

Clause No. 9 in Report No. 5 of the Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting on March 27, 2014.

TRAVEL ALERT MOBILE APPLICATION PILOT UPDATE

Committee of the Whole recommends adoption of the following recommendation contained in the report dated February 24, 2014 from the Commissioner of Transportation and Community Planning:

1. RECOMMENDATION

1. It is recommended that this report be received for information.

2. PURPOSE

This report provides an overview of the Travel Alert mobile application one-year pilot project deployed for York Region and the planned continuation of the pilot for an additional year.

3. BACKGROUND

The Travel Alert mobile application is one of York Region's Traveller Information Systems deployed as part of an overall strategy to manage increased travel demand and improve traffic operations within the Region

York Region's *Intelligent Transportation Systems Strategic Plan* (ITS Strategic Plan) identified traveller information services as a key component of an overall plan to improve traffic operations within the Region.

Informed travellers are better equipped to make decisions either pre-trip or en route that can reduce travel time and improve overall system efficiency by mode shifting, route shifting and/or time shifting trips.

The ITS Strategic Plan (published in 2008) identified telephone-based and web-based systems as the primary tool for delivering traveller information services to the public. Since the publication of the ITS Strategic Plan, the prevalence of mobile applications as a primary source of information for the public has grown significantly.

In 2012, Transportation and Community Planning staff had preliminary conversations with a Markham-based mobile applications developer (GreenOwl Inc.) regarding the possibility of deploying a York Region mobile application as a traveller information service. On February 6, 2013, the Transportation Services Committee approved a one-year pilot project for the mobile application.

On February 18, 2013, York Region launched its first local traffic mobile application, Travel Alert, delivering congestion and hot-spot information to users that are en route

York Region's Travel Alert is a personal traffic reporting and messaging application for travellers incorporating hands-free, voice-activated, real-time traveller information relevant to their trip. More specifically, it provides audible alerts as the users approach problem areas. Consequently, it helps the user make more informed decisions about travel, and raises the driver's awareness of nearby priority safety areas (e.g. red light camera sites, community safety zones, etc.).

Refer to *Attachment 1* for a Travel Alert mobile application "walk-through".

A strategic marketing and communications plan was developed to help promote the new York Region Travel Alert application

Below is a list of marketing initiatives that have been undertaken to introduce and promote Travel Alert:

- Advertised in local print media
- Branded web page on www.york.ca
- Promoted on York Region social media channels – Facebook and Twitter
- Radio tags on 680 News during traffic reports over long weekends when motorist activity would be highest (May, July, August and October 2013)
- Monthly online media campaign on yorkregion.com from February to October 2013
- Online ads on the Weather Network (March and May)
- Targeted advertising (i.e. CAA Magazine, Spring/Summer edition)
- Promoted at vivaNext and YRT/Viva outreach events during July and August 2013
- Cineplex lobby ads (March 2013) and Cineplex pre-show big screen ads in July 2013
- Two YouTube videos were created to promote the application on social media channels – views to date continue to increase

Refer to *Attachment 2* for the January 2014 Travel Alert Program Bulletin.

4. ANALYSIS AND OPTIONS

While the concept of traveller information mobile applications is not new, the Travel Alert mobile application is unique in the industry because of its business model

The York Region/GreenOwl Inc. Travel Alert mobile application is unique in a number of ways:

- All product development costs (capital and ongoing maintenance) of the Travel Alert application on three platforms (iOS/Apple, Android and Blackberry) were borne by the developer.
- GreenOwl Inc. charged a fee to re-brand the existing application as York Region's own product and in return, York Region provided data sources to GreenOwl Inc.
- The product has been previously deployed for CTV Toronto and its affiliates, including CP24, thereby leveraging their users in that GreenOwl Inc. provides traffic data anonymously from all application users back to York Region.

The York Region Travel Alert mobile application provides the Region with important data used to manage traffic operations on a daily basis

Presently, no accurate source of real-time traffic data (e.g. speed, volume, classification) is available for the Regional road network. Integration of the Travel Alert mobile application with the Advanced Management Traffic System (ATMS) in the newly-launched York Region Traffic Management Centre (TMC) provides a solution for real-time traffic data. The accuracy of the data provided is currently being evaluated.

Figures 1 - 4 demonstrate the large number of events that have been reported by mobile application users to date.

Figure 1
Total Number of Events by Type

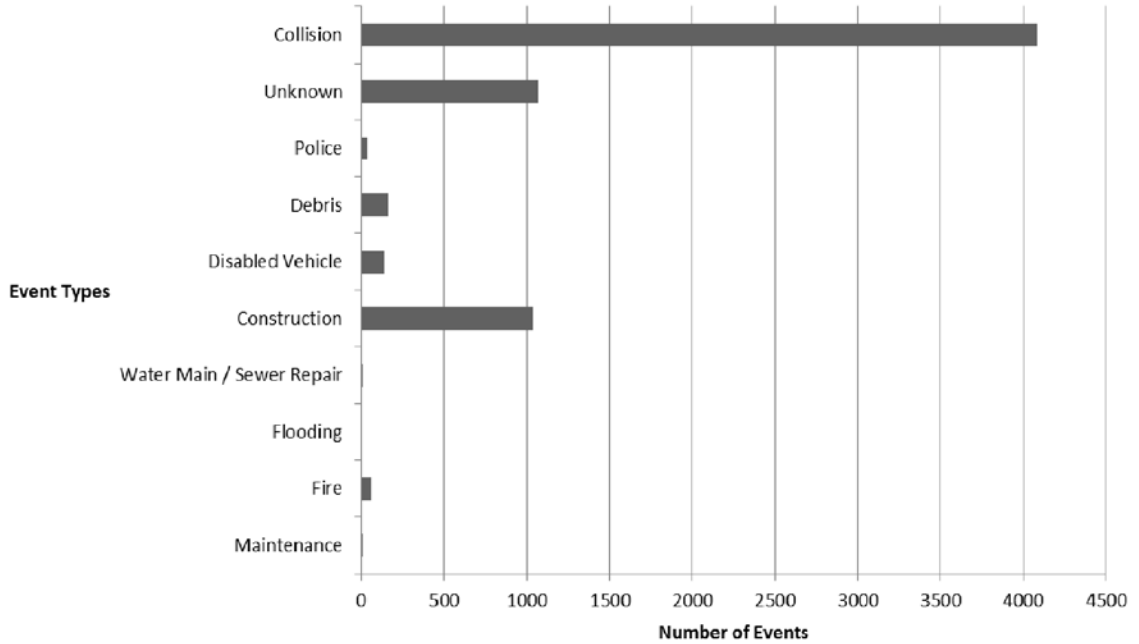


Figure 2
Total Number of Events by Day of Week

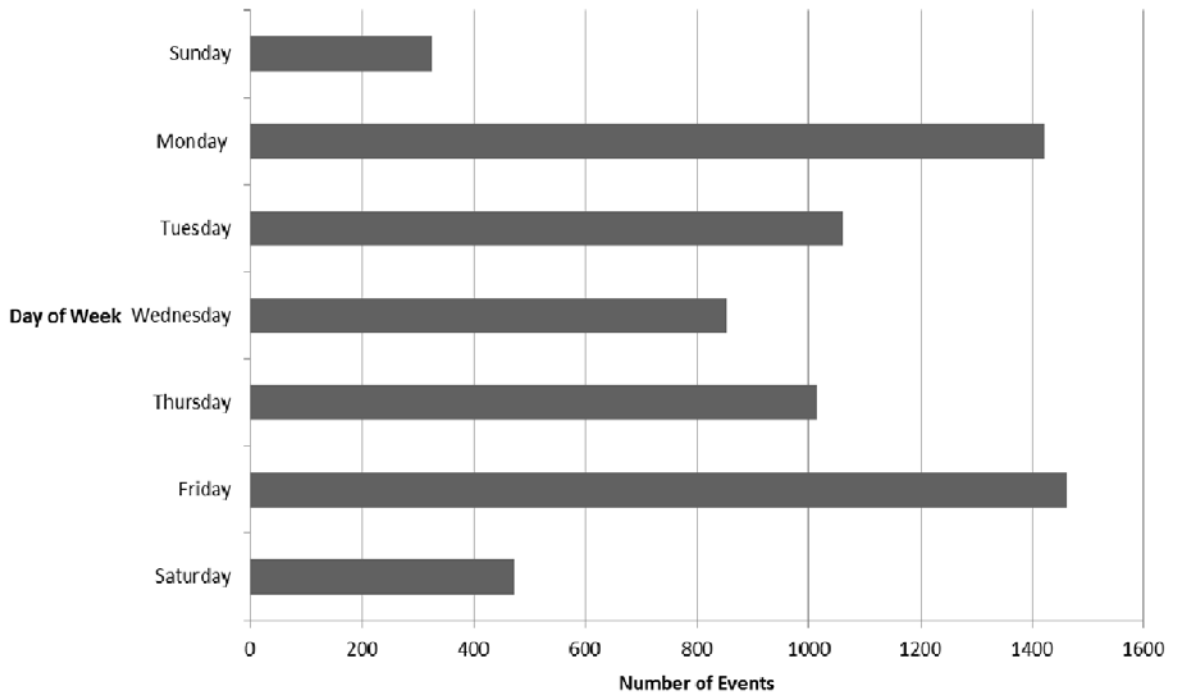


Figure 3
Total Number of Events by Roadway

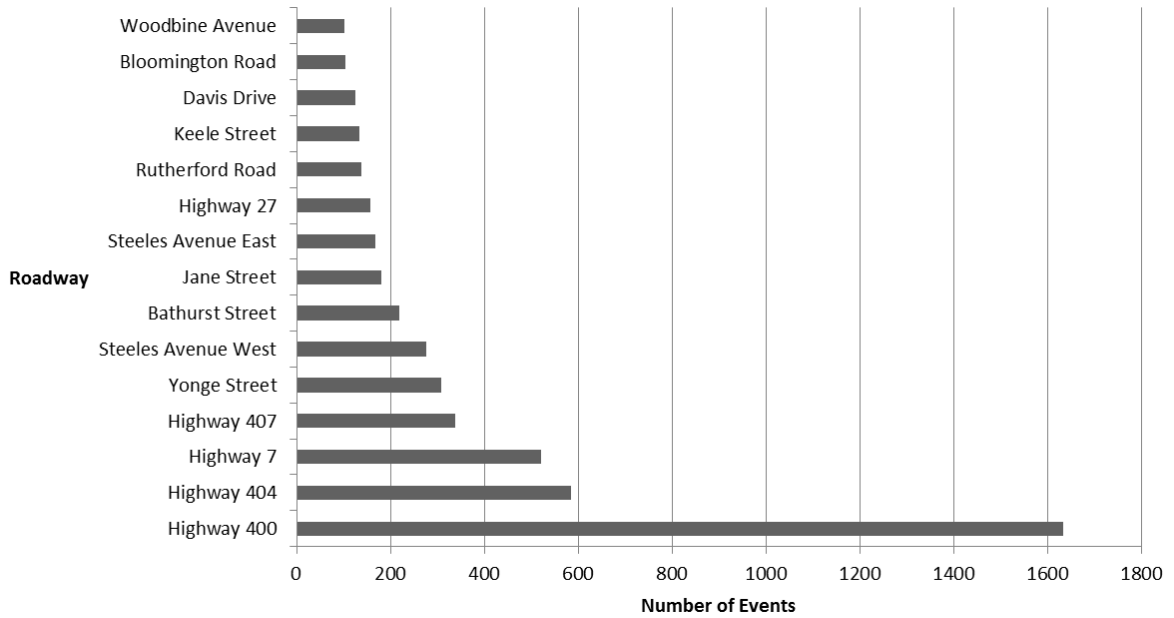
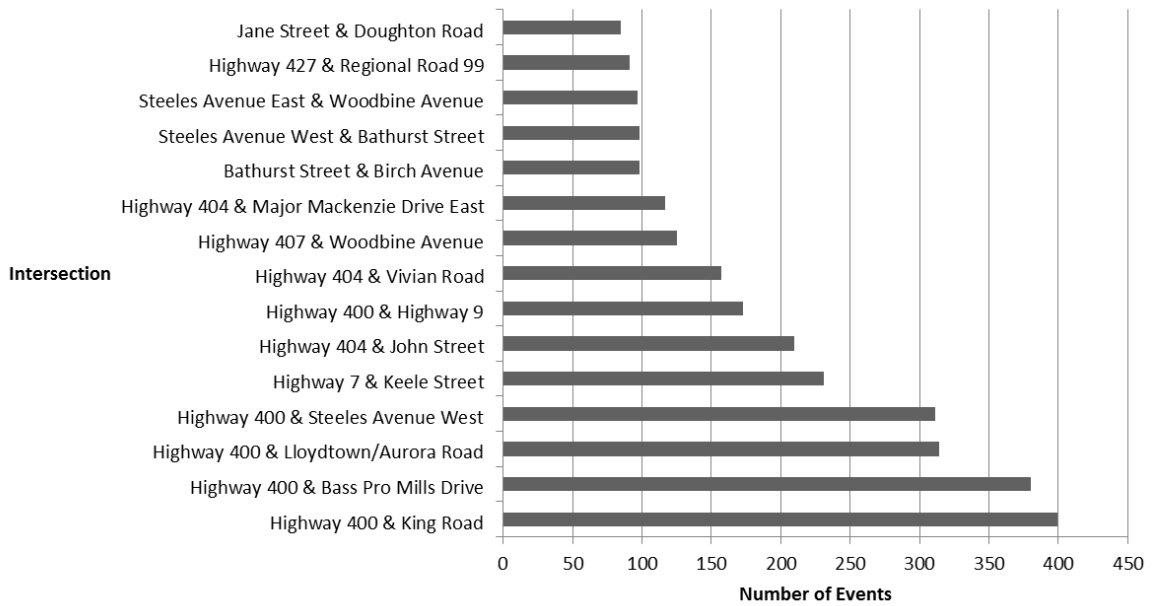


Figure 4
Total Number of Events by Intersection



This data is valuable to the Region, as it supplements the Traffic Management Centre with additional information, allowing it to be used for a variety of purposes. For example, after verification by the Traffic Management Centre Operators, data collected can trigger the Roads Dispatch Centre to dispatch road patrollers to check a particular site. Furthermore, after quality checks, the data can be disseminated to the public through other means such as the York Region website or social media.

The Travel Alert mobile application provides travellers with speed and event data collected from multiple sources relevant to their route

Information within the application is sourced as follows:

- **Speed** – Speed/congestion information is collected from all users of the application (their mobile phones act as anonymous probes measuring speed)
- **Events** – Event information (e.g. collisions and construction) includes:
 - Third party data, which is collected from broadcast and other media.
 - Traffic incident and closure data, which will be collected from York Region’s Advanced Traffic Management Systems (ATMS)
 - Traffic incident data reported by other app users.
- **Proximity Alerts** – Proximity alerts for York Region include community safety zones, school zones, red light camera sites, new traffic control signals, and more

Focus Groups were conducted to assess the usability of the application among current users (what is working, what is not, what is missing) and to understand how to generate usage among non-users

Three focus groups were conducted in December 2013 representing a mix of users, lapsed users and non-users of the Travel Alert mobile application. A total of 30 people participated with representation from all municipalities.

Overall, the perception of the Travel Alert application was mixed. Participants who use Travel Alert liked the following features:

- Real-time traffic conditions on major roads
- Colour coding of traffic congestion on map
- Ability to set personal daily routes
- Automated notifications (collisions/construction) for saved routes
- Voice alerts en route (hands-free capabilities), including Bluetooth
- Alerts about toll roads en route
- “Report Traffic” function
- Route travel times
- Hotspots (e.g. red light cameras and community safety zones)

Features that were disliked by users of the application are as follows:

- Does not provide directions (no GPS)
- Does not provide alternate routes
- The “look” of the application – the application icon and the colour scheme is outdated
- No traffic information for smaller roads
- Not user-friendly – difficulty determining all the capabilities of the application
- Touch sensitive – screen settings change easily
- Considered particularly hard to use on a BlackBerry
- Tutorial is not detailed enough
- Slow to load (particularly when initially opening the application)

Lapsed users mentioned their unwillingness to use the application for the following reasons:

- Not needed in their day-to-day trips as they travel short distances
- Travel the same route daily and were reluctant to change their patterns despite the traffic conditions
- Unwilling to take the time to use the application and understand it

Participants were also unaware the information provided in Travel Alert is better, and more detailed for York Region, compared to other traffic applications.

Focus Group results revealed that York Region should continue to offer a mobile application as a traveller information service to the public, but that it should be enhanced

Participants also requested additional features, which are currently being evaluated as to whether or not they should be incorporated in Travel Alert. Requests include: GPS functionality, a main menu interface, weather updates, and additional hotspots (e.g. gas stations and coffee shops).

The York Region Travel Alert mobile application demonstrated success with over 7,500 downloads to date

The performance statistics for the system were analyzed monthly. These included the number of downloads, unique users per week and impressions per month. Impressions include:

- **Travel Alert Impressions** – the number of voice messages and the visual displays of ‘no issue’, ‘slow traffic ahead’, and ‘very slow traffic ahead’ alerts (relevant to the user)
- **Community Safety Message Impressions** – the number of voice messages and visual displays of school zones, as well as community safety zones (relevant to the user)

Figure 5 illustrates a total of 7,765 application downloads to date, which includes 4,203 iPhone users, 2,164 Android users and 1,398 Blackberry users. Statistics show that between 500 and 1,000 unique users use the application on a daily basis.

Figure 5
Travel Alert Downloads

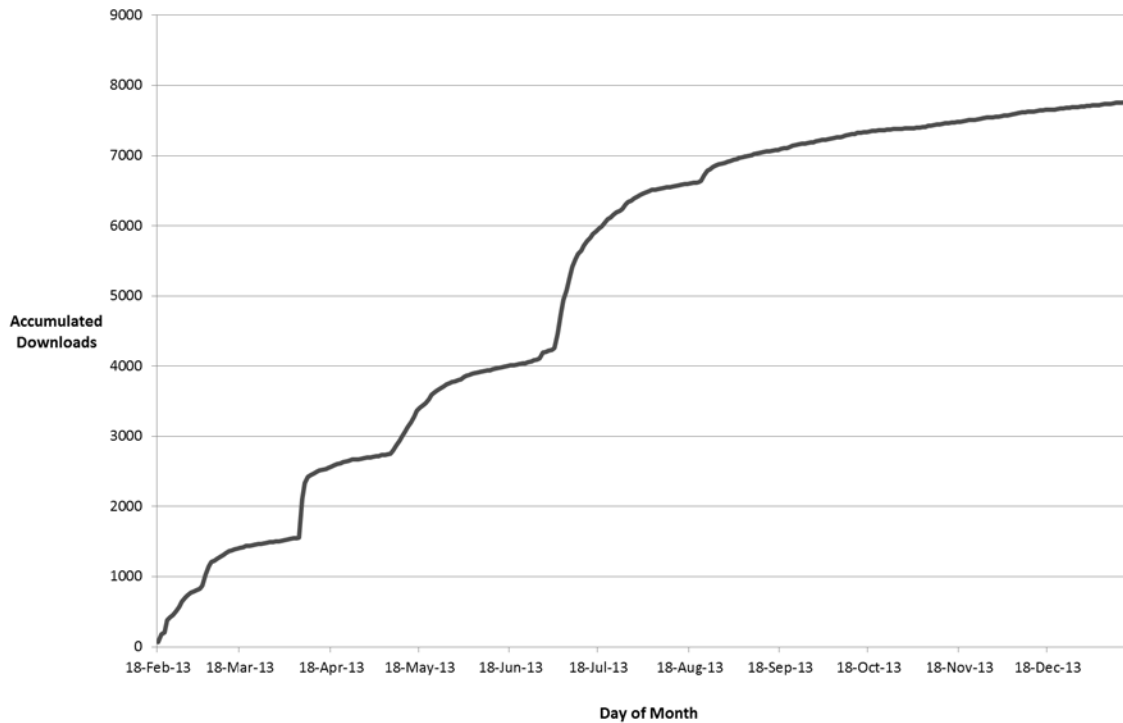


Table 1 provides the number of monthly impressions for Travel Alert, as well as community safety messages.

Table 1
Travel Alert Impressions and Community Safety Messages

| Month (2013) | Total Travel Alerts Served | Total Community Safety Messages Served | TOTAL Impressions |
|-------------------------|---------------------------------------|---|--------------------------|
| February | 3,852 | 412 | 4,264 |
| March | 7,002 | 510 | 7,512 |
| April | 11,700 | 954 | 12,654 |
| May | 11,714 | 566 | 12,280 |
| June | 9,878 | 346 | 10,224 |
| July | 19,108 | 1,028 | 20,136 |
| August | 5,864 | 1,060 | 6,924 |
| September | 6,478 | 726 | 7,204 |
| October | 6,524 | 698 | 7,222 |
| November | 6,634 | 733 | 7,367 |
| December | 7,030 | 752 | 7,782 |
| Total | 95,784 | 7,785 | 103,569 |

Link to key Council-approved plans

York Region's *Vision 2051* identifies "Interconnected Systems for Mobility" as a key objective within its mandate. Within this mandate, road disruptions are to be managed through a combination of network detection and monitoring and the active management of planned and unplanned events as they occur. Road disruption management also includes the dissemination of traveller information to York Region travellers so that they can make informed decisions concerning mode, route and time of travel. The York Region Travel Alert mobile application is one of several initiatives to deliver accurate and timely traveller information to York Region travellers in support of *Vision 2051*.

5. FINANCIAL IMPLICATIONS

To continue with the pilot, the Travel Alert mobile application will cost \$30,000 annually, which includes both operational costs as well as access to historical data

The previous cost related to the deployment of the one-year mobile application pilot was \$25,000, annually. The continuation of this pilot will cost \$30,000 annually. The increase in cost is to integrate the application with the Traffic Management System, as well as to include new enhancements to the application, which align with recommendations from the focus groups.

In the event that the pilot is cancelled before the end of the one-year extension term, York Region has agreed to pay GreenOwl Inc. all related fees up to and including the next month of service pro-rata. That is, the service termination date would be the last day of the following month after the cancellation notice is given.

The cost associated with the application is included within the 2014 Transportation and Community Planning Capital Budget.

Ongoing marketing and communication efforts are key to driving users to the application

In order to successfully promote the launch, a large number of marketing initiatives were undertaken that coincided with the mobile application launch. Other marketing activities were organized during the year. As a result of the significant marketing and communication plan, the total cost for marketing during the one-year pilot was approximately \$83,000.

Now that the mobile application has successfully launched, consistent marketing and communication efforts need be established to sustain it. The anticipated cost for this is \$40,000, annually.

The cost associated with marketing and communications for the application is included within the 2014 Transportation and Community Planning Budget.

6. LOCAL MUNICIPAL IMPACT

Since the data within the Travel Alert mobile application is crowd-sourced, it can report on all roads within York Region (and beyond) regardless of jurisdictional authority. However, the detail and quality of the data is dependent upon the number of users on one road section at any given time. Consequently, less information is expected to be available for the local road system than on the Provincial highway and Regional road networks.

7. CONCLUSION

The Travel Alert mobile application was assessed for its benefits over the one-year pilot period by analyzing usage rates, performance metrics, and public feedback. Overall, both qualitative and quantitative results were generally positive. However, the Travel Alert mobile application has only been in operation for one-year, and therefore the Region is not ready yet to fully commit as there are other elements that require examination beforehand.


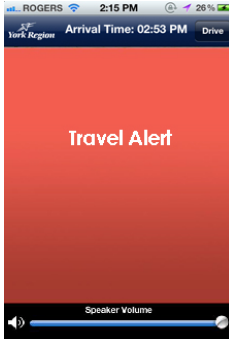
System features and enhancements identified during the focus groups, such as simpler menus and navigation features, will be implemented and evaluated during the next year. Furthermore, the two-way integration between the Travel Alert mobile application and the Traffic Management System will be utilized by the new Traffic Management Centre. This will allow Travel Alert to disseminate additional data types to York Region travellers in a timely and accurate manner. The two-way interface will also supplement the Traffic Management System with an additional data source used by the Region, after verification and quality checks by the Traffic Management Centre Operators.

For more information on this report, please contact Steven Kemp, Director, Traffic Management and Intelligent Transportation Systems at ext. 75226.

The Senior Management Group has reviewed this report.

Attachments (2)

TRAVEL ALERT MOBILE APPLICATION

| | | |
|-----------------------------|--|--|
| <p>Before you Start</p> |  <ul style="list-style-type: none"> • Free to Download & to Use • 3 Platforms |  <ul style="list-style-type: none"> • Safety from Driver Distraction • Product Tutorials Available |
| <p>Pre-trip Planning</p> |  <ul style="list-style-type: none"> • Personalization • Simple Interface |  <ul style="list-style-type: none"> • En-route Traveller Information • Route Alternatives |
| <p>En-route Information</p> |  <ul style="list-style-type: none"> • Graphical Interface • Raises Awareness |  <ul style="list-style-type: none"> • Audible Alerts • Initiated when approaching Problem Areas. |



Travel Alert

Program Results Bulletin January 2014

Travel Alert App

- Personalized traffic reporting providing informative, real-time traffic updates on York Region roads
- Hands-free option alerts you to any unexpected delays on your route
- Includes safety landmarks such as community safety zones and speed limit reductions
- Travel Alert also comes with a list of pre-loaded community favourites for popular destinations such as Richmond Hill to the Hollidge Tract in the York Regional Forest, Toronto to Canada's Wonderland, Stouffville to the 404 and Highway 7 Business Area
- Travel Alert provides alternate detour routes giving you time to adjust your route to avoid delays

Participating Communications Organizations

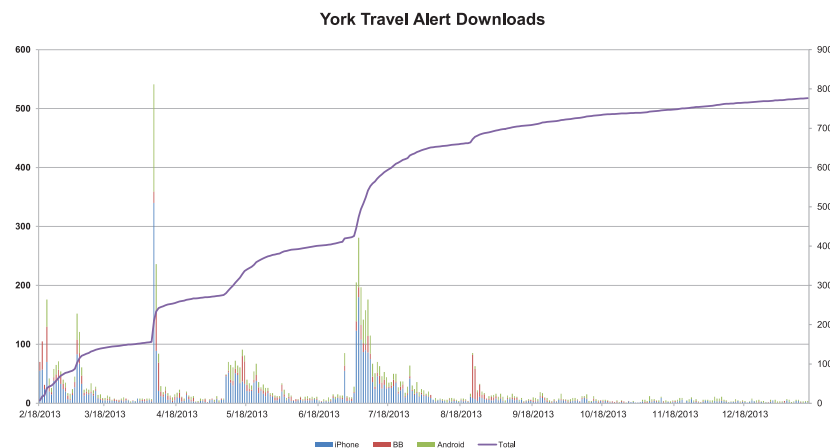


Program Results and Status

- Launched February 18, 2013
- To date 21,255 web hits to the Travel Alert page on York.ca
- Tracking email addresses of users to invite them to participate in a follow-up survey about the app



Over 7,700 downloads to date



Travel Alert App Developer



York Region Travel Alert
Download the App now

