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## Brewer's Sparrow

Priority Level: II    MT Score: 20    AI: 3

**Reason for Concern.** The nominate form of this species is a sagebrush obligate which has shown significant population declines throughout much of its range, including the two physiographic areas which overlap Montana. Very little is known about the distribution and habitat needs of the "Timberline" form of this species in the state.

**Distribution.** There are scattered breeding records throughout the State with only three latilongs not represented with evidence of breeding (Montana Bird Distribution Committee, 1996). Most suitable habitats are concentrated in the southern half of the State with few sightings in the northwest and north of the Missouri River. Gap (Redmond et al. 1998) modeling predicted four million ha of suitable habitat (or 11% of the state) for the species within Montana. The "Timberline" (Brewer's) Sparrow is a subspecies that is found breeding in high elevation shrubfields and krumholz. Within Montana, they have been located on the east side of the divide in Glacier National Park.

**Habitat Requirements.** Brewer's Sparrow is a species characteristically found within sagebrush habitat (Rising, 1996), and indeed is considered by most to be a sagebrush obligate (but see Timberline Sparrow). Both Johnsgard (1979) and Saab and Rich (1997) felt that Brewer's Sparrow is closely associated with shortgrass prairie with scattered to abundant amounts of sagebrush or other shrub-steppe vegetation. Others have shown a negative correlation with grass cover, with the species preferring dense sagebrush stands (Rotenberry and Wiens 1980). Best (1970) found Brewer's Sparrow utilizing sagebrush as important nesting cover; Bock and Bock (1987) found they preferred unburned to burned sagebrush. One Idaho study indicated that large patch size and robust shrub cover both increase the likelihood of use by this species (Knick and Rotenberry 1995). It is often the most common breeding bird where it occurs.

**Ecology.** This species feeds on insects found in the foliage of sagebrush and on the ground, and on the seeds of grasses and forbs. It nests in large, living sagebrush, rarely using shrubs <50 cm tall (Peterson and Best 1985). The nests are near the ground, and are usually placed in the finest branches of new growth near the tips of the branches (Rich 1980), so shrubs in good vigor are important to nesting. They show strong site fidelity, returning from year to year to nest in the same area (Wiens and Rotenberry 1985).

**Management Issues.** The species is vulnerable to parasitism by Brown-headed Cowbirds, especially where the sagebrush landscape has been broken up by agriculture and pastures. Reductions in sagebrush cover and vigor from control actions such as burning or herbicides will reduce or eliminate habitat suitability for the species. The long-term viability of the species in Montana will depend on the maintenance of large stands of sagebrush in robust condition throughout the species' range in the state. Wide distribution of suitable habitat is essential, due to their tendency toward site fidelity.

**Management Recommendations.** Implementing recommendations for SageGrouse should encompass all the needs of Brewer's Sparrows.