

Paradise Valley Corridor Study

US 89: Gardiner to Livingston

Saving Lives by Incorporating Wildlife Passage Opportunities

Case Statement

Vehicle traffic on United States Highway 89 (US 89) from Livingston to Gardiner is likely to increase over the next 20 years. In fact, this year alone, Yellowstone National Park saw a 4% increase in vehicle traffic. To prepare for this growth and address existing public safety concerns, the Montana Department of Transportation (MDT) has initiated a corridor planning study on US 89, in cooperation with the Federal Highway Administration and Park County. According to MDT, “the study will identify feasible improvement options to address safety and geometrical concerns within the transportation corridor based on needs presented by the public, the study partners, and resource agencies.”

MDT indicates that wildlife-vehicle collisions accounted for roughly 50% of all reported collisions on US 89 between Gardiner and Livingston from 2007 to 2012.

Along the corridor, wildlife-vehicle collisions pose a substantial threat to public safety. In fact, MDT states that, over a 5-year period from 2007 to 2012, a total of 286 collisions were reported along this stretch, of which almost 50% (142) involved wildlife. MDT does not include wildlife carcasses found along the highway that are not accompanied by a reported crash in its count of wildlife-vehicle collisions. Nonetheless, during the same 5-year period, over 700 large mammal carcasses were reported by MDT Maintenance on this stretch of US 89. Through the 11-year period from 2002 to 2012, more than 1,600 large mammals were killed along this stretch of highway, including over 1,500 deer, 94 elk, and 6 bighorn sheep, along with 1 antelope, 1 bison, 1 black bear, and 1 moose.

Cost-Benefit of Wildlife Mitigation

Each year, wildlife-vehicle collisions cause hundreds of human deaths, over 29,000 injuries, and cost Americans over \$8 billion, not to mention the harm to native wildlife, including game species. Between vehicle repair costs, medical bills, towing fees, accident attendance costs, hunting value of road-killed game species, and more, the total costs for the average collision with a large ungulate in the United States and Canada have been estimated at over \$6,000 per deer or bighorn sheep, \$17,000 per elk, and \$30,000 per moose (in 2007 US\$)¹.

However, there is a proven solution to this costly issue: wildlife mitigation measures, including wildlife underpasses, overpasses, and systems that automatically detect



wildlife nearby, have been shown to reduce wildlife-vehicle collisions by over 85% - a reduction from 100 collisions to 15 or fewer¹. Despite their upfront costs, these measures have been shown to pay for themselves over time through collision cost prevention when installed at collision hotspots, saving taxpayer dollars in the long run.

The graphic on the back of this handout shows the total number of wildlife killed per half mile along US 89, based on the number of deer, elk, moose, and other large mammal carcasses collected by MDT maintenance crews from 2002 to 2012. Although not every carcass is accompanied by a reported collision, patterns in carcass data can help to identify “hotspots” (in orange and red) where wildlife are frequently killed along the roadway as sites that likely warrant further study.

A follow-up analysis of estimated collision costs at these hotspots based on more detailed wildlife-vehicle collision reports, in combination with information about land ownership, presence of migration corridors, and local topography, is crucial to identifying potentially suitable sites for wildlife mitigation measures.

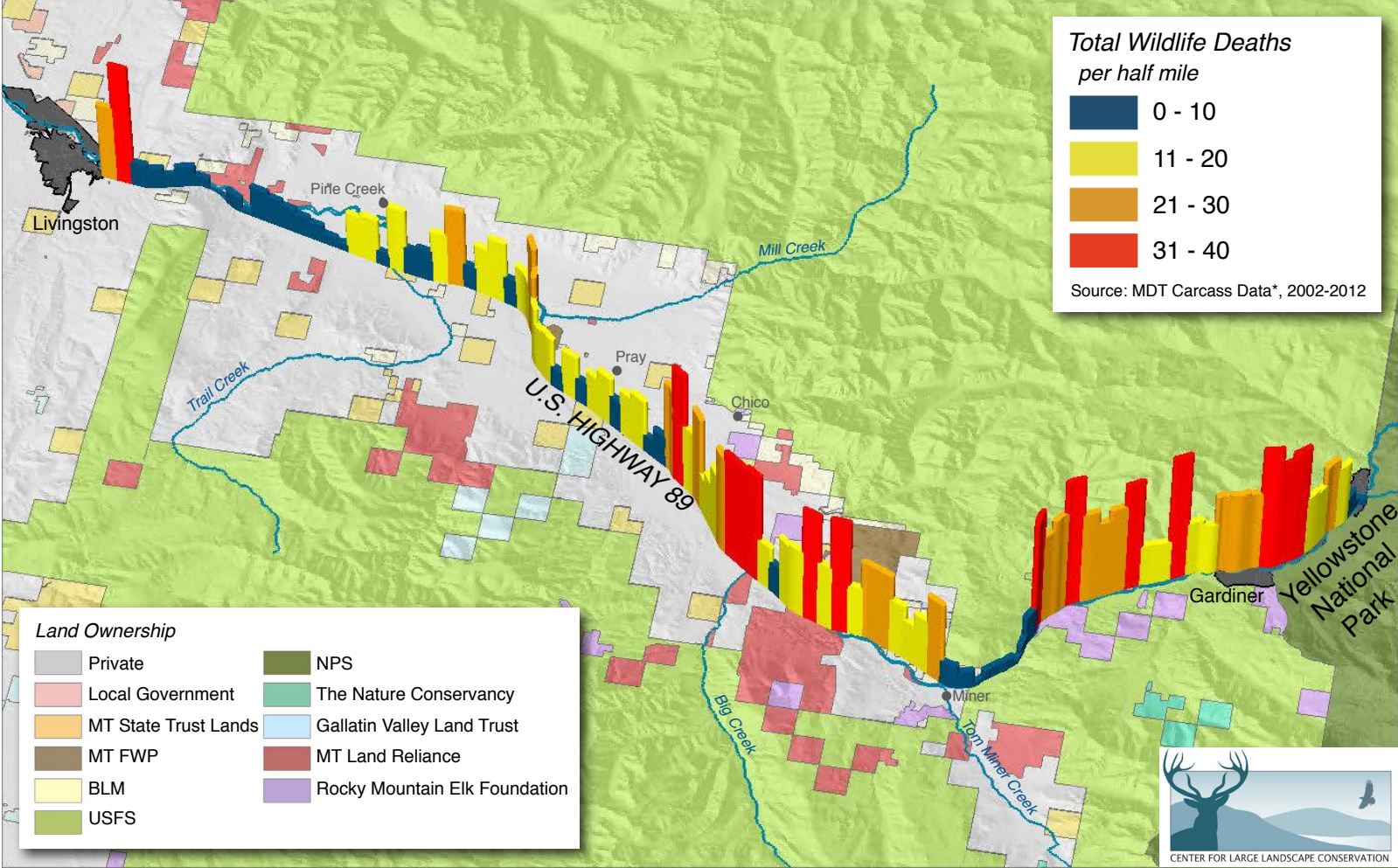
At these sites, it may actually cost taxpayers more to do nothing to prevent collisions with wildlife than it costs to do something. Where mitigation is determined to make sense, taking steps to prevent collisions and provide safe passage is predicted to save human lives, wildlife, and money – creating a win-win-win situation.

Recommendation

We are recommending that MDT undertake a cost-benefit analysis of mitigation measures that will increase public safety and decrease the potential for wildlife-vehicle collisions on US 89. Ultimately, we want to ensure that a comprehensive wildlife mitigation analysis will be conducted in advance of any future project planning and development on US 89.

¹ Huijser, M.P. et al. 2009. Cost-benefit analyses of mitigation measures aimed at reducing collisions with large ungulates in the United States and Canada: a decision support tool. *Ecology & Society* 14(2): 15.





* "The MDT carcass database contains information on carcasses collected by MDT maintenance personnel; however not all carcass collection is reported consistently or on a regular schedule. This makes the information provided by the carcass database useful for pattern identification, but not statistically valid."



What You Can Do

Contact MDT and let them know that further research should be conducted to better understand how to reduce wildlife-vehicle collisions during any future project planning or development of US 89. **Submit your comments online at <http://www.mdt.mt.gov/pubinvolve/paradisevalley/comments.shtml>**

Case Studies and Research

Above are images of wildlife using crossings installed on US 93 north near Polson, MT. This project is considered the gold standard in the U.S. and should be replicated to the greatest extent possible when considering highway design in Montana. For more information on wildlife crossings and their efficacy as well as case studies, photo galleries, and research please visit:

www.Montanans4Wildlife.org

