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Endangered and Threatened Wildlife and Plants: Bi-State Distinct Population Segment of Greater Sage-Grouse

Comments on Proposed Listing Rule

The basis for the proposed listing ruling for the Bi-State Distinct Population Segment (DPS) of Greater Sage-Grouse is based on the fact that this population is “both markedly separated and significant to the remainder of the sage grouse taxon (page 04361; Benedict et al. 2003; Oyler-McCance et al. 2005).” Furthermore, these grouse occur at the southwestern edge of this taxon and have been declining in numbers. Sage-grouse in this DPS also exist within habitat that is vulnerable to drastic changes from habitat loss and anthropogenic conversion (e.g., linear features and exurban development) to non-habitat uses. In general, sagebrush habitats in this DPS are highly vulnerable to future change by conifer encroachment and cheatgrass invasion. The U.S. Fish and Wildlife Service identified 6 population management units (PMUs) in this DPS. These PMUs encompass 43 leks within approximately 755,960 hectares (1,868,017 acres) of sagebrush habitat within Carson City, Lyon, Douglas, Mineral, and Esmeralda Counties, Nevada, and Alpine, Mono, and Inyo Counties, California. In my opinion the proposed listing rule provides reasonable support for listing the greater sage-grouse in the Bi-State DPS under the Endangered Species Act of 1973.

Comments on Proposed Critical Habitat Rule

I found the critical habitat rule to be reasonable and to be based on solid scientific evidence. Fortunately, field studies have been conducted in the Bi-State DPS, which have yielded important information used to inform the critical habitat rule. For instance, recognition of differences in biological requirements including higher cover of sagebrush at nesting sites than for populations occurring outside the southern Great Basin as well as limited support for understory herbaceous cover or height required for nest site selection or success is one piece of information that suggest the close relationship that Bi-State sage-grouse have with big sagebrush. These conditions underscore the importance of maintaining dense stands of sagebrush for nesting sage-grouse in the Bi-State DPS. I also suggest including Kirrol et al. (2012) in this discussion as that paper reports a strong relationship for sage-grouse nesting and brood-rearing (early and late) for sagebrush and grasses in xeric big sagebrush habitat in south-central Wyoming. The importance of meadow habitats and currently dysfunctional corridors and sites (largely sagebrush encroached by pinyon-juniper woodland) to the Bi-State population is also clearly described in the recovery listing rule. In addition, climate change will likely lead to a hotter

climate with more precipitation occurring in summer, which will favor cheatgrass expansion, thus creating a tremendous strain on sagebrush habitats in the Bi-State DPS. Landscape factors identified in the Bi-State critical habitat rule indicate the size and isolation among various populations to be a significant conservation concern. The critical habitat plan also notes that there is connectivity between important segments of the population, but that habitat has been lost due to factors including woodland encroachment.

Specific Comments

Please cite Davies et al. (2011) in the critical habitat rule when discussing issues of conifer encroachment in mountain big sagebrush and annual grass invasions in Wyoming big sagebrush habitats.

Please proof the ruling and critical habitat decisions before finalizing this document. I note some typos including “shelter” spelled as “shelt” on page 9 of the listing rule.

Literature Cited

Davies, K.W., C.S. Boyd, Beck, J. L., J.D. Bates, T.J. Svejcar, and M.A. Gregg. 2011. Saving the sagebrush sea: an ecosystem conservation plan for big sagebrush plant communities. *Biological Conservation* 144:2573–2584.

Kirol, C. P., Beck, J. L., J. B. Dinkins, and M. R. Conover. 2012. Microhabitat selection for nesting and brood-rearing by the greater sage-grouse in xeric big sagebrush. *The Condor* 114:75-89.

Kolada, E. J., J. S. Sedinger, and M. L. Casazza. 2009a. Nest site selection by greater sage-grouse in Mono County, California. *Journal of Wildlife Management* 73(8):1333-1340.

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