

**THE OPEN LANDS DILEMMA: THE CHALLENGES OF BIG GAME
MANAGEMENT AND TRANSPORTATION PLANNING IN OPEN
LANDSCAPES—
A CASE STUDY OF THE MISSOURI BREAKS NATIONAL MONUMENT^{tw}**

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Significant attention has been paid recently to the effect of road densities and spatial arrangement on big game habitat security, hunter opportunity, and ethical hunting environments. However, the vast majority of research has been performed in forested environments, and the applicability of big game habitat security standards and guidelines to open landscapes, such as the Northern High Plains, is questionable due to significant differences in vegetation cover and topography. At the same time these landscapes are often heavily roaded and are becoming increasingly popular with hunters and recreationists. In addition, open landscapes are more conducive to off-road vehicle (ORV) travel, and impacts of this growing use on big game vulnerability and on ethical hunting are not fully understood. The open-landscape challenges facing public lands managers trying to balance management mandates with big game habitat security, hunter and recreational opportunity, and ethical hunting environments are illustrated using the newly created Missouri Breaks National Monument. The need for creating science-based recommendations to help address these issues in development of current public land management plans, as well as the need for more research into habitat security standards for these environments, are proposed.