

1 **DRAFT MINUTES FOR WMTSP MEETING**

2 **February 6, 2010**

3 **Courville Meeting Room, Hilton Quebec Hotel, Quebec City, Quebec, Canada**

4 **WMTSP Attendees**

5 Rick Nelson, NV DOT, AASHTO Region 4, Chair of WMTSP

6 John Burkhardt, Chair TRB Winter Maintenance Committee

7 Mark DeVries, McHenry County, Illinois Supervisor, APWA representative

8 Bill Hoffman, NV DOT, AASHTO HSCOM Snow & Ice Task Force Leader

9 Steven Lund, MN DOT, AASHTO Region 3 representative

10 Wilfrid Nixon, U of Iowa, TRB Surface Weather Transportation Committee

11 Greg Parker, Johnson County Iowa Engineer, NACE representative

12 Max Perchanok, Ontario Ministry of Transportation, (incoming chair TRB Winter Maintenance  
13 Committee)

14 Paul Pisano, FHWA, Road Weather Management Program, Team Leader

15 Lee Smithson, AASHTO SICOP Coordinator

16 **Guests**

17 Richard Carpentier, Ministry of Transportation, Quebec

18 Paul Delannoy, AMEC, Ottawa, Ontario

19 Melody Miller, Transport Canada

20 **Introductions and Review of Agenda**

21 Rick Nelson opened the meeting with introductions and review of the agenda. No items were added or  
22 deleted.

23 **Overview of XII International Winter Road Congress Meeting**

24 Rick Nelson and Lee Smithson reviewed the upcoming PIARC meeting and the responsibilities WMTSP  
25 had in setting up, staffing and taking down the AASHTO/FHWA/TRB booth. Paul Pisano reviewed the  
26 USA Pavilion booth and Lee presented a proposed staffing for the booth on Monday through Thursday.

27 **Taking a Worldly Look to the Future**

1 **AASHTO SCOM Strategic Plan Progress Report**

2 Bill Hoffman reviewed progress on the AASHTO SCOM Strategic Plan (attachment #1). Bill discussed the  
3 new SCOM Organizational and Functional Matrix with its five Technical Working Groups (Pavement;  
4 Bridge; Roadside; Equipment; and Highway Safety/Reliability) and four Strategic Focus Areas  
5 (Performance Management; Workforce Development; Environmental; Research). Each Technical  
6 Working Group will have a Chair and the two Vice Chairs will each take two of the Strategic Focus Areas.  
7 A conference call has been set up on February 8, 2010 to determine who will take each of the chair and  
8 vice chair positions and also discuss how the Technical Working Groups and the Strategic Focus Areas  
9 will coordinate their efforts. The “Highway Safety & Reliability Technical Working Group Statement of  
10 Direction” currently has only one reference to winter operations and that is “Encourage focus and  
11 increased awareness of winter operations related issues and concerns;”. WMTSP needs to assist in  
12 preparation of a Work Plan for the Highway Safety & Reliability Technical Working Group that will reflect  
13 how the Winter Maintenance Technical Service Program supports the strategic goals of the SCOM.  
14 WMTSP discussed the proposed SCOM Functional Matrix and noted the WMTSP Four Year Program  
15 approved at the July 2009 SCOM meeting in Maryland has line items that support each of the Strategic  
16 Focus Areas (Performance Management; Workforce Development; Environmental; and Research). This  
17 will be a good start in making the SCOM Organizational and Functional Matrix work. Rick wants WMTSP  
18 to step back and take another look in a different light paying close attention to how this supports the  
19 strategic goals of both SCOM and SCOH.

20 **Domestic Scan Outreach Efforts**

21 Bill Hoffman reviewed the outcomes of the US Domestic Scan outreach efforts. The final report, “Scan  
22 07-03, BEST PRACTICES IN WINTER MAINTENANCE, Summary Report”, has been completed and is  
23 posted on the SICOP web at [www.sicop.net](http://www.sicop.net) under the “Documents” section. Bill reviewed some of the  
24 outreach efforts that he has used to promote the results of the Scan. He presented a power point of  
25 Scan highlights to the 30 states that attended the August 2009 National Winter Maintenance Peer  
26 Exchange in Madison, Wisconsin. He also was invited to Indiana DOT to present best practices at several  
27 of their field locations. Washington DOT also had him present the Scan findings via a web conference  
28 with their area managers. Bill is also a scheduled speaker at the APWA’s North American Snow  
29 Conference being held in Omaha, Nebraska on April 18-21, 2010. Steve Lund is presenting a technical  
30 paper “Best Practices in Winter Maintenance from the US Domestic Scan Program” at the PIARC  
31 meeting on Thursday, February 11, 2010.

32 **Report on SIRWEC Meeting**

33 Wilf Nixon gave a brief report on the SIRWEC meeting. Wilf sent out a listing of SIRWEC technical papers  
34 for WMTSP to review and pick up on any subjects that fit into Aurora, Clear Roads, and WMTSP  
35 programs. The intent is to give the appropriate project champion a heads-up to read the paper and  
36 determine if it would supplement their project. Wilf is working with the SIRWEC planning committee to  
37 persuade them to have their 2012 meeting be held in Iowa City in conjunction with TRB’s Fifth National

1 Conference on Surface Transportation Weather and Eighth International Symposium on Snow Removal  
2 and Ice Control Technology.

3 **PIARC B-5 Committee Update**

4 Rick Nelson and Paul Pisano provided an update on the PIARC B-5 Technical Committee on Winter  
5 Service. Rick and Paul discussed how they are working on breaking through the “stove pipes” because  
6 they are not seeing collaboration that needs to be accomplished. Efforts are underway to have the B-5  
7 meeting be held in conjunction with the SCOM meeting in Savanna, Georgia next summer. Dealing with  
8 flow of data B-5 has a skeleton draft on two case studies; 1) Olympics traffic study, and, 2) 511 traveler  
9 information (Nevada DOT sent out a survey on this and has some information). Wilf believes that  
10 sustainability needs to be defined in understandable and acceptable terms. Rick said the French have  
11 developed an excellent model on how to work through this and arrive at a sensible solution. The model  
12 can use four or five areas and goes through each scenario and shows impacts on budget or environment  
13 or other considerations. Bill wants to use a matrix at the SCOM meeting in Savanna to address  
14 mobility/sustainability. Bill/Rick/Paul will work up a presentation for that meeting. Paul said the next  
15 issue of PIARC “Routes/Roads” magazine will highlight two PIARC papers dealing with sustainability. The  
16 B-5 Committee is distributing a CD ROM “Snow and Ice Data Book 2010”. The 2010 version is the third  
17 edition of the document. The first was published in 2002 for the XI International Winter Road Congress  
18 in Sapporo, Japan and the second was presented in 2006 at the XII Winter Road Congress in Turin, Italy.  
19 The document provides a quick overview of the climatic and operational realities of various countries  
20 contending with winter.

21 **Outreach and Discussion of Agency Winter Maintenance Projects and Operations**

22 **FHWA**

23 Paul Pisano reviewed highlights from the FHWA Road Weather Management Program (see attachment  
24 2). Paul chose three items to highlight; 1) Three MDSS Product Demonstration Showcases will be held in  
25 2010 in Alaska, Washington, and Wisconsin, 2) the ongoing research study, “Human Factors Analysis of  
26 Road Weather Advisory and Control Information” is developing and implementing procedures to  
27 evaluate the effectiveness of road weather information and dissemination methods and generating  
28 effective strategies for communicating road weather information. The project will be completed in  
29 2010, and, 3) FHWA is looking for a state or states to work on an Intellidrive(SM) project for getting the  
30 data from vehicles and how that data can support MDSS.

31 **Aurora**

32 Bill Hoffman reviewed highlights from the Aurora program (see attachment 3) Max discussed the WIKI  
33 pedia (see attachment #3, Project 2009-03 Knowledge Base for RWIS and Environmental Data Loggers)  
34 being developed for RWIS and how that morphed into other areas that Aurora might be able to partner  
35 with Clear Roads. The Aurora WIKI was demonstrated at the Clear Roads meeting in January 2010.  
36 Aurora will continue to develop this web-enabled knowledge base for road weather information with a  
37 specific emphasis on data loggers in the next year.

1 Max advised that highway maintenance is fully outsourced at MTO through medium and long-term  
2 contracts. Contracts focus on performance management and getting the best work for their contracted  
3 dollars. It also involves how much to spend to achieve various LOS goals. Aurora has funded a new  
4 project for 2010 to work with MTO on a proposal “Development of Output and Outcome Models for  
5 End-results Based Winter Road Maintenance Standards”. An Aurora project team will be selected for  
6 this three year project.

## 7 **Clear Roads**

8 Lee Smithson reviewed highlights from the Clear Roads program (see attachment 4) and Mark DeVries  
9 provided an update from the January 25-28, 2010 Clear Roads meeting in Spokane, WA. Clear Roads  
10 selected three 2009 National Peer Exchange projects for their 2010 program: Best Management  
11 Practices for Reducing Corrosion on Maintenance Equipment ##3 (electrical and mechanical); True Costs  
12 of Snow and Ice Control ##5 (there is a need to determine the true costs of snow and ice control  
13 operations); Enhance AI/RWIS CBT ##8 (make AI/RWIS CBT network or web-friendly for ease of  
14 distribution and tracking. Make so you don’t have to return to the same computer to complete or track  
15 scores.) (Note: Prioritized Research Needs Statements (##) can be found on page 50 of the 2009 Final  
16 Report at [www.westerntransportationinstitute.org/professionaldevelopment/peer-exchange](http://www.westerntransportationinstitute.org/professionaldevelopment/peer-exchange) ). Mark  
17 reported that Clear Roads began drafting project scopes for ##3 and ##5 listed above. Clear Roads  
18 discussed ##8 above and agreed that a letter should be prepared by CTC & Associates and sent to  
19 WMTSP conveying Clear Roads decision to fund the project to make it a web-based system, as well as  
20 separating the material into smaller units. Since much of the content is RWIS, Aurora will also need to  
21 participate in the project. There was also discussion that perhaps the larger snow and ice community  
22 outside those who have contributed to the development of the CBTs should pay a fee for using the  
23 system to support its on-going maintenance.

## 24 **Transportation Research Board (TRB)**

25 Wilf Nixon provided an update on the activities of the TRB Surface Transportation Weather Committee.  
26 The Committee intends to hold the Fifth National Conference on Surface Transportation Weather in  
27 2012 and is offering Iowa City as a possible location for the conference. Wilf also suggested to SIRWEC  
28 that its 2012 be held either preceding or following the weather conference in Iowa City.

29 John Burkhardt and Max Perchanok provided updates from the TRB Winter Maintenance Committee.  
30 John talked about Research Roadmap project and hopes that some WMTSP members would be on the  
31 NCHRP panel. Paul is working on getting a contractor on board to organize and develop material for a  
32 surface transportation weather workshop and policy forum later in 2010. The winter issue of TR News is  
33 available at the USA Pavilion. It contains many articles on winter maintenance. Wilf and John want to  
34 do a webinar to push technology transfer (i.e., Winter Weather 101). Max reviewed his power point for  
35 the proposed NCHRP problem statement, “Applying Asset Management Principles to Winter  
36 Maintenance”. The objective of the research is to develop an analytical model that applies an asset  
37 management approach to winter maintenance processes.

38

1 **American Public Works Association**

2 Mark DeVries reported on APWA activities. (see attachment #5 APWA Winter Maintenance Committee  
3 Updates, #6 Teleconference call January 19, 2010, and #7 APWA Winter Maintenance Subcommittee  
4 Business Plan 2009-2010) Mark discussed the North American Snow Conference coming up in Omaha on  
5 April 18-21, 2010, and reminded us that they had record attendance in Des Moines. Travel is becoming  
6 more difficult but Omaha registration going good, no contracted hotel rooms are available. There will be  
7 36 sessions and will include aviation. APWA wants to include any mode that has winter maintenance  
8 issues. Click Listen and Learn, only get one session a year. Mark showed a power point on McHenry  
9 County “Sustainability”. He also talked about APWA certification and noted that public or private  
10 employees must be certified to apply chemicals in McHenry County. He would like to create a web  
11 based or CBT based certification program. Mark believes certification promotes being proactive in all  
12 areas. APWA’s Center for Sustainability is putting on “Sustainability in Public Works Conference” in  
13 June. APWA is doing outreach to the youth with its Chipper’s Chili Chase material.

14 **National Association of County Engineers**

15 Greg Parker reported on NACE activities. Greg reported that during a 99 counties meeting in Iowa it  
16 was reported that the counties should be able to get AI/RWIS CBT from their LTAP but discovered local  
17 LTAPs didn’t have them. NACE followed up and wrote the LTAP clearing house and believes the problem  
18 is now solved. None of the counties are using MDSS and he believes there is a need for training to get  
19 this technology implemented. He reported that PennDOT put together a lineal listing of all their power  
20 points on winter training. Mark DeVries reported they always hand out the two page flyer on CBTs at  
21 their meetings to emphasize it is available in the APWA bookstore.

22 **Development of 511 in Canada**

23 Lee Smithson presented a power point highlighting some problems with the 511 system in the US. He  
24 showed the inconsistencies between two states, Iowa [www.511ia.org](http://www.511ia.org) and Illinois [www.511.il.org](http://www.511.il.org) . Iowa  
25 brings up maps in high or low band resolution with condition reports while the Illinois site in the Road  
26 Conditions tab displays ads like “Make MSN your Home Page” and “Home Values—great service to find  
27 out what your home is worth on today’s market” but no maps, and in the Road Closure tab “Find Road  
28 Closures at great prices” and “Road Closure Applications (Hiring Now) Positions Open in Your Area”.  
29 Paul Delannoy, AMEC and Melody Miller, Transport Canada, provided an overview of the development  
30 of 511 in Canada. She said Transport Canada isn’t into operating 511 but talked about those  
31 provinces/territories using it. Environment Canada would be the overseer of the weather component.  
32 Transport Canada had a 511 summit last summer to discuss where is it now and where did they want to  
33 go. They will have a report this spring. A Western Regional Summit will be held later this year.  
34 Transport Canada will be looking into the development of a National Traveler Information Portal (NTIP).  
35 This would be a web based system with links to provincial, regional and municipal traffic information  
36 sites. Transport Canada is a member of the Enterprise Pooled Fund which recently completed a study  
37 entitled “Nationwide ATIS System” (Attachment 8). Transport Canada intends to use parts of the  
38 Enterprise study to develop their NTIP. WMTSP discussed appointing a task force to work with

1 AASHTO's 511 coordinator Jim Wright, Paul Delannoy, and Melody to develop a NCHRP 20-7 project  
2 proposal to prepare an overview of 511 in the US looking at the lower 48 states plus look at Canada,  
3 problems with uniform reporting and condition description, determine what governance and content  
4 currently exist and what funding options should be investigated. Rick discussed that when 511 started it  
5 was targeted at 10 cities where traveler information, especially winter, had major importance. Weather,  
6 transit, and traffic were of high interest to get the system started in a particular area. Max discussed the  
7 data supply must come from RWIS and other reliable road monitoring equipment. Bill believes the  
8 phone component seems to be okay, but the web part needs fixing. Bill pointed out we do not know  
9 how to effectively get this information to the user. Rick says SHRP 2 (Reliability Group) is looking at  
10 what are the best methods to communicate this information. Nevada DOT found 511 is important  
11 where there is winter weather, and lesser importance in other areas. Other surveys have also shown  
12 weather was ranked as most important. Wilf points out the in the UK interrupts the radio with an  
13 information push system. Mark points out that 511 should have an NORTH AMERICAN prospective. Bill  
14 is working on a "511 Push" for Nevada. (WMTSP ACTION ITEM—develop a roadmap, identify who is  
15 doing what, who needs to be involved in this and what outcomes do we want to see. Wilf will put a task  
16 force together to do information gathering to identify the facts. Coalitions like I-80 or Northwest  
17 Passage may eventually be able to contribute to the effort, but they currently are just getting  
18 organized.)

#### 19 **Ministry of Transportation Quebec (MTQ) Winter Operations**

20 Richard Charpentier presented a power point which highlighted winter operations in the Ministry of  
21 Transportation, Quebec. Richard made a power point presentation entitled "Winter Maintenance in  
22 Canada-Quebec". The presentation covered the geography of Quebec, highway network, winter  
23 maintenance, contracting, contract management process and performance measurement. He discussed  
24 how to improve performance—they measure each contractor and found them to average 90 to 92%  
25 2008-2009 which relates to "Contractor effectively meets the requirements". Quebec does not have a  
26 salt management plan. They would like to have incentive pay for high performance. Use winter index,  
27 but use five year average, so if contractor uses too much salt, it will reduce their profit internally to  
28 contractor. Performance is monitored survey patrols and complaints from users. MTQ is looking at  
29 FAST for one of their new bridges. Wayne Lupton is proposing one to them. What are the experiences  
30 in US? Wilf did some work with CO DOT and only one contractor, Boschung, seemed to be able to live  
31 up to their claims. SAFELANE also seems effective. FAST problems are generally with the triggering  
32 system. NV DOT is installing four systems and Boschung is their choice. Their approach is the FAST will  
33 apply an initial application which will hold until the regular operations take over. Bill stressed to need to  
34 have someone well trained and can also maintain the system. Also need camera surveillance to help  
35 monitor the operations. NV applications are remote locations so need to act quickly. Pennsylvania DOT  
36 participated in the Domestic SCAN and has just released a report which is very good. Steve said MN DOT  
37 has some problems with repair parts, just can't go to the hardware store and pick them up.

#### 38 **I-80 Coalition Update**

1 Bill Hoffman provided an update on the progress of the I-80 coalition. Bill handed out an I-80 Coalition  
2 sheet. This Coalition has been assembled to work with four states on integration of road weather and  
3 road conditions communications. The Coalition held a workshop last week and had representation from  
4 the Northwest Passage (I-90 and I-95) Coalitions, Industry, and four state DOTs. The discussions were  
5 focused on operations, winter maintenance, traveler information and weather forecasting. Most of the  
6 conversations kept returning to freight problems and the associated challenges that exist. The I-80  
7 Coalition has a website [www.I-80.com](http://www.I-80.com).

8

### 9 **Maryland DOT SHA Snow/Ice Operations Review**

10 Bill Hoffman discussed the Maryland SHA operations review that he and Mark DeVries conducted at the  
11 request of Maryland SHA. Mark felt that it was a courageous move for the MDSHA to ask WMTSP to  
12 make this review and in his opinion the visit was well received even though it revealed things that could  
13 be improved. Rick thought there may be some dangers if the state doesn't follow through on the advice  
14 from the "experts". Mark pointed out that most of what they presented to MDSHA were best method  
15 practices being used by other states and the discussions with the field personnel may help them in  
16 deciding if these are practices that could be used in their operations.

17

### Project Review of SICOP Program

### 18 **CBT Revisions & Development**

19 Lee Smithson discussed the development and the updating of the AI/RWIS CBT and the five  
20 maintenance operations CBTs. The AI/RWIS CBT was completed and distributed in 2004. The CBT was  
21 revised and expanded in 2007 to include NCHRP 6-17, "Selecting Snow and Ice Control Materials to  
22 Mitigate Environmental Impacts". The revised AI/RWIS CBT and a new CBT "Selecting Snow and Ice  
23 Control Materials to Mitigate Environmental Impacts" were distributed in July 2007. The five  
24 maintenance operations CBTs developed in cooperation with Clear Roads were completed and  
25 distributed in 2008. Work is underway on developing a sixth CBT "Performance Measures for Snow and  
26 Ice Control Operations". Storyboards have been written and reviewed by the TWG. It is anticipated the  
27 CBT will be finished by early summer 2010. A web application for the five maintenance operations CBT  
28 has been provided to states that have requested it. So far seven states (CO, IA, KA, ME, MN, NE, and  
29 ND) have tried the web base versions. Each state has a few students enrolled, but most have only  
30 visited the site with no noteworthy progress in getting through the material. The most popular delivery  
31 still seems to be installing the program on their local computer so it is available with a "click" on their  
32 desktop icon. Mark DeVries advised that a letter will be coming from Clear Roads asking AASHTO to  
33 develop AI/RWIS into a web based application like the five maintenance operations CBTs. The letter will  
34 state Clear Roads intent to contribute funding to the project and their interest in seeing it separated into  
35 smaller units. The AI/RWIS CBT was developed nearly eight years ago for CD ROM application, so major  
36 work will be involved. WMTSP needs to consider that letter, determine what needs to be done and what  
37 we want the end product to look like and do. There has been discussion that the AI/RWIS CBT is too  
38 long and needs to be split into two CBTs one on Anti-icing and the other on RWIS. Rick has concern with

1 splitting into two parts because AI and RWIS are so interrelated. The original TWG considered the two  
2 as separate subjects, but decided they needed to be kept together in one CBT. What might work is to  
3 develop an introductory course for both AI/RWIS showing their interrelationships and then separate  
4 detailed CBTs for AI and RWIS. WMTSP will need to further discuss control of the web site whether the  
5 larger snow and ice community who did not join the pooled fund should pay a fee for using the system  
6 to support its on-going maintenance. Currently when a pooled fund state wants to try the web  
7 application, Lee will notify GanTek who then gives the state an access code. This seems to work well  
8 since typically a state will encounter some computer and firewall problems which GanTek seems to be  
9 able to work through their problems jointly with them in a minimal amount of time. GanTek currently  
10 maintains the web site.

11 **ESS Guidelines & Implementation**

12 As Paul reported during the July meeting, the Domestic Scanning Tour found the ESS Guidelines being  
13 implemented. The Guidelines are posted on the FHWA and SICOP websites. Paul reported FHWA has a  
14 second version of this posted on their website. Aurora wants to include non-invasive sensors and will  
15 send Paul a letter requesting this addition to the project.

16 **Update on Anti-drifting Measures with Proactive Road Design Considerations (SNOWMAN)**

17 Lee reported that the first project in New York State using SNOWMAN has now completed its second  
18 winter of field evaluation. Lee checked at the end of January 2010 and the field maintenance foreman is  
19 very pleased with the results. Last winter (2008-2009) the area had heavy winter with more than usual  
20 blowing and drifting snow. The snow fence captured and stored all the snow and deposited it in the  
21 designed storage area and not on the roadway. Visibility was also greatly improved. This winter (2009-  
22 2010) was a lighter winter and the fence easily stored all the drifting snow. During both winters  
23 considerable overtime was saved when compared to previous winters without the snow fence. An  
24 agreement has been signed between Iowa DOT and NYSDOT to allow Iowa to install the SNOWMAN  
25 software on their CAD MicroStations. As soon as the software is up and running, Iowa plans to test  
26 several trial problem area locations for engineered mitigation techniques. Lee will be presenting a  
27 technical paper about SNOWMAN entitled "Implementing Passive Snow and Ice Control Measures" at  
28 Session T4-2 on Wednesday, 8:30 to 10:00 AM and at a Poster Session on Thursday, 8:30 AM to noon.

29 **Outreach to Local Government**

30 Mark covered this earlier in the meeting (See page 5, lines 1 through 13 of these minutes).

31

32 **Integrated ITS Corridor**

33 Paul reported that work continues, but there is nothing major to report. WMTSP needs to review the  
34 PIARC Technical Sessions agenda to determine if any technical papers are being presented that would  
35 add to the WMTSP base of knowledge.



1 **Update on 2007 National Winter Maintenance Peer Exchange Projects:**

- 2 • Guidelines for A/I & Deicing #1—the following italicized material comes from the 2007 National  
3 Winter Maintenance Peer Exchange Final Report: *(Peer Exchange Steering Committee*  
4 *Recommendations—This was a discussion on determining when and at what rates deicing*  
5 *materials should be applied to the roadway to maximize effectiveness. Items such as product*  
6 *type, pavement temperature, pavement type, relative humidity, precipitation rate and type, etc.*  
7 *The discussion also recommended a guide for when and how much deicer should be used for*  
8 *reapplication of materials. The group felt there was a need to develop a standard set of*  
9 *guidelines or “best practices” that covered anti-icing, deicing and prewetting.)* Lee reported that  
10 during the July 2009 WMTSP meeting this project was discussed the outcome being that little  
11 research had been accomplished beyond that already published and WMTSP should wait until  
12 Clear Roads finishes its projects before proceeding). Lee reported that the two Clear Roads  
13 projects, #1, “Determining Effectiveness of Deicing Materials and Procedures” and #2,  
14 “Development of Standardized Test Procedures for Evaluating Deicing Chemicals” are not yet  
15 completed, so WMTSP probably needs to wait for the results from them to be able to tell if they  
16 have anything that would contribute to the development of the Guidelines. The contract with  
17 the PI on the first contract (#1) was cancelled but Dennis Burkheimer did create a written guide  
18 that seems to satisfy the original goal of the project (see attachment 9). Clear Roads decided to  
19 create a video based on Dennis’s guidelines. It is anticipated that video will be available this  
20 summer. A revised final report has been submitted to the Clear Roads board on project #2. Ron  
21 Wright, Chief Chemist, Idaho Transportation Department is currently reviewing the report and  
22 providing feedback to the contractor. The material is complicated, so the contractor is being  
23 asked to make the report more clear and readable. Also two other Clear Roads projects,  
24 “Identifying the Parameters for Effective Implementation of Liquid-only Plow Routes” and  
25 “Correlating Lab Testing and Field Performance for Deicing and Anti-icing Chemicals (Phase I)”  
26 are in the process of being let and getting contracts signed. WMTSP needs information from  
27 these projects to be able to determine if new material needs to be added to the existing  
28 guidelines. Also WMTSP needs to review the PIARC presentations to see if there are any papers  
29 that would add knowledge to the development of these Guidelines. After considerable  
30 discussion it was generally felt that with no new research results available we need to stay with  
31 the published research, it is basically driving the MDSS with reported success, so it should be  
32 sufficient for agencies to ingest it into their guidelines. Those attending the domestic scan feel  
33 the need for more effective outreach. There are decision making flow charts that may be  
34 helpful. Since this need was the top priority at the 2007 Peer Exchange and has direct  
35 application to the top priority needs statement in the 2009 Peer Exchange (see page 11, lines  
36 27-39 of these minutes for further detail) a task force needs to be established to decide what  
37 needs to be accomplished and report this at the next meeting in Savannah.
- 38 • LOS Determination #3—the italicized material comes from the 2007 Final Report *(Steering*  
39 *Committee Recommendations—Is there a defensive way to determine or establish LOS*  
40 *nationwide (corridor management and seamless LOS across state boundaries)? Consistency*  
41 *across state lines is a challenge. This would document successful practices some state have*

1 worked out which would help other states gain from these experiences) Bill reported that work is  
2 underway with the I-80 Coalition, but it is too early to provide answers to help guide this  
3 project.

- 4 • Communication Public/Legislators #5—the italicized material comes from the 2007 Final Report  
5 (*Steering Committee Recommendations—DOTs need tools to be developed to assist them in*  
6 *managing and communicating with motorists, management, politicians, stakeholders, etc. Need*  
7 *effective ways to communicate and explain level of service, expectations, and costs on various*  
8 *roadway systems. What are the best practices for communicating to legislators the need to*  
9 *establish performance measure and then provide the staffing and funding necessary to meet*  
10 *those measures. There is also a need to communicate performance metrics to field crews so they*  
11 *understand their importance. Legislators and upper management need to understand the*  
12 *ramifications of not funding maintenance activities and the long term impacts on the*  
13 *infrastructure.*) There have been some successes that can possibly guide the development of  
14 the needed tools. Bill Hoffman will contact MN and WA DOTs for their materials and  
15 information about how they were successful with their legislatures.
- 16 • National Winter Test Facility #13—the italicized material comes from the 2007 Final Report.  
17 (*Steering Committee Recommendations—Build a test facility to provide objective data regarding*  
18 *the effectiveness of various winter maintenance treatments. The group felt there was a strong*  
19 *need for a national test facility that could be used for testing materials, methods and equipment*  
20 *used in winter maintenance. Having a national test center would establish a rigid set of research*  
21 *guidelines, protocols and procedure which should make the results more accurate. Can also test*  
22 *RWIS sensors and MDSS logic at this facility.*) Wilf reported that Eli Cuelho, Western  
23 Transportation Institute, made a power point presentation to the TRB AH010, Surface  
24 Transportation Weather Committee on January 11, 2010 showing the progress that WTI is  
25 making on building a national winter maintenance test facility. WTI has snow making capability.  
26 Continuation will be based on obtaining funding. WTI is working on getting the word out on  
27 what they have and what they can do. Lee reported that Aurora has a companion project, 2008-  
28 01 “Development of a National Road Weather Testing Program” to market the idea of a national  
29 testing facility to various audiences and sources of support. Tina Greenfield is the Aurora  
30 project champion. She has facilitated several conference calls with members of Clear Roads,  
31 Aurora, AASHTO, and PNS and they began working on a draft document describing the  
32 capabilities of a test facility. The concept of a single facility then morphed into the idea of a  
33 consortium or board of experts to help those who need research accomplished and those who  
34 actually do the research locate appropriate facilities. During the last conference call on January  
35 7, 2010, the project broadened to consider what role a searchable knowledge site such as a WIKI  
36 (the #2 priority research needs statement from the 2009 Peer Exchange) would contribute to a  
37 National Winter Test Facility and a Nation Winter Testing Program. At this point, the focus of  
38 this project is still a moving target, but progress is continuing.
- 39 • Consistent Descriptions/Road Conditions #15—the italicized material comes from the 2007 Final  
40 Report. (*Steering Committee Recommendations—Road condition reports vary greatly from one*  
41 *area to another. Also, the interpretation of a given road condition is different to different*

1           *people. Need to develop standard ratings and descriptors for road conditions. Also need to*  
2           *develop acceptable, common, consistent and uniform snow and ice dynamic messages that*  
3           *avoid confusion and liability issues.)* Bill feels that the I-80 Coalition would be a good venue for  
4           determining if states can come together and agree on uniformity. The discussion with Transport  
5           Canada this morning also has possibilities of working across the US/Canada border for seamless  
6           reporting and consistent descriptions.

- 7           • Future National Peer Exchanges #18—Lee reported the National Winter Maintenance Peer  
8           Exchange that this project refers to was held July 25-26, 2009 in Madison. The Final Report is  
9           posted on the SICOP web site. The Peer Exchange was rated as very successful by the attendees  
10          and attendees stated they would like to have another Peer Exchange in 2011. Final report. ,  
11          Section #8, Next Steps reads, “Since the members of AASHTO SICOP are represented on each  
12          consortium and attend each consortium meeting, it will be the responsibility of AASHTO SICOP  
13          at its meeting on February 6, 2010 to review and guide the overall progress of the outcomes  
14          from the 2009 National Winter Maintenance Peer Exchange.” The topic of another Peer  
15          Exchange in 2011 came up at the Clear Roads January 2010 meeting. The Western states are  
16          interested in having the exchange in the west. Spokane will host APWA in 2011 if there is  
17          interest in holding the Peer Exchange in conjunction with another major event. WTI is also  
18          interested in hosting and taking a field trip to their new winter testing facilities.
- 19          • Boiler Plate Legal Language #26—the italicized material comes from the 2007 Final Report.  
20          *Steering Committee Recommendation—Concerns over litigation have slowed down the ability of*  
21          *states to share data. This project would develop some standard language that could serve as a*  
22          *starting point for states to address legal issues that may be involved with data sharing. Need*  
23          *examples of language that is out there and how it has worked.* Paul said that there is some  
24          boiler plate language on the Clarus web page, but what they thought might happen just didn’t  
25          happen. Paul will look for some examples to help bring this project to a close.

## 26    **WMTSP Program**

- 27          • Presentation of New Projects, 2009 Peer Exchange Projects (Bill & Lee)
  - 28                  ○ Develop Level of Service Based Application Anti-icing & Deicing Guidelines ##1. WMTSP  
29                  discussed this new project and concluded it was not clear what is needed. It is very  
30                  interrelated to the 2007 Peer Exchange Priority #1 “Guidelines for A/I & Deicing. Clear  
31                  Roads is working to finalize two projects, “Determining Effectiveness of Deicing  
32                  Materials and Procedures’ and “Development of Standardized Test Procedures for  
33                  Evaluating Deicing Chemicals”; has let another project “Deicing Chemicals Testing Phase  
34                  I”; and is working on a contract for another project entitled “Identifying the Parameters  
35                  for Effective Implementation of Liquid Only Plow Routes”. These four projects all have  
36                  outcomes that interrelate to project ##1 above and probably need to be completed  
37                  before undertaking the Level of Service portion of this new project. WMTSP needs to  
38                  monitor progress on the Clear Roads projects and in the meantime in order to bring  
39                  more clarity to this new project, Lee will contact all the attendees at the 2009 Peer  
40                  Exchange, and ask them for further details and ideas for the ##1 project.

- 1           ○ Develop synthesis to Guide Outreach Program for Benefits of a Proactive Snow and Ice  
2 Control Program Using Anti-icing and Prewetting ##6—the outreach program would  
3 address benefits of increased operational efficiency and effectiveness, improved  
4 mobility and safety, and environment and global sustainability. Notes from the 2009  
5 Peer Exchange indicate the synthesis should address equipment and training costs of  
6 gearing up for liquids and should address three audiences; 1) Upper management and  
7 the institutional issues they face, 2) Field operations personnel who address work  
8 environment and cultural issues, and 3) Traveling public who need to understand how  
9 proactive snow and ice control operations are conducted. The synthesis should also  
10 provide recommendations for technology transfer such as webinar program outline,  
11 power point for a speaker bureau, etc. WMTSP discussed there is on-going and  
12 completed work that should be considered in the synthesis, for example, Clear Roads  
13 has an on-going project 08-02, “Cost-benefit Analysis Toolkit” to develop a practical tool  
14 such as a spreadsheet or computer program that can be used to calculate the  
15 benefit/cost and justify expenditure for specific new practices, equipment and  
16 operations used in winter maintenance activities. Project completion is scheduled for  
17 July 2010. They are also developing a Request for Proposal for a project entitled “Snow  
18 and Ice Control Operations True Cost”. The two phases of this project are: Phase 1,  
19 with a goal of determining snow and ice control costs via a variety of different methods  
20 using internal or external resources, and Phase 2, with a goal to validate and update the  
21 Salt Institutes research that documented the costs to and impact on society when roads  
22 are not accessible. Other works include TRB’s Research Pays Off on “Implementing a  
23 Winter Maintenance Decision support System: Indiana Department of Transportation’s  
24 Process, Success and Savings”, Richard Balgowan’s success stories in the Township of  
25 Hamilton, New Jersey, and snow and ice feature Washington State DOT had on the  
26 Discovery Channel.
- 27           ○ Develop BMP for Salt Shed Construction Siting and Leachate Management ##10—this  
28 project needs to start with a literature search to see what is available. Two resources  
29 that have served the winter maintenance community well are the Salt Institute’s “The  
30 Salt Storage Handbook” which can be downloaded from their website at  
31 [www.saltinstitute.org/content/download/478/2972](http://www.saltinstitute.org/content/download/478/2972) . This handbook provides guidance  
32 on estimating capacity needed, site selection, space requirements, and general safety  
33 rules. Another excellent resource is Transportation Association of Canada’s “Synthesis  
34 of Best Practices Road Salt Management”, September 2003, which can be downloaded  
35 at [www.tac-atc.ca/english/resourcecentre/readingroom/pdf/roadsalt-7.pdf](http://www.tac-atc.ca/english/resourcecentre/readingroom/pdf/roadsalt-7.pdf) . These  
36 best practices include planning, site selection, designing a functional facility, storage and  
37 handling, site drainage, site operation and maintenance, record keeping, salt vulnerable  
38 areas, vehicle washing, and training. Need to also do a literature search for Leachate  
39 Management. The next issue of the Salt Institute’s Newsletter will have an article on  
40 leachate management.
- 41           ○ Develop a Multidisciplinary/Interactive Process to Monitor Hiring and Retention  
42 Problems ##23—there are two NCHRP reports “NCHRP Synthesis 323, Recruiting and

1 Retaining Individuals in State Transportation Agencies” (September 2003) and “NCHRP  
2 Report 636 Tools to Aid State DOTs in Responding to Workforce Challenges” (2009) that  
3 should be reviewed for their applicability to addressing this research needs statement.  
4 Collaboration with TRB Winter Maintenance Committee (AHD65), TRB Maintenance and  
5 Operations `Personnel (AHD15), HSCOM Strategic Focus Area “Workforce Development”  
6 and WMTSP seems appropriate. John Burkhardt is currently reviewing NCHRP 636.

- 7 • Practice Ready Papers TRB E-C126: Lee reported that the five practice ready papers from the  
8 TRB Surface Transportation Weather and Snow Removal and Ice Control Symposium held in  
9 Indianapolis, June 2008 were posted on the SICOP List-serve to provide them more exposure to  
10 the snow and ice community. Four responses were received within 24 hours of the posting  
11 indicating they appreciated the notification and acknowledging this would be a useful service for  
12 them. John pointed out that TRB doesn’t have a method to push these papers out to the snow  
13 and ice community and he has several more practice ready papers from the 2010 TRB Annual  
14 meeting. Lee will follow up with both John and Wilf and get their practice ready papers on to  
15 the SICOP List Serve. Need to also promote these at the AASHTO HSCOM summer meeting.
- 16 • Evaluation of WMTSP Program
  - 17 ○ SICOP 4 Year Program—Lee discussed the need for WMTSP to review the SICOP 4 Year  
18 Program (see attachment #6 to the July 18, 2009 minutes) and determine what revisions  
19 need to be made to develop the 2011-2014 Four Year Program to be presented at the  
20 HSCOM July 2010 meeting in Savanna, GA. WMTSP also discussed the need for the  
21 state DOTs to provide financial support to keep the program going. Only 21 states  
22 responded to the last solicitation for SICOP funding. Lee will get a list of states that  
23 haven’t contributed to SICOP and send it to Steve and Bill for follow-up. Paul brought  
24 up new requirements for air quality monitoring are going to bring forth a request to  
25 hang those on RWIS stations.

26 **Rick asked if there were further items not on the agenda that WMTSP needed to discuss?**

27 **Does WMTSP want to promote on-site reviews?** WMTSP thought this would be useful to pursue with  
28 other states. Mark felt the on-site reviews were well received and the states felt they were very helpful.  
29 Bill and Mark felt it was a courageous move on MD SHA to ask WMTSP to do this. Rick points out that  
30 there may be some dangers if the state doesn’t follow through on the advice from the “experts”. Paul  
31 thought it is the right thing to do. Mark felt confident with their recommendations since they were just  
32 a repeat of best practices being used in other government agencies and this was an effective way to get  
33 that word out to the people who can directly apply it in their daily operations.

34 Steve says they are looking into ADA issues. MN DOT has an inventory all their facilities like trails etc  
35 and are checking them for ADA applications. There are applications that they haven’t been able to fulfill  
36 yet.

37 Paul says their funding has been extended only to the end of the month which makes it hard to predict.  
38 New projects need to be linked to Intellidrive(SM).

1

2 Draft dated March 22, 2010

3 March 24, 2010, added Max Perchanok corrections on page 4, lines 1 and 2.