Governor Hickenlooper and the National Weather Service designated last week “Winter as Weather Awareness Week” in Colorado. Appropriately, maintenance crews from the Colorado Department of Transportation (CDOT) in portions of Logan, Phillips, Sedgwick and Weld counties are prepared for the winter season that will begin any day.

There are 44 maintenance employees dedicated to plowing and de-icing state highways in Crook, Haxtun, Holyoke, Julesburg, New Raymer and Sterling. To help crews combat snow and ice along 1,981 lane miles of highway, a variety of equipment and products will be used throughout the winter, including a new tow plow.

“Motorists in the northeast corner of the state may have seen a tow plow last winter on I-76 between Wiggins and Atwood, and since it was so successful there, we have been able to get one of our own that can potentially be used from Atwood to the state line,” said CDOT maintenance supervisor Byron Rogers. “The tow plow will allow us to free up resources so we can not only plow more areas of the highways, but also increase safety for the traveling public at the same time.”

The tow plow is a trailer pulled by a normal plow that, when combined, can plow and/or de-ice 24 feet of interstate at one time. A second plow follows the tow-plow trailer to clear the shoulders of any remaining snow. (See a video of the tow plow in action at http://tinyurl.com/445tpcw .)

When the tow plow is in use, both lanes of the highway will be blocked and the snow plow will be traveling at a maximum speed of 35 mph. Both the snow plow and tow plow will be equipped with flashing lights, and motorists should be prepared for slower travel speeds. Motorists should also stay far back from the plow, as it is the safest spot with a clear roadway and increased traction.

CDOT always treats and plows primary roads first, such as I-76 and US 6. Secondary routes include State Highway (SH) 11, SH 14, SH 23, SH 55, SH 59, SH 61, SH 63, SH 71, SH 113, US 138 and US 385.

Highway segments with an annual average daily traffic (AADT) count less than 1,000 will experience limited snow removal operations. For the most part, CDOT crews will maintain these highways 14 hours a day, from 5 a.m. to 7 p.m. (exceptions may be granted for school bus routes, highway segments with high accident rates or hospital/emergency routes). To view a complete list of highways with limited plow coverage, visit www.coloradodot.info/travel/winter-driving .

To help maintenance crews combat the snow and ice, CDOT will still continue to use liquid de-icers, solid de-icers and a sand/Ice Slicer mixture. The two main types of liquid de-icers that will be used this winter are magnesium chloride and cold temperature magnesium chloride. Magnesium chloride is effective at pavement temperatures above 16 degrees Fahrenheit while cold temperature modified magnesium chloride is effective for pavement temperatures below 16 degrees Fahrenheit. Trucks are equipped with infrared sensors to monitor ambient and pavement temperatures throughout a storm.

The two types of solid de-icers that will be used are Ice Slicer and North American Salt. Both are granular salts mixed with magnesium chloride. Ice Slicer is primarily used for pavement temperatures 20 degrees Fahrenheit and below while North American Salt is primarily used for pavement temperatures above 20 degrees Fahrenheit. In some areas, crews will mix the solid de-icers with sand for increased traction.

To disperse these various products, the maintenance crews will use 39 pieces of snow removal equipment. Of the 39 pieces, 13 are mid-range plows (typically used for solid de-icers or salt and sand) and 14 are tandem plows (typically used for liquid de-icers). Crews also have seven loaders, three motor graders and two small snow blowers for the removal of heavy or large amounts of snow and rest area operations.

In addition to the products and equipment, CDOT utilizes real-time technology called the Maintenance Decision Support System (MDSS), which combines advanced weather prediction, advanced road condition prediction and rules of practice for anti-icing and de-icing to generate road treatment recommendations on a route-by-route basis.

The goal of MDSS is to provide more effective use of maintenance resources in order to increase safety, reliability and mobility on roadways.

The MDSS system allows crews to input real-time conditions, including road and ambient temperature, type of snow removal products being used and the application rate. After comparing the information to 15 weather reports, the system will then provide suggested treatments based on the information and models.

The system may tell the operator to re-treat the road at a later time, apply different products at different rates or even to continue current procedures. The suggested treatment can then be followed or the operator can override the system. Eleven trucks in this maintenance area will be equipped with MDSS this year.

Last year, CDOT crews used approximately 55,733 gallons of liquid de-icer, 1,703 tons of solid de-icer, 1,624 tons of the sand/Ice Slicer mixture, and also plowed more than 78,400 lane miles in Logan, Phillips, Sedgwick and Weld counties.

While CDOT is prepared for the winter ahead, it is also important for motorists to be prepared. CDOT strongly encourages motorists to plan ahead by visiting www.cotrip.org or by calling 511 anywhere in Colorado. Current road and weather conditions are available 24 hours a day, seven days a week.

People can also sign up for email and text message alerts by visiting www.coloradodot.info and clicking on the green cell phone icon in the upper right corner under the search function. People can subscribe to any of the lists for free and there is an entire list dedicated to northeast Colorado.

Here are a few winter driving tips to remember:

—Be sure windshield wiper fluid reservoirs are full, as liquid de-icers may stick to the windshield.

—Let the snowplow drivers do their jobs by giving them extra room and don’t pass them on the right.

—Slow down! Even roads that have been treated with liquid de-icers may be slippery.

—Be prepared. Have a scraper, snow brush, coat, hat, gloves, blanket, first aid kit, flashlight, tire chains, water, and nonperishable food in the car.

Make sure tires have good tread.

For more information about CDOT's snow removal plan including equipment and products, visit www.coloradodot.info/travel/winter-driving
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Holyoke Enterprise November 15, 2012