
EVALUATION OF WILDLIFE GUARDS AT ACCESS ROADS

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The reconstruction of 90.6 km of U.S. Highway 93 from Evaro to Polson, MT on the Flathead Indian Reservation includes 41 fish and wildlife crossing structures and 13.4 km of road with wildlife fencing. These measures are aimed at reducing wildlife–vehicle collisions, while allowing wildlife to cross the road. In fenced road sections, gaps for side roads are mitigated by wildlife guards (similar to cattle guards). We focused on a 1-km fenced section where animals can either cross the road using five crossing structures (4 culverts, 1 bridge), or they can access the road through two guards on the east side and cross using jump-outs, i.e., earthen ramps that allow animals in fenced areas to jump down to safety, on the west side. We monitored wildlife movements with cameras at the two guards and in one large crossing structure adjacent to a guard. We investigated how effective these guards are in keeping deer (*Odocoileus* spp.) from accessing the road. We also compared movements across a guard to those through a crossing structure. The guards were 85 percent or more effective in keeping deer from accessing the road, and 93.5 percent of deer used the crossing structure instead of an adjacent guard when crossing the road. Though the guards were not an absolute barrier to deer, the results indicated that deer were substantially discouraged from crossing the guards, and the vast majority crossed the road using the crossing structure rather than the guard, indicating that guards are an effective means of mitigation.