

Winter Travel Planning with Ontario's Track My Plow Portal

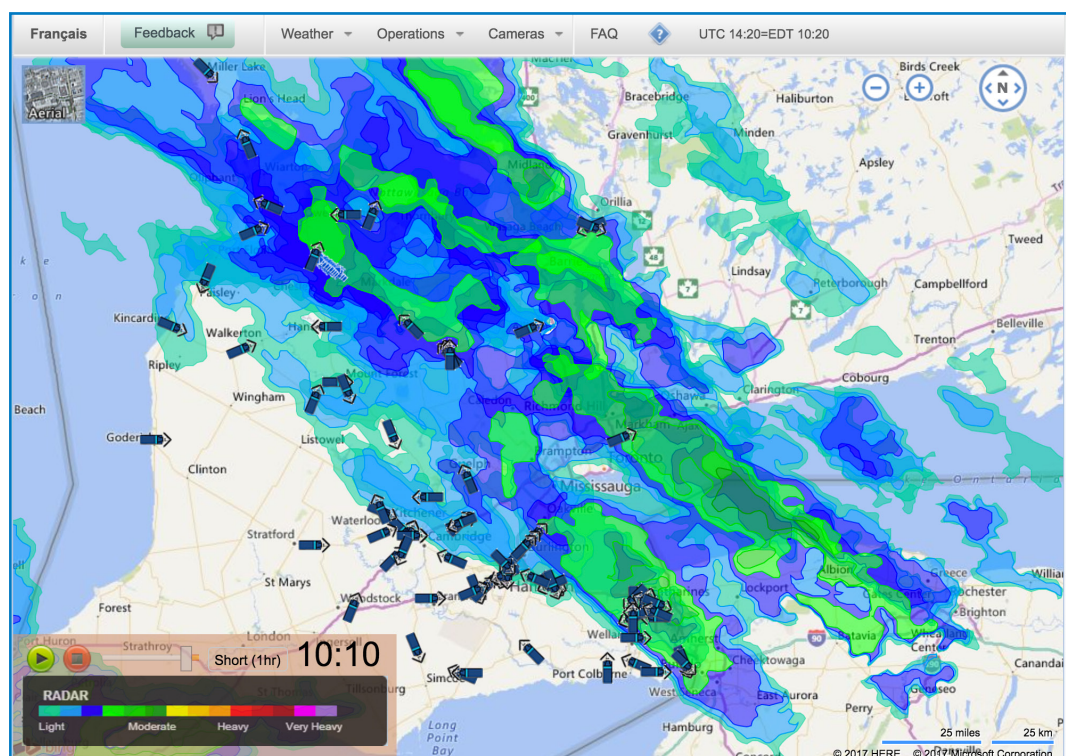
In 2014, the Ontario Ministry of Transportation (MTO) began developing [Track My Plow](#), to enhance winter roadway information. Track My Plow is designed to better prepare drivers for winter driving by providing visual road and weather data through an online portal. Since the portal started, it has expanded to include 14 of 20 contract areas enabling the public to track the location of over 800 pieces of winter equipment on provincial highways. Knowing the locations and activities of winter equipment assists Ontario drivers in planning and safely navigating their travel routes.

Track My Plow Online Portal: Map and Features

The Track My Plow portal is built on a basic Bing map, viewable in road or aerial view, with zoom in/out capability. The Track My Plow Program customizes the maps to feature specific visual overlays. The overlay features of the program are located across the top of the portal page and are displayed as buttons with drop down menus. Overlays include:

- Weather – drop down selections to view local weather forecasts and radar weather
- Operations – selections for plow operations and contract area views
- Cameras – lists a selection of available COMPASS traffic cameras, Road Weather Information System (RWIS) cameras, plow equipment mobile cameras and municipal camera feeds where available.
- Feedback – where the ministry invites user ratings, comments and suggestions

The portal also includes up to date Environment Canada weather alerts, Ontario511 and Ontario Provincial Police twitter feeds, as well as a frequently asked questions section.



A screen capture image of the Track My Plow web portal displaying the use of local and radar weather overlays in addition to the locations of winter equipment on provincial highways.

Weather View

Track My Plow weather information is provided by Environment Canada. When local weather is selected in the drop down menu, small icons appear where weather information is available throughout the province. By hovering on the weather icon a pop-up displays current and forecast weather details for that specific area.

The radar view, when selected, looks similar to a weather channel display. It shows the movement of weather systems over a one hour period and includes a legend for assessing weather severity. >

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Operations Views

The Operations overlay is the portal's signature feature for viewing and tracking winter equipment and identifying the Area Maintenance Contract boundaries.

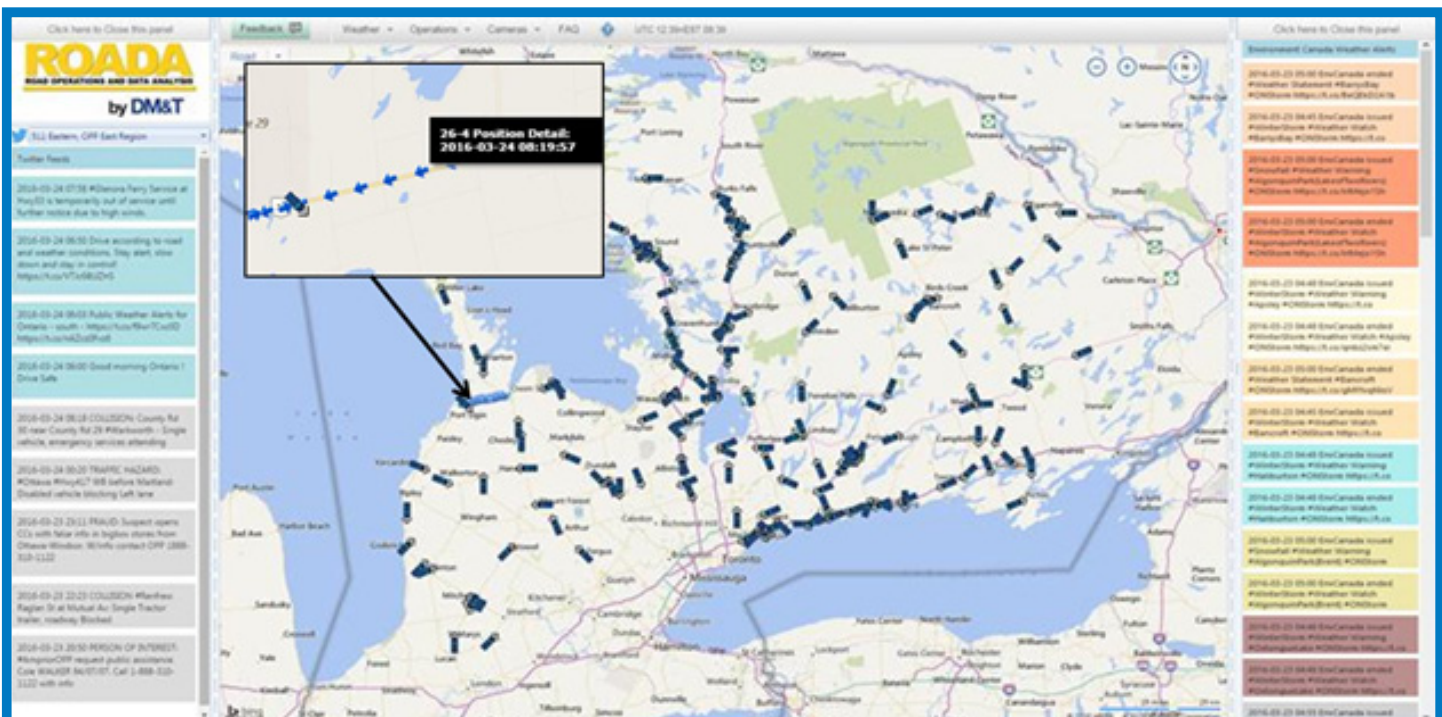
The Track My Plow Program uses global positioning system (GPS) to distinguish plow positions. Information provided through the system is refreshed frequently on the Track My Plow portal.

The technology behind Track My Plow was developed in conjunction with several industry partners. The data from winter maintenance equipment is collected by the ministry's service provider who sorts and manages the data. As data is translated and combined with the geographic information, it becomes available, in real-time, on the Track My Plow portal.

Camera Views

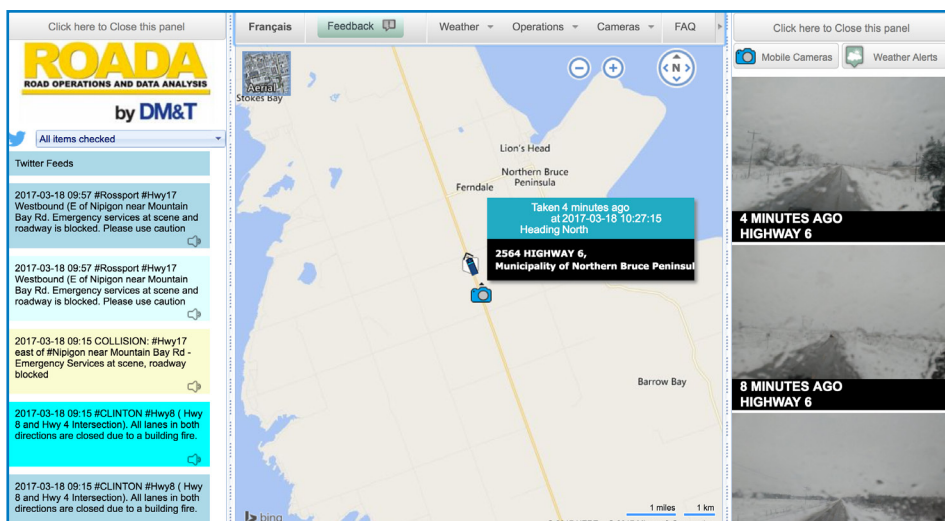
By using the portal's camera views the user is able to see highway condition images in near real-time from winter equipment mobile cameras, some municipal cameras and the ministry's road/weather cameras. Camera images are provided by the ministry's COMPASS traffic cameras and the ministry's Road Weather Information System (RWIS) installed across the provincial highway network. MTO and its contractors use the RWIS temperature, pavement and precipitation sensors to predict weather conditions and plan for winter road maintenance activities.

Track My Plow's camera views, combined with plow orientation and weather information make it a valuable tool for planning winter travel. >

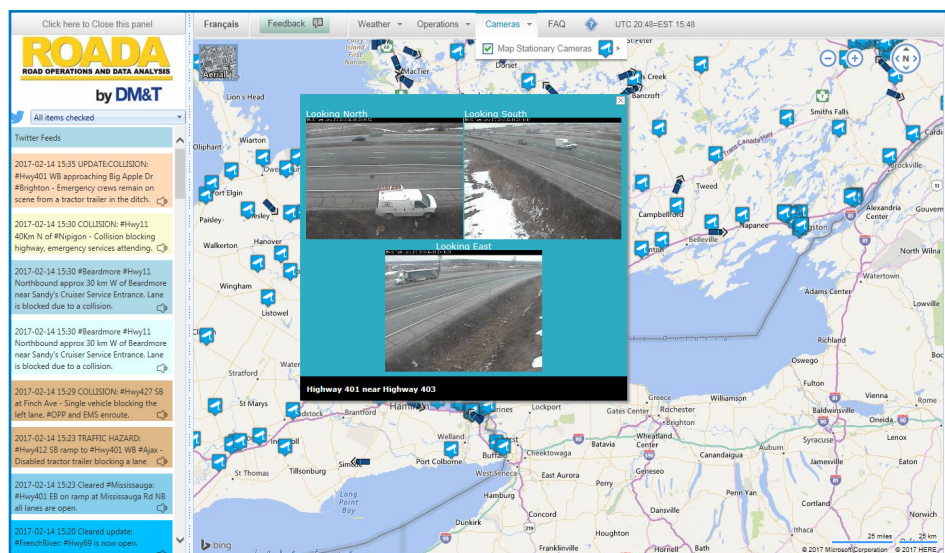


A screen capture of the Track My Plow web portal displaying the location of winter equipment on provincial highways. The left column features a Twitter feed; the right, Environment Canada's weather alerts. The photo inset demonstrates the effects when you zoom in and click on a plow: plow direction, breadcrumbs of past locations, and a time-stamp are displayed.

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This Track My Plow view displays images from mobile cameras in the right column. When you hover over a mobile camera image, the location of the image is indicated in a blue and black box as shown in the centre of the Ontario Track My Plow map.



This Track My Plow view displays images of bare highway pavement in Woodstock, Ontario, when a cursor is hovered over a road/weather camera icon in that location.

The Innovative Track My Plow Project

In 2014, Track My Plow started as a joint innovations project between the ministry and industry partners as a “proof of concept” pilot. The pilot was developed internally and took place in the winter of 2014/15, in two of Ontario’s maintenance contract areas: Owen Sound and Simcoe County.

In 2015, in response to the Auditor General’s [Special Report on Winter Highway Maintenance](#), the ministry introduced a [Winter Highway Maintenance Action Plan](#) that outlined strategies to improve winter highway maintenance as well as enhance the availability of roadway information for drivers. The timing was ideal to include the piloted Track My Plow project as part of the Action Plan, and the portal was introduced to the public in the two pilot areas, in October 2015.

During that winter 2015/16 season, the Track My Plow feedback link garnered positive public feedback from its use in Owen Sound and Simcoe County and by the end of February 2016, the site had expanded to 7 contract areas and recorded over 100,000 visits to the portal. Positive feedback resulted in the Winter 2016/17 expansion of the pilot program to 14 of the 20 provincial contract areas.

Also introduced for the 2016/17 winter season was a mobile-friendly version of the portal. The mobile version is like the web portal, but configures the overlay and twitter options in one drop down menu for a variety of smart phone and tablets. ➤

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In addition to RWIS, COMPASS and municipal camera information, the ministry is piloting the use of tablets for collecting and submitting road condition information in real-time. Traditionally, road condition information is submitted by maintenance patrollers via radio to Traffic Operations Centres, who in turn transcribe the data and upload it to the 511 site. As part of a pilot project, patrollers are entering road condition information directly on tablet computers, which in the future may be directly linked to the 511 site, but currently a trial automated email report is sent to the Traffic Operation Centre.

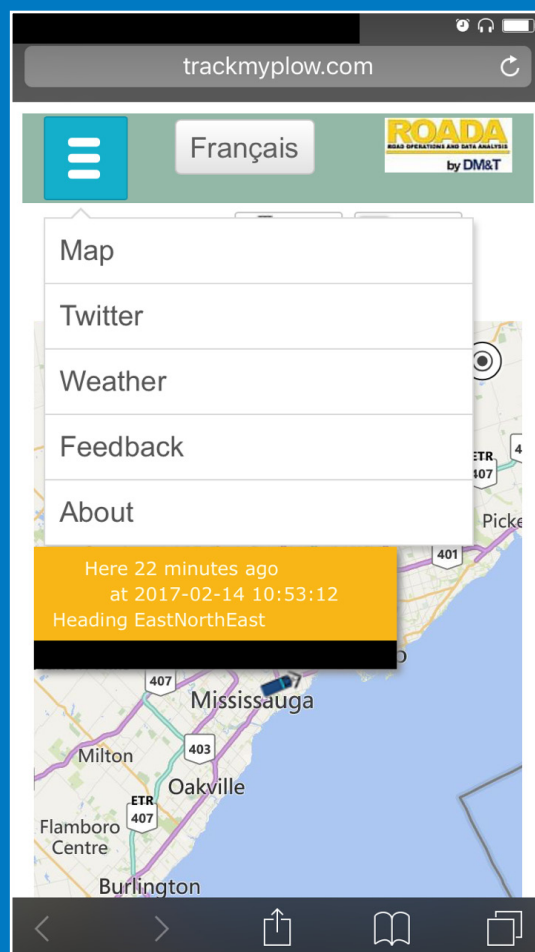
The current Track My Plow program is delivered by a dedicated project team of ministry staff along with participation of several maintenance contractors Carillion Canada Inc., Integrated Maintenance & Operations Services (IMOS), High Road Maintenance (HRM), and DeAngelo Brothers Inc. (DBi) Services along with Automated Vehicle Locator (AVL) company, DM&T Services Ltd., who developed the software for the Track My Plow program.

If the Track My Plow project continues its success through the 2016/17 winter season, it could be expanded to new areas that are selected through consultation and volunteer participation with MTO's industry partners.

Track My Plow is available in English and French at trackmyplow.com or by navigating to the link the [Province's 511 Traveller Information Services](#). •

For more information on the Track My Plow program, please contact:

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The Track My Plow mobile interface showing the drop down menu and a time-stamp for a Mississauga, Ontario, plow.

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