



Maintaining Alberta's Highways in Winter

- Hundreds of people work together to keep Alberta's 32,000 kilometres of highways clear and open to traffic during the winter.
- Since 1996, private companies have maintained Alberta's primary highways (numbered with one or two digits) and since 2001, they have maintained our three-digit highways as well.
- The Alberta government's maintenance contract inspectors monitor and regularly review the contractors' work to ensure it's carried out to standards. This includes:
 - random audits of the contractor's service delivery;
 - extensive review of contractor performance after all major storms to ensure their response was appropriate; and
 - consideration of concerns expressed by Alberta motorists.

Highway Maintenance Contracts

- Contractors across the province must meet service standards and are penalized if they don't. These standards are based on how the provincial government carried out highway maintenance in the past and are continually improved.
- Contractors schedule patrols every day during the winter to continually check highway conditions.
- Contracts require that snowplow and grader operators undergo extensive training and this training is maintained and enhanced through on-going programs.
- To ensure a high level of service, Alberta's highway maintenance contractors are paid only for the work they do – hourly rates are paid for snowplowing and ice control and contractors are paid by the tonne for the sand and salt they use. They're not paid unless they are out working, so there's no incentive for contractors to reduce service levels or to leave their snowplows or sanding trucks in the garage during a storm.



- Highway maintenance contracts are awarded to the lowest bidder after other factors such as work execution plans, experience levels and past performance are taken into account.
- Monitoring of contractors' work has shown that levels of service are as good as or better than they were when the provincial government did the work itself prior to 1996.
- Alberta's highway maintenance system is one of the best anywhere. Most Canadian provinces and even other countries such as Finland, Norway and New Zealand, are studying Alberta's system and looking at putting it in place for themselves.
- Although our province has high highway maintenance standards, there is always room for improvement. For example:
 - The Alberta government continues to implement recommendations made by the Severe Winter Storm Committee to improve the level of service, increase the number of snowplow operators on major routes and enhance communication and public education.
 - New technology has enabled us to make improvements. For more information on this topic, see our fact sheet *Technology Improves Winter Safety on Alberta's Highways*.

Before A Storm

- Winter highway maintenance begins well before the snow arrives.
- During the summer, government works with its highway maintenance contractors on ways to improve response times, address specific regions of the province that pose maintenance challenges, and improve coordination with the Alberta Motor Association and the RCMP.
- The Alberta government hires weather forecasters to provide precision weather forecasts for key highways throughout the province. These forecasts contain specific weather details that help the highway maintenance contractors determine the best winter maintenance approach.
- Weather updates are relayed to field staff to help them anticipate and prepare for storms.



- Good winter driving conditions in Alberta are defined as having “clear driving lanes with packed snow/ice on the centre line and the shoulders.” Alberta’s highway maintenance contractors often exceed this standard.

When A Winter Storm Hits

Other provinces frequently close highways when a storm begins. In Alberta, every effort is made to clear the highways as quickly as possible and keep traffic flowing safely so that commercial trucks and other motorists are inconvenienced as little as possible. Despite best efforts to keep pavement bare all year round, sometimes Mother Nature gets the upper hand. Heavy snowfalls, extended storms, high winds, extremely cold temperatures and freezing rain can make it difficult to keep our highways free of ice and snow.

- Whenever a storm hits, day or night, hundreds of maintenance contractors are out on Alberta’s highways.
- Alberta standards ensure that snowplows are on the highways when there are three or more centimetres of snow on the ground, or when highways become icy.
- Contractors are expected to provide snow and ice control as quickly as possible prior to heavy traffic. However, this is not always possible if a storm hits during heavy traffic periods (e.g. start and end of weekend).
- There are more than 600 snowplows dedicated to provincial highways - the number of plows on a highway depends on road conditions and traffic volumes.
- To achieve good winter driving conditions, as much snow or ice as possible is removed with plowing equipment. Then, any remaining snow or ice is treated with sand, salt or a sand/salt combination.
- When the temperature dips below -10 Celsius, salt (sodium chloride) doesn’t work very well. Calcium chloride and magnesium chloride are used in some parts of the province as de-icing agents in colder temperatures and to freeze-proof sand piles. Sand is primarily used for traction, but in high winds sand is not as effective because it will blow off the road.



- In response to severe storms, highway maintenance contractors may mobilize additional personnel and equipment from other areas of the province to help them cope.

After A Storm

Following major storms, government works with the maintenance contractors to review response times and other processes to see what could be done to improve service levels.