



City of Richmond

Report to Committee

To: Public Works and Transportation Committee

Date: October 24, 2014

From: Tom Stewart, ASCT.
Director, Public Works Operations

File:



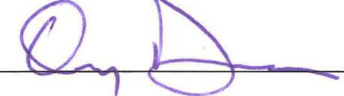
Re: Update on 2014/2015 Snow and Ice Response Preparations

Staff Recommendation

That the staff report titled "Update on 2014/2015 Snow and Ice Response Preparations", dated October 24, 2014, be received for information.

Tom Stewart
Director, Public Works Operations
(604-233-3301)

Att. 2

REPORT CONCURRENCE		
ROUTED TO: Communications Parks Services	CONCURRENCE <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	CONCURRENCE OF GENERAL MANAGER 
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO 

Staff Report

Origin

This report provides information about the City's 2014/2015 snow and ice preparations.

Analysis

Public Works has implemented numerous changes over the past several years to enhance the City's readiness and response efforts. These changes include: policy amendments, equipment review, enhancement to public communications/public involvement, record keeping and overall response planning.

Overview of Existing Initiatives

Policy Amendments

Traffic Bylaw 5870 was amended by Council on November 23, 2009, to require commercial, industrial and multi-family property owners or occupiers to clear snow and ice from sidewalks adjacent to their property. City staff will remind the public of Bylaw 5870 through news releases, as well as social media, such as Facebook, YouTube and Twitter. This Bylaw was amended to encourage the use of public transit with improved convenience for pedestrians. Section 6.1 of the Bylaw reads:

"The owner or occupier of any parcel of real property which is developed for, or used in whole or in part for, commercial, industrial or multi-family dwelling use other than a two-family dwelling shall remove all snow and ice from any sidewalk adjacent to such parcel for a distance that coincides with the property line of his real property, not later than 10:00 a.m. of everyday, including Sunday."

In response to public concerns about the lack of salting and ploughing on residential streets, Council approved an amendment to Bylaw 7013 (Roadways – Ice and Snow Removal) to identify and add third priority routes. These routes include the designated collector roads and roads of local significance in residential subdivisions. This initiative will help improve vehicle access from within subdivisions to the major collector roads. However, it should be noted that third priority routes will only be cleared if first and secondary routes have been fully attended to and resources permit.

Equipment

The City has six road temperature sensors. These sensors are monitored 24 hours a day and provide early indications of potential road frost or freezing conditions. Each sensor is strategically located under roadway asphalt throughout the City to provide real time information concerning road conditions. Sensor locations are illustrated in Attachment 1 and a complete list of equipment dedicated for snow response is provided in Attachment 2.

Public Outreach

Public involvement within the community is vital during the winter season. The City participates in the following programs, working jointly with the public:

- **Snow Angels Program:** This program was introduced in 2010 and connects local volunteer organizations with elderly citizens and residents with mobility/health challenges during a snowfall event. Assistance involves shovelling snow from sidewalks, driveways and/or walkways. A Snow Angels registry is accessible on the City's website and can also be obtained by calling the Community Services Department, Dispatch, City Hall, or any of the Community Centres. The program is activated in the event of a significant snow fall (defined as an accumulation of 5+ centimetres of snow) and is dependent on the severity of the storm and volunteer resources. The City plays a role in coordinating and promoting the Snow Angels program, but the volunteers are recruited, screened and managed by each association participating in the registry.
- **Good Neighbour Program:** This program encourages everyone to clear the walkways around their property and help others who may face challenges. This neighbour-helping-neighbour campaign simply encourages residents to watch for people in their neighbourhood that could use help removing snow from their sidewalks and driveways and offer them a helping hand.

Communications Strategy

A comprehensive communication strategy has proven to be valuable in delivering accurate, timely and relevant information to the public. By using a cross-functional approach, each division's important messages are delivered in a coordinated fashion over a variety of pre-determined mediums in both a proactive, planned manner as well as reactive when extreme weather occurs and circumstances require it. The communications strategy includes, but is not limited to, using the following mediums:

- Social media: The City's Twitter, Facebook, Youtube; retweeting/sharing information from credible sources i.e. weather warnings.
- Media relations (news releases, media interviews)
- City's website (dedicated web pages, news pages)
- Richmond Review City Page
- City's intranet for employees
- **Social Media:** Social media is incorporated into the overall communication strategy to reach out to the community through Facebook, Twitter and YouTube. Social media provides timely updates during snow and ice events. This includes use of the @RichmondBC Alert Twitter account which is used only to provide emergency-related messages to residents (which include snow or other weather events). These updates include weather forecasts, what preparations are underway for current and upcoming events, current conditions and the status of any road closures due to debris, etc. This 2014/2015 season staff will again incorporate the use of photos and videos through its

social media channels. During the 2013/2014 snow season staff created a number of short videos to visually inform residents of a variety of snow topics (tips on how they can prepare for snow and snow removal preparation done at the Works Yard for any predicted snow events). These videos were shared to the public through the City's Facebook, Twitter and YouTube pages in advance of and during snow and ice events.

- News releases: News releases have been developed to address common extreme weather/snow and ice topics and will be released to the media as events occur. Some examples include: clearing leaves from storm drains, personal winter preparedness, and how the City is preparing for extreme weather events.
- Website: The City's website provides considerable information about snow response including news releases and a list of contractors that residents, Strata Councils, and business owners can call for snow removal services at their own cost. This information can be found at the following location:
<http://www.richmond.ca/services/rdws/weather/cityprepares.htm>.
- Coordinated Response: The City's various divisions have established communications protocols which will reinforce the snow response communications program. Participating departments include Public Works, Parks, Emergency Programs, Corporate Communications and Richmond Fire-Rescue.

2014/2015 Weather Forecast

Richmond's unique geography often results in exclusive weather patterns. Richmond-specific weather information and long range forecasts are received daily. According to Northwest WeatherNet the 2014/2015 winter forecast is as follows:

Expect a normal to warm/dry winter this year with one arctic outbreak possibly a second, a third outbreaks is not expected. The main climate driver for British Columbia winters is the El Nino/La Nina cycle. Current conditions are just below El Nino thresholds and are not expected to reach El Nino levels. In the event an El Nino does develop, early predictions are that it will be of the weak variety.

Operational Preparations

Operational preparations are underway which include equipment overhauls, meetings to coordinate efforts amongst departments, and training for staff. Training is crucial for preparation and is always an integral part of the groundwork for each winter season. This training is to ensure a sufficient number of personnel are available to respond to inclement weather events.

The City has 960 metric tonnes of salt secured under contract with an additional 500 metric tonnes on reserve. Salt is stored at the Public Works and Sidaway yards. Storing salt at the Sidaway yard enables us to reduce response times and increase efficiencies.

Through a centralized control centre, staff closely monitor and record equipment locations, route start and completion times, and salt distribution. This allows us to respond accurately to enquiries and to better track expenditures that can be used to forecast costs for future events.

2013/2014 Winter Season Summary

During the past winter season we experienced four snow events and ten ice/frost events of varying duration and severity. The City used 1408 tonnes of salt to clear 6025 lane kilometres of 1st and 2nd priority roads.

Conclusion

Preparations for the 2014/2015 snow and ice season by all required departments are well underway and will be completed in time for the upcoming winter.



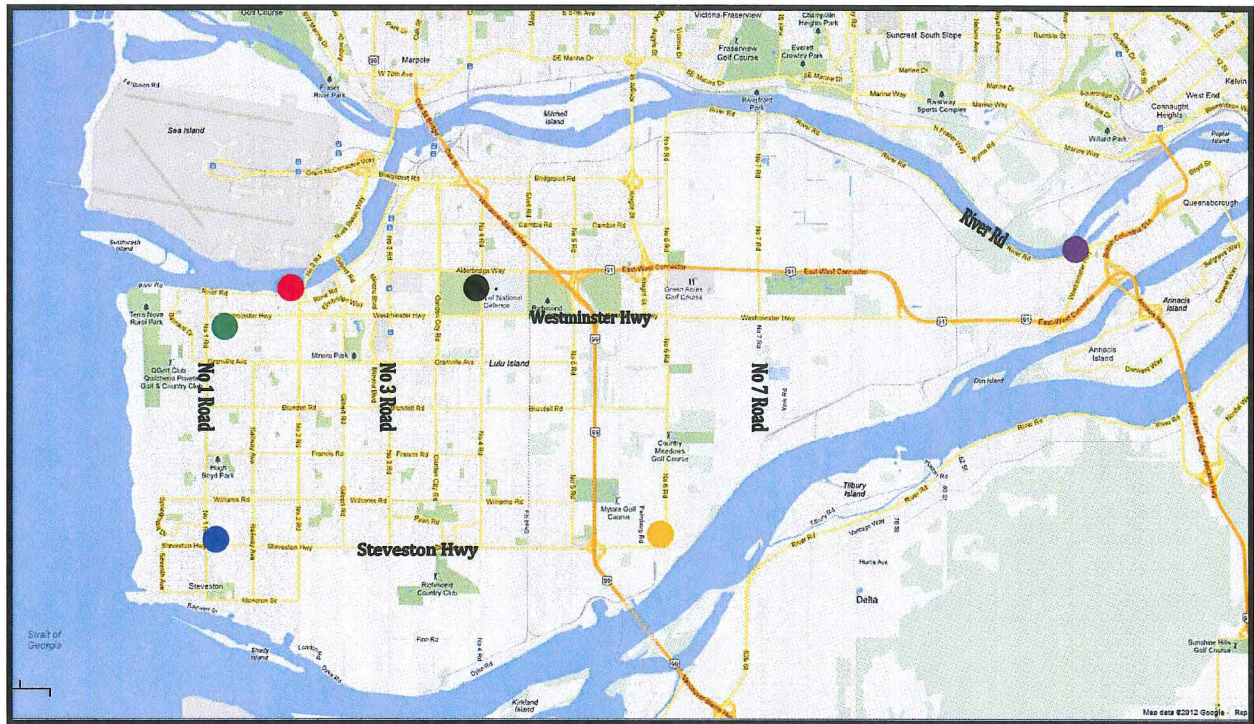
Ben Dias
Manager, Roads & Construction Services
(604-244-1207)

Att. 1: City of Richmond – Road Temperature Sensor Locations

Att. 2: City of Richmond – Snow Response Equipment

Attachment 1

City of Richmond - Road Temperature Sensor Locations



Road Temperature Sensors:

- Armoury
- No. 6 Road South
- Oval
- Queensborough
- Steveston
- Forsyth (installed in 2013)

Attachment 2**City of Richmond - Snow Response Equipment**

Number of Units	Description
4	Single-Axle Dump Trucks with Flinks and Belly Plows
1	1-tonne Flat Deck Truck with Insert / Brine Tank
6	Tandem Dump Trucks with Insert and Plough Attachments
1	Crane Truck with Insert
5	F550S with Snow Plows
1	Flusher Truck (Brine)
4	Mobile (Walk-Behind) Snow Blowers
5	Backhoes
1	Front End Wheel Loader
1	Holder
2	Bobcat Skid Steer
3	Hydro Excavators
1	Brine Mix (for pre-wetting)
2	Brine Applicator Inserts
960 tonnes	Salt