

**Winter Maintenance Activities  
Senate Transportation Committee Hearing**

Good morning. My name is Deputy Secretary Scott Christie and I represent PennDOT's Highway Administration Deputate. On behalf of the Secretary of Transportation Leslie Richards, I appreciate the opportunity to comment on the status of winter operations.

For the 2014-15 winter season, our data from police reports shows 7 reportable crashes involving ice falling from a heavy truck/tractor trailer's roof and striking a trailing vehicle. The methodology for arriving at this number is not exact because Pennsylvania's police crash form does not require specific documentation of this information and by law PennDOT only receives the crash forms for "reportable crashes". These are crashes containing an injury, death, or towing of a vehicle due to damage. Based on these factors, we were not able to reach a definitive conclusion as to the severity of this issue.

Winter maintenance operations are very important to PennDOT and effectively planning and preparing for winter traffic services is a major component of our overall winter maintenance success.

For the current winter season, we have budgeted \$203 million to perform winter maintenance activities on our nearly 40,000 linear miles of state highways, which comprise over 96,000 snow lane miles. Pennsylvania has the fifth largest state maintained highway system in the nation. At PennDOT, winter maintenance is a year round activity involving pre-winter planning, training, winter operations and post winter after action reviews.

In our Central Office, staff manages our overall winter activities and preparedness through a dedicated Winter Services Section. This section is responsible for monitoring personnel levels, equipment and materials along with the contracting of winter rentals, coordinating with PEMA, coordinating winter municipal agreements and managing our forecasting services. They work directly with our Engineering Districts and County Maintenance organizations to provide training, policy guidance, winter budget monitoring, and anything else required to attain the proper response level for winter storms.

A successful winter at PennDOT includes many items but we primarily focus on three key elements:

1. Staffing;
2. Equipment, and
3. Materials.

Approximately 4,800 transportation equipment operators, including full-time and permanent operators, are required to perform plowing activities during the winter to maintain our highway system. At PennDOT, we have approximately 4,100 transportation equipment operators that are supplemented by over 700 temporary winter transportation equipment operators that are brought in to fill gaps and ensure adequate staffing for 24 hour operations.

PennDOT utilizes 2,254 plow trucks to maintain the highway system. Where we have urbanized areas and higher traffic volumes, 270 contracted winter rental plows are used to supplement our fleet allowing for an adequate level of service in these areas. We partner with 653 municipalities who maintain 11,240 snow lane miles of state roadway for us.

At PennDOT, we constantly seek out and review new technologies for equipping our fleet through FHWA research programs and networking with other states. We evaluate new technologies in spreading winter materials, plow types and various weather related monitoring services. Efficiency is key when we average about 939,000 tons of salt used each year, with 1.5 million tons of salt used in 2014-2015 – which was an exceptional winter season.

In the late summer and early fall of each year, PennDOT employees prepare for winter by attending our Snow Academies. We also provide winter training to our municipal partners through the Local Transportation Assistance Program, or LTAP. The leaders of our Engineering Districts meet with Central Office staff and discuss strategies and improvements through our Winter Leadership meetings. We also meet with our state agency partners in PSP and PEMA. From these meetings, we review and strengthen our policies and procedures for winter services.

When winter storms are forecasted, PennDOT manages the event at many levels of response. Our Central Office holds a Winter Weather WebEx to include all of our Engineering Districts and state partners in winter operations including PSP, PEMA, PA Turnpike. Our contract meteorologist provides both forecast and open discussion of the event which leads to the open discussion and coordination of our operations across the state. We discuss the possible need to relocate our winter assets, implementation of Incident Commands, discuss the need for interstate restrictions and coordinate our overall response. At the conclusion of the meeting, we provide this information to our partner state agencies and municipal partners.

We also utilize our new technologies to efficiently manage the storm through the use of 511 reporting to the general public, Automated Vehicle Location (AVL) for location and material use for our crews and Roadway Weather Information Systems (RWIS) reporting real time road conditions for our managers.

Post winter our activities include After Action Reviews (AAR) of how events unfolded and the effectiveness of our response. The Winter Section performs analysis of our AVL and RWIS data to identify material and manpower efficiencies in operations as well as developing new training plans for our crews. We review winter performance metrics and work with State Educational Institutions with research of new technologies in the treatment of our road systems. For example, this year we are evaluating alternative anti icing treatments as well as evaluating the amount of salt we spread per lane mile. All of our combined efforts are used in an effort to continually improve the delivery of winter services efficiently and safely to the motoring public.

We would like to thank you for your interest in this topic. At this time, I am available to take any questions you may have. Thank you.