

RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: 3rd

Wisconsin Department of Transportation
DT1241 2009

Research, Development and Technology Transfer	
Program: (Choose One)	
<input type="checkbox"/> Policy Research	<input checked="" type="checkbox"/> Pooled Fund TPF # 5(092) Clear Roads
<input type="checkbox"/> Wisconsin Highway Research Program	<input type="checkbox"/> Other
Project Title: Development of a Toolkit for Cost-benefit Analysis of Specific Winter Maintenance Practices, Equipment and Operations	
Administrative Contact/Phone #: Colleen Bos/ (608) 577-4805	WisDOT Project ID(s): 0092-09-08
WisDOT Technical Contact/Phone #: Michael Sproul/ (608) 266-8680	Other Project ID: Clear Roads 08-02
Project Investigator/Phone # (agency & contact): Xianming Shi, PhD, PE, Western Transportation Institute (WTI) Montana State University (406) 994-6486	Approved Starting Date: 12/17/2008
WisDOT Comments:	Original End Date: 8/31/2010
	Current End Date: 8/31/2010
Sponsor: Wisconsin Department of Transportation	Number of Extensions: 0

Schedule Status:

- On schedule Ahead of schedule
 On revised schedule Behind schedule (Please explain below)

Total Project Budget	Expenditures Current Quarter	Total Expenditures	% Funds Expended	% Work Completed
\$149,500.00	\$24,642.00	\$61,806.00	41%	42%

Project Description:

This project is the development of a toolkit that will provide winter maintenance managers a means by which to evaluate and justify expenditures on a variety of practices, equipment and operations. Specifically, this research aims to establish a practical toolkit that can be employed by maintenance managers not only to understand the expected costs and benefits of specific practices, equipment, or operations, and convey those expectations to decision-makers outside the maintenance community. The toolkit will include guidance related to the costs and benefits of practices, equipment, and operations, as well as provide a means to be expandable in the future to include additional winter maintenance elements as needed.

Progress This Quarter: (Includes project committee meetings, work plan status, contract status, significant progress, etc.)

Task 0. Project Management (45% completed)

This task involved periodic communications within the research team (e.g. weekly meetings) as well as between the research team and the sponsor

Task 1. Comprehensive Literature Review (95% completed)

The literature review of the costs, benefits and effectiveness of winter maintenance practices, equipment and operations was refined and edited during the quarter.

Task 2. Survey of Best Practices (75% completed)

Work that was completed during this quarter on the refinement and administration a follow-up survey of winter maintenance practitioners. This survey focused on obtaining more specific information related to the costs and benefits associated with the top ten practices, procedures and equipment identified by the initial survey of practitioners. These items included anti-icing, front and underbody blades, AVL/GPS, pavement temperature sensors, RWIS, deicing, MDSS, carbide blades, air temperature sensors, and zero velocity spreaders.

Task 3. Tool and Methodology Development (5% completed)

The subcontractor has started some work on the conceptual design, requirements analysis and use case scenario analysis of the toolkit, aimed to develop a website mockup as a starting point.

Anticipated Work Next Quarter:

Work in the coming quarter will consist of two tracks. First, the second round of surveys will be analyzed to determine what specific information (costs, benefits, documentation) related to the top ten toolkit items have been provided by survey respondents. Should additional information be required following this survey, practitioners will be contacted by telephone.

The second track of the work will focus on the continued development of the toolkit itself. This will include the development of website mockups, as well as the integration of cost and benefit information into the tool itself. Initial coding work is also expected to progress.

Circumstances Affecting Progress and/or Budget:

None at the present time.

Gantt Chart:

		Calendar Year / Month																	
		2008	2009									2010							
Tasks	Milestones	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5
Task 0. Project Management		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Project kickoff	Dec-08	X																	
Quarterly progress reports	End of each quarter		X		X		X		X		X		X		X		X		X
Task 1. Comprehensive Literature Review			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Interim Report: Synopsis of Findings and Recommended Toolkit Elements			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Interim Conference Call Meeting/Presentation	Apr-09				X														
Task 2. Survey of Best Practices			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Initial Survey - develop and distribute			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Survey Analysis - Identify priority items																			
Follow-up Survey - Obtain specifics on priority items																			
Summary of Results	Jul-09											X							
Task 3. Tool and Methodology Development									X	X	X	X	X	X	X	X	X	X	X
Task 4. Pilot Training Session																			
Task 5. Training for TAC	May-10																		
Task 6. Recommendations for Implementation																			
Draft final report	Apr-10																		X
Final report	May-10																		X

Boxes with an X indicate completion of work to date