

Winter maintenance ideas from 2006 workshops

by Don Walker, Director



A workshop highlight was the chance to look over new plowing equipment like this flared plow that improves snow casting.

The critical decision revolves around the need for bare pavements after a storm versus acceptance of driving on snow pack.

TIC Bulletins with more information (see page 10): *Using Salt and Sand for Winter Road Maintenance #6 and Pre-wetting and Anti-icing—Techniques for Winter Road Maintenance #22.*

THE TIC has completed another round of successful winter maintenance workshops. Over 500 local officials and staff were able to attend. Discussions of plowing and salting revealed the different approaches to maintaining rural or low volume roads compared to urban streets and major highways.

The critical decision revolves around the need for bare pavements after a storm versus acceptance of driving on snow pack. Where the goal is bare pavement following the storm, then using straight salt and overtime plowing are the norms. Agencies responsible for high volume roads also are tending to prewet their salt and to apply liquids directly to the pavement (anti-icing), frequently using salt brine for the liquid. TIC Bulletin #22, *Pre-wetting and Anti-icing*, provides a handy resource to learn more about these more proactive techniques.

On the other end of the scale, many roads in Wisconsin are either gravel or very low volume rural roads and residential streets. It is not advisable to use straight salt on gravel roads because they become soft, and plows remove surface gravel. Lower volume roads can function well with snow pack if icy areas are sanded. Some roads are also used by snow-mobiles, and they require maintaining the snow pack.

Some local officials are facing the decision of whether to upgrade winter road service by providing clear surfaces after the storm. This public request often occurs in developing rural areas. While a higher level of service can be provided, it will usually come with a higher cost. Clearing pavements requires more salt, and it is usually best done with straight salt



Salt spreaders with left and right side discharge are becoming more common.



Drivers do not need a special Tank Endorsement to operate trucks with pre-wetting/anti-icing tanks of less than 1,000 gallons, according to the State Patrol.

rather than a salt/sand mix. It is also very helpful to plow roads throughout the storm to minimize snow pack. This requires more overtime and more drivers to work the extra hours.

Once the public has used improved roads in winter it is very difficult for road agencies to return to snow pack roads. Given our reduced local road budgets, the decision to provide clear winter roads must be carefully reviewed. Some local agencies have been successful in providing better road conditions on their main roads (arterials and major collectors) while not committing themselves to overtime and straight salt for the local roads and residential streets.

Equipment and operators

Winter road maintenance requires good equipment and experienced operators. These topics were also covered in the recent workshop series. Some confusion continues regarding CDLs. As stated in previous Crossroads articles, a Haz Mat Endorsement is required for driving a commercial vehicle with a Haz Mat placard. However, local agencies in Wisconsin are no longer required to placard their vehicles for Haz Mat. Therefore, if there is no placard, then the driver does not need this endorsement.

A CDL is not required to drive vehicles with air brakes unless that vehicle is a commercial vehicle (over 26,000 lb. GVW, etc.). Vehicles such as plow trucks with tanks for prewetting or anti-icing, do **not** require the driver to have a Tank Endorsement when the tank holds less than 1,000 gallons.

That type tank is assumed to be "portable" under Section 8 of the CDL Manual, according to the Wisconsin State Patrol. For many participants, the chance to look over new plowing equipment was the highlight of this year's workshops. Five different counties, two cities, and a town volunteered to bring their equipment to one of the workshops. [Sample truck specs and safety check lists are available by requesting them from the TIC. (See Resources page 10.)

The equipment shown had many similarities and a few predictable differences. Agencies plowing in rugged terrain or on narrow streets often prefer single axle trucks, while agencies which also use their trucks for hauling and construction prefer tandem or tri-axle vehicles. One-way plows are preferred if the roads are rural and mostly two-lane. Reversible plows are the norm for urban areas and multi-lane roads.

All plow vehicles had automatic transmissions, joy stick plow controls, and wing plows with safety lighting. Most are using the newer HID front auxiliary plow lights. Those spreading straight salt have thermal sensors to read both road and air temperatures.



Joystick plow controls enhance safety and convenience.

Popular safety features include power windows, heated wipers and heated mirrors. One county has had good luck with heated windshield fluid equipment. Salt spreaders with left and right side discharge are becoming more common, along with LED-type truck lighting. Several trucks are using the instant chains for the rear wheels.