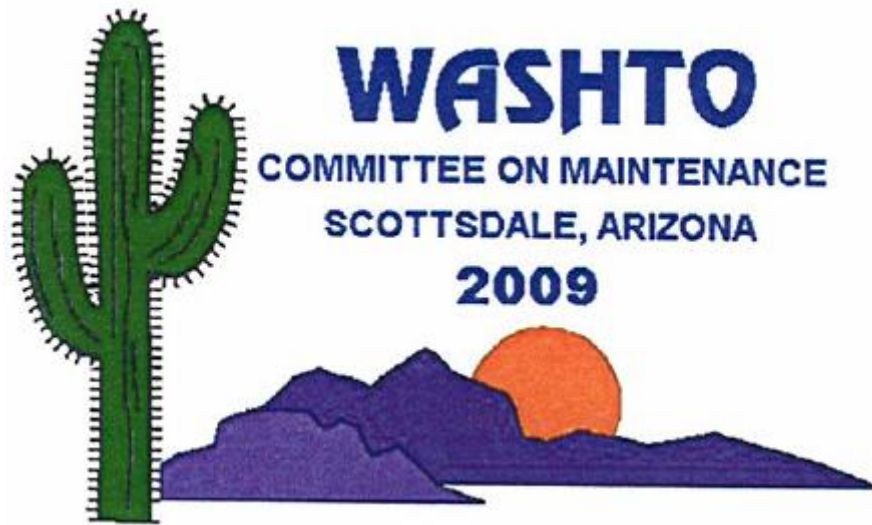


March 8-11, 2009



Proceedings

March 8-11, 2009



Thanks to Joe Graff with Halcrow, Inc. for developing the proceedings for this meeting.



March 8-11, 2009

WASHTO

Committee on Maintenance

Scottsdale, AZ

March 8-11, 2009

Table of Contents

Item	Description	Page
1	Welcome	4
2	Attendees	5 – 6
3	Round Table Discussion	6 - 15
4	Vendor Recognition	15 - 16
5	FHWA Update (Also see Appendix 11)	16 – 17
6	Debris Removal lessons learned from Hurricane Ike	17
7	Question and Answer Session	17 - 18
8	Climate Change and How Alaska is Responding	18 – 20
9	Bio Diesel and Storm water – What's happening in Washington State?	20
10	Solar Highway Update – Oregon	21
11	Vegetation and Roadside Issues in Oklahoma	21
12	Putting the Pieces of the Puzzle Together, WSDOT	22
13	Contracting Out – Current State of Practice	22 - 23
14	District Incident Reporting Knowledgebase – Nebraska	23
15	Snow and Ice Issues	23 – 25
16	TCCC Activities – ADOT	25
17	New Retro reflectivity Standards – UDOT	26
18	General Discussion	26 – 28
19	Business Meeting	28 – 29
20	Attachment Summary	30

March 8-11, 2009

WASHTO

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Scottsdale, AZ

March 8-11, 2009

Sunday, March 8, 2009 – Social – Sponsor ICA

Monday, March 09, 2009

Chris Christopher, Chair – Welcome, Introduction of John Halikowski

Welcome - John Halikowski, Director, Arizona DOT – BA Communications, Arizona State University. Previous director of Motor Vehicle Division. AZ is a high growth state, with the past focus on build, build, build. No focus on preservation. Now with the poor economy, they have to face taking care of roads. In a recent meeting with US DOT director, it was discussed how everyone is part of the solution.

Since 1999, the Arizona legislature took out 895M from dot. The shortfall this year is 70M. The Arizona DOT talked to the legislature told them they would need to cut back on aesthetics, litter, graffiti, etc.

The western states have to work together

The Stimulus bill will be a shot in the arm, but it is short term. What happens after that? Federal Authorization is the next issue. He doesn't see economy improving until 2012, so we have a ways to go.

There is no single solution, the challenge is to redefine maintenance, and we have to be innovative. Tough decisions will need to be made over the next few years. Keep an open mind, think outside of the box. The law can be changed if there are statutory impediments.

Welcome to sunny state.

Chris Christopher, Chairman – Chris spelled out some ground rules and indicated Caltrans could not attend the meeting but was going to call in. Wyoming will host WASHTO Maintenance next year.

Jim Sorenson – Said many are here because you created a pooled fund. You should learn from each other. Innovation is paying off. Think of more and better things to do over the next few days to advance maintenance.

Chris – Rich Clark, Utah, is the keeper of pooled fund.

March 8-11, 2009

Introductions and Attendees:

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March 8-11, 2009

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Round Table

Steve Takagawa, The California Governor implemented a 10 % cut in pay for all state employees by creating a work furlough, 2 days per month. Moral is very low. Engineers have had 40% raise over the past 3 years, so it's not hurting them as bad. It has had a big impact on maintenance. They usually take 1st and 3rd Fridays off. This will be in effect for 17 months, but they are continuing to working on snow and other emergencies. They have an \$85M court liability and had to pay \$20M out of the maintenance budget. It had to come from the districts. Furlough was for all state employees. California is a big union state. If employees are not paid on time, they have to pay penalties.

They have had 739 Caltrans vehicles hit on roadside. They have a pilot program to put cameras in 50 vehicles to see what was happening. They are having a big push on improving safety and preventable accidents. 3 Caltrans people killed last year. They took maintenance employees off the road that day to talk about what they could do. They are concentrating on safety to see how to make employees safer. They have a maintenance training academy to educate maintenance employees. They are trying to treat them as professionals.

Because of the cutback in budget they are using more and more parolees. People that don't get a job out of prison, go back to prison. It is making a big difference; however, it is hard on employee morale. Caltrans pays for disposal of all trash and pays for parolees. There was a question about Supervision? California Department of Corrections works with contractors to hire the parolees. 11,000 - 12,000 parolees released monthly. Prisons are still overcrowded.

Adopt a Highway program is in suspension. Minute Men (Border watch group) had a section, but they had them removed. They are issuing no new permits. They have lost 1200-2400 sponsors. The suspension was a political issue, pressure to stop some group. There will be new legislation. They can't get the program going again until laws are passed and administrative rules are written, etc. At one time, there was a proposal to do a background check on all volunteers. (Did not pass)

March 8-11, 2009

They got an employee killed patching potholes and are now looking at a self contained pothole patching machine. Right now, none are good enough, but they are optimistic.

They are trying to develop standards for illegal campsites (homeless); they have to do a lot of cleanup. They will post a sign 72 hours in advance of cleanup with information about the closing and location of shelters, etc. Legal counsel indicated they have to salvage and hold any valuables. Steve is fighting this and the sign will say remaining material is trash. It is causing some bad public relations because sometime they have to move people that are in wheel chairs. They are working with homeless shelters. People don't want to move to shelters.

Luci Moore – Oregon is already there on “camper” policy. Oregon managers are taking furlough days. The remaining staff will likely be on furlough one day per month soon. A raise given last July was rescinded. No overtime will be allowed the week of the furlough. They can get overtime in non-furlough time. They do not have a budget issue right now. They have kept maintenance budget whole and moved construction money to maintenance. The new big initiative is a water quality project. They will clean up 100 percent of wells. There have been issues on roadside storm water. She had to fight environmentalists about environmental affect of maintenance projects.

They are working on emission reductions on equipment. They are reducing idling vehicles, such as with truck mounted attenuators (TMAs). They are utilizing LED for lights on arrow boards, changeable message signs. They are expanding Adopt a Highway programs outside of litter to adopt a weed – noxious weeds. They may have two groups adopting the same section, one for litter and one for noxious weeds.

Recycling containers will be put into rest areas. They are concerned about what might get put into them.

Oregon DOT now has a 1R program (Resurfacing) for pavement preservation. They worked through the FHWA to establish the program where they don't have to bring everything up to standards. ADA, Safety, Environmental. It has been an education program, with state and FHWA offices.

Steve, Idaho, Since last legislative session, the Governor is going around the state having Idaho Transportation Funding forums. They have determined they have a \$240M backlog. \$137M will go to Idaho DOT with the remainder, \$103M going to local governments.

They hired a consultant for \$500,000 to review Idaho DOT to see how they could be more efficient. Finding: Funding cannot keep pace with the need. They don't have a plan, they don't have vision, they rely on the districts and are very decentralized. They don't have sufficient systems to manage the program (MMIS) and don't have a good PMS. Steve agrees with the backlog. He thinks the funding should focus on maintenance preservation first and not allow new capacity to siphon money off of maintenance. (Audit attached.)

Now it's up to the legislature. Three bills have been introduced to raise the gas tax 5 cents per gallon two years in a row. There is a bill for a rental car tax increase. They need \$6M for new

March 8-11, 2009

MMIS and PMS. The legislature has committed to funding the MMIS. They are still in session, but should be gone by end of month. The old MMS was mainframe. In 2004 they tried to implement an oracle FIMS – It failed. A new AMS was implemented (Financial) but they didn't want to include maintenance. The Legislature will give them a year to implement new system.

They have no furloughs.

Steve Takigawa - Caltrans spent \$22M to implement an MMS and it has paid for itself in claims.

Rich Clark, Utah DOT – UDOT is trying to get all salt under covers. They are building about 6 salt sheds per year. They are replacing about two maintenance shops per year, but did not ask for any this year. They are using a “sponsor a highway” program. It has taken a year to get going. A contractor sells sections of highway to “sponsors”. Business pays a fee and contractor picks up litter. The contractor does all the work, UDOT approves. The contractor disposes of the litter.

UDOT divided up their highways into sections and did an RFP. In Caltrans, contractors compete for sections.

Performance Requirements – Twelve pickups are scheduled per year. It is tied to the Maintenance Management Quality Assurance program and if it does not meet program requirements, they may require them to increase pickups. The program just started, so they don't know about the rate of compliance.

Has it had an effect on AAH Program? No, they took urban freeways where they had no adopt a highway sections.

Mountain Passes – They contracted with a company to put cameras at remote locations so they can monitor the snow accumulation. The employees love it. The cameras have paid for themselves many times. The public cannot see the cameras. They are not lit, although they can see at night in the headlights of vehicles.

Energy Savings initiative – They are looking for ways to save money.

Tow Plow – They have purchased one tow plow and are very impressed with it. It is a trailer with a plow on it. It cost \$100,000 for the plow. It is towed behind a plow truck. The drivers were initially very apprehensive, but now like it. They are using it on freeways. They use a follow vehicle behind it.

They showed a video during the snow and ice demo.

OMS – Maintenance Management System – It came on line in November; they are very excited about it and they are very pleased with it. They are still adding on their feature inventory. They are using a GPS GIS approach to features inventory. They are studying what equipment is needed at the maintenance offices to keep their inventory up to date.

March 8-11, 2009

This is the first year they have had to take money back from districts (3%), but they have had no furloughs. They went to 4-10 hour days during the summer and shut down the office on the day off. The public complained at first, but have adjusted. It is a real savings to employees that commute. They work 5 – 8 hour days in winter for snow operations. All state agencies are working 4-10's. The public has accepted it.

Are there reports on cost savings? They were hoping it would be higher, and are still studying.

They are experimenting with grooved in water based paint. It looks very promising and allows the uses of larger beads.

Mike Coffey, Alaska DOT – Alaska DOT – Last year they had a lot of money, with oil at 148/barrel, Alaska residents got a check for \$3200. Their budget is down this year and is tied to oil prices. They have a state equipment fleet and have to pay for use of the equipment. They are looking at paying a usage rate instead of a replacement rate, but this will cost in long run. They are looking at reducing equipment and also staff. Material prices have also increased tremendously. Mag Chloride costs \$1.44 per gallon. They are developing salt brine systems that will cost \$.50/gal. This will result in big cost savings. The budget is a flat line.

Their infrastructure is deteriorating, with a large backlog in deferred maintenance. They have a \$5M backlog with a \$2M annual budget. They use federal money for maintenance. They are concerned they might lose federal money. 70% of employees are paid with state funds, but if they lose some discretionary program money, they may have to lay off employees.

They are under attack from the AGC for capital force account program, even though it is less than 1%. AK DOT does a lot of reclaiming. They have rented reclaimers for years and could have bought them many times over, but AGC dictates they cannot purchase reclaimers or laydown machines.

They have had a bad winter, but have had melting of permafrost and less ice causing coastal erosion.

New operators get \$21 per hour, but they can get \$7 per hour more in the private sector.

The Alaska DOT is the largest airport operator in country. Unfunded mandates from the TSA are costing them a lot of money.

Training – Training for maintenance of rural airports is a problem. They have to contract it, but have no requirements. Need to train them, but hard to get out.

A new gas pipeline program is being pushed by Governor. They are getting money to upgrade the Dalton Highway.

AAH – They had a group that had a section adopted that had an objectionable web site. Their legal counsel said they could not limit. They may expand the adopt a highway program to allow Moose Foundation to remove Moose Browse from ROW.

March 8-11, 2009

Ken Shultz, Wyoming DOT – WyDOT has had a material price increase, so they have not been able to purchase as much material. They still have some paving crews. The budget is OK, and have a small surplus. Aeronautics got a \$7M increase and maintenance did not lose any.

Staffing is a challenge As the mineral industries pays better. The downturn in the economy has allowed WYDOT to pick up some employees from other states. They are also getting a lot from the private sector.

Pay Raises – They will get the 4% that was planned.

The Governor has requested cost containment measures, other than people.

Their interim traffic management center went on line this past winter. It is handling message systems and changeable message signs. They are using it for winter maintenance operations. They are taking over radio operations from the districts and are going to use cell phones. They did not create new positions, but used existing FTE's in Cheyenne where it is easier to hire.

The Highway Patrol is co-located with the DOT and it is working very well. The Highway Patrol is part of DOT. Highway Patrol likes the cameras across the state and monitors them.

They have installed variable speed limit signs on IH 80 between Laramie and Walcott junction; MM 250-260. They change the speed limit for sight distance (Blowing sand or snow) or other issues. They have mounted them on overhead signs to ensure visibility. The Highway Patrol is involved in setting a lower speed and especially when raising speed limit back to regular speed.

Their Communications group is struggling with the use of new towers; they have environmental problems.

The winter has been relatively easy although the mountains have seen a lot of snow. An easy winter with low fuel prices has saved money. They shouldn't have a drought problems because of mountain snow.

They continue to experiment with pre-wetting aggregate and are seeing some material savings. they have two salt brine plants up and getting four more. They are trying to cut back on material use.

Scanning Tour – The scanning tour was successful, even though attendance was down.

Enterprise Asset Management System – The system is up and running and they are starting to see some fruit from the program. Peoplesoft is working well.

Stimulus – Wyoming may not take all the money in all areas, but will use all the transportation money and will go after any not spent in other states. Much will be spent on the preservation program.

Next years WASHTO meeting is in Cheyenne.

March 8-11, 2009

Lonnie Hendrix, AZ – Their economy is tied to the housing industry.

Budget – They have had a 12-13 percent cut and it may reach 15% by the end of year. In addition, they have been asked to identify other cuts.

Furloughs- Some state agencies have had a reduction in force, but the DOT has not laid off. They are having to implement the Stimulus projects. They increased FTE's in "Rent a Techs" and they will hire additional to take up slack. They are cross training between maintenance and construction. Morale is very poor.

Stimulus – Arizona's share is \$350M. They have only put \$4.5M in resurfacing and it may be cut out.

Budget Allocation Process – Give Lonnie any suggestions for a logic based way to allocate the maintenance budget to the districts.

MMS Upgrade – They have a Maintenance Management System upgrade that rolls out in July. The existing system is 20 years old.

Asset Inventory – They are currently using four full time staff to gather an asset inventory. Most of the state is done, except Phoenix area.

Brine Plant – The Globe District is developing a brine plant.

Environmental Area – They had a program for constructing salt sheds but it came to halt because of funding. They are performing environmental awareness training.

Emergency Management – They are having an emergency management meeting quarterly with California, Nevada and Utah.

Rest Areas – They are closing some rest areas for budget reason. They are looking at cost savings.

Corporate Sponsors for Adopt a Highway. It was first come first serve, and they are not happy there have been no permits being issued.

Photo Enforcement Cameras – There are a lot of them around town. The DPS installs and maintains them. Hits to cable barrier have gone down substantially in areas where there are cameras. They are using them in construction zones. The DPS has vans that they can use with photo enforcement cameras.

Kevin Bloss, Oklahoma DOT - Oklahoma hasn't felt the budget problems.

MMS – They finally have a signed contract a few days ago. Negotiations with Agile were challenging, so they went ahead with People soft.

March 8-11, 2009

Getting salt is difficult. They are currently getting it from Louisiana at \$58.62/Ton. Trucking it went from \$35/ton to \$70/ton.

Building Replacement Program. They are changing their terminology from “Barns” to Offices. Prototype plans and cost estimates are \$5M in FY 09 and will be the same in FY 10. They will try to build one per district. The last one cost \$1.2M. Fencing, Storage Tanks, Land Purchase, and size all impact the price. They are putting in some innovative items such as a herbicide rack to load from the top. Existing barns were 1960’s vintage. The design is done by consultant and Architect.

Alternative fuel sites – They will rely on private sources for gas.

Rest Area – They have an Interagency Agreement between ODOT and the Oklahoma Dept of Tourism to maintain at the rest areas at TIC’s.

Stimulus – The state got \$465M, ODOT \$340 M. They let 50 construction contracts this month and have \$1.1B worth of projects shovel ready. Was the Stimulus money put into preservation? No. They moved capacity projects forward.

Chris Christopher, Washington State –

Equipment Freeze - In September they got an equipment freeze,. They have a hiring freeze as well as equipment.

Salt – They got a shipload of salt from Chile.

Employee Safety Program - Their new employee safety program has been phenomenal. Injuries are down 30% and the cost of claims are down. They have probably saved \$3M. The biggest change is pre-activity safety plan; a tailgate discussion of safety. Question: Do you do daily documentation? Yes. Will you share guidelines? Yes

The Safety Incentive Program gave the employees \$100 for meeting goal and if the Region met their goal, an additional \$100. They have had to stop paying because it was so successful.

Storm - Chris passed out report on a severe snow storm. The snow was followed by rain and caused a lot of flooding problems. They had contingency money to pay for emergency problems; so their budget will be ok.

Equipment – Trucks are designed to shift at 1500 rpm and most people are used to shifting at 3000 rpm. A light has been installed in some vehicles that comes on at 1500 rpm. It has saved fuel.

Changeable Portable Message Signs. They had to spend four days dealing with hackers to make sure they were secure.

Salt Brine – They are moving to salt brine.

Washington Montana and Idaho used to have tri-state conference.

March 8-11, 2009

Toribio Garza – Texas – Zane Webb retired.

Budget – They have reduced travel, training and cut equipment last year, overall the budget is down 15%.

MMS – They have a contract signed with Agile

Emergencies - They had a major hurricane again in 2008 - Ike.

Lost Employees – They lost 3 last year.

Reorganization – There is a big push to regionalize the Department. This has caused anxious employees.

Stimulus – 25% has gone to preservation

Legislative Issues – Legislature didn't believe DOT. TxDOT developed the "2030 Committee". Prominent business people were selected. They identified huge needs in DOT. The report will be very beneficial.

Comprehensive Development Agreement (CDA) – A CDA has been awarded to Cintra to rebuild a section of IH 635 in Dallas. Maintenance and Operation for 50 years. Cost \$4B

Brad Darr, North Dakota– The Pooled Fund developed Maintenance Decision Support System (MDSS) (<http://mdss.meridian-enviro.com/pfs/>) has been expanded to all sections. They have added a storm replay section. They had a hard winter. They will have to replace some weather sites soon because they are old.

Salt Brine – They have some salt brine facilities.

Transportation Technician – They have combined construction and maintenance employees with a Transportation Technician title. The downturn has allowed them to hire some new employees

MMS – Theirs is broken; they are looking at asset management, but maintenance was left out of the steering committee.

Maintenance Training Program – They have had a successful maintenance training program for five years.

Salt Sheds – They are going to the legislature to get funding to construct some. Most are just tarps on the ground.

Hard Winter – They hired dozer operators to help. They had severe snow fog and had 38 plow crashes where people ran into plows.

Successes – They produced an Anti-Ice Brochure which has been very successful.

March 8-11, 2009

Budget Surplus – Legislature is in session and everyone is fighting over a \$750M surplus.

ITS – TxDOT is putting more digital message signs on the Interstate.

Study on needs paying good dividends.

Craig Lind, Nebraska DOT – Their Funding Allocation Committee has developed a capital improvement program.

Stimulus – Nebraska DOT got \$165M; most of it is going into pavement preservation projects with one big interstate 3R project.

Staffing – No furloughs. They did some wage adjustments last year. Some technicians were making more than supervisors, so supervisors then got increase and engineers got increase. Because of the economy, they are getting more applicants for positions. He received 54 applicants for an \$11 per hour job.

Legislature is in session - 2.4% raise on books. The proposed equipment budget was eliminated.

Cameras – They are putting cameras up. They have 89 statewide and another 20 are going up. This eliminates people going to field to look at roads.

MDSS - They have joined the MDSS pool fund project.

MMS – They implement an Enterprise Asset Management System for Equipment in '07 and it is working well.

Salt – They have a new contract for 140,000 tons of salt. This year they have used only 53,000 tons. They guaranteed the vendor 80%, so they may need to buy salt to meet contract. They are using salt brine. They are also big into geomelt because they have a sugar industry and buy from them. They are going to fabric buildings for salt storage.

Asphalt - Asphalt (CRS-2L) prices have gone up substantially. It was \$150/ ton and now they are paying \$615/Ton.

Rest Areas – In his district, they have six and want to close four.

Raised Pavement Markers – They have a project to remove plowable pavement markers; they had one fly up and cause a liability problem.

David, Colorado DOT –Colorado is having the same issues.

Blue Ribbon Panel – A report on the quiet crisis indicated it would take \$1.5 B to raise LOS from C to B. Due to economy no additional funding will occur.

March 8-11, 2009

Budget - Maintenance lost half of the budget. All contracts have to go to the governor's office for approval. The maintenance budget is scheduled to be increased in FY 10, but the construction program is almost nothing. There is a bill in the legislature for an increased vehicle registration fee and a tax on rental cars. They will not touch a gas tax. The money will be dedicated to bridges and highways. Additional revenue is expected to be \$200 M; some of which will go to the counties.

Furloughs – Furloughs are on the table.

Training – Colorado has a good maintenance training academy, and it is supported by the Director.

Stimulus – Colorado's share is \$330 M of which 30% will go to resurfacing projects. \$12.5M will go for transit funds in non-urbanized areas. They will meet the 120 day requirement and will be ready to spend money that others cant spend.

Equipment - Equipment is aging – They are replacing some trucks that are 25 years old. They are trying to implement a life cycle equipment cost project.

Maintenance Level of Service Program – One of the module in the Enterprise Asset Management Software is a maintenance level of service program. It is working very well.

Employee Retention – it is hard to retain employees in ski areas. They still have vacancies in Mountain areas. Even though they have \$500/mo addition for housing and some housing

Storm Water – They have gotten a categorical exclusion for maintenance.

Lonnie Hendrix - Vendor Recognition

Pervo Paint - Scott Shannon,. In business since 1929. Manufacturer of Traffic Paint

Hocker and Evans - Dennis Ryan

SCI - Jeff Smith, Manufactures Vehicle Impact Attenuator and Changeable Message Signs. Their system has a very low maintenance cost. UC Davis is doing a study of the cost of impact attenuators. They are always in dangerous locations. Las Vegas Nevada, replaced 50 units in 4-5 months.

Urateck – Dave Sickles – Eagle Lift in California represents Urateck. Urethane foam lifts and stabilizes pavement and other areas.

ICA – Marshall Stivers- ICA maintains highways, for agencies , states and others. They have 7500 bridges in Florida to inspect and report. They maintain a cable stayed structure in Tampa as well as Rest Areas in Florida.

March 8-11, 2009

Southwest Slurry Seal, Started in 1981, they perform slurry seal and micro surfacing. They are primarily in Arizona and occasionally in Nevada. They are a board member on the ISSA. Slurry.org is a great resource.

US Forest Program – Most states have roads in the National Forest System.

Stimulus – The US Forest Service turned in \$7B in requests and got \$73M in funding. They are only funded at 30-40% of their need. They are pulverizing some paved roads to reduce maintenance costs. There is discussion about making off road travel in National Forests restricted or prohibited.

Nevada, Bill Hoffman –

Furloughs - They have not had furloughs, but lost the 3R program of \$120M.

Washington DOT, Chris Christopher

Equipment – The Washington AGC saw maintenance working on a road and complained. They lost the equipment budget for 2009. \$9M

Smart Drive System – Camera System for in cars, looks out the front windshield plus another that looks back at driver. It can be put into any vehicle. Fuel efficiency report system where they can show idling per driver, etc. 25 vehicles for \$9500/ five months?

Snow Plow Visibility – They have gone to a light package including blue lights and foils to change blowing snow. They are using mobile data collection.

Asset Management System- They plan to have an RFP out by 2012

Strategic Plan for IH 80 Coalition - They are looking at rural interstate mountain passes. They are looking at interoperability and seamless travel.

Audits – They have three audits going on: Blue Ribbon, Legislative Counsel and Sage Commission

Their legislature is currently in session.

Jim Sorenson, FHWA – He is on the agenda to discuss the Stimulus and Transportation Reauthorization.

Economic Stimulus – American Recovery and Reinvestment Act of 2009 (ARRA) FHWA developed a Q&A document to answer questions on the stimulus package. It is on the web at: <http://www.fhwa.dot.gov/economicrecovery/qandas.htm>. It is 100% Federal money. Only 3.6% of the money went into highways and transit.

They doubled normal 2009 apportionments to the states.

March 8-11, 2009

Highway Trust Fund – The Highway Trust Fund is underfunded. They need \$100B to maintain status quo. Likely 2010 highway bill will be a one year bill with one year of funding with \$72B level. They will then work on a 5 year bill. There are quite a few reporting and certification requirements. There are a lot of support documents concerning both subjects and others on the Web Site.

Briefing Sheets – There are papers on both Asset Management and Bridges.

Work Zone Safety – FHWA recommends lime yellow vests.

Toribio Garza, TxDOT –

Emergency Operations – They have had several big events over the past few years.

Hurricanes – Hurricane Rita Sept 05, Hurricane Dolly, July 08, Hurricane Ike, September 08.

Floods – El Paso, Aug 06, Texas, July 07

Hurricane Ike – Sept 08 – To date they have worked 451,000 hours, \$14M

The preparation for evacuation they called “Chasing Ike”. The forecasted track changed back and forth several times before it hit Galveston. The storm surge pushed an incredible amount of debris inland including a huge barge. Debris cleanup is continuing six months after the storm. Two months after the hurricane, after FEMA dropped reimbursement to 75%, the Governor gave TxDOT the responsibility for all debris removal. They organized a project review team, made up of members from TxDOT, the Texas Commission on Environmental Quality, the Texas General Land Office (Have responsibility of coastal lands), The US Corp of Engineers, etc. They determined environmental permitting requirements. There were no environmental shortcuts taken on clearing debris. They hired debris removal contractors and monitoring consultants. They are separating debris into hazardous material, recyclable material, compostable and landfilled. There are still bodies unaccounted for. Paid for by the CY of debris, construction of access roads and vehicles by the each

Contracts for the initial storm debris cost \$6.5M and then \$8.4M. They have done 120 contracts including work for ferry repair. The Total cost so far: \$116M, FEMA reimbursement \$8.4M; FHWA reimbursement \$40M TxDOT \$65M FHWA reimbursement is simple. FEMA reimbursement is very complicated.

4074 TxDOT employees have worked on Hurricane Ike including people from 36 different organizations (Districts and Divisions)

Questions: – Do you own your own fuel tankers? A few, but have a contract with a vendor that provides 36 - 1000 gallon tanks, and 12 – 10,000 gal tanks.

Where is the debris going? It is separated, and is recycled, composted, burned and landfill.

March 8-11, 2009

Jim Sorenson – Recommends having the local FHWA office attend WASHTO.

FHWA has an ER manual and an ER training team. Aerial photography is the best way to document

Chris Christopher – Chris had a video of culvert washout that was shown.

Kevin Bloss, Oklahoma – They had several ER events in 2007.

Ice - It starts raining before it gets cold enough to freeze; when the temperatures drop ice forms. They normally get their salt from Kansas, but the mines flooded and ODOT is not a priority. They ordered 2500 tons of salt delivered from Louisiana by barge The next storm they ordered 27,000 tons of salt. They are building 60'x100' salt shed 10'high with 10" concrete walls. They have aluminum frames and a canvas top.

Floods – They had some bad floods and had a landslide on SH 82 that cost \$7M to repair. Then they had another round that cost \$7.3M. They had another landslide on SH 20 \$7.1M

Question: How do you handle debris removal during flooding events? They contracted it out.

Who has a web site for all road closures? State, plus City and County? Luci – We are working on one for Portland. Caltrans has GPS sites up.

INRIX – DOT or county can purchase service. They are looking to partner with AAA and the automobile manufactures to provide in vehicle information.

Rich Clark – They had a huge landslide that closed road. It would have cost a minimum of \$500,000 to contract.. They used qualified UDOT crews to blast some very large rocks (House sized). They removed it all with local crews and it cost \$40,000.

Luci - Who is using WEB EOC? Oklahoma, Washington, Nevada (Is currently training) Nebraska , Utah, N Dakota, Wyoming, Alaska, Oregon going.

Day 2

Mike Coffey, AK DOT, Alaska Alaska has 14,000 miles of roads with 5,600 miles of it state owned. They have 845bridges.

Climate Change Strategy – The majority of the state is built on permafrost. It is over a huge area,with much of it very remote, where the roads are not connected.

The climate change is having a major impact.

- Melting warming Permafrost
- Increased storm frequency and intensity
- Increased Coastal erosion due to lack of sea ice

March 8-11, 2009

- Increased river and shore erosion
- Sea-level rise
- Increasing temperatures

They have spent \$10M on problems related to melting warming permafrost, including increased surface distress, increased slides and failures. Their designs will have to change, with embankments built over permafrost needing to be thicker. Their crews do nothing but patching and reclaiming over the summer. They have a lot of longitudinal cracking on the pavement edge.

They are having Increased storm frequency and have debris flows and flooding.

Coastal Communities and their infrastructure are vulnerable to accelerated coastal erosion.

This year they had pack ice in November. The flooding has been extreme. There is a longer transition between seasons. Instead of a week or two, it has grown to 6 weeks. They are having increased flows in streams and ice flows.

The rising temperatures mean softening of asphalts resulting in rutting and pavement failures. The warming trend has caused major fires. They now have vegetation growing where they hadn't before, requiring brush cutting.

They are relocating roads so villagers can get out due to flooding. They are doing a lot of flood mitigation, drainage improvements and permafrost protection. They are looking at ways to keep permafrost frozen. Possibly using larger stone, or insulated fills.

Six communities are in jeopardy and they are developing relocation plans. One community is moving

Kivalina – Alaska DOT &PF provided sand bags to protect runway.

Newtok – Moving now to Mertarvik. AKDOT is building a barge landing. They are negotiating with Innovative Readiness training (IRT), a US governmental organization that will build the road.

Mike sits on the Alaska Climate Change Sub-Cabinet It is an "Immediate Action Workgroup" to look at the needs over the next 12-14 months. They got \$10.6M in state funds and \$40M additional Federal money. Recommendations from Alaskans for Alaskans. They are Involved in communities and tribes and get input from business, industry, academia, citizens, etc. They are looking at building codes –All agencies Schools, Federal, State, Municipalities. Final Report deadline – September 09

Question: How much has it warmed? 2.5 degrees in 20 years. The permafrost around Fairbanks is 29 degrees. An additional 2 degrees could have major impacts.

Do other states have similar committees?

March 8-11, 2009

Oregon has legislation on emission controls. Green buildings

Colorado, Yes

Washington, Yes

Alaska – Most of the recommendations have been slashed.

Washington – Chris Christopher, Use of Bio Diesel - A combination of regular of diesel and some other oil. They have been using it since 2005 and now use 2.5M gal/yr. The ferries use 17M gal/yr. By June 1, 2009 they are required to use a minimum of 20% in State equipment. By June 1, 2015 Washington is required to use 100% biofuels.

Short term challenges: Availabilities, Cold Weather Impacts, Storage/ Shelf Life. There are a number of states using, Oklahoma, Texas, Nebraska.

In cold weather Washington has had jelling problems, reduced from 20% to 10%.. The Ferry system is not having problems because they use a lot. Other parts of the state don't use as much. This summer, they are going to try 30, 50 or 100 percent in three different trucks. The proponents say it cleans engines, but it eats up rubber hoses.

Oregon is using 27% Bio Fuel B5 in the mountains, they normally use B20. It is more susceptible to moisture. They are circulating the fuel. They have had jelling problem, but also had a similar problem with low sulfur diesel. There are anti-jelling agents that work.

Oklahoma is using B20 because manufacturers don't recommend more than that.

Question: Are there other states with mandates to use bio-diesel? Colorado has executive order to reduce petroleum products. They are looking into bio diesel, but also reducing overall driving and usage.

Yellowstone National Park is using 100% bio diesel.

Idaho is using B20. They had no problems until the ultralow sulfur requirements. Now there is an ASTM specification. Don't put chemicals into it. They create a winter blend that includes 40% number 1, 40% number 2, 20% bio fuel. It is all ultra low sulfur. The biggest issue is storage, especially in vehicles that sit all summer, for example snow plows. They need to drain the fuel out of those vehicles.

Arizona is using Bio Diesel B5 and have not had too bad a problem with jelling except in vehicles where it sits for a while. They don't use it in the winter.

Washington DOT Municipal Storm water – They have built 10,000 or so storm water features. They were never given any funds to maintain them. Now they have a new permit that will require them to maintain them at a cost of about \$15M. They are being sued by another organization for failing to maintain.

March 8-11, 2009

Luci Moore – Solar Highway – Presentation. Oregon wanted to be the first state in country to put in a “solar highway”. They have installed a bank of solar panels on the highway right of way. It is part of a climate change initiative. The Governor and Director is on board. The Director is very supportive. They are looking for power with less impact on the environment. Oregon's electrical consumption is going up.

The pilot is at I-5 and I-205 South of Portland. The utility companies are installing it. The utility company is getting a huge tax credit. They will get their money back in 5 years.

It has to be at a location where it is used in the near vicinity. They are getting solar panel energy at the same cost as “dirty” power. The utility company gets a reduction in the power taken from the normal grid. It has won an award. It was first in the country.. They had to take into account safety, to make sure it was out of the clear zone. They got environmental clearance. They also had to take into account reflectivity, traffic control, grid Interconnection, shading and security.

Rich Clark, Utah. They are trying to generate 2% of their power using wind generators and solar panels. Solar is more predictable. They are using incentive and grant money. The savings would not pay for itself for 100 years. They are looking at a mini-hydro-electric plant. It would provide 100% of the power for the local maintenance section. They have a Monticello Wind Turbine.

Kevin Bloss - Led a discussion about Rest Areas and Interstate Oasis –

OKDOT is paying the Oklahoma Department of Tourism to maintain the Rest Areas at Travel Information Centers. Oklahoma DOT will maintain the pavement and perform snow and ice removal. There were questions about levels of service increase and the associated cost. The Department of Tourism may want more money to raise the LOS. OK DOT would have to pay.

We had a general discussion about rest areas, closures, trucks parking on the ROW, etc. Some issues are the spacing of Rest Areas, trucks parking on the shoulders, ROW, etc.

Oasis Program – Kevin read the Federal Rules on the Oasis Program. Oklahoma DOT has a good logo program. They could conflict with each other.

Rich – The Oasis program requires truck parking. They are looking at a joint venture between the state and a vendor. The rest rooms will have to be open 24 hours a day. They have implemented a number of them with Flying J. UDOT only signing for them.

Idaho – Had an old rest area that they closed and worked with Flying J to open. They paid Flying J \$325,000 and signed it as “Interstate Oasis”. It is working well.

March 8-11, 2009

Chris Christopher, WDOT – Attended Executive Leadership Course

He got four major things out of it; Competency result in confidence, consistency results in trust, Respect, give it and get it back, civility builds rapport

WsDOT Maintenance Accountability Program (MAP) How did you set LOS targets by Region? Ten years ago they took a shot in the dark to tie LOS to funding. They have made a few minor changes. Finally have enough data to really make decisions. Do you adjust level of effort if above target? No, but frequently have to explain why they are above target. Their budget in 01-03 was \$275M and was increased \$7M for additions to the system and \$2M for inflation. Now it is in a downward trend. They have had new miles added and inflation. It is important to tie priority work, delivery of maintenance, and performance measurement to budget requests.

When they set the performance standards they worked with the legislature and discussed priorities. They asked questions: What is Maintenance? ` 1. Operate the system, 2. Repair it when it breaks, 3. Perform preventive maintenance. 4. Take care of political issues.

They recently had an audit by a 3rd party. The report indicated no glaring waste, no areas where savings was identified. Findings:

1. Maintenance funding has not kept up with increasing demand from system additions, etc.

Large and growing backlog of maintenance now exists.

2. They have some basic management components in place, (MAP, MMS, Inventory, etc.)
3. However their Maintenance Management Program cannot accurately reflect work that is backlogged.

Definition of maintenance backlog – Backlog is the difference between the work that should have been done versus the work that actually got completed.

MAP1 was good at reporting what was happening, it did not predict needs MAP2 measured the output. How much is there to do? How much did we do? What didn't get done becomes the backlog. To manage, you need them both. They need to develop output performance measures.

For the strategic plan, they need to be saying the same story in all areas, eventually leading to the budget request.

Maintenance Contracting Discussion –

There is an "Executive Summit" in Tampa in April on NCHRP 20-24A(61). Research is being done by ARA. They are performing a critical review of highway agency contracting practices. They will prepare an interim report and then a final report.

SAIC is developing an NHI Course on Performance Based Contracting.

March 8-11, 2009

NCHRP 14-18: Determining Highway Maintenance Costs is being performed by Cambridge Systematic.

Contract Maintenance Texas – Zane gave history of past 10 years of controversial contracts performed. He discussed the controversial “Trans-Texas Corridor”. TxDOT got the reputation that they were not responsive to the public or the legislature. There was a big push to tear TxDOT down in the legislature. When Zane retired, John Barton and Zane Webb talked to a reporter. The resulting article did not realistically represent what they said.

Craig Lind, Nebraska, discussed the “District Incident Reporting Knowledgebase” (DIRK) – It is a web based system to track incidents from discovery to resolution. Whoever takes the initial call can input the information into the database. A decision has to be made as about sending an employee out to resolve the issue. Everything is recorded, the location, type of incident, highway number, reference post, selection list for all intersections on system, details of incident, description, category, priority. The outcome of the call is recorded and who notified the DOT. The system has good reporting information including information about pending issues and resolved incidents. It reports a chronological list of all of the activities of each incident. It tracks response time. The system sends an email to District Engineer.

It is good information for documenting response requirements after hours, on weekends or holidays.

They use DIRK to report damage to DOT appurtenances. It will track the cost accrued to the damage and repair, materials, labor, supplies, etc. They use the system to document claims. They will probably start using it to document construction claims.

Question: Does anyone use cameras in vehicles to send in live video feeds? Caltrans said they had a pilot program.

Bill Hoffman, Nevada, Discussed Snow and Ice issues – He handed out a Washington DOT Salt Usage Map. They have also done a lot of runoff testing and they are not having problems with salt.

There are a number of Publications pertaining to Snow and Ice:

NCHRP 20-7 Update of the AASHTO Guide for Snow and Ice Control

NCHRP – 6-17 Developing Performance Measures for Winter Maintenance

INRIX National Scorecard – www.INRIX.com

Winter Maintenance Domestic Scan – Rod Pleton, Lund, Minnesota DOT,

Upcoming Meetings:

AASHTO/TRB – Annapolis Maryland, July 09

2nd Winter Maintenance Peer Exchange Madison WI, Aug 26 and 27

March 8-11, 2009

PIARC XII International Winter Road Congress – Quebec, CA

Aurora, Colorado, Pacific Northwest Snow fighters – Materials, Specifications, Testing - Inhibitor Longevity and Deicer Performance Study.

Idaho Transportation Department. (ITD) Salt Brine Experience – They purchased a brine maker in 2006. They used brine for anti-icing, deicing and pre-wetting. Coeur d'Alene used 375,000 gallons in the first winter (06). The cost of Brine is \$0.14 per gallon at tank. They needed about 10% more than magchloride. In the '07/'08 winter, they used brine at 45 gal/LM. They bought a used transport to haul brine.

Pocatello bought a brine making system in 2007. Brine is more forgiving than magnesium chloride. Mag can cause problems in humid conditions. They don't have to re-circulate salt brine in the tank.

Shoshone – Bought a salt brine system for the '08/'09 winter. They are using for pre-wetting only. They have a lot of wind, so they don't spray liquids. They are still evaluating and believe mag-chloride may be less expensive. They may go with brine with a corrosion inhibitor.

Washing vehicles – There was a discussion about washing vehicles. Everyone is washing their vehicles after spraying to reduce corrosion damage. .

Bridge Spray Systems, Wayne Lupton, Envirotech - Bridge Spray Systems keep bridges as clear as the roadway.

Colorado DOT installed a bridge Spray System in Glenwood Canyon because vehicles were coming out of a dry tunnel onto a curved bridge and accidents were happening. Spray systems reduce the amount of salts put on bridges.

Pavement Sensors have not been very good. They work by measuring electrical continuity. Snow plows are very hard on the sensors. They have to be maintained. Active Surface Sensors are installed lower in the pavement and determines when ice crystals form and the temperature of bridge deck when crystals form.

Valves, spray nozzles - During new construction or retrofits, think about maintenance. The nozzles have to be assessable to be able to maintain them.

Infrared sensors – Measure temperature, ice formation, dew point, and pavement friction. They look at one square yard on the bridge deck. The sensors can trigger changeable a message sign.

Luci Moore, Oregon DOT – Poly Storage Tank Inspection Program – They have had a number of connection problems that pored material into a creek, etc.

Tank Management Program (Handout). They have implemented a Tank Management Program on how to select tanks, required wall thickness, purchasing guidelines, risk

March 8-11, 2009

assessment, inspection guidelines, criteria for high risk tanks, etc. They brought in an expert to develop the program and train employees. They test with ball point pen and baseball bat.(Get in electronic format)

Brad Darr, North Dakota – Maintenance Decision Support System – North Dakota is using the MDSS on 77 routes with 26 AVL units.

It tells them how much salt to put on the road and at what time. Information about salt used can be recorded in the truck. The system has weather on it, right in the truck. Their vision is to input timesheets, etc, right in the truck. The System has a color coded map of the state, shows roads, alerts, blowing snow alerts, etc. Cameras can be accessed at RWIS sites. They used radio technology and got it to work. A thermal map can be displayed showing RWIS sites and Airport sites. They Interpolate between sites. It can show air and pavement temperatures. Map can show truck report, where the trucks are, plow up or down, material and rate being applied, etc.

The system also can recommend when to apply chemical.

Cost/Benefit – States using system have validated their system. They have established all the inputs. Resources are able to be utilized better to produce a higher level of service with the same resources or the same level of service with fewer resources.

NDDOT – They like the MDSS. They are sold on it. They may put AVL in only one truck per section or about 1 in 4.

Wyoming, Ken Schultz– They haven't gone to a full deployment, but have got information in the system and ITS has access. They have near live info. A lot of people are very happy with it. All areas are different and each has to learn how to use the system to their best advantage.

The system could be used to document herbicide application , seal coat application, etc.

Minnesota is trying to get a winter severity index out of the system also. Intensity and duration? Yes and how the storm comes in, rain first, etc.

Rich Clark – Showed UDOT Tow Plow Video.

Lonnie Hendrix, TCCC Activities – Transportation Curriculum Coordination Counsel. Joint counsel to look at training needs. Spend \$1.0M – \$1.5M per year in training class development.

Matrixes are being developed for Construction, Maintenance, etc. Current project is to expand Maintenance Core Curriculum to include Pavement Preservation.

Training Research Database – Identifies source of training, curriculum. www.ntrr.dot.gov

A lot of web based training is available on line.

March 8-11, 2009

Courses are available at no cost.

Management, System Preservation, etc.

Utah, Rich Clark, Sign Reflectivity – UDOT plans to establish a sign contract. They plan to update the sign inventory. A committee will be formed to select assessment or management method (2010-2011). They will have a budget request to implement adopted method. They convert all their costs to a per lane mile cost and are usually successful at getting the extra budget for additional miles. Their MMS has a features inventory.

How are other states implementing?

Oregon – Annual night time inspections have been performed. They may calibrate previous inspectors and may continue to do same.

Utah – Reflectometers are not consistent. They will get better.

Thank You – Arizona DOT for hosting 2009 WASHTO Conference

Zane Webb – Congratulations on Retirement

Day three

Emergency Relief – Does anyone have any innovative financing recommendations for ER. Most just take money out of another fund, contingency fund, etc. and hope to get reimbursed.

How do states handle traffic control plans for maintenance? Oklahoma – They have 8 traffic engineers that approve traffic control plans for maintenance. Colorado – They have misc. and signing standards. Maintenance follows one of the standards unless they have unusual situation and then get traffic engineer to approve. N. Dakota has a pocket guide.

Arizona Risk Management – When a work zone is set up, they document in their MMS. They take a hard copy of traffic control plan with them. They indicate in the comments in MMS what TCP they used. Use Part 6 MUTCD unless they need to modify.

Wyoming just captures time performed on traffic control and keeps the Traffic Control Plan used that day in a diary.

TCCC has four levels of training on Traffic Control.

Alaska has gone to web based on all training and they are happy with it. They are too remote and it is cost prohibitive have training in person.

March 8-11, 2009

There is FHWA safety money to help pay for training. Workforce Development.

Have any states closed Interstate Rest Areas? – Texas has closed rest areas. They have a published plan, and get the support of local politicians.

Nebraska will try to close some and leave the pavement for truck parking.

Oklahoma is closing some and allowing DPS Oversize and Weight use old site.

Texas has an internal committee going to the districts to review maintenance operations. They are driving roads for two days with maintenance supervisors and getting with the District Engineer on the third day. They have a very candid discussion about needs. How often does the director of maintenance visit with supervisors? How often does the Area Engineer come visit? They are getting some very good input from maintenance supervisors. They have a wealth of knowledge.

Arizona has an environmental person who travels around to maintenance and gives advice. Their job is to keep the District Engineer out of jail. What do the rest of you do?

Alaska – M&O has their own environmental manager in one area. They are getting things done much quicker.

Oregon – They have five regions. Each has two environmental coordinators. Construction uses them also. They report to the Regional Director.

Washington – Have six regions and each have environmental coordinators.

Idaho – Has the same.

Roads that cross state lines. How do states coordinate with each other when there is an incident at state line? States have coordination meeting. Coordination is critical for things like snow storms. Idaho has agreements with surrounding states to assist each other.

Arizona – Asked for authority, particularly during disasters, to work outside of the ROW.

Oregon has a public works agreement with all the cities and counties. Anyone can ask for or receive assistance. The agreement says in an emergency. Liability is covered in the agreement.

Indian Reservations – Reservation police have stopped traffic and allowed for collecting funds on the road for various organizations.

Utah – They have a new formula for water based paint. They are grooving pavement and inseting paint into the groove. The plows don't wear it off. They have had some issues on concrete where paint did not stick well to some rocks. Larger beads provide better reflectivity. 125 mil groove. 25 mil stripe.

March 8-11, 2009

Oregon – Is trying to figure out how to retain stripes. Thermoplastic striping is expensive and doesn't last more than two years.

Who is using centerline rumble strips? They have used in Idaho and Arizona and have had some raveling. Oregon is not having problems. Utah has not had any problems but don't have many down yet.

Alaska – How do you handle after hours calls to Supervisors, on call pay? Not paying on call. If you leave the house you get paid for four hours.

Arizona – It is voluntary, If supervisor has to take a lot of time to find crews, they are paid for their time.

Oklahoma – They are not on call; they are paid if they work more than 15 minutes.

Washington – Pay for standby (\$1/Hr), don't get paid extra. If they are not on standby, they are paid full hourly rate for work performed.

Nebraska – Who is allowing supervisors to take vehicle homes? Allow in Nebraska. Pay if they go out. Texas allows supervisors to take vehicles home. Nevada just rewrote their policy. It has to be included as income. Vehicles have radios, cones, etc. Alaska – They have a few people that abuse use of vehicles. It is a grey area. Washington Supervisors used to take vehicles home. About half of superintendents took vehicles home, but didn't ever go out. They took them away. Oregon solved problem of tax law by making them work vehicles with emergency lights and fuel tanks.

N. Dakota – Allow Snow plow drivers to take vehicles home? Some

Is anyone letting the public know services are being cut because of funding? Colorado has publicized policy and is anticipating many complaints in the fall.

Arizona is putting signs up "Route not plowed or patrolled on nights or weekends". So far they have been able to plow one path down roads because of light winter.

ADA – Perform winter maintenance on all facilities built with FHWA funds? Jim Sorenson said it did not require clearing snow from sidewalks, etc. Policy should parallel what is done on roadway. They should provide a cut in the plowed snow at cross walks for pedestrians.

Business Meeting –

SB&R Funds – State can request a waiver.

Scanning Tour – Texas cannot commit. Maybe they should not have one this year. They have political issues. Jim - Pooled fund can't be just a holding tank. The money is tagged for WASHTO meetings. It has an end of life 3 years. If necessary, don't charge a registration for next years meeting.

March 8-11, 2009

Jim – Other items can be performed to utilize money. MQA, Research on bridge decks, meetings about other issues.

Vote on presentations to be presented at WASHTO. Highest Votes: Solar Highway, Cleanup after IKE, MQA, BIO Diesel

WASHTO Meeting is the same week as the AASHTO Maintenance Subcommittee.

WASHTO Meeting Maintenance Session was not well attended last year.

AASHTO Subcommittee on Maintenance Organizational Structure Change – Currently 11 committees or focus groups. They will probably reduce number.

Three meetings are important. Contract Seminar in Orlando

Planning to attend AASHTO Maintenance - Utah, Nevada, North Dakota, Wyoming, Oregon – Subject to approval.

2010 Meeting – Wyoming Plans on hosting. This is best meeting. They hope to use the pooled fund. It will probably in Cheyenne. They plan to send a questionnaire about peoples interest. It is close to a lot of ski areas in Colorado. They will have it downtown and everyone will be able to walk to restaurants. They will probably hold it about the same timeframe. Everyone will probably have to fly into Denver and drive to Cheyenne. It is about 1 ½ hour drive. They could pool in rental cars.

Who wants to host in 2011? Washington, Texas, Colorado and Nebraska are the longest since they last hosted.

Nebraska – They would be glad to host, but they are four hours from the Denver airport. There is a one flight into Scotts Bluff – They could tour the DO, Omaha is 4 - 5 hours away. Lodging will be much cheaper. The airline is Great Lakes.

Texas and Colorado is questionable.

Postpone Vote until later

Rocky Mountain Pavement Preservation - Idaho, Wyo, Nev, Utah, Texas are meeting in October in Salt Lake City.

March 8-11, 2009

Attachments

The following attachments were handed out at the meeting but are not included as attachments to this report::

1. ATSSA Roadway Safety Training Institute – January – June FHWA Grant Sponsored Course Schedule

See: http://www.atssa.com/cs/roadway_safety_training_institute

2. Poly Tanks for Farms and Businesses, Purdue University

Download at: <http://www.btny.purdue.edu/Pubs/PPP/PPP-77.pdf>

The following attachments were handed out at the meeting and are included as attachments to this report::

- 1. Agenda**
- 2. Summary of Maintenance Contracts, March 2009**
- 3. Washington State – Biodiesel – Looking Forward**
- 4. Washington State – WSDOT Municipal Stormwater Permit Implementation**
- 5. Washington State – December 12, 2008 – January 9, 2009 “Responding to the Storms**
- 6. TxDOT contracting more**
- 7. NCHRP 20-24A(61) Executive Forum on Performance-Based Maintenance and Operations Practices (Update)**
- 8. NCHRP 14-18 Determining Highway Maintenance Costs (Update)**
- 9. Oregon DOT – Environmental Management System (EMS) Policy and Procedures Manual**
- 10. Oregon DOT – Risk Assessment for Deicer Tank Locations and Tank Inspection information**
- 11. FHWA – Jim Sorenson Notes for the WASHTO Maintenance Conference**

March 8-11, 2009

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March 8-11, 2009

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March 8-11, 2009

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March 8-11, 2009

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March 8-11, 2009

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March 8-11, 2009

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March 8-11, 2009

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March 8-11, 2009

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March 8-11, 2009

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March 8-11, 2009

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March 8-11, 2009

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