

## I-80 Coalition Fall Workshop Action Items Summary

### Attendees

<i>Name</i>	<i>Agency</i>
Steven Kirkpatrick	Caltrans
John Domina	Nevada DOT
Bill Hoffman	Nevada DOT
Denise Inda	Nevada DOT
Thor Dyson	Nevada DOT – District 2
Mike Fuess	Nevada DOT – District 2
Dave Titzel	Nevada DOT – District 2
Michael Murphy	Nevada DOT – District 3
Kevin Lee	Nevada DOT – District 3
Sondra Rosenberg	Nevada DOT
Bill Thompson	Nevada DOT
Brenda Redwing	Nevada DOT FHWA
Ngozi Okoro	Nevada DOT FHWA
Richard Clarke	Utah DOT
Glenn Blackwelder	Utah DOT
Ralph Patterson	Utah DOT
Dan Kuhn	Utah DOT
Ken Shultz	Wyoming DOT
Vince Garcia	Wyoming DOT
Talbot Hauffe	Wyoming DOT
James McGee	Nebraska Department of Roads

<i>Name</i>	<i>Agency/Firm</i>
Lisa Burgess	Kimley-Horn and Associates
Deanna Haase	Kimley-Horn and Associates
Molly O'Brien	Kimley-Horn and Associates
Tony Mouser	Northwest Weathernet
John Mewes	Meridian
Paul Bridge	Vaisala
Jeremy Duensing	Telvent DTN
Mike Baker	Wal-Mart
Rod Schmalhaus	Wal-Mart
James Healey	Wal-Mart
Rick Norton	Wal-Mart
Mike Haas	Open Roads Consulting
Ted Trepanier	INRIX
Sheldon Drobot	NCAR
Rhett Milne	NWS
Gabriel Guevara	FHWA Freight (on phone)

### Near-Term Activities (“Low Hanging Fruit”)

#### Outreach:

- **Develop PowerPoint presentation about issues on I-80** – 30 minute presentation about issues on I-80 to be able to show to I-80 Corridor stakeholders. Can be used for orientation as well as education.
- **Develop 2-Pager of what this Coalition is about and example outcomes thus far** – to be able to distribute as warranted.
- **Add content to Best Practices link on website** – plans, agreements, research activities, studies and other information will be collected from states and put up on the I-80 Coalition website either in the public access area or the member only access area.

#### Coalition Communications:

- **Finalize contact list** – states to finalize contact list for operations/maintenance.
- **Map the contact information on a strip map** – this will include contact list and I-80 devices and will be color coded for jurisdictional areas. Will also show centers that are spun up during winter months as needed as well as permanent centers. Will show general information as a start and will attach finalized contact list. Envision multiple 11x17's to hang up.

- **Develop freight survey** – develop a survey for freight for each of the states to distribute to their contacts to include questions such as what restrictions/standards are different state-to-state that are difficult to adhere to, what information would be beneficial for them to receive pre-route/en-route, etc. This will help to focus freight activities on solutions to actual needs.
- **Involve other freight stakeholders in the conversation** – need to get a call together with the freight group after the workshop. Could include Great White, CR England, Swift, FedEx, UPS, American Truck Association State Chapter, American Independent Truck Association, Independent Owners/Operators, and the National Association of Truck Stop Owners.
- **Briefs to Association newsletters** – some states write short briefs about DOT and maintenance activities to include in Association newsletters. This would be helpful to implement on a state-to-state basis if not currently done already.

#### Tools:

- **NWS to help Nevada get on iNWS and NWSChat tool** – the NDOT I.S. department does not allow the usage of the NWSChat tool. NDOT needs the NWS to write them a letter to allow support of the NWSChat tool. The NWSChat tool needs to be utilized for each NWS forecasting office along the I-80 Corridor across the Coalition states. There are approximately 5-6 offices NWS Offices along the Corridor. It would be beneficial for DOTs to utilize this tool if they are not using it now. This promotes regular local coordination with local NWS contacts.
- **Leverage email distributions** – Northern California sends out an email notification of road closure/conditions information to the California Trucking Association. In addition, they send out emails (24/7) to 750 truck dispatch terminals. This Coalition could leverage opportunities to send out information such as DOTs forwarding iNWS alerts onto freight private sector distribution list.

#### Tours:

- **Winter “tour” for decision-makers and media** – this would be beneficial for decision-makers and media to know firsthand what winter weather operations and maintenance is like for the DOTs and to be able to champion the message to other decision-makers and to the public. Getting the PIOs involved at beginning of winter and during storms would help in this effort. Need to look at best practices for how to get media involved.
- **TMCs to support tours** – if TMCs are not offering tours currently, it would be beneficial to support them to communicate the necessity and usage of them to interested parties desiring tours.
- **Leverage social media to get information out to travelers (Twitter/Facebook)** – social media is becoming a real-time tool for conditions reporting and this Coalition will look to opportunities to leverage these outlets in the future.

### Longer Term Activities

#### Multi-Agency Concepts:

- **Opportunities for multi-agency training** – some states offer formalized training programs for their DOT personnel in operations and maintenance, and some states do not have well-established programs. Training may be offered on the same subjects in different states – it was recommended to establish multi-state training through webinars or other tools to accomplish this activity. Potentially utilize a third-party provider such as TCCC (Transportation Curriculum Coordination Council) to establish training.
- **Develop the “One-Stop-Shop” concept** – this will generally be an internal tool for DOTs, not for public usage. Existing mapping applications can support I-80 corridor mapping for road conditions/weather reporting/weather forecasting – it just needs to be defined how that information will be used to share consistent information with to all states accessible from one

location. Leverage relationship with NCAR to further this concept. The states need to start doing impact-based forecasting. Local information is important, but all of the information across the corridor should be accessible from one location. States also need to treat freight as a step above the normal traveling public. The responsibility should be on the TMC, not necessarily the PIO, to do a push system to truckers/media/DOT personnel.

### Communications:

- **Linking TMCs across states** – this would likely involve multiple phases of connectivity, starting with regular phone dialogue between the TMCs and potentially moving to a more integrated and automated method. Establishing the cooperation and coordination across state lines beyond just one state's nearest neighbor is important to begin this formal linking strategy.
- **Connecting DOT TMCs to freight dispatch centers** – connecting TMCs to Freight Dispatch Centers would be beneficial for freight dispatch centers to receive information directly from the source. It is also beneficial for the TMC to collect corridor information from other states to communicate it directly to freight industry.
- **Collocation of media at TMC** – this is a successful practice of many state TMCs to get more accurate information to the media in a more timely way rather than allowing media to speculate on information to disseminate. This does involve some logistics and planning in advance of this move, but it is recommended and a potential strategy for some TMCs to look at implementing if the need warrants.
- **Document the significant differences across the states** – this would be beneficial to document in terms of chain control, freight size/weight/height restrictions, and state standards applied to the roads.

### New Initiatives:

- **Leverage IntelliDrive and MDSS initiatives** – there have been great strides in using information in innovative ways to support the objectives of the Coalition and it would be in the Coalition's best interest to continue to try to leverage federal initiatives as much as possible.

### Freight:

- **Take closer look at freight standards across states** – some states have standards for the freight industry that make it difficult for them to comply as well as manage their operations and movements. Coalition states should look for opportunities to adjust standards to relieve some potentially unnecessary limitations on the freight industry if they are not justified because of other purposes.
- **Map of freight decision points and protocol changes** – Coalition states could look for opportunities to modify protocols and processes for handling freight movements through their states to be more efficient for the freight industry as well as to satisfy safety and maintenance needs on the road for DOT personnel and the general traveling public.
- **Truck parking** – this will continue to be a concern for this Coalition and the activities of the Coalition will continue to strive to solve some of the issues with truck parking across the corridor.

### Weather:

- **Common weather descriptors with common color coding** – the weather descriptor brief white paper developed for attendees at this workshop highlighted the different terminology utilized in different states for winter-related conditions. There is consensus among the group that it would be beneficial to define red, yellow, and green thresholds within each state as to what the 'impact' of that weather descriptor is on the roadway and the driving safety for the traveling public and the truck drivers. The Coalition will start with the work that has been done as part of the NorthWest

Passage group on common weather descriptors, but it was mentioned that there is significant effort involved in modifying systems to be consistent. That is why the recommendation coming from this meeting is to not modify individual systems, but rather to establish a common 'message' to travelers using a weather-impact color coding system that takes the individual terms of each state and categorizes that term into what impact that term has on the roadway. 3" of snow in Nevada is not the same as 3" of snow in Wyoming – this solution will make sure that each state maintains its unique terminology for reporting, but the general driver will know that 3" in Nevada is yellow and 3" in Wyoming is green. This could also be developed to signify the impact of the same description in different parts of the states – evidenced by the significant changes of terrain in California and Utah.

### Outreach:

- **Develop performance measures** – measures are needed at the DOT level as well as for activities on this corridor to support internal and external purposes.
- **Media campaigns** – this is to be able to tell the DOT story to the public more effectively. this is beyond just the scope of this Coalition and involves multiple outreach strategies.

### Formalized Groups:

- **Weather Strategy Group** – Ralph Patterson (UDOT) will take the weather initiatives forward.
- **Freight Group** – Dan Kuhn (UDOT) will take lead with support from Kimley-Horn on developing a freight survey. Formal freight group will continue to meet via webinar or conference call after this workshop.
- **TMC/Communication Group** – It was planned during the workshop to get the TMCs to have an initial conference call before winter begins to discuss information that should be talked about during the calls before a situation happens to make sure before a major event that the calls are efficiently managed. Calls will then be implemented to link up the 6 TMCs by having a 20-minute conference call prior to a storm. Look to use webinars during this call as needed to link TMCs. It would be beneficial for these calls to happen between day-time personnel as well as between the midnight personnel all of the peer groups are talking to each other. Steve Kirkpatrick (Caltrans) will take the lead to start up that initial conference. When a weather event warrants it, Tony Mouser (Northwest WeatherNet) can initiate the call for the entire corridor.

### Coalition Next Steps:

- All champions of initiatives will begin to initiate near term activities
- Hold Spring webinar in the May/June 2011 timeframe
- Hold October larger workshop in 2011

# **I-80 Coalition Fall Workshop Detailed Meeting Summary**

## **1. State DOT Presentations**

Each state offered presentations to update the Coalition partners on activities that have happened since January (the last Coalition meeting) in their state. Discussion and topics from each state are included below. A general update for the Coalition is that the I-80 Coalition website is on the FHWA Office of Freight Management website – [http://ops.fhwa.dot.gov/freight/corridor\\_coal.htm](http://ops.fhwa.dot.gov/freight/corridor_coal.htm).

### **California:**

- There has been an increased partnership with CHP – patrol officers man the chain control areas now.
- 2010 Snow Operations Plan – includes business practices, how Caltrans staffs up during the winter, and operational processes utilized during snow and ice operations. Hard copies were distributed to attendees; an electronic version is posted on the I-80 Coalition web site under “Best Practices”. <http://www.dot.ca.gov/dist3/departments/mtce/documents/SnowPlan-2010.pdf>
- Within California on the I-80 corridor, there is \$500 million worth of projects invested, many completed in the near-term.
- The website [www.GetAcross80.com](http://www.GetAcross80.com) has been an initiative by Caltrans that has moved forward to provide consistent information to the traveler. It is a resource for I-80 specific information on weather, work zones/construction, closures, rest areas, CCTV, and a link to Caltrans truck services.
- Caltrans began a project to improve traveler information through the corridor involving the deployment of electronic toll readers from Auburn to Truckee to ultimately provide travel times on CMS. This captures travel time data from Bay Area Fast Track users that are in the Sierras.
- Caltrans started using the Ice Slicer (as Utah has already implemented) as a pilot program in Truckee.
- Operating expenses continue to be extremely tight in the state.
- Caltrans has experienced successful operation of the pusher truck and will be continuing the program this year.
- The Sacramento TMC feeds 511 and information is supplemented by with CHIRP (information from the field to the center). The Sacramento TMC is challenging to support the I-80 corridor, so there is a need to have close proximity of responders to help traveler information with I-80 near Truckee.
- Caltrans coordinates one-on-one meetings with stakeholders along the I-80 corridor annually – including DOTs, businesses, maintenance, trucking industry.
- When Caltrans spins up their winter operations, they staff up using an existing list of maintenance and construction personnel that are not able to work over the winter. It is generally observed that approximately 70% of the list comes back to Caltrans to work every year.

### **Nevada (State Update presentation – under Coalition Activities/Meeting Archives on website):**

- NDOT has installed 7 additional repeater sites to support NDOT’s radio system to report information for MDSS. Nevada cannot use cell phones for communications because there is no coverage over a large portion of the state.
- NDOT recently installed two new RWIS sites.
- NDOT is working to improve communications with both CA and UT on a District basis.

- There is a Joint Operating Policy Statement (JOPS) agreement between NDOT and DPS/NHP. NDOT has complete control over the roadway, but sometimes law enforcement takes control. As the statewide TIM Coalition moves forward, this should improve the coordination and communication.
- Nevada is currently looking to expand the Traffic Incident Management (TIM) Coalition statewide from the trial program in the Las Vegas area.
- 1,000,000 acres of wildfires occurred in 2006 in northern Nevada, so the response operations involved additional stakeholders such as Bureau of Land Management (BLM).
- NDOT is requesting two tow plows in the current legislative session as well as adding wing plows to the fleet. NDOT still needs to replace aging units in the existing fleets. There is interest in what UDOT acquired with tow plows.
- The state is looking into other technology such as rear air foils, wing plow laser aiming lights, blue lights on rear of snow plows.
- There are four new wildlife crossings along I-80 and NDOT is looking to enhance that program throughout I-80. Overcrossings have found to be more effective than undercrossings. There were 70 wildlife/vehicle incidents in the immediate vicinity of the crossings in the year before the pilot deployment of these crossings.
- NDOT (as well as other states) have incurred a loss of institutional experience through retirements, turnover, etc. It is a challenge maintaining a consistent level-of-service with new hires, temps, trainees. Formal agreements such as the recent JOPS agreement between NHP and NDOT should help solidify the institutional arrangements and expectations, regardless of personnel changes.
- Nevada is looking to revamp the Maintenance Academy training program and it will be a charge over the next few years to build it back up to address needs.

**Utah (State Update presentation – under Coalition Activities/Meeting Archives on website):**

- Utah needs to leverage temporary hires to support snow and ice operations and maintenance – there is an opportunity to leverage what Caltrans is doing with their temporary worker program.
- Utah has webinar training available that would support other states in opportunities for multi-agency training programs.
- Spreader calibration has helped UDOT save on salt usage.
- Salt slurry (watered down salt for disbursement) has worked well to break up ice packs quickly. This method can be used periodically when salt treatments are not working as effectively as envisioned. Prewetting the salt is promoted by Utah.
- The combination of spreader calibration and salt slurries has shown a 20%-40% savings in salt usage.
- UDOT has 19 CCTVs along I-80 and they are adding 15 new CCTVs.
- [www.commuterlink.utah.gov/forecastview](http://www.commuterlink.utah.gov/forecastview) – RWIS sites support recent weather forecast, operators and maintenance personnel are using this more and more the forecasts provided on this site.
- UDOT is focused on putting the same ‘impact to the roads’ information out as the private sector, but “impacts” identified in weather forecasts differ among the various weather providers. Forecasters with National Weather Service (NWS) know what UDOT is doing and vice versa through utilizing the NWSChat tool. The road impacts communicated to travelers needs to be the same no matter who is reporting that information.
- Coordination with NWS has been successful this year. NWS does not necessarily know operations, so this constant coordination is beneficial to get them talking directly to the TMC operators. Utah has been using webinar conference calls and maintaining a ‘first name’ relationship with NWS. The NWS/UDOT Joint Conference helps to maintain relationships, discuss priorities and issues, and plan for winter season ahead.

- One-Stop-Shop for information: Larry Dunn is heading up the Google mapping of I-80 conditions reporting along the corridor for Utah. NWS wants to host the weather forecasting/reporting tool envisioned as part of this Coalition, but UDOT would like to supplement that tool as well with operations information. Perhaps provide an I-80 link on the NWS website for public information? This would be a great way to get information out to freight travelers and could potentially utilize this concept to support other corridors. NCAR currently has a national Google map already that can be leveraged.
- Utah has an existing VMS agreement with Utah Highway Patrol (UHP) which is a designed process to help build trust. UHP will pass the traveler information dissemination request onto the right person to be able to post a message. UHP can close the road, but if it is longer than 30 minutes they have to let UDOT know.
- There is a need for coordination for posting traveler information messages in other states. The challenge is when “Call 511” is posted on the sign, the traveler could be potentially calling the wrong state’s 511 system. There is a need for a global message to mention both 511 networks so the traveler knows which one to call.

### **Wyoming:**

- WYDOT was able to purchase 35 new trucks and plans on replacing 40 more next year.
- WYDOT does not use tow plows, as the combination of grades and winds are not believed to be optimal for tow plow usage.
- Currently they are replacing and supplementing snow fences with a new vertical fence design.
- There are 6 salt brine plants in Wyoming. WYDOT vehicles are capable of pre-wetting salt on every truck. They have seen through research on the ground to compare winter and materials usage correlation. This procedure has saved over \$75,000 the first year and \$110,000 the second year.
- Variable Speed Limit (VSL) deployments as well as maintenance enhancements in Wyoming have resulted in a 20% reduction in closures and a 50% reduction in truck crashes. There has been significant benefits to the VSLs and maintenance enhancements.
- Text message subscription service experienced 4 million texts in 6 months and was able to reduce the WYDOT telephone bill by \$75,000. There were 1.9 million calls the year before the text subscription service was implemented which was reduced to 1.2 million calls last year.
- There is now a “pre-application” process in Wyoming for residents to be able to receive pre-authorization to use certain roads during a closure or hazardous weather. If travel is advised on a closed road in Wyoming, people who have been pre-approved to use that road when it is closed are able to use the roadway. This GovDelivery application process addresses a law that was passed about privileged access. This has been a preliminary deployment thus far. Wyoming Highway Patrol does the authorizations before a storm happens and this process is relatively straightforward for the TMC to support.
- There will be 4 VSL zones in Wyoming in the near-term – there is one zone implemented currently. Speeds are determined by a trooper or maintenance person who will make a recommendation for the variable speed based on radar detection. The DOT then makes a recommendation based on the base speed + 5 mph. This year WYDOT is working on a control system at the University that will incorporate weather variables to make the determination better for the DOT. VSL’s are enforcement as a regulatory sign. There are amber signs and black/white signs. These signs will not be automated.

**Nebraska** (*State Update presentation – under Coalition Activities/Meeting Archives on website*):

- Automated gates have been put on I-80 near Wyoming. Current gates have been installed on ramps although there are mainline gates as well.
- The backbone of ITS in rural states is RWIS, as weather data is key to safety and mobility on rural highways – need to leverage RWIS heavily to support operations and maintenance in rural states.
- NDOR has developed a successful business model to allow ‘sponsorship’ of its freeway service patrol fleet – charges \$5,000/square inch for advertising space/logos on FSP vehicles.
- NDOR has rest area kiosks which have real-time communications in rest areas and 511 information on the kiosk. Nebraska was the first state to implement a statewide 511 service. It co-branded the AMBER Alert program and 511 to demonstrate its value as an important emergency notification tool.
- 200,000 ADT at the Nebraska/Iowa border – Iowa is an important Coalition state moving forward as this Coalition expands.
- TMCs between Nebraska and Wyoming are not connected.

## **2. Freight Discussion**

*Presentations from workshop included under Coalition Activities/Meeting Archives on website:*

- ***Freight – UDOT Overview of Freight on I-80***
- ***Freight – I-80 California Goods Movement***
- ***Freight – Wyoming Survey Overview***

Discussions on the topic of freight included:

- Utah received a federal grant for \$500,000 to look at Truck Parking on I-15 – a lot will apply to the issues discussed with I-80 in terms of parking availability, notifying truckers of available parking, long distances between decision points, similar weather challenges, etc.
- The Caltrans I-80 segment experiences 2.2 million TDU’s per year. There is a drop off in overall traffic mid-state because of Sierras although truck volumes are steady into and over the Sierra’s. Daily traffic is one factor to consider – peak periods and Fridays/Sundays would be interesting to single out for analysis purposes. I-80 is not as significant in California as I-15/99. There are 4,000 trucks on I-80 through the state, but the other Interstates experience up to 30,000 in the San Jose/San Francisco/San Joaquin Valley area. Trucks traveling long-haul are mixed in with short-haul traffic through California – this creates challenges with logistics to support long-haul truckers if commuter/quick trip traffic impacts their movements. 2007 Goods Movement Action Plan was developed for Caltrans. Proposition 1B (approx \$3 billion in State funding) supports Trade Corridors Improvement Fund (TCIF) I-80 rail/freight projects which are all due to go to construction within the year. These projects will add significant capacity to I-80.
- The Port of Oakland has plans for expansion and the state is a partner in that expansion from a funding perspective. The Port still has capacity left but there are expansions planned in the near future. Interested parties can check the Port website for expansion details [www.portofoakland.com](http://www.portofoakland.com).
- I-80 has Corridor System Management Plan (CSMP) coverage from Bay Bridge to the Sierra foothills – these are all publically accessible on the [www.corridormobility.org](http://www.corridormobility.org) website.
- There are expansion plans of PEMS detectors along the I-80 corridor at a spacing of every mile.

- California does not allow triple stack trucks – Nevada and Utah allow triples and 30 miles of roadway in Nebraska allows triples. This is an inconsistency that is difficult for the trucking industry to manage in their freight hauling planning.
- The California Meal Break Law affects drivers – it is a required 30 minute parked break. This law affects scheduling of freight routes across the country for drivers that live in California because they are required to take these breaks even out of the state. It takes approximately 4 hours to traverse Donner Pass (CA/NV state line), so this requirement put into effect means trucks may be required to find truck parking wherever they are located when they need to take their break. It is an estimated \$1 a minute to sit for a truck.
- Local agencies do not have a way to accommodate new buildings that require truck traffic (terminal access) – i.e. a new WalMart facility. City infrastructure enhancements often are needed to support the freight industry off of the interstate. Although, there are many companies that prioritize locations that are directly off of the Interstate to make sure that these kinds of improvements are kept to a minimum.
- Nevada is developing its first Statewide Freight Plan as part of a larger Statewide Rail Plan project. The focus of the Freight Plan will be to identify projects, policies, and processes to enhance freight flow, reduce costs, provide truck parking, and increase opportunities for freight community in Nevada.
- WYDOT completed a study involving a survey of the freight industry to find out who is out there driving the trucks and what are they hauling. The results of the survey are that 42% were carrying food and would be penalized heavily because of their perishable products due to closures/restrictions. The average age of a truck driver is around 40-45 and almost 25% of people had only been driving 1-5 years. 7-8% of the drivers were not fluent in English (could probably be higher – other reports suggest 15-20% of drivers). That leads to questions regarding the usage of English DMS messages losing effectiveness on non-English speaking drivers. In addition, 1/3 of the drivers plan to retire within 5 years and half of the drivers plan to retire within 10 years – this equates to a significant loss of industry knowledge and high turnover.
- It would be beneficial to include additional freight stakeholders in Coalition activities including CR England, FHWA Office of Freight Management, FedEx/UPS, and Trucking Associations. Action item is to reach out to other freight stakeholders.

In northern CA, freight industry regularly keeps in contact with Kingvale Communication Center (Caltrans). It would be beneficial for the same coordination to occur in other states particularly because the freight industry travels across long-haul corridors and needs to know information well in advance to make good decisions on routing.

It is generally more effective to push information to dispatch centers to then forward onto truckers. For truckers that operate independently from any dispatch center, it would be beneficial to allow subscriptions for alerts. These two opportunities will limit the ‘distraction’ to the driver but gets them the information they need to know to make good decisions in the way that most suits their operations.

What does authoritative information mean? The public needs to know who is the weather “authority”. The detailed information coming from DOT is different from the maintenance forecasting is different from private sector information. The vendor may be different, but the forecast has to be the same to the traveler. States need to start doing impact-based forecasting.

What is the best way to get information to the freight drivers? Accurate and timely information is helpful. Messages that are up on signs for multiple days are not always helpful. DMS that point drivers to channel updates are only helpful if they are reasonably up-to-date. Most truck drivers have XM radio, so if there is a way for DOTs to tie road conditions/weather forecasting information into an XM station, that would be

extremely helpful. Messages that are sent to the radio stations help the most so they can listen to the reporting detail that will help them most. VMS coupled with HAR based on a survey was the most helpful to truck drivers – but it needs to be reliable data.

### **3. Truck Parking Discussion**

*(National Truck Parking Survey presentation – under Coalition Activities/Meeting Archives on website)*

Trucks just need a place that is safe, comfortable, and legal, and anything additional provided to them is added bonuses. Utah has taken advantage of the “oasis” concept which is called the Rest Stop Program. This is a private partnership with Utah as a joint effort to provide a rest stop – this includes restrooms, parking, store/food, drinking water, lighting, and is operational 24/7 hours that is clean, safe, secure, and not on state right-of-way. The private partners cannot charge for parking. The DOT encourages the private partners to have picnic areas. Utah has not put any funding toward this program.

Nevada has a problem that truck parking is undesirable in urban areas and that the currently law does not allow private businesses to be on public ROW.

The trucking industry puts a priority on food, fuel, restrooms, showers, safety and convenience – entertainment or luxuries are not encouraged because the drivers want to get in and get out of the truck parking quickly. (Freight – Wyoming Survey Overview presentation)

Based on a National Truck Parking Survey, only 1/3 of truckers find available parking at private truck stops. Long haul truckers must rest for 36 hours after 70 hours of driving.

### **4. Weather Discussion**

This section of the workshop focused on weather. The consistent weather descriptors topic was discussed during the workshop and key presentations were offered to participants. *Presentations from workshop included under Coalition Activities/Meeting Archives on website:*

- *NCAR Presentation*
- *NWS Overview of iNWS and NWSChat Tool*

#### **Consistency Issues:**

- Consistency in reporting is a big concern between states and for information getting out to the public.
- Nevada’s current 511 does not talk about road conditions (icy, wet, etc.) because of weather – only provides information on chains required or no chains required. Every state has a different reporting system and a different level of detail in how weather is reported.
- What is DOT’s role for providing information? Value added information will most likely be held in the private sector. NWS does not do road surface reporting right now, that is why DOT’s have gotten with private sector to get that extra “value added” information. All of the weather information could be and should be accessible from one location regardless of the private sector partner chosen for each state’s reporting purposes.
- No one has control about how the public gets road condition information consistently because there are a lot of different sources of weather info. This group needs to get down to how you define conditions and how you update conditions.

- Important information the drivers need: road temperature, precipitation levels (i.e. 4 inches of snow), forecast, last time a plow went by, and chain controls. Getting this specific information to the truck driver will help them make every decision they need.
- NWS is doing a study to standardize the weather story – even NWS Weather Forecasting Office reports/forecasts differently.
- FHWA has initiatives in place to develop communication standards, but not thresholds of what information would be categorized as what level of impact. This is where the states need to be involved at their local level. This group has an opportunity to define thresholds that make the most sense. NCAR forecasts in green, yellow, red, and purple road weather impact levels.

### **Using Information:**

- IntelliDrive – algorithm based on maintenance vehicle equipment usage to determine road conditions would be helpful, need to use information that transmits information to support the DOT getting good information to make good decisions and help the DOT get better information to the public.
- NCAR is working with IntelliDrive concepts – test beds, test vehicles, lots of data analysis. NCAR could potentially add traffic information, CMS messages, audio alerts to their mapping and database. The IntelliDrive project will be an 18 month project. Experimental data collection will occur this fall/winter, and more serious data collection will occur next fall/winter. It is believed that a 3-4% market penetration will provide enough data to support IntelliDrive applications.
- NWS mapping is utilizing mileposts for alert limits rather than landmarks, although will be keeping landmarking for those that are accustomed to using this method. NWS offers data feeds for XML and RSS for information that can go onto other platforms.
- iNWS – Interactive NWS (mobile and internet) – [inws.wrh.noaa.gov](http://inws.wrh.noaa.gov) – Using the iNWS tool, the states along the corridor could create alerts for the I-80 Corridor for receiving automatic information from NWS. Only public agencies can access this tool right now, but it would be beneficial for the trucking industry to be able to subscribe to a tool like this. NWS is currently working on a relationship with cellular service providers for texting applications. It was introduced the possibility of the trucking industry getting on an email system for dissemination of this information. DOTs can forward the alerts they receive onto the private sector now as an interim solution. WYDOT has been subscribing to this iNWS for over a year in a pilot program. Information available using this tool is accurate within one minute, so it is near real-time.
- NWSChat – this tool has been very helpful in chatting with DOTs to confirm information and for the DOT to get answers from the NWS on the confidence in their reporting and upcoming information. The Chat tool is only good with one NWS forecasting office, so the I-80 Coalition corridor would include approximately 5 chat tools. Utah typically uses three chat tabs to cover the entire state. The Chat tool is only for media, transportation, emergency responders – mainly government entities. Wyoming is using NWSChat at the TMC. Nebraska is using it at the District level. Nevada cannot use it due to internal IT issues limiting access to chat capability. California is not using it currently.

### **Reporting:**

- NCAR could support a potential initiative to add data to their existing maps and act as the host of the one-stop-shop location of information – pending funding for such an initiative.
- The public would receive information at the same time as the DOT, so including DOT information about road closures in the alert would be challenging. The NWSChat tool can support this information decision making ahead of time. DOTs uses the system to confirm what is going on out on the roadway.
- There is not a nationwide standard for weather indicators.

- UDOT provides forecasts for NDOT District 3 and also provides NWS observations in real-time.
- EmergencyEmail.org takes NWS information and emails that out to subscribers. For DOTs, it would be more beneficial to go directly to the source of this information rather than going through a third party service.
- With iNWS you can get flood warning alerts at specific points in rivers for hydrology reporting. In order to get water conditions from the source, water.usgs.gov provides the river alerts and conditions. NWS has this information as well.
- Does NWS ever point to 511 about road closure information? 30-40% of calls NWS receives are asking about road information. Utah/Wyoming/Nebraska all tell NWS to tell the public to call 511. Wyoming is an official E-Spotter. If the states do not tell NWS about information they want to disseminate to the public, NWS will not know about that information. Opportunity to perhaps coordinate with NWS to help promote 511 as a number for road conditions when NWS issues alerts.
- Need to figure out a way to get basic conditions (red, yellow, green) to the traveling public so they can make intelligent decisions. UDOT is working with the NWS on mapping storms and impacts. UDOT is using red, yellow, and green to indicate speeds on the roads generally corresponds to the severity of an incident.
- NW Passage came up with a common dictionary for weather terminology, but implementation is not easy and it could potentially require modifications to existing systems. It will be important for any weather terminology or dictionary to be established relative to the 'impact' the weather has on the road and being consistent across state lines what information relative to that 'impact' is shared with the public.

## 5. Maintenance Discussion

Websites that offer winter maintenance information are offered in the list below (*Maintenance – Links, Resources, Equipment, etc. presentation – under Coalition Activities/Meeting Archives on website*):

- Aurora Program has a Wiki site where topics can be searched related to winter snow and ice operations and maintenance – [www.aurora-program.org/knowledgebase](http://www.aurora-program.org/knowledgebase)
- Minnesota Department of Transportation has great information about salt solutions, maintenance activities, and other topics on their website – [www.dot.state.mn.us/maintenance/training](http://www.dot.state.mn.us/maintenance/training)
- Clear Roads is a pooled fund project that offers research for winter highway maintenance at their website – [www.clearroads.org](http://www.clearroads.org)
- Clarus is an initiative to develop and demonstrate integrated surface transportation weather observations, forecasting, and data management system. Additional information can be found on their website – [www.clarus-system.com](http://www.clarus-system.com). Utah's information is not shown in the system currently because Utah has changed their RWIS program schema so much over the last year that it is not yet compatible with Clarus format requirements.

There is a need to focus on performance measures with maintenance activities. Washington State uses photos of the roadway during different conditions to communicate levels of service to the public. Lots of states are matching speed and delay to the road conditions. Probably a lot of the rural states are looking at speeds for performance measures because that is easier to link to reliability and safety for the road user in those areas. Performance measures help out greatly in explaining why something is happening. Performance measures are a great tool for decision-makers and also supports performance based budgeting.

There are lots of opportunities to support preventative maintenance during winter snow and ice operations and maintenance – anti-icing, snow fences, forecasts/RWIS/MDSS. Winter maintenance operations

follows closely to the pavement degradation curve by taking an asset management approach to winter maintenance applications “curve”. It would be beneficial to add the mobility curve, a crash rate/safety curve, and a resources needed curve. The traveler is the wildcard in this situation because the curve is in a perfect world with the perfect traveler.

## **6. Traveler Information Discussion**

Denise Inda provided updates from the 511 Coalition meeting held in Dallas TX in September 2010 (*Traveler Information – 511 Coalition Update presentation – under Coalition Activities/Meeting Archives on website*):

- Northern California sends out an email notification to Truck Motor Carrier Associations and they send out (24/7) to 750 dispatch terminals. There may be an opportunity to do something similar for the I-80 corridor. Reference previous comment about the Kingvale Winter Ops center (Caltrans) coordinating directly with the trucking industry for up-to-date information on conditions and closures.
- New York has an application that can route trucks based on bridge heights using their GPS system. In New York, there are some bridges that are listed as 12’6” which are actually 13’6” to account for snow packing, but some bridges are actually 12’6” – so there is a definite need for truck routing in the New York area because of this issue.
- Wisconsin works with American Truck Association State Chapter, American Independent Truck Association, Independent Owners/Operators, and the National Association of Truck Stop Owners. Different sources are great to involve for their perspective on how to get traveler information out to the public and to the trucking industry.
- Utah Trucking Association (UTA) does a weekly fact flash and a weekly road report that gets disseminated to dispatchers. This is inexpensive to do and could be a good way to get information out. The PIO gets information to UTA and UTA produces the weekly reports. In California, the Sierra Reports does the same thing.
- Revenue generation was a hot topic at the 511 Coalition meeting. Revenue generation versus revenue neutral models were discussed – Georgia Model versus Massachusetts Model. FHWA says revenue from special signs must support the sponsored program (safety patrols or 511). Nevada funds a portion of their 511 system based on revenues from logo sales to direct drivers to specific amenities right off of the freeway system.

It was recommended to limit the one-stop-shop location of information concept to just interstates to be more of a feasible solution. Limit to just the I-80 corridor for now, but this concept can be used beyond that to do other crossed interstates. Limit the one-stop-shop location concept also to DOTs only, not for public accessibility.

- UDOT is looking to post available truck spaces via DMS.
- Many trucking associations do a weekly and/or monthly report of roads within their respective state.
- When reporting information, DOTs should use landmarks as well as mileposts to appeal to all users.