



City of Richmond

Report to Committee

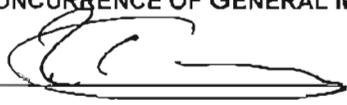
To: Public Works and Transportation Committee **Date:** October 31, 2012
From: Tom Stewart, ASCT. **File:**
Director, Public Works Operations
Re: **Update on 2012/2013 Snow and Ice Response Preparations**

Staff Recommendation

That the staff report regarding "Update on 2012/2013 Snow and Ice Response Preparations", dated October 31, 2012, be received for information.

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

Att. 2

REPORT CONCURRENCE			
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER	
Parks	<input checked="" type="checkbox"/>		
REVIEWED BY SMT SUBCOMMITTEE	INITIALS: 	REVIEWED BY CAO	INITIALS:  

Staff Report

Origin

October 17, 2012, the Public Works and Transportation Committee requested an updated report on the City's Snow and Ice Response Preparations. This report provides information on anticipated weather patterns associated with the upcoming 2012/2013 winter season, and the City's current preparedness measures, as well as those underway, to ensure a coordinated response. Also, there is information on the newest measures which are planned to increase public communications during weather events.

Analysis

In light of changing weather patterns and increased frequency of extreme weather events, Public Works Operations has implemented numerous changes over the last few years to enhance our readiness planning and response efforts. Overviews of these changes, incorporated in the next section, include; policy amendments, equipment review, enhancement to public communications/public involvement and overall response planning. Furthermore, information on expected weather patterns for the 2012/2013 season, operational preparations and planned expansion of public outreach efforts are provided.

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 media releases, as well as social media, such as Facebook 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 Policy 7013 (Roadways – Ice and Snow Removal) to 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 accommodated and if the resources permit.

Equipment: There have been a number of improvements over the past few years, including the construction of a “snow shed” in 2010, this project was approved by council and has resulted in the enhanced preparation and readiness of equipment during snow and ice events. The City has also installed five road temperature sensors and is in the planning stages for the installation of another two sensors. These sensors are monitored 24 hours per day and provide early indications of potential road frost or freezing conditions. These sensors are strategically located throughout the City to provide real time information concerning road conditions illustrated in Attachment 1. A full list of equipment dedicated for snow response is provided in Attachment 2.

Public Outreach: Comprehensive communication and a public involvement plan are vital when working with the community during the winter season. The City has included these plans in order to work cooperatively with the public:

- Website: The City updated their website to provide considerable information on snow response. Included on the site is a listing of private service providers for contractors that residents, Strata Councils, and business owners can call for snow removal services at their own cost.
- Snow Angels: This program was introduced in 2010 to connect local volunteer groups and service clubs with seniors and people with disabilities who may need assistance during extreme weather events. Assistance can take the form of shovelling snow from walkways. A registry of community organizations can be accessed on the City's website or by calling the Community Services Department, Dispatch, City Hall, or any community centre. The "Snow Angels" program is activated in the event of a major snowfall which is defined as 48 hours of continuous snowfall and a minimum of 15cm of snow.
- Social Media: This past 2011/2012 snow season staff incorporated social media into the overall communication process to reach out to the community through Facebook and Twitter. The City will continue the use of social media via Facebook and Twitter to provide frequent updates during snow and ice events. These updates include weather forecasts, what preparations are underway for current and upcoming events, pictures relating to the event (equipment, staff, road conditions, etc...).
- Community Associations: Staff will continue to work in partnership with the different community associations to improve service levels through open communication and combined efforts. In 2011/2012 staff arranged to have one of the City's Kubota's (a small off road unit with a removable snowplough attachment) to be stationed at the Salmon Shed in Steveston Park. While this unit is regularly used by Parks staff throughout the year, it is also available to the trained volunteers of the Steveston Community Society during snow and ice events.

2012/2013 Weather Forecast

City staff continuously monitors Richmond's specific weather forecasts and conditions. Richmond's unique geography often results in exclusive weather patterns. Forecasts with Richmond-specific weather information and forward-looking forecasts are received daily. The current long-term weather forecast for this upcoming winter season, according to Northwest Weathernet, has been predicted as:

"An extreme winter in either direction is unlikely. In most years, we have some weather parameters to clue off of, with the most important one being El Nino / La Nina. However, this year, practically every single weather parameter is in the middle of the scale, or is counter balanced by other factors. There will be no El Nino or La Nina this year. The record low Arctic sea ice will have some minor impact in making the eastern portions of North America colder/snowier, which means a bit less wet and cold for us."

Operational Preparations

Operational preparations are underway which include equipment preparation, meetings to coordinate efforts between departments, and training for staff. Training was key preparation for the past 2011/2012 season and continues to be important this season. This training is to ensure a sufficient number of personnel are available to respond during short-term and long-term events.

The City of Richmond's salt supplies have been secured for this winter season. There are currently 960 metric tonnes secured under contract and an additional 500 metric tonnes on reserve. In addition to the Public Works Yard, a second location (Sidaway Site) will be stocked with salt for the reloading of trucks during snow events. This secondary location will reduce travel times and increase efficiencies for equipment working on the east side of Richmond.

The City will closely monitor and record equipment locations, route(s) start and completion times and salt distribution through a centralized control centre. This will allow for accurate responses to public enquiries, better record keeping and post event summaries. Costs will also be tracked per lane kilometer to provide additional information for evaluation and future forecasting of expenditures.

2011/2012 Winter Season Summary

During the November 2011 to April 2012 winter season there were 7 snow events and 14 frost events of varying duration and severity. The City of Richmond used 926.82 tonnes of salt and cleared/salted 5169 lane kilometres of 1st and 2nd priority roads.

Conclusion

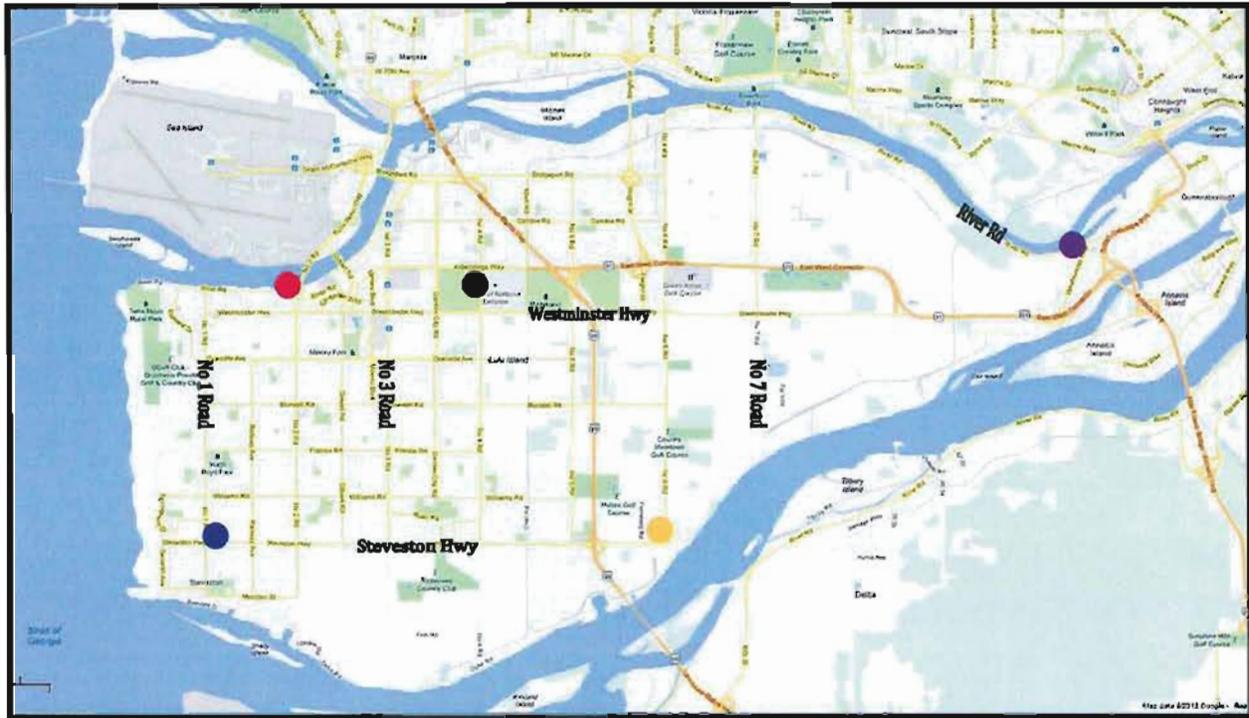
Currently, preparations for the 2012/2013 winter season are underway and will be completed in time for the upcoming season. The City is continuously seeking opportunities to improve service levels, communications and community involvement. Public outreach, through social media, will continue to be implemented to inform, provide current event information and involve the public in an effort to minimize risks associated with snow and ice.



Ben Dias
Manager, Roads & Construction Services
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City of Richmond - Road Temperature Sensor Locations



Road Temperature Sensors:

- Armoury
- No. 6 Road South
- Oval
- Queensborough
- Steveston

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
1	F550S with Snow Plows
3	F550S with Snow Plows
1	Mobile Road Grader
4	Mobile (Walk-Behind) Snow Blowers
5	Backhoes
1	Front End Wheel Loader
1	Holder
1	Bobcat Skid Steer
3	Hydro Excavators
960 tonnes	Salt
14,000 litres	Brine Mix (for pre-wetting)
216 pails (6 skids)	Ice Melt (walkways, stairs, etc.)