

RESEARCH ADVISORY COMMITTEE MEETING MINUTES

The Research Advisory Committee met in Cheyenne, Wyoming, in the Commissioner's Conference Room, on Wednesday, January 8, 2014. The meeting commenced at 9:00 a.m. The following members were present, constituting a quorum.

Keith Fulton, P.E., Bridge Program.
Tim McDowell, P.E., Programming.
Joel Meena, P.E., State Traffic Engineer.
Martin Kidner, P.E., State Planning Engineer.
Tory Thomas, P.E., District 3 Maintenance Engineer.
Tony Laird, P.E., Highway Development.

The following member was excused.

Lowell Fleenor, P.E., District 2 Engineer.

Also present at and participating during the meeting were: Jeff Purdy, FHWA; Kathy Ahlenius, Winter Research Analyst; Noriaki Ohaha, Ph.D., Assistant Professor; David Makai, Ph.D., Associate Professor; Mehmet E Ozbek, Ph.D., Assistant Professor and Graduate Program Coordinator; Captain Derek Mickelson, Wyoming Highway Patrol; David Pilliod, Supervisory Research Ecologist, USGS Forest and Rangeland Ecosystem Science Center; Bob Bonds, Environmental Resource Manager; Rand Decker, InterAlpine Associates; Hall Sawyer, Research Biologist, Western Ecosystems Technology, Inc.; and Gregg Fredrick, Assistant Chief Engineer for Engineering and Planning.

1. Minutes: The minutes from the October 9, 2013 were reviewed and changes were made. Mr. Fulton provided his changes in writing. Mr. Meena mentioned that the minutes should reflect the fact that the RAC will be scoring the proposals so there is no confusion on why proposals are chosen. Minutes from the previous meeting were approved as changed by a unanimous e-mail vote.
2. Contracts: Ms. White informed the RAC that any new contracts which deal with gathering data on ungulates would include language which requires the contractor to place the data in the ungulate database. Further, language will be drafted on turning material language into AASHTO standards.
3. Proposals and Updates: The following updates and proposals were heard:
 - A. **Update** Multi-Measure Performance Assessment and Benchmarking of the Divisions of the Wyoming Highway Patrol. Mehmet Ozbek and Derek Mickelson.

Mr. Ozbek provided an update on the project and reminded the RAC about the purpose of the project. This project relies heavily on data and other information gathered from WYDOT. Literature reviews and interviews with Wyoming Highway Patrol staff have been conducted. A large amount of data and other

collateral information has been gathered. Mr. Ozbek has presenting information on this project to various conferences and will presenting findings at the Transportation Research Board annual meeting.

Discussion and questions from RAC:

Discussion was held on whether there was an algorithm or a metric used to determine the manpower needs. Mr. Ozbek explained that he is using a metric which will reflect hours that each division puts in each year and the performance of each division. Discussion was also held on what has been achieved so far and how this model could be used by the traffic safety division. Discussion was further held on whether data from 2013 would be used in this project. Captain Derek believes that the 2013 data should be available in early 2014.

B. Update and Proposal for additional funds – Evaluation of a Mitigation Site: Amphibian Population. David Pilliod and Bob Bonds.

Mr. Pilliod informed the RAC that his presentation was not only an update, but also a request for additional fund and an extension of time to finalize the report. Mr. Pilliod explained how the wetlands are important to the wildlife in intermountain west, and how they provide habitats for bats, birds, reptiles, and ungulates. Managing wetlands provides a unique opportunity to offset losses to habitat during construction. Mr. Pilliod explained that there is very little know about why some populations succeed and why some do not. Mr. Pilliod also discussed how this project is a collaboration with other state and federal agencies, and how the project actually began in 2003. Each year this project builds on existing resources. Mr. Pilliod discussed what occurred before WYDOT became a partner in the project, and what has occurred since the proposal was accepted by WYDOT. Mr. Pilliod also explained how the study is tracking amphibians by observation and by acoustic monitoring. This project will bring cost savings for WYDOT.

Discussion and questions from RAC:

Discussion was held on the extension of time and additional funding. This project was envisioned as a 6 year project, but the original funding request was for just 3 years, with hopes of an extension of time and funding for the additional 3 years. At this time, the contractor is only the asking the RAC for the extension of time and a small amount of funds to carry them through the finalization of the first part of the project. There was discussion on the 9 wetlands which were built in the area of this project. Mr. Pilliod passed out information on amphibian ecology and the decline in the United States.

Funding Requested: \$44,500

Project Length: 12 months.

BREAK

C. Proposal (Recap) – Investigation of Ground Level Wind Factors and Blowing Snow Conditions. Noriaki Ohara, Kathy Ahlenius, and David Mukai.

This was a quick overview to the proposal that was brought forward in the first quarter. Mr. Mukai discussed the original proposal and briefly went over the bullet points for the project. This project relates directly to safety and service, and will benefit WYDOT and the stakeholders in Wyoming. The project will investigate ground level wind and blowing snow. Mr. Mukai also discussed the benefit and cost savings this project could have on keeping the highways open; the studies by Ms. Rhonda Young regarding the impacts from blowing snow and wind; and how the study will focus on wind and snow at the first 15 feet above ground level.

Mr. Ohara discussed the snow study that will be part of the project and how this correlates to wind. He discussed the towers which will be used in the study, and the visibility problems.

For the best results, the project should run for at least 2 winters.

Discussion and questions from RAC:

Discussion was held on the tower locations, how the towers can be moved, the placement of the towers, and the 3 heights that will be measured. Ms. Ahlenius discussed the portable weather stations and how these will assist in the placement of the towers. Discussion was also held on the data from the visibility monitors. Further, discussion was held on the models that will be used, the different sizes of trucks that will be studied, and how the goal is to come up with a wind speed and snow quality that will cause a blow over. Finally, discussion was held on the placement of loads and their affect on blow overs.

Funding Requested: \$105,803

Project Length: 24 months

D. Update – Comprehensive Technology Assessment for Avalanche Hazard Management. Rand Decker

Mr. Decker presented an update on the avalanche studies that have been conducted in the past and more specific the OBELLX Avalanche Blaster. Mr. Decker was honored to be presenting to the RAC. He is a professor at Northern Arizona University and a principle in his consulting firm. He addressed public and WYDOT safety surrounding avalanches. The OBELLX project is just one in many projects that have been conducted in the last 15 years. Mr. Decker has researched avalanche control in both the United States and Europe. He further discussed the different avalanche devices that are in use in Wyoming. Mr. Decker discussed why, even though the snow sail project did not work, it was valuable research. Finally, Mr. Decker discussed the cost benefit and residual risk of the avalanche projects.

Discussion and questions from RAC:

Discussion was held on the signage at one of the avalanche sites; the Clackson system which is maintained in trucks that clean up after avalanches; the volume of the various avalanche devices; and how after completing the project, Mr. Decker will run a model to provide WYDOT on which systems work the best in which areas.

E. Update – Trappers Point Wildlife Crossing Study. Hall Sawyer

Mr. Sawyer provided an update on the study which is being conducted outside of Pinedale and Daniel. Construction on the project was completed last fall and in the fall of 2012 the cameras were installed. The primary objective of this project was to document the number and type of animals that are using the over/underpasses. The next step in this project will be to look at the number of crashes associated with wildlife and whether the over/underpasses have cut down on the crashes. Mr. Sawyer pointed out that during the first year more than 23,000 animals (18,400 mule deer and about 1,500 pronghorns) crossed the road using the over/underpasses, and that typically mule deer will go through the underpasses and pronghorn will go over the bridges. Mr. Sawyer did state that there was a lot of back and forth traffic by some of the animals. Mr. Sawyer discussed some of the issue that they have encountered with this project including: motorized use of the over/underpasses; reclamation of the passes; the Green River Drift; and ranchers closing fences. He does feel that the public is embracing the project and that this project has generated both national and international interest. Mr. Sawyer showed a short video of animals crossing using the over/underpasses.

Discussion and questions from RAC:

Discussion was held on the types of animals using the over/underpasses and whether there were any problems with the cameras from vibrations in the underpasses.

4. Discussion on Funding

Ms. White discussed the extra money in the budget, which included the reversion from RES2012, the money from the LTAP/T2 grants. Ms. White informed the RAC that the funds for the Rumble Strip project would now be coming through the research funds and not the planning funds. She addressed the 80/20 split, the state match and the ICAP funds. Martin explained how he sets up the funding for the state match.

It was moved by Mr. Meena and seconded by Mr. Fulton that none of the projects requesting funds in the second quarter should be funded. Discussion was held on the merits of the proposed projects and whether the proposed projects are aligned with the WYDOT Mission. Mr. McDowell provided the RAC with more information on the amphibian project and why it was necessary to provide this project with money and more time. By a vote of 4 to 2, the motion to not fund any projects in the second quarter was carried.

5. Miscellaneous Discussions

Discussion was held on the need to have presenters provide updates in person at the RAC meetings for a 15 minute presentation. Discussion was held on alternative ways to presented updates. Discussion was held on the final reports and where they were housed on the WYDOT webpage and the online research library. Discussion was also held on a possible newsletter from the research center on the final report and upcoming projects.

Mr. McDowell informed the RAC about the need to provide the MEPDG project with additional funding due to the inflated cost of conducting some of the data collection.

Discussion was held on a new date for the next meeting due to a conflict with the supervisor's meeting.

It was moved by Mr. Meena and seconded by Mr. Fulton that the meeting should be adjourned. The next meeting is scheduled for **Wednesday, April 7, 2014, at 1:00 p.m., in Cheyenne.**