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## **MOVING WILDLIFE UNDER US HIGHWAY 93 IN MONTANA'S BITTERROOT VALLEY THROUGH WILDLIFE CROSSING STRUCTURES**

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The impediment that the Bitterroot Valley's roads and vehicle traffic pose for wildlife movement can be partially mitigated with wildlife crossing structures. This study evaluates 18 wildlife crossing structures installed by Montana Department of Transportation along US Highway 93, south of Missoula. Through the use of camera traps, this ongoing study evaluates the efficacy of these crossing in allowing wildlife to move safely under the road, and in reducing wildlife-vehicle collisions between the communities of Lolo and Hamilton. Photographic data on white-tailed deer use were analyzed for success rate and rate of repellence. Use of structures by other species of wildlife was also analyzed. In three years of post-construction monitoring, success rates ranged from zero to two white tailed-deer passes per day. Carnivores were photographed using crossings and moving over the highway at grade. At this time, bridge structures have a higher success at passing white-tail deer that approach them than culverts, except for a large (6 m wide and high) steel culvert, which worked as well as bridges. Fencing to crossings is important: bridges without wildlife fencing had success rates well under 0.2 deer passes per day. At this time overall trends appear to suggest that: wildlife fencing, more vegetation at the ends of structures, and wider structures result in higher success rates for white-tailed deer. When the study is completed in 2015 we will have a better understanding of the structure and landscape variables important to facilitate wildlife use of wildlife crossing structures.