State Planning and Research Program
Quarterly Report

PROJECT TITLE: *Best Practices for the Prevention of Corrosion of Department of Transportation Equipment: A User's Manual*

OBJECTIVES:

This project will develop best practice guidelines using the information provided in the Phase I report and other relevant sources. The end result would be an easy-to-use guide that summarizes in layman's terms the best practices to prevent corrosion to maintenance equipment.

PERIOD COVERED:

Jul. 1, 2014 – Sept. 30, 2014

PARTICIPATING AGENCIES:

Western Transportation Institute, Montana State University – Prime
Monte Vista Associates LLC, Arizona - Subcontractor

PROJECT MANAGER: Tom Peters **LEAD AGENCY**: Mn/DOT **PRINCIPAL INVESTIGATOR**: Laura Fay	**SP&R PROJECT NO**:	PROJECT IS: ____ Planning _X_ Research & Development
ANNUAL BUDGET: $49,950	**PROJECT EXPENDITURES TO DATE**: $49,950	

WORK COMPLETED:

Task 0. Project Management (95% Completed)

A kick-off meeting was held with the project panel via teleconference on June 26, 2014 to discuss the project progress and next steps.

Task 1: Review and Analyze Research (100% completed)

The researchers have compiled, reviewed, and analyzed the results of the Phase I final report (Best Practices and Guidelines for Protecting DOT Equipment from the Corrosive Effect of Chemical Deicers) and other relevant research that focuses on chloride corrosion. (Inhibitor blends are not a focus in this study). Recent research conducted by international sources were reviewed wherever available, along with the ongoing research and existing documents published by the Department of Defense (DoD), National Association of Corrosion Engineers (NACE), automotive/trucking industry, Departments of Transportation (DOTs), etc. The review has supplemented the one conducted in Phase I and focused on recent literature and literature useful for developing the user's guide or manual.

Task 2: Develop a Manual (98% completed)

Utilizing information from Task 1, the team has developed a user-friendly manual that documents best practices of managing the risk of equipment corrosion, especially in the presence of chemical deicers. This manual will serve as a "living document" that can be readily implemented and updated after the completion of this project. The audience for this manual will be operators, mechanics and garage-level supervisors. Readers will not have higher than a high school diploma and the manual will be written to avoid chemical jargon. The manual will focus more on instruction and less on the science behind corrosion.

Task 3. Final Report and Presentation (90% completed)

The researchers are preparing a final report of the work completed, including an executive summary, introduction, methodology, results for each task, the user's manual, and concluding remarks (with recommendations for implementation). We are working to develop a final report presentation to the Clear Roads Technical Advisory Committee which we recommend is held as conference call or webinar.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

Work in the coming quarter will consist of addressing comments from the Technical Panel on the Task 2. Manual deliverable, and finalizing the Task 3 (Final Report and Presentation) and creating the PowerPoint presentation.

STATUS AND COMPLETION DATE:
Laura Fay has taken over as PI on this project for Xianming Shi who is now at Washington State University. We anticipate having the work completed for this project ahead of the Dec. 31, 2014 completion date. We will work with the project coordinator to set up a date for the final presentation of results for this project.