



ADMINISTRATIVE REPORT

Report Date: February 8, 2017
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VanRIMS No.: 08-2000-25
Meeting Date: February 8, 2017

TO: Standing Committee on City Finance and Services
FROM: General Manager, Finance, Risk, and Supply Chain Management
General Manager, Engineering Services
SUBJECT: Snow Response Update

RECOMMENDATION

- A. THAT Council authorize the Director of Finance to increase the City's 2017 operating budget if required, by up to \$9.4 million for costs related to the January and February 2017 snow events, with funding from the General Revenue Stabilization Reserve, for any or all of these costs that cannot be absorbed in the current operating budget over the remainder of the year.
- B. THAT Council authorize the Director of Finance to increase the City's 2017 operating budget for Solid Waste Collections if required, by up to \$1.2 million for costs arising from missed collections as a result of the January and February 2017 snow events, with funding from the Solid Waste Capital Reserve for any or all of these costs that cannot be absorbed elsewhere within the current solid waste utility operating budget over the remainder of the year.

REPORT SUMMARY

This report provides an update on costs incurred to date to respond to the December 2016 and January and February 2017 snow events, and requests authorization to increase the City's 2017 budget for up to \$9.4 million as required to fund snow response and related costs, and up to \$1.2 million to fund costs related to missed collections due to snow, with funding from the City's General Revenue Stabilization and Solid Waste Capital reserves. These Financial Stabilization reserves are part of the City's financial planning policies and have been put in place as a tool to mitigate unanticipated and unbudgeted costs which may occur from time to time. It is expected that with Climate change there is potential for more frequent and more extreme weather events, and the City will need to ensure we are resilient enough to handle

these changes in both our operations and financial planning. The City's Financial Stabilization reserve policies are a key part of this resilience. The authorization to increase the budget with funding from these reserves allows the City to continue to deliver on the planned services and programs outlined in the 2017 budget while maintaining a contingency for future unknown events which may occur through the remainder of the year. This authorization will only be exercised, in part or in whole if through the year, these costs cannot be absorbed within the existing 2017 budget (through either favorable revenue results or below budget expenditures).

This report does not address the report back items from the motion approved by Council on January 25th, 2017. Those report backs will be brought to Council at a later date once the final staff review has been completed.

COUNCIL AUTHORITY/PREVIOUS DECISIONS

Council received a report on April 9, 2013, outlining the City's snow removal plan, priority routes, and details regarding the City's response to the snow and ice weather event which occurred on December 19th, 2012.

On January 25th, 2017, Council approved the following motion:

- A. THAT Council formally thank City staff who worked through the holidays responding to the extended period of cold weather and snow in Vancouver.
- B. THAT Council be provided with a copy of the final staff review of the 2016-2017 winter snow response.
- C. THAT staff report back with an estimate of the cost and resources needed to provide full side-street snow removal in Vancouver.

A further report will be brought forward to council following a staff review of the 2016-17 events.

CITY MANAGER'S/GENERAL MANAGER'S COMMENTS

The City Manager agrees with the recommendations presented in this report.

REPORT

Background/Context

The 2016/2017 winter season so far has been one of the coldest and snowiest in recent memory. In addition, snow and rain followed by freezing temperatures caused a "rain/freeze/thaw cycle". This resulted in the City facing unusually challenging street conditions, including significant build-up of ice, especially in parts of Vancouver with higher elevations.

Due to accumulation of ice on side streets and back alleys, Sanitation crews faced challenging conditions this winter with respect to green bin and garbage pickup. These issues were even more difficult for Multi-Material BC's (MMBC) recycling collection contractor Smithrite because recycling trucks are lighter than garbage trucks and have more difficulty navigating icy streets and lanes.

To address the cost challenges arising from unusual weather events such as those experienced in 2017, the City's annual budget includes a contingency fund and reserves have been set aside for costs due to major events.

Reserve Policy

Financial Stabilization reserves are set up as part of the City's Financial management policies to provide stabilization to taxes and fees over the years. The Revenue Fund Stabilization Reserve provides for operating contingency funds for events such as inclement weather, catastrophic events, environmental hazards, extraordinary public safety situations, economic downturns and unforeseen changes in revenues. The City maintains a reserve to enable it to respond to these events to prevent service disruptions, mitigate risk, and adverse impact on property taxes and fees and the City's financial position. The Solid Waste Capital Reserve provides for stabilization of utility rates, and to fund the future closure and post-closure costs of the Vancouver Landfill. As we expect extreme weather events to increase due to Climate change, these reserves provide for stabilization from year to year for these unpredictable events.

Council Contingency

The City's Snow Removal Plan, received by Council on April 9th, 2013, set out City policy to fund costs related to major snow and ice events from the annual operating budget contingency.

The annual Operating Budget includes a \$4 million Council Contingency for unforeseen events including weather events.

Given that it is early in 2017, it is prudent to request approval for funding of the snow events in order to maintain the Council contingency budget to respond to any future unusual weather or emergency events over the next 11 months.

Strategic Analysis

The snow events in December 2016 and January and February 2017 have resulted in additional costs which have been incurred, or will be incurred by a number of city departments which are described below.

Snow response

Each fall, the City prepares its crews, equipment and City residents for the potential of serious weather events, which could include snow, ice, windstorms and flooding. During the winter season (typically beginning in November), Engineering staff continually monitor weather forecasts to ensure an appropriate response. The annual budget to prepare City equipment and crews for winter response is \$725,000; the actual winter response cost for the year is dependent upon the weather and the additional costs are charged to a contingency budget.

The 2016/17 winter season so far has required a much greater use of resources than a typical Vancouver winter. With several severe snowstorms and multiple snow/melt/freeze cycles in December, January and now in February, City crews have been on 24/7 rotations to brine, salt and plow roads according to current conditions. On the resourcing side, this has included calling in drivers who were not scheduled and/or who were off on vacation. On the equipment and supplies side, we are experiencing greater vehicle maintenance costs due to the need to have the full fleet of close to 40 pieces of equipment out on the roads during multiple heavy snow and ice events, and we have already had to acquire almost 12 times more road salt than is used in a typical winter.

Salt Usage

Salt and brine usage for the 2016/17 unusual snow and ice weather event response has far exceeded the typical season usage. So far this 2016/2017 season a total of 11,800 tonnes of salt and 1.19M litres of brine have been applied to city roadways. In comparison, in the 2015/16 season, which is representative of a typical winter season in Vancouver, 1,000 tonnes and 477,000 litres of brine were applied. As part of the salt usage, the City made the decision to provide free sand and salt mix to residents at 10 sites and one neighbourhood location for a total of 260 tonnes of salt and sand in response to ice build-up on streets and shortage in retail outlets.

Challenges were experienced by municipalities across the region in acquiring salt which impacted the price and availability of materials. The City had a guaranteed supply contract to provide 3,000 tonnes of salt and two additional contracts were initiated in December 2016 to diversify the supply as required including one local company and one out of province. At no time did the City run out of sand and salt supply as a result of its strategy and storage approach.

Damage to City Infrastructure

A significant amount of work will be required to address damaged city infrastructure following the snow and ice event including: an influx of "street light out" issues from a combination of circuit burn ups and short circuit problems from the saline stormwater runoff following salt application to our roadways; and significant increase in potholes or "pop outs" as a result of freeze thaw actions on our roadways.

In addition, cleaning of residual sand on our primary and secondary arterials, bike lanes, sidewalks around schools, hospitals and community centres will be required. Cleaning of sand is necessary to prevent: plugged catch basins which cause localized flooding impacting pedestrians, motor vehicles and private property; sand ingress into the grey infrastructure which will decrease the capacity of pipes and increase wear on sewer pump assets; and sedimentation/turbidity in our water bodies that can adversely affect fish and other life forms.

Costs at Civic Facilities

Snow and ice removal services for various Civic sites are provided, as required, by contracts established through our procurement process. This not only includes snow removal, but also includes salting services for when the weather is dry but below 2 degrees C. Sites include

various VFRS and VPD locations, the City Hall campus, Civic Theatres and non-market housing locations, and several other Civic locations.

The City of Vancouver is providing additional warm and welcoming space for anyone who needs to get out of the cold. Some of the City's community centres have been opened as warming shelters, supported by staff and volunteers.

Parks Costs

Snow and ice related costs at City parks and community centres include treating perimeter sidewalks and direct internal park walkways in the downtown area, park access roads, primary parking areas, and access paths to major facilities; treating heavily used perimeter sidewalks, direct internal park walkways, and the more frequently used parking areas; providing limited snow clearing program on less frequently used perimeter sidewalks and direct internal park pathways and parking areas; and keeping roads, walkways and pathways clear of tree and tree debris.

Utility Missed Collections

Through January and February in areas where there were steep, narrow and icy streets and laneways, City trucks could not safely drive in to collect garbage and green bin containers. Multi-material BC's contractor for curbside recycling services - Smithrite - faced similar challenges. These conditions did not occur on all City streets and lanes but were focused in select areas. The successive nature of the storms resulted in continued missed collections due to the difficult lane conditions.

In order to collect the garbage and green bin from these homes a number of additional efforts were made. Additional resources were added to salt lanes by hand with teams of backhoes and laborers with shovels. Where accessible, small trucks were also sent in to spread salt and sand. Collection trucks used tire chains to maximize what could be collected automatically. In areas that could not be serviced by collection trucks, staff wheeled carts to an accessible area and then used backhoes to tip into dump trucks. Additional resources from other Engineering branches were redeployed to supplement Sanitation staff with peak days up to 110 staff. Resources varied by day depending on the outstanding work load to clear the backlog of missed garbage and green bin pick up.

Implications/Related Issues/Risk (if applicable)

Financial

The December 2016 snow response costs were approximately \$3.1M which includes \$2.7M for City Engineering staff, equipment and materials, including salt, \$.35M for contracted services at Civic Facilities and approximately \$.05M allocated towards warming centres. These costs have been absorbed within the 2016 Operating Budget through redirecting of a number of staff and equipment from other budgeted activities and under budget expenditures in other areas.

The estimated financial cost for early 2017 snow response is approximately \$10.6 million; of which approximately 50% has been spent to date on City staff and equipment, salt purchases, contracted services and additional staff and equipment costs as a result of missed garbage and green bin collections.

To date in 2017, approximately \$1.5 million has been incurred for salt purchases, \$2.5 million for engineering snow response staff and equipment, \$.7 million for staff and equipment to address missed collections, \$0.6 million for snow and ice removal at Civic sites, \$0.4 million for snow and ice related costs at City parks and community centres, and \$30,000 for warming centres. As costs are still being updated in the system, these are estimated at this time.

It is estimated an equivalent amount will be required to address excessive Engineering infrastructure damage related to the snow and temperature conditions, excessive damage to the City fleet and additional costs for street cleaning to remove sand from roadways and walkways.

It is anticipated that throughout 2017, management will look for opportunities to absorb some or all of these costs in the current Citywide operating budget, however, given it is early in the year, Council approval to adjust the 2017 budget if needed through a draw from the City's Financial Stabilization reserves will enable staff to continue with planned programs and services, and maintain the remaining contingency for unknown events in the year ahead. This authorization will only be exercised, in part or in whole if through the year, these costs cannot be absorbed within the existing 2017 budget (through either favorable revenue results or below budget expenditures). Therefore, it is recommended that \$10.6 million be made available for snow related costs as may be required from the General Revenue Stabilization Reserve and the Solid Waste Capital Reserve, which as per City reserve policy may provide funding for stabilization.

Human Resources/Labour Relations

The snow events that have occurred in 2016 and 2017 have required City staff deployments after hours and on holidays and weekends. The city will continue to monitor overtime workloads and use of temporary staffing as required.

CONCLUSION

The snow events in January and February 2017 are expected to result in \$10.6 million of additional costs for the City, including costs for salt, snow removal, and repair of damaged street infrastructure. The ability to access the General Revenue Stabilization Reserve for up to \$9.4 million and the Solid Waste Capital reserve for up to \$1.2 million, if required, to fund the snow response will provide the budget for these costs while enabling staff to continue with these programs and services planned in the 2017 budget and preserving the Council contingency budget for the remainder of 2017 if required.

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