



November 20, 2012

*Via MDT Online Comment Form and E-mail*

Tom Kahle, MDT Project Manager  
**Montana Department of Transportation**  
Online Comment Form  
Rail, Transit and Planning Division

Re: Comments on Draft Tongue River Road (S-332) Corridor Planning Study

Dear Mr. Kahle:

Montanans for Safe Wildlife Passage (MSWP) submits the following comments on the Draft Tongue River Road (S-332) Corridor Planning Study (Study) that was developed in accordance with the 2011 Legislature's directive that the Montana Department of Transportation (MDT) ". . . survey and provide design and preliminary engineering work to improve State Secondary 332." (Study at vii.) We appreciate receiving the one week extension of the comment deadline from November 13<sup>th</sup> to November 20<sup>th</sup>.

MSWP formed in 2011 to bring individuals and conservation groups together to advocate for innovative solutions to improve and/or maintain habitat connectivity across Montana roads and provide safe passage for Montana's people, fish, and wildlife. Our members include individuals who have been working on improving wildlife passage for wildlife and aquatic species for over 15 years, including research, mapping, monitoring, policy work, and on-the-ground projects.

First, we would like to commend MDT for your Corridor Planning Process that allows for earlier planning-level coordination with the community, resource agencies, and other entities. This process is an excellent way to ensure adequate community involvement early on in the transportation planning process and can provide a more meaningful and thorough NEPA/MEPA process.

Through these comments, we hope to bring to your attention the importance of wildlife considerations in the Tongue River corridor, a riparian area of critical importance to wildlife in Eastern Montana. We also highlight specific instances in which MDT should more fully consider the effect of any proposed improvement options on wildlife, including recommended actions MDT can take to mitigate the effects of any proposed improvements on the motoring public as well as Montana's wildlife. Finally, we question whether the overall purpose and need of the Study, as currently written, is adequate to justify the proposed improvement "Concepts" and hope the final draft addresses more fully the issues we raise.

## **I. Background Information: Safe Wildlife Passage In Montana**

### **A. Good planning for wildlife means safer highways for Montanans.**

Wildlife-vehicle collisions cause human fatalities, injuries, property damage, and pose safety and maintenance challenges for departments of transportation. A 2007 study, requested by Congress pursuant

to the SAFETEA-LU Act, estimated that one to two million collisions between cars and large animals occur every year in the United States. (Huijser *et al.* 2007.) Even though the overall number of collisions has leveled off at around 6 million per year (1990-2004), the relative percentage of collisions due to animals has increased. Specifically, wildlife-vehicle collisions have increased by 50% in the past fifteen years, from fewer than 200,000 per year in 1990 to approximately 300,000 in 2004 – about 5% of all reported motor vehicle collisions. (Huijser *et al.* 2007.) State Farm Insurance similarly reported in 2009 that deer-vehicle collisions had jumped 18% in the prior five years, even though the number of vehicles had increased by only 7%.<sup>1</sup>

An estimated 200 people die and 26,000 people are injured each year in the U.S. due to wildlife-vehicle collisions, and the total annual cost of wildlife-vehicle collisions is estimated to exceed \$8 billion. (Huijser *et al.* 2007.) The average costs to a motorist from colliding with a deer include: \$1,840 in vehicle repair costs, \$2,702 in medical costs, \$125 in towing and law enforcement services, \$2,000 for the monetary value of the animal, and \$50 for carcass removal and disposal, which totals \$6,717. Note that these figures are from 2007 and are likely much higher today.

The cost averages for larger animals, such as elk and moose, are even higher (\$3,000 and \$4,000, respectively). (Huijser *et al.* 2007.) In addition to endangering Montanans, wildlife-vehicle collisions also constitute a major threat to survival for some of the nineteen federally listed threatened or endangered animal species in Montana and the U.S., including lynx. (*Id.*)<sup>2</sup>

Studies indicate providing wildlife passage across highways save lives, animals, and money. Wildlife crossings (with fencing) are estimated to reduce vehicle collisions with large wild ungulates by 80 to 90%. (Woods 1990, Clevenger *et al.* 2001, Dodd *et al.* 2007.) A series of six underpasses (with fencing) on State Route 260 near Payson, Arizona, for example, has realized a benefit of greater than \$6,000,000, based on the Western Transportation Institute's most recent estimate of cost of elk-vehicle collisions.<sup>3</sup> A study conducted by Utah State University further demonstrated that mitigation efforts to reduce deer-vehicle collisions could produce a net positive economic gain and increase driver safety. The study estimated that the overall cost for 13,020 collisions from 1996 to 2001 in Utah was approximately \$45,175,454, resulting in an estimated average per year cost of about \$7,529,242 and a mean collision cost of \$3,470. (Bissonette *et al.* 2008.)

Here in Montana, when discussing the numerous wildlife crossings installed in the Ravalli area on Hwy 93 N., Confederated Salish and Kootenai Tribes Wildlife Program Manager Dale Becker stated, "For the most part I think we're intercepting a lot of the deer strikes and a lot of the bear collisions." Becker noted, "The research is ongoing, to give you an idea in the Ravalli area, from May of 2008 to December of 2009,

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<sup>1</sup> State Farm Insurance, September 28, 2009. Deer-Vehicle Collision Frequency Jumps 18 Percent In Five Years. Bloomington, Illinois.

<sup>2</sup> Threatened, Endangered, and Candidate Species in Montana (November 2011). Found on-line at: [http://www.fws.gov/montanafielddoffice/Endangered\\_Species/Listed\\_Species/TEClist.pdf](http://www.fws.gov/montanafielddoffice/Endangered_Species/Listed_Species/TEClist.pdf)

<sup>3</sup> CDOT Briefs. March 6, 2009. I-70 temporarily closed today to move elk from median. Post Independent, Glenwood Springs, CO.

through camera work and tracking surveys, there were documented a bit over 6,500 wildlife crossings or uses of the crossing structures."<sup>4</sup>

Wildlife-vehicle collisions also have financial implications for governmental agencies. Law enforcement incurs costs to investigate collisions, while transportation or other related state agencies incur costs to remove and dispose of carcasses and repair damaged infrastructure. (Huijser *et al.* 2007.) In addition to saving human and animal lives, inclusion of strategies to mitigate wildlife-vehicle collisions on Montana's highways thus will save MDT money by decreasing the costs for carcass removal and disposal, law enforcement, and emergency services. Agencies should take advantage of such win-win opportunities to save money while improving road safety for Montanans and wildlife.

**B. Federal and regional efforts support the integration of wildlife considerations early in the planning process.**

Over the last five years, numerous state and federal initiatives and instruction memoranda support the integration of wildlife consideration early in the planning process to protect wildlife habitat and movement corridors. The most notable effort is the **Western Governors' Association (WGA) Wildlife Corridors Initiative** (Western Governors' Association 2008) that is working to:

- Make the preservation of wildlife corridors and crucial habitat priorities for transportation planning, design, and construction;
- Integrate conservation and transportation coordination, planning, and implementation across jurisdictions.

As part of the WGA effort, Montana Fish, Wildlife and Parks has been hailed as a leader because of its work in developing the Crucial Areas Planning System (CAPS)<sup>5</sup> when planning for aquatic and wildlife passage. Among other things, CAPS can be used to generate GIS maps that show habitat for fish and wildlife, including crucial areas for aquatic and wildlife corridors. Where the WGA, CAPS and/or other tools show that a proposed project will harm aquatic and wildlife connectivity, federal and state agencies have properly committed to implement mitigation measures aimed at offsetting the identified harm.

At the federal level, Montana Department of Transportation should be aware of a **Federal Highway Administration (FHWA) June 1, 2010 memorandum** regarding the Wildlife Vehicle Collision (WVC) Reduction Study Training Course (attached). That memorandum, which was sent from FHWA Administrators to the Director of Field Services, Federal Lands Highway Division Engineers, and Division Administrators, recognized the usefulness of the training during evaluation of wildlife-collision mitigation strategies. Significantly, the memorandum further urged *all FHWA divisions to adopt the practice of "incorporat[ing] this consideration of wildlife and safety needs into their Categorical Exclusion and other documentation checklists" because "early consideration can result in project design features that decrease wildlife mortality and increase safety for vehicle drivers and passengers"* (emphasis added, Attachment at 2). Montana Department of Transportation should similarly incorporate

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<sup>4</sup> KXLH 9, June 29, 2011. Animal crossing structures saving lives in Montana. Found online: [http://www.kxlh.com/news/animal-crossing-structures-saving-lives-in-montana/?fb\\_comment\\_id=fbc\\_10150288607176077\\_17520218\\_10150289352616077](http://www.kxlh.com/news/animal-crossing-structures-saving-lives-in-montana/?fb_comment_id=fbc_10150288607176077_17520218_10150289352616077)

<sup>5</sup> Found online at <http://fwp.mt.gov/fishAndWildlife/conservationInAction/crucialAreas.html>

wildlife-vehicle mitigation strategies into their highway project checklists and other documentation to ensure that these strategies are not only considered early, but that appropriate funding levels are also included within the first initial project budgets.

## **II. Comments: The Draft Tongue River Road Corridor Planning Study**

At this time, MSWP has reviewed the Draft Tongue River Road Corridor Planning Study (Study) and offers the following comments on the overall purpose and need and recommended concept plans for S-332 and the likely effect of the proposed improvements on wildlife in Montana and how the Study can be improved by including more information and cost estimates to mitigate the harmful effects of the proposed Concepts.

### **A. Purpose and Need**

The stated purpose of the Study is to determine financially feasible improvement options to address safety and geometrical concerns within the transportation corridor based on needs presented by the community, the study partners, and resource agencies. However, given the flat or negative county population growth, negative traffic growth rates, as well as the lower crash rates and crash severity levels compared to the statewide average, it does not appear that safety issues or AADTs are the driving force for this study. Rather, it seems that anticipated truck traffic from Otter Creek Coal is the driving force for the interest in transportation improvements along S-332. Thus, the purpose and need does not appear to be an accurate reflection of the current situation.

Moreover, there is a pending proposal to extend the Tongue River Railroad segment from Ashland to Miles City, expressly for the purpose of transporting “coal from the proposed mine sites in Rosebud and Powder River Counties, Montana, including the proposed mines in the Otter Creek area” (Notice of an Intent to Prepare an Environmental Impact Statement, in *Tongue River RR Co., Inc.*, STB Docket No. FD 30186, 77 Fed. Reg. 64592, 64593 (Oct. 22, 2012)). According to the Notice, “the [Surface Transportation] Board must approve a construction application unless it finds that the construction is ‘inconsistent with the public convenience and necessity.’” (*Id.*) The Tongue River Railroad predicts that the anticipated train traffic on the proposed segment “would consist of 26 round trips per week, or 2.7 loaded unit coal trains daily on average, with 7.4 trains per day total (empty and loaded).” (*Id.*) Yet, as discussed below, the current Study projects a potential 17-fold increase in the traffic along S-332, solely as a result of increased truck traffic to transport Otter Creek’s coal. Each proposal cannot reasonably be examined in a vacuum. Rather, the current Study and the pending railroad extension are two sides of the same coin. If the railroad extension is approved, then there is no justification whatsoever for spending tens of millions of dollars on S-332 (Concepts 3-5), given its very low AADTs and low crash rate.

Accordingly, any future studies of the S-332 corridor must assess the entirety of the impacts of significantly increased truck and/or railroad traffic on the area. Rather than assessing only the proposed upgrades to S-332, it is critical that MDT assess the cumulative and related effects of the planned and prospective activities along the corridor, including increased truck and/or railroad traffic, increased

polluted runoff into 303d listed streams, increased air pollution, increased likelihood of wildlife-vehicle collisions, increased release of greenhouse gasses, and associated climate change impacts.

We, however, welcome the opportunity for MDT to enhance this secondary route for landowners and the community that is utilizing the road to address maintenance, safety and environmental concerns along the corridor. Given the comments to date on the importance of the rural and agricultural character of the study area, the best option to meet MDT's stated need in Chapter 4: Preserve the Environmental, Cultural, Recreational, and Agricultural Nature of the Corridor, would be to do minimum upgrades to S-332, maintain the gravel sections of the road, and limit the amount of truck traffic in this rural area.

## **B. Stakeholder Engagement**

MSWP would like to thank you for engaging stakeholder early in the transportation planning process through this Corridor Study. We recommend adding non-governmental organizations, landowner alliances, and conservation organizations to your outreach list. The list of stakeholders identified in the Study (at 3) is limited in scope. We recommend the following groups be added to your outreach list to ensure that stakeholders interested in conservation, agricultural lands, private landowner interest, and wildlife concerns have an opportunity to provide meaningful input:

- Northern Plain Resources Council, Billings, MT, Contact: Teresa Erickson
- Montanans for Safe Wildlife Passage and all of its members, Contact: Monique DiGiorgio, [Monique@commongroundconservation.com](mailto:Monique@commongroundconservation.com); 406-548-1592
  - Center for Large Landscape Conservation
  - Defenders of Wildlife
  - Future West
  - Western Environmental Law Center
  - Craighead Institute
  - Yellowstone to Yukon Conservation Initiative
  - Wildlands CPR
- Alternative Energy Resources Organization, Helena, MT Contact Kevin Moore 443-7272; <http://www.aeromt.org/food-ag>

## **C. Environmental Setting & Biological Resources**

### **1. Riparian Areas**

Estimates for the total area of Montana's land base that are riparian range from 2-4% percent.<sup>6</sup> "Wetlands and riparian areas are among Montana's greatest treasures. They are essential to maintaining water quality and the supply of clean water, and contribute in many ways to Montana's quality of life. While less than five percent of the total landscape in the western United States is wetland/riparian, *over 75*

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<sup>6</sup> A Planning Guide for Protecting Montana's Wetlands and Riparian Areas, by Janet Ellis and Jim Richard, a Montana Watercourse, MDEQ, and MT Audubon publication produced by MSU in 2008. Page 2-1

*percent of animals in the west are highly associated with these areas."*<sup>7</sup> These two critical facts, along with the fact that the S-332 runs along the Tongue River through-out the entire Study Area, should be stated in the Wetlands Section 3.4.1.4, which should be revised to be titled "Wetlands & Tongue River Riparian Corridor." Although the Study (at 23) states that "Wetlands impacts should be avoided to the greatest extent practicable" and (at 25) states the same thing with regard to "riparian river, stream or creek habitats," the reader of the current draft is left wondering how the different Concepts, especially Nos. 3-5, will impact these critical resources, as there is no description of where the current road is located in relation to the Tongue River or where any potential road expansion will place the road or fill into riparian/wetland areas.

Based upon maps of the area, it appears the large majority of S-332 is located away from the riparian vegetation of the Tongue River, but there are approximately two dozen tributary stream crossings as shown in Appendix D of the Environmental Scan. Thus, the current location of the road impacts riparian vegetation at these crossings and possibly several points along the Tongue River such as Garland and Big John Creek. Thus, our concern is that Concepts 3-5 could and likely would impact wetland and riparian areas to a much greater extent than the current road, but the possibility of that occurring (or not) is not addressed in the Study. It is not enough to just state that "Formal wetland delineations will need to be conducted" (at 23). A reader of this Corridor Study should at least have a better understanding of the magnitude and likelihood of impacting a resource that represents only 2-4% of Montana's land base (and in this particular area of MT, it would be closer to 2%). Additionally, if complete avoidance of wetland and riparian resources is not possible for Concepts 3-5, then a general estimate of the additional costs of environmental mitigation measures should be reflected in the estimated costs for those concepts.

## **2. Tongue River Flood Plain**

The Study (at 23) sets forth the applicable laws that regulate improvements in the floodplain, but again, there is no information about the possibility of Concepts 3-5 encroaching upon the floodplain. This Corridor Study should inform the reader whether or not the current location of the road is entirely outside of the Tongue River floodplain and how likely encroachment is under Concepts 3-5 and approximately how great a length of the floodplain corridor could be impacted. If the study can document where 35 spot improvements are needed and where 46 vertical curves are at issue, then surely it can also provide this type of information in regards to potential wetlands, riparian, and floodplains encroachment. This information should be important in MDT's and other decision-makers' determination of which Concept to choose.

## **3. Water Quality**

The Study (at 22) states that the Tongue River is listed as a 303(d) water body and that probable causes for the water quality impairment include increased lead, nickel, salinity, solids, and sulfates from stream bank modifications/destabilization (among other causes). There is zero information in the Study or the

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<sup>7</sup> Montana Fish Wildlife & Parks: Montana Wetlands and Riparian Areas: A 2002 Study, FWP RMU Research Summary No. 8 [fwp.mt.gov/fwppDoc.html?id=11059](http://fwp.mt.gov/fwppDoc.html?id=11059)

Environmental Scan about any projections on how the various Concepts could decrease the river's water quality. If a portion of the impairment is due to stream bank destabilization from the current road, then it seems probable that further impairment could occur from widening the roads and laying back and straightening out curves. Whether or not such improvements will likely exacerbate the Tongue River's status as a 303(d) river should be addressed at least at a basic level.

#### **4. Geology**

The Study states (at 21) that S-332 traverses the alluvial terraces of the Tongue River and the Environmental Scan in Appendix C provides descriptions of the various silty, sandy, clay soil types, all of which are prone to landslides as was evidenced in many slumps and slides early this year. The report states (at 16) that "evidence of continued subsurface failure was noted at some of the [slide] locations," but there is no discussion of what challenges the geology presents for the road improvements listed in the Concepts. The challenging geology within the Study Area merits further discussion in terms of additional costs for the various Concepts and long-term maintenance issues.

#### **5. Prime Farmland**

The Study states that activities associated with the construction of the Tongue River Road Corridor will likely create impacts to the soil map units with prime and important farmland status. The farmland soils map provided in Appendix B of the Environmental Scan indicates that farmland soils of Statewide Importance and Prime Farmland soils make up the large majority of the entire Study Area. Agricultural lands and working landscapes are important for wildlife habitat and movement as well as an increased quality of life. We are concerned that a greater level of activities along the Tongue River Road Corridor will result in loss of important agricultural activities and farmland.

#### **6. Fish & Wildlife**

We are pleased to see that animal-vehicle collisions and habitat connectivity are identified as a concern to be addressed on S-332, and that "there is a desire for underpass/overpass structures to protect wildlife and due to the sensitivity of the area." (Study at 5.) We concur with this statement and encourage MDT to consider all options to provide safe passage for wildlife including culverts, underpasses, overpasses, span bridges, animal detection systems, and wildlife friendly fencing on lower volume sections of the roadway. We are also supportive of the Environmental Scan (Appendix B) recommendation to maintain the riparian vegetation on both sides of the riparian corridor to ensure terrestrial connectivity. (*Id.*, App. B, at 15.)

We are also pleased to see that MDT utilized MT Fish, Wildlife and Parks CAPS database in this corridor study, including a full assessment in Appendix E. Acknowledgement of the need for fish passage and connectivity, especially given the fact that all Yellowstone fish species have the ability to migrate upstream into the Tongue River because of the construction of the Muggli Bypass and removal of the SH dam.

MDT should also consider that paving S-332 will likely act as a barrier to ecological connectivity and increase habitat fragmentation. Indeed, the severely limited scope of MDT's analysis – specifically

defined as ½ mile “buffer” on each side of S-332 (Study at 1), by its very nature, is likely to understate the effect of MDT’s proposed improvement options (Forman, 2000). Road width and traffic density are the two most significant contributors to the “barrier effect” (Forman & Alexander 1998), with certain animals, including elk, moose, grizzly bear, and mountain lions, being particularly vulnerable to the barrier effect of roads. (*E.g.*, Ward, 1976; Frederick, 1991; Dickson *et al.*, 2005; Dussault *et al.*, 2007.)

Impacts to fish and wildlife will be reduced to the greatest extent possible with a corresponding reduction in the scope and extent of upgrades, including paving, to S-332. If construction occurs, MSWP recommends:

- Fish and wildlife passage opportunities at regular intervals along the entire stretch of S-332;
- Additional information gathering, including MT CAPS as well as a more thorough mitigation analysis that is expanded to detail specific activities and estimated costs;
- The use of wildlife friendly fencing whenever possible.

The Study (at 26) states that animal-vehicle collisions are unreported within the study area. In order to understand the depth and breadth of the issue, MSWP recommends more information be provided in the Wildlife Section of the Study about the number and distribution of ungulates in the Study Area that are moving back and forth across the road. The Environmental Scan (at 18) states that the area provides the "highest value winter range for both mule deer and white-tail deer" and thus this could be discussed further in terms of how increased traffic will likely negatively impact these species. Elk are also in the Study Area but not even mentioned in the report. We recommend a pre- and post-construction study to inform the placement of wildlife crossing structures.

### **III. Transportation Conditions**

#### **1. Traffic Volume**

As noted, it appears that the primary justification for proposed action is to accommodate the anticipated increase in traffic volume as a result of coal extraction at the Otter Creek coal tracts. Indeed, based on the most recent 20 years of traffic data, the projected average annual growth rate is less than a quarter of a percent (0.24%). (Study at 18.) Moreover, from RP 11.0 to RP 49.5, the average annual historical and projected growth rates were *negative* in three of the four time frames examined (1992-2011; 1992-1999; 2000-2011; 2005-2011). (*Id.*) Based on the average annual growth rate over the past 20 years, the number of projected vehicles per day (VPD) for the unpaved portions of S-332 varies from a high of 105 at RP 11.0 to a low of 53 vehicles per day at RP 39.5 and 49.5. Although there is not a “rule of thumb” for when a road should be paved, MDT notes that “traffic volumes of approximately 200 VPD may be a potential threshold for paving a roadway.” (*Id.* at 33.) Clearly, the projected volumes based on the past 20 years do not come close to justifying paving (Concept 5). It is only when projected increases due to development of the Otter Creek coal tracts are included that the “potential threshold” of 200 VPD is exceeded. (*Id.* at 20, Table 12, compare Baseline Scenario with Scenarios 1-3.)

Based on the *Otter Creek Property Summary Report*, it would take 30 loaded trucks per hour, based on an assumed work schedule of 350 working days per year and 24 hours per day, to transport 10 million tons of coal per year. (*Id.* at 19.) The Report further states that:



[T]his is the equivalent to one loaded truck every two minutes. In addition, an empty truck would pass by in the opposite direction every two minutes. In all, a total of 1,440 truck trips per day would be needed to haul the estimated coal production. (*Id.*)

Similarly, paving cannot be justified by the available crash data or the sufficiency of the existing bridges. In particular, the Study indicates that there have been 18 crashes along S-332 between January 1, 2001 and December 31, 2011. This translates into a rate of 0.86 crashes per million vehicle miles.<sup>8</sup> In contrast, the statewide crash rate for a rural secondary highway is 1.40. Stated differently, the crash rate on S-332 is 38% lower than the statewide rate for similar roads. Surely, scarce transportation funds should be allocated to those roadways that would give Montanans the biggest improvement in rural safety per dollar spent.

Nor can the proposed improvements be justified based on the condition of bridge crossings. As the Study indicates, bridge structures with a rating of 0-49.9 are eligible for replacement, while structures with a rating of 50-80 are eligible for rehabilitation. In this case, “[a]ll four bridges within the study areas were determined to be not structurally deficient and not functionally obsolete for the current conditions. (*Id.* at 17, emphasis in original.) Indeed, three of the four bridges have ratings of over 90 (RP 19.87, sufficiency rating of 90.1; RP 39.61, rating of 91.3; RP 47.80, rating of 97.7). The fourth has a rating of 68.0 (RP 1.02); although eligible for rehabilitation, it is otherwise considered structurally sufficient. Again, rather than spend limited transportation dollars replacing three structurally sufficient bridges, as is proposed in Concepts 3-5, Montanans would be better served by those funds being expended on replacing, repairing or rehabilitating the estimated 391 structurally deficient bridges in Montana, the top 10 of which have average annual daily traffic that ranges from a low of 12,670 to a high of 37,280 vehicles per day.<sup>9</sup>

## 2. Increased Speed

Currently, the paved portion of S-332 (RP 00 to RP 17.7) has a speed limit of 70 mph, while the unpaved portion (RP 17.7 to RP 50.4) has a speed limit of 45 mph. If MDT were to pave S-332 in its entirety, as is proposed in Concept 5, it is likely that the design speed for all or a significant portion of the newly paved road would increase, depending on terrain and other improvements (*e.g.*, straightening out curves) (*id.* at 11), and the posted speed would increase to 70 mph. Numerous studies indicate that traffic speed is one of the most significant predictors of wildlife-vehicle collisions (*e.g.*, Newman *et al.* 2012), as the driver’s reaction time is reduced to a fraction of the time at slower speeds. Indeed, Found & Boyce’s (2011) models suggest that simply reducing speed limits on roads traveling through high deer-vehicle collision-risk areas could lead to a reduction in such collisions. Reductions in speed limits also have been shown to reduce vehicle collision rates with bighorn sheep and elk. (Bertwhistle 1999.)

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<sup>8</sup> Of those 18 crashes, one-third (six) involved collisions with either wild or domestic animals. All 18 crashes only involved a single vehicle with the majority involving "driver error, either driving too fast for the conditions or careless driving." Study at 10.

<sup>9</sup> *The Fix We're in For: The State of Montana's Bridges*, Transportation for America Report at 4 & Table 2, <http://t4america.org/docs/bridgereport/states/bridgereport-mt.pdf>

Although the posted (legal) speed may be higher or lower than the design speed (Study at 11), at least one study of traffic speeds in Yellowstone National Park concluded that “[a]ctual speeds averaged 16 mph higher than the [55 mph] posted speed limits on road segments where design and condition did not act to slow vehicle speeds.” (Gunther *et al.* 1998.) If visitors to Yellowstone National Park – many of whom travel hundreds if not thousands of miles to experience its scenic beauty and to view wildlife – do not adhere to posted speeds where the road design allows higher speeds, it is difficult to imagine that the average person traveling on a newly paved and/or improved S-332 would not similarly adhere to the design, rather than the legal, posted speed limit.

Other studies similarly conclude that road improvements, including straightening out curves, increasing lane and shoulder widths and paving gravel surfaces, are associated with an increase in wildlife-vehicle collisions. (Vokurka & Young 2008; Leblond *et al.* 2007; Jones 2000; Gunther *et al.* 1998.) Improvements are also associated with increased residential development.<sup>10</sup>

Thus, the increased speed that comes with paving and road straightening is our greatest concern in regards to impacts to wildlife as these upgrades will result in a tremendous increase in AVCs over the 50 mile Study Area as well as habitat fragmentation. Even if numerous wildlife crossings are installed along with fencing, those measures reduce but do not eliminate AVCs and reduce but cannot fully mitigate for the habitat fragmentation.

#### IV. Proposed Concept Plans

##### 1. Estimated Costs

The estimated cost of the five proposed Concepts vary widely (Study at 43, Table 17):

Concept	Estimated Cost	Cost/Mile of Improvement
1	\$6,120,000	\$121,428.57
2	\$4,924,000	\$150,581.04
3	\$27,219,000	\$832,385.32
4	\$37,909,000	\$752,162.70
5	\$57,404,000 (24')	\$1,138,968.25
	to \$93,813,000 (40')	to \$1,861,369.05

Concept 5 (reconstruct with pavement) carries a particularly high price tag – between \$1.1 and \$1.9 million per mile of improvement. If the additional traffic due to the Otter Creek coal development is included, then the projected average annual daily traffic on S-332 increases 17-fold, from an average of 116 vehicles per day to 2,056 vehicles per day. At that projected traffic level, MDT design standards recommend a roadway width (travel lanes and shoulders) of 36'. (Study at 40.) In that event, it is likely

<sup>10</sup> Land Use Effects of Paving Rural Roads, <http://www.headwaterseconomics.org/regional.php#paving>.

that additional rights-of-way will need to be purchased from adjacent landowners. (*Id.* at 43.) These costs have **not** been included in the above estimates.

The estimated costs also do not include costs likely to be incurred for wildlife mitigation measures, despite the fact that MDT repeatedly acknowledges the potential effect of the proposed improvements on wildlife-vehicle collisions and connectivity in the Study (at ix, x, 5, 25, 26, 32, 35). In particular, MDT states that “[d]ue to potentially extensive mitigation measures, project costs may be higher than typically expected and should be budgeted for in the planning process.” (*Id.* at 25.) Despite this recognition, none of the Concepts includes any estimates for the cost of anticipated wildlife mitigation measures, even though those costs are projected to be “higher than typically expected.” (*Id.*) Even though an exact dollar amount is not known, an estimate could be used based on similar measures taken on other highways, such as Highway 93 North & South.

## 2. Recommendation on Preferred Concept Plan

Based on our review of the proposed options and the feedback you have received from the community, MSWP strongly recommends that MDT move forward, if any investments are to be made, with **Concept 2A: Gravel Placement**, to improve the road surface and maintainability, **Concept 1B: Slide Areas**, to stabilize the slide areas, and **Concept 1C: Guardrail**, to improve safety. As noted in the study, concerns over paving have already been expressed by the community because it would:

- Decrease the quality of life in the area due to increased traffic and increased vehicle speeds;
- Create safety hazards for livestock movement; and
- Increase truck-traffic, especially as it relates to coal development.

In addition, stakeholders felt that the existing paved section of S-332 is in disrepair. Investments along this corridor should be made on existing infrastructure first, before new infrastructure and improvements, including paving new sections of roadway, are made.

## IV. Conclusion

In conclusion, MSWP respectfully requests that MDT:

- Move forward, if any investments are to be made, with **Concepts 1B & C and 2A**.
- Expand the draft study to incorporate wildlife-related mitigation measures and include their cost in the budget analysis of the proposed improvements.
- If MDT moves forward with Concepts 1- 3, that the environmental documentation to meet NEPA/MEPA requirements be at a minimum an Environmental Assessment and if either Concept 4 or 5 is chosen, then an Environmental Impact Statement.

We would be happy to conduct site visits with you as you move forward with next steps. Wildlife mitigation can often be achieved by considering relatively minor adjustments, such as lengthening bridges and/or increasing the number and size of culverts to provide safe passage.

We also ask that you add us to your contact list for all notifications of public meetings and newsletter publications regarding the Draft Tongue River Road Corridor Planning Study ([Monique@commongroundconservation.com](mailto:Monique@commongroundconservation.com)). If you have any questions/comments about this letter or

would like to meet with us, please don't hesitate to contact Monique DiGiorgio at the contact information below.

Respectfully submitted,

***Montanans for Safe Wildlife Passage***

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# Memorandum

Subject: **INFORMATION:** FHWA Wildlife Vehicle Collision (WVC) Reduction Study Training Course

Date: June 1, 2010

From: <sup>for</sup> Joe Toole *Joe Toole*  
Associate Administrator for  
Office of Safety

In Reply Refer To: HEPE

Gloria M. Shepherd *Gloria M. Shepherd*  
Associate Administrator for  
Planning, Environment, and Realty

To: Directors of Field Services  
Federal Lands Highway Division Engineers  
Division Administrators

The Office of Safety and the Office of Planning, Environment, and Realty wish to announce the availability of the FHWA Wildlife Vehicle Collision (WVC) Reduction Study Training Course. This course was developed by the Office of Safety Research and Development, the Office of Project Development and Environmental Review, and the Office of Federal Lands. The web-based course is now available at: <http://www.environment.fhwa.dot.gov/WVCtraining/index.asp>.

This training is based on the findings of the Wildlife Vehicle Collision Reduction Study: Report to Congress which is available at: <http://www.tfhrc.gov/safety/pubs/08034/index.htm> and the Best Practices Manual developed from that study. The Manual, which is the textbook for the course, may be accessed at: <http://www.fhwa.dot.gov/environment/hconnect/wvc/index.htm>. The Report to Congress, Best Practices Manual, and the Web-based course were developed in collaboration with representatives from State DOT(s), other federal agencies, and experts in the field of Wildlife Vehicle Collisions. This collaborative effort resulted in a thorough and in-depth process to identify WVC problem areas and habitat connectivity opportunities, and to evaluate effective mitigation strategies that can be implemented to reduce WVCs. The course covers a wide variety of these strategies such as wildlife fencing, animal detection systems and vegetation management in great detail.

This web based course and the information it contains is particularly important at this time. The Congressional WVC study estimated that one to two million collisions between cars and large animals occur every year in the U.S. This presents a real danger to human safety as well as wildlife survival.



Though human injuries and fatalities as a result of WVCs are relatively rare, they do occur and are a serious consequence of WVCs. More common impacts for drivers and their passengers are vehicle damage, secondary motor vehicle crashes, emotional trauma, and less direct impacts such as travel delays. WVCs can also require the assistance of law enforcement personnel, emergency services, and road maintenance crews for potential repairs and carcass removal. For animals, WVCs present an immediate danger to their individual survival, and further reduce the population survival probability of certain threatened and endangered species.

The information presented in the Study, Manual and course is a useful tool in evaluating the need to accommodate wildlife collision mitigation strategies and connectivity needs during the environmental review process, regardless of the class of action of the environmental document. In addition to Environmental Assessments and Environmental Impact Statements, many Divisions and State DOTs have incorporated this consideration of wildlife and safety needs into their Categorical Exclusion and other documentation checklists. We encourage all divisions to adopt this practice since early consideration can result in project design features that decrease wildlife mortality and increase safety for vehicle drivers and passengers. In addition to the information resources outlined above, many states have collaborated with non-governmental organizations to develop regional and local information regarding wildlife corridors and connectivity priorities. We have attached a summary prepared by the Western Environmental Law Center of some of these studies and tools.

We are planning an informational webinar in the near future to highlight the features of the course. Logistical information for the webinar will be sent by separate email in the coming weeks. If you have any questions related to this effort please contact Mary Gray at [mary.gray@dot.gov](mailto:mary.gray@dot.gov), or by phone at by at 360-753-9487 or Dennis Durbin at 202-366-2066, [dennis.durbin@dot.gov](mailto:dennis.durbin@dot.gov), in the Office of Project Development and Environmental Review or Carol Tan at 202-493-3315, [carol.tan@fhwa.dot.gov](mailto:carol.tan@fhwa.dot.gov) in the Office of Safety Research and Development.