

MONTANA WILDLIFE AND TRANSPORTATION

DATA AND INFORMATION WORKGROUP

10:00am – 2:00pm, January 28, 2021

Meeting Notes

Purpose: To better understand the concept of ranking and weighting and explore applying this concept starting with the first criterion (human safety and property damage)

Objectives:

- Understand the concept of ranking and weighting
- Review map of primary data sources and provide feedback
- Explore ranking and weighting for the first criterion
- Determine approach and next steps for ranking and weighting
- Outline homework and agenda for February 25 meeting

Attendees:

- D&I Work Group: Liz Fairbank (MSWP), Andrew Jakes (MSWP), Gabe Priebe (MDT), Paul Sturm (MDT), Brian Andersen (MDT), Justin Gude (FWP), Adam Messer (FWP)
- Planning and Implementation Team (PIT Crew): Renee Lemon (FWP), Hannah Jaicks (MSWP), Nick Clarke (MSWP), Deb Wambach (MDT)

Agenda:

1. Introduction
2. Ranking and weighting overview
 - a. Adam gave a high-level overview of modeling landscape features by ranking and weighting GIS layers.
 - b. Andrew shared the methodology and process he and partners used to map big game winter range and migration priorities in Northeastern Montana.
 - c. The group talked about the need to address missing data, imperfect data, and continuous versus categorical variables.
3. Map of primary data sources
 - a. Brian shared a preliminary ArcGIS Online mapping application in which he had compiled various data layers like crash data and carcass data.
 - b. The group discussed an overall approach of working through one criterion at a time, determining which primary data layers to include, and determining what analysis needs to be done on each of the criteria.
 - c. The GIS folks would like to keep the longer list of data layers with detailed information. The data category field can distinguish which data layers will be used in the ranking and weighting analysis.
4. Explore ranking and weighting for first criterion (human safety and property damage)
 - a. The group discussed an analysis of the crash data and the possibility of creating a heat map of the last 10 years. There was discussion about how to filter out the relevant crashes (e.g., crash type = wildlife animal). Gabe, Deb, and Paul will meet with other MDT staff to determine the appropriate analysis parameters, and will share this

information with Brian so he can perform the analysis and add the resulting layer to the mapping application.

- b. The group discussed an analysis of the carcass data and the possibility of creating a heat map of the last 10 years.
5. Next steps (start by 1:40pm)
- a. The group will continue to work through ranking and weighting for each criterion, which includes identifying contributing data sources.
 - b. At the next meeting, the group needs to finish up the first criterion and then move to the second. They want another longer, workshop style meeting.
 - c. Homework between now and the next meeting is that Justin will create a spreadsheet outlining a weighting exercise for the four criteria. He will send it to the group and members need to get their input back to Justin. Members should also familiarize themselves with the data and come prepared to rank weight the layers at the next meeting.
 - d. The group did not see the need to attend the next Steering Committee meeting, but may have an update at the Steering Committee's meeting in May.
6. Review and Close

ACTION ITEMS:

- Gabe, Deb, and Paul will meet with other MDT staff to determine the appropriate analysis parameters for MHP crash data, MDT carcass data, and MDT traffic volume data and will share this information with Brian so he can perform the analyses and add the resulting layers to the mapping application. The group would like to see these at the next meeting.
- Next meeting needs to be rescheduled. The group would like to have the same format and length of time for that meeting. The meeting will continue to walk through the dataset excel document and work on weighting and ranking for criteria and data sources.
- Justin will put together a spreadsheet with a weighting exercise of the four primary criteria. He will send it out and each member should fill it out and get it back to Justin so he can compile the information prior to the next meeting.
- Paul suggested that members also familiarize themselves with the data sources from the spreadsheet to have some thoughts prepared for the next steps in the weighting and ranking effort.