MONTANA WILDLIFE AND TRANSPORTATION

DATA AND INFORMATION WORKGROUP

9:00am – 1:00pm, Thursday, October 28th, 2021

Meeting Notes

Purpose: Finalize the draft product with the five criteria, cleanup and organize data and plan for story map production, coordinate work for October and November milestone tasks, and plan presentation of draft product to the steering committee.

Objectives:

- Review and accept the new roll-up of the draft product, including all revisions to NAC 5
- Review and discuss data cleanup/organization efforts in the back and front of the house
- Coordinate work for the October/November milestone tasks
- Begin planning the presentation of the draft product and identify items requiring additional guidance and input from the steering committee for the December 7th meeting
- Begin discussions on how the product should be used, how it should not be used, limitations, and purpose, consider preliminary recommendations to the SC for public release

Attendees:

- D&I Work Group: Andrew Jakes (MSWP), Liz Fairbanks (MSWP), Paul Sturm (MDT), Brian Andersen (MDT), Adam Messer (FWP), Justin Gude (FWP)
- Planning and Implementation Team (PIT Crew): Barb Beck (FWP), Brooke Shifrin (MSWP)

Agenda:

1. Introduction

2. Review and accept the new roll-up of the draft product
    a. Review and agree on the layers (and layer data) included in NAC 5
        - The group added surface width data
            - For all non-interstate routes, the layer includes the entire top width surface in both directions of travel, including for divided highways, and will be used as is.
            - For Interstates, the surface width across single direction of travel and will be doubled to include both directions of travel (EB & WB, NB & SB).
            - There are areas where interstate has a vegetated median between the divided lanes of opposite direction of travel, and many places that have only have a jersey barrier between the divided lanes. MDT is comfortable with using the data they have and doubling it, and others agrees it appears we are getting what we need out of this data set.
        - The "separated median" issue will be noted as a data gap/need. However, there is recognition that there may not ever be capacity to address it, requiring a great deal of manual work.
        - The adjacency of other linear infrastructure will include roadways and railways for now. Larger canals will not be included in the adjacent linear feature data, since it cannot be teased out from smaller irrigation ditches and laterals. Brian checked with the state library and there is no layer for large canals. Identification of large

canals will be noted as a data gap/need. Waterways was agreed not to be included in this layer at this time.

b. Review and agree on the revised rankings and weightings for NAC 5
   - Justin heard back from everyone and re-calculated the means based on everyone's input.
   - Should not change the results noticeably. The result was a little less weight on predicted traffic volume and a little more weight on some of the other inputs.

c. Review and discuss the new roll-up of the product. Agree that it is performing and displaying as intended and desired
   - Adam and Brian showed the results of final analysis. Brian believes the product is in a good place and defensible.
     - The group agreed results seem sound and that overall, the analysis captures the important factors and fulfills the intention for the product.
   - Each of the inputs for NAC5 should be looked at to verify all looks good.
   - Brian displayed the draft application inclusive of the added base layers: parcels, rails, speed limits, traffic, etc.
   - Need input on what the base layers should be, preferring to stay away from a laundry list and identify what would serve about 80% of target audience.
   - Need to cleanup how criteria, values, ranges, etc. are labeled in interactive map app so that when people click on the road segments the info provided means something (see additional notes in data cleanup agenda item)
   - Brian created a top 10 layer. This needs to be discussed further. Do we want to draw attention to these or not? Do we want people to just decipher this for themselves based on what the data shows? (see additional notes in data cleanup agenda item)
   - There was mention of a Forest Service "large carnivore study" in the 90s that could be an interesting point of comparison with these results
   - The challenge now is to figure out what makes sense in terms of display for the interactive story map that becomes available to the public. What base layers should be included in the tool? How should the analysis results be displayed?

d. Determine any "asks" for guidance or additional input from the Committee
   - It could be helpful to identify several different options for displaying the analysis results (as alternatives to top 10 sites) and present those to the Steering Committee for input.
   - Would the SC like to see displays available by MDT districts and/or FWP regions for example?
   - Desire input on which layers should be made available for base layers, hoping to stay away from a long laundry list.
   - What kind of summary map would be best?
   - The group also thought it would be helpful for the SC to share their understanding of timelines, roles and functions as this overall process moves forward.

Outcome: The group finalized the "draft" product with five criteria and identified next steps to prepare the product to share with the Committee on December 7th. There was group agreement that the results

of the analysis seem solid and now the task is to determine how the results are best displayed and how to ensure the information available in the application is meaningful to the customer.

3. Review and discuss data cleanup/organization efforts in the back and front of the house

    a. Brian reported on progress made in data cleanup/organization, simplifying, and making metadata user-friendly
    b. Brian and Adam will lead discussion and make recommendations for classifying and naming the data. Group will agree on naming and classification strategy.
        - A look at top 10 sites raises some interesting questions/considerations:
            - The group looked closely at the site near the Bozeman main street exit ramp on I90 as an example
            - Based on data distribution, Brian doesn't believe this site is popping out solely because it's a place where maintenance staff pull off to mark carcasses
            - But this is an interesting look at an example of a place that rises into the top 10 but is likely going to be highly developed in the future, which raises questions about what kind of mitigation would be most appropriate in a place like this
            - This is a good example of why other factors/criteria are important for determining what kinds of projects should move forward
            - Potential areas for investment are highlighted by the tool, but local efforts will be the place to determine if something should be done, where projects should be undertaken, and what the most appropriate strategy is to address the issue(s) identified.
            - This kind of example should be highlighted in the write up
        - The example above led to a discussion about the utility of a layer that shows existing wildlife accommodations

          NOTE: Deb Wambach (MDT) added some additional information to this section based on status of this work.
            - Discussion about Western Area Fish and Wildlife Agencies' (WAFWA) effort to create a layer of existing wildlife accommodations in western states
            - MT hasn't done this comprehensively yet, but FWP intends to contribute to WAFWA effort. MDT is currently working on developing a layer of existing wildlife crossings including those that were specifically intended and funded to address wildlife-vehicle conflicts and/or connectivity.
            - WAFWA group has sent info about metadata collected in Colorado including date of construction, species in mind, dimensions, etc. Utah has mapped existing wildlife structures.
            - Metadata for that layer should include start and end of fencing.
            - MDT is working on developing this layer. Some items, like appropriate site photos may require additional field work. It is intended at this time that barrier fencing will be identified as a "yes/no" field in the data. Actual length of fence may require additional survey and could be identified as a data gap.
            - Could local groups help with this effort somehow? Perhaps local groups can assist in identifying/documenting what already exists.
            - Could this kind of layer be used as a validation tool for the D&I product? In other words, are there wildlife accommodations in the vicinity of the top 10 sites right now? The top 10 segments are around larger cities.
        - Additional discussion about data display:

- Could we show x% instead of top 10 segments- some of these top 10 segments may not be the best targets
- What about showing top x % by district or region; some concern about what this could imply for agency staff capacity or use of funding resources in districts or regions with lower need/there is value in looking at it from a statewide scale
- Group agreement that looking at top 5% statewide is an important layer (among several other options) to show the steering committee

c. Group will review the story map interface and discuss the write-ups for each section
   - There was group agreement that being able to see results for each road segment in the application is valuable. This will require figuring out how to display criteria scores in a way that's meaningful (i.e. values need to be standardized/scaled so they all mean the same thing).
   - The group landed on each road segment having a pop-up summary that states something along the lines of: "This segment has scored in the x percentile of the overall score. It scored in the x percentile of (insert criteria), x percentile of (insert criteria), etc. for each of the 5 NAC. The percentiles provided should round to the nearest whole number.
   - The roll-up application should then provide an opportunity for diving deeper into each of the criteria; the interface for each criterion should make very clear the weight of that criterion in the overall score.
   - Individual maps for each of the 5 NAC will also be available independent of the roll-up

d. Group will determine strategy, schedule, and leads for completing write-ups for the story map
   - See notes in tasks/timelines agenda item below

e. Group discussion and identification of next steps
   - Brian noted that ESRI is changing the story map interface. It is becoming a scroll-through left hand narrative versus current tab platform.
     - The group supported making the shift to this new interface now.
   - Brian has already started this and will move ahead with doing so. Brian is working to integrate tab style interface into narrative style platform
   - The group needs to identify a narrative for each criterion (i.e. what story should be told about each of the criterion, why was it chosen, what went into it (high level))- see notes in 4e below
   - Need to identify what other base layers the group wants included in the interactive map

Outcome: The group agreed on what needs to be done to ensure the product is defensible and user-friendly. The group determined next steps for data cleanup/organization, classification, and story map production, preliminary recommendations for release of the tool to the public to be made to the Committee. The group will work on narrative write ups (executive summaries) for each criterion to be incorporated into the story map. Brian will continue refining the story map interface in the new ESRI style, cleaning up the pop ups with information about each road segment, and include percentile rankings so the data is meaningful to the user.

4. Review the revised tasks and timeline document and coordinate the work for the October/November milestone tasks
    - Need to ensure that moving forward, meeting invites, etc. are forwarded to Andrew's personal email and that Andrew gets a new Teams invite to his personal email.
        a. Final draft spreadsheet of all criteria and datasets (AM, BA)
        b. Refine application to include all components (AM, BA)
        c. Document all datasets and limitations (AJ)
            - Andrew clarified this should be in word format
        d. Document data needs and gaps (AJ)
            - Andrew clarified this should be in word format
        e. Clean up naming and metadata (back) and create story map documentation (front) (BA, AM TBD)
            - Add a task that gets at distilling information for report into web page/user interface elements before methodology write up. This effort can be coordinated by Adam and Brian but will need support by the group.
            - Focus on a write up for each bolded criterion in the spreadsheet.
                - Discuss dataset inputs at a high level (why criteria were chosen, why inputs were chosen, etc.).
                - Use Needs Assessment Criteria Details document (Draft - 11192020) in Teams.
                - Can we finalize this document as we draft the criteria blurbs for the story map?
                - Add the executive summary/overall explanation for each criterion into this document so that everyone can see what everyone else is doing.
                - **These draft summaries are due (inserted into the document referenced above) from the following individuals by November 12.**
                    - Summary for NAC1—Gabe
                    - Summary for NAC2---Paul
                    - Summary for NAC3---Justin
                    - Summary for NAC4---Liz
                    - Summary for NAC5---Justin
            - Brian/Adam can focus on the specifics of the analysis write up for metadata. Brian and Adam will integrate Andrew's executive summaries into the metadata. Brian will clean up the pop-ups.

Outcome: The group made progress on the October/November milestone tasks, made plans and identified others to assist in completion of those tasks, and began planning for December milestone tasks. The group set a deadline of 11/12 for completing executive summary write ups for each criterion that will go into application interface.

5. Begin discussions on presentation of the draft product to and request for additional guidance from the SC at their December 7th meeting
    - The group agreed on several important presentation elements:
        - Brian and Adam will tag team the presentation
        - High level overview of how we've arrived at product
        - Walk through application/functionality

- Show the Committee different layer options for displaying the analysis results (e.g. top 10 road segments, top 5%, top 5% for each district/region)
- Get Committee reaction to overall weights for each criterion, especially number 5
- Answer Committee questions
- Discuss potential questions from the public on weights and possible responses
  - Could this be an FAQ sheet provided with the tool or in the guidance?
- Discuss timeline
- Other D&I members need to be on call during the meeting
  - Deb should forward the December 7th Committee meeting invite to all D&I members

Outcome: The group agreed on presentation of draft product and identification of items requiring additional guidance and input from the Committee

For next meeting scheduled November 18th:

- ✓ Group will begin discussions on how the product should be used, how it should not be used, limitations, and purpose, consider preliminary recommendations to the SC for public release
- ✓ Talk through old draft document in Teams on this topic at next meeting
- ✓ Ensure D&I group is on the same page around these questions, especially as they relate to some of the process questions for project implementation that the Committee will be grappling with
- ✓ What are some questions that could be posed to the Committee as part of December presentation? Dive into during next meeting.

6. Next Meeting
   a. What does the group want to accomplish at the November 18 meeting?
      - See notes above for November 18th meeting
      - Clarify if anything else is needed for new story map interface in preparation for presentation to the Committee on December 7th

   b. What is the group's homework between now and November 18? Will that be accomplished individually, in small groups, or some other way?
      - AJ – Write ups for report. Andrew will touch base with Brian to coordinate on metadata analysis write up that Brian and Adam are working on
      - All - Executive summaries for each criterion that will go into story map- group work on in Teams document by Nov. 12
      - BA and AM - Back-end data cleanup, application interface organization, and functionality including transition to new story map interface, data cleanup and organization, base layers, pop ups with info about each road segment

Outcome: The group agreed on next steps and agenda for next meeting. The November 18th meeting should focus on discussion about how the product should be used/should not be used, limitations, purpose, etc. and identify specific recommendations and questions to pose to the Committee as part of December presentation

7. Closed by 11:30 am