



MONTANA WILDLIFE & TRANSPORTATION SUMMIT

FINAL REPORT

December 4-5, 2018
Carroll College
Helena, Montana

MONTANA FISH, WILDLIFE & PARKS

VISION ZERO
zero deaths - zero serious injuries
MONTANA DEPARTMENT OF TRANSPORTATION

MONTANA STATE UNIVERSITY | Western Transportation Institute

MONTANANS for SAFE WILDLIFE PASSAGE

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EXECUTIVE SUMMARY

The intent of this report is to share the key takeaways and recommendations that emerged from the Montana Wildlife and Transportation Summit held in Helena, Montana, December 4-5, 2018. Following the examples set by Wyoming and Colorado, Montana held this summit with the goal of addressing transportation and wildlife issues through relationship building and information sharing. The resulting recommendations will guide stakeholders in working together to address wildlife-vehicle conflicts and protect wildlife movement across state highways. Reflecting the success of the Summit, the agencies have already committed to and are actively pursuing some of the recommendations.

There was an incredible amount of positive energy in the room as everyone sat down to hear Governor Bullock kick off the Summit. More than 160 participants attended the Summit from state, local, federal, tribal government, and non-governmental organization (NGO) staff, including Montanans for Safe Wildlife Passage (MSWP) members. Broad stakeholder engagement was crucial in elevating the importance of wildlife and transportation issues within Montana Department of Transportation (MDT) and Montana Fish, Wildlife & Parks (FWP), and it created a stronger partnership with MSWP and other stakeholders.

Through a series of presentations and breakout discussions, participants identified opportunities and challenges, and developed a set of recommendations. The recommendations are organized by the themes that surfaced at the Summit: Working Together; Planning; Policy and Legislation; Priorities, Data Collection, and Information Sharing; Education and Outreach; and Funding.

Participants discussed the importance of planning for wildlife accommodations through local stakeholder and citizen engagement and consideration of community plans. Wildlife accommodations should be implemented in areas where future land use patterns will allow for continued wildlife movement and residents are prepared to live alongside wildlife. Developing a unified message, crafting a communication strategy, and engaging the public will be critical to raising awareness, getting public input, and ensuring all stakeholders are engaged from the start.

Agency Directors agreed to collaborate on a Memorandum of Agreement (MOA) outlining how the agencies will work together on this subject. This MOA will provide consistency and longevity through changing agency administrations and provide a foundation for broader partnerships, including NGOs and other stakeholders.

Summit participants stressed the need to establish collective priorities for wildlife accommodations given limited resources. These priority areas or projects should be generated at the local level but must connect to the greater landscape and statewide priorities. It is important to distinguish between an area that is a priority because of the potential to conserve wildlife habitat and movement versus when an area is a priority because wildlife movement is

causing wildlife-vehicle conflicts and impacts to human safety. Connectivity and safety priorities may overlap in the same location, potentially elevating these projects as a higher priority. In addition, projects that require a simple retrofit to existing structures, or fencing modifications, might be considered “low hanging fruit” that could be accomplished in a shorter time-frame with a smaller budget.

Lastly, funding was a major topic of discussion at the Summit. Funding is a driver for implementing more wildlife accommodations in Montana, but MDT cannot fund and lead all efforts. There is a need to establish a mechanism for private contributions to help fund and maintain wildlife accommodations. Forming partnerships for the planning, development, and fiscal investments in wildlife accommodations is critical to Montana’s success in comprehensively addressing wildlife and transportation issues over the long-term.

The Summit was designed to be the beginning of a more comprehensive, long-term dialogue to address transportation and wildlife issues. The *Pathways Forward* section outlines actions in progress and recommendations to address the transportation and wildlife challenges identified at the Summit. In addition, this report provides a detailed account of Summit proceedings including presentation overviews and breakout session highlights.

BACKGROUND

Wildlife and Transportation

Montana is known for its wide-open landscapes and abundant wildlife. Our state is the gateway to natural destinations like Glacier and Yellowstone National Parks and offers world-class recreation and breathtaking scenic areas. Statewide, the Montana Department of Transportation (MDT) manages over 25,000 lane miles of highway that connect Montana's cities, towns, and rural areas. The state's infrastructure ensures the efficient transport of people, goods, and services contributing to the strength of the economy, while the abundance of wildlife in our state is not only an important economic element, it is also a pillar of the quality of life in the "Last Best Place." Highways and wildlife are both integral components of Montana, which is why it is necessary to address a growing set of issues related to wildlife and transportation conflicts. In 2018, Montana ranked second in the United States for a driver's chance to experience a vehicle collision with a deer (State Farm 2018)[1]. These collisions can be costly and dangerous for both humans and wildlife.

Roads and wildlife can come into conflict in a variety of ways. Wildlife Vehicle Collisions (WVCs) often lead to vehicle damage. These collisions can result in serious human injuries or fatalities. WVCs may be the first contributing factor in other collision types including roadway departure, roll-overs, or head-on collisions as drivers swerve to avoid the wild animal. WVCs cost the US $6-12 billion a year, which taxpayers pay for through resources such as law enforcement, emergency services, road maintenance crews, wildlife managers, and vehicle repairs (Huijser et al. 2007)[2]. Additional costs are borne by the public through increased insurance premiums as auto insurance claims associated with WVCs are passed on to the consumer.

Roads can directly impact wildlife through injury or mortality resulting from WVCs. This impact can be significant for rare

Wildlife Accommodation:
A feature or strategy designed and implemented into a transportation facility to moderate the effects of the infrastructure on wildlife and their habitat. Objectives are to minimize or eliminate barriers to wildlife movement, protect important habitat components within the landscape, and reduce or eliminate the potential for wildlife-vehicle conflicts.

Wildlife Vehicle Conflict:
Any interaction between wildlife and vehicles. This includes direct interactions between drivers and wildlife, such as a collision. It also includes indirect impacts to drivers (e.g., swerving, braking) and indirect impacts to wildlife (e.g., avoidance, moving at different times and locations).

Wildlife Vehicle Collision:
A collision between a vehicle and wild animal that is reported and typically documented as a "crash".

[1] State Farm. 2018. Annual report on deer-related crashes. <https://newsroom.statefarm.com /2018-deer-crashes-down/>. Accessed 15 Feb 2019.

[2] Huijser, M.P., P. McGowen, J. Fuller, A. Hardy, A. Kociolek, A.P. Clevenger, D. Smith & R. Ament. 2007. National wildlife-vehicle collision reduction study. Report to Congress. U.S. Department of Transportation, Federal Highway Administration, Washington D.C., USA. 266 pp.

species and smaller populations. Roads can also pose an obstacle or barrier to wildlife movement. This can make it difficult for wildlife to obtain food, water, shelter, or mates. This is especially a problem for migratory wildlife that travel long distances every year between summer and winter ranges. It can also isolate populations from one another, disrupting gene flow. Roads can also indirectly impact wildlife habitat through increased noise, light, pollution, and fragmentation, decreasing both the quantity and quality of suitable habitat.

Inspiration & Purpose of the Summit

The inspiration to have a summit started with Montanans for Safe Wildlife Passage (MSWP), a coalition of non-governmental organizations (NGOs) that promotes innovative solutions to maintain habitat connectivity and provide safe passage for Montana's people, fish, and wildlife. MSWP reached out to Patrick Holmes, the Governor's Natural Resources Policy Advisor, to enlist the support of the Governor in achieving their conservation goals. The initial conversation explored the need for greater collaboration across agencies and NGOs on wildlife and transportation issues as well as working together to improve the planning and implementation of wildlife accommodations.

The conversation expanded to include Montana Department of Transportation (MDT), Montana Fish, Wildlife & Parks (FWP), and the Western Transportation Institute (WTI). Based on the recent success of wildlife and transportation summits held in Wyoming and Colorado, the group agreed a summit in Montana would elevate wildlife and transportation issues and align efforts among partners.

While there had been collaboration already occurring between the agencies and NGOs, the main purpose of the Summit was to improve working relationships and communication. A Planning Committee was formed, which included Deb Wambach (MDT), Renee Lemon (FWP), Rob Ament (WTI), Laramie Maxwell (MSWP), Hannah Jaicks (MSWP), and Nick Clarke (MSWP). MSWP members took on the bulk of the fundraising and logistical efforts, while MDT and FWP members coordinated agency participation and served as liaisons between the agencies and the Governor's Office during summit planning. All Planning Committee members worked together on summit content and organization, blending their unique perspectives as representatives of their agency or organization into a common vision. The summit planning focused on articulating objectives and producing tangible recommendations for moving forward together. With diligent work, newfound friendship and collaboration, and the help of countless others along the way, it took about six months to plan and implement the inaugural Montana Wildlife & Transportation Summit.

PATHWAYS FORWARD

Pathways Forward is comprised of two sections: Summit Recommendations and Summit Commitments. Through a series of presentations and breakout discussions at the Summit, participants from a cross section of agencies and organizations collectively developed the recommendations listed in the Summit Recommendations Section. These recommendations are organized by six themes that emerged from the Summit: Working Together; Planning; Policy and Legislation; Priorities, Data Collection, and Information Sharing; Education and Outreach; and Funding.

MDT, FWP, and MSWP have already committed to and are actively pursuing some of the Summit Recommendations. These are listed as Actions under the Summit Commitments Section. For example, MDT, FWP, and MSWP have already committed to forming a Steering Committee to consider the Summit Recommendations and provide direction on how to implement recommendations, identifying the required capacity and resources. The idea to form a Steering Committee is based on discussion and recommendations that resulted from the Summit (See Summit Recommendation 1A and Summit Commitment Action 1).

SUMMIT RECOMMENDATIONS

Theme 1: Working Together
Objective: Continue to build trust and improve working relationships among agencies, tribes, NGOs, and other stakeholders. Identify productive communication and participation methods among stakeholders. Encourage early engagement with partners in agency planning, programs, and projects with respect to wildlife accommodations.

Recommendation 1A: Create a collaborative structure of committees and/or work groups to provide the capacity to plan for and implement wildlife accommodations, as well as define roles and responsibilities.

Recommendation 1B: Develop a Memorandum of Agreement (MOA) between MDT and FWP that outlines how the agencies will work together on wildlife and transportation issues. This MOA can provide consistency through different agency administrations and build a foundation for a broader partnership, including NGOs and other stakeholders.

Recommendation 1C: Develop a website that outlines the collaborative structure and provides a clearinghouse for activities during and after the Summit.

Recommendation 1D: MDT District and FWP Region staff should continue to meet biennially to discuss highway projects in the Statewide Transportation Improvement Program. Expand the scope of the biennial meetings to include additional topics and stakeholders, as needed.

Theme 2: Planning
Objective: Develop and implement a work plan that guides efforts developed at the Summit, primarily pertaining to priorities, information sharing, education and outreach, and funding.

Recommendation 2A: Develop a dynamic statewide wildlife and transportation work plan that reflects the local, regional, and district efforts. This approach will be informed by ongoing engagement with stakeholders at the local levels to ensure a joint process that is rooted in participation and inclusion, while still structured by oversight from the Steering Committee.

Recommendation 2B: Track and report progress of the statewide wildlife and transportation work plan. Develop a timeline for regular evaluation, updates, and reporting.

Theme 3: Policy and Legislation
Objective: Develop administrative policies, procedures, and guidelines that support collaborative efforts to reduce wildlife-vehicle conflict and conserve wildlife habitat and movement across state highways. In the spirit of collaboration and trust-building, legislative and policy ideas should be addressed through the Steering Committee.

Recommendation 3A: The Steering Committee should explore opportunities to provide input on federal policies that affect the ability of the state to plan for and implement wildlife accommodations.

Recommendation 3B: Promote the importance of wildlife and transportation considerations within the agencies.

Theme 4: Priorities, Data Collection, and Information Sharing
Objective: Establish collective priorities (e.g., information needs, projects, geographic areas) and address challenges with data collection, management, use, and sharing.

Recommendation 4A: Compile information at the local, regional, and district level, and identify information gaps. Develop a system to improve information sharing. Ensure all stakeholders are engaged including MDT, FWP, NGOs, and local government.

FWP should lead the wildlife movement and habitat conservation data compilation effort and be responsible for the development of relevant analysis products to be used in prioritization.

MDT should lead the carcass and collision data compilation effort and be responsible for the development of relevant analysis products to be used in prioritization.

NGOs and other stakeholders (e.g. county planners, local government, citizen groups) should identify other information (e.g. models, studies, mapping, land-use plans) to feed into this joint prioritization process.

Recommendation 4B: Develop statewide guidance that establishes consistency in identifying priorities at the local, regional, and district levels. This process should include standard criteria to be evaluated when establishing priorities to address safety and wildlife movement needs.

Recommendation 4C: Establish a collaborative process that originates at the local, regional, and district levels to prioritize information needs and wildlife accommodation projects.

Recommendation 4D: Develop opportunities for stakeholders to provide information for MDT's Wildlife Accommodation Process, which supports delivery of the Statewide Transportation Improvement Program.

Recommendation 4E: Explore additional data collection tools and technology to improve the consistency of carcass reporting. Explore options for citizen science to contribute to carcass reporting.

Theme 5: Education and Outreach

Objective: Identify opportunities and develop approaches to engage a broader community in participating, providing comments and input, and supporting projects related to wildlife and transportation issues.

Recommendation 5A: Develop a statewide communications strategy that defines target audiences, establishes a unified message, identifies appropriate types of media/outreach, appoints the appropriate messenger for the target audiences, and designs education and outreach activities.

Recommendation 5B: Establish local, regional, and district communication strategies that tailor the statewide strategy to best fit different communities. Provide communities with relevant information about wildlife and transportation issues and seek community input from the outset.

Theme 6: Funding

Objective: Research and develop funding mechanisms that add to traditional transportation program funds, including implementation, operation, and maintenance.

Recommendation 6A: Identify existing funding resources and gaps.

Recommendation 6B: Develop alternative funding sources for wildlife accommodations including information gathering/research projects and monitoring efforts.

Recommendation 6C: Establish partnerships and agreements intended to share the development and fiscal responsibility of wildlife accommodations both outside and within MDT's highway program.

Recommendation 6D: Develop or streamline mechanisms for the agency acceptance of alternative/private funding for the purposes of implementation, operations, and/or maintenance of wildlife accommodations.

SUMMIT COMMITMENTS

Action 1: Form a Steering Committee to provide oversight and direction.

→ The Steering Committee will be comprised of two representatives each from MDT, FWP, and MSWP.

→ The role of the Steering Committee is to consider recommendations resulting from the Summit, make decisions regarding actions moving forward, and direct all work under the Summit themes. This may include the formation of work groups and task prioritization to ensure resource capacity and balance within existing programs.

→ The Steering Committee will coordinate with other efforts working on wildlife and transportation issues, such as U.S. Department of Interior Secretarial Order 3362, to avoid duplication of efforts and competition of resources.

Action 2: Establish a Planning and Implementation Team to support the Steering Committee.

→ The Summit Planning Committee representatives from MDT, FWP, and MSWP will transition into the role of the Planning and Implementation Team. Additional team members may be added as determined appropriate by the Steering Committee.

→ The Planning and Implementation Team will coordinate work as directed by the Steering Committee.

Action 3: Develop a Memorandum of Agreement (MOA) between MDT and FWP outlining how the agencies will work together on wildlife and transportation issues.

→ The MOA can provide consistency in addressing wildlife and transportation issues through changing agency administrations and will build a foundation for a broader partnership that includes NGOs and other stakeholders.

Action 4: Develop a website that provides a clearinghouse for Summit documentation, related efforts, and information sharing into the future.

→ The website will be hosted by MDT.

→ The website will post the Summit Final Report, Summit presentations, a story map, and updates on Steering Committee and Planning and Implementation Team work.

Action 5: MDT District and FWP Region staff will continue to meet biennially to discuss highway projects and local wildlife and transportation topics.

→ These ongoing meetings are an opportunity for early agency collaboration on highway projects and facilitation of wildlife and transportation planning efforts at the local level.

→ The scope of the biennial meetings could be expanded to include additional topics and stakeholders.

Action 6: MDT is implementing the Wildlife Accommodation Process (WAP).

→ The WAP is a new component in MDT's project development process which will ensure consistency and early consideration of wildlife needs and accommodation recommendations on highway projects.

→ The WAP will provide opportunity for agency partners and other stakeholders to contribute information to support decision making on projects in the Statewide Transportation Improvement Plan (STIP).

A LOOK BACK – SUMMIT IN REVIEW

The Montana Wildlife & Transportation Summit (Summit) was held on December 4 and 5, 2018 at Carroll College in Helena, Montana. It was co-convened by the Governor's office, MDT, FWP, WTI, and MSWP. The purpose of the Summit was to bring stakeholders together to strengthen working relationships, share information, and develop strategies to plan and implement wildlife accommodations. The emphasis of this first meeting was to build common ground among MDT, FWP, and the NGOs around wildlife and transportation issues in order to enable a more robust engagement of additional interested stakeholders in the future.

This Summit served as the initial meeting to explore the complex issue of wildlife and transportation conflict. It was intended to set the stage for future engagement with a broad array of interested partners, stakeholders and the general public. More than 160 people attended the Summit, including leadership, upper management, and staff from state and federal agencies, tribal nations, non-governmental organizations, and local government. The Summit was facilitated by Shawn Johnson, Center for Natural Resources and Environmental Policy at the University of Montana, who provided the guidance, thoughtful reflection, and splash of humor needed to keep the group on track, at ease, and fully engaged throughout the full agenda.

Summit Objectives:

- → Share and understand the missions, priorities, and challenges of the various stakeholders. Strengthen professional relationships and develop common understanding around wildlife and transportation issues in Montana.
- → Identify opportunities and challenges in working together to implement wildlife accommodations.
- → Learn about partnerships that resulted in successful wildlife accommodation strategies in other states.
- → Recommend actions to elevate wildlife and transportation considerations at both the program and project level. Develop a framework for advancing strategies identified at the Summit.

The Summit agenda was structured to answer three main questions:

- → Where Are We Now?
- → Where Do We Want To Be?
- → How Do We Get There?

Participants worked to answer these questions through a series of presentations and breakout sessions intended to strengthen relationships while inspiring strategies for greater collaboration in planning and implementing wildlife accommodations. Presentations throughout the Summit were a means of recognizing and building on common ground among participating organizations in terms of their missions, mandates, constraints, and internal processes. The presentations also helped to develop a shared understanding of the challenges

associated with wildlife and transportation considerations, as well as successes and opportunities illustrated by examples from other states and partnerships.

The breakout sessions were an opportunity to get to know one another and spark a dialogue around working together to chart a path forward and translate ideas into action. The sessions were specifically designed to provide opportunities to meet a variety of colleagues interested in this issue, focus on specific elements of this complex topic, and develop actionable recommendations for moving forward together both programmatically and individually.

WHERE ARE WE NOW?

Current approaches to wildlife and transportation issues

Opening Remarks

Governor Steve Bullock, MDT Director Mike Tooley, FWP Director Martha Williams, and MSWP representatives Laramie Maxwell and Kim Trotter gave opening remarks and set the tone for the Summit. Each of the speakers were asked to prepare remarks addressing the same three topics: 1) Share a personal or professional story regarding wildlife and transportation; 2) Why does my agency or organization care about this issue; and 3) What does my agency or organization hope will result from the Summit.

The stories shared reminded us that wildlife and transportation conflicts impact us all. They ranged from a tradition of recording the number and species of wildlife seen from the road during family trips to dealing with the aftermath of the many WVCs encountered as a highway patrol officer. The themes that connected them all were the deep appreciation for the beauty and wildness of the great state of Montana and the expectation that our highways will provide for the safe and efficient transport of people, goods, and services across its vast landscape. In light of these values, there was an expressed understanding of the need to work together to address wildlife and transportation conflicts. The speakers then touched on why their agency or organization cares about this issue and what they hoped would result from the Summit.

Governor Bullock outlined why stakeholders need to address conflicts between highways and wildlife. He highlighted the importance of the state's transportation infrastructure and wildlife to Montana's quality of life and economy. He described the impacts of WVCs on public safety and property. In addition, he explained that transportation systems cause direct mortality to wildlife and create barriers to wildlife movement. He challenged Summit participants to think beyond major infrastructure projects to find timely and cost-effective solutions.



Photo Credit: Hannah Jaicks

Director Tooley stressed the importance of safety in MDT's Vision Zero goal and highlighted the financial constraints on MDT related to a 3:1 ratio between infrastructure needs and available fiscal resources. He also noted that MDT projects must be done with sensitivity to the environment. Based on public surveys, the public expects that MDT will work to reduce WVCs and protect wildlife. He closed by noting that Montana has already achieved great strides in wildlife accommodations, but that more work needs to be done. Common goals and mission overlap between MDT and FWP will provide the building blocks for partnerships and collaborations moving forward.

Director Williams emphasized that people live and visit Montana for the outdoor experience and creating opportunities outside is integral to FWP's mission. She noted that safe roadways are critical to that outdoor experience. She called for a balance between safety and connectivity across our highways and landscapes, relying on the integrity of science and personal and professional relationships to achieve these goals.

MSWP representatives Laramie Maxwell and Kim Trotter shared the coalition's willingness to be a resource to the state by offering information, education and outreach, communication coordination, creative fundraising, and building political will. They noted that open minds and partnerships are the essential means for effectively protecting the "Last Best Place." All opening speakers acknowledged the challenges and opportunities surrounding wildlife and transportation issues in Montana and expressed confidence in the ability of those in attendance to work together to establish productive partnerships and develop creative solutions.

Breakout Session #1 – Share Your Story

Participants engaged in the first Breakout Session titled "Share Your Story" (Appendix 1). This was an opportunity for everyone to meet one another and share what he or she would have highlighted if they had been asked to give the opening remarks for the Summit. Each person introduced him or herself and shared a topic or theme important for framing the Summit discussions from his or her professional perspective. There was a general desire to better understand the issues, build trust and form relationships, work better together, and develop ways to better engage the public around this issue. There was advice given to focus on durable outcomes that can be institutionalized at the program level so they endure beyond current leadership or administration. There is a need to address present day wildlife and transportation conflicts while also planning for a changing climate and developing landscape. Both human and wildlife safety as well as habitat fragmentation and connectivity need to be considered if wildlife accommodations are going to be effective in the short-term and over the life of the investment. Forming partnerships to facilitate continued dialogue focused on finding creative funding solutions to wildlife accommodation investments, operations, and maintenance is integral to lasting success.

MDT, FWP, and MSWP Presentations – Understanding Your Mission

The next presenters were MDT Preconstruction Engineer, Dustin Rouse; MDT Environmental Services Bureau Chief, Tom Martin; FWP Chief of Staff, Paul Sihler; and MSWP Representatives, Renee Callahan and Lance Craighead. They explained their respective agency or organization's mission and goals in general and as specifically related to wildlife and transportation considerations. They shared relevant work and initiatives, and their thoughts on current challenges in planning and implementing wildlife accommodations. These presentations were critical to understanding the complexities of the issue, the mandates and constraints at the program level of each agency or organization, and areas of existing common ground that can be built upon.

MDT has implemented nearly 150 wildlife accommodations over the past decade or so, ranging from wildlife friendly right-of-way fencing to substantial underpasses and one of the nation's first overpasses. An example project from each of MDT's five Districts that has successfully incorporated wildlife accommodations is highlighted in Appendix 8. Montana is considered a national leader regarding wildlife accommodation implementation, but much work is yet to be done. For instance, improving collaboration to work with partners and stakeholders more effectively is needed to make better informed decisions. Further, leveraging funding and resources, formalizing processes of engagement to more consistently consider wildlife needs in transportation planning, and improving communication and outreach with the public will only enhance the missions of MDT and FWP and fulfill the goals of their partners.

Throughout the presentations, it became clear that the missions of MDT, FWP, and MSWP are highly complementary. There are stark differences in the focus, process, and scope of their mandates, but they all work to encourage the transport of people, goods, and services while keeping both people and wildlife safe. There were also important overlaps in their key challenges to working together in what Renee Callahan called, "the challenge-opportunity puzzle." The term captures the important idea that true collaboration requires a paradigm shift, a commitment to thinking outside the box, and doing things differently than we may have in the past. This process may be challenging and perhaps uncomfortable, while at the same time filled with new opportunities. The overwhelming message was that these kinds of projects require establishing trust and nurturing ongoing relationships at the individual level as well as forming lasting partnerships at the program level.


Photo Credit: FWP

Breakout Session #2 – Let's Be Honest

Participants transitioned into the second Breakout Session, called "Let's Be Honest: What's working and what can be improved?" (Appendix 3). This was an opportunity for everyone to appreciate what is already working well and identify what could be improved. This latter subject was explored as a list of key issues and current challenges to

planning and implementing wildlife accommodations. Given the wide scope of possible answers, the facilitator framed the discussion around the emerging themes from the previous presentations: Working Together; Planning; Policy & Legislation; Priorities, Data Collection, & Sharing; Education & Outreach; and Funding. Participants were also encouraged to include any other overarching theme that was not on the list. In the end, all ideas fit into one or more of the identified themes and groups reported out on their top collective ideas.

There were certainly accomplishments to celebrate, such as the recent development of MDT's Wildlife Accommodation Process. This process will ensure that wildlife needs, accommodation recommendations, feasibility analysis, and decisions are more consistently made and documented during the project development process throughout MDT. Excitement was expressed about the alignment between the Governor's Office, MDT, and FWP in addressing wildlife and transportation issues. Of note was the biennial meetings that occur between MDT and FWP to review the Statewide Transportation Improvement Plan (STIP) relative to fish and wildlife considerations for upcoming highway projects. There was appreciation for the steady improvement of data collection and sharing as well as the technology to model and map. Montana agencies and stakeholders have been working on planning and implementing wildlife accommodations for a long time. There is much to be proud of and many lessons were learned along the way that now provide opportunities for improvement that can only increase our chances for success.

The main challenge expressed was early and ongoing engagement with partners, stakeholders, and the public. Transportation funding limitations for both construction and ongoing operations and maintenance of wildlife accommodations was noted. There was also a desire to codify partnerships so that commitments or policies guiding partners to work together on wildlife and transportation issues do not change with administrations. There was a call to figure out what data is available, who has it, who needs it, and how to more efficiently share it. The identification of data gaps and dedicating resources to filling those gaps was also noted.

Keynote Presentation - Cascade Crossroads: I-90 Snoqualmie Pass, Washington
"Find a group of people who challenge and inspire you, spend a lot of time with them, and it will change your life." ~ Amy Poehler

Okanogan-Wenatchee National Forest's (OWNF) Wildlife Biologist, Patty Garvey-Darda and Washington Department of Transportation's (WSDOT) Assistant Regional Administrator, Brian White gave the keynote address. They told the story of their collaboration on the reconstruction of Interstate-90 (I-90) on Snoqualmie Pass in Washington. They began with a screening of "Cascade Crossroads," which is a short film about the project. They then shared insights about their process and partnerships, as well as answered questions from the group.

I-90 is probably the most important highway in Washington, connecting the eastern part of the state with the western for the transport of goods, international markets, and recreation. The highway runs east and west across the Cascades, which run north and south and are renown as an incredibly biodiverse and connected ecosystem. Allowing people and goods to continue to



Photo Credit: Ivars Krutainis

move east and west while allowing wildlife and ecosystem processes to move north and south presented an enormous challenge and an incredible opportunity to address both safety from WVCs and connectivity. What resulted was a ground-breaking collaboration and public engagement campaign that culminated in this successful project and inspirational story.

The project was a 15-mile interstate reconstruction across Snoqualmie Pass. The I-90 Bridges Coalition was formed as a multi-agency, multi-stakeholder science team to answer the question, "How do we meet the purpose and need to provide for ecological connectivity?" The challenges seemed insurmountable at the outset, but by trusting and engaging with their partners the team was able to find solutions and garner support each step of the way. Education and outreach, including a robust public awareness campaign which engaged stakeholders, citizens of all ages, agency partners, and legislators was their recipe for success. They focused attention on educating kids and their parents about highway crossings, showing up to county fairs, science fairs, farmer's markets, and even hosting a coloring contest. The amount of time and effort put into engaging people on the issue built overwhelming public and political support for the project, which was integral to their success.

It was evident that Patty Garvey-Darda and Brian White were extremely proud of their partnership and the work they had accomplished together. They illustrated what it takes to collaborate on a project that meets the needs of both people and wildlife with commitment and creativity. The presentation provided an important example of how transportation and conservation groups can work together. While the scope and magnitude of the Washington Snoqualmie Pass project may not translate seamlessly to Montana for a variety of reasons, their story provided valuable ideas to inform creative thinking, inspire risk-taking, and motivate us to work better together. Their message to the Summit was clear: Collaboration expands the possibilities of what can be achieved. The Cascade Crossroads story can be viewed at: https://www.youtube.com/watch?v=BGFIoLkEKP4

The Summit sponsors provided an evening social reception to close Day 1, which allowed participants to make new connections, network with colleagues, and share their ideas for charting a path forward. The reception was a well-attended enjoyable event filled with the energy of the day and anticipation for what would be achieved tomorrow.

WHERE DO WE WANT TO BE?

Identifying and prioritizing solutions to work better together

Science and State of the Practice Presentations

Justin Gude, FWP's Chief of Research and Technical Services Bureau and Dr. Marcel Huijser, Senior Research Ecologist with WTI presented on wildlife habitat and movement in Montana, transportation system impacts to wildlife, the state of the practice of wildlife accommodation strategies, available technology, and broader programmatic solutions. Both speakers emphasized the need for clarifying the purpose of each wildlife accommodation. We need to consider the target species or multiple species of interest and the variations in their spatial and temporal scale of movement. For example, pronghorn may require road crossings twice a year for their seasonal migrations between ranges, while male grizzlies might have a 2-3-year walk-about to disperse from one ecosystem to another to establish a home range and find a mate. A deer population may need to move across a highway frequently to access shelter on one side and food or water on the other. These behavioral and life history variations influence the approach needed to design an effective wildlife accommodation. Use of a variety of current and historical data can inform these decisions. Wildlife movement and habitat data coupled with a myriad of transportation data provides the basis for wildlife accommodation analysis. Coordination with partners, agency staff, land use planners, and other stakeholders is critical to a strong analysis and inclusive decision-making.

Design of an appropriate wildlife accommodation must consider whether we are addressing a safety problem such as elevated rates of WVCs or a conservation priority such as a connection between wildlife populations. Strategies meant to reduce collisions for human safety and strategies intended to reduce wildlife mortality or increase permeability to allow for wildlife movement do not always overlap and the solutions may look very different. Road width, fencing, and traffic volumes may render a highway a partial or complete barrier to wildlife movement. In these cases, carcass and collision data would not tell the story, but GPS collar data might paint a clearer picture of wildlife movements and obstacles on the landscape. In addition, there is a need for FWP and partners to identify important habitats and species to inform wildlife accommodation priorities and MDT processes.

Over the past decade, there has been much research and monitoring of wildlife accommodation effectiveness regarding wildlife use, reduction in WVCs, and modification of driver behavior. These results continue to shape the knowledge base and the possibilities for successful wildlife accommodations. New technology is continually evolving with respect to animal detection systems. Road ecology is an emerging science that is gaining traction across the world. Successful wildlife accommodations require detailed analysis, proper design and installation, ongoing operations and maintenance, effectiveness monitoring, and a commitment to adaptive management over the long-term.

Breakout Session #3 – Solution Resolution

Participants moved to the third Breakout Session, titled "Solution Resolution" (Appendix 4). This was an opportunity for participants to develop solutions to address challenges identified in the previous Breakout Session. Each table reviewed the list of successes and challenges that a different group had previously identified. Individuals had time to consider potential solutions and share his or her ideas with the table. The group then worked together to refine the ideas and document their collective top choices on sticky notes. They then placed their ideas on the corresponding flipcharts, containing the general theme that the idea best fit under. This exercise allowed participants to develop solutions to the previously identified challenges and categorize these solutions into the overarching themes. The many ideas generated during this session are listed in Appendix 4 and were then prioritized in the Breakout Session #4.

Successful Partnerships Presentation

Rob Ament, Road Ecology Program Manager with WTI presented a wide array of wildlife accommodation projects in the West, offering examples of the many ways that agencies, organizations, and stakeholders can partner on a project. The point was to remind us to be creative in how we think about collaborating with each other. Some standout suggestions for NGOs and citizen group participation included the development of a smart phone app for data collection, being a host for a design competition, or leading the effort to make a short film about a project. There are many project aspects that partners can plug into beyond recommendations and design, whether it has to do with science, education and outreach, communication, facilitation, or creative fundraising. There are a number of options for creative fundraising to garner private monies for grant match or cost-share of wildlife accommodation projects. These might include private fundraising, pooled fund studies, grant writing, purchase and loan, or operations and maintenance subsidies. The transportation agencies need to ensure there are mechanisms in place to streamline the process of receiving and applying private funds to federal and state projects. These were helpful examples of collaboration in wildlife accommodations, allowing the group to learn from similar projects in our neighboring states. The take home message was to think creatively and seek project-specific, long-term partnerships to achieve success.

Breakout Session #4 – Believable and Achievable

The participants next engaged in their fourth Breakout Session, titled "Believable and Achievable" (Appendix 5). This was the time to evaluate and prioritize the many possible solutions that had been generated in the previous session. Each group was given a flip chart that corresponded to an overarching theme with a graph drawn on it and the corresponding sticky notes generated from the previous activity. The y-axis was labeled "impact" and the x-axis was labeled "feasibility." Each group worked together to place their sticky notes on the graph to represent the level of impact and feasibility. Some solutions may have high impact but might be difficult to achieve, requiring major program-level transformation or new policy development. Other solutions may be the "low hanging fruit" in that they are very feasible and readily achievable, while their impact may be small by comparison. The groups then reported their top solutions that emerged as both impactful and feasible. These solutions were recorded

on a screen in real-time during the report out to ensure the correct ideas and priorities were captured. The prioritized solutions are listed below.

Working Together
- → Identify passage connectivity priorities
- → Create a collaborative structure (e.g. Interagency Grizzly Group, including senior staff)
- → Identify short-term and long-term low-hanging fruit to continue to engage all interested parties, including local landowners

Planning
- → Form working groups for long-term projects based on priority areas or projects
- → Identify local research needs and develop a method of project prioritization
- → Design a process for working together during corridor projects and formalize scoping processes with early engagement

Policy and Legislation
- → Develop constituencies in support of wildlife and transportation consideration, project planning, and implementation
- → Work with leadership at the federal and secretarial level to provide policy direction for states to prioritize funding wildlife transportation issues
- → Develop a Memorandum of Agreement between FWP and MDT to solidify their partnership and develop joint guidance or policy related to wildlife and transportation issues
- → Elevate wildlife accommodations on par with other MDT mandates through new policy at MDT
- → Refocus priorities within MDT mission statement to balance wildlife accommodations with other directives such as safety
- → Consider wildlife accommodations or priority areas in advance of new project nominations in the P3 process

Priorities, Data Collection, and Information Sharing
- → Coordinate priorities and identify data and data sharing needs at the local level
- → Joint project prioritization, potentially through the use of technology
- → Increase use of modeling and create a unified data collection tool

Education and Outreach
- → Develop a shared vision and message among partners in order to design appropriate strategies and tactics
- → Coordinate with partners to define the audience and target messages appropriately
- → Design tactics and outreach strategies geared toward target audience and desired outcomes

Funding

→ Create partnerships and develop agreements to formalize relationships and commitments
→ Create a multi-stakeholder group to take on long-term planning
→ Develop project prioritization framework to focus funding efforts

HOW DO WE GET THERE?

Emerging themes and recommendations for action

Confederated Salish and Kootenai Tribes Presentation

Dale Becker, Tribal Wildlife Program Manager for the Confederated Salish and Kootenai Tribes' (CSKT), and Whisper Camel-Means, Wildlife Biologist with the CSKT Natural Resources Department presented on the reconstruction of Highway 93 through the reservation lands. They explained why protecting wildlife movement across highways is culturally important to CSKT and provided insights and lessons from the project. The highway was seeing increased traffic due to an increasing human population and greater visitation to Flathead Lake and Glacier National Park. CSKT's primary concerns were public safety and the potential for further dilution of their native culture. Tribal values are central to the project, which is that the "road is a visitor" and should respond to and be respectful of the land and the Spirit of Place. The project took many years of challenging work and continues today. They found that a Memorandum of Understanding among CSKT, Federal Highway Administration, and MDT was necessary to ensure tribal interests were addressed by the project and to formalize the roles and responsibilities of the partners. Currently, the stretch of Highway 93 between Evaro and Polson contains the most crossing structures per mile for the longest distance in the country. They learned that it is crucially important to establish trust from the onset, believe in partners and the process, and be open to new ideas and concepts. They encouraged the group to be patient and focus on resolving the problem at hand while working together to achieve the desired end product.



Photo Credit: Rob Ament

Chart the Course

Facilitator Shawn Johnson assisted participants in transitioning from thinking about individual solutions for specific challenges to devising a plan for accomplishing all of the solutions over time. Given all of the prioritized solutions, participants needed to determine next steps to start tackling solutions, such as developing a final report with clear recommendations from the Summit and work groups.

Breakout Session #5 – Ready, Set, Action!

The participants transitioned into the fifth and final Breakout Session, titled "Ready, Set, Action" (Appendix 6). The purpose was to take the prioritized solutions the group had generated and determine what needs to happen in order to move the ideas forward into action. Participants were encouraged to answer the question, "What's the next step to accomplish the many solutions discussed at the Summit?" and write their best ideas on index cards. The index cards were then shuffled around the room and rated by a new group with a score of 1 to 5 (1 for low and 5 for high).

Following are the ideas that were rated 5:

- → Create a formal process for identifying shared priorities among MDT, FWP, and NGOs
- → Get buy-in and direction from agency leaders. Leaders would task staff with developing framework for an interagency committee
- → Annual meetings between MDT and FWP to plan projects
- → Consider wildlife accommodation issues early (pre-nomination) in the MDT process so inclusion of wildlife accommodations in the projects are not considered an "extra" expense. Wildlife accommodation costs are included in the nomination
- → Identify statewide and regional opportunities for committee development
- → Identify pilot projects for MOU and agreement development
- → Identify a group/committee to begin discussion on education and public outreach with the intent of providing one voice
- → Need to define and agree on a set of goals for moving forward, possibly in the form of an MOU
- → MOU between MDT and FWP that includes biennial meetings between districts and regions, staff positions responsible for invitations and agenda, data collection and carcass pickup, mapping, data sharing on wildlife research and maps
- → Develop a global MOU for wildlife and transportation in Montana that includes the shared goals of this summit
- → Develop regional coalitions comprised of local, state, federal, and tribal agencies, NGOs, and interested individuals for long range planning and identification of opportunities
- → Use grizzly bear interest and conservation groups as a platform for launching major private donor campaign
- → Establish a multi-agency/organization oversight committee at Upper Management level
- → Resource mapping (funding, partnerships, land, etc.) to identify where resources intersect with priority wildlife management needs statewide
- → Develop a vision for a wildlife connectivity strategy statewide
    - → Create Wildlife Connectivity Task Force (wildlife biologists)
        - → Multi-agency
        - → Identify land acquisition needs and highway mitigation structures
        - → Develop priorities for wildlife
    - → Take Wildlife Taskforce Results – form larger coalition
        - → Involve land management agency planners (county, MDT, NGOs)

- → Develop a statewide connectivity plan that identifies management guidelines for agencies and a strategy for land acquisition
- → Identify corridor project areas and form collaborative to identify stakeholders and start working on funding, partnership, and vision

Individual Reflections

Participants were asked to reflect on the collective recommendations that emerged over the two days of the Summit and think about their individual role in affecting change at the program level to make these recommendations a reality. Then participants were asked, "What could you do in your job tomorrow to move just 15% towards that solution?" Participants shared their thoughts with their neighbor and wrote down a specific goal to reach within the next two weeks, along with their name, email, and phone number. These papers were crafted into paper airplanes and soared around the room. Each participant was asked to pick up an airplane and call the person on their piece of paper in two weeks to check in on their progress and make yet another personal connection.

Closing Remarks

FWP Chief of Staff Paul Sihler, MDT Director Mike Tooley, MSWP representatives Don Burgess and Rachel Caldwell, and Natural Resource Policy Advisor to the Governor, Patrick Holmes gave closing remarks. They expressed enthusiastic satisfaction that the objectives of the Summit had been met. Each was very pleased with the quality of shared information, the expanded perspectives, and the energy and momentum built during the Summit. There was a sense that it had been extremely valuable to look at model projects and partnerships for inspiration. Gratitude was expressed to both agency Directors for committing themselves and their staff for the two days of the Summit, recognizing the amount of resources it took for all to be there. The opportunity to engage in meaningful, face-to-face dialogue around this issue with people that do not normally cross paths was celebrated. The leadership expressed that the message was received loud and clear: Collaborative efforts and an elevated focus on wildlife and transportation issues are needed. They conveyed that change of this nature will take time and that patience, communication, and trust are crucial to moving forward from standard procedures and policies. They explained that funding and capacity constraints are a difficult reality to maneuver, but that should not stop us from taking next steps where we can. Working together, we will identify opportunities and leverage the required resources to reduce WVCs and protect wildlife movements across Montana. The success of the Summit is only the beginning and the relationships formed here will be the motivation to help us lead with "YES!"

APPENDIX 1. SUMMIT AGENDA

Montana Wildlife and Transportation Summit

December 4 and 5, 2018

Carroll College, All Saints Hall, Campus Center Building
1601 N Benton Ave Helena, Montana

Agenda

On behalf of the Governor's Office, Montana Department of Transportation, Montana Fish, Wildlife, & Parks, Montanans for Safe Wildlife Passage, and Western Transportation Institute, we welcome you to the inaugural Montana Wildlife and Transportation Summit. The purpose of the Summit is to bring stakeholders together to share information and develop strategies to plan and implement wildlife accommodations. By working together, we can reduce animal-vehicle collisions and protect wildlife and their movement corridors across state highways. Summit objectives include:

- Strengthen professional relationships and develop common understanding around wildlife and transportation issues in Montana
- Identify opportunities and challenges in working together to implement wildlife accommodations
- Learn about partnerships that resulted in successful wildlife accommodation strategies in other states
- Recommend actions to elevate wildlife and transportation considerations at both the program and individual level

Tuesday December 4th WHERE ARE WE NOW?		
10:30 am	Check-In and Registration	
11:30 am	Welcome Lunch	Catered Lunch Provided
12:30 pm	Opening Remarks and Introduction	Governor Steve Bullock MDT Director Mike Tooley FWP Director Martha Williams MSWP Laramie Maxwell, CLLC MSWP Kim Trotter, Y2Y Shawn Johnson, Facilitator
1:20 pm	Breakout Session #1	Share your story
1:40 pm	Understanding MDT, FWP and MSWP missions and goals related to wildlife and transportation Panel Q&A	Dustin Rouse, MDT Tom Martin, MDT Paul Sihler, FWP Renee Callahan, CLLC Lance Craighead, Craighead Institute
3:00 pm	Break	Snacks and Beverages Provided
3:15 pm	Breakout Session #2	Let's Be Honest: What's working and what can be improved
3:50 pm	Keynote Presentation: Cascade Crossroads	Brian White, Assistant Regional Administrator for Construction and Development, WSDOT Patty Garvey-Darda, Wildlife Biologist, Okanogan-Wenatchee National Forest
4:50 pm	Wrap Up Day 1	Shawn Johnson, Facilitator
5:00 pm	Reception	Heavy Hors d'oeuvres and Cash Bar Provided

Wednesday December 5th WHERE DO WE WANT TO BE?		
8:00 am	Recap Day 1	Shawn Johnson, Facilitator
8:10 am	Montana's Wildlife Habitat and Movement Wildlife and Transportation – Impacts and Strategies	Justin Gude, FWP Dr. Marcel Huijser, Western Transportation Institute
9:10 am	Breakout Session #3	Solution Resolution: Develop solutions to address challenges identified in Breakout Session #2
10:00 am	Break	Beverages Provided
10:20 am	Successful Partnerships	Rob Ament, Western Transportation Institute
10:50 am	Breakout Session #4	Believable and Achievable: Prioritize Solutions
12:00 am	Lunch	Catered Lunch Provided
Wednesday December 5th HOW DO WE GET THERE?		
1:00 pm	Confederated Salish and Kootenai Tribes	Dale Becker, CSKT Whisper-Camel Means, CSKT
1:40 pm	Chart the Course	Shawn Johnson, Facilitator
1:50 pm	Breakout Session #5	Ready, Set, Action: Develop Recommendations
2:55 pm	Break	Snacks and Beverages Provided
3:10 pm	Reflect on Collective Recommendations and Individual Momentum	Shawn Johnson, Facilitator
3:50 pm	Closing Remarks	Patrick Holmes, Policy Advisor for Natural Resources, Governor's Office MDT Director Mike Tooley FWP Director Martha Williams MSWP Don Burgess, Bitterroot Sapphire Coalition MSWP Rachel Caldwell, NPCA
4:20 pm	Summit Closing	Shawn Johnson, Facilitator
4:30 pm	Adjourn	

APPENDIX 2. BREAKOUT SESSION #1 – SHARE YOUR STORY

BREAKOUT SESSION 1

SHARE YOUR STORY

Description: This is your chance to share what you would have highlighted if you were asked to give opening remarks for the Montana Wildlife and Transportation Summit

Format: Each person at your table has 2 minutes to introduce her/himself (name, organization, hometown) and share 1-2 topics or themes she/he thinks are important for framing the discussions we will have at this summit.

Timing:	20 minutes total	
	First 2-3 minutes	Personal reflection – each person thinks about her/his top 1-2 topics or themes
	Middle 15 minutes	Each person introduces her/himself and shares her/his top ideas or themes
	Final 2-3 minutes	Facilitator will ask for brief reports from 3-4 tables
Roles:	Time keeper: Assign someone at each table to keep track of the time and limit each person to two minutes.	
	Note taker: Assign someone at the table to capture key ideas and themes in the space below. Be prepared to share these ideas during the report out.	

Please record your table's key ideas and themes below.

BREAKOUT SESSION 1 - RESULTS

Some raw results were minorly edited for the sake of clarity.

- Leverage one another's expertise - get out of the silos of different entities and organizations to achieve progress
- Better understand what has been done on this subject
- Take time to identify shared priorities to work towards for the future
- Understand what development and transportation corridors have done to impact shrinking wildlife ranges
- Better incorporate wildlife mitigation into transportation planning. There is a lot of opportunity to be courageous, take calculated risks, and work with different entities
- Understand and address the differences between fragmentation versus mortality. Mortality can be solved by fencing, but perhaps this contributes to fragmentation of wildlife populations. We must address both issues
- Increase conversation among stakeholders to foster understanding and progress
- Listen to one another
- Proactively work for cost effective wildlife accommodation
- Wildlife corridors are important to protect, easement acquisitions are also key
- We need to plan to better understand existing challenges and opportunities to address them
- We need capacity to continue the conversations that start here at the Summit
- Wildlife friendly fencing in the Madison River Valley would reduce conflict
- Predators such as wolverines, grizzlies, wolves need crossing specific to these species in order to ensure healthy populations
- Involvement in the similar Wyoming wildlife and transportation effort
- Committed to finding site-specific solutions for people and wildlife along transportation corridors
- Interested in big game and large predators, will listen and offer where relevant
- Working to integrate wildlife mitigation into transportation planning often ends with a lack of funds and no time to include it in the plans
- Focus on durable outcomes such as essential winter ranges and high priority wetlands
- Focus on big game crossings: conservation is not as essential here as human safety. Durable, strategic, and integrated
- What can transportation planners do to improve safe passage of people and wildlife?
- Durability and functionality of crossings is essential
- Wildlife-vehicle collisions have negative impacts on wildlife populations
- Public education around this subject is very important
- Early coordination among MDT, FWP, and the public is essential to successful, worthwhile inclusion of wildlife mitigation efforts
- Timeframe for comments on transportation plans should be realistic and those comments must be taken into consideration and addressed
- Funding for wildlife mitigation must be increased and public-private partnerships are a way to do this that should be built on

- Address and/or acknowledge the point that wildlife mitigation sometimes pulls funding from bike/pedestrian efforts and other competing interests
- Conservation and land management strategy
- Connectivity: Pronghorn migration
- Community education and outreach
- MDT's Vision Zero: Highway project solutions
- Need to address issue of maintenance funds and procedures of wildlife accommodation infrastructure
- Reduce wildlife-vehicle collisions
- There is a cost to wildlife accommodations
- Driver complacency and expectancy
- Address where is the best place to do projects and how will they be funded
- Truly collaborate
- Maintain the Montana quality of life
- Leverage partnerships
- Functional strategies will preserve habitat and wildlife
- Localized wildlife mortality should be addressed
- Share experiences and exchange feasible solutions
- Promote partnerships and shared responsibilities to get to solutions, adequate funding, and public support
- Address data challenges
- Improve timeline and educate partners on sharing information for transportation planning and construction and design in order to be able to weigh in effectively
- Improve human safety – reduce human fatalities from crashes
- Provide for wildlife habitat connectivity
- Factor in changes of climate into planning for wildlife now and in the future
- How do we fund additional infrastructure? How do we pay to maintain built projects?
- Address concerns in a fiscally responsible manner
- Public engagement around human safety versus wildlife connectivity and the realities around paying for these things
- In Montana interested stakeholders have not fully explored the potential for funding and support work to address this issue. Look into additional partners, local initiatives, etc.
- How do we prioritize resources available to address these issues? For example, Highway 93 would use considerable resources that would then not be available for other projects
- Need to share widely best available wildlife science will all relevant parties
- Need to understand how and when to engage early and effectively in the transportation project planning process
- Develop increased trust and communication among agencies and entities including sharing data
- Public education and outreach as a strong tool
- Private land owners are important – incentivize them to participate
- Need for open sharing of wildlife data and related, realistic objectives for that data
- Hold reasonable expectations and bring enhancements to MDT project planning

- Be clear about objectives for transportation and wildlife projects
- Think long term with wildlife and transportation goals as Montana is developing rapidly
- Local level data from MDT staff and relevant communities should be shared
- Agencies must have robust coordination
- Corridors: If they are studied, mitigation efforts should be carried out to address the needs found in the study. Studies should not occur without action
- How do we remind people they are in a wildlife corridor when they have not seen a sign for many miles?
- Data MUST be shared between agencies and organizations
- Funding will always be an issue. We need man power to collect quality data. There should be outreach to volunteers for citizen science, work for the people and the wildlife, by the people
- Public, political, and financial support are required to make progress
- Make wildlife part of the discussion for all future transportation projects. Use best available science to build the case
- This effort should both address wildlife connectivity for grizzly bears and wildlife migrations while also maintaining the priority of improving human safety
- Understand one another and each agency's priorities and operations
- Include and support all stakeholders – trust one another and present a united front
- Data is needed to support actions
- Important to work together and discuss shared priorities
- Educate the public
- Include all species in planning
- The Summit presents a unique opportunity with the involvement of many stakeholders to set aside differences and focus on shared goals
- Folks like grandeur but MDT must focus on multi-functionality. What smaller things can we incorporate with consistency?
- Private landowners must be included in the conversation
- Funding must be increased and prioritized
- At MDT there is lack of funds to carry our mitigation efforts even if good projects are identified
- There should be a focus on bringing in the public to the conversation
- We must protect the driving public
- We must engage the community and educate specifically around the need for wildlife fencing associated with accommodation efforts
- This is where dead animals meet the road, there is tremendous potential at this gathering
- We need to come together as partners with common goals, able to learn from and teach one another. Wildlife preservation will work through aligned resources, ideas, and comparing old and new methods
- Use good data to make good decisions to best utilize and protect resources
- Better understand and influence land use decisions
- Let's be better at publicizing successes of all sizes. Local/regional examples and opportunities for people to connect with this cause

- Public engagement is key to change. Increased public attention on this issue will lead to a higher priority place for wildlife accommodation in planning
- A lack of state maintenance funds for wildlife accommodations should be addressed
- Partners should work together to better pool money for accommodations
- Railroads, private landowners, and county representatives MUST be engaged and are currently not represented
- DOTs should learn from one another, from state to state to minimize mistakes and maximize effective outcomes
- Education and outreach with the public to muster support for wildlife accommodations
- Innovate around funding
- Funding for what happens after the Summit, for ongoing research, and for infrastructure maintenance
- Priorities: Where do we spend precious public resources and funding?
- Collaboration is hard and we must work at it
- Education and outreach: Sharing our successes and replicating them
- We need to standardize procedures to lessen the reliance on internal champions
- All signs lead to the relevance and importance of collaboration, let's remember that
- Economic approaches to prevent WVCs
- Important to bring the public along in the conversation
- Determine creative resources that can fund conflict resolution
- Learn from one another
- Promote exclusionary fencing
- Protect elk and other species will benefit
- Utilize science in acquisitions and easements to work towards objectives
- Create a community to honor and maintain hunting culture
- Determine where NGOs fit most effectively into this collaboration
- Working with railroads is difficult but must be addressed
- Improve multi-agency relationships
- Better understand MDT planning processes and where to fit in
- Identify priorities and coordinate
- Costs for wildlife accommodations can be exorbitant and therefore prohibitive
- Collaboration around innovative funding solutions to get projects moving
- Focus on riparian areas. Roads often follow along riparian areas/rivers/lakes, which are also essential to wildlife and heavily used by them = inherent conflict
- Important to restore habitat quality on both sides of the highway mitigations
- Reconnect historic range and migration corridors and allow grizzly populations and range to expand
- Build structures of appropriate size to effectively move ungulates and keep them and people safe
- Normalize professional communication among agencies, stakeholders, etc. around all topics associated with transportation corridor planning. Engineers and biologists must have respectful relationships
- People want to see wildlife when they come to MT. We don't want these people to hit wildlife when they are coming to wildlife watch

- Regional transportation planning concepts
- Working on pronghorn migrations in N Montana and wants to see aquatic and terrestrial connectivity across the landscape through on the ground implementation and community involvement
- Improve on determining what are the most critical areas for mitigations to be cost effective and get better return on investment
- Set aside certain areas for stand-alone mitigation
- Pre-construction, design, planning, safety, sensitivity to environment
- Funding and proper placement of accommodations are concerns
- Need for spatially explicit data
- Get folks together that have data
- Secretarial Order on migration and winter range in western states
- The Summit should serve as a model for other states hoping to jump start movement on this topic

APPENDIX 3: BREAKOUT SESSION #2 – LET'S BE HONEST

BREAKOUT SESSION 2

LET'S BE HONEST:
WHAT'S WORKING, WHAT'S NOT?

Description: This is complicated and dynamic work, and we're constantly hearing about and thinking about what we can do better. This is your chance to share your thoughts about what is working well and, if you're willing, share something that didn't go as planned. We all have those moments. And they can be incredibly instructive.

Given the wide scope of possible answers, it may be useful to think about the different arenas of work, such as:

- working together;
- data collection, sharing, and analysis;
- creative funding;
- education and outreach;
- policy and legislation; and
- workforce and capacity.

Format: Each person will have 5 minutes of personal time to think about the issues and challenges we need to address for this summit to be a success.

1. What are the key ideas or practices that are helping us move forward? What's working?
2. What are the central challenges or concerns that are holding us back? What's not working?

After each person has answered these questions on her/his own, we will form two small groups at each table (3-4 people per group). Each small group will discuss their responses to the questions and capture their group's top 3-4 successes and 3-4 challenges.

After each small group has agreed upon their top 3-4 successes and 3-4 challenges, we will come together as a whole table and repeat the same exercise. At this point, try to narrow it down to your table's top 5 successes and top 5 challenges and record those on the back of this page.

Timing: 35 minutes total

First 5 mins Review instructions and do a quick round of table introductions

Next 5 mins Individual time to answer questions

Next 10 mins Small groups consolidate and prioritize their top 3-4 answers

Next 10 mins Tables consolidate and prioritize their top 5 answers and record them below

Final 5 mins Facilitator will ask for brief reports from 3-4 tables

Roles: Time keeper: Assign someone at each table to keep track of the time.

Note taker: Assign someone at the table to capture the table's top 5 successes and challenges. Be prepared to share these ideas during the report out.

Record your group's top 5 successes and challenges below. If possible include a theme associated with each success or challenge (e.g., working together; data collection, sharing, and analysis; creative funding; education and outreach; policy and legislation; workforce and capacity; or other.)

Top 5 Successes (What's Working) Top 5 Challenges (What's Not)

BREAKOUT SESSION 2 - RESULTS

Some raw results were minorly edited for the sake of clarity.

Successes

Working Together

- Biennial FWP and MDT meetings
- Shared values through MOAs, MOUs
- Working together is best when there is regular, ongoing communication during the lifespan of a project
- Right of way agents are promoting wildlife friendly fences, but in the end, it is the landowner's decision
- Finding bridges to gain trust from the start or at the right time
- There are more collaboratives within the conservation community
- Agencies are getting together to prioritize areas
- Relationships drive success
- Respect for each other's space and expertise
- Montana leads the nation in wildlife crossings
- FWP biologists consult with MDT on projects
- Greater communication among agencies, stakeholders, and the public
- Current coordination within agencies is pretty good
- The summit in and of itself!

Planning

- Crash Analysis for design process has proven to be helpful information
- There has been a greater use of multipurpose structures
- Timing of project construction is important in order to mitigate negative impacts
- Closely track STIP
- "Strategic planning"
- The development of MDT wildlife accommodation process
- Early consideration of wildlife and habitat in NEPA
- Early involvement of all agencies in project development

Policy & Legislation

- There is a paradigm shift happening within MDT
- MDT is releasing an accommodations manual
- Alignment among Governor's office, MDT, and FWP in addressing transportation and wildlife issues

Priorities, Data Collection & Information Sharing

- Greater ability to model wildlife movement
- More interagency data sharing
- Improved data collection in silos
- Identifying more hot spot areas and migration routes
- Greater summary "big picture" data

Education & Outreach

- Greater intra-agency education
- Hired public relations staff for public education
- Greater inter-agency and multi-agency outreach
- Better agency and public communication, which has shown up in more public awareness of wildlife and transportation issues.
- There is better information available demonstrating solutions to wildlife and transportation issues in other states
- There has been earlier public outreach about projects
- There is better education for drivers

Funding

- Funding programs have been reinstituted
- Creative funding sources with Army Corps in Washington

<u>Challenges</u>

Working Together

- Difficult convening partners *e.g.,* NGOs have $ but cannot assemble people needed
- FWP would like more input about highway right of way fencing than just private land owners
- Need to develop criteria to evaluate "success" or "failure" of structures and crossing projects
- Identify NGO employees that will remain constant over time to avoid issues with turnover
- NGOs tend to be focused on crossings
    - Need to investigate other lower cost options
- Working with the public to gain trust can be barrier
- NGOs need to know how and when to engage in the process
- Infrequent or lack of communication
- Some states haven't bought in
- Lack of engagement of the insurance industry
- "private landowners creating issues"
- There is a disconnect between federal, state, and local
- Need to change paradigm to engage stakeholders early and establish buy in
- Early coordination doesn't always involve NGOs
- Willingness to collaborate
- Agency silos
- Landowner buy in for fencing
- Communications with railroad companies

Planning

- Rules and procedures create barriers
- Road sections with many access points can be challenging for crossings
- Wildlife timing restrictions gives short summer construction season
- Balancing wildlife crossings with other environmental impacts e.g. wetlands
- How much security does MDT need regarding commitments from private landowners? Are conservation easements sufficient protection to create a permanent crossing for wildlife?
- Effecting large landscapes through lots of small projects may not be immediately impactful but successes come down the road
- Ability to affect adjacent wildlife attractants *e.g.,* alfalfa fields
- Focused on key crossings while larger areas are ignored
- Planning and coordination of timelines
- Need criteria for prioritizing projects pre and post-completion
- Finding an appropriate time to get input into the process
- Doing more "opportunistic planning" and less "strategic planning"

Policy & Legislation

- Regulated resources take priority over wildlife crossings e.g. wetlands
- Land use decisions displace wildlife
- Policies change with administrations at state and federal level
- Need to institutionalize working together to address these issues, codifying the process
- Need for policy and legislation related to private landowners creating attractants next to highways

Priorities, Data Collection & Information Sharing

- Data collection underreporting
- A process for data sharing is needed
- Need finer scale data for MDT planning and projects
- Lack of baseline data
- Data management
- Understanding what data is available and who has it
- Need for more collar data
    - Funding is prohibitive
- Acquiring more in-depth data from sources not currently being used

Education & Outreach

- What's the right message?
- Better public outreach
- Generating awareness
- Inspire the public to take personal responsibility of limiting wildlife-vehicle crashes
- Messaging to the appropriate target audience
- Need for public understanding of when to engage
- Lack of information and education for the public

- Have science and full story as a message both internally and externally
- Lack of inclusion of all agency partners
- Changing the opinions of stubborn people

Funding

- Ongoing maintenance costs
- Budgets and cost of structures may be prohibitive
- Balancing budget versus need
- Funding cost-effective solutions
    - There are more projects on table than money for ongoing maintenance
- Inability to match federal money if there was more funding available
- Lack of funding
- Spending funds on the wrong things
- Long-term, continuous funding and support
- Need for outside funding
- Projects that are funded do not allow for new infrastructure (e.g. pavement pres.)
- Lack of legislative dollars

Specific

- Ninepipes area of US-93: Implement lessons learned
- Adaptive management
- How do you end exclusion fences?
- Current conditions, e.g. development patterns do not allow for creative solutions in places
- Adjacent landowners are too influential
- Human safety is prioritized over wildlife crossing

APPENDIX 4. BREAKOUT SESSION #3 – SOLUTION RESOLUTION

BREAKOUT SESSION 3

Solution Resolution

Description: Yesterday, you identified some areas of success and some important challenges. Today, you get to share your ideas about how to amplify those successes and address those challenges. This session is all about thinking big, being innovative, thinking outside the box, and generating as many ideas as you can about how to build upon what's working and address what's not. We're aren't worried about evaluating ideas just yet. The focus is on generating as many ideas as possible.

Materials: List of Successes and Challenges, Large Index Cards, Paperclips

Format: Each table will have a stack of index cards. Each card will have one of the successes or challenges from yesterday's session paperclipped to it.

When the session starts, you will distribute the cards around the table so that everyone has a card with a success or challenge. Each person will have 3 minutes to read the success or challenge and write as many ideas as they can on the card that address the success or challenge. If additional cards are needed, add them to them the stack and use the paperclip to make sure the right index cards stay attached to the success or challenge being addressed.

After everyone has a chance to add their ideas to the cards, each person will report back to the table as a whole on the ideas that have been generated around that success or challenge. Everyone should have one set of ideas they are reporting back.

Timing:

9:10 – 9:15	Read instructions and conduct a brief round of introductions
9:15 – 9:40	Eight, three-minute rounds of individual brainstorming on index cards
9:40 – 9:55	Each person quickly reads the ideas generated on the card he/she is holding
9:55 – 10:00	Facilitator asks for brief reports back from 3-4 tables

Roles: Time keeper: Assign someone at each table to keep track of the time.

Reporter: Assign someone at the table to be prepared to share 1-2 thoughts about this exercise during the report out period.

BREAKOUT SESSION 3 – RESULTS

Some raw results were minorly edited for the sake of clarity.

Working Together

- Ensure a transparent public process
- 3rd party facilitation
- MDT, FWP, and NGOs establish shared priorities
- Consider making biennial FWP/MDT meetings annual and inviting BLM and Forest Service biologists
- Create opportunities to better understand each other's perspectives, organization goals, and discipline e.g. monthly meetings or a week-long conference
- Create a process for MDT to engage with FWP and NGOs to incorporate wildlife data into project planning prior to STIP and especially survey phase
- Release the wildlife accommodations process and educate the resource agencies and NGOs on how and when they fit into this process
- More and better communication from earlier on in the process with everyone involved
- More frequent face to face interaction among stakeholders
- Low-hanging fruit, acknowledge what has been done, build collaborative and meet at a regional level
- Set up a structure similar to Interagency Grizzly Bear Committee for administering highway/wildlife issues, planning, funding, and management
- Schedule and hold regional meetings between ALL partners, not just FWP and MDT
- Talk to federal land managers
- Agencies to publish plans and priorities regularly

Planning

- Joint project prioritization & planning
- Short term versus long term
- Place emphasis on existing structure placement for wildlife passage. That is, prioritize and enhance passage at existing bridges and railroad access sites
- More emphasis on pre-NEPA planning
- Pre-nomination funding scoping to identify needs for wildlife. Get money into projects early so features are not "additional" to project
- Planning for future land use change with private ownership, including culture and demographics
- Two-tiered approach: continue personal collaboration process to deal with immediate needs and develop a big-picture long-term vision over the next 5 years
- Involve stakeholders from the beginning
- Engage more in land use planning processes where decisions are made that affect wildlife movement
- Integrated conservation planning efforts to go along with high priority crossing structures
- Proactive, longer-term plans
- Identify local research needs

- Process for engaging during corridor studies
- Formalize scoping/planning process and opportunities for collaboration
- Collaborative workgroups with multiple interests for long-term projects
- Align plans with park, county, and agency management plans
- Emphasize existing enhancements
- Look beyond MDT identified projects to identify need from a WL perspective
- Standardize process
- Identify passage connectivity priorities
- Create a collaborative structure to administer highway and wildlife issues, planning, funding and management (interagency grizzly group, including senior staff)
- Short-term and long-term low hanging fruit to continue to engage all interested parties (including local landowners)
- Develop vision for wildlife connectivity strategy statewide. (1) Create multi-agency wildlife connectivity task force of wildlife biologists to identify land acquisition needs and highway mitigation structures with the goal of developing priorities for WL. (2) Take wildlife taskforce results and form a larger coalition that involves land management agency planners, country planners, MDT planners, and NGOs with the goal of developing a statewide connectivity plan, identifying management guidelines for agencies, and a strategy for land acquisition. (3) Identify corridor project areas and form collaborative to identify stakeholders and start working on funding, partnerships, and vision.
- FWP and MDT commit to a common message to staff about priorities and importance
- Identify and empower a champion; form a charter etc. e.g. a Governor's appointee
- Consider making biennial FWP and MDT meetings annual to stay more engaged

Policy & Legislation

- Agencies agree to review existing laws, regulations, and procedures to identify impediments to addressing wildlife transportation issues
- Establish core institutional goals, values, and accountability measures to ensure long-term support and commitment
- Create standardized process of having MDT district biologists before nominating proposals
- MOU between MDT and FWP to commit staff and recourses to continue the dialog started at the summit
- Develop constituency
- Work at federal secretarial level to provide policy direction to states
- Joint policy writing to ensure agencies have consistent policies
- Direction from MDT management to prioritize wildlife accommodations in equal balance with safety priorities within mission statement
- Add wildlife to P3 as policy change at MDT
- Work through W6A to build support and policy direction related to wildlife and transportation
- Elevate importance at the Director and Cabinet level

- State agencies should actively participate with local growth policy development and in reviewing development proposals
- Support participation, both individual and professional in the legislature hearing process
- Better vetting of policy at MDT before Director signs and approves
- Affirmative policy for landscape-level connectivity for specific taxa
- Determine data needs and sharing on a 20-year timeframe
- Incorporate wildlife warnings in mobile mapping applications for travelers - tie in with road hazard and road conditions

Priorities, Data Collection & Information Sharing

- Get information dispersed to lower levels where the work happens
- Identify data and sharing needs at the local level
- Increase data modeling for transportation and wildlife
- FWP should go through regional prioritization process to identify collision hotspots
- Area-specific collaboration to identify passage/connectivity priorities, then align conservation partner investment
- Extrapolation of fine-scale findings to ID passage locations in areas where data doesn't exist
- System to coordinate projects across agencies
- Shared data/GIS warehouse
- Get stakeholders together on a local or regional level to discuss data gaps and needs
- Update information over time. Show how specific mitigation measure have helped and how they may not have been affective or created other issues
- Collect data on successful animal crossings, not just unsuccessful
- Interactive GIS mapping system to capture all data from all agencies, counties etc. Managed by one specific state agency to minimize the silo affect
- Citizen science mobile applications to gather data
- Hire one person with multi-agency funding (like Kathy with NCDE Grizzly Bear Recovery Workgroup) to manage a GIS database for all highway/wildlife info

Education & Outreach

- Identify key personnel who can keep the core mission and overall objectives in focus and can "re-educate" or remove those who create conflict by focusing on their own agenda
- Coordinate skilled public relations folks amongst partners to get the message out
- Include safety as a message
- Tie highway and wildlife conflict issues into ongoing FWP educational efforts in school programs
- Education based on data
- Engage private landowners, stockgrowers, first responders, schools, county governments, the legislature, and conservation boards
- Create culture within communities by educating agencies and the public on the shared needs and benefits between wildlife and transportation
- Joint webpage for MDT and FWP with successes and future plans

- Provide more education to tourists who are unfamiliar with driving in areas with so much wildlife
- Promote internal buy-in e.g. what's the benefit to the practitioner at the end of the project?
- Listen, explain, and ask questions to make people feel like they learned it on their own
- FWP needs to make maps of migration routes and locations where we have concerns about ecological issues associated with transportation routes available to decision-makers and the public
- Leverage multiple interest groups to influence agencies and businesses who are not on board with need e.g. railroads
- Invite railroad to Summit, dovetail railroad communications with existing MDT relationship and take small steps
- Emphasize education that leads to constituency support for projects, policy changes etc.
- Public outreach concerning the need for and success of structures for conservation and human safety
- Education from agency to agency about interests, restrictions, funding, data, and process
- FWP and MDT need to better institutionalize information exchange, communication, and planning between the two agencies. More people need to have this as a part of their job and need to meet more frequently
- Develop and publish a plan to address safety and connectivity

Funding

- Adopt a spin-off of adopt-a-highway program so citizens can cover maintenance costs once structures are built
- Create partnerships and agreements
- Develop multi-stakeholder group for long range planning
- Develop project prioritization
- Dedicated fund for construction maintenance and operations
- Be cautious about stipulations behind grants
- Could do preliminary design with an agreement to go for grants and other funds down the road
- USFS forest highway program - get them involved and ask for funding, expertise, and assistance
- Prepare for the opportunities you may not even know exist
- Lay your plans on the table, look for intersections in them, and funding is much more likely to follow
- Wildlife is charismatic. Engage some of our wealthy citizens to fund solutions
- Develop tools that provide an estimate of return on investment that includes cost savings due to fewer carcasses being picked up etc.
- We need to be informed for the public to be informed
- Have personnel who know federal, state, and non-profit funding sources
- FWP & NGOs auction off tags to raise funds
- Engage insurance industry

- Create cooperative funding opportunities between and among partners
- Fund a dedicated person at MDT to liaise with FWP and work on private/NGO/creative funding for wildlife mitigation
- FWP and NGO's to develop POOLED and dedicated funds source specifically for highway projects
- Create end user fees for earmarked funding
- The cheapest solution is not always the best
- Reach out to NGOs for funding to gather data

APPENDIX 5. BREAKOUT SESSION #4 – BELIEVABLE AND ACHIEVABLE

BREAKOUT SESSION 4

Believable and Achievable

Description: It was really fun thinking big this morning and not worrying about political or financial constraints. Now, let's take another look at those ideas and think about how big of an impact they might have and how feasible they are. While we'll be taking a good look at those ideas you rate as "high impact" and "highly feasible," we also want to be sure to capture those really good ideas (moonshots, anyone?), even if they don't seem feasible just yet.

Materials: List of Actions/Solutions Around a Specific Theme
Stack of Post-it Notes
Piece of Flip-Chart Paper with "Impact" and "Feasibility" graph

Format: Each table will receive a stack of index cards with the ideas/solutions that were generated during the morning session. They will be sorted so that each table is addressing ideas/solutions around a common theme.

When the session starts, you will distribute the cards around the table so that everyone has a card with a particular success or challenge and a list of ideas to address that success or challenge. Each person will have 3 minutes to read the information in front of them and identify what they consider to be the top 2 ideas on that card. (3 minutes)

After everyone has a chance to rate their top 2 ideas, people will exchange cards with the person sitting next to them. Working in pairs, the groups of two will either validate or refine the top 2 ideas, so that both people agree on the top 2 ideas for addressing a specific challenge or success. (6 minutes)

After the groups of two have their top 2 ideas for each success or challenge (each pair will have 4 ideas total, 2 for each card), they should write those ideas on the post-it notes provided at the tables. Each idea should have its own post-it note. After writing the idea, each pair should place the post-it note on the graph where they think it should go. (10 minutes)

After everyone has placed their post-it notes on the graph, each pair will share why they prioritized those particular ideas and why they placed them on the graph where they did. (20 minutes)

The group as a whole will then consider whether it wants to consolidate any of the ideas or move any of the post-it notes to another location on the graph based on the group's feedback.

Each group should then record the top 3 ideas generated by the group – those that appear on the graph as having the highest combined feasibility and impact rating – in the space below.

Each group should also record any breakthrough ideas they want to share in the space below.

Note takers/runners will take snapshots of each graph at the end of this round.

Timing:

10:50 – 10:55 Read instructions and conduct a brief round of introductions
10:55 – 11:15 Individual and 2-person groups identify and place top 2 ideas to address each success/challenge on the graph
11:15 – 11:35 Each 2-person team shares the ideas they picked and their rational for rating them how they did
11:35 – 11:45 Whole groups review and refine the ratings as a whole
11:45 – 11:50 Each group captures their overall top three ideas on the sheet below, including any breakthrough ideas
11:50 – 12:00 Facilitator asks for reports back from 3-4 tables.

Roles:

Time keeper: Assign someone at each table to keep track of the time and tasks.

Reporter: Assign someone at the table to be prepared to share 1-2 thoughts about this exercise during the report out period.

Top 3 Ideas:

1.

2.

3.

"Breakthrough" Ideas

BREAKOUT SESSION 4 - RESULTS

Some raw results were minorly edited for the sake of clarity.

Working Together

- Identify passage connectivity priorities
- Create a collaborative structure (e.g. Interagency Grizzly Group, including senior staff)
- Identify short-term and long-term low-hanging fruit to continue to engage all interested parties, including local landowners

Planning

- Form working groups for long-term projects based on priority areas or projects
- Identify local research needs and develop a method of project prioritization
- Design a process for working together during corridor projects and formalize scoping processes with early engagement

Policy and Legislation

- Develop constituencies in support of wildlife and transportation consideration, project planning, and implementation
- Work with leadership at the federal and secretarial level to provide policy direction for states to prioritize funding wildlife transportation issues
- Develop a Memorandum of Agreement between FWP and MDT to solidify their partnership and develop joint guidance or policy related to wildlife and transportation issues
- Elevate wildlife accommodations on par with other MDT mandates through new policy at MDT
- Refocus priorities within MDT mission statement to balance wildlife accommodations with other directives such as safety
- Consider wildlife accommodations or priority areas in advance of new project nominations in the P3 process

Priorities, Data Collection, and Information Sharing

- Coordinate priorities and identify data and data sharing needs at the local level
- Joint project prioritization, potentially through the use of technology
- Increase use of modeling and create a unified data collection tool

Education and Outreach

- Develop a shared vision and message among partners in order to design appropriate strategies and tactics
- Coordinate with partners to define the audience and target messages appropriately
- Design tactics and outreach strategies geared toward target audience and desired outcomes

Funding

- Create partnerships and develop agreements to formalize relationships and commitments
- Create a multi-stakeholder group to take on long-term planning
- Develop project prioritization framework to focus funding efforts

APPENDIX 6. BREAKOUT SESSION #5 – READY, SET, ACTION

BREAKOUT SESSION NO. 5

READY, SET, ACTION

Description: We've been thinking hard, thinking big, and generating a lot of ideas and options. Now's the time for you to share what you think is needed to start tackling all of these good ideas. What should we start doing differently, starting tomorrow? How should we stay connecting, keep these conversations going, and ensure that all the good work we've done the past two days moves forward?

Materials: Large index cards

Format: On your own, think about this question, "What's the next step to accomplish the many solutions discussed this morning?". Write your best idea on the index card. Place all cards in a stack in the middle of your table. (5 minutes)

Runners will pick up stacks of index cards and shuffle them to other tables. Each table will pick up a new stack and distribute so everyone has 1 card. (3 minutes)

On your own, read the idea on the card. Rate the idea with a score of 1 to 5 (1 for low and 5 for high) and write the score on the back of the card. When the bell rings, pass the card to the person on your right. Read and score the new card. Continue until you've scored every card at your table. (10 minutes)

Add the scores on the back of each card. With your table, determine the 3 highest scores. (5 minutes)

Each table shares the ideas with the 3 highest scores with the room. Graduate students and Planning Committee members will list and prioritize the ideas based on scores on a large screen. (20 minutes)

BREAKOUT SESSION 5 – RESULTS

Some raw results were minorly edited for the sake of clarity.

Solutions rated 5

- Create a formal process for identifying shared priorities between MDT, FWP, and NGOs
- Get buy-in and direction from agency leaders. Leaders would task staff with developing framework for an interagency committee
- Annual meetings between MDT and FWP to plan projects
- Consider wildlife accommodation issues early (pre-nomination) in the MDT process so this wildlife portion of the project is not considered an "extra" expense. Wildlife accommodation costs are included in the nomination
- Identify statewide and regional opportunities for committee development
- Identify pilot projects for MOU and agreement development
- Identify a group/committee to begin discussion on education and public outreach with the intent of providing one voice
- Need to define and agree on a set of goals for moving forward, possibly in the form of an MOU
- MOU between MDT and FWP that includes biennial meetings between districts and regions, staff positions responsible for invitations and agenda, data collection and carcass pickup, mapping, data sharing on wildlife research and maps
- Develop a global MOU for wildlife and transportation in Montana that includes the shared goals of this summit
- Develop regional coalitions comprised of local, state, federal, and tribal agencies, NGOs, and interested individuals for long range planning and identification of opportunities
- Use grizzly bear interest and conservation groups as a platform for launching major private donor campaign
- Establish a multi-agency/organization oversight committee (high enough for decision-making)
- Resource mapping (funding, partnerships, land, etc.) to identify where resources intersect with priority wildlife management needs statewide
- Develop a vision for a wildlife connectivity strategy statewide
    - Create Wildlife Connectivity Task Force (wildlife biologists)
        - Multi-agency
        - Identify land acquisition needs and highway mitigation structures
        - Develop priorities for wildlife
    - Take Wildlife Taskforce Results – form larger coalition
        - Involve land management agency planners (county, MDT, NGOs)
        - Develop a statewide connectivity plan that identifies management guidelines for agencies and a strategy for land acquisition
    - Identify corridor project areas and form collaborative to identify stakeholders and start working on funding, partnership, and vision

Solutions rated 4

- Include a funding structure and mechanism
- Starting at eh very top of MDT, a directive should be written acknowledging the importance of this matter that will empower MDT to start to fully consider this matter from the earliest point of project planning. Approve committing MDT. Prorate share of funding to the project budget at the beginning
- Identify two folks from MDT and FWP – one at decision-maker level and one at implementation level
- MDT and FWP Directors assign key staff for a steering committee to develop an MOA for collaboration on safe wildlife passage. Consider including MSWP?
- Use current knowledge on migration, dispersal gene pool (Justin Gude FWP PPT) on species of concern. Identify priority wildlife/traffic corridors in less complex landownerships (i.e. Federal land blocks) to get "low hanging fruit" projects off the blocks
- Consolidate data collection tool and database across agencies and a coordinated effort
- Creating data sharing platforms, technologies, and positions to develop and enhance the technologies
- Develop prioritization criteria for identifying conservation corridors of highest value and conservation investment. And, to provide local guidance for consistent approach
- Higher level commitment (i.e. an MOU) mandating this coordination between agencies and stakeholders. Things to include in MOU: structure of coordination and roles
- Raise the MDT P3 process to include wildlife migration as a priority (equal to safety and other P3 priorities)
- Form upper level NGO-MDT-FWP committee
    - Develop charter for working together
    - Direct lower levels how to organize
- Better landowner education for wildlife friendly fences along roads to facilitate wildlife moving across roads. Needed vast stretches of Eastern Montana
- Summit report
    - Key deliverables
    - Commitment
    - Broadly distributed to all (inclusion and accountability)
- Identify and empower a champion; form a charter, etc. (e.g. Governor's appointee)
- MOU (Similar to fisheries division
- FWP/MDT commitment
    - Common message to staff about priorities and importance
    - Form interdisciplinary structure e.g. Interagency Grizzly Bear Committee as a model

Solutions rated 3

- Mid-management 'champions' steering committee (four people) and an advisory team made up of other stakeholders such as tribes, landowners, NGOs, and academic (12 people)
- MSWP steering committee to approach the Governor to approach the Secretary of the Interior and the Secretary of Transportation with support from MDT and FWP to include federal priorities for addressing safe wildlife passage in funding packages
- Build a mechanism for conveying the problem of the wildlife and transportation issues. Inform about the knowledge and objectives of summit participants to the public for the purpose of building local and statewide support. For example, a website supported by all partners to facilitate requests for legislative funding
- Memorialize this relationship and process between FWP, MDT, and possibly other entities through MOU signed by the Governor
- Agree to meet for annual summit and invite the railroad
- Create smaller working group to hammer out details of action items and report back/formulate recommendations
- Broaden representation and create coordinating structure that is inclusive
- Identify and convene coordinating council composed of technical, policy, finance, etc. Folks from FWP, MDT, NGO, Governor's Office, transport, scientific communities to set priorities
    - Will include coordinating known priorities based on existing data
    - Governor will appoint lead
    - Each Director will appoint staff
    - E.G. Sage Grouse Initiative or Interagency Grizzly Bear Committee
- FWP/MDT commitment to internal communication of outcomes of summit
- Individuals to be tasked to be liaison between FWP, MDT, and NGOs. This may be accomplished by creating new department positions within FWP and MDT or adding additional duties to current positions
- Build a mechanism for conveying the problem of the wildlife and transportation issues
    - Inform about the knowledge and objectives of summit participants to the public for the purpose of building local and statewide support (e.g. a website supported by all partners to facilitate requests for legislative funding)
- Partnerships where members bring data, information, and funding to share with partners on potential projects
- Need to keep communicating with each other
- Meet with legislature to let them know our objective
- Identify low-hanging fruit (e.g. data collection, GIS/mapping, story map) and meet more regularly
- MOU between FWP and MDT to establish roles, communication, and procedures regarding transportation and wildlife
- Create a detailed outline/process for agencies to work together, including who meets (includes admin/HQ and staff), how often, best management practices, data collection and processing, funding, monitoring, working with partners, etc. Put this into an MOU or agreement or other

- Summit attendees within all participant agencies and groups meet internally to discuss and reflect on the summit, identify the lessons learned and opportunities, who should we connect with and what can we do to put ideas into action
- Establish low cost, low impact programmatic improvements that are incorporated into standard practice (e.g. minimum box culvert size, regardless of hydraulic needs, to facilitate small animal passage
- Continue early collaboration/input from FWP wildlife biologists on MDT projects – the earlier the better
- Begin to build better relationships and start conversations on a local level. Look at the MDT road hotspot map for my local area to identify problems
- Developing wildlife/conservation/community and corridor projects within a jurisdiction or regionally
- Identify a facilitator or two within your local group or agency to keep the stakeholders engaged with one another. Initially, these facilitators could work to develop a unified set of goals that are not abstract but attainable – identify regional priority areas (MDT-FWP biologists ID and concur)
- Beginning a state level process to identify and prioritize coarse level areas/regions for ensuring connectivity. Include all stakeholders
- Statewide interagency connectivity plan to identify and prioritize projects and partners that includes adaptive management

Solutions rated 2

- Outreach to legislature then MDT/FWP summary to build support. Seek input from Wyoming and Colorado Summits – have similar priorities
- Strengthen a statewide coalition of wildlife biologists from state, federal, NGOs for planning needs for ecological connectivity. Coalition should be body of scientific expertise addressing multi-facets of planning, education, policy, funding
- FWP-MDT MOU to jointly move forward
- Celebrate the good work that's already been done
- Publicly promote work done, underway, and at the local level internally, interagency, NGOs, legislators, local agencies/governments
- Increased need for public education with the different types of projects. Why they are needed, how they help both with wildlife and the public using the highways and even when they are not being used, they are still beneficial (e.g. flashing signs and pronghorn crossings that may be only used a couple times a year)
- Interagency guidance in the form of an MOU and dedicated individuals acting as liaisons enhancing coordination and communication
- The leadership of MDT, FWP, and MSWP should designate a team of people to process the results of this meeting and develop a plan for moving the ball forward
- Creating a fund and clarifying process for adding money to that fund for wildlife mitigation from MDT and other entities (e.g. culvert upsizing may be emergency/fast replacement if state's funding limited. May not be able to upsize on short term basis without having in place

- Local FWP-MDT meetings that include wildlife movement considerations and needs (in to STIP addition)
- Mission statement to all coworkers
- Be an individual proponent
- Spread the word by telling everyone we work with about the concepts
- Biennial joint stakeholder meeting(s) to explain projects and NGO activities, in addition to government coordinated meetings

Solutions rated 1

- Secure funding to support a new hire (split MDT-FWP) to continue to move forward and identify priority next steps post summit
- Video conference
- Convene a second summit to discuss progress on the identified solutions
- Dedicate a percent of MDT funding for any project to address wildlife
- Issue a press release and initiate media outreach regarding the convening of this Summit – purpose, participants, content, significance, and outcomes. Could even include an op ed co-authored by Directors Tooley and Williams

Solutions left unrated

- Public information education program
- Permanent steering committee – interagency including NGOs
- Interagency data sharing and coordination
- Divide and conquer: Multiple working groups tasked with working on developing specific priorities around specific topics. For example, human safety priorities/hotspots or large carnivore hotspots. If we tackle one subject at a time, then layer them over each other. Could be done regionally
- Work within the local Transportation Coordination Committee meeting to identify opportunities to include other agencies before a project becomes nominated

APPENDIX 7. SUMMIT SPEAKERS BIOGRAPHIES

Summit Speaker Biographies

Governor Steve Bullock
Montana Governor Steve Bullock is a proven leader who has successfully brought people together to get things done for the state of Montana. Born and raised in Montana, Steve has spent his career fighting on behalf of workers, students and families. Working with a Republican legislature, he expanded Medicaid, passed an Earned Income Tax Credit, and passed one of the most progressive anti-dark money bills in the country. Every day, Steve heads to work at the State Capitol committed to ensuring that Montana remains the best state in the nation to live, work, start a business, and raise a family.

Director Mike Tooley
Montana Department of Transportation
Michael Tooley leads over 2200 employees who manage Montana's highway system, public transportation, rail service and aviation services. His vision of Unity, Transparency, and Effectiveness has allowed MDT to see things differently and as a result create effective new opportunities to provide services to Montana. He serves as the Governor's Highway Safety Representative for National Highway Traffic Safety Programs. He also serves on the American Association of State Highway and Transportation Officials (AASHTO) Executive Board, Highway Traffic Safety and Performance Management Committees, and was elected President of the Western Association of State Highway and Transportation Officials (WASHTO) in 2017. He holds a B.S. in Public Safety Administration from Grand Canyon University and was a member of Harvard University's Senior Executives in State and Local Government Class of 2006. He is a 2008 graduate of the FBI National Academy and retired as Colonel and Chief of the Montana Highway Patrol in 2012.

Director Martha Williams
Montana Fish, Wildlife & Parks
Martha Williams is Montana Fish, Wildlife and Parks' 24th director in the 117-year history of the agency, and has spent her career dedicated to natural resource management. She served as legal counsel for FWP from 1998 to 2011, taught natural resource law, public land and resources law, and wildlife law at UM's Alexander Blewett III School of Law, co-directed UM's Land Use and Natural Resources Clinic, and worked as the deputy solicitor for parks and wildlife at the U.S. Department of Interior, where she oversaw legal issues and litigation for the National Park Service and the U.S. Fish and Wildlife Service. Williams received her bachelor's degree from the University of Virginia and her Juris Doctor with honors from UM's law school.

Laramie Maxwell
Montanans for Safe Wildlife Passage
Center for Large Landscape Conservation
Laramie is a Conservation Associate at The Center for Large Landscape Conservation in Bozeman, Montana, a member organization of Montanans for Safe Wildlife Passage (MSWP). Laramie served as a representative for MSWP on the Planning Committee for this Summit. Her work focuses on promoting wildlife habitat connectivity through policy building and community outreach. She helped to organize the 2017 National Forum on Landscape Conservation as well as contributed to the policy chapter in the report *Pathways Forward*, published by the Network for Landscape Conservation in 2018. Laramie has a Bachelor of Arts in Environmental Policy from Colby College.

Kim Trotter
Montanans for Sage Wildlife Passage
Yellowstone to Yukon Conservation Initiative
Kim is a skilled conservation advocate, fundraiser and coalition builder brings over two decades of experience to her role as Y2Y's U.S. Program Director. Before joining Y2Y, Kim served as Executive Director at the Community Foundation of Teton Valley, and previously the Director of Trout Unlimited's Idaho Water Project, where she worked a diverse group of partners to protect and restore Idaho's native and wild fisheries. She also spent six years as a Land Protection Specialist with the Teton Regional Land Trust. Kim received her Masters of Environmental Management from Duke University's Nicholas School of the Environment and a Bachelors of Science from the University of Puget Sound. In 2009, Kim received the U.S. Forest Service's "Rise to the Future" National Partnership Award for her leadership of ESA fisheries recovery efforts in central Idaho. She currently sits on the Board for the Idaho Conservation League and is an active member on the Eastern Idaho Regional Working Group, for the Idaho Department of Fish and Game.

Shawn Johnson
Center for Natural Resources and Environmental Policy, University of Montana
Shawn is Managing Director of the Center for Natural Resources and Environmental Policy at the University of Montana. He has helped advance a joint effort between the Center and the Lincoln Institute of Land Policy on regional collaboration and landscape conservation. Shawn is co-author of "Working Across Boundaries: People, Nature, and Regions" (Lincoln Institute, 2009), and contributed to "Large Landscape Conservation, A Strategic Framework for Policy and Action" (Lincoln Institute, 2010).

Dustin Rouse
Montana Department of Transportation
Dustin is the Preconstruction Engineer for MDT and is responsible for MDT's Preconstruction Program. Dustin's transportation background began 20 years ago in construction in the Butte District before moving into Hydraulics and finally to Area Engineer for the Great Falls District. Dustin returned to Butte in 2011 as the District Preconstruction Engineer. Dustin has been in his current position since 2016 and is committed to improving MDT's Preconstruction Program through innovation, transparency, and MDT's overriding focus on safety through vision zero.

Tom Martin
Montana Department of Transportation
Tom is the Environmental Services Bureau Chief for the Montana Department of Transportation (MDT), a position he has held for the past 11 years. Tom has over 25 years of experience with MDT and has held other positions in the Consultant Design, Bridge and Geotechnical areas. Tom is a licensed professional engineer in the state of Montana. In his personal time, Tom enjoys spending time with his family, hunting, fishing, camping and hiking.

Paul Sihler
Montana Fish, Wildlife, & Parks
Paul is Chief of Staff at Montana FWP. He began work for FWP in 1995, and has held numerous positions in the department including Division Administrator and Chief of Operations. He took a five year sabbatical from the department beginning in 2002 to help launch the Heart of the Rockies Initiative, a collaborative effort by 24 land trusts in Montana, Idaho, Wyoming, British Columbia and Alberta working on landscape scale private land conservation. His daughter Emma is a freshman at MSU.

Renee Callahan
Montanans for Safe Wildlife Passage
Center for Large Landscape Conservation
Renee is the Senior Policy Analyst at the Center for Large Landscape Conservation in Bozeman, Montana, where she works to promote public policies that facilitate ecological connectivity and large landscape conservation, with a focus on reducing the disruptive effects of roads on motorists and wildlife. She concurrently serves as the Executive Director of ARC Solutions, an interdisciplinary partnership working to raise awareness of and promote innovation in the placement, construction and design of the next-generation of wildlife crossing structures. Prior to moving to Bozeman, Renee worked for over a decade on federal regulatory law and public policy issues in Washington, D.C. Originally from Virginia, she received a Master's in Environmental Science and Management from the University of California-Santa Barbara, a Juris Doctorate from the American University Washington College of Law, and a Bachelor of Arts from Harvard University.

Frank Lance Craighead
Montanans for Safe Wildlife Passage
Craighead Institute
Lance is a field ecologist, population geneticist, and GIS technician with over twenty years of experience in conservation planning. He grew up helping his father, Frank, and uncle, John, with their pioneering study of grizzly bears in Yellowstone Park in the early 1960's. He co-edited: "Conservation Planning: Shaping the Future" published in 2013 by Esri Press. He graduated from Carleton College in Minnesota, completed a Master's degree at the University of Wisconsin , and completed his Ph.D. in Biological Sciences from MSU in 1994 studying grizzly bear genetics in the Alaskan Arctic. He is a Research Affiliate in the Ecology Department at MSU; and a member of the IUCN World Committee on Protected Areas, the Society for Conservation Biology, and the Society for Conservation GIS. As Executive Director of the Craighead Institute he coordinates research and outreach; helping synthesize results and directing communications, fundraising, and development. Conservation of grizzly bears, and grizzly habitat, has always been a central focus.

Brian White
Washington State Department of Transportation
Brian graduated from the Oregon Institute of Technology with a BS in Civil Engineering. He then obtained his Professional Engineer's License and began his engineering career with the Washington State Department of Transportation in Yakima. Brian has held various positions with WSDOT, including construction inspector and project designer. He served as the Program Manager overseeing the development and implementation of the Highway Capital Construction Program for several years, after which he was promoted to Project Director for the I-90 Snoqualmie Pass East Project. He successfully managed funding, communications and the design and construction phases in that position until he was promoted to his current position as the Assistant Regional Administrator for Construction, Design and Environmental.

Patty Garvey-Darda
Okanagan Wenatchee National Forest
Patty is a wildlife biologist with the USDA Forest Service on the Okanogan-Wenatchee National Forest and serves as the liaison to the Washington Department of Transportation on the I-90 Snoqualmie Pass East project. She holds a B.S. in Conservation of Natural Resources and a Master's degree in Zoology, both from the University of California, Berkeley.

Justin Gude
Montana Fish, Wildlife, & Parks
For 11 years Justin has served as the Wildlife Research and Technical Services Bureau Chief at Montana FWP where he supervises the wildlife research, health, and biometrics programs. His duties include coordinating science conducted by FWP and collaborators so that it is directly relevant and used to inform wildlife and habitat conservation, human-wildlife conflict management, public opportunity, and organizational planning efforts. He previously worked as a Wildlife Biologist for the U.S. Fish and Wildlife Service and as a Wildlife Biometrician for Montana FWP. He has a B.S. from the University of Florida and an M.S. from Montana State University and has coauthored 40 peer-reviewed publications and over 120 agency technical reports.

Marcel Huijser
Western Transportation Institute
Marcel is a senior road ecologist at the Western Transportation Institute at Montana State University, where he leads a range of road and wildlife related projects for state and federal governments, counties, foundations, and other funders. He was the lead scientist on the 15-year-long US Highway 93 wildlife mitigation project on the Flathead Indian Reservation in Montana. He specializes in the effectiveness of wildlife mitigation measures along highways. He focuses on improving human safety through reducing collisions with large mammals, maintaining or improving ecological connectivity, and cost-benefit analyses.

Rob Ament
Western Transportation Institute
Rob Ament, M.Sc., Biology, is the Road Ecology Program Manager. He has more than 25 years of experience in plant ecology, natural resource management, environmental policy, and organizational development. He manages over 20 active road ecology research projects throughout North America and currently serves on five national and international committees and boards.

Dale Becker
Confederated Salish and Kootenai Tribes
Dale has served as the Tribal Wildlife Program Manager since 1989. His duties include program oversight and direction, fiscal management, wildlife and habitat policy consultation, personnel supervision and management, program and project planning and public outreach regarding wildlife issues. He has been active in mitigation planning for hydroelectric facilities, U. S. Highway 93 and several smaller projects located on the Flathead Indian Reservation. Previously he was a Wildlife Research Specialist with the Montana Cooperative Wildlife Research Unit at UM and also worked for the U. S. Forest Service and private ecological consulting firms. He holds a B. S. and an M. S. in Wildlife Biology from UM, is a Certified Wildlife Biologist, and was selected as the recipient of the Wildlife Biologist of the Year in 2004 by the Montana Chapter of The Wildlife Society for his work on highway mitigation, hydroelectric mitigation planning and extirpated species restoration.

Whisper Camel-Means
Confederated Salish and Kootenai Tribes
Whisper is a Wildlife Biologist working for Confederated Salish and Kootenai Tribes Wildlife Management Program. Her duties include US Highway 93 Post Construction Monitoring of wildlife mitigation tools. Outreach and education are important elements of this work. She is the President of the Montana chapter of The Wildlife Society as well as a Certified Wildlife Biologist for this organization. Whisper has recently selected and completed fellowships with the National Conservation Leadership

Institute: Cohort 12 and is a Wilburforce Fellow in Conservation Science. She has a Bachelor of Science in Wildlife Biology from University of Montana and a Master of Science in Fish and Wildlife Management from Montana State University.

Patrick Holmes
Montana Governor's Office
Patrick currently serves as Governor Bullock's Natural Resources Policy Advisor. Prior to his current position, Patrick served as the Chief of Staff to the Under Secretary for Natural Resources and Environment. During his tenure at the Department of Agriculture, he was trusted to provide counsel to the Secretary of Agriculture on issues related to forest restoration, innovative wood products, working lands conservation, wildland fire, and others affecting the U.S. Forest Service and Natural Resources Conservation Service. He holds a Masters of Environmental Management from Yale University and a Bachelors of Arts in Natural Resources Management and Policy.

Don Burgess
Montanans for Safe Wildlife Passage
Don is a freelance writer and editor. His career has included a ten-year stint as hunting editor at the Rocky Mountain Elk Foundation's *Bugle* magazine, ten years teaching high school English and journalism, and fifteen years as a contractor building recreational trails and bridges for the USFS. A lifelong hunter-conservationist, he lives in Missoula, MT, a few blocks from where he was born.

Rachel Caldwell
Montanans for Safe Wildlife Passage
National Parks Conservation Association
Rachel is the Yellowstone Wildlife Program Coordinator for National Parks Conservation Association, where she leads campaigns aimed to protect and preserve Yellowstone National Park wildlife and park resources across the Greater Yellowstone Ecosystem. With a background in natural resource conflict resolution, she is passionate about helping stakeholders work together to identify innovative and sustainable solutions to complex wildlife and resource management issues. Rachel holds a B.S. in English and Writing from Southern Oregon University, and an M.S. in Environmental Studies and graduate certificate in Natural Resources Conflict Resolution from the University of Montana.

APPENDIX 8. MDT EXAMPLES OF SUCCESS

Examples of MDT Wildlife Accommodation Successes

Missoula District - The bridge over the Thompson River was replaced in 2015-2016 and the project included wildlife passage through the new bridge, wildlife guards, wildlife fence and jumpouts installed east of the bridge. Beginning in winter 2019, a second project will continue the wildlife fence another 2.2 miles, incorporate a 49.6' wide x 10' high wildlife underpass, and add Zapcrete (electric mats) to each end of the fencing to prevent end runs. The primary purpose of the wildlife accommodations is to deter bighorn sheep access to the roadway. Over the past decade, the local bighorn sheep population has experienced a drastic decline, largely due to vehicle collision related mortality. Deer, elk, and black bear will also benefit from the installation.

Butte District – The Toston Missouri River Crossing Corridor Study published in February of 2011 indicated that wildlife collisions and carcasses are elevated within the project area and recommended consideration of wildlife mitigation measures with any project forwarded from the study. Large structures over the Missouri River and MRL tracks are being replaced in 2019/2020 with a reconstruction project on Highway 287 near Toston. The project will also be turning the two-lane road section into 4- and 5-lane sections. The MDT carcass data revealed elevated mortality of deer in the project area as compared to other similar routes. Moose, elk, and pronghorn also occur in the project area. The replacement of the structures provides an opportunity to provide for wildlife movement through the structures with the addition of fencing to guide animals through the structures and prevent them from crossing the highway at-grade. Wildlife barrier fencing will tie the two structures together and extend to the north. Jumpouts will be provided in the fence sections and Zapcrete (electric mats) will be installed at the fence ends to prevent end runs. Additional wildlife crossing signage, including flashing lights will be installed to warn drivers of the potential for at-grade animal movement across the highway outside of the fenced section.

Great Falls District - MDT needed to accommodate Threatened and Endangered species (grizzly bear primarily) at a location agreed upon by MDT, FWP, USFWS, and USFS biologists early in the project design development of a reconstruction on Highway 200 east of Lincoln. At this site, accommodation of elk, moose, and deer movement was also considered as MDT roadkill data, local landowners, and the agencies identified these species as crossing the roadway in this area. MDT decided an underpass (12-foot-high x 20-foot-wide flat slab bridge) and associated fencing was the best option to pass all the species at this location. Later in the project development process, another area along the project was identified as a problem area for elk crossing the roadway, and another structure of the same dimensions and fencing was installed there as well. Both structures have successfully passed all the target species, including grizzly bear and elk. Additional species including bobcat, mountain lion, coyote, wolf, sandhill cranes, black bear, a big horn sheep, and a variety of small mammals have also been documented using the structures.

Glendive District - Upon the recommendation of FWP and resulting from telemetry research on the migratory movements of pronghorn completed by Andrew Jakes, MDT erected several static and dynamic (flashing) signs along U.S. Highway 191 and Highway 2 in north central Montana in 2016. This signage was meant to alert travelers to the specific areas along the highways where GPS data showed that pronghorn were known to cross these roadways during migration. Through a cooperative agreement, MDT installed the signs and FWP would activate the dynamic signs whenever pronghorn were present in the area and staging in an attempt to cross the roadway.

Billings District - Due to the deer densities in the project area being some of the highest in the state (FWP 2000), wildlife accommodations were evaluated for inclusion on a 2009 reconstruction project including bridge replacement on Highway 200 in Fergus County west of Lewistown. The bridges at Beaver Creek and Cottonwood Creek were being replaced with this project and it was determined that placing a wildlife path stamped into the riprap and covered with road mix was the simplest option to allow for deer movement underneath the highway through the bridge openings. Wildlife fencing was not used to funnel the deer underneath the bridges; but soon after project completion, deer started using the paths (see photo below; note the numerous deer tracks on the path).

