

**EMPOWERING I-80 COMMUNITIES  
TODAY AND TOMORROW**



## **A18. Wildlife Crossing Working Group**

**EMPOWERING I-80 COMMUNITIES  
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**Appendix A.18**

**I-80 Corridor System Master Plan: Wildlife Crossing**

Table of contents for Appendix A.18:

- 1- Introductory narrative providing context for the work
- 2- Wildlife Crossing Working Group Mission Statement
- 3- Working Group Meeting Summaries
- 4- Intermediate Working Group Action Review
- 5- Working Group Survey Results
- 6- Working Group Draft “Conversation Topics” Working Paper
- 7- Collateral Materials

## EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW



### **I-80 CSMP Wildlife Crossing Working Group – Introduction**

The functional relationship between transportation and wildlife ecology along I-80 continues to be a prominent concern for a wide range of stakeholders. The I-80 Corridor Wildlife working group explores the various dynamics of road ecology while considering enhanced infrastructure that can improve the safety of motorists and wildlife by reducing wildlife-vehicle collisions, decreasing habitat fragmentation, and increasing landscape connectivity. The following information is provided to demonstrate the considered nature of and implications for the initial dialogue undertaken by the working Group. Note, Working Group chair, Emily Kubovchik estimates the working group collectively dedicated 174 hours participating in 12 highly interactive and engaging virtual meetings involving multiple perspectives. This working group continues leading edge exploration of the implications for wildlife crossings in support of amazing wildlife habitats along the I-80 corridor and throughout the western United States.

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## **I-80 Corridor System Master Plan Study Wildlife Crossing Working Group Mission Statement**

The mission of the Wildlife Crossing Working Group (WCWG) is to collaboratively use available literature, research results, and data to recommend to respective state DOTs effective and efficient mitigation measures to reduce large animal/vehicle collisions for safety and ecological benefits along I-80 from CA to WY. Secondly, the WCWG will recommend measures that decrease habitat fragmentation and increase landscape connectivity for all species consistent with member agency missions. Tools to accomplish these goals include collaborative data sharing, research, public outreach, public/private partnerships, and cooperative funding where possible.

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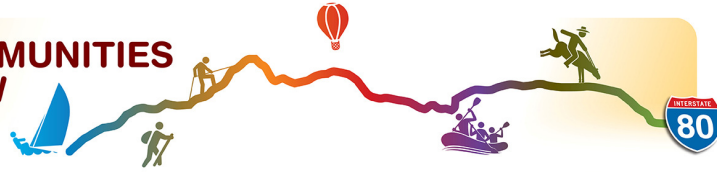


<b>Group:</b>	I80 CSMP Wildlife Crossing Working Group		
<b>Subject:</b>	Kick-off Meeting		
<b>Date and time:</b>	April 30, 2013 10:00 A.M. PCST	<b>Meeting no:</b>	1
<b>Meeting place:</b>	Teleconference	<b>Minutes by:</b>	Emily
<b>Attendees:</b>	<i>Steve Merrill (NDOT)</i> <i>Suzy Melim (Caltrans D3)</i> <i>Nova Simpson (NDOT)</i>  <i>John Bradshaw (NDOT)</i>  <i>Chris Young (NDOT)</i>  <i>Kari Huebner (NDOW)</i>	<i>Emily Kubovchik (Atkins)</i>  <i>Perry Gross (Atkins)</i>  <i>Coy Peacock (NDOT)</i>	

### Agenda/Minutes

ITEM	DESCRIPTION
1	<p><b>Welcome!</b></p> <p><i>Roll call for RSVP and other attendees. Teleconference etiquette and meeting logistics. Brief introduction to the website.</i></p>
2	<p><b>I-80 CSMP Overview</b></p> <p><i>Perry Gross provided a project overview, indicating the importance of specific, topical discussions by several working groups to help inform the project task forces as well as to inform the overall project concepts.</i></p>
3	<p><b>Project Website</b></p> <p><i>Emily asked that all participants review the website and familiarize themselves with its many functions and all of the different types of information. The WLC WG has its own page with meeting dates and times and agendas and meeting notes. The WLC WG page also has a list of contacts/members with a hyperlink to the names for easy e-mailing. An RSS feed has is also available so that participants know when the pages of interest have been updated.</i></p>

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### 4 Recruitment

*Some great suggestions were made with regards to recruitment to include Mining, politicians at local levels, BLM, Department of Interior, Forest Service Districts, Fish and Wildlife, local FHWA, Members of Western Government Association, UNR, California Deer Association, Rocky Mountain Elk Foundation, and other Conservation/preservation Groups, District level agency staff. Emily would like to solicit contacts if possible, but will forge ahead on finding appropriate representation within these agencies.*

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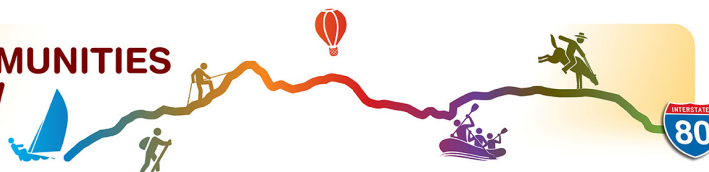
### 5 Next Steps

*Emily noted for everyone to please review the draft goals/purpose on the website and we will discuss/finalize at the next meeting. Also, if there are any resources (like the DOI habitat initiative -- thanks Chris) please let me know and I will either post the resource or look into it further.*

*The next meeting is scheduled for **May 14, 2013 at 10:00 am***

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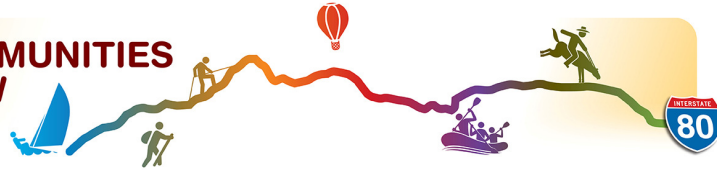


<b>Group:</b>	I80 CSMP Wildlife Crossing Working Group		
<b>Subject:</b>	Organizing the Group		
<b>Date and time:</b>	May 14, 2013 10:00 A.M. PCST	<b>Meeting no:</b>	2
<b>Meeting place:</b>	Teleconference	<b>Minutes by:</b>	Emily
<b>Attendees:</b>	<i>Steve Merrill (NDOT)</i> <i>John Bradshaw (NDOT)</i>  <i>Chris Young (NDOT)</i>  <i>Kari Huebner (NDOW)</i>  <i>Sandra Jacobson (USFS)</i>  <i>Will Pratt (Snyderville Basin Recreation District)</i>  <i>Jin Zhen (FHWA)</i>  <i>Mike Cox (NDOW)</i>	<i>Rick Clark (USFS)</i>  <i>Coy Peacock (NDOT)</i>  <i>Amy Duffy (Western Regional Partnership)</i>  <i>Greg Novak (FHWA)</i>  <i>Michael Murphy (NDOT)</i>  <i>Lisa Yoder (Summit County)</i>  <i>Emily Kubovchik (Atkins)</i>  <i>Kris Absher (Atkins)</i>	

### Agenda/Minutes

ITEM	DESCRIPTION
1	<p>Welcome!</p> <p><i>Roll call for RSVP and other attendees. Brief introduction of participants and roles within their respective agencies.</i></p>
2	<p>Review Purpose of Working Group</p> <p><i>Emily provided a brief overview of the I-80 Corridor System Master Plan, and the purpose of the working group. Generally, the conversations within the working group will be documented and provided to the broader project stakeholders. These discussions intend to inform future strategies, projects, and programs from a corridor-wide (California,</i></p>

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*Nevada, Utah, Wyoming) perspective. By collaborating among the many varied interests along the corridor, the goal is to provide a framework in which funding may be more easily achieved.*

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### 3 Identify an Initial List of Subtopics for Working Group Exploration

*The following is a grouped list of initial topics that the group brainstormed. These topics were grouped (by the facilitator) to help facilitate future conversations. These topics will be further reviewed for both priority and feasibility of further action.*

*A clarification was made with regard to the width of the corridor. Emily clarified that there was no defined width and for the purpose of our working group we should consider what area is influenced by I-80 or has an influence on I-80.*

#### **DATA**

- 1. Focus on data mining to identify crossing areas.*
- 2. Look at corridor topography to see where structures make sense. Which type of remedy is appropriate by area; overcrossing vs. undercrossing? What would migration look like if I-80 didn't exist?*
- 3. Need movement map by species.*
- 4. Gather information from statewide habitat connectivity plans.*
- 5. Contact Western Regional Partnership for information.*
- 6. Contact Western Governors Association (Wildlife Movement group) for potential GIS information*
- 7. Assess gaps- this will occur after data has been collected and reviewed*

#### **BEST PRACTICES**

- 1. Best practices – likely to be discussed during more in-depth conversations on specific topics*

#### **EDUCATION AND OUTREACH**

- 1. Research indicates that crossing structures are effective*
- 2. Is the railroad considering similar strategies within rail corridors (adjacent to I-80)?*

#### **RIGHT-OF-WAY**

- 1. Outside DOT right-of-way coordination issues are difficult when it comes to fencing, public vs. private land*
  - 2. Identify land owners along the corridor (data)*
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### **FUNDING**

1. *Funding is difficult to get for wildlife crossings. Explore combining wildlife crossing needs with safety needs, and accident prevention for more access to funding.*
2. *Safety aspect becomes harder to justify as accidents decrease because structures are working*
3. *Project Ranking – Is there a benefit to identifying the most important need?*

### **AGENCY GOALS**

1. *Ecology and transportation – goals of different agencies differ; restoration vs mitigation*
2. *Review habitat plans (this also has a data component) and identify common goals between agencies*
3. *USFS encourages a broader view that includes ecological issues and their importance*

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#### **4 Goals and Objectives for Working Group: Review Statement on Website**

*Emily asked that the members review the information on the website and provide feedback on the group's purpose.*

*USFS would like consideration of bigger ecological issues and the potential for restoring migrations to how it was before I-80 became a barrier. To identify not only species causing safety issues, but the movement of all species.*

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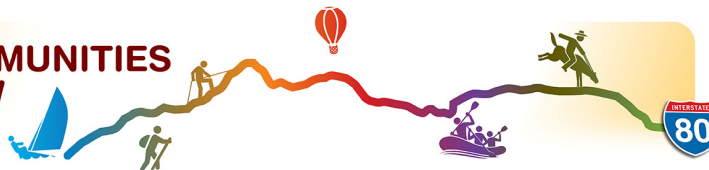
#### **5 Next Steps**

*As always if there are additional resources please let me know and I will either post the resource or look into it further.*

*The next meeting is scheduled for **May 28, 2013 at 10:00 am Pacific***

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<b>Group:</b>	180 CSMP Wildlife Crossing Working Group		
<b>Subject:</b>	Organizing the Group		
<b>Date and time:</b>	May 28, 2013 10:00 A.M. PCST	<b>Meeting no:</b>	3
<b>Meeting place:</b>	Teleconference	<b>Minutes by:</b>	Emily
<b>Attendees:</b>	<i>Steve Merrill (NDOT)</i> <i>John Bradshaw (NDOT)</i> <i>Chris Young (NDOT)</i> <i>Will Pratt (Snyderville Basin Recreation District)</i> <i>Rick Clark (USFS)</i> <i>Nova Simpson (NDOT)</i> <i>Suzy Melim (Caltrans D3)</i>	<i>Coy Peacock (NDOT)</i> <i>Michael Murphy (NDOT)</i> <i>Paul West (UDOT)</i> <i>Emily Kubovchik (Atkins)</i> <i>Kris Absher (Atkins)</i> <i>Carmen Bailey (Utah DWR)</i>	

### Agenda/Minutes

ITEM	DESCRIPTION
1	<p>Roll Call/Introductions</p> <p><i>Roll call for RSVP and other attendees. Brief introduction of participants and roles within their respective agencies.</i></p>
2	<p>Review mission statement from Website</p> <p><i>Emily Kubovchik reviewed the changes she made to the mission statement to simplify it. Co-chair Nova Simpson added an important interface with safety. Carmen Bailey commented on the functional linkage between wildlife and transportation. The group agreed to adding language to show the interface between wildlife crossings and safety for traveling public and wildlife. <b>Action:</b> Emily will finalize the mission statement and put on the website.</i></p>

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### 3 Review and prioritize list of topics (from Meeting 2) for further exploration

*Emily listed the 18 topics generated by the group during the last two meetings. She reviewed them by the following groupings:*

- *Data*
- *Best practices*
- *Education and outreach*
- *Right-of-way*
- *Funding*
- *Agency Goals*

#### ***Data:***

- *Carmen introduced the Utah Wildlife-Vehicle Collision Reporter known as “Road kill tool”. This is an online tool for agencies to keep track of wildlife-related collisions. It is an iPhone app and is not for public use. However, this data can be made available to the working group members. **Action:** Emily will work with Carmen to set up a WebEx to demonstrate the Utah Wildlife-Vehicle Collision Reporter. **Action:** Emily will send Carmen the working group names for access to the app.*
- *Carmen also informed the group about the Western Governors’ Association wildlife coordination group who collected the following data in the Critical Habitat Assessment Tool (CHAT): The working group may be able to get access to their data for the GIS tool.*
  - *Sensitive species*
  - *Riparian areas*
  - *Game areas*
  - *Un-fragmented habitat*
- *Nova indicated the iPhone app data may be more valuable to this working group than the CHAT. The group agreed that DOTs and DOWs need to coordinate better.*
- *Rick told the group about the California Road kill Observation System (CROS) which relies on observations from the public. Wyoming collects data too – but not on an app. The University of Wyoming has GIS format from the Natural Diversity program.*

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- *Other data resource agencies include: California Fish and Wildlife, BLM, Nevada Natural Heritage*

***Action:** Emily will follow-up with agencies to compile resource information and available data*

***Action:** Emily will add identification of mitigation activities by location to the Data topics.*

### **Best practices:**

- *Emily will keep an ongoing list of best practices for stakeholders to use as a resource when identified during specific discussions.*

### **Education and outreach:**

- *Nova indicated it is a priority to reach upper management at the agencies with the need for wildlife crossings.*
- *Carmen added they have worked hard to develop relationships with UDOT and that UDOT takes the lead on outreach. Carmen will invite folks from UDOT to join the working group.*

***Action:** Emily will add the Citizen Science Program concept to the Education and Outreach topics.*

### **Right-of-way:**

- *Identify programs or mechanisms to encourage private engagement and possibly provide incentives that may make private landowners more willing to cooperate.*
  - *Urban sprawl, ranches and fencing are all part of the bigger ecological picture.*
  - *Land Acquisitions to promote habitat connectivity and concerns outside the right-of-way.*
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### *Funding:*

- *Crossings pay for themselves over time because collisions are reduced.*
- *Provide justification for crossings by showing the #s using the crossings.*
- *Group doesn't see much of an advantage to ranking project priorities.*

### *Agency goals:*

- *Main DOT goal is to provide safe and efficient transportation system.*
- *Second tier goal is to provide ecological restoration.*
- *The group should look for common interests and goals. This collaboration not only decreases fragmentation but increases opportunities to share funding resources*

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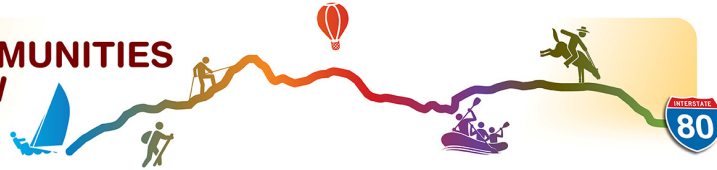
## 4 Next Steps

*Action:* Emily will send out an on-line survey to help streamline future discussions.

*The next meeting is scheduled for **June 18, 2013 at 10:00 am Pacific***

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<b>Group:</b>	I80 CSMP Wildlife Crossing Working Group		
<b>Subject:</b>	Data		
<b>Date and time:</b>	June 18, 2013 10:00 A.M. PCST	<b>Meeting no:</b>	4
<b>Meeting place:</b>	Teleconference	<b>Minutes by:</b>	Emily
<b>Attendees:</b>	<i>Will Pratt (Snyderville Basin Recreation District)    Coy Peacock (NDOT)</i> <i>Nova Simpson (NDOT)    Michael Murphy (NDOT)</i> <i>Hannah Main (Caltrans D3)    Emily Kubovchik (Atkins)</i> <i>Kari Huebner (NDOW)    Carmen Bailey (Utah DWR)</i> <i>Shawn Frye (HDR-GI)    Jessen Mortensen (NDOT)</i> <i>Sandra Jacobson (USFS)    Amy Duffy (WRP)</i>		

### Agenda/Minutes

ITEM	DESCRIPTION
1	<p><b>Roll Call/Introductions</b></p> <p><i>Roll call for RSVP and other attendees.</i></p>
2	<p><b>Review new! mission statement from Website</b></p> <p><i>Emily Kubovchik reviewed the changes she made to the mission statement. Sandra Jacobson had several questions, and recommended that the mission statement be further clarified so as to capture whether the group was geared more toward mitigation or research and monitoring. The mission statement will be reviewed and modified accordingly.</i></p> <p><i>Nova is working with NDOT's Safety Department to purchase wildlife cameras and continue to work with UNR in order to monitor various wildlife crossings. Further monitoring efforts should provide additional information about the structures and their effectiveness for target species.</i></p>

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### GIS

- **Data sharing**

*Emily Kubovchik indicated that the study team wanted to provide GIS data publically, with the understanding that there are some layers that may be locked down because of their sensitivity. Kari Huebner indicated that this seemed like a reasonable approach moving forward. Shawn Frye indicated that specific GIS layers could be locked down and password protected if needed to better secure sensitive information. Emily also asked if anyone had a “go-by” or some sort of MOU for sharing data with other agencies. It appears that the data is either made available or can be requested from agency to agency fairly easily.*

*NDOW data can be requested by through the Reno NDOW office. Kari will help facilitate that data coordination.*

- **How do we want to use this info?**

*Emily asked the group how we wanted to use GIS and the information we collect. Sandra wanted clarification on what species the group was targeting. Nova Simpson indicated that since larger species have a bigger effect on safety, these would be our focus. Sandra cautioned the use of carcass data as the sole data source for determining crossing locations. This was acknowledged.*

*Sandra also mentioned that while the designs typically accommodate the large species, information on smaller species is also helpful in allowing for connectivity of smaller species and additional design elements such as “cover” can be included in these designs. Sandra suggested that this group help develop best management practices for mitigating multiple sizes of species. For example, cross culverts included in roadway projects primarily for conveying water may also accommodate smaller animal species.*

*It was also mentioned that unique habitats such as wetlands may help inform crossing locations and may be included in GIS*

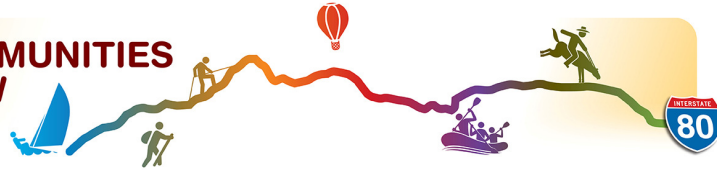
*Carmen noted that Utah doesn’t currently have very robust corridor data. Kari mentioned that collaring various species has really helped increase Nevada’s corridor data, but noted that it was labor intensive and took several years to collect and organize the data to its current state.*

- **Update on GIS info received**

*Shawn Frye has compiled several data sources in GIS and has documented where the data came from, what the data entails, and contact information for the specific data. This may*

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*more easily track the information for updates when additional information is collected or modified by the initial owner of the data.*

*Sandra indicated that the National Forest Service have data on winter and summer ranges*

*Kari wanted to know how far from the I-80 corridor do we want to collect information? Species may be required to move at a landscape level and that several locations may need to be addressed when targeting specific populations. Additionally, other environmental factors may be limiting the species and crossings may not be the only aspect that needs to be addressed away from intersections with I-80.*

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### 4 **Research on Wildlife Crossing Topics**

*Emily asked what kind of research are Universities around the country doing and would it be beneficial to start compiling a list of research topics for reference. Emily will work with Nova to start compiling a list.*

*Carmen indicated that Utah State (Pat Cramer) is finishing up a 6 year research project and would be willing to present this information to the group*

*Carmen also indicated that she would like to present the Road kill app to the group. Emily will investigate the use of Webex to facilitate the meeting.*

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### 5 **Explanation of Survey**

- **Organize and combine topic categories**
- **Prioritize topics/Categories**

*Emily indicated that she would be sending surveys out to the group to help focus discussions and prioritize topics to maximize actionable items*

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### 6 **Next Steps**

*Next meeting is scheduled for July 9<sup>th</sup> with a full agenda. Carmen Bailey has volunteered to present the Wildlife-Vehicle Collision Reporter application. Additionally, working group participants attending the International Conference on Ecology and Transportation will provide some highlights of the conference. Emily Kubovchik will also send out a survey for working group members to complete to help the group focus/prioritize topics of interest. These survey results will be discussed at future meetings.*

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<b>Group:</b>	I80 CSMP Wildlife Crossing Working Group		
<b>Subject:</b>	Data		
<b>Date and time:</b>	July 9, 2013 10:00 A.M. PCST	<b>Meeting no:</b>	5
<b>Meeting place:</b>	Teleconference	<b>Minutes by:</b>	Emily
<b>Attendees:</b>	<i>Will Pratt (Snyderville Basin Recreation District)</i> <i>Nova Simpson (NDOT)</i> <i>Hannah Main (Caltrans D3)</i> <i>Kari Huebner (NDOW)</i> <i>Shawn Frye (HDR-GI)</i> <i>Sandra Jacobson (USFS)</i> <i>Chris Young (NDOT)</i> <i>Patty Cramer (USU)</i> <i>Kevin Lee (NDOT)</i>	<i>Coy Peacock (NDOT)</i> <i>Michael Murphy (NDOT)</i> <i>Emily Kubovchik (Atkins)</i> <i>Carmen Bailey (Utah DWR)</i> <i>Jessen Mortensen (NDOT)</i> <i>Amy Duffy (WRP)</i> <i>Lucy Joyce (NDOT)</i> <i>Steve Merrill (NDOT)</i> <i>Dan Olsen (USU)</i>	

### Agenda/Minutes

ITEM	DESCRIPTION
1	<p><b>Roll Call/Introductions</b></p> <p><i>Roll call for RSVP and other attendees.</i></p>
2	<p><b>Wildlife-Vehicle Collision Reporter App presentation</b></p> <p><i>Carmen Bailey gave a WebEx presentation on the application currently used in Utah to track animal hits on Utah roads. Currently since access to the application is limited and by invitation only, a hit is only recorded when the carcass is removed so as to limit double counting. Utah has not solicited public reporting. Source code is available and has currently been obtained by several agencies. The information database is currently being used to determine areas of concern, but with time it will hopefully be utilized to investigate</i></p>

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*larger questions including habitat dynamics and road avoidance.*

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### 3 **ICOET Highlights**

*Sandra Jacobsen gave an brief overview of the International Conference on Ecology and Transportation held June 23-27 in Scottsdale, Arizona. Sandra indicated that the take home message was that transportation and ecology is being recognized as a real science, and that the advocates are making incremental progress in the industry. The United States, the west in particular, has been recognized internationally for their progress on the subject*

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### 4 **Explanation of Survey**

- **Organize and combine topic categories**
- **Prioritize topics/Categories**

*Emily indicated that she would be sending surveys out to the group to help focus discussions and prioritize topics to maximize actionable items*

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### 5 **Review new! mission statement from Website**

*Emily Kubovchik indicated that there are still being changes made to the mission statement and will report on statement at the next meeting*

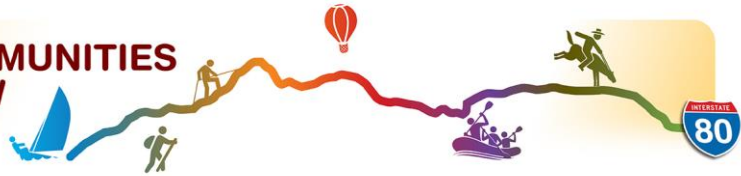
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### 6 **Next Steps**

*Next meeting is scheduled for July 30<sup>th</sup>. We will be discussing the result of the survey to be sent out in addition to a discussion on funding. Also, Coy briefed the group on funds received from the MCOM grant. Nova will give a more detailed explanation of this at the following meeting.*

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# EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW



<b>Group:</b>	I80 CSMP Wildlife Crossing Working Group		
<b>Subject:</b>	Organizing the group		
<b>Date and time:</b>	July 30, 2012 10:00 A.M.	<b>Meeting no:</b>	6
<b>Meeting place:</b>	Teleconference	<b>Minutes by:</b>	Emily
<b>Attendees:</b>	Nova Simpson (NDOT) Kari Huebner (NDOW) Sandra Jacobson (USFS)	Michael Murphy (NDOT) Chris Young (NDOT) Emily Kubovchik (Atkins)	

## Agenda/Minutes

ITEM	DESCRIPTION
1	<p>Roll call and introductions for RSVP and other attendees</p> <p><i>Roll call for RSVP and other attendees.</i></p>
2	<p>Introduction to Liveability</p> <p><i>Emily gave a brief overview of the concept of liveability, how these principles came about, and why these principles are of importance to the group in terms of the future of funding. Emily explained that through a collaborated effort between the FHWA, EPA, and HUD</i></p>
3	<p>I-80 Economic Report</p> <p><i>Carmen Bailey gave a WebEx presentation on the application currently used in Utah to track animal hits on Utah roads. Currently since access to the application is limited and by invitation only, a hit is only recorded when the carcass is removed so as to limit double counting. Utah has not solicited public reporting. Source code is available and has currently been obtained by several agencies. The information database is currently being used to determine areas of concern, but with time it will hopefully be utilized to investigate larger questions including habitat dynamics and road avoidance.</i></p>
4	<p>Funding</p> <p><i>Carmen Bailey gave a WebEx presentation on the application currently used in Utah to track animal hits on Utah roads. Currently since access to the application is limited and by invitation only, a hit is only recorded when the carcass is removed so as to limit double counting. Utah has not solicited public reporting. Source code is available and has currently been obtained by several agencies. The information database is currently being used to determine areas of concern, but with time it will hopefully be utilized to investigate larger questions including habitat dynamics and road avoidance.</i></p>

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### 5 Survey Results

*Carmen Bailey gave a WebEx presentation on the application currently used in Utah to track animal hits on Utah roads. Currently since access to the application is limited and by invitation only, a hit is only recorded when the carcass is removed so as to limit double counting. Utah has not solicited public reporting. Source code is available and has currently been obtained by several agencies. The information database is currently being used to determine areas of concern, but with time it will hopefully be utilized to investigate larger questions including habitat dynamics and road avoidance.*

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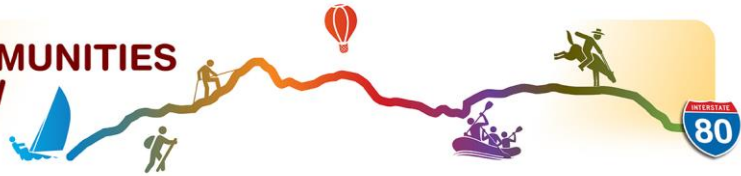
### 6 Next steps

*Next meeting is scheduled for July 30<sup>th</sup>. We will be discussing the result of the survey to be sent out in addition to a discussion on funding. Also, Coy briefed the group on funds received from the MCOM grant. Nova will give a more detailed explanation of this at the following meeting.*

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### 7 Adjourn

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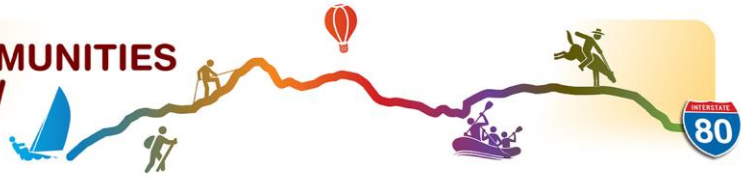


<b>Group:</b>	I80 CSMP Wildlife Crossing Working Group		
<b>Subject:</b>	Survey Results and Data Activities		
<b>Date and time:</b>	August 20, 2013 10:00 A.M.	<b>Meeting no:</b>	7
<b>Meeting place:</b>	Teleconference	<b>Minutes by:</b>	Emily
<b>Attendees:</b>	<i>Nova Simpson (NDOT)</i> <i>Will Pratt (Snyderville Basin Recreation District)</i> <i>Ashley Green (Utah Fish and Game)</i> <i>Suzanne Melim (Caltrans)</i>		<i>Michael Murphy (NDOT)</i> <i>Coy Peacock (NDOT)</i> <i>Perry Gross (Atkins)</i> <i>Shawn Frye (HDR)</i> <i>Danja Petro(Atkins)</i>

## Agenda/Minutes

ITEM	DESCRIPTION
1	<p>Roll call and introductions for RSVP and other attendees</p> <p><i>Roll call for RSVP and other attendees.</i></p>
2	<p>Summary of Survey Results</p> <p><i>Perry and Danja gave a brief overview of the survey results focusing on the data collection and audiences. Survey indicated that</i></p>
3	<p>Trial on data activities</p> <p><i>We don't know how much information would be there on the table. What species to use, dear would be a given. We are trying to figure out what are the species we would be studying. East of Donner summit we have GIS data. Shawn we need to streamline the data and see how we can simplify it. Utah, 74-85% of collision is mule so that may be on top of the list for consideration. In Utah we also have statewide habitat maps. Mike northern Nevada mule deer is the most frequent crosser and we have the most amount of data. Second phase would be Elk. We see more and more Elk involved now.</i></p> <p><i>Perry – we need to organize a meeting with shawn to see how the data can be compiled and make some interpretation and see what we can do to develop best practices.</i></p> <p><i>Do we have contact people what is the next steps: take one specie (mule deer) across the states. Fish and Game Suzy will see if she can</i></p> <p><i>Habitat data may not be the same across the states but we can see if this can be combined</i></p>
4	<p>Next steps</p> <p><i>Next meeting is scheduled for July 30<sup>th</sup>. We will be discussing the result of the survey to be sent out</i></p>

## EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW



*in addition to a discussion on funding. Also, Coy briefed the group on funds received from the MCOM grant. Nova will give a more detailed explanation of this at the following meeting.*

Get data sets together and see how we can use them

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5      Adjourn

## EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW



### Review Purpose of Working Group

*Emily provided a brief overview of the I-80 Corridor System Master Plan, and the purpose of the working group. Generally, the conversations within the working group will be documented and provided to the broader project stakeholders. These discussions intend to inform future strategies, projects, and programs from a corridor-wide (California, Nevada, Utah, Wyoming) perspective. By collaborating among the many varied interests along the corridor, the goal is to provide a framework in which funding may be more easily achieved.*

*USFS would like consideration of bigger ecological issues and the potential for restoring migrations to how it was before I-80 became a barrier. To identify not only species causing safety issues, but the movement of all species.*

The mission of the Wildlife Crossing Working Group is to better understand the functional relationship between transportation and wildlife ecology along I-80. Through conversations focused around areas that intersect with I-80, the working group will explore the various dynamics of road ecology and consider enhanced infrastructure that can improve the safety of motorists and wildlife by reducing wildlife-vehicle collisions, decreasing habitat fragmentation, and increasing landscape connectivity.

*Nova is working with NDOT's Safety Department to purchase wildlife cameras and continue to work with UNR in order to monitor various wildlife crossings. Further monitoring efforts should provide additional information about the structures and their effectiveness for target species.*

### Identify an Initial List of Subtopics for Working Group Exploration

*The following is a grouped list of initial topics that the group brainstormed. These topics were grouped (by the facilitator) to help facilitate future conversations. These topics will be further reviewed for both priority and feasibility of further action.*

*A clarification was made with regard to the width of the corridor. Emily clarified that there was no defined width and for the purpose of our working group we should consider what area is influenced by I-80 or has an influence on I-80.*

### Review and prioritize list of topics (from Meeting 2) for further exploration

*Emily listed the 18 topics generated by the group during the last two meetings. She reviewed them by the following groupings:*

- *Data*
- *Best practices*
- *Education and outreach*
- *Right-of-way*
- *Funding*
- *Agency Goals*

## EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW



### DATA

1. *Focus on data mining to identify crossing areas.*
  2. *Look at corridor topography to see where structures make sense. Which type of remedy is appropriate by area; overcrossing vs. undercrossing? What would migration look like if I-80 didn't exist?*
  3. *Need movement map by species.*
  4. *Gather information from statewide habitat connectivity plans.*
  5. *Contact Western Regional Partnership for information.*
  6. *Contact Western Governors Association (Wildlife Movement group) for potential GIS information*
  7. *Assess gaps- this will occur after data has been collected and reviewed*
- *Carmen introduced the Utah Wildlife-Vehicle Collision Reporter known as "Road kill tool". This is an online tool for agencies to keep track of wildlife-related collisions. It is an iPhone app and is not for public use. However, this data can be made available to the working group members. **Action:** Emily will work with Carmen to set up a WebEx to demonstrate the Utah Wildlife-Vehicle Collision Reporter. **Action:** Emily will send Carmen the working group names for access to the app.*
  - *Carmen also informed the group about the Western Governors' Association wildlife coordination group who collected the following data in the Critical Habitat Assessment Tool (CHAT): The working group may be able to get access to their data for the GIS tool.*
    - *Sensitive species*
    - *Riparian areas*
    - *Game areas*
    - *Un-fragmented habitat*
  - *Nova indicated the iPhone app data may be more valuable to this working group than the CHAT. The group agreed that DOTs and DOWs need to coordinate better.*
  - *Rick told the group about the California Road kill Observation System (CROS) which relies on observations from the public. Wyoming collects data too – but not on an app. The University of Wyoming has GIS format from the Natural Diversity program.*
  - *Other data resource agencies include: California Fish and Wildlife, BLM, Nevada Natural Heritage*

**Action:** *Emily will follow-up with agencies to compile resource information and available data*  
**Action:** *Emily will add identification of mitigation activities by location to the Data topics.*



## EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW



### GIS

- **Data sharing**

*Emily Kubovchik indicated that the study team wanted to provide GIS data publically, with the understanding that there are some layers that may be locked down because of their sensitivity. Kari Huebner indicated that this seemed like a reasonable approach moving forward. Shawn Frye indicated that specific GIS layers could be locked down and password protected if needed to better secure sensitive information. Emily also asked if anyone had a “go-by” or some sort of MOU for sharing data with other agencies. It appears that the data is either made available or can be requested from agency to agency fairly easily.*

*NDOW data can be requested by through the Reno NDOW office. Kari will help facilitate that data coordination.*

- **How do we want to use this info?**

*Emily asked the group how we wanted to use GIS and the information we collect. Sandra wanted clarification on what species the group was targeting. Nova Simpson indicated that since larger species have a bigger effect on safety, these would be our focus. Sandra cautioned the use of carcass data as the sole data source for determining crossing locations. This was acknowledged.*

*Sandra also mentioned that while the designs typically accommodate the large species, information on smaller species is also helpful in allowing for connectivity of smaller species and additional design elements such as “cover” can be included in these designs. Sandra suggested that this group help develop best management practices for mitigating multiple sizes of species. For example, cross culverts included in roadway projects primarily for conveying water may also accommodate smaller animal species.*

*It was also mentioned that unique habitats such as wetlands may help inform crossing locations and may be included in GIS*

*Carmen noted that Utah doesn't currently have very robust corridor data. Kari mentioned that collaring various species has really helped increase Nevada's corridor data, but noted that it was labor intensive and took several years to collect and organize the data to its current state.*

- **Update on GIS info received**

*Shawn Frye has compiled several data sources in GIS and has documented where the data came from, what the data entails, and contact information for the specific data. This may more easily track the information for updates when additional information is collected or modified by the initial owner of the data.*

*Sandra indicated that the National Forest Service have data on winter and summer ranges*

*Kari wanted to know how far from the I-80 corridor do we want to collect information? Species may be required to move at a landscape level and that several locations may need to be addressed when targeting specific populations. Additionally, other environmental factors may be limiting the species and crossings may not be the only aspect that needs to be addressed away from intersections with I-80.*

### **BEST PRACTICES**

1. *Best practices – likely to be discussed during more in-depth conversations on specific topics*

## EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW



2. *Emily will keep an ongoing list of best practices for stakeholders to use as a resource when identified during specific discussions.*

### **EDUCATION AND OUTREACH**

1. *Research indicates that crossing structures are effective*
2. *Is the railroad considering similar strategies within rail corridors (adjacent to I-80)?*

#### **Education and outreach:**

- *Nova indicated it is a priority to reach upper management at the agencies with the need for wildlife crossings.*
- *Carmen added they have worked hard to develop relationships with UDOT and that UDOT takes the lead on outreach. Carmen will invite folks from UDOT to join the working group.*

**Action:** *Emily will add the Citizen Science Program concept to the Education and Outreach topics.*

### **RIGHT-OF-WAY**

1. *Outside DOT right-of-way coordination issues are difficult when it comes to fencing, public vs. private land*
2. *Identify land owners along the corridor (data)*

#### **Right-of-way:**

- *Identify programs or mechanisms to encourage private engagement and possibly provide incentives that may make private landowners more willing to cooperate.*
- *Urban sprawl, ranches and fencing are all part of the bigger ecological picture.*
- *Land Acquisitions to promote habitat connectivity and concerns outside the right-of-way.*

### **FUNDING**

1. *Funding is difficult to get for wildlife crossings. Explore combining wildlife crossing needs with safety needs, and accident prevention for more access to funding.*
2. *Safety aspect becomes harder to justify as accidents decrease because structures are working*
3. *Project Ranking – Is there a benefit to identifying the most important need?*

#### **Funding:**

- *Crossings pay for themselves over time because collisions are reduced.*
- *Provide justification for crossings by showing the #s using the crossings.*

## EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW



- *Group doesn't see much of an advantage to ranking project priorities.*

### **AGENCY GOALS**

1. *Ecology and transportation – goals of different agencies differ; restoration vs mitigation*
2. *Review habitat plans (this also has a data component) and identify common goals between agencies*

*USFS encourages a broader view that includes ecological issues and their importance*

#### **Agency goals:**

- *Main DOT goal is to provide safe and efficient transportation system.*
- *Second tier goal is to provide ecological restoration.*

*The group should look for common interests and goals. This collaboration not only decreases fragmentation but increases opportunities to share funding resources*

### **Research on Wildlife Crossing Topics**

*Emily asked what kind of research are Universities around the country doing and would it be beneficial to start compiling a list of research topics for reference. Emily will work with Nova to start compiling a list.*

*Carmen indicated that Utah State (Pat Cramer) is finishing up a 6 year research project and would be willing to present this information to the group*

*Carmen also indicated that she would like to present the Road kill app to the group. Emily will investigate the use of Webex to facilitate the meeting.*

### **Explanation of Survey**

- **Organize and combine topic categories**
- **Prioritize topics/Categories**

*Emily indicated that she would be sending surveys out to the group to help focus discussions and prioritize topics to maximize actionable items*

### **Wildlife-Vehicle Collision Reporter App presentation**

*Carmen Bailey gave a WebEx presentation on the application currently used in Utah to track animal hits on Utah roads. Currently since access to the application is limited and by invitation only, a hit is only recorded when the carcass is removed so as to limit double counting. Utah has not solicited public reporting. Source code is available and has currently been obtained by several agencies. The information database is currently being used to determine areas of concern, but with time it will hopefully be utilized to investigate larger questions including habitat dynamics and road avoidance.*

## EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW



### ICOET Highlights

*Sandra Jacobsen gave an brief overview of the International Conference on Ecology and Transportation held June 23-27 in Scottsdale, Arizona. Sandra indicated that the take home message was that transportation and ecology is being recognized as a real science, and that the advocates are making incremental progress in the industry. The United States, the west in particular, has been recognized internationally for their progress on the subject.*

### Explanation of Survey

- **Organize and combine topic categories**
- **Prioritize topics/Categories**

*Emily indicated that she would be sending surveys out to the group to help focus discussions and prioritize topics to maximize actionable items*

### Introduction to Livability

*Emily gave a brief overview of the concept of liveability, how these principles came about, and why these principles are of importance to the group in terms of the future of funding. Emily explained that through a collaborated effort between the FHWA, EPA, and HUD*

### I-80 Economic Report

*Carmen Bailey gave a WebEx presentation on the application currently used in Utah to track animal hits on Utah roads. Currently since access to the application is limited and by invitation only, a hit is only recorded when the carcass is removed so as to limit double counting. Utah has not solicited public reporting. Source code is available and has currently been obtained by several agencies. The information database is currently being used to determine areas of concern, but with time it will hopefully be utilized to investigate larger questions including habitat dynamics and road avoidance.*

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### Trial on data activities

*We don't know how much information would be there on the table. What species to use, deer would be a given. We are trying to figure out what are the species we would be studying. East of Donner summit we have GIS data. Shawn we need to streamline the data and see how we can simplify it. Utah, 74-85% of collision is mule so that may be on top of the list for consideration. In Utah we also have statewide habitat maps. Mike northern Nevada mule deer is the most frequent crosser and we have the most amount of data. Second place would be Elk. We see more and more Elk involved now.*

## EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW

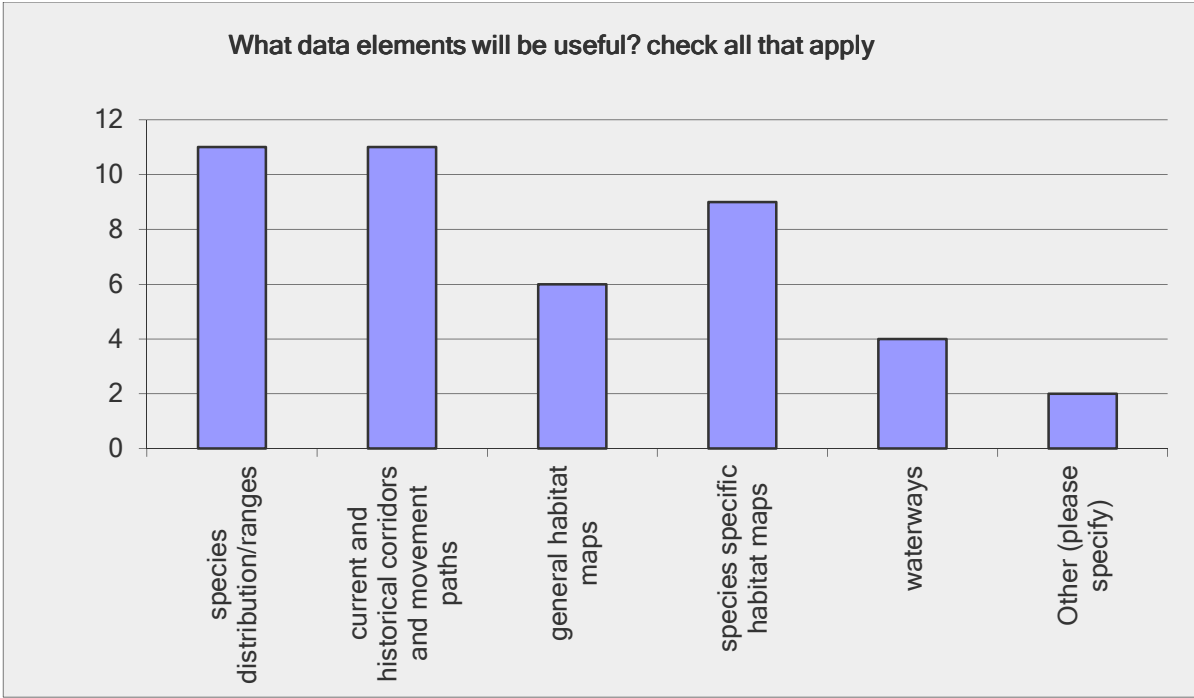


*Perry – we need to organize a meeting with Shawn to see how the data can be complied and make some interpretation and see what we can do to develop best practices.*

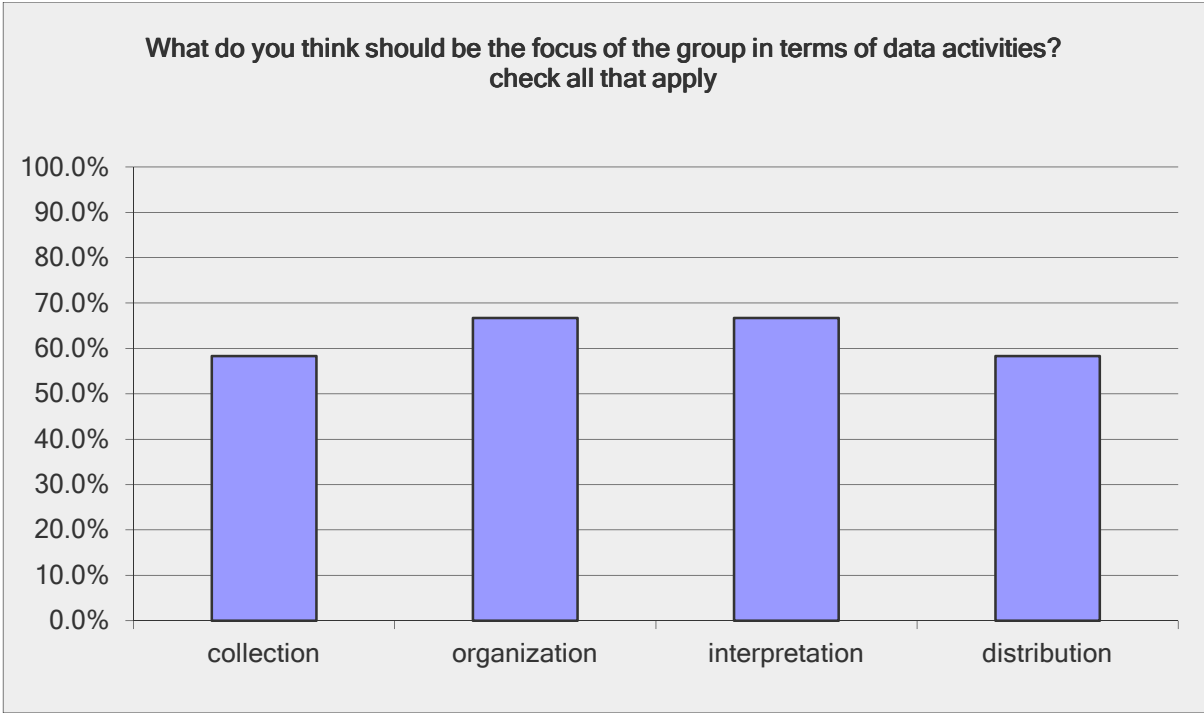
*Do we have contact people what is the next steps: take one specie (mule deer) across the states. Fish and Game Suzy will see if she can*

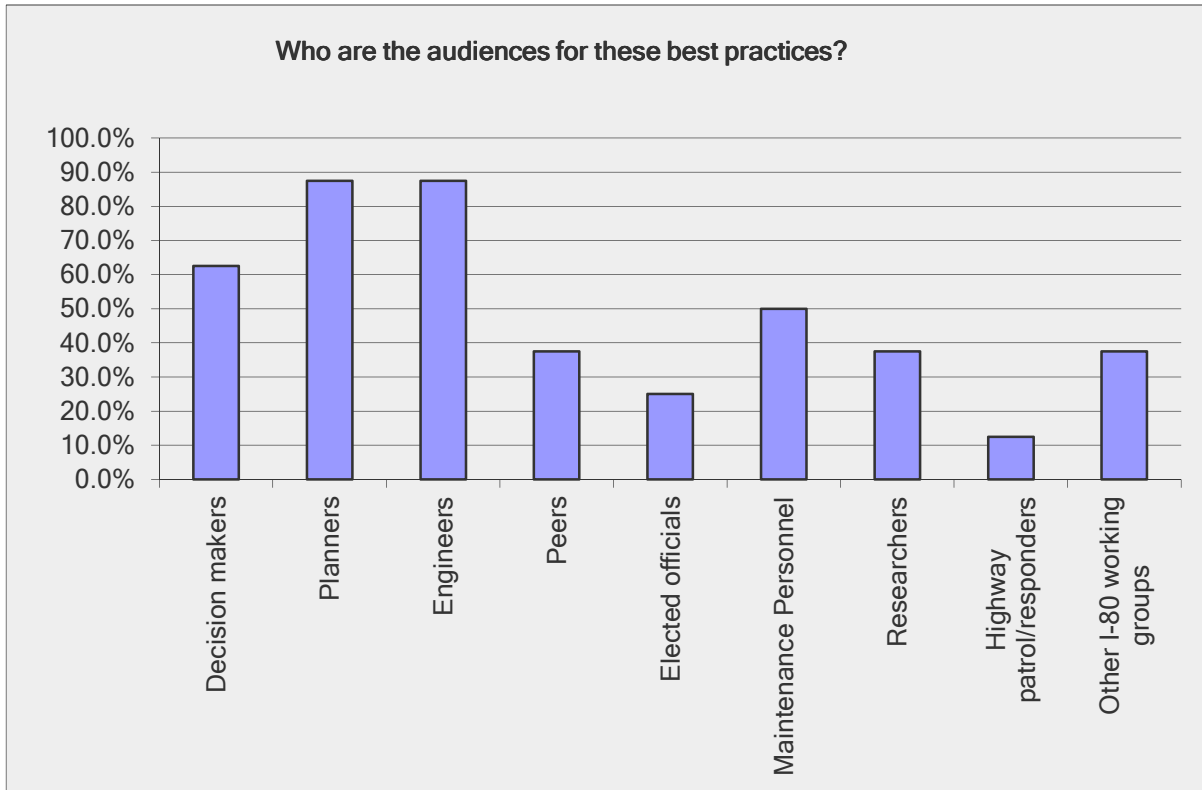
*Habitat data may not be the same across the states but we can see if this can be combined*

# SUMMARY OF SURVEY RESULTS

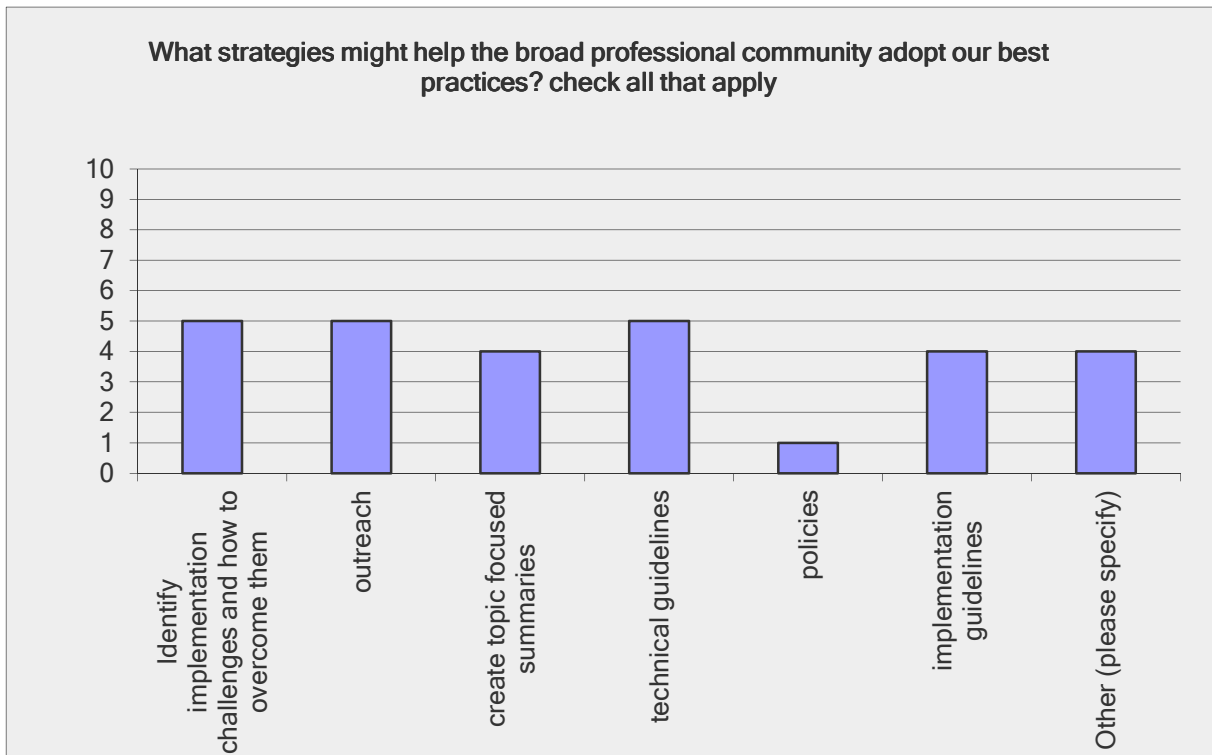


Additional: wildlife management areas, public lands, hot spots for wildlife-vehicle collisions



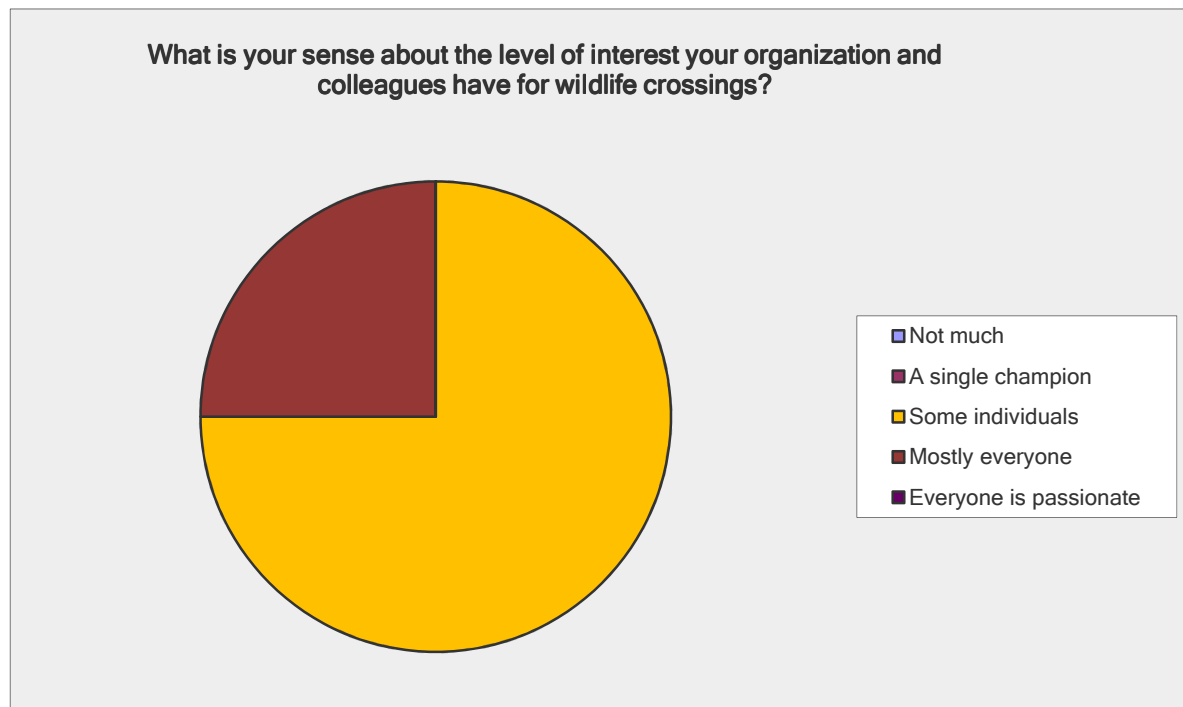


Additional: Designers



Additional :

- Show them how our best practices makes their job easier, more efficient, find the hook that each group needs for buy in
- Provide contact information on final literature we come up with.
- I know everyone thinks that implementation is the problem, when in fact it is not. It is identifying the locations and getting the scope into our planning documents (STIP). Once they are in the STIP, we can get the money.
- Share at professional conferences like IOCET





## **What obstacles to implementation would "best practices" help to overcome?**

- Show engineers and planners what is possible, and benefit cost ratios that make it worthwhile financially to create wildlife crossings
- Utilizing past experiences to make BMP's would increase effectiveness of crossing structures and their associated infrastructure.
- I think this group has to realize that the DOT's look at animal crossings mostly as a safety issue. We have to change the perception to the road blending into the natural environment. This means that the cost of animal crossings, especially for smaller species, just become part of the price of doing business. In order to accomplish this group has to identify all species and come up with a list crossing along I-80.
- Overall education regarding the wildlife use of crossings. Species specific preferences of different types of wildlife crossings.
- Interagency cooperation - resource agencies and transportation providers. mou/moa may help, but not required.
- Participation from all 4 States. Members.

## **Do you have any ideas on how to identify, collect, and organize best practices? (Remember, we want to capture ideas across all species including smaller animals.)**

- Talk to wildlife and transportation people in the western states, check out TRB library for reports and ongoing research.
- We could create a survey just for BMPs to identify some of the items we would like to focus on. This would probably require the division of tasks throughout the working group, utilizing each person's strengths.
- No
- No, other than reference links sent in previous email.
- Have a vision for what the corridor could look like if we implement best practices.

## **What kinds of leveraged resources have been provided by program partners and/or other funding sources within your organization?**

- FHWA and RITA have money for state transportation agencies (former) and universities (latter). Also, FHWA enhancement funds have been used for wildlife.

- Funding and internal support to conduct research of crossing structures.
- NGOs, Federal Aid
- We used multiple federal funding program match with state funding from different sources
- Partnering with NDOW and private organizations
- FHWA critter crossing web site

**Can you identify common interests your organization might have with other stakeholder organizations?**

- Sports people groups, like the mule deer foundation are very interested in protecting wildlife. So are other non-profit wildlife type groups. Making agencies look good is also a common interest.
- Safety and removing wildlife from roadways.
- Safety for people and wildlife
- Working with them to find alternate funding sources
- NDOW/ species and habitat preservation; Highway Patrol/safety; hunter groups/preservation of species;range management/best practices for species such as sage grouse; ranchers
- FHWA internal - hq, resource center, federal-aid divisions and federal lands

**What are the most common right-of-way disputes (i.e. accessibility, acquisition) and who are the players usually involved (land management agencies, private corporations, private sole owners)?**

- Private landowners
- BLM and private ownership
- Have not really had disputes most the state is controlled by federal agencies.
- Not sure but would assume ranchers, FHWA, and both public (Nevada State Lands) and private land management agencies(Nature Conservancy), but who would be potential partners if approached correctly.
- federal - blm vs. usfs vs. DOD vs. Tribes. Mines also have clout on federal land (some are foreign companies)



**Topic:** Wildlife Crossings, General

**Subtopic:** Conversation Topics

**Related Topics:**

**Major Stakeholders:** 1. State land agencies 2. Federal land agencies 3. DOTs

**Other Stakeholders:**

**Champions:** 1. NV

**Context:** The multi-state stakeholders along the I-80 corridor have identified the need to collectively better understand the functional relationship between transportation and wildlife ecology along I-80. Through conversations focused around areas that intersect with I-80, the group will explore the various dynamics of road ecology and consider enhanced infrastructure that can improve the safety of motorists and wildlife by reducing wildlife-vehicle collisions, decreasing habitat fragmentation, and increasing landscape connectivity.

The I-80 Corridor Wildlife working group brainstormed and decided to pursue the following discussion topics that will help the states along the I-80 corridor achieve common and state specific goals:

- Data Elements
- Best Practices
- Right-of-way
- Funding
- Agency Goals

The following is a summary of what each topic entails and what would be the benefits and outcomes of exploring these topics.

**Data Elements**

Identifying gaps in data is an essential topic to be explored that will help stakeholders understand the utility of a robust database that would support the identification of crossing areas and habitat connectivity plans for various species impacted along the corridor. Useful data elements may include but are not limited to:

- Species distribution ranges
- Current and historical corridors and movement paths
- Habitat maps
- Waterways

Discussions on this topic will also explore strategies for data collection, organization, interpretation and distribution to corridor stakeholders.

**Best practices**

Identifying and sharing best practices with planners, engineers and decision makers will facilitate more efficient and focused coordination among these groups. Strategies that might help the broad professional community understand and adopt these best practices will be explored by the group. Some of these strategies include:

- Implementation challenges and show how to overcome them
- Education and outreach
- Technical and implementation guidelines
- Topic focused summaries
- Policies

**Right-of-way**

Right-of-way coordination issues are difficult when it comes to fencing, public vs. private land and the accessibility to land ownership data. Additionally, urban sprawl, ranches and fencing all play a role in the feasibility of wildlife crossing locations. Corridor stakeholders would like to focus initial efforts on:

- Identifying programs or mechanisms to encourage private engagement and potentially provide incentives that may make private landowners more willing to cooperate.
- Using land acquisition as a strategy to promote habitat connectivity and other concerns outside the right-of-way.

<p><b>Funding</b> Funding is difficult to get for wildlife crossings, but as the benefits of these crossings becomes more widespread, leveraging wildlife crossing needs among 4 collaborating states with safety needs and accident prevention becomes crucial in applying for discretionary funding. The group would like to explore a variety of funding avenues to concurrently reduce animal crashes and reduce habitat fragmentation.</p> <p><b>Agency Goals</b> Current state efforts are focused on monitoring current wildlife crossings, and on collecting data on changes in migration patterns, habitat areas, etc. These efforts are linked to the differing goals of each state. Land agency goals vary along the corridor from restoration of migration patterns and mitigating the impacts of roadways on migration patterns, while the state DOT goals include providing a safe and efficient transportation system. The group is seeking common interests and goals that will benefit both ecology and transportation by sharing knowledge and resources.</p>	<p><b>Recommended Actions:</b></p> <ul style="list-style-type: none"> <li>• Focus data efforts on Mule Deer to start facilitating best practices in data collection, organization and distribution.</li> <li>• Continue to monitor and report on current crossing locations with regards to safety benefits and how these crossing affect migration patterns and habitat connectivity.</li> </ul>
<p><b>Conclusions:</b></p> <ul style="list-style-type: none"> <li>•</li> </ul>	<p><b>Future Significance:</b> In addition to the safety of motorists, it is very important to recognize the impacts that development has on ecology. Collaboration among transportation professionals, ecologists and advocacy groups will help reduce adverse long term effects on our natural resources.</p>
<p><b>Discussion:</b> See above. Need continued discussion on different data strategies across the different state agencies and how these strategies help facilitate common agency goals.</p>	<p><b>Future Additional Champions:</b> UPRR, Wildlife advocacy groups.</p> <p><b>Optimal Outcome:</b></p> <ul style="list-style-type: none"> <li>•</li> </ul>

### Technical Report Documentation Table

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4. Authors Emily Kubovchik, Nova Simpson	5. Author Organization Atkins, NDOT	
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# EMPOWERING I-80 COMMUNITIES TODAY AND TOMORROW



## I-80 Wildlife Crossing



**EMPOWERING I-80 COMMUNITIES  
TODAY AND TOMORROW**

