

MODOT READY TO MEET THE WINTER CHALLENGE

WORK FORCE

MoDOT's St. Louis Metro District will have the help of more than 500 employees when clearing roads this winter. They will work in 12-hour shifts when a storm hits the area. The St. Louis District maintains 6,400 lane miles of state-owned interstate highways, numbered and lettered routes. If you were to take all of our roadways and stretch them out to one lane, it would go from New York to San Francisco and back. During an average snowfall, more than 230 trucks equipped with plows, wing plows, salt brine tanks and rock salt spreaders will be used to fight snow, ice and frost.

MATERIALS AND EQUIPMENT

- **Salt Brine** — Salt brine is a simple product, just rock salt dissolved in water. MoDOT uses salt brine in two ways: pretreating roads before snow has accumulated, and prewetting rock salt that is spread on roads covered with snow and ice. Pretreating roads will prevent frost and delay snow and ice from sticking to the pavement. MoDOT has a fleet of trucks equipped with 1600-gallon tanks and pumps that can spread salt brine over one, two or three lanes of pavement. Crews will apply 25 gallons of salt brine per lane mile. MoDOT's salt-brine trucks usually travel less than 40 miles per hour.
- **Calcium Chloride** — Liquid calcium chloride will only be used in extreme weather conditions when salt is no longer effective to help melt ice and snow. Calcium is more effective than salt brine at temperatures below 15 degrees but is nearly eight times more expensive and more corrosive to the bridges, pavement and cars.
- **Rock Salt** — Rock salt is prewettted with salt brine and applied to the

roadway to keep the roads clear. MoDOT applies salt at an average rate of 200 pounds per mile. During an average snowfall, MoDOT uses 3,000 tons of salt in the region. For the 2005-2006 winter season, MoDOT has more than 38,000 tons of rock salt stockpiled.

- **Snowplows/Wing Plows** — Wing plows extend out on the side of a truck and can cut a 12.5-foot swath through the snow, allowing trucks to plow the full width of a lane. Newer 14-foot snowplows clear one lane of pavement. Trucks equipped with wing plows or snowplows travel at 15 to 25 miles per hour. MoDOT has 95 wing plows and 65 14-foot snow plows.
- **Gang-Plow Operations** — Crews use this special technique only on multi-lane highways. The trucks are in each lane and line up diagonally across the highway. As they move forward, they push the snow from the inside lane to the next until the snow is plowed to the shoulder. A new piece of equipment will also be used in gang-plow operations. It is called a TowPLow. A TowPLow is a trailer snowplow pulled by a standard snowplow. A TowPLow can cut a 30-foot swath through the snow or 2.5 lanes. The St. Louis Metro District has one TowPLow.

PRIORITY ROUTES

MoDOT has a formula for snow removal. Each route is assigned a priority according to the type of roadway and how many motorists use the roadway each day.

- **First Priority** — The first priority is to clear the driving lanes on the interstate highways.
- **Second Priority** — The second priority is to clear the driving lanes on high-volume roadways (those with more than 5,000 vehicles a

Winter 2006-2007 Quick Facts



**MoDOT
snowplows
patrol 6,400
lane miles
in the
St. Louis
region**

day). This includes roads like Olive Blvd., Lindbergh Blvd. and Page Ave.

- **Third Priority** — The third priority is to clear the driving lanes of the outer roads and the lighter-traveled sections of roadways (those with fewer than 1,700 vehicles each day). Crews always clear the driving lanes first. After the storm, crews go back to plow the overpasses, ramps and shoulders. Then, they remove snow on the sides of bridges and barrier walls.

SNOW REMOVAL COSTS

MoDOT's St. Louis Metro District spends an average of \$2.5 million per year on snow removal. These costs include crews, labor, equipment and materials.

SAFE WINTER DRIVING TIPS

- Slow down.
- Turn your headlights on.
- Stay at least 100 feet behind snowplows and salt brine trucks.
- Since the roads in the best condition are behind the plows, that is your safest place to drive.
- Don't try to pass or drive beside snowplows.

