Flathead Audubon Society
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To: District Ranger
West Side Reservoir Post-Fire Project
Hungry Horse/Spotted Bear Ranger Districts
PO Box 190340
Hungry Horse, MT 59919

March 2, 2004

Comments on West Side Reservoir Post-Fire Project from Flathead Audubon Society

Our comments fall in several categories including cavity habitat/snag management, harvest in riparian areas and RHCA's, harvest in other non-timber Forest Plan allocations, potential harvest in old growth, and access management.

Cavity Habitat/Snag management

The proposed action does not contain sufficient detail concerning the management of cavity habitat as determined by snag management. The species, numbers, sizes, and distribution of snags are all important factors that need addressed.

Lisa Bate is a Research Wildlife Biologist who has conducted research on cavity-nesting species and their habitat in the Flathead National Forest and other areas over the past 12 years. Lisa has prepared and submitted detailed comments concerning cavity habitats, snags, and snag management that reflect the best currently available science (Lisa J. Bate, February 26, 2004. Letter to District Ranger Jimmy DeHerrerra commenting on proposed Robert-Wedge salvage harvest). Those comments are equally applicable to the West Side Reservoir Post-Fire Project and Flathead Audubon Society fully endorses her comments (copy attached) and we incorporate them into our comments by reference. We strongly encourage you to use the comments when developing details of snag management.

Lisa Bate's comments clearly describe the importance of large larch and Douglas-fir snags. However, these species and large diameter specimens may not exist over all of the proposed harvest units. Where large larch and Douglas-fir snags do not exist, other species and/or smaller diameters should be retained according to a preference scale that your wildlife biologists can prepare. The largest diameter snags provide the best habitat for a variety of species but where they do not exist in sufficient numbers, smaller diameter snags should be provided.

All deciduous tree species snags should be retained regardless of size. Cottonwood and aspen snags provide high quality nesting and feeding habitat wherever they occur.

Because cavity nesting birds are territorial, it is important to provide suitable nesting/foraging habitat in harvest units and not just depend on unharvested areas.

Some OSHA standards concerning snags are also a concern. Right now OSHA standards requires cutting all snags in work areas that are not Class 1 or 2. For larch snags this should be relaxed because even a live larch tree with heart rot (Class 3) can remain standing for hundreds of years. They do not pose the same risk as a fir or spruce in Class 3.

Harvest in riparian areas
The proposed harvest in MA12 riparian areas is a concern. It is highly unlikely that any harvest in these areas will contribute to meeting the intent of these areas to provide high quality wildlife, fisheries, and water quality values. Removing snags can only reduce cavity nesting and foraging habitat availability, reduce the trees available to produce beneficial large woody debris in the riparian zone, and increase soil disturbance that leads to sediment movement into streams. Given the thousands of acres burned in the uplands being considered for salvage it seems unnecessary to even consider the riparian areas. The proposed action states that one reason for riparian harvest is to reduce the potential resource damage to these areas if the public gathers firewood. This is not a valid reason because unless every potential firewood tree is harvested, the public will still gather firewood from the remaining trees and then their "potential resource damage" will be added to the resource damage done from the salvage harvest.

The Proposed Action is silent on whether RHCA's have any proposed harvest or not. Flathead Audubon Society has the same concerns for any proposed harvest in RHCA's as stated for proposed harvest in MA12.

Harvest in other non-timber forest plan allocations
The proposed harvests in MA's 2A and 2B are also concerns. It is highly unlikely that any harvest in these MA's will contribute to meeting the intent of maintaining unroaded lands for semi-primitive recreation and also the harvest would reduce the cavity habitat values created by the fires.

Old Growth
The proposed action states that no salvage is proposed in areas that "currently" meet old growth habitat. What does currently mean? Is all old growth before the fires still considered old growth or have adjustments been made because of fire effects? If adjustments have been made, what are the reasons for the adjustments and does the planning area still comply with Forest Plan direction concerning old growth? More details are needed before we can provide meaningful comments. Potential activities in old growth are a concern.

Access management
Flathead Audubon encourages the Flathead National Forest to implement the Forest Plan direction for access management with few, if any, exceptions.

In those subunits where access management actions are proposed, when would the improvements be implemented? Will it be concurrent with harvest activities or relegated to sometime in the future? How would access management actions be funded? The Moose and Spotted Beetle Projects that are existing firm commitments already consume virtually the entire Flathead Forest road decommissioning budget so where would the money come from to do any work on West Side Reservoir Post-Fire Project? It is a major concern that the salvage harvest would be completed rapidly but any wildlife mitigation work such as access management may not be done for many years, if at all, due to lack of funding and priorities. Access management should be implemented as quickly as the salvage harvest.

Of the 6 grizzly bear subunits proposed for access management, only 3 are proposed to achieve Forest Plan standards. No reasons are given for the failure to achieve standards. Why can't the other 3 subunits achieve Forest Plan access standards? Do you have some information that suggests that these 3 subunits are not biologically important to the grizzly bear?

Will the proposed salvage harvest require increasing Open or Total Motorized Access Density and reducing Security Core during the time salvage activities take place? If so, that is especially a concern

since none of the subunits meet access standards and they would further be reduced for some unknown period before the "proposed" levels were eventually met.

How does the proposed harvest in the Ball Fire affect the previous decisions and firm commitments made in the Spotted Beetle Decision? It is a concern that proposed fire salvage would delay implementation of the Spotted Beetle Decision to achieve Forest Plan standards in Kah Soldier grizzly bear subunit.

Why is Ball Branch subunit proposed to go beyond Forest Plan standards for access management? Such actions are sure to further antagonize those who object to decreased levels of motorized access to achieve Forest Plan standards.

Not removing all culverts in decommissioned roads within the grizzly bear recovery area (which all of the fires were) does not comply with Appendix TT in the Forest Plan. No mention is made that a Forest Plan Amendment would also be required to leave culverts in decommissioned roads.

The Proposed Action, in the section titled "Roads Needed for Salvage Harvest," contains statements that no new permanent system or temporary roads would be constructed, but about 4.5 miles of historic road templates would temporarily be used. If these are truly "historic" roads then they are unusable by motorized vehicles and thus would require construction/reconstruction before they can be used. If they are being changed from historic to "temporary" by the use of machinery, then it is misleading to say that no new temporary roads would be constructed. Are these historic templates to be used for salvage being counted in A19 access density calculations? They should be since they are motorized roads to be used during the non-denning season and that is what A19 measures.

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February 26, 2004

Jimmy DeHerrera, District Ranger
Hungry Horse/Spotted Bear Ranger Districts
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Hungry Horse, MT 59919

Dear Mr. DeHerrera,

Thank you for the opportunity to comment on the proposed salvage harvest for the Robert/Wedge fires. I am a Research Wildlife Biologist currently under contract with both the Rocky Mountain and Pacific Northwest Research Stations. My research now, and over the past 12 years, has focused exclusively on cavity-nesting species and their habitat: snags, large trees, and logs.

First, I would like to commend you in your decision not to harvest snags in any of the roadless areas. Overwhelmingly, authors that have conducted research in stand-replacement burns agree that if salvage-logging is to take place that it would be best for cavity-nesting communities if large areas were exempted from logging rather than trying to only "slightly modify" entire burns. This is especially important when considering the Black-backed woodpecker (a sensitive species), which is negatively affected by salvage logging (Caton 1996, Hitchcox 1996, Saab and Dudley 1998; as cited in Bate 2001). This approach should provide adequate foraging resources for the Black-backed Woodpecker. Furthermore, authors recommend leaving a continuum of habitat conditions to meet the needs of all cavity-nesters, because each cavity-nester in the studies examined had slightly different habitat requirements.

Historically, large-diameter ponderosa pine and western larch have been harvested because of their high value as a timber commodity and for fuelwood (Hann et al. 1997; as cited in Bate and Wisdom 2002). These tree species also are two of the most valuable species for a suite of vertebrates, and most of which are of conservation concern due to substantial habitat loss. Western larch is strongly selected by many species of cavity-using wildlife because it provides some of the most suitable nest and roost sites, owing to the characteristics of the wood and its decay patterns (McClelland 1974, Bull et al. 1997). Specifically, western larch is much more susceptible to heart rot making it strongly selected for by a suite of wildlife species.

The presence of roads, however, can negatively affect snag and log habitat, directly and indirectly. Directly, snag and log densities are immediately reduced when road-building occurs because of the conversion of habitat to nonhabitat (Hann et al. 1997, Reed et al. 1996, Trombulak and Frissell 2000; as cited in Bate 2001). Indirectly, roads negatively affect snag and log densities because of commercial timber harvest and increased access to these structures by firewood cutters.

In the past, the harvest of snags and logs for firewood was limited by the distance that log rounds could be carried to a truck. Now, however, many commercial firewood cutters use cable systems to harvest snags and logs. Snags and logs can now be brought from great distances to a road for cutting and loading. Therefore, snag retention efforts for wildlife should be emphasized away from roads. In our research on the Flathead National Forest looking at the effects of roads on snags, we found that stands far from roads had almost three times the density of snags as stands adjacent to open or closed roads (Bate and Wisdom

2002). We also observed that snag densities within the first 50 m of a road were significantly lower than densities further away. What is important to note is that this was in unburned forests. Where no vegetation exists to impede the visual corridor such as in burned forests, I would expect this impact to extend much further into a stand. Therefore, the Forest Service should emphasize snag retention efforts for wildlife away from roads. In addition, snag densities in these units far from roads should compensate for the expected loss along roads.

Undoubtedly, timber harvest also has a significant impact on the snag resources important to wildlife. In the same study mentioned above, we found that stands with no history of timber harvest had three times the density of snags as stands that were selectively harvested, and 19 times the density as that in stands that had undergone a complete harvest. These results suggest that past timber harvest practices have substantially reduced the density of snags, and that snag losses have not been effectively mitigated under past management.

I became especially aware of this after I had the opportunity to review GIS maps of the West Side Reservoir and Robert/Wedge fires. What I saw was of great concern. Many of the proposed salvage units were the only ones within a square-mile landscape that contained larch that would be suitable (> 17 inch DBH) to provide nesting and roosting habitat. Although numerous spruce and fir trees still exist across our landscapes, they are not selected for nest sites by cavity-nesters because they lack the suitable decay characteristics.

National Forests are required to maintain viable levels of native wildlife populations on public lands. This was the objective in 1974 when the Forest and Rangeland Renewable Resources Planning Act (RPA) became law (Forest and Rangeland Renewable Resources Planning Act 1974; as cited in Bate et al. 1999). I cannot help but to question whether the Forest Service can maintain viable population levels of native wildlife species if the remaining stands that support older larch trees are allowed to be harvested. I strongly encourage to you examine the number and juxtaposition of stands that contain more than two to three larch per acre (> 17 inches dbh) and drop these from your proposed action. Heart rot comes with age. Maintaining adequate densities of larger larch (> 17 in dbh) is critical because trees of this size are most likely old enough to contain heart rot.

Cavity-nesting birds are not the only thing affected by reduced densities of suitable snags. Commodity values of timber can be reduced by insect damage. Most cavity-nesters are insectivores, and have proven instrumental in preventing, or retarding, local insect outbreaks (Beebe 1974, Otvos 1979; as cited in Bate et al. 1999). Some species of woodpeckers will aggregate in areas where insect outbreaks are occurring, thus accelerating the decline of the insect population. In addition, as foraging woodpeckers remove the bark of beetle-infested trees by chipping and probing, the microenvironment of the remaining beetle eggs and larvae is altered. The remaining eggs and larvae may be more susceptible to mortality caused by parasites and extreme temperature fluctuations. Therefore, by providing cavity-nesters with adequate habitat we can benefit from the biological control they provide when present in adequate numbers.

Managers are encouraged to consider both the nesting and foraging needs of cavity-nesters when writing salvage-logging prescriptions for burned habitats. Initially in burned areas, cavity-nesters mainly select snags that were made suitable for nesting by decay mechanisms that occurred before the event of fire. Their broken tops or the presence of conks along the bole (Hutto 1995, Caton 1996, Hitchcox 1996, Saab and Dudley 1998; as cited in Bate 2001) best identifies these snags. Subsequently, fire-killed trees that were previously sound soften with decay introduced by the multitude of insects that colonize dead and dying trees. These snags then provide additional nest sites. Cavity-nesters consistently select larger snags for nesting than

expected based on what is available. Nest tree species selection may often be based on availability although aspen, ponderosa pine, and western larch are consistently favored.

Foraging trees differ from nesting trees and *Picoides* woodpeckers (Hairy, Three-toed, and Black-backed woodpeckers) seem especially vulnerable to the removal of fire-killed trees that would otherwise provide important foraging substrates (Bate 2001). Woodpeckers select large diameter and thick-barked trees for foraging more than expected based on availability. In these areas that would mean focusing on western larch and Douglas-fir snags for foraging. Foraging trees typically are large diameter conifers exhibiting few signs of decay or broken tops. Foraging activities decrease on trees that are severely burnt.

Previous research shows that snag guidelines typically are not met in areas harvested for timber (Morrison et al 1986, Bate 1995). Because implementation can be difficult in logging situations, it may be best to continue with some of the prescriptions set forth in the Moose Fire EIS. That is, retain all ponderosa pine (if any) and larch > 18 inches in logging units because of their importance as nesting and roosting sites. In addition, to provide adequate foraging habitat within these units, I recommend retaining all Douglas-fir snags and trees > 20 inches wherever safety permits. In addition, I suggest retaining 15 to 25 percent of the area in clumps of snags which then to get more use (Saab and Dudley 1998). If possible, these should be positioned around highly valuable wildlife snags or trees and/or close to a green edge. Research shows that these units get more use (Bunnell et al. 2002).

Snags and logs with heart rot characteristics are not only important to cavity-nesting birds. A myriad of mammalian species (bats, squirrels, pine martens, fishers, bears) rely on these structures for den and rest sites (Bull et al. 1997). Maintaining these structures even after forests have burned is critical for them because they can persist for so long on the landscape. Salvage logging in the areas containing old-growth characteristics may have long-lasting negative impacts on these species. Although these areas have burned, the decay characteristics within these stands are the ones most likely to provide critical habitat components to many wildlife populations over the coming decades until newly generated stands mature and develop the necessary decay characteristics. Areas such as these may also provide important wildlife corridors once the shrubs and trees regenerate.

Finally, I strongly encourage the Forest Service to take a more active role in educating the public about the beneficial aspects of fire. Many plant and animal species have evolved in fire-maintained landscapes and researchers believe that stand-replacement fires are critical for the long-term survival of some species (Bunnell 1994, Hutto 1995, Caton 1996, Saab and Dudley 1998, Dixon and Saab 2000; as cited in Bate 2001). In addition, informing the general public as a reason for snag retention prescriptions in certain areas may make this process less contentious. I have included copies of the unpublished literature I have cited throughout.

Thank you for considering my comments.

Sincerely,

Lisa J. Bate