habitat has changed as open understory habitats have closed due to general and widespread increases in relative abundance of seedling/sapling and pole size Douglas-fir. These areas also tend to have more severe fires than what occurred historically.
Based on formal survey results, widely scattered incidental sightings, and inventoried habitat information, local flammulated owl population trends remain relatively stable or slightly declining on the Forest. This is based on results from the 2005 re-inventory of 1992 transects that seem to indicate that along certain routes, flammulated owl numbers have declined over that 13 year timeframe.

Habitat for the flammulated owl is well distributed in breaklands along the major rivers and tributaries on the Forest. Within the Region, flammulated owl habitat is abundant and there is enough habitat to maintain flammulated owl populations. Severe stand-replacement fire or insect epidemics may reduce habitat suitability in the short term by reducing canopy cover. These disturbance events also create habitat components such as snags and a mosaic of vegetative conditions.

Although individual flammulated owls could be impacted at the project level, populations are not likely to be affected at the Forest level or across the range of the species. It is determined that salvage activities "May impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the populations or species". Forest Plan (1987) standards would be met.

3.7.4.4.11 Pygmy Nuthatch (Sitta pygmaea)

Fire salvage may reduce some of the components that this species prefers. However, most effects to pygmy nuthatch habitat occurred as a result of the fire. Conifer planting proposed in the action alternative, as well as old harvest units burned from the 2006 fire, would improve future nesting and foraging habitat. Although individual species may be impacted by implementing this project, populations are not likely to be affected at the Forest level or across the range of the species. It is determined that salvage activities "May impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the populations or species". Forest Plan (1987) standards would be met.

3.7.4.4.12 American Marten (Martes americana)

Project activities may reduce some of the components that this species prefers. However, most effects to marten habitat occurred as a result of the fire. Adherence to snag and down woody debris design criteria reduces the impacts to this species and retains future denning sites. Conifer planting proposed in the action alternative, as well as old harvest units burned from the 2006 fire, would increase habitat for various prey species.

Marten habitat is well distributed across the Northern Region and Nez Perce National Forest. Based on monitoring results and widely scattered incidental sightings, local marten population trends remain relatively stable on the Forest. At the project level, marten could be affected. However, at the Forest level and across the range of the species, the effects of past, present, and reasonably foreseeable future actions appear small to negligible.

3.7.4.4.13 Pileated Woodpecker (Dryocopus pileatus)

Based on the available information for several indicators including habitat data, inventory and monitoring data, and population trend data, information suggests a stable or increasing pileated woodpecker population trend in the Nez Perce Forest. The habitat is abundant and well distributed. Available data support the conclusion that local pileated woodpecker population trends, are relatively consistent with larger scale analyses conclusions including the North American Breeding Bird Survey Trend results cited above. Overall, pileated woodpecker populations continue to remain relatively healthy and stable or slightly increasing.

Although individual birds or pairs could be disturbed by project activities, none of the proposed alternatives should affect populations at the local or watershed level. Based on the current level of insect and natural fire activity on the Nez Perce National Forest and in the Region (Samson 2006a, 2006b), habitat for the pileated woodpecker is abundant and well distributed on the Forest and within the Region. There is sufficient habitat to support viable populations of black-backed
woodpeckers in the Salmon River drainage and Forest-wide. At the Forest level and across the range of the species, the effects of past, present, and reasonably foreseeable future actions appear small to negligible. Even though project activities may reduce some of the components that this species prefers, populations are not likely to be affected at the Forest level or across the range of the species. Forest Plan (1987) standards would be met for this species.

3.7.4.4.14 SHIRA’S MOOSE (*ALCES ALCES*)

All indications are that healthy populations are well distributed across the western states, Idaho, and the Nez Perce National Forest. Based on the information presented there appears to be little risk of loss of population viability on the Nez Perce National Forest.

3.7.4.4.15 ROCKY MOUNTAIN ELK (*CERVUS ELAPHUS*)

Cover was reduced due to the loss of tree and shrub foliage, but shrubs would likely grow in over the next several years and replace some hiding cover. However, some visual blockage is maintained by fire-killed trees and therefore maintains some cover in the short-term provided by burned trees until they fall. This screen would be reduced by harvest activities. In time, shrubs and seedlings would grow tall enough to provide cover and reduce the long-term effects of cover loss to the fires. Therefore, none of the proposed activities should affect local elk populations at the local or Forest level.

Factors outside of the Forest Service’s control such as the loss of winter ranges to subdivision, hunter harvest, highway road-kill, severe winters, drought, disease, hunting seasons and bag limits, etc. may have negative effects on elk and the species it represents. However, the actions taken in the Antler Salvage project are consistent with maintaining habitat for elk at all scales. These species are largely habitat generalists, and habitat occurs throughout considerable portions of North America. All indications are that healthy populations are well distributed across the western states, Idaho, and the Nez Perce National Forest. Based on the information presented there appears to be little risk to elk populations on the Nez Perce National Forest.

3.7.4.4.16 NEOTROPICAL MIGRATORY BIRDS

At the project and watershed level, the cumulative effects of the proposed salvage project may affect individuals or local populations of some bird species. At the Forest level and across the range of these species, effects would be expected to be small to negligible.

3.7.5 Existing Condition

3.7.5.1 THREATENED AND ENDANGERED SPECIES

This analysis responds to the requirement that federal agencies address effects to listed threatened, endangered, and proposed species during project planning under the Endangered Species Act of 1973 as amended (P.L. 96-159 1531(c)).

Threatened and endangered species selected for this analysis are consistent with U.S. Fish and Wildlife Service Species list 2007-SL-0302 dated June 1, 2007. This update lists the gray wolf, bald eagle, and northern Idaho ground squirrel as federally listed species that may occur or whose habitat may occur on the Salmon River District. No “proposed” or “candidate” wildlife species are currently listed.

The Canada lynx was removed from the current Nez Perce National Forest list based on new criteria that require very specific evidence of recent lynx presence for making a determination of “occupied” or “unoccupied” habitat for each National Forest. Although the Clearwater and Lolo National Forests, adjacent to the Nez Perce, have been determined “occupied” based on survey results, DNA, or photos, the Nez Perce has not yet met the criteria and has been designated “unoccupied”.

Although historic trapping records indicate lynx occupied the Forest in the past and incidental sightings of lynx have been documented in more recent years, these factors are not considered in
the new determinations for lynx occupancy. Since “best available science” suggests that lynx do occupy the Nez Perce National Forest, the Forest is cooperating in lynx winter surveys to obtain the necessary information to address the criteria being used to establish occupancy. In the meantime, the Nez Perce would continue to evaluate the effects of our activities on lynx and USFWS would continue to consult on or review our lynx analyses, as appropriate for the determination.

Officially, the USFWS does not consider any portion of the Nez Perce National Forest to be permanently occupied by grizzly bears at this time. As a result, the Nez Perce National Forest is not required to consult with USFWS regarding effects to grizzly bear from management actions. Therefore, further analysis regarding grizzly bear and potential effects of the proposed project activities would not be carried forward.

Habitat for the northern Idaho ground squirrel (Spermophilus brunneus brunneus) is limited to the most southwest portion of the District, south of Riggins, Idaho, in the Rapid River Drainage. Due to the lack of potential suitable habitat elsewhere on the district, this species would not be carried forward in the analysis. Based on this information, an effects determination for the northern Idaho ground squirrel would be “No Effect”.

3.7.5.1.1  Gray Wolf (Canis lupus)

Historically, gray wolves were known to range throughout Idaho until the mid to late 1800’s. In the early 1900s, their numbers were significantly reduced due to conflicts with mining and livestock operations, along with a reduction in their prey base. In January of 1995 and 1996, gray wolves were reintroduced into central Idaho as an experimental, nonessential population.

The gray wolf has a global rank of G4 (apparently secure) and an Idaho State ranking of S1 (critically imperiled) (Nature Serve 2007, S3-Idaho Department of Fish and Game 2005, Groves et al. 1997a). Wolves were reintroduced into north central Idaho beginning in 1995. Wolf populations have since multiplied dramatically throughout the state. Based on most recent monitoring results, north Idaho wolf populations continue to increase to meet or exceed local recovery population goals.

There were at least 72 documented packs in the Idaho portion of the Central Idaho Wolf Recovery Area (Nadeau et al. 2006, pg 100). The population for the state of Idaho is estimated at 673 wolves (Nadeau Nadeau et al. 2006, pg 100). Within Central Idaho, total confirmed wolf packs now easily exceed 15 (http://mountain-prairie.fws.gov/wolf/annualreports.htm). The Wolf Reintroduction Final Rule (USDA Fish and Wildlife Service 1994) stated that “when six or more breeding pairs are established in an experimental population area (Central Idaho), no land-use restrictions may be employed outside of national parks or national wildlife refuges, unless wolf populations fail to maintain positive growth rates toward population recovery levels for 2 consecutive years”.

Wolves are known to use the project area. There are approximately 8+ known wolf packs on the Nez Perce National Forest. An active wolf pack utilizes the project area for hunting. There are no known wolf dens or rendezvous sites within or near any of the proposed treatment areas.

The Antler Salvage project area supports primarily year round habitat for big game species. The most important limiting habitat factor for wolves is believed to be human-caused mortalities, such as shootings and vehicle-strikes.

Potential effects of the alternative are associated with changes in big game habitat and exposure to human disturbance. All alternatives would continue to allow trail and highway vehicles during the summer months and snowmobiles during the winter. Such access increases the opportunity for people to observe and possibly shoot wolves that might be in the area. The quality and quantity of forage for prey species should be highly palatable and rich in nutrients for the next couple of years. The potential for the spread of noxious weeds would decrease the quality of the forage within the fire area.

3.7.5.1.1  Canada Lynx (Lynx Canadensis)
Canada lynx were listed as a threatened species on March 24, 2000. Although lynx have sometimes been portrayed as a late-successional forest species, lynx appear to be more closely associated with a mosaic of late- and early-successional stages (Roloff 1995 pg. 77). Prey consists of snowshoe hares and a variety of birds and other small mammals.

The Canada lynx has a global rank of G5 (widespread, abundant, and secure) and an Idaho State ranking of S1 (critically imperiled) (Nature Serve 2007, Engle and Harris 2001, Idaho Department of Fish and Game 2005, G4-Groves et al. 1997a).

There are approximately a dozen anecdotal reports of lynx on the Forest, yet these sightings are infrequent (Forest records). The Rocky Mountain Research Station, in cooperation with the Northern Region and the Nez Perce National Forest, conducted winter track surveys using established protocols during 2007 in all areas of the forest, excluding roadless and wilderness areas. No lynx were detected during survey efforts conducted in January and March 2007. Discussions are occurring between the Forest and the Rocky Mountain Research Station to continue surveys in 2008.

Lynx analysis unit (LAU) delineations and habitat mapping actions directed by the Canada Lynx Conservation Assessment and Strategy (LCAS 2000) have been completed for the entire forest, which includes the project area. The Antler Salvage project is located within one lynx analysis unit (#2071102). This process has identified suitable foraging and denning habitat in the Little Slate Creek watershed. Table 5 displays the current estimates for denning, foraging, and unsuitable habitat in this LAU.

<table>
<thead>
<tr>
<th>LAU Name</th>
<th>LAU Total Acres</th>
<th>Acres of Habitat</th>
<th>Denning Habitat (%)</th>
<th>Foraging Habitat (%)</th>
<th>Unsuitable Habitat (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2071102</td>
<td>28,739</td>
<td>15,691</td>
<td>15</td>
<td>84</td>
<td>1</td>
</tr>
</tbody>
</table>

The fire burned a small portion of the southern end of the LAU. The fire burned with more of a mosaic, creating patches of burned and unburned areas. Only a small portion of the lynx habitat within the project area may have burned severe enough to have possibly created an unsuitable condition. There is ample forage and denning habitat within the remaining portion of the LAU north of the project area.

3.7.5.1.1 Bald Eagle

The Salmon River provides an important wintering area for bald eagles during the months of November through March. In 1978, National Forests within Region 1 were directed to designate essential bald eagle habitat. This designation included all areas within one-half mile on the north side of the river from White Bird, Idaho to Vinegar Creek.

The Salmon River is surveyed annually as part of the interagency Mid-winter Bald Eagle Survey. Annual surveys for bald eagles are also conducted on the South Fork Clearwater, Little Salmon, Middle Fork Clearwater and Selway Rivers, and Clear Creek. Based on the monitoring data, local bald eagle population trends are considered stable or slightly increasing.

Carrion from large ungulates is the primary food source for local eagles, and they use large, open-branched ponderosa pine as perch and roost trees, which allow good visibility of large ungulate carcasses. The majority of the perch/roost sites are directly adjacent to the Salmon River. There is no known bald eagle nesting occurring in the Salmon River subbasin or the Nez Perce National Forest.

3.7.5.2 SENSITIVE SPECIES

The USDA Forest Service designates sensitive species. Habitat management for these species is aimed at preventing additional population declines, which could lead to listing under the Endangered Species Act. Sensitive species are those plants and animals identified by the Regional Forester for which population viability is a concern (FSM 2670.5). There are 16
sensitive species currently listed on the Nez Perce National Forest by the Northern Region Regional Forester (dated 03/2005).

The effects were measured against the Forest Plan standards and guidelines, sensitive species goals and conservation strategies (if available).

The current Region 1 sensitive species that may occur in or have habitat within the project area include: northern goshawk, boreal toad, Townsend’s big-eared bat, wolverine, fisher, fringed myotis, flammulated owl, white-headed woodpecker, black-backed woodpecker, and pygmy nuthatch. Due to lack of suitable habitat, and the lack of confirmed species use in or near project area, there are no known or anticipated effects to the black swift, peregrine falcon, ringneck snake, mountain quail, harlequin duck, or Coeur d’Alene salamander. This is also the case when combined with past, present, or reasonably foreseeable future actions. For these reasons, no further discussion on these sensitive species will follow. Due to lack of habitat, proposed activities would have “No Impact” on these species.

3.7.5.2.1 Wolverine (*Gulo Gulo*)

Within the western U.S., wolverines occur principally in remote, high-elevation mountain basins and cirques, particularly during the breeding season (Rowland et al. 2003). Wolverines are opportunistic scavengers and ungulate carrion is considered an important food source. Productivity of habitats and related ungulate carrion availability are important aspects of wolverine habitat management.


The wolverine has a global rank of G4 (not rare, apparently secure) and an Idaho State ranking of S2 (imperiled) (Nature Serve 2007, Idaho Department of Fish and Game 2005, Engle and Harris 2001, Groves et al. 1997a). On Nez Perce Forest, wolverines are considered a sensitive species and are generally assumed to occur principally at higher elevations near wilderness and roadless areas and foraging in the winter in lower elevations. Confirmed wolverine sightings have been documented on the Forest.

3.7.5.2.1 Northern Goshawk (*Accipiter gentilis*)

The northern goshawk is considered a late-seral or old growth associated species. The Northern Region of the Forest Service also considers the northern goshawk a sensitive species.

The northern goshawk is found throughout North America (DeGraaf et al. 1991, p. 79). The northern goshawk is a large forest raptor that occupies forested habitats throughout the northern hemisphere. Although goshawks nest in a variety of habitat types, they often prefer stands of mature timber with open understories and closed canopies; nest stands are often located near water, roads, and other forest openings (Squires and Reynolds 1997). Most literature with regards to goshawk nesting habitat depict that goshawks tend to nest more frequently on north aspects (Reynolds et al. 1992, pg. 13), yet some studies have observed that in mixed conifer types there is no preference for north aspects, except for ponderosa pine types (Hayward et al. 1990).

Northern goshawk habitat in the western U.S. is characterized by mature to old growth forest with dense canopy cover. Typical goshawk nesting habitat in western Montana and northern Idaho is mature to overmature conifer forest with a closed canopy (75-85% cover) on a moderate slope (15-35%) facing north, at or near the bottom of a slope (Hayward and Escano 1989). Relatively large diameter trees, and wide spacing of trees and foliage, allow birds to fly beneath the upper canopy. Goshawks have been found to use the same nesting area for decades, and goshawk territories typically contain a number of alternate nests (Patla et al. 1995).
Recent studies suggest that goshawks may not be as tied to old growth forests as previously understood. McGrath et al. (2003) indicate that old growth forest structures are not useful in predicting goshawk nesting habitat. In the northern Rockies, goshawks are often associated with mature forest, not necessarily old growth forests (Squires and Ruggerio 1996, Clough 2000:67-68).

The northern goshawk has a global rank of G5 (widespread, abundant, and secure) and an Idaho State ranking of S4 (apparently secure) (Nature Serve 2007, Engle and Harris 2001, G4/S4-Groves et al. 1997a). Goshawks are not listed as a species of greatest conservation need for the state of Idaho (Idaho Department of Fish and Game 2005-Idaho Comprehensive Wildlife Conservation Strategy). The estimated population level for goshawks is at the state population target noted in “Partners In Flight Continental Priorities and Objectives for Idaho” (Rosenberg 2004).

Kennedy (1997) conducted a review of available, peer-reviewed research, and found no evidence of a decline in goshawks in North America based on its range, demographics (density, fecundity, and survival), and population trends. In its status review, the U.S. Fish and Wildlife Service determined that listing under the Endangered Species Act was not warranted (U.S. Fish and Wildlife Service 1998). The U.S. Fish and Wildlife Service (1998) found “no evidence that goshawk habitat is limiting the population, or that a significant curtailment of the species habitat or range is occurring. Goshawks remain widely distributed throughout their historic range in the western United States” (U.S. Fish and Wildlife Service 1998).

Based on work by Samson (2006a and 2006b) there is sufficient habitat in the Northern Region for northern goshawks. Samson (2006a) estimated that there is approximately 41,464 acres of nesting habitat on the Nez Perce National Forest, enough to support 276 to 1382 pairs of goshawks (assuming one to five alternative nests are constructed by the northern goshawk within the home range) (based on a 25-30 acre nest site, Reynolds et al. 1992). An estimate of foraging area based on non-overlapping pairs (1758 hectares (4344 acres) based on telemetry, Bright-Smith and Mannan 1994) suggests that the Nez Perce National Forest has approximately 695,465 ac of foraging habitat or enough habitat that could support approximately 160 pairs of goshawks (Samson 2006a). Samson (2006b) also stated that there is enough habitat within the Northern Region and on the Nez Perce National Forest to maintain viable populations of northern goshawks.

Using the Forest Inventory and Analysis (FIA) data, goshawk habitat was modeled for the Forest. Goshawk nesting habitat was defined as dry forest and mesic, mixed conifer vegetation with large trees and closed canopies (>60%). Foraging habitat consists of pole-sized trees or larger with moderate and high closed canopies (>40%).

The results of the Forest-wide Forest Inventory and Analysis (FIA) habitat modeling indicate that, overall, goshawk habitat is widely distributed across the Forest. Forest-wide, the total potential goshawk habitat (which includes nesting and foraging) ranges from 34-42% of the forested lands. The amount and distribution of FIA habitat data is both a reflection of the capability and current condition of the landscape, as well as the number of plots across the landscape and within each watershed.

Goshawks have been recorded across the Nez Perce National Forest and contain 13 nest sites. In addition, goshawks have been detected on permanent long-term monitoring transects (1994-2004) as part of the Northern Region landbird-monitoring program, as well as the Northern Region’s 2005 survey for goshawks. This species may be more common than records suggest, as it is fairly inconspicuous due to its behavior and preference for heavily forested areas. The project area is not known to be inhabited by goshawks. This is based a review of Idaho Conservation Database records; District/Forest monitoring efforts, surveys, and incidental observation records; and Regional survey information.

For this analysis, goshawk nesting habitat is defined as any vegetation with large trees (>14”dbh) that burned with a fire severity rating of low/moderate or less. Nesting habitat for goshawks is somewhat limiting due to the nature of the burn and loss of live tree canopy. There is
approximately 2200 acres of potential nesting habitat in the project area for goshawks. Steep slopes also reduce the value of the area as being considered goshawk nesting habitat. Foraging habitat for goshawks is defined as any vegetation. Hunting may occur along the edges of the old and new units and burned areas. Approximately 3815 acres are considered potential goshawk foraging habitat, basically enough habitat for one pair of goshawks.

3.7.5.2.1 Fisher (Martes pennanti)

The fisher is a management indicator and sensitive species on the Nez Perce National Forest. Fisher occurrence in western North America is closely associated with low- to mid-elevation forests with a coniferous component, large snags or decadent live trees and logs for denning and resting, and complex physical structure near the forest floor to support adequate prey populations (Aubry and Lewis 2003).

In a fisher research project conducted in 1985 to 1988 (Jones 1991) near Elk City, Idaho, 90% of all fisher summer use observations occurred in mature and old growth forests having a relatively high composition of Pacific yew, moderate to large diameter spruce, and large diameter Douglas-fir. Fisher locations were strongly associated with water and they avoided areas with less then 40% canopy closure and drier habitats. Fisher used sapling, pole and younger forests for hunting. In winter, 54% of the fishers were relocated in mature and old growth forests and in young forests 46% of the time. Availability of large diameter logs (>21 inches DBH) appeared to be particularly important in winter habitat selection. Fishers have been documented throughout much of the Nez Perce National Forest. Fisher home ranges in north-central Idaho were 2 to 11 times larger than other reported fisher home ranges, and averaged 20,400 acres in males and 10,080 acres in females (Jones 1991).

Fisher has a global rank of G5 (widespread, abundant, and secure) and an Idaho State ranking of S1 (critically imperiled) (Nature Serve 2007, Idaho Department of Fish and Game 2005, Engle and Harris 2001, Groves et al. 1997a). In Idaho, the species occurs in the northern and central parts of the state.

Samson (2006b) stated that there is enough habitat within the Northern Region and on the Nez Perce National Forest to maintain viable populations of fisher. Samson (2006b) estimated that there are approximately 409,700 acres of summer and 695,600 acres of winter habitat on the Nez Perce National Forest, enough to support 20 male and 40 female fisher.

Using the Forest Inventory and Analysis (FIA) data, fisher habitat was modeled for the Forest. Fisher summer habitat is defined as mesic, mixed conifer greater than or equal to 14” in diameter, except for lodgepole pine where size is greater than or equal to 9 inches. Canopy cover is greater than or equal to 40%. Winter habitat is defined as mesic, mixed conifer including lodgepole pine greater than 9 inches in diameter.

The results of the Forest-wide Forest Inventory and Analysis (FIA) habitat modeling indicate that, overall, fisher habitat is widely distributed across the Forest. Forest-wide, the total potential fisher habitat ranges from 17-23% of the forested landbase for summer habitat and 29-37% for winter habitat. The amount and distribution of FIA habitat data is both a reflection of the capability and current condition of the landscape, as well as the number of plots across the landscape and within each watershed.

Fisher are known to occur on the District. A review of the Forest’s monitoring of winter track surveys and District or State observation files reveal that fisher tracks have been detected on routes west of the project area. It is reasonable to assume that fisher inhabit the project area.

For this analysis, fisher summer habitat is defined as large trees in mixed grand fir or subalpine fir. There is approximately 489 acres of mesic, mixed conifer habitats. Approximately 73 acres of the 488 acres (15%) burned with a fire severity rating of moderate or higher and may limit the amount of closed canopy, mixed conifer forests suitable for fisher. Winter habitat is defined as mixed grand fir, lodgepole pine, and subalpine fir stands greater than 9” dbh. There is approximately 1185 acres of winter habitat in the project. Approximately 92 acres (8%) burned with a fire severity rating of moderate and higher and may limit the amount of habitat that is
suitable for fisher in the winter. The home range size for both a male and female fisher is larger than the amount of habitat available for fisher in the project area.

3.7.5.2.1  Townsend’s Big-eared Bat (*Corynorhinus townsendii*)

Big-eared bats occur in a wide variety of habitat types and forage in many areas, including grasslands, shrublands, vegetated stream corridors, forests, and along roadways that provide easy flight "tunnels" through forested habitat. They use snags, caves, buildings and rock crevasses for daily roosting and for maternity roosts, and are very susceptible to disturbance at those sites. Open water is also important habitat for bats.

Townsend’s big-eared bat has a global rank of G4 (not rare, apparently secure) and an Idaho State ranking of S2 (imperiled) (Nature Serve 2007, S3-Idaho Department of Fish and Game 2005, Engle and Harris 2001, Groves et al. 1997a).

The Townsend’s big-eared bat is a sensitive species on the Nez Perce National Forest. The western portion of the Nez Perce Forest is within the Idaho predicted distribution of Townsend’s big-eared bat (IDFG 2005). Townsend’s big-eared bats are known to occur in the Salmon River Basin. The project area provides foraging habitat and large diameter snags for roosting. There are no caves, mines, rock crevasses or buildings suitable for roosting sites within treatment units. Several old buildings within the project area were destroyed in the fire. There are no known winter summer roosting, summer roosting, or summer maternity sites identified within the project area. Large diameter snags that are hollow may provide alternative roost sites.

Implementation of this project would not affect suitable roosting habitat such as caves, rock crevasse or buildings. Foraging activity would occur outside of project activity hours, and the availability of foraging would not be reduced, as there would be no effect to the availability of prey species such as insects and moths.

3.7.5.3  RIPARIAN AND AQUATIC ASSOCIATED SPECIES

3.7.5.3.1  Boreal toad (*Bufo boreas*)

Western toads use moist areas such as streams, ponds and lakes for breeding, foraging and overwintering habitat. They prefer shallow areas with mud bottoms and high temperature areas, often in sites with vegetation present for breeding. A wide variety of upland habitats are used during non-breeding times. Riparian areas serve as migratory or dispersal corridors. Important upland habitat structure needed includes down woody debris where individuals can access moist microhabitats during the hot daytime summer hours to avoid desiccation.

The boreal toad has a global rank of G4 (not rare, apparently secure) and an Idaho State ranking of S4 (apparently secure) (Nature Serve 2007, Engel and Harris 2001, Groves et al. 1997a).

The boreal toad is a sensitive species on the Nez Perce National Forest and is known to occur on the Nez Perce Forest. Since western toads use a variety of habitats, non-breeding use could occur in the project area. There is no aquatic habitat present in the proposed units, but moist habitat occurs in riparian areas within the project area. The still or relatively slow-moving water that might be found in streams which western toads prefer for breeding is not available. A few ponds resulting from old mining activities may be scattered throughout the project area.

3.7.5.4  DISTURBANCE DEPENDENT SPECIES

3.7.5.4.1  Black-backed woodpecker (*Picoides arcticus*)

The black-backed woodpecker inhabits boreal forests throughout North America, including Idaho. Black-backed woodpeckers are also somewhat nomadic and would move to large areas with fire-killed dead and/or dying trees or infected with bark and wood-boring beetles. Black-backed woodpeckers are habitat specialists that respond opportunistically to dramatic changes in forest structure and composition, such as fire and insect outbreaks (Dixon and Saab 2000, Powell 2000). Population spurts associated with large fires and insect epidemics may be necessary for maintaining black-backed woodpecker populations. Because of the rarity of fires and the
frequency of salvage logging, the black-backed woodpecker may now exist at population levels much lower than in historic times (Hutto 1995).

Black-backed woodpeckers inhabit montane forests; primarily ponderosa and lodge-pole pine stands (Bull 1980:6-7, 26, 35, 41-42, 54, 59, 62-65). They are frequently seen inhabiting burned areas, harvested areas, or beetle-killed forests. Old growth lodgepole pine, ponderosa pine, Douglas-fir, and mixed conifer forests provide such conditions (Washington Dept. Wildlife 1991 p. 1). Optimal black-backed woodpecker habitat however, is provided by recent (<5 year old) burned-over forest (Washington Dept. Wildlife 1991 p. 1). Nest sites are located in cavities of dead or live trees containing heartrot near water.

Black-backed woodpeckers feed in concentrations of dead and dying trees, and are often seen feeding in areas where there have been recent fires or insect outbreaks. Black-backed woodpeckers would also forage in stands undergoing bark beetle outbreaks, but density estimates in these stands are substantially lower than in post-fire forests (Powell 2000). Such sites provide the limited habitat conditions required for nesting and feeding. Black-backed woodpecker numbers decline about five years after a fire or beetle outbreak, paralleling the decline in bark beetle larvae.

Bull et al. (1986) and Goggans et al. (1988) studied black-backed woodpeckers in beetle-infected forests. Bull et al. (1986) observed black-backs foraging most often in ponderosa pine and lodgepole pine trees, but western larch and Douglas-fir were also used. Forage trees tended to be small, with mean dbh being 12 inches. Goggans et al. (1988) found black-backed woodpeckers foraged and roosted in mature and overmature stands of lodgepole pine and lodgepole pine-dominated mixed-conifer stands. Forage trees ranged in size from 8-20 inches dbh, with a mean dbh of 14 inches.

Habitat for black-backed woodpeckers and other snag associated species is defined as medium and large trees consisting of a low-moderate and higher fire severity rating. In Idaho and Oregon, home range sizes for black-backed woodpeckers range from 178-306 acres (Dixon and Saab 2000).


Black-backed woodpeckers are not listed as a species of greatest conservation need for the state of Idaho (Idaho Department of Fish and Game 2005-Idaho Comprehensive Wildlife Conservation Strategy). The black-backed woodpecker estimated population level is at the state population target noted in "Partners In Flight Continental Priorities and Objectives for Idaho" (Rosenberg 2004).

The National Breeding Bird Survey (BBS) is a national bird occurrence monitoring program coordinated by the US Geological Survey. These routes are used to monitor long-term changes in populations as part of the national Breeding Survey effort (Sauer et al. 2005). Although single survey routes do not have an adequate number of data points to show population trend individually (by route), they do indicate if black-backed woodpeckers were detected or not, and when combined with the other routes, they provide a measure of relative statewide population trend. Nationally, this portion of the northwest shows a long-term upward trend in the population of black-backed woodpecker of greater than 1.5% per year over a 37-year period (1966-2003). For the state of Idaho, the BBS data shows a long-term upward trend in the population of 13.8% per year since 1966.

The black-backed woodpecker is considered a sensitive species within the Northern Region of the Forest Service. The black-backed woodpecker is known to occur on the Nez Perce National Forest, but in relatively low numbers.

Using data from Table 14 in Samson (2006a), there has been a 10-fold increase in forested area affected by fire and insect/disease on Nez Perce National Forest between the 1990-1993 period to the 2000-2003 period. A total of 377,534 acres were affected by these processes during the
2000-2003 time period. Comparing Region One Forests from 2000-2003, the Nez Perce Forest has the highest amount of recent insect and disease affected area.

Estimates of black-backed woodpecker habitat in burn areas range from 21,557 acres in 1990-1993 to 68,613 acres in 2000-2003 (enough post-fire habitat that could support approximately 70 to 121 pairs in 1990-1993 or 224 to 385 pairs in 2000-2003) (based on a territory size of 178 to 306 hectares as cited in Dixon and Saab 2000). Estimates of black-backed woodpecker habitat in insect-infested areas range from 16,010 acres in 1990-1993 to 308,920 acres in 2000-2003 (enough post-fire habitat that could support approximately 52 to 90 pairs in 1990-1993 or 1009 to 1735 pairs in 2000-2003). Samson (2006b) also stated that there is enough habitat within the Northern Region and on the Nez Perce National Forest to maintain viable populations of black-backed woodpeckers.

Black-backed woodpeckers are known to occur on the Salmon River District in both fire created and insect infested habitats. Woodpecker surveys have been conducted in the project area in 1992, 1993, 1994, and 1995. Black-backed woodpeckers are known to use the area, mostly resulting from the Scott Fire in 1992, which was salvage logged in 1993 and 1994. Monitoring showed that black-backed woodpeckers remained in the area after salvage activities were completed.

Approximately 3617 acres of burned trees greater than 5" dbh occurs within the project area (Table 2) and 19,661 acres of habitat in the Black Butte fire area. There is enough habitat within the Black Butte Fire area for approximately 64-110 pairs of black-backed woodpeckers and 12-20 pairs in the Antler Salvage Project Area.

The most important aspect of black-backed woodpecker and others associated with snags is to provide dead and dying trees for foraging, nesting, and roosting substrate.

3.7.5.4.1 White-headed Woodpecker (Picoides albolarvatus)

White-headed woodpeckers use a variety of forest types, but are primarily associated with open-canopies of mature to old growth ponderosa pine. Fire-climax forests characterize these communities. The quality and quantity of woodpecker habitat is reduced due to past fire suppression in these habitats.

This bird forages in open ponderosa pine forests where it relies heavily on pine seeds during the winter months and insects during the summer (Ligon 1973). Both of these resources are typically more abundant on mature or older ponderosa pine, than in younger forests. Home ranges for white-headed woodpeckers are relatively small, and home range size appears to be correlated with the degree of forest fragmentation (Blair et al. 1995). In areas with contiguous stands of predominantly old-growth ponderosa pine, home ranges average 158 acres in size (ranging from 126 to 314 acres); in areas with a variety of seral stages and silvicultural treatments, home ranges average 734 acres in size (ranging from 116 to 2706 acres) (Ligon 1973:862-869; Blair et al. 1995).

It was found that nests were not located in stands with canopy cover above 26 percent or tree density greater than 411 trees/hectare (165 trees per acre). Nest trees average 22 inches, ranging from 15-34 inches. This indicated a preference for very open pine forests with low tree densities with large diameter snags in an advanced state of decay (Frederick and Moore 1991:27; Blair et al. 1995).


Woodpecker surveys have been conducted in the project area in 1992, 1993, 1994, and 1995. White-headed woodpeckers are known to use the area. For this analysis, white-headed woodpecker habitat consists of large diameter (14" dbh) ponderosa pine habitat types. Approximately 1044 acres of large diameter ponderosa pine habitat occurs in the project area. Of that, approximately 275 acres burned severely (26%), potentially reducing the suitability of these
areas for nesting and foraging. There is enough habitat for approximately 1 pair of white-headed woodpeckers within the project due to the amount of fragmentation of the low elevation xeric forest communities.

3.7.5.4.1 Fringed myotis (*Myotis thysanodes*)

In Idaho, the fringed myotis is associated with grasslands, xeric shrublands, ponderosa pine, Douglas-fir, and mixed xeric forests (IDFG 2005). Maternity colonies, day roosts, and night roosts for the fringed myotis are found in caves, buildings, underground mines, rock crevices, tree hollows and bridges. Roost trees tend to be large diameter snags in early to medium stages of decay. Fringed myotis prey on beetles, harvestmen, crickets, spiders, moths, and crane flies.

The fringed myotis has a global rank of G4/G5 (apparently secure/widespread, abundant, and secure) and an Idaho State ranking of S2 (imperiled) (Nature Serve 2007, Idaho Department of Fish and Game 2005, S1-Engle and Harris 2001, S1-Groves et al. 1997a).

In 2005, the Northern Region recognized the need for additional documentation of bats on Forest Service lands. Therefore, surveys were conducted across the Region on selected Ranger Districts in 2005 and 2006. Surveys in 2007 are geared more towards keying in on sensitive species and the habitat they prefer.

As part of the Northern Region’s 2005 bat inventory, 8 different species of bats were found on the Salmon River District. Surveys were conducted primarily over water sources (streams, pools of water, or stock ponds). The fringed myotis was primarily found in low to mid elevations. It is thought that this species may roost in snags with sloughing bark.

As part of the Region’s survey efforts for bats in 2005, fringed myotis bats were found within the project area and it even suggested that a maternal colony of fringed myotis occurs within the project area. Several lactating female bats were caught in mist nests during survey efforts in 2005. Previous fires within and adjacent to the project area might have created abundant snag roosting sites.

The project area and vicinity has potential roosting habitat for fringed myotis as the fire has created an abundance of snags. The project would have no effect on caves, large crevices, or buildings. Some of the soft snags may have been consumed by the fire. Implementation of this project would not affect suitable roosting habitat such as caves, mines, rock crevasse or buildings. However, several old buildings were destroyed in the fire. Foraging activity would occur outside of project activity hours, and the availability of foraging would not be reduced, as there would be no effect to the availability of prey species such as insects and moths.

3.7.5.4.1 Flammulated Owl (*Otus flammeolus*)

The flammulated owl is widely distributed in western North America, breeding from southern British Columbia through the highlands of Guatemala. The flammulated owl is considered a sensitive species within the Northern Region of the Forest Service. They are small, cavity-nesting, predominantly insectivorous owls that are neotropical migrants (Hayward and Verner 1994, Powers et al. 1996). In Idaho, the species has been reported from most of the state’s mountain ranges (Groves et al. 1997b p. 119), and is known to occur on the Nez Perce National Forest (Shepherd and Servheen 1992 p. 7). Habitat for flammulated owls occurs on the Forest, primarily along the Salmon, South Fork Clearwater, and Selway Rivers.

Flammulated owl habitat is characterized by open-grown, fire-climax, mature to old growth ponderosa pine or Douglas-fir forest (Reynolds and Linkhart 1992 p. 166, Shepherd and Servheen 1992). Such habitat is likely preferred because it offers both suitable nesting cavities (usually excavated by northern flickers or pileated woodpeckers) and highly available prey.

Flammulated owls need dense foliage for roosting (Hayward and Verner 1994). Roost sites can be found in multi-layered, mixed-conifer forests with a ponderosa pine component, or flammulated owls may use Douglas-fir or ponderosa pine trees with a sprawling form that provide
pockets of dense foliage. Nesting territories are documented between 20-60 acres in size, but flammulated owls have been known to forage as much as 0.5 miles from their nest (USFS 1992).

The flammulated owl has a global rank of G4 (apparently secure) and an Idaho State ranking of S3B (vulnerable) (Nature Serve 2007, Idaho Department of Fish and Game 2005, Engle and Harris 2001, Groves et al. 1997a). The flammulated owl estimated population level is at the state population target noted in “Partners In Flight Continental Priorities and Objectives for Idaho” (Rosenberg 2004).

Samson (2006a) estimates the Nez Perce National Forest has 39,579 acres of flammulated owl habitat. Assuming a mean territory size of 45 acres, there is enough habitat that could support approximately 880 pairs of flammulated owls on the Nez Perce Forest. Samson (2006b) also stated that there is enough habitat within the Northern Region and on the Nez Perce National Forest to maintain viable populations of flammulated owls.

Samson (2006a) indicates that during 1938-1942 to present, the relative percent of large ponderosa pine trees slightly increased on the Nez Perce Forest (from 3.7% to 4.9%). There has also been an increase in suitable large tree Douglas-fir habitat during the same time period (a shift from 5.6% historically to 7.9% currently). This indicates habitat on the Nez Perce National Forest has slightly increased from the 1938-1943 level (historic large tree PIPO and DF was 9.3%, current large tree PIPO and DF is 12.8%) when compared to other forests in the Northern Region. Although NPNF habitat quantity may not have changed appreciably, Samson (2006a) indicates habitat quality has changed as open understory habitats have closed due to general and widespread increases in relative abundance of seedling/sapling and pole size Douglas-fir (a shift from 6.0% historically to 9.5% currently).

Habitat occurs along the Salmon River for the flammulated owls and owls are known to inhabit the Salmon River District in low elevation ponderosa pine, Douglas-fir, and mixed ponderosa pine/Douglas-fir communities. Post-fire conditions are less than optimal for this species. Nesting habitat was severely burned in 1992, salvage logged, and burned again in 2006, creating a reduction in live crown canopy and more open conditions than the flammulated owl prefers. Foraging habitat has also been impacted as the shrub layer has been temporarily reduced or eliminated, which impacts prey species. Foraging and prey habitat may be improved as the understory grasses, forbs, and shrubs respond from being burned, as well as reducing the understory conifer component.

For this analysis flammulated owl habitat is defined as ponderosa pine, Douglas-fir, or mixed ponderosa pine/Douglas-fir habitats. Approximately 2024 acres of large diameter mixed ponderosa pine/Douglas-fir habitats occur in the project area. Of that approximately 518 acres (26%) burned severely potentially reducing the suitability of that habitat for nesting. There is enough habitat for approximately 34-101 pairs of flammulated owls.

Flammulated owl surveys have been conducted within the project area in 1992 (Idaho Department of Fish and Game-IDFG), 1993, 1994, 1995, and 2005 (partnership with IDFG and part of the Northern Region’s effort to survey for flammulated owls Region-wide). Flammulated owls are known to use the project area.

3.7.5.4.1 Pygmy Nuthatch (Sitta pygmaea)

This species is associated with dry, lower elevation ponderosa pine forests, especially mature to late-seral stands that are fairly open (Engle and Harris 2001). Pygmy nuthatches nest in dead and live trees with dead sections and prefer mature, undisturbed forests. Pygmy nuthatches diet consists of insects and spiders during the breeding season pine seeds in the winter (Kinger and Ghelambor 2001). The pygmy nuthatch is both a primary and secondary cavity nester and would also use natural cavities.

The pygmy nuthatch has a global rank of G5 (widespread, abundant, and secure) and an Idaho State ranking of S2/S3 (imperiled/vulnerable) (Nature Serve 2007, S1-Idaho Department of Fish and Game 2005, Engle and Harris 2001, Groves et al. 1997a). Affected Environment
For this analysis, pygmy nuthatch habitat consists of large diameter (14" dbh) ponderosa pine habitat types. Approximately 1044 acres of large diameter ponderosa pine habitat occurs in the project area. Of that, approximately 275 acres burned severely (26%), reducing the suitability of these areas for nesting and foraging.

3.7.5.5 MANAGEMENT INDICATOR SPECIES

3.7.5.5.1 American marten (*Martes Americana*)

The American marten (*Martes americana*) is designated a management indicator species on the Nez Perce National Forest. Marten are inhabitants of dense, mesic coniferous forests that support abundant vole populations (Koehler and Hornocker 1977, Patton and Escano 1990, Buskirk and Ruggiero 1994). Marten prefer higher elevation, mature subalpine fir/Engelmann spruce forests with large woody debris, and well developed canopy cover (Koehler and Hornocker 1977, Campbell 1979, Kujala 1993) and avoid large openings where they are less than 150 feet from cover. Marten need dense overstory (>30%) and sufficient understory cover for hiding and denning (Snyder 1991). However, it is possible that marten may be more associated with complex vertical and horizontal woody structure than with forests of a particular age, species, or overstory requirement (Chapin et al. 1997). Rarely do marten use open, xeric coniferous forests and those that lack structure near the ground (Koehler et al. 1975, Buskirk and Ruggiero 1994). Pine marten are found at higher elevations and on mid-slopes during winter; in summer, martens use riparian areas more intensively (Bull 1996).

The average home range for male pine marten in northeastern Oregon was about 6,700 acres and was twice that of females whose home range averaged about 3,500 acres (Bull and Heater 2001). Home range sizes of both males and females were larger in managed versus unmanaged forests, and home ranges between same-sex individuals had no appreciable overlap (Bull 1996, Bull and Heater 2001).

Marten use habitats similar to those used by fishers, but unlike fishers, they can hunt efficiently both in the subnivean layer (under snow) and on the surface of deep snowpacks (Aubry and Lewis 2003). In the central Rocky Mountains, large logs (>16 inches), large snags (>16 inches dbh), and live spruce and fir trees >8 inches dbh were important characteristics for marten den sites, and rock crevices and red squirrel middens were used along with logs and snags (Ruggiero et al. 1998).

The marten has a global rank of G5 (widespread, abundant, and secure) and an Idaho State ranking of S5 (secure) (Nature Serve 2007, G4/S4-Groves et al. 1997a).

Samson (2006b) stated that there is enough habitat within the Northern Region and on the Nez Perce National Forest to maintain viable populations of marten. Samson (2006b) estimated that there are approximately 904,650 acres of habitat on the Nez Perce National Forest, enough to support 135 male and 258 female marten.

Using the Forest Inventory and Analysis (FIA) data, marten habitat was modeled for the Forest. Marten habitat is defined as mesic, mixed conifer greater than or equal to 14” in diameter, except for lodgepole pine where size is greater than or equal to 9 inches. Canopy cover is greater than or equal to 40%.

The results of the Forest-wide Forest Inventory and Analysis (FIA) habitat modeling indicate that, overall, marten habitat is widely distributed across the Forest. Forest-wide, the total potential marten habitat ranges from 17-22% of the forested lands. The amount and distribution of FIA habitat data is both a reflection of the capability and current condition of the landscape, as well as the number of plots across the landscape and within each watershed.

Marten are known to occur on the District. Winter track surveys reveal that marten tracks have been seen west of the project area. It is reasonable to assume that marten inhabit the project area.

For this analysis, marten habitat is defined as large trees (>14" dbh) in mixed grand fir or subalpine fir and mixed lodgepole pine >9" dbh. There is approximately 1067 acres of mesic,
mixed conifer habitats within the project area. The home range size for both a male and female marten is larger than the amount of habitat available for marten in the project area. Approximately 76 acres (7%) burned with a fire severity rating of moderate or higher and may limit the amount of closed canopy, mixed conifer forests suitable for marten.

3.7.5.5.1 Pileated woodpecker (Dryocopus pileatus)

The pileated woodpecker is considered a late-seral or old growth associated species. The pileated woodpecker is a fairly common year-round resident in Idaho coniferous forests and has been documented throughout the Nez Perce National Forest. Pileated woodpeckers are large, cavity-nesting birds associated with late successional stage forests but also younger forests that have scattered, large, dead trees (Bull and Jackson 1996). Pileated woodpeckers appear to seek out microhabitats with a higher diversity of tree species and higher densities of decadent trees and snags than are available across a landscape (Carpenter and Keating 1979, Savignac et al. 2000, Aubry and Raley 2002). Through their selection of large dead and damaged trees, pileated woodpeckers may serve as a good indicator of ecological function rather than just the age of a stand or forest (Bonar 2001).

The pileated woodpecker is widely distributed in western North America, and is a common resident of northern Idaho's coniferous forests. The pileated woodpecker is used as an indicator of mature forests, primarily because of their preference for large diameter snags as nest trees that tend to occur more frequently in mature forests (Bull and Jackson 1996). Hutto (1995) reported in the Northern Rocky Mountains that mature cottonwood bottoms, riparian areas, ponderosa pine, mixed conifer, cedar-hemlock, and larch stands were used by the pileated woodpecker. Forests above 5,000’ are generally avoided. Lodgepole pine and spruce-fir forests in particular receive little use, most likely due to the scarcity of large diameter trees (Aney and McClelland 1990 p. 10).

Nesting habitat and food sources are considered key to maintaining viable populations of pileated woodpeckers. In particular, the amount of large trees and large snags affect available nesting habitat, and the amount of large logs on the forest floor affects the habitat for carpenter ants, a critical food source.

The pileated woodpecker has a global rank of G5 (widespread, abundant and secure) and an Idaho State ranking of S4 (apparently secure) (Nature Serve 2007, Dixon 2005, pers. com., Groves et al. 1997a, pg 155). Pileated woodpeckers are not listed as a species of greatest conservation need for the state of Idaho (Idaho Department of Fish and Game 2005-Idaho Comprehensive Wildlife Conservation Strategy). On the Nez Perce Forest, the pileated woodpecker is a management indicator species. Based on monitoring counts from five randomly placed survey transects established in 1988, as well as incidental pileated woodpecker sightings, show that pileated woodpeckers do occur on the Forest and are fairly common.

The pileated woodpecker BBS trend map (1966-2003) for the entire United States is displayed below and referenced at: http://www.mbr-pwrc.usgs.gov/bbs/htm03/trend2003_v2.html. The BBS population trend map for pileated woodpeckers indicates that the entire Nez Perce National Forest, is within larger landscape areas showing a 1966-2003 slight upward trend of > +1.5% change per year. For the state of Idaho, the BBS data shows a long-term upward trend in the population of 3.6% per year since 1966 (1966-2004).

Population trends were reviewed across a larger scale on February 1, 2006, from the USGS – Patuxent Wildlife Research Center’s North American Breeding Bird Survey web site (http://www.mbr-pwrc.usgs.gov/bbs/bbs.html). Analysis for cavity nesting species revealed that among all BBS cavity nester data for the years 1966-2004, pileated woodpeckers are categorized as an “increasing species”, based on significant trend (p less than 0.1) statistics: Adjusted trend = 1.8375; N routes = 1830; Unadjusted trend P value = 0.0-1.8460.

Based on a summary of habitat estimates provided by Samson (2006a), there are approximately 273,285 acres of nesting and 399,563 acres of winter foraging habitat on the Nez Perce National Forest. Based on a territory size of 793 to 1557 acres, the Nez Perce National Forest can
support 176 to 345 pairs of pileated woodpecker during the breeding season. Based on approximately 99 acres for a pair of pileated woodpeckers in the winter time, the Forest can potentially support 4036 pairs of pileated woodpeckers.

Pileated woodpecker habitat was modeled for the Forest using the Forest Inventory and Analysis data. Pileated woodpecker nesting habitat consists of large diameter snags (>=14” dbh), except lodgepole pine and subalpine fir, where snag densities are greater than or equal to one snag per acre. Foraging habitat consists of pole-sized trees or larger, except lodgepole pine and subalpine fir, with canopy cover greater than 15%.

Results of the Forest-wide Forest Inventory and Analysis (FIA) habitat modeling indicate that, overall, pileated woodpecker habitat is widely distributed across the Forest. Forest-wide, the total potential pileated woodpecker habitat (which includes nesting and foraging) ranges from 37-45% of the forested lands. The amount and distribution of FIA habitat data is both a reflection of the capability and current condition of the landscape, as well as the number of plots across the landscape and within each watershed.

Woodpecker surveys have been conducted in the project area in 1992, 1993, 1994, and 1995. Pileated woodpeckers are known to use the area. This is based a review of Idaho Conservation Database records and District/Forest monitoring efforts, surveys, and incidental observation records.

For this analysis, pileated nesting habitat is defined as large trees (>14” dbh) of ponderosa pine, Douglas-fir, and mixed conifer habitats. There are approximately 2292 acres of large diameter mixed ponderosa pine and mixed conifer habitats in the project area, enough habitat for approximately 2-3 pileated woodpeckers nesting territories. Approximately 540 acres (24%) of the 2292 acres burned severely, potentially reducing the suitability of these areas for nesting due to the loss of the overstory canopy. Foraging habitat is defined as ponderosa pine, Douglas-fir, and mixed conifer habitats with trees > 9” dbh. Approximately 2858 acres are considered pileated woodpecker foraging habitat.

3.7.5.5.1 Shira’s moose (Alces alces)

Shira’s moose (Alces alces) is designated a management indicator species on the Nez Perce National Forest. In Idaho, moose occur mainly in mountainous conifer forest. Favored browse species utilized year-round include willow, menziesia, mountain maple, serviceberry, and Pacific yew (Pierce and Peek 1984). Forest vegetative types used by moose include grand fir and subalpine fir. Pacific yew occurs as a major subdominant species in old growth grand fir/ginger habitat type, occurring as a subdominant canopy beneath the overstory canopy and creating a double-canopied forest overstory.

Winter habitat is the most limiting habitat component for moose. During the winter months, moose use a wide variety of vegetation (Leege 1990). Winter range is characterized by double-canopy coniferous forests which intercept significant amounts of snow and also provide palatable evergreen forage (Pierce and Peek 1984, Peek et al. 1987). Grand fir-Pacific yew habitat types fit these criteria and are favored for winter foraging. Pacific yew is lacking in the project area.

Moose are known to occur in the project area. Forage is provided in the form of browse species across the project area and in old harvest units.

3.7.5.5.1 Rocky Mountain Elk (Cervus elaphus)

Elk are considered a management indicator species as they are a species that is hunted. They require early-seral communities for feeding and more closed canopy areas for hiding and thermal cover.

Elk are the product of habitat quality, and are influenced by the effects of weather, hunting, and predation. Forest management practices tend to affect habitat quality and hunter access. In reviewing elk numbers along with recent elk-calf recruitment data, elk population trends on the Forest are considered stable or moderately down. In addition to habitat concerns, total predation
population numbers and the cumulative effects on game herds have become a concern to local sportsmen and the Idaho Department of Fish and Game.

Elk habitat effectiveness before the fire for the Coffee Can elk unit was at 43%, which is below the Forest Plan Objective of 50%. As a result of the fire, approximately twenty-five percent of the fire area and the Antler Salvage project area burned severe enough to reduce cover (See Table 1). Habitat was severely burned in 1992, salvage logged, and burned again in 2006, reducing the amount of live crown canopy and creating large openings within and adjacent to the project area. Foraging habitat has also been impacted in places as the shrub layer has been temporarily reduced or eliminated. The area below 4500' on southerly and westerly aspects is considered winter range. Most of the winter range is below the project area. A flush of forage is expected following the 2006 fires and would benefit elk, their predators (wolf), and other early-seral species.

Cover has been reduced due to the loss of tree and shrub foliage. However, shrubs would likely grow-in over the next several years replacing some hiding cover. Some visual blockage is maintained by fire-killed trees and therefore maintains some cover in the short-term provided by burned trees until they fall.

3.7.5.5.1 Neotropical Migratory Birds

Neotropical migrant birds use coniferous forest habitats of the U.S during the summer breeding season but migrate to southern latitudes to spend winters in habitats as far south as Mexico, and South America. Tropical deforestation and other environmental effects related to bird wintering grounds are thought largely responsible for declines in some neotropical migrant bird populations that summer in the eastern forests of the U.S.

Forest landbirds include all the avian species, sometimes collectively termed ‘neotropical migratory birds’ and ‘resident songbirds.’ This group of birds is not treated separately by species, because they are an extremely diverse group of species, with widely disparate habitat requirements.

Timber harvest and fire suppression have altered the natural landscape of western forests (Dobkin 1994 p.5). Fragmentation of nesting habitat is theorized to increase rates of migrant bird nest predation and brood parasitism by other species. Small, isolated forest patches, particularly in forests of the Eastern U.S. are considered at greatest risk. In contrast, natural fire regimes and topographic diversity in the West combined in the past to produce a temporally dynamic, naturally fragmented landscape compared with the previously extensive and relatively homogenous eastern deciduous forest.

Despite these changes, neotropical migrant populations in the western U.S. are recognized as faring better than eastern North American populations. A comprehensive review of Breeding Bird Survey data from 1966-85 found that Western neotropical migrants as a group were not declining overall. However, the review found evidence of significant widespread declines among 19 songbird species of native grassland and shrub steppe habitats (Dobkin 1994 p.4-5). These habitats are not represented within the project area.

A 3-year study by the USDA Forest Service Northern Region Landbird Monitoring Program (Hutto and Young 1999 p.69) concluded that some landbird species are relatively restricted in their habitat distribution to only one or two naturally occurring cover types that are themselves restricted in spatial extent, or at least less extensive than they were historically. Of the potential cover types which occur within the project area, providing adequate amounts of 1) post-fire, standing dead forests, 2) harvested forest types, and 3) riparian environments were identified as important to maintaining viable species of songbirds across the landscape of the region.

Forest landbirds include all the avian species, sometimes collectively termed ‘neotropical migratory birds’ and ‘resident songbirds.’ This group of birds is not treated separately by species, because they are an extremely diverse group of species, with widely disparate habitat requirements.
The project area provides potential breeding and foraging habitat for neotropical migratory birds. Species identified as high priority in ‘The Idaho Bird Conservation Plan’ (Idaho Partners in Flight 2000) and that are known to occur or suspected to occur in the project area, are listed below in Table 7.

### Table 3.7.6. IPF High Priority Species Potentially Occurring in the Project Area.*

<table>
<thead>
<tr>
<th>Neotropical Migrant Species</th>
<th>Associated Habitats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three-toed woodpecker</td>
<td>High-elevation mixed conifer</td>
</tr>
<tr>
<td>Olive-sided flycatcher,</td>
<td></td>
</tr>
<tr>
<td>Hammond's flycatcher</td>
<td></td>
</tr>
<tr>
<td>Sharp-shinned hawk,</td>
<td>Low-elevation mixed conifer</td>
</tr>
<tr>
<td>Northern goshawk,</td>
<td></td>
</tr>
<tr>
<td>Black-backed woodpecker,</td>
<td></td>
</tr>
<tr>
<td>Brown creeper, Varied</td>
<td></td>
</tr>
<tr>
<td>Thrush, Townsend’s warbler,</td>
<td></td>
</tr>
<tr>
<td>Western tanager</td>
<td></td>
</tr>
<tr>
<td>Fammulated owl, White-headed woodpecker</td>
<td>Mountain shrubs</td>
</tr>
<tr>
<td>Lazuli bunting</td>
<td></td>
</tr>
<tr>
<td>(Moderate conservation</td>
<td></td>
</tr>
<tr>
<td>Priority)</td>
<td></td>
</tr>
<tr>
<td>Rufous hummingbird,</td>
<td>Riparian</td>
</tr>
<tr>
<td>Willow flycatcher,</td>
<td></td>
</tr>
<tr>
<td>Black-billed magpie,</td>
<td></td>
</tr>
<tr>
<td>American dipper,</td>
<td></td>
</tr>
<tr>
<td>Yellow warbler,</td>
<td></td>
</tr>
<tr>
<td>MacGillivray’s warbler</td>
<td></td>
</tr>
<tr>
<td>Black-backed woodpecker</td>
<td>Burned Forests</td>
</tr>
</tbody>
</table>

*All data and habitat type descriptors from IDPIF (2000).

Most neotropical migrants are cup nesters that will establish nest in live trees interior from forest edges such as roads and openings. However, some neotropical migrants (e.g. flammulated owl) and other protected bird species are secondary cavity nesters (birds that don’t excavate their own nest hole but rather use natural cavities or those excavated by woodpeckers and other species). Heavy tree mortality as a result of the fire provides important components for birds. Dead trees provide drumming sites for woodpeckers and hunting perches for raptors. Dead trees also provide food for a variety of bird species and nesting substrate for primary and secondary cavity nesters. Many birds utilize riparian areas, some of which contain a large dead tree component as a result of the fire.

The Forest Land Bird monitoring program objective is to monitor trends in landbird populations. Since the inception of the program in 1994, more point count transects have been established on the Nez Perce Forest. Ongoing monitoring has not raised concerns about declines of any species.

Any treatment, including no action, positively affects some species at the expense of others. Because migratory birds use a wide variety of habitats, habitat conditions and impacts can be inferred from other species section in this document.

### 3.7.6 Environmental Consequences

#### 3.7.6.1 Direct and Indirect Effects

**Gray Wolf**

**Alternative 1**

No vegetative treatments, including timber harvest or slash treatment, would occur with this alternative. No temporary road construction would occur, nor would thermal or hiding cover be reduced from harvest activities. Under this alternative there would be no activities or disturbances to alter movements or temporarily displace wolves or important ungulate prey species within the project area.

As a result of fire suppression, succession would continue. Open patch sizes would continue to decrease as ingrowth fills and matures in old openings, and conifers would encroach in
grasslands. This process would decrease the nutritional value and availability of forage for big game species, as well as smaller prey species.

**Alternative 2**

There are no known wolf dens or rendezvous sites within the project area. There would be no anticipated impacts to these sites.

The removal of dead or dying trees under the modified proposed action would slightly increase the vulnerability of wolves and big game to human visibility and thus slightly increase the potential for human-caused mortality as the snags act as a screen.

If elk or other prey species populations or habitat changes as a result of proposed salvage activities, wolves may also be affected because of their reliance on ungulate prey. In the short-term, harvest activities would indirectly impact prey habitat by removing residual cover as the snags act as a screen for big game species, thus increasing the vulnerability of big game species to human mortality. In the long-term, reforestation efforts would create hiding cover, thus improving big game and wolf habitat. The elk habitat effectiveness unit (EHE Unit) that encompasses the project area is below the Forest Plan standard of 50% at 43%. There might be a slight decrease in the effectiveness value due to the increase in the size of the openings and lack of cover in the eastern portion of the EHE unit.

The temporary increase of human activity in the project area associated with harvest and vegetative treatments could increase the possibility of human-wolf interactions and influence how wolves use the project area, as well as their prey species. The construction of temporary roads and reconstructed roads could displace wolves and/or their prey during construction and use. As mitigation, all current access closures would be maintained as part of the proposed project to maintain wildlife security within the project area.

Based on the nature and duration of the proposed project, the mortality risk for wolves would remain low. Key wolf habitat areas, such as den sites, rendezvous sites, or whelping sites, would not be affected by the project.

### 3.7.6.1.1 Canada Lynx

**Alternative 1**

Alternative 1 would have no effects on existing habitat, prey availability, or lynx that may use the project area because no activity or habitat changes would occur. As snags fall, they would create denning sites for lynx. Cover and forage within the project area would improve over time as trees start growing resulting from natural and artificial regeneration. Over time, the amount and distribution of available lynx foraging and snowshoe hare habitats would decline as the young trees would eventually grow out of the reach of snowshoe hares, and self pruning would reduce the amount of horizontal cover.

**Alternative 2**

The fire resulted in the loss of overstory cover and denning sites as the fire burned down woody debris, creating somewhat unsuitable habitat conditions in a small portion of lynx habitat within the LAU. Treatments would reduce future denning sites by removing dead and dying trees and burning of slash and further move habitat to unsuitable conditions.

**Table 3.7.7. Amount of Lynx Habitat Treated under Alternative 2**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Denning</th>
<th>Foraging</th>
<th>Unsuitable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Acres</td>
<td>2,413</td>
<td>13,113</td>
<td>165</td>
</tr>
<tr>
<td>Acres Treated Alternative 1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Acres Treated Alternative 2</td>
<td>240</td>
<td>189</td>
<td>1</td>
</tr>
</tbody>
</table>
Approximately 189 acres of foraging and 240 acres of denning habitat would be treated with this project (Table 6). This LAU is not limited by denning habitat, and treatments would not bring denning habitat to 10% or less. Approximately 1% of the habitat within this LAU is currently considered to be in an unsuitable condition for lynx. In this LAU, both denning and foraging habitat would be treated and change the amount of unsuitable habitat to about 4% and would reduce the potential for down wood and den sites. Natural and artificial regeneration would improve foraging habitat for lynx over time.

The temporary increase in human activity as a result of project implementation would increase the possibility of human-lynx interactions and could disturb, displace, or disrupt individual lynx using the project area. However, no long-term adverse harassment or potential for mortality is anticipated to result from project implementation. Should lynx or a lynx den be sighted during project implementation, forest and U.S. Fish and Wildlife Service personnel would be notified.

3.7.6.1.1 Bald Eagle

Proposed salvage activities are over one mile above the river. There are no anticipated impacts from this project to bald eagles or their habitat. Therefore, further analysis regarding bald eagles and potential effects of the proposed project activities will not be discussed further. Based on this information, an effects determination for the bald eagle would be “No Effect”.

3.7.6.1.1 Wolverine

Wolverines have not been observed and are not known to occur within the project area, however occasionally sightings are reported on the district. Winter foraging habitat is available within and down slope of the project area in the big game winter range. This wide-ranging species may pass through to opportunistically seek large mammal carrion among wintering ungulate populations. No denning habitat is known to be present in the project area.

Disturbance to wolverine is highly unlikely given that wolverines are at best infrequent visitors to the area. Harvest of fire killed trees would not hinder the wolverine’s ability to travel across the landscape. Proposed activities would not take place within or adjacent to potential denning habitat. Conifer planting proposed in the action alternative would increase habitat for various prey species, especially small mammals and big game species, potentially increasing the prey base for predators such as the wolverine.

Alternative 1

Under the no action alternative, current conditions would remain. There would be no reduction in habitat. No suitable habitat would be reduced beyond what the 2006 fires already reduced. Alternative 1 would rely on natural regeneration to create cover which is expected to take longer than artificial regeneration.

Alternative 2

The removal of cover and salvage that creates large openings would have the most effect because wolverines are reluctant to cross large openings (Hornocker and Hash 1981). The availability of carrion is especially important to wolverines during the winter months. The action alternative would maintain elk habitat conditions as they currently are below the Forest Plan objective of 50% habitat effectiveness for summer range. The action alternative would help improve cover conditions through reforestation efforts.

There would be no changes in access into the project area, thus exposure to humans would not change. However, human disturbance related to harvest activities, could influence how wolverines use the project area. These effects are determined to be minimal.

3.7.6.1.1 Northern Goshawk (Accipiter gentilis)
Alternative 1

Under the no action alternative, current conditions would remain. There would be no reduction in habitat. No suitable habitat would be reduced beyond what the 2006 fires already reduced. Meanwhile, young forests may provide increased foraging opportunities for goshawks. This alternative represents the most amount of habitat, although natural regeneration may take longer than with the action alternative.

Alternative 2

None of the alternatives would harvest much that qualifies as nesting habitat. This makes intuitive sense, because this project is focused on removing dead and dying burned trees. Severe burn areas are not considered nesting habitat for the northern goshawk, as the live canopy component has been reduced for cover and nesting substrate. There would be no impact to nesting habitat for goshawks, as the majority of the area consists of south facing slopes and is too steep to be considered nesting habitat.

Harvest activities would create openings approximately 3-86 acres in size. Approximately 260 acres of the 2204 acres (12%) identified as potential nesting and 625 of the 3815 acres (16%) identified as foraging habitat is slated for harvest.

The condition of foraging habitat should remain stable or improve slightly under the action alternative. Stringers of green trees, riparian area, and some burned areas may still provide some foraging habitat. Snags and down wood also provide habitat for many prey species preferred by goshawks. More mesic environments containing grasses, forbs and shrubs may recover more quickly than drier sites, so small mammal populations should also recover rapidly.

No activity is proposed in riparian habitat conservation areas (RHCAs). Planting conifers in harvest areas would speed up the return of suitable cover for goshawks and their prey.

During project implementation, human activity, equipment noise, and helicopter flights might preclude use of the project area by goshawks for hunting purposes.

3.7.6.1.1 Fisher

Alternative 1

Under the no action alternative, current conditions would remain. No suitable denning habitat would be reduced beyond what the 2006 fires already reduced. Natural regeneration of mixed conifer stands would eventually return those areas burned at mixed and high mortality levels back into suitable denning habitat. Meanwhile, young forests may provide increased foraging opportunities for fisher as the stands start providing some sort of cover. If a reburn were to occur, it could reduce current habitat if remaining snags are burned and if adjacent mature stands are affected by a fire. This alternative represents the most amount of denning habitat for all late-seral species, although natural regeneration may take longer than with the action alternative.

Alternative 2

The majority of the harvest within the project area is in the larger diameter size classes. Treatments would reduce the amount of dead and dying stand structure as well as down wood recruitment. Harvest activities would create openings ranging in sizes approximately 3-86 acres in size. Most of the new harvest units are adjacent to previous harvest units creating extremely large forest openings over several hundred acres in size, which are devoid of standing snags and down wood. This reduces the likelihood that fisher would use the openings, except maybe the edges, as these areas are avoided until the living canopy cover exceeds 40 percent. Approximately 213 acres of fisher summer habitat (44%) and 206 acres of winter habitat (17%) are identified for harvest.

There would be no changes in access into the project area, thus exposure to humans would not change. However, human disturbance related to harvest activities, could influence how fisher use the project area. These effects are determined to be minimal.
During project implementation, human activity, equipment noise, and helicopter flights might preclude use of the project area by fisher for hunting and denning purposes.

No activity is proposed in riparian habitat conservation areas (RHCAs). Planned reforestation of treated upland areas would be an important contribution for this species to reoccupy available habitats. Planting conifers in harvest areas would speed up the return of suitable cover for fisher and their prey.

3.7.6.1.1 Townsend’s Big-eared Bat (Corynorhinus townsendii)

**Alternative 1**

No vegetative treatments would occur with this alternative and current vegetative processes would continue. The no action alternative would maintain snag densities at present levels and may even increase as additional trees die. As these trees die, potential roosting habitat for bats would increase.

As snags fall over time, snag habitat would decline. Snag-fall rates vary for different tree species and size classes. Only the largest would likely remain standing over the long-term, post-fire. If the area reburns due to fuels accumulation from fallen snags, current snag habitat would be reduced, yet habitat could be created if adjacent mature stands are affected by a fire. Suitable roosting substrate may also be lost to firewood gathering activities, especially along roads.

This alternative would leave the greatest density and sizes of snags, which is highly desirable.

**Alternative 2**

No abandoned buildings or mines would be modified under the action alternative. By harvesting dead and dying trees, new openings would be created on the landscape, potentially providing new edges for foraging bats. Where hollow trees are used as day roosts, logging activities could affect individuals. Dead trees may only remain standing for a few years in harvest areas and tend to be of the smaller diameter size classes. These smaller snags probably have little utility for roosting bats, so the loss of larger diameter trees would reduce the availability of roost sites for Townsend’s big-eared bats.

Adherence to design criteria for snags would ensure that adequate snag habitat is available. In addition, fire-created snags in the adjacent fire area would continue to provide snags for roosting habitat.

3.7.6.1.1 Boreal toad (Bufo boreas)

**Alternative 1**

Under the no action alternative, current conditions would remain. There would be no reduction in habitat. No suitable habitat would be reduced beyond what the 2006 fires already reduced.

**Alternative 2**

No suitable breeding habitat would be affected by proposed activities. If western toads were present in the uplands, direct mortality could occur from mechanical activities. The project includes design criteria for maintaining a certain level of snags and coarse woody debris within the unit areas would provide thermal habitat for toads that may use the area following proposed activities. However, portions of the treatment units would be piled and burned or either broadcast burned. If boreal toads are present in the units, mortality could potential occur as a result of broadcast burning.

3.7.6.1.1 Black-backed woodpecker (Picoides arcticus)

**Alternative 1**

The no action alternative would maintain snag densities at present levels, benefiting black-backed woodpeckers and other that prefer snags, which provide nesting and foraging sites. The amount of habitat may even increase as additional trees die and insect populations increase. Stressed
trees may survive and wood boring and bark beetles are expected to increase. As these trees die, habitat for black-backed woodpeckers and other wildlife species would increase. Populations of snag associated species are expected to expand locally as insects invade burned areas. After five-years post-fire, after insects are no longer attracted to the fire, habitat for black-backed woodpeckers would decline.

As snags fall over time, snag habitat would decline. Snag-fall rates vary for different tree species and size classes. Only the largest would likely remain standing over the long-term, post-fire. There is an increased potential for reburn under this alternative (due to fuels accumulation from fallen snags), which could reduce current snag habitat if remaining snags are burned, yet habitat could be created if adjacent mature stands are affected by a fire. Suitable nesting substrate would also be lost to firewood gathering activities.

This alternative would leave the greatest number of snags, which is highly desirable not only to Black-backed woodpeckers but many other wildlife species associated with snags.

**Alternative 2**

Alternative 2 would directly affect nesting, foraging, and roosting habitat on approximately 2% of the burn and 16% within the project area. Dead and dying trees would be removed, which would reduce the levels of cambium-girdling and wood boring insects. Approximately, 625 acres is slated for harvest. The majority of the units consist of medium or larger sized dead and dying trees. This amount of harvest could potentially reduce habitat for approximately 2-3 pairs of black-backed woodpeckers within the project and fire areas.

Scientific literature tells us that the amount of logged versus unlogged habitat on the landscape, both pre- and post-fire, affects black-backed woodpecker distribution and home range size. In addition to black-backed woodpecker habitat being modified as a result of this project, the patchiness of the remaining habitat would increase as well. Due to past fire and salvage efforts within and adjacent to the project acre, the sizes of forest openings are over several hundred acres and are devoid of snags and down wood. Harvest activities associated with this project would increase the sizes of the forest openings, especially in Scott and Witsher Creek watersheds.

Habitat for black-backed woodpeckers would be retained in those trees that are unmerchantable and snags less then 10 or 12 inches in diameter within the units, riparian leave strips, and the rest of Black Butte fire area outside of the project area. It is expected that there would be an influx of beetle attacks on stressed, live trees after harvest, thus creating additional habitat for many woodpecker species as trees die. Snag habitat would become available in treated and untreated areas within the project area as some of the remaining stressed trees die. Snags potentially lost to firewood gathering activities within the project area are expected to be minimal due to the fact that access into the area is limited.

Disturbance from harvest activities could displace woodpeckers and other species during the nesting season or deter use of some areas that could be used as nesting, foraging, or roosting areas while activities occur. This could directly affect the reproductive success of individuals.

3.7.6.1.1 White-headed Woodpecker (Picoides albolarvatus)

**Alternative 1**

Under the no action alternative, current habitat would not change. Suitable habitat may reduce as snags fall, but in general, current conditions would remain. Large ponderosa pine snags and live trees would likely remain until a second canopy layer naturally regenerates. Snags created by the fire, may increase future nesting opportunity for white-headed woodpeckers. Additional snags would be available as stressed lived trees die.

**Alternative 2**

Potential nesting and foraging sites for this species would be reduced as large diameter snags are removed. Approximately 155 acres of ponderosa pine habitat are identified for harvest. This
equates to 15% of white-headed woodpecker nesting habitat in that is identified for harvest, adding to the amount of fragmentation of ponderosa pine habitats within Scott and Witsher Creek drainages.

Most of the new harvest units are adjacent to previous harvest units creating extremely large forest openings over several hundred acres in size, which are devoid of standing snags and down wood. This reduces the likelihood that white-headed woodpeckers would use the openings in harvested areas, due to the loss of large diameter ponderosa pine snags as nesting and foraging substrate.

During project implementation, human activity, equipment noise, and helicopter flights might preclude use of the project area by white-headed woodpeckers and where trees or snags are used by nesting white-headed woodpeckers, logging activities could affect individuals.

3.7.6.1.1 Fringed myotis (Myotis thysanodes)

**Alternative 1**

No vegetative treatments would occur with this alternative and current vegetative processes would continue. The no action alternative would maintain snag densities at present levels and may even increase as additional trees die. As these trees die, roosting habitat for bats would increase.

As snags fall over time, snag habitat would decline. Snag-fall rates vary for different tree species and size classes. Only the largest would likely remain standing over the long-term, post-fire. If the area reburns due to fuels accumulation from fallen snags, current snag habitat would be reduced, yet habitat could be created if adjacent mature stands are affected by a fire. Suitable roosting substrate may also be lost to firewood gathering activities, especially along roads.

This alternative would leave the greatest density and sizes of snags, which is highly desirable.

**Alternative 2**

No abandoned buildings or mines would be modified under the action alternative. By harvesting dead and dying trees, new openings would be created on the landscape, potentially providing new edges for foraging bats. Where snags are used as day roosts, logging activities could affect individuals by reducing the availability of roost sites. Dead trees may only remain standing for a few years in harvest areas and tend to be of the smaller diameter size classes. These smaller snags probably have little utility for roosting bats, so the loss of larger diameter ponderosa pine and Douglas-fir snags would reduce the availability of roost sites for fringed myotis bats.

Reconstructing of an existing road #76327 could possibly remove several ponds along the side of the road that have been used by bats as a drinking site. Bats would have to find alternative watering sources and may have to travel longer distances to get a drink. Most of the streams within the project area are high velocity, steep gradient stream and provide very little if any pool or slack water environments.

Adherence to design criteria for snags would ensure that potential roosting habitat is available. In addition, fire-created snags in the adjacent fire area would continue to provide snags for roosting habitat.

3.7.6.1.1 Flammulated Owl (Otus flammeolus)

**Alternative 1**

Under the no action alternative, current habitat would not change. Large diameter snags would be retained providing nesting substrate for flammulated owls. Suitable habitat over-time would be reduced as snags fall, but in general, current conditions would remain. Large ponderosa pine and Douglas-fir snags and live trees would likely remain until a second canopy layer naturally regenerates. Additional snags would be available as stressed lived trees die.
Alternative 2

Potential nesting sites for this species would be reduced as large diameter ponderosa pine and Douglas-fir snags are removed. Even though they need snags with cavities, they prefer moderate overstory live canopy cover for nesting and areas with high shrub cover and grassland edges for foraging. Salvaging large diameter ponderosa pine and Douglas-fir snags reduces the amount of nesting substrate available in units once the stands are reforested. Approximately 368 acres of flammulated owl nesting habitat is identified for harvest. This equates to 18% of flammulated owl nesting habitat that is identified for harvest, reducing habitat for approximately 6-18 pairs of flammulated owls. Dead trees may only remain standing for a few years in harvest areas and tend to be of the smaller diameter size classes. These smaller snags probably have little utility as nesting habitat, so the loss of larger diameter trees would reduce the suitability of the area to be used by flammulated owls.

Harvest activities would create openings approximately 3-86 acres in size. As a result of past wildfires and fire salvage activities within the project area, forest openings within the Scott and Witsher Creek watersheds tend to be well over several hundred acres in size and devoid of snags, live trees, and down wood. The placement of new fire salvage units would increase the size of forest openings. Retention of snags within the new units would be those that are not merchantable and small, less than 10 or 12 inches in diameter. The suitable of these areas to provide nesting habitat after harvest is lost as those snags that would provide nesting substrate would be removed from the landscape. Flammulated owls are known to nest more on ridges and plateaus. Even though riparian area would not be harvest and may contain large diameter trees, it is unlikely that flammulated owl might nest in riparian areas.

Foraging habitat is not expected to be impacted by this project beyond the fire already accomplished.

During project implementation, human activity, equipment noise, and helicopter flights might preclude use of the project area by flammulated owls and where trees or snags are used by nesting flammulated owls, logging activities could affect individuals.

3.7.6.1.1 Pygmy Nuthatch

Alternative 1

Under the no action alternative, current habitat would not change. Suitable habitat may reduce as snags fall, but in general, current conditions would remain. Large ponderosa pine snags and live trees would likely remain until a second canopy layer naturally regenerates. Snags created by the fire, may increase future nesting opportunity for the pygmy nuthatch. Additional snags would be available as stressed lived trees die.

Alternative 2

Potential nesting sites for this species would be reduced as large diameter snags are removed. Approximately 155 acres of ponderosa pine habitat are identified for harvest. This equates to 15% of pygmy nuthatch nesting habitat in that is identified for harvest, adding to the amount of fragmentation of ponderosa pine habitats within Scott and Witsher Creek drainages.

Most of the new harvest units are adjacent to previous harvest units creating extremely large forest openings over several hundred acres in size, which are devoid of standing snags and down wood. This reduces the likelihood that pygmy nuthatches would use the openings, due to the loss of large diameter ponderosa pine snags as foraging substrate.

3.7.6.1.1 American marten

Alternative 1

Under the no action alternative, current conditions would remain. No suitable denning habitat would be reduced beyond what the 2006 fires already reduced. Natural regeneration of mixed conifer stands would eventually return those areas burned at mixed and high mortality levels back
into suitable denning habitat. Meanwhile, young forests may provide increased foraging opportunities for marten as the stands start providing some sort of cover. If a reburn were to occur, it could reduce current habitat if remaining snags are burned and if adjacent mature stands are affected by a fire. This alternative represents the most amount of denning habitat for all late-seral species, although natural regeneration may take longer than with the action alternative.

Alternative 2

The majority of the harvest within the project area is in the larger diameter size classes. Treatments would reduce the amount of dead and dying stand structure as well as down wood recruitment. Harvest activities would create relatively openings ranging in sizes approximately 3-86 acres in size. Most of the new harvest units are adjacent to previous harvest units creating extremely large forest openings over several hundred acres in size and are devoid of standing snags and down wood. This reduces the likelihood that marten would use the openings, except maybe the edges, as these areas are avoided until the living canopy cover exceeds 40 percent. Approximately 131 acres of potential marten habitat is identified for harvest. This equates to 12% of potential marten habitat that is identified for harvest.

There would be no changes in access into the project area, thus exposure to humans would not change. However, human disturbance related to harvest activities, could influence how marten use the project area. These effects are determined to be minimal.

During project implementation, human activity, equipment noise, and helicopter flights might preclude use of the project area by marten for hunting and denning purposes.

No activity is proposed in riparian habitat conservation areas (RHCAs). Planned reforestation of treated upland areas would be an important contribution for these species to reoccupy available habitats. Planting conifers in harvest areas would speed up the return of suitable cover for marten and their prey.

3.7.6.1.1 Pileated woodpecker

Alternative 1

Under the no action alternative, current conditions would remain. No suitable nesting habitat would be reduced beyond what the 2006 fires already reduced. Standing and down trees would attract carpenter ants thus creating foraging opportunities for pileated woodpeckers. Natural regeneration of mixed conifer stands would eventually return those areas burned at mixed and high mortality levels back into suitable nesting habitat. If the area were to reburn, current habitat would be reduced if remaining snags are burned and if adjacent mature stands are affected by a fire. This alternative represents the most amount of nesting habitat, although natural regeneration may take longer than with the action alternative.

Alternative 2

Removing dead and dying trees would reduce the availability of nesting and foraging substrate available to pileated woodpeckers. Post-fire increases in insects can be expected, thus providing a food source and future nest sites for pileated woodpeckers and other woodpeckers. Pileated woodpeckers require fairly high canopy cover and avoid large openings. Pileated woodpeckers may use the edges of openings and possibly treated areas as foraging and nesting areas as snags and green trees would remain post harvest activities.

Alternative 2 would directly affect nesting, foraging, and roosting habitat on approximately 2% of the burn and 16% within the project area. Approximately 368 acres of pileated woodpecker nesting habitat and 517 acres of foraging habitat is identified for harvest. This equates to 16% of pileated woodpecker nesting habitat that is identified for harvest and 18% of foraging habitat that is expected to be impacted by harvest. The majority of the large diameter trees in proposed harvest units would be removed. Snags that are considered unmerchantable and less then 10 or 12 inches in diameter would remain within the units, along with riparian leave strips and the rest of Black Butte fire area outside of the project area would remain as pileated woodpecker habitat.
In addition to pileated woodpecker habitat being modified as a result of this project, the patchiness of the remaining habitat would increase as well. Due to past fire and salvage efforts within and adjacent to the project acre, the sizes of forest openings are over several hundred acres and are devoid of snags and down wood. Harvest activities associated with this project would increase the sizes of the forest openings, especially in Scott and Witsher Creek watersheds.

Disturbance from harvest activities could displace woodpeckers and other species during the nesting season or deter use of some areas that could be used as nesting, foraging, or roosting areas while activities occur. This could directly affect the reproductive success of individuals.

It is expected that there would be an influx of beetle attacks on stressed, live trees after harvest, thus creating additional habitat for many woodpecker species as trees die. Snag habitat would become available in treated and untreated areas within the project area as some of the remaining stressed trees die. Snags potentially lost to firewood gathering activities within the project area are expected to be minimal due to the fact that access into the area is limited.

Snag and woody debris retention and riparian zones would assure that when forests are re-established there would be components of habitat that this species prefers. No activity is proposed in riparian habitat conservation areas (RHCAs). Planned reforestation of treated upland areas would be an important contribution for these species to reoccupy available habitats. Planting conifers in harvest areas would speed up the return of suitable cover.

3.7.6.1.1 Shira’s moose

Alternative 1

Under the no action alternative, succession of forage and cover vegetative components would occur under natural processes. A flush of forage is expected following the 2006 fires and would benefit moose. Cover was reduced due to the loss of tree and shrub foliage, but shrubs would likely grow in over the next several years and replace some hiding cover lost in the fire. However, some visual blockage is maintained by fire-killed trees and therefore maintains some cover in the short-term provided by burned trees until they fall. In time, shrubs and seedlings would grow tall enough to provide cover and reduce the long-term effects of cover loss to the fires.

Alternative 2

Approximately, 190 acres of mesic forest habitats would be harvested. These areas provide providing cover and forage species for moose. Those stands proposed for regenerative harvests would no longer provide suitable moose summer habitat until such time as shrub and browse growth was sufficient to provide foraging opportunities for moose.

Moose could be affected by the action alternative due to harassment or disturbance from project activities. The magnitude of this disturbance would depend on the duration and the timing of such activities.

This alternative decommissions temporary roads and maintains access closures on existing roads. These actions would help mitigate increased human-moose interactions and moose disturbance that would likely result from project implementation activities.

3.7.6.1.1 Rocky Mountain Elk

Alternative 1

Under the no action alternative, succession of forage and cover vegetative components would occur under natural processes. A flush of forage is expected following the 2006 fires and would benefit elk. Cover was reduced due to the loss of tree and shrub foliage, but shrubs would likely grow in over the next several years and replace some hiding cover lost in the fire. However, some visual blockage is maintained by fire-killed trees and therefore maintains some cover in the short-term provided by burned trees until they fall. In time, shrubs and seedlings would grow tall enough to provide cover and reduce the long-term effects of cover loss to the fires.
Alternative 2

The Black Butte fire has reduced the amount of cover within the project area. As a result of past wildfires and fire salvage activities within the project area, forest openings within the Scott and Witsher Creek watersheds tend to be well over several hundred acres in size and harvest activities would further fragment forest habitats and increase the size of forest openings. Elk may use the edges of these openings as foraging and hiding areas. In time, shrubs and seedlings would grow and over time provide cover and reduce the long-term effects of cover loss to the fires and salvage activities. Regeneration of treated areas would recreate hiding cover more quickly than Alternative 1.

The elk habitat effectiveness unit (EHE Unit) that encompasses the project area is below the Forest Plan standard of 50% at 43%. There might be a slight decrease in the effectiveness value due to the increase in the size of the openings and lack of cover in the eastern portion of the EHE unit due to the fire and proposed harvest.

Elk vulnerability to hunting may increase somewhat in the short-term with the loss in cover as dead and dying trees are removed and potentially increase the vulnerability of elk to human visibility and thus slightly increase the potential for human-caused mortality.

There would be no new road construction or obliteration of existing roads occurring as part of this project.

No improvements in security would be made as part of this project. Temporary roads constructed for harvest activities would be obliterated after use and would not add to existing road densities within the project area or watershed. Therefore, security for big game species would not change.

3.7.6.1.1 Neotropical Migratory Birds

Alternative 1

Dead and dying trees would not be harvested under this alternative. Overall, this alternative would leave bird habitats across the project area to continue under natural processes. Areas with heavy trees mortality and blowdown would provide structural diversity, both standing and down wood, providing habitat for many bird species. As trees fall to the ground, downed logs and shading from snags could delay regeneration in those stands with particularly heavy mortality.

Post fire, there is expected be an initial shift in species composition to invader species and those adapted to early successional communities. Within time, there would be a gradual return of those species adapted to mid-seral, mature, and late successional forests.

Alternative 2

Table 4 displays the acres of each habitat type that would be modified by harvest. Removal of dead and dying trees would create openings and edges that could be used by a variety of bird species. Prescribed fire, natural regeneration and/or seed planting could accelerate regeneration of canopy cover in harvest units.

Any treatment, positively affects some species at the expense of others. It would be impossible to treat all the individual species separately. The removal of dead and dying trees would reduce the amount of foraging and nesting sites for those species that prefer post-fire habitats. Approximately 16% of the project area and 2% of the fire area is identified for harvest. Habitat would be created or improved for those species that prefer early forest successional stages created by some type of vegetation treatment such as harvest. Some species' habitat needs are represented by other species discussions, e.g. dry site species are represented by flammulated owls; early seral stage species by elk; old forest associates like the pileated woodpecker and northern goshawk; and snag associated species by black-backed woodpeckers and fringed myotis.

Timber removal would result in the potential loss of nesting and foraging habitat currently being used by a variety of neotropical and other migratory bird species. The proposed salvage project
would open or remove sufficient acres of canopy, particularly when juxtaposed against past harvest units, that the number and/or size of the openings would be too large to be used. If foraging habitat, which requires canopy closure, becomes too sparse, that bird or pair may expend too much energy foraging to maintain their territory or to rear young.

Given the amount of burned habitat and insect or disease acres across the Forest, many nesting and foraging opportunities would continue to exist. Individual birds or local populations could be impacted by timber cutting should harvest occur during the breeding season.

3.7.6.2 CUMULATIVE EFFECTS

3.7.6.2.1 Gray Wolf

Reducing the exposure of gray wolves and ungulate prey to humans is a factor in maintaining high quality big game habitat and reducing the risk of incidental wolf mortality. The Antler Salvage project area contains established human activities and developments including roads, timber harvest, access to a private inholding, and recreational opportunities. In addition, the project area and surrounding landscape receive heavy hunting pressure for deer, elk, and moose, which not only affects the wolf prey base, but increases the number of wolf-human interactions. Other activities include road and trail maintenance and measures to control noxious weeds. The most important cumulative effect to gray wolf recovery in Idaho is incidental mortalities from shooting, trapping, and vehicle strikes. This probability increases with increased road access. Existing road access closures would remain in effect. Human access, available cover, and public attitudes largely determine mortality risk to wolves.

Fragmentation of habitat has not reduced wolf habitat considerably, but has impacted habitat for preferred prey species through the loss of cover and reduced quality of security areas. The overall impacts to elk habitat from past management and wildland fires are difficult to assess. The elk management unit that encompasses the project is below the 50% elk habitat objective set by the Forest Plan and is not expected to change as a result of this project.

All alternatives maintain road and trail access within the project area and contribute to the cumulative impacts on wolf habitat and their prey species.

3.7.6.2.1 Canada Lynx

Fire, wind, insects, and disease have played an important, historic role in maintaining the mosaic of forest successional stages that provide habitat for both snowshoe hare and lynx. With the advent of fire suppression, vegetative mosaics and species composition have been altered and may have reduced the quality and quantity of habitat for snowshoe hares. Denning habitat is becoming more extensive at the expense of foraging habitat. Timber harvest in the project area, while keeping pace with a typical fire regime in terms of cumulative acres of stand regeneration, has altered the distribution of lynx habitat, and has left numerous small (<40 acre), uniformly-shaped patches. Suitable denning and travel habitat has been harvested or thinned across national forest lands, generally leaving low amounts of snags and large downed wood. Overmature stands that have lots of structural diversity and numerous gaps and microsites, such as typically occur in old growth forests, are less available in the project area because of past timber activities that targeted older, larger trees. Initially, openings created in the forest have a negative impact on both hares and lynx, through the reduction in cover and browse species for hares. Eventually, these areas produce good foraging and hunting habitat (after about seven years (Koehler and Brittell 1990). Firewood cutting along open roads has also decreased downed logs important for lynx and their prey species.

Road systems have increased human access and the potential for human-induced mortality from vehicle strikes or accidental shooting/trapping. Up until 1996, people were allowed to trap lynx, potentially impacting population sizes or demographics. Groomed snowmobile routes overlap many of the watershed’s roads and trails, and there is at least some snowmobile use of non-groomed trails. Snowmobile tracks can allow other predators access into areas they ordinarily
couldn’t use because of deep snow, and these predators could compete with lynx for snowshoe hare or other prey.

Timber harvest and temporary road construction, road conditioning, fire suppression, noxious weed treatment, and recreational activities are likely to continue. Cumulatively, these actions have and would affect the distribution of lynx and lynx habitat across the landscape. The no action alternative would temporarily protect the integrity of forested land in the project area. The action alternative would increase the amount of unsuitable habitat in the project area and reduce future denning sites by removing dead and dying trees. Previously and newly harvest stands would be planted and provide suitable foraging and cover habitat once the stand matures.

3.7.6.2.1 Wolverine

Cumulative effects to wolverine habitat would be most affected by access management goals for this area. There would be no changes in access into the project area, thus exposure to humans would not change. Habitat conditions would remain stable or slightly improve through planting efforts. Past timber harvest, wildfires, fire suppression, and mining activity have altered habitat characteristics in the project area by reducing the amount and distribution of large diameter trees, snags, and down wood, and by creating numerous, small patches in more mesic habitats. Wildlife fires and salvage logging has created large openings within and downslope of the project area.

These changes have affected wolverine prey species such as small mammals and ungulates. Prior to fire suppression and timber management, elk and deer populations depended upon natural disturbances to create openings that provided the early successional growth they favor for foraging. The network of edges that the salvage project and past harvest activities have create produced a number of large openings devoid of large diameter snags and down wood.

Road construction associated with past management activities have provided people relatively easy access into the area and has reduced wildlife security in the area. Human developments such as hiking trails, pack trails and outfitter activity, ATV and snowmobile uses within the drainage have increased human access into the area as well. Snowmobile use may also have had effects on winter prey species by providing pathways for other predators to access a limited winter wolverine prey base. New roads created under this project proposal would exist only temporarily on the landscape.

3.7.6.2.1 Northern Goshawk

The harvest of over-mature and old growth timber is considered to be the past, present, and reasonably foreseeable habitat change that has the biggest potential impact on northern goshawk. Fire suppression has also been known to reduce suitable conditions for goshawks by created dense understories.

Most of the effects to goshawks and their habitat resulted from the Black Butte fire. There would be no cumulative impacts on nesting habitat for goshawks, as the majority of the area is considered too steep to be considered nesting habitat. The removal of dead and dying trees would reduce the availability of perch sites within the project area. Stringers of green trees, riparian area, and some burned areas may still provide some foraging habitat. Foraging habitat should remain stable or improve.

The size of forest openings within the project area, particularly in Witscher and Scott Creek Watersheds, are over several hundred acres in size. This project would increase the size of those forest openings by placing new units adjacent to old harvest units. The removal of trees would open the canopy and allow clearer flight paths into the understory. Human activity would increase during project implementation which might preclude use of the project area by goshawks for hunting purposes.

3.7.6.2.1 Fisher
Past insect outbreaks, fires, fire suppression, and timber harvest have left a mosaic of habitats on the landscape, but they are not characteristic of the patterns that occurred historically under a more natural disturbance regime. Most harvest units are simple, uniformly-shaped, small to medium-sized patches (<40 acres), without snags or large fire-resistant trees. Salvage units tend to larger than 40 acres. Gone in these areas are the important snag, down wood, and residual large tree components that provide the structural diversity preferred by fishers once a stand regenerates. Past activities may have altered the availability of denning habitat, forested connectivity, and prey habitat for fisher. The loss of medium and large trees from timber harvest has reduced the older forest component that is important to fisher year-round. Across the analysis area, open roads facilitate access for trappers and firewood cutters, potentially decreasing fisher populations and the downed logs important for fisher and their prey species.

The fire is responsible for most of the effects to fisher habitat within the area. Proposed activities would be additive to that and to past activities by reducing overhead cover and lowering snag and down woody debris levels. However, adherence to design criteria for snag and down woody debris retentions and planting of units should improve habitat conditions over the long-term.

3.7.6.2.1 Townsend’s Big-eared Bat

Past timber harvest, road construction and maintenance, fires, fire suppression, grazing, mining activity, and abandoned mine closures have likely affected Townsend’s big-eared bat habitat in the project area as well as across the Nez Perce National Forest. Factors that could lead to a decline in Townsend’s big-eared bats are the loss and/or disturbance of suitable roosting habitat. Abandoned mine sites that were plugged or closed without consideration of bat use were lost as potential roost sites or hibernacula. Past and present recreational exploration of caves, mine adits, and mine shafts may result in abandonment by bats, and is likely to continue into the future. The closure of old mine adits and shaft has also reduced the amount of available habitat for this species. The continued suppression of wildfires allows succession to continue which reduces the quality of foraging habitat by minimizing edges and eliminating openings. Past timber harvest targeted medium to large trees and left few residual snags and large legacy trees; this may have affected individual Townsend’s big-eared bats or local populations.

The continued suppression of wildfires would allow succession to continue and allow trees to encroach in grasslands, thereby further reducing the suitability of foraging habitat. Past and current fire suppression and firewood cutting activities, and past timber harvest have reduced potential roosting habitat by decreasing the amount of large seral tree species and allowing unnaturally dense understory conditions to increase. This has impacted the quality of foraging habitat as well. The severity of wildfires in the lower elevation, ponderosa pine and Douglas-fir communities within the Salmon River Basin has been high over the last 10-15 years. Several areas of old growth ponderosa pine have stand-replaced which historically were more of an underburn. Thus snag habitat as potential roosting sites may have increased. Timber salvage of the larger diameter snags in several burned areas has reduced the availability of potential roost sites.

The actions identified as part of this project would contribute to a decrease in the availability of snags for roosting within the project area. However, the Black Butte Fire created abundant snag habitat.

3.7.6.2.1 Boreal toad

Past harvest practices of removing forest vegetation along streams, along with the accumulation of fuel levels associated with fire suppression has created unnatural conditions. Fire suppression has created denser forests that tend to burn hotter and are more destructive. Activities associated with this are not expected to be additive to past actions. Although there is a potential for individual mortality, no adverse effects to the viability of boreal toad populations overall would be expected with this salvage project.

3.7.6.2.1 Black-backed woodpecker
In reviewing the Nez Perce National Forest fire occurrence records, the amount of burned forest per year has increased considerably since the mid-1930s. Approximately 65,992 acres burned on and immediately adjacent to the Forest in 2006. These fires ranged from less than one acre to about 37,000 acres in size, based on GIS fire perimeters. These post-fire conditions have created habitat for many wildlife species. No other fire salvage efforts are anticipated from the 2006 fires. In addition, approximately 205,079 acres have burned on and adjacent to the Nez Perce National Forest from 2000 to 2004, creating abundant habitat for black-backed woodpeckers and other species associated with snags. Additionally, insect and disease activity is ongoing with mountain pine beetle epidemics on the Forest since the 1980’s.

The 2006 fires across the Forest have created an abundance of snags, which would become suitable cavity building and roost sites within the next decade for many species, as well as foraging areas. However, this nesting and roosting substrate would slowly decline as snags start falling. Other natural disturbances on the Forest, such as beetle outbreaks in lodgepole pine stands, have created an abundant amount of habitat for the black-backed woodpecker. Other small pockets of insect and disease outbreaks across the Forest has also created habitat for various wildlife species. The two combined natural events have created an abundance of habitat for those species associated with snag habitat.

As a result of the Black Butte Fire, habitat has been created for the black-backed woodpecker and other snag associated species that prefer lower elevation, dry forest habitats consisting of ponderosa pine, Douglas-fir, and some mixed conifer. Salvage logging of burned trees would slightly reduce habitat for the black-backed woodpecker. This reduction of fire-killed trees and potential snags reduces the amount of habitat that would otherwise be utilized by black-backed woodpeckers and other snag associated wildlife species. Leave trees and snags within the units and additional acres that burned that are not being treated would mitigate these effects. In addition, it is expected that there would be an influx of beetles in the next couple of years, creating additional nesting, foraging, and roosting sites for snag associated species.

Other activities or projects that reduce the potential for wildfire and epidemics or outbreaks of insect populations also reduces habitat for black-backed woodpeckers. Timber harvest, like the Little Slate project to the northwest of the project area, that reduces the incidence of insects or reduce stand densities and the risk of stand-replacing fires reduces habitat for black-backed woodpeckers. Firewood gathering would reduce additional nesting, roosting, and foraging substrate along roadways. The loss to firewood gathering is expected to be low because access to project area is limited. Snags would be retained interior to road prisms in unharvested areas within the project area, within the Black Butte Fire area, and other fires areas across the Forest. Ongoing and future fuel reduction projects that have a prescribed fire component have the potential to improve habitat for species associated with snags, especially those that consist of fall burning. As individual trees or clumps of trees torch, nesting, foraging, and roosting habitat may be created within otherwise green forests.

### 3.7.6.2.1 White-headed Woodpecker

Active fire suppression in former fire-climax ponderosa pine communities and harvest of mature and old growth ponderosa pine trees are the two most important cumulative impacts affecting white-headed woodpeckers and other ponderosa pine associated species in general.

The absence of large fires during the past 80 or more years has resulted in denser, more closed canopies with more patches of Douglas-fir regeneration in the understory than typically occurred historically. Historically, low elevation south- and west-facing slopes were likely dominated by open-understory, large tree habitat. These dense understories and the accumulation of fuels has created a landscape that is more prone to stand-replacing fires, which historically use to be more open and were frequented by fires that were more of an underburn. This reduces the amount and distribution of both nesting and foraging habitat. Across national forest lands, selective cutting and past timber harvest of mature and old growth ponderosa pine has removed suitable nesting, foraging, and snag habitat components.
Many wildfires over the last 15 years within the lower Salmon River subbasin, from Bargamin Creek to Riggins, created more stand-replacing burned xeric forest communities than what occurred historically. The loss of the live canopy cover and fire salvage activities in the watersheds within and adjacent to the project area have considerably reduced the amount and distribution of white-headed woodpecker habitat. Approximately 66% of the Scott Creek watershed has been harvested, 41% of the Witsher Creek, and 49% in Bullion Creek watersheds. In addition, both of these watersheds contain a considerable amount of grassland habitat. Harvest activities associated with this project would further reduce the amount of nesting habitat available within these watersheds.

Fire suppression, prescribed fire, noxious weed treatment, and recreation activities, would continue under all alternatives. Planned reforestation of treated upland areas would be an important contribution for this species to reoccupy available habitats.

3.7.6.2.1 Fringed myotis

Past timber harvest, road construction and maintenance, fires, fire suppression, grazing, and mining activity have likely affected fringed myotis bats habitat in the project area as well as across the Nez Perce National Forest. Factors that could lead to a decline in fringed myotis bats are the loss and/or disturbance of suitable roosting habitat. Abandoned mine sites that were plugged or closed without consideration of bat use were lost as potential roost sites or hibernacula. Past and present recreational exploration of caves, mine adits, and mine shafts may result in abandonment by bats, and is likely to continue into the future. The closure of old mine adits and shaft has also reduced the amount of available habitat for this species. The continued suppression of wildfires allows succession to continue which reduces the quality of foraging habitat by minimizing edges and eliminating small openings. Past timber harvest targeted medium to large trees and left few residual snags and large legacy trees; this may have affected individual Townsend’s big-eared bats or local populations.

The continued suppression of wildfires would allow succession to continue, thereby further reducing the quality of foraging habitat. Past and current fire suppression and firewood cutting activities, and past timber harvest have reduced roosting habitat by decreasing the amount of large seral tree species and allowing unnaturally dense understory conditions to increase. This has impacted the quality of foraging habitat as well. The severity of wildfires in the lower elevation, ponderosa pine and Douglas-fir communities within the Salmon River Basin has been high over the last 10-15 years. Several areas of old growth ponderosa pine have stand-replaced which historically were more of an underburn. Thus snag habitat as potential roosting sites may have increased. Timber salvage of the larger diameter snags in several burned areas has reduced the availability of potential roost sites.

The actions identified as part of this project would contribute to a decrease in the availability of snags for roosting within the project area. However, the Black Butte Fire created abundant snag habitat.

3.7.6.2.1 Flammulated Owl

Active fire suppression in former fire-climax ponderosa pine communities and harvest of mature and old growth ponderosa pine, Douglas-fir, and western larch are the two most important cumulative impacts affecting flammulated owls and other ponderosa pine associated species in general.

The absence of large fires during the past 80 or more years has resulted in denser, more closed canopies with more patches of Douglas-fir and grand fir regeneration in the understory than typically occurred historically. Historically, low elevation south- and west-facing slopes were likely dominated by open-understory, large tree habitat. Fire suppression efforts may have contributed to increased understory growth and denser mid-canopy trees, making foraging more difficult for flammulated owls. These dense understories and the accumulation of fuels has created a landscape that is more prone to stand-replacing fires, which historically use to be more open and were frequented by fires that were more of an underburn. Across national forest lands, selective
cutting and past timber harvest of mature and old growth Douglas-fir, ponderosa pine, and western larch has removed suitable nesting, foraging, and snag habitat components.

Many wildfires over the last 15 years within the lower Salmon River subbasin, from Bargamin Creek to Riggins, created more stand-replacing burned xeric forest communities than what occurred historically. The loss of the live canopy cover and fire salvage activities in the watersheds within and adjacent to the project area have considerably reduced the amount and distribution of flammulated owl habitat. Approximately 66% of the Scott Creek watershed has been harvested, 41% of the Witsher Creek, and 49% in Bullion Creek watersheds. In addition, both of these watersheds contain a considerable amount of grassland habitat. Harvest activities associated with this project would further reduce the amount of nesting habitat available within these watersheds.

Fire suppression, prescribed fire, noxious weed treatment, and recreation activities, would continue under all alternatives. Planned reforestation of treated upland areas would be an important contribution for this species to reoccupy available habitats.

3.7.6.2.1 Pygmy Nuthatch

Active fire suppression in former fire-climax ponderosa pine communities and harvest of mature and old growth ponderosa pine trees are the two most important cumulative impacts affecting pygmy nuthatches and other ponderosa pine associated species in general.

The absence of large fires during the past 80 or more years has resulted in denser, more closed canopies with more patches of Douglas-fir and grand fir regeneration in the understory than typically occurred. Historically, low elevation south- and west-facing slopes were likely dominated by open-understory, large tree habitat. These dense understories and the accumulation of fuels has created a landscape that is more prone to stand-replacing fires, which historically use to be more open and were frequented by fires that were more of an underburn. This reduces the amount and distribution of both nesting and foraging habitat. Across national forest lands, selective cutting and past timber harvest of mature and old growth Douglas-fir and ponderosa pine has removed suitable nesting, foraging, and snag habitat components.

Many wildfires over the last 15 years within the lower Salmon River subbasin, from Bargamin Creek to Riggins, created more stand-replacing burned xeric forest communities than what occurred historically. The loss of the live canopy cover and fire salvage activities in the watersheds within and adjacent to the project area have considerably reduced the amount and distribution of pygmy nuthatch habitat. Approximately 66% of the Scott Creek watershed has been harvested, 41% of the Witsher Creek, and 49% in Bullion Creek watersheds. In addition, both of these watersheds contain a considerable amount of grassland habitat. Harvest activities associated with this project would further reduce the amount of nesting habitat available within these watersheds.

Fire suppression, prescribed fire, noxious weed treatment, and recreation activities, would continue under all alternatives. Planned reforestation of treated upland areas would be an important contribution for this species to reoccupy available habitats.

3.7.6.2.1 American marten

Of the past and current activities that affect marten and their habitat, fire suppression and timber harvest have and would continue to alter the amount and distribution of potential habitat. Past insect outbreaks, fires, fire suppression, and timber harvest have left a mosaic of habitats on the landscape, but they are not characteristic of the patterns that occurred historically under a more natural disturbance regime. Fire suppression has created stands that are more homogeneous and contain more mid-sized conifers. Most harvest units are simple, uniformly-shaped, small to medium-sized patches (<40 acres), without snags or large fire-resistant trees. Salvage units tend to larger than 40 acres. Gone in these areas are the important snag, down wood, and residual large tree components that provide the structural diversity preferred by marten once a stand regenerates. past activities may have altered the availability of denning habitat, forested
connectivity, and prey habitat for marten. The loss of medium and large trees from timber harvest has reduced the older forest component that is important to marten year-round. Across the analysis area, open roads facilitate access for trappers and firewood cutters, potentially decreasing marten populations and the downed logs important for marten and their prey species.

The fire is responsible for most of the effects to marten habitat within the area. Proposed activities would be additive to that by reducing overhead cover and lowering snag and down woody debris levels. However, adherence to design criteria for snag and down woody debris retentions and planting of units should improve habitat conditions over the long-term.

3.7.6.2.1 Pileated woodpecker

Timber harvest and road construction have reduced the amount and continuity of mature and old growth habitat across the project area. In addition, past actions frequently targeted medium and large trees and valuable ponderosa pine and western larch snags. These actions have left fewer appropriate stands, and trees within stands, that could be used by pileated woodpeckers. Past harvest left few snags orlegacy trees, and little down wood. As these older harvest units have begun to mature, they are devoid of the structures that could be utilized by pileated woodpeckers. At the same time, active fire suppression since the early 1900s has allowed succession to continue in those stands that have not been harvested. Relatively simple one- and two-story stands have transitioned to more complex multi-story stands with increased canopy closure, and individual trees have grown larger. Some of these stands may now qualify as suitable pileated habitat.

Increased fuel loads from fire suppression increase the chance of stand-replacing fires which has reduced the acres of older, xeric forest habitats across the landscape. Fires would create additional snags, but it would take many years before new forest would mature to levels where burnt stands could be used by pileated woodpeckers. Other projects in or near the project area may also alter the amount, distribution, and connectivity of older, dense-canopied stands, including the Little Slate project to the northwest of the project area and ongoing firewood cutting.

Project activities would reduce some habitat for the pileated woodpecker. However, some level of pileated woodpecker habitat would remain within the project area as snags and live trees would be retained within harvest areas, as well as in untreated areas such as riparian areas, areas outside of the units and in the surrounding landscape (both within and outside of the fire perimeter). In addition, trees are expected to die in the project area as they become stressed and/or attacked by insects. These newly dead trees that are not harvested would provide nesting and foraging habitat for this species in both treated and untreated areas.

The proposed salvage project and others proposed in the area (i.e., Little Slate project) could open or remove sufficient acres of canopy, particularly when juxtaposed against past harvest units, that the number and/or size of the openings would be too large to be used by pileated woodpeckers. If foraging habitat, which requires canopy closure, becomes too sparse within a pileated woodpecker territory, that bird or pair may expend too much energy foraging to maintain their territory or to rear young.

3.7.6.2.1 Shira’s moose

Past timber harvest has resulted in the loss of medium and large. Active fire suppression since the early 1900s has allowed succession to continue, and this has resulted in an increase in the amount of moose habitat. Fire suppression has also reduced the nutritive quality of browse species.

Road construction has resulted in increased access into the project area and reduced security for moose. Human disturbance as it relates to wildlife security and human-induced mortality is the past, present, and reasonably foreseeable action with the greatest effect on moose in the project area. These projects in combination with ongoing recreational activities, could disturb moose and increase human-moose interactions. Modifications to moose summer habitat could impact individuals by summer habitat. At the Forest level and across the range of the species, past, present, and reasonably foreseeable future actions would have negligible effects.
3.7.6.2.1 Rocky Mountain Elk

Removal of dead and dying trees would affect elk vulnerability in the short-term due to the cover provided by dead trees. This cover would be replaced by shrub regrowth and conifers during planting operations. Planting of treated areas would recreate hiding cover more quickly.

Because proposed temporary roads would be removed, and no new permanent roads would be built, proposed activities are not expected to cumulatively add to these measures of human disturbance levels. Elk habitat effectiveness is likely to increase in the long-term with the natural regeneration of the vegetation within the burned areas, in addition to other additive effects produced by such activities associated with this proposal and fire rehab projects. Planting of conifers in harvest areas burned in the fire would speed up the process of an area to provide cover. Elk habitat effectiveness would remain at current levels or slightly reduced due to the reduction in cover and the increase in fragmentation.

Road building, human activities, timber harvest, recreation, fire control, livestock grazing, and other multiple use activities to different degrees have previously affected portions of the project area. The most important cumulative effect to elk in Idaho is hunting. In addition, human disturbance (as measured by open road density and availability of wildlife security) impacts many wildlife species. Because proposed temporary roads would be removed, and no new permanent roads would be built, proposed activities are not expected to cumulatively add to these measures of human disturbance levels.

Another important cumulative effect effecting wintering elk is the availability of browse. The impacts of this project are expected to be negligible beyond what the fire has already done. A flush of forage is expected following the fire and would benefit elk and other early-seral species.

3.7.6.2.1 Neotropical Migratory Birds

Past and present actions have impacted or altered migratory bird habitat in the project area and surrounding watersheds. These actions include grazing, mining, firewood cutting, timber harvest, fire suppression, natural wildfires, road construction and maintenance, dispersed recreation, motorized trail routes, and home site construction. All of these past and present effects have contributed to the current species distribution and population sizes of Neotropical and other migratory birds.

Timber harvest with its fragmentation and the lack of fire on the landscape has resulted in a change in the habitat for some neotropical migrant birds. Some habitats would be lost as a result of prescribed burning and timber harvest for species using denser forested canopies. Continued fire suppression would allow succession to continue and increase the amount of mature timber in the area. However, continued fire suppression would also increase the fuel build-up in the area, thereby increasing the eventual likelihood of a large-scale stand-replacing fire, which could result in a loss of the habitat for many neotropical migrant birds, yet create habitat for others.

Managing riparian areas separately from upland habitat by implementing PACFISH buffers benefit species associated on interior habitat with dense forest canopies. Maintaining a variety of snags in various states of decay and sizes would also help maintain existing populations of neotropical migrants.

Project actions, in combination with past, present, and reasonably foreseeable Federal projects would also affect bird species by potentially removing important foraging and nesting habitat. The creation of early successional by removing dead and dying trees may also benefit other bird species. The removal of dead, dying, and green trees would remove foraging and nesting sites and would constitute habitat losses, but the extent of the impacts would be limited due to the limited amount of burned forest identified for harvest. Woodpecker populations and secondary cavity-nesters in particular are likely to be affected by the removal of dead and dying trees. Harvests that occur during the nesting period would increase the likelihood of direct mortality to nestlings and could disturb mating and nesting behaviors.
Project activities, in combination with past, present and reasonably foreseeable future actions including fire exclusion in the overall landscape, would cumulatively add some fragmentation effects to the forested landscape.

Overall Cumulative Effects for Wildlife Species

The Antler salvage project proposes harvesting approximately 625 acres or less out of 33,380 total acres that burned. Ground-based and helicopter logging systems would be used. No logging would occur in PACFISH designated riparian habitat conservation areas.

Landings designated for helicopter use already exist, so additional disturbance would not occur. Limited road reconditioning to existing roads is proposed, and less than 2.5 miles of temporary road construction is proposed. New temporary roads would be decommissioned following harvest.

Forest lands in the project area have been affected by numerous past and ongoing activities on federal lands. The most recent events that affected the area include the 1992 Scott Fire and salvage harvest, the Black Butte Fire, and BAER activities conducted in fall 2006 and spring of 2007.

For the most part, the Black Butte Fire has created or improved habitat for snag dependent and early-seral wildlife species and reduced habitat for others. The Antler Salvage project is expected to reduce some habitat for those species that prefer snags. However, in the looking at what habitats the Nez Perce National Forest provides for wildlife species, the Antler Salvage project is not expected to considerably reduce the amount of wildlife habitat as only 16% of the burned landscape in the project area and 2% of the Black Butte Fire area is slated for harvest.

The Nez Perce National Forest provides habitat for a variety of wildlife species. Terrestrial resources have undergone substantial physical changes since the initiation of significant human disturbances in the mid to late 1800s. Specific activities include but are not limited to large-scale dredge mining in tributaries in the upper portion of the Little Slate watershed, timber harvest, road construction, domestic livestock grazing, wildfires, fire suppression activities, and prescribed fire activities. Many of these projects have changed the quantity, quality, and distribution of wildlife habitat for any number of species.

The Salmon River Drainage and their tributaries were historically created and maintained through disturbance and recovery processes. Current disturbance regimes for fire, insects and disease have been altered by past management practices and the interruption of natural fire processes (Barrett et al. 1997, p. 15). These altered disturbance regimes result in landscape vegetation patterns that differ considerably from historical conditions. The resulting forest character has tended toward middle aged, multi-layered, dense stands disproportionately over-represented and interspersed with shade-tolerant tree species, while both early successional and old growth forest character are relatively under represented. This is a result of both fire suppression and timber harvest.

Past harvest of larger seral ponderosa pine, Douglas-fir, and larch, and absence of natural fire regimes have allowed forest structure and composition changes involving unnaturally dense, successionaly advanced invasion by shade-tolerant conifers to occupy lower elevations where more open stands of large pine once occurred. Moderate to low density stands of large pine with more productive grass/forb and scattered shrub understories once provided more suitable habitats for species such as flammulated owls, white-headed woodpecker, pileated woodpeckers (large snags), elk (forage-rich winter range), and gray wolf (prey abundance). At higher elevations, pine and Douglas-fir plantations have artificially increased these seral species presence on moist sites, 2-layered stands have become 3 layered, and some young stands are overstocked. Unnatural conifer densities are present at both low and higher elevations due to fire exclusion, which make these stand at risk to more intense fires. This condition increases risks of long-term habitat loss and further old growth habitat fragmentation due to larger scale high-intensity wildfires. Due to the lack of frequent of fires in the low elevation, xeric forest communities, there has been a loss of large diameter ponderosa pine and Douglas-fir trees due to stand-replacing fires along the Salmon River above Riggins, Idaho.
Although some harvest related losses and fragmentation has taken place, the greatest habitat changes impacting species in this area have been due to loss of large diameter pine through salvage activities and unnatural encroachment by shade-tolerant conifers. Interrupted fire disturbance patterns have contributed to impaired habitat conditions for late-seral associated species such as flammulated owl, white-headed woodpecker, pileated woodpecker, and northern goshawk. In addition, loss of the open stand structure, large diameter pine and the lack of frequent low-intensity fires at lower elevations have suppressed big game winter range forage production directly important to wintering elk and indirectly important for ungulate predators, including wolves.

Many wildfires over the last 15 years within the lower Salmon River subbasin, from Bargamin Creek to Riggins, created more stand-replacing burned xeric forest communities than what occurred historically. The loss of the live canopy cover and fire salvage activities in the watersheds within and adjacent to the project area have considerably reduced the amount and distribution of wildlife habitat, especially for those that are associated with low elevation, xeric forest communities. Approximately 66% of the Scott Creek watershed has previous been harvest, 41% of Witsher Creek, and 49% of Bullion Creek. In addition, these watersheds contain a considerable amount of grassland habitat. This affects how animals move through or utilize any given watershed due to the amount of habitat in a permanent or temporary open vegetative condition. There is a considerable amount of habitat that has been lost for species like flammulated owls and white-headed woodpeckers that prefer mixed xeric forests or pure ponderosa pine forests. The loss is attributed to the loss of live, large diameter ponderosa pine to stand-replacing fire events and subsequent fire salvage activities.

Motorized vehicular traffic and human disturbances associated with an overall road and trail network currently impairs habitat connectivity and habitat value for species that require security such as elk and furbearers. It also contributes to disturbance and dispersal impacts to other wildlife and may increase human-induced mortality risks for some wide-ranging predators such as wolves and fisher. In addition, cumulative human-induced disturbance levels, motorized traffic impacts, harvest-related and fire exclusion-induced changes in landscape patterns present for long periods within the project area have compromised the integrity and functionality of any local biological corridors that may have been present historically. Past road construction and related impacts have further impaired old growth habitat effectiveness by contributing to fragmentation effects on forest interior species. Fragmentation of old growth patches and related impacts on habitat connectivity in general, can impair survival and competitiveness of some species by increasing predation, nest parasitism, and interspecific competition from forest edge species.

Of the past activities in the vicinity of the project, fire suppression, succession, and timber harvest (primarily large clear-cuts and road building) are the ones that have impacted and would continue to impact wildlife species the most, mainly by causing losses in preferred or suitable habitat. The effects of ongoing activities are relatively minor in terms of their overall impacts to wildlife species. These may include: livestock grazing; firewood gathering; mushroom picking; and recreation; as well as Forest Service administered inventories for invasive weeds and watershed condition; planting of burned non-fully stocked plantations; fire suppression rehabilitation of dozer lines, hand lines, and trails; and invasive weed treatment. In addition, the Forest is currently conducting a NEPA analyses on a project to improve watershed conditions and use timber harvest and fire to achieve desire vegetative conditions in the Little Slate watershed.

Cumulatively, conditions that have resulted from fire suppression and succession have affected species directly and indirectly and have predisposed many habitats to larger, more destructive fire events. This, in combination with other human activities and human encroachment, has resulted in long-term habitat loss or changes in structure of those habitats to many species of wildlife, while in some cases producing limited, short-term benefits for others.

3.7.7 Irreversible and Irretrievable Effects

3.7.8 Consistency with the Forest Plan and Environmental Law

Nez Perce National Forest Plan Compliance
Endangered Species Act Compliance
Migratory Bird Protection Compliance