

DRAFT MINUTES
Winter Maintenance Policy Coordination Committee Meeting
AASHTO/APWA/NACE

April 4-5, 2002
Las Vegas, Nevada

Attendees

Pat Hughes, Chairman—AASHTO WMPCC (Minnesota DOT)
Lee Smithson, SICOP Coordinator
Mujeeb Basha—AASHTO Staff
Paul Pisano—FHWA
Diana Clonch—APWA (City of Columbus, Ohio)
Rick Nelson—Lead States Program (Nevada DOT)
Dan Roosevelt—for Andy Bailey, AASHTO Southeastern Region (Virginia DOT)
John Blacker—AASHTO Western Region (Montana DOT)
Joe Doherty—AASHTO Northeastern Region (New York State DOT)
Dave Jones—AASHTO Highway Subcommittee on Maintenance (Idaho DOT)
Wilfrid Nixon—TRB Committee A3C09 Winter Maintenance (University of Iowa)

Call to Order/Opening Items

Chairman Hughes called the meeting to order at 8:00 am, reviewed the agenda and laid out the meeting charge to develop the next four-year SICOP program. He also reviewed the NCHRP FY 2003 Research Program that Mujeeb had e-mailed to WMPCC members and how it relates to the WMPCC program. Problem 2003-F-05, “Standardized Testing Methodology for RWIS Surface and Subsurface Sensors” was funded at \$300,000. The objective of this research is to develop detailed standards, specifications and procedures for the testing and calibration of surface and subsurface sensors. The standards, specifications and procedures will be applicable for both laboratory and field use. Problem 2003-F-06, “Unfunded Contingency Problem 2002-F-03 Environmental Impacts of Chemical Snow and Ice Control Chemicals and Their Relationship to Cost and Effectiveness” was funded at \$250,000. This research is needed in response to the many new so-called “environmentally friendly” chemicals that are now available. The objective of the research is to examine the environmental impacts of a range of these snow and ice control products for several parameters of interest, and identify which are potentially harmful. These products and the parameters would be selected by an expert panel, based on the members’ own experience and a search of the current literature. The panel members will select parameters of importance to environmental regulatory agencies, such as biological and chemical oxygen demand, contribution of phosphorus or other nutrients that speed eutrophication, or the impact of low pH or heavy metals on the toxicity of receiving waters. The product of the research will be recommendations for choosing specific chemicals in environmentally sensitive areas, and a sound basis for those choices that the public and regulatory agencies can support.

Pat advised WMPCC that the SPR20-7 program increased from \$600,000 to \$750,000. Dave Jones expressed his disappointment that Resolution 01-11 he got approved at the summer 2001 HSCOM meeting, did not get SPR 20-7 funding. His resolution “Resolution Requesting SCOH Support Development of a 20-7 Synthesis on Anti-icing Issues” asked for a synthesis of existing studies on anti-icing issues and in the longer term provide direction for additional research opportunities related to anti-icing product evaluation technology and testing. This would essentially be an updating of the SHRP H-332 report “Handbook of Test Methods for Evaluating Chemical Deicers”. Pat also discussed the AASHTO proposed reorganization. There might be a possibility that WMPCC would report to HSCOM rather than SCOH. Information was sketchy at this point.

Work Plan Reports

Project #1—AI/RWIS CBT (Rick Nelson and Lee Smithson) is progressing very well. WMPCC was concerned about George Blaisdell leaving CREEL and the impact that might have on the scenario preparation. The first two lessons of the generic package have been produced and Lee brought a CD-ROM of Lesson 1 so WMPCC could review it. The consultant will prepare a 10 minutes demo to be used at the AASHTO HSCOM meeting in July. Probably have a booth at that meeting and also at the AASHTO annual in Anchorage. Lee will contact Ken Kobetsky and Joe Perkins and make arrangements to show the 10 minutes demo at the Chief Engineers meeting. Lee will also demo and discuss the CBT at the PNS meeting in June and at the Transportation Association of Canada’s annual meeting in September and is looking for a spot on the program at the Eastern and Western Snow Conferences.

Project #2—State of the Practice Equipment and Facilities for RWIS and Anti-icing Operations (Rick Nelson and John Blacker), the web site currently has several specifications posted from Idaho TD and a link to specifications at the Iowa DOT. All other members of WMPCC will e-mail Wilf their specifications for posting to the web site. WMPCC future efforts in this area will be to monitor/maintain the web site and make sure it is current. SICOP web master will need to move this to an accomplishments/maintenance list on the web site.

Project #3—Determine Appropriate Friction Indicators to Describe Winter Road Conditions for Maintenance Operators and the Traveling Public (Lee Smithson). WMPCC discussed the role friction is playing in countries outside the U.S. but felt its use in the U.S. is several years away. It was decided that when the results of NCHRP 6-14, “Feasibility of Using Friction Indicators to Improve Winter Maintenance Operations and Mobility” become available this summer WMPCC will need to reevaluate the project and decide its future directions.

Project #4—Driver Education (John Blacker) had his people gather what other states are doing and discovered there isn’t much going on. There are two focus areas in this project, driver education and marketing. He discovered the driver education portion seems to be making progress primarily due to the fact that the State DOT is usually

developing the materials and providing DOT people to the schools to teach the sessions and not charging for this service. Montana DOT found that by going to the various county and state fairs they were able to reach about 20% of the total state population which is a plus since it goes well beyond just the classroom generation. The people who volunteered to staff the booths liked the duty so they see it as a win-win situation. There is still an unmet need to educate the driving public about snow and ice control operations and how to safely operate a vehicle during inclement weather. Pat said on the 1998 scanning tour to Europe there was considerable effort to educate people on the value of good tires, changing to seasonal tires, safe driving and promoting safety. An important part of the feedback from John's survey of the states was that all of the states wanted to do something, they just didn't have a program put together or the resources to put a program together on how to get this safety service project accomplished. Wilf encouraged John to post his findings to the SICOP web site. Scanners to Japan in the 2002 tour pointed out that they found winter driving safety postings in strategic areas at the rest areas to be very effective. Wilf pointed out that some photos taken on the scan of what was discovered in Japan would be good materials for the SICOP web site. Pat believes we need people from other disciplines at the table to determine what is needed to develop and implement a coordinated program. WMPCC agreed that step one for this project and for SICOP project #9 is to assemble a multi-discipline group to determine what needs to be done and how to do it. Mujeeb offered to work with John on this project to be a point of contact and fill in information on other organizations and programs (highway helper, etc). Rick felt that a conference call would be a good start to getting things organized. WMPCC members need to get any names they believe can help to Mujeeb to put a list together.

Project #5—Anti-icing Chemical Specifications (Dave Jones)—web site posting reflects current project scope. Dave has a session at the PNS Snow Conference entitled “The PNS Specification Explained or How to Form Your Own PNS-Workshop”. This session will be designed to show people how to set up their own PNS specifications, what worked and what didn't. The session will focus on quality testing and performance oriented specifications. One of the big problems is the industry is continually adding new products or modifying existing ones which makes it difficult to keep current. The story here is how PNS got together, why they got together, and both the vendor and the customer have a defined process so the expectations are understood. The process is the important accomplishment. APWA has a session at the spring meeting to show how a consortium of cities can get together to develop and implement performance oriented specifications and quality assurance programs. Diana will let us know if there is something to report or post to the SICOP web. PNS is now concentrating on getting more local governments involved. Need to get this information on the SICOP web site so people can see how PNS got formed and what was accomplished.

Project #6—Anti-drifting Snow Measures (Joe Doherty and Lee Smithson). Lee reported that the NCHRP Project SP20-7, Task 147, “Update Design Guidelines for Control of Blowing & Drifting Snow” is now under contract, but completion has been moved back to sometime in the fall 2002. Joe reported that SNOWMAN is not working very well. Progress on software development is delayed. The reason for the delay is workers are

mostly SUNY graduate students so progress is not predictable. Pat reported that Minnesota DOT is getting lots of good press on living snow fence. There should be a good payoff on local roads in rural areas.

Project #7—Urban Winter Maintenance Practice Guide—Diana checked with APWA and no contract has been let to rewrite this Guide. APWA wants to proceed with the project but needs funding assistance. WMPCC needs to review this project and see if there is an opportunity to partner with APWA.

Project #8—Automatic Fixed Remote Chemical Distribution Systems (Paul Pisano and Andy Bailey)—discussed that the table posted on the SICOP web needs some updating. Bernie Ask offered to send Paul an updated list that can be used in revising the SICOP web site. Minnesota DOT has a study underway to document benefits. Paul reported that the Freeze-free evaluation project is underway. Next winter will be the primary field data-gathering period. Currently, FHWA is evaluating how to gather the data, ie, video camera, etc. Everyone agreed that the focus of WMPCC should now be on the payoff. Perhaps the MN DOT report and the “Automated Stationary Anti-icing Systems Panel” presentations at PNS would be appropriate for posting to SICOP web. Wilf can put links to these reports if posting doesn’t seem appropriate. This project is complete and should be moved to the Accomplishments/Maintenance Section of the WMPCC work program.

Project #9—Develop a Model Media Package (Wilf Nixon)—this is a two part project of which part 1, development of the SICOP web has been accomplished and still being enhanced. At the last meeting WMPCC recommended forming a Technical Working Group to look at development of a model media package and establishing a budget for the project. The concept would be to collect existing media relations packages and develop a template that could be used by an agency to develop and improve information flow to the media during winter storm situations. WMPCC delayed further discussion on the project until the new work program is discussed and after that determine how it fits in with proposed projects.

Project #10—State of the Practice AVL Technology (Andy Bailey and Lee Smithson)—WMPCC discussed that AVL is now firmly in place as a management tool in the transit industry. AVL has many parallel applications in maintenance operations and would also be valuable to other highway safety operations, ie, if the highway patrol needs sand or salt at a location, they could locate the nearest snow and ice control vehicle and more effectively coordinate with the supervisor for possible assistance. The usefulness is apparent for improving fleet management operations. An artificial intelligence technique demonstrated at the PIARC conference was to send an experienced operator in a GPS equipped vehicle to run a snow and ice route recording what the that operator believes to be appropriate application rates for various storms and pavement temperatures. The supervisor can then pick the appropriate artificial intelligence program number and the inexperienced operator enters the program into the on-board computer. This allows an inexperienced operator to focus on truck operation while the on-board computer with GPS interface adjusts the spreader rates. This technique shows promise for applying in the U.S. Aurora, Colorado uses AVL to track and manage various public works

functions. Diana noted that Detroit, Michigan used CMAQ funds to install AVL and Columbus, Ohio used STP funds for AVL. AVL is being used to track contractor and government activities. Benefit cost studies have been conducted, but failed due to lack of an accurate database. Perhaps a synthesis is needed to gather in all the strands so WMPCC can document who has what, how well does it work and record the various functions of fleet management, route optimization, contract operations monitoring, material management, and safety. The synthesis would provide information needed to populate the SICOP web site with best practices and B/C studies. A quick way to start building a table of AVL users would be to post on the snow and ice list serve a request for input from current AVL users.

Project #11—On Board Freezing Point Measurement (Wilfrid Nixon and Lee Smithson)—Lee reported that more data was successfully gathered by the Concept Vehicle this past winter although Iowa only had two snow events. A minor problem with the unit is that slush tends to build up on the unit and has to be periodically removed by hand methods. He feels that the field people will invent a mechanical wiper to assist the blowpipe in removing the slush. The advantage of using the Pelter cell technology is actual freezing point is determined without the need to adjust the device for each chemical being tested. The Swedish National Road Administration tested six Pelter cell devices this past winter and will be sharing their data with the Iowa DOT. Dave reported the Pelter cell technology would be an advantage since Idaho found that their in-pavement RWIS sensors need to be calibrated to the chemical (NaCl or MgCl) present on the roadway. The Iowa DOT paid nearly \$11,000 for the chemical tester complete with computer and in-cab readout. Price may be a factor for achieving widespread implementation of the technology. SSI has been franchised by AeroTechTelub to market their Frensor (this is the unit on the Concept Vehicle) in the U.S. Currently SSI has only sold one unit. The scanning tour people discovered two companies in Japan that are testing mobile salinity detection technology. Both companies' efforts looked promising. WMPCC agreed this is a project that needs to be pursued and agreed to monitor developing technologies that will measure salinity or freezing point.

January 2002 Scanning Tour

Paul summarized the scanning tour results as a good learning experience and an opportunity to discuss how winter weather globally impacts our lives. There were no new earth shattering discoveries. He felt it was an excellent opportunity for the National Weather Service and Intelligent Transportation Systems people to see how winter weather impacts mobility, agency operations and how other countries are organized to deal with the problems. The advance question list provided to Japanese officials served as a catalyst and provided structure for each agency visit. The list also helped lead the discussion into the research they had underway. Rick came away with a renewed emphasis on open communications across agency lines and importance of data sharing. The Japanese have lots of instrumentation in the field, but still rely on sending someone out into the field to verify existing conditions before determining operational strategy. The Japanese seem to have lots of people (may be due to a full employment objective) and have found ways to keep them busy. The team was surprised to see snow removal

service level expectations so low. The team observed that snow that had fallen the night before was not removed until sometime the next day after the morning commute had packed it and produced slippery conditions. This places an extra burden on the driver to be a better operator and on the vehicle to have good tires, etc. Although the team didn't explore snow and ice control operations outside of the Sapporo area, several papers presented about snow removal from other areas of Japan did not reflect anything different. The Japanese are well advanced with fiber optics. The team observed that research underway is longer range probably five to ten years away from being implemented. WMPCC believes the U.S. could do similar research, but we need to be more focused. Wilf suggested a research program for wacky ideas is needed to stimulate innovation. The 1998 scan discovered the European countries had a well coordinated research program probably related to the fact that the National Government had responsibilities for maintenance of the roadways, which makes coordination and uniformity of maintenance an easier task. Another item for consideration is that maintenance research in the U.S. is not accomplished by scientifically trained researchers, while in Japan they use scientifically trained researchers. We also need to do more partnering with other states to leverage our money and knowledge. Another handicap is that some states limit spending their research dollars to universities within their state which limits the expertise available in solving winter maintenance problems. Japan does considerable partnering with private industry in developing new equipment.

Paul reviewed the STIP recommendations from the ITS & Winter Operations Scan:

STIP A.2, "Shared Equipment Development". The problem statement points out that within the U.S., no organization exists to oversee and direct research on new and experimental equipment for winter operations. The winter scan to Japan showed how the Japanese government partners with the private sector to share in the developmental costs of innovative winter maintenance equipment. WMPCC felt that a partnership should be established with the AASHTO HSCOM Equipment Focus Group and the TRB Committee A3C08, Maintenance Equipment. The mission of WMPCC would be to facilitate the development of a group to investigate and to champion a workshop project to explore the possibilities of emulating the Japanese model. Lee needs to contact the chairs of the AASHTO HSCOM Focus Group and TRB A3C08 and report back to WMPCC their interests in the project. Steve and Diana were to do likewise with NACE and APWA.

STIP B.1, "RWML—Road Weather Mark-up Language". The Japanese are developing RWML to refine the mark-up language for specific transportation applications, specifically road information, weather, disaster, and local events. They intend to combine their road communication standard, XML and RWML to achieve seamless interoperability for traveler information for Internet and mobile phone access. The U.S. should make an assessment of the draft RWML standard to determine if it has:

1. Utility for ITS and traveler information in the U.S.
2. Does RWML: require modification to work within the ITS architecture?
3. Should RWML be expanded for use in the U.S.?
4. Should FHWA support a standards effort to adopt RWML?

STIP B. 2, “Review of Completed ITS/CVO Corridor”. Finland E-18 a cross-country corridor appears to be a completed ITS/CVO integrated corridor. Field detection and surveillance systems monitor existing environmental, traffic and roadway performance. This information is used to provide automated corridor management. A small team of ITS/Traffic/Maintenance engineers should perform a review of this system to determine its transferability to the U.S. WMPCC would determine if it has a niche in this project after the review is completed.

STIP C.1, “Development of Road Weather Information Systems Standards/Implementation Guidelines”. The objective is to identify appropriate standards for RWIS/ESS siting. The first task would be to produce a synthesis documenting existing environmental sensor siting standards within the meteorological community and the transportation community. The second task is to assess the prospect of applying meteorological standards to the highway environment. The third task would be to draft implementation guidelines based on the assessments in task 2.

STIP C.2, “Pilot Project NWS”. This project calls for a cooperative assessment of capabilities between the National Weather Service, a value added met service and a combination of state/county/city road administrations. These entities should combine forces to develop specific products/services and use these products/service in operations.

STIP D.2, “Create a Synthesis of MDSS Projects”. A number of major Maintenance Decision Support System (MDSS) projects are in various stages of development around the world. There is a need to review and summarize these projects and to provide a written synthesis of the key elements of them.

STIP E.3, “Synthesis of Papers on Performance Evaluation”. Prepare a synthesis of the material presented at the SIRWEC and PIARC Winter Maintenance Conferences including all of the performance evaluation standards contained therein. If necessary, WMPCC would make supplemental contacts with the presenters to obtain the needed information. The synthesis should contain:

1. Winter road maintenance standards, by road classification if appropriate, and
2. Evaluation standards for winter road maintenance performed.

STIP O.1, “Develop Long-term Partnerships with Japanese Research Institutions”. The Japanese research organizations visited on the scan have research partnerships with a number of foreign agencies. Their research projects tend to be longer-term and more fundamental in scope than U.S. projects and thus a partnership would be complementary. Steps in this project would be:

- Identify the nature of the Japanese current research partnerships
- Determine which organizations in the U.S. could best partner with the Japanese organizations and suggest a scope for those partnerships
- Help move the partnerships into existence and action
- WMPCC should partner with TRB Committee A3C09 in this process

STIP O.2, “Build Technical Links with Oberon Corporation in Tokyo”. Oberon has been working with various highway agencies in Japan to develop new sensors. Specifically, they are engaged in developing three sensors: a vehicular mounted salinity meter; a millimeter wavelength radar sensor for detecting obstacles ahead of a plow; and a GroundView Sensor, a visual vehicle mounted sensor that determines the road condition (icy, snow-covered etc.) in real-time. The objective would be to develop and maintain links with Oberon to achieve three goals:

1. Determine how the above named sensors work and whether they are deployable
2. If yes, identify which are suitable for field tests in the U.S. and arrange, manage and report on such tests.
3. If tests are successful work with Oberon, through licensing and other means, as needed, to make the sensors available to the U.S. market.

Paul commented on the very active outreach WMPCC members are doing.

Pat asked WMPCC members to write up a more complete description of their projects within the next month and submit them so project prioritization of both proposed and existing projects could occur and a four-year program developed. WMPCC should keep a couple of items in mind when selecting projects:

Is it urgent/important?

Is there a good chance to be successful in the next four years?

Is there a project champion ready to guide the project?

Discussion of Other Projects That WMPCC Members Are Involved In

Wilf—will propose at the January 2003 TRB annual meeting the selection of a site for the 2004 Winter Maintenance Symposium. A suggestion was made to combine with PNS which will be in Washington with Washington DOT hosting. Dave Jones will liaison with the PNS program committee to get meeting details. There is also the possibility of linking with the Western Snow and Ice Conference in September. “The Use of Abrasives in Winter Maintenance” project Wilf managed is completed and a report is available and the “Field Testing of Abrasive Systems in Winter Maintenance” didn’t achieve data collection this past winter because lack of weather. The “Winter Maintenance” college course Wilf is teaching at the University of Iowa has several Canadians enrolled. Wilf also taught a training course at Washington DOT. He will be talking to the Japanese about the possibilities of adapting the program for Japanese presentation. The best part of the course is watching the students discuss “how can we take one part of what we learned and apply it this winter”. Wilf is in the process of archiving the list-serve. Three months of questions takes about a quarter MB of storage.

Joe—the Quixote Company bought up SSI and things seem to be moving now. Expect to have 25 or 30 sites up and running this summer. NYSDOT video taped the first installation to record how each site should be constructed (compacting around each pad, etc) and used it to show the contractor what was expected. The technique worked well and got good results.

Dave—feels overwhelmed with the responsibilities of facilitating the PNS conference in June and then hosting the Rocky Mountain Equipment Show in July. The Equipment Show is free admission and will feature new inventions being demonstrated as part of the technology exchange program. He will also participate in the Region 8 States, a two day bus tour of field maintenance in September. He has an ITS earmark to integrate RWIS sites in Idaho and to take RWIS data and put that into a format that the public can use.

Diana—has major responsibilities at the APWA North American Snow Conference next week. Expect about 2,000 people. She and Wilf will be reporting on the ITS and Winter Operations Scan.

Pat—starting to plan the next World Congress in Italy in 2006. Looking for feed back from the Japan PIARC World Congress.

John—Montana has seven still cameras on their RWIS sites and will be adding six more. They had 200,000 to 400,000 monthly hits on the web site during the winter. Pictures are taken every five minutes. 511 Project will be up and running by August or September 2002. Yellowstone Corridor project is utilizing portable and stationary variable message signs. Montana is having environmental problems with MgCl and sand and their affect on water quality. (Joe)—New York is seeing an increase in snow and ice control lawsuits. New York monitors the algae in their reservoirs. Wilf--A3C09 put out a call for papers for the Environmental Affects of Sand and Chemicals.

Paul—working with translator in Argentina to translate the AASHTO Snow and Ice guide into Spanish. He is working on “Developing the Fundamentals of Road Weather Management Course” and expects it to be complete by this fall. He would like to develop a loosely organized group of people to explore the MgCl issue and document the problems. He believes significant issues might need further study and data. Paul feels MDSS is moving along well with national labs nearing completion of a functional model. It will be an open system capable of modification in the future. Labs will come to FHWA next week then June 13-14 there will be a stake holder meeting in Boulder on how to keep everyone engaged. Other great news in FHWA is “info structure”. Lots of RWIS data, etc, to make up an info base. Three main components are congestion, security, and weather. Mainly focused on metro areas. 511 Gallup poll shows the importance of weather, weather got 48%, while the runner-up was congestion at 28%. John says this was #1 in Montana, winter weather driving conditions. NTCIP working group met this week, how to structure communications protocol was main topic of discussion. Their packet on “ESS, Environmental Sensor Station Standards, Standards Application Package”, is now available and contains many details on communication standards (Paul will send a copy to each WMPCC).

Rick—can now view RWIS data and camera images on the NV web site. Have an Operations Center for Northern Nevada now in the District Office. Las Vegas already has a traffic operations center. Northern Center is mainly concerned with weather and the southern is mainly concerned with congestion. Have a project with California for

westbound traffic for dynamic message signs. This will warn traffic so they can get off early and avoid turning I-80 into a parking lot. A lawsuit on an experimental RWIS activated dynamic message sign and a fatal accident.

Dan—now have www.shenandoah.com web site for detailed road weather information. Dan feels this will aid them in implementing 511. Dan also passed out a handout on 22 Aurora projects. Part of these (1991-01 and 1991-02) are posted on the Aurora web site. Have received replies from 9 countries on 2000-02. 2000-08 has been built in Sweden.

WMPCC/SICOP Program **-Evaluation of existing projects**

Project #1—active program still lots of marketing and updating needs to be accomplished. Needs agency follow up on how well did the training program work, did it improve efficiency and effectiveness. Need to develop a follow up program to ask questions such as: did the training get the information across; did it modify employee approaches; and did it change policy. In addition to handing the person a disc, we need did to give them an implementation plan i.e. here are some after action plans to assess how well your people are using this training. Here are the soft things your people need to do that aren't on the CD-ROM. Dave thinks there is expertise on the Tech Team to accomplish this task. Rick will take the lead on developing this. He will modify the scope on the web site and let the WMPCC know when it is available for review.

Project #2—this project is ready for transferring to the maintenance category of the web site. The project is completed and just needs to be maintained. There is a need to liaison with TRB Maintenance Equipment Committee, Regional Equipment Managers meeting and others let them know what is on the web and determine their interest in helping with updating and maintenance of the site.

Project #3—ready to move to the accomplishment/maintenance category of the web (can move into a more active category if appropriate after the results of NCHRP 6-14 are known). Lee will prepare new project statement.

Project #4—merge with Project #9 and keep on WMPCC project active and current list. Prioritize along with the new projects. John will prepare new project statement and try to link to the insurance industry.

Project #5—Dave feels no sense of accomplishment (no victory) and closure. Leave in the reprioritization process. Dave will rewrite the project scope and write down what is victory and submit to WMPCC.

Project #6—active project that will be posted to the web when finished. Joe will prepare a revised project statement.

Project #7—Diana will provide an update to Lee after APWA

Project #8—move to the accomplishments/maintenance part of the web and link to other documents. Andy (which probably means Dan) will notify the List-Serve that this information is available and ask folks to let us know if there are any additions or deletions

#9—merge with #4

Project #10—Andy and Lee will build a table of users from input received from list serve posting and look at merging this with proposals coming out of the scan.

Project #11—Wilf and Lee will look at merging this with proposals coming out of the scan.

-Evaluation of New Projects—STIP

A.2. “Shared Equipment Development” needs better coordination with others who share this scope (A3C08), AASHTO HSCOM Equipment Focus Group, and Regional Equipment Managers Groups. Two phase process 1) develop a relationship with others 2) test and evaluate equipment. The first step will be to have a workshop to bring in appropriate people (both private and public sectors). Three champions on this project, Lee for TRB and AASHTO, Steve for NACE, and Diana for APWA.

B.1. “RWML”. Carl Kain will be writing this STIP.

B.2. “Review of Completed ITS/CVO Corridor”. Champion for this project is Jim McCarthy.

C.1. “Development of RWIS Standards/Implementation Guidelines”. Champions for this project are Dan Roosevelt and Paul Pisano.

C.2. “Pilot Project NWS”. Champions for this project Paul Pisano, Gregory Mandt, Paul Lariviere, and Rick Nelson.

D.2. “Create a Synthesis of MDSS Projects”. Champions for this project Paul Pisano and Dan Roosevelt

E.3. “Synthesis of Papers on Performance Evaluation”. Champion for this project Paul Lariviere.

O.1. “Develop Long-term Partnerships with Japanese Research Institutions”. Champion for this project is Wilf Nixon

O.2. “Build Technical Links with Oberon Corporation in Tokyo”. Champion for this project is Wilf Nixon

-Evaluation of New Projects—Other Projects

Dave--Revise SHRP-H-332 "Handbook of Test Methods for Evaluating Chemical Deicers". Wilf is doing something similar at Iowa DOT, "Evaluation of Using Non Corrosive Deicing Materials and Corrosion Reduction Treatments for Deicing Salts" and the "Investigation of Materials for Reduction and Prevention of Corrosion on Highway Maintenance Equipment". WMPCC should wait until those projects are finished to see if that completed work satisfies the need or should that work be folded into the proposed revision project.

Paul—Paul talked with Joe Perkins and he thought we should be doing avalanche research. There is some research now and it is referenced in the Snow and Ice Guide. Paul and Pat will talk to Ken on the avalanche protection. Dave will have Steve Conger and Ed Fink review what is already in the Snow and Ice Guide for adequacy. Rick will contact Thor and have him do the same. WMPCC will wait to hear from all three experts before deciding what to do.

Paul—build a link with the insurance industry. Andy Mergenmeir tried to contact insurance industry in the U.S., but didn't get any return phone calls. Probably need to start with ICBC (Graham Gillifam) for suggestions on how to proceed.

Dan—Standardization of RWIS Presentation follow up to Pat's letter and Perkins letter. Pat has had discussions on this and it appears it goes beyond where SICOP is and involves many others. That is what Rick is suppose to do in his new committee assignment (What committee?) There is chance for lots of overlap and duplication so WMPCC should work through Rick on both of these projects. AASHTO Subcommittee on Systems Operations and Management, will look at standardization of presentation to road users, etc.

Paul—build on PIARC winter maintenance terminology and promote the adding of an U.S. dictionary.

Wilf—issues on information management. We are creating a mountain of data most being used very little. Determine how to organize and present this information to the various audiences.

Dave—put the updating and revising of the Snow and Ice Guide in line for SP 20-7 funding. Lee will develop the 20-7 request. Results of NCHRP Projects 6-13 and 6-14 will be available and ready for incorporating into the Guide. Should place special emphasis on environmental section.

Pat—how should we be looking at the environmental aspects? Dave said they are having a panel on that at PNS, that should provide some insight. Idaho already has to refrain from plowing directly into the stream. Rick said air quality is an issue in Reno. The answer will revolve around best practice methods. John thinks we should put a request on the list-serve for states and local governments to list BMPs they use and who to contact for more information.

-Reprioritization of Program

Prioritization techniques—WMPCC has 20 projects, all seem important. The decision now is which ones need action and which just get monitored. Paul raised the question do we want to identify one big project and carry it through to success? Pat thinks 3-5 projects plus the CBT would be about right.

Next step is for Lee to prepare minutes with an outline of the projects. Project champions would prepare their final project statements and submit them to Lee by May 31, 2002. Lee will consolidate them on a rating sheet. WMPCC will then rank the projects and let Lee know which projects they would have time to champion. Projects with active champions could move forward even though they might not be high on the WMPCC priority list. WMPCC asked Lee to monitor progress and make sure each member stays on schedule.

Next Meeting and Closing Remarks

The fall WMPCC meeting should be held in conjunction with the AASHTO Annual meeting and WMPCC should staff a SICOP booth to increase our exposure to the Chief Engineers. Lee will contact Ken and ask for 15 minutes on the SCOH Business Meeting to spot light the AI/RWIS CBT. Lee will get a AI/RWIS CBT continuous loop CD ROM of about 10 minutes duration to show SCOH and to use at other AASHTO, TRB, and Snow and Ice conferences.

Draft date: May 6, 2002