

**BIOLOGICAL ASSESSMENT
FOR POWDERHORN RESORT'S
MASTER DEVELOPMENT PLAN,
PHASE 1 ENVIRONMENTAL ASSESSMENT,
MESA COUNTY, COLORADO**

Prepared for:

U.S. Forest Service

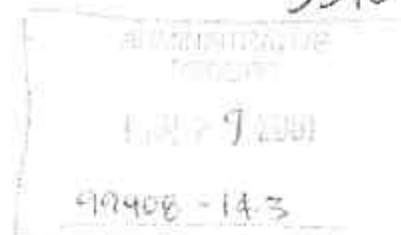
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classified as unsuitable lynx habitat, will become suitable as a result of ongoing natural conifer succession. This will reduce the effects of historic fires, which currently suppress lynx foraging values, and will allow suitable lynx habitat in the DU to exceed the 70% threshold, regardless of the 9 acres of spruce-fir forest and the acreage of other forest that would be removed under Alternative D.

The proposal, therefore, **may affect, but is not likely to adversely affect** potential lynx habitat. Recommended mitigation measures, described below, would further reduce potential impacts.

6.3.2 CUMULATIVE IMPACTS

There are no additional impacts appropriate for consideration under Alternatives B and C beyond those presented above under Alternative A.

6.3.3 CONCLUSION

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Alternative D **may affect, but is not likely to adversely affect** lynx habitat. After reviewing the current status of Canada lynx, the environmental baseline for the action area, the effects of Alternative D, and the cumulative effects, the implementation of Alternative D at PSA is not likely to jeopardize the continued existence of the contiguous United States distinct population segment of the lynx, and would not reduce appreciably the likelihood of both the survival and recovery of lynx by reducing their reproduction, numbers, or distribution. No critical habitat has been designated for this species, therefore, none will be affected. Effects of Alternative D at PSA would not result in incidental take, either by "harm" or "harassment", because the habitat loss would not significantly modify or degrade current habitat availability resulting in death or injury to lynx by significantly impairing behavioral patterns such as denning, foraging, or travel. Recommended mitigation measures, described below, would further reduce potential impacts, but are not part of Alternative D.

Alternative D would be **likely to adversely affect** habitat of the Colorado pikeminnow, bonytail chub, humpback chub, and razorback sucker. After reviewing the current status of these species, the environmental baseline for the action area, the effects of Alternative D, and the cumulative effects, the implementation of Alternative D at PSA is likely to jeopardize the continued existence of the Colorado pikeminnow, bonytail chub, humpback chub, and razorback sucker, and is likely to adversely modify designated critical habitat. Recommended mitigation measures, described below, would further reduce potential impacts, but are not part of Alternative D.

7.0 DETERMINATION

Alternative A would have no effect on the lynx. Alternative B, C, or D **may affect, but is not likely to adversely affect** lynx habitat. After reviewing the current status of Canada lynx, the environmental baseline for the action area, the effects of Alternatives B, C, and D, and the cumulative effects, the implementation of Alternatives B, C, and D at PSA is not likely to jeopardize the continued existence of the contiguous United States distinct population segment of the lynx, and would not reduce appreciably the likelihood of both the survival and recovery of lynx by reducing their reproduction, numbers, or distribution. No critical habitat has been designated for this species, therefore, none will be affected. Effects of Alternative B, C, or D at PSA would not result in incidental take, either by "harm" or "harassment", because the habitat loss would not significantly modify or degrade current

4B (18 ac.), aspen 4C (37 ac.), spruce-fir 3C (2 ac.) spruce-fir 4C (4 ac.), Douglas-fir 4C (5 ac.), Gambel oak 2 (20 ac.), and rock (0.3 ac.), totaling 111 acres, mostly within existing ski terrain on Powderhorn's existing SUP area. This would create approximately 89 acres of ski trails, 22 acres of gladed terrain (4A aspen forest), and 3 acres of road. Like Alternatives B and C, this habitat modification would affect 2.0% of the DU.

The magnitude of resulting habitat capability differences between Alternatives B, C, and D on the 5,625-acre DU were 0.2% or less on individual species. HABCAP modeling and habitat capability evaluations did not result in any substantive change for any species considered in this document. As a result, the presentation and discussion of additional model results for individual species are not warranted. Alternative D HABCAP results are part of the project file available for review at the Grand Valley Ranger District. The effects associated with Alternative D on those R2 sensitive species present in this landscape unit and considered in this document would not reduce the $\geq 40\%$ of habitat potential standard that must be maintained for these species. Alternative D may impact individual species and/or their habitats, but is not likely to cause a trend to federal listing or a loss of species viability for any species considered herein.

The same potential ecological effects described above under Alternatives B and C apply to Alternative D, with the two following exceptions. First, on those 22 acres of aspen-dominated forest that would be gladed, Alternative D would have less effect on facultative forest interior species and provide less benefit to generalist edge species than conventional trail development under Alternative B or C. However, for many obligate forest interior species with small home ranges, fragmentation effects may preclude or greatly impair habitat effectiveness in and beyond this entire 22-acre area. Second, Alternative D would convert 6.1 versus 12.9 acres (under Alternatives B and C) of mature spruce-fir forest to ski trails and produce proportionally less habitat fragmentation effects. This community is presently relatively uncommon on the ski area, partly as a result of historic fires and partly because most of this habitat type occurs at higher elevations on Grand Mesa that are above the ski area. Implementation of Alternative D would have less effect on those forest interior species associated with mature conifer stands that are relatively uncommon on the ski area, though more abundant within the main distribution of spruce-fir habitat on the mesa.

6.3.1.2 Forest Sensitive Species

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Alternative D would have no direct or indirect impacts on the following R2 species or their habitats: reflected and pale moonwort, clustered lady's slipper, Colorado tansy-aster, regal fritillary butterfly, northern leopard frog, common loon, merlin, pygmy nuthatch, fox sparrow, and long-eared myotis. Suitable habitats available to all R2 species analyzed in the DU under Alternative D would exceed the 40% potential habitat capability threshold requirement of the Forest Plan (USFS 1991) to maintain viable vertebrate populations. Alternative D may impact individual tiger salamanders, northern goshawks, flammulated owls, flammulated and boreal owls, three-toed woodpeckers, olive-sided flycatchers, purple martins, golden-crowned kinglets, pygmy and dwarf shrews, long-legged myotis, and American marten, but is not likely to cause a trend to federal listing or a loss of species viability.

6.3.2 CUMULATIVE IMPACTS

With the following two modified effects, the cumulative impacts of Alternative D on the fish and wildlife community within the project area would be identical to those described above in Section 6.2.2