



Spring thaw

and its effect on transportation

This year's winter has been varied and unusual. From bitterly cold days to unseasonably summer-like conditions, the winter of 2012-13 has been a season of freezing and thawing. Those conditions and the coming spring may cause problems for many who rely on vehicles as the roads fall victim to spring thaw.

During the spring thaw, roads are much more fragile than at other times of the year. Under the weight of traffic, especially heavy trucks, potholes will appear at the weak spot in a road. Even one overweight truck can cause a lot of damage.

In Ontario, potholes, cracks, and breaks are a fact of life on our highways, roads, and city streets. Those can be made worse by above-average spring runoff and high water tables. Dry weather, on the other hand, helps to stabilize road beds, which allows crews to make repairs promptly.

Under the Ontario *Highway Traffic Act*, the province restricts the loads on trucks to protect the highways during the spring thaw, when roads are most likely to be damaged. Seasonal load restrictions are also common in other parts of Canada and in the United States—many road authorities monitor the depth of the frost to help them decide about load restrictions. The times and places where reduced load limits will be in effect are specified on special signs that are posted beside the road.

Potholes are caused when water from rain or snow works its way under the pavement. When the temperature drops, that moisture freezes and expands, moving some of the soil under the pavement. When the temperature rises again, the ice melts, leaving a

weak spot under the pavement that can break with the pressure of passing vehicles. Some paved highways are more vulnerable to potholes and break-ups in the spring than others. Aged and cracked roads will allow more water to get below the pavement. Roads without much slope will stay saturated longer, because the water will have to evaporate rather than run away.

Though trucks and cars are the cause of some of the damage to roads, they can also be damaged themselves by potholes and spring thaw. Vehicles can receive damage to

- wheel rims and hubcaps
- tires
- suspension and shock absorbers
- wheel alignment.

It is important for all drivers, regardless of the size of their vehicle to

- keep their tires properly inflated (an improperly inflated tire is more likely to burst when it hits a pothole)
- maintain a safe speed
- avoid potholes safely
- beware of other cars or trucks swerving to avoid potholes
- be extra careful at night if there is a possibility of potholes.

Damage to vehicles, whether it is immediate or develops gradually, can make a worker less efficient. More important, it can cause accidents and injuries. Everyone, regardless of the size or type of their vehicle, should be especially careful when they are driving in the spring.

The Ontario Ministry of Transportation lists its most up-to-date load restriction notices on its website:
www.mto.gov.on.ca/english/trucks/loadnotice.shtml

