

Report to Council



Date: November 4, 2024
To: Council
From: City Manager
Subject: 2024-2025 Winter Operations Snow and Ice Control
Department: Infrastructure Operations

Recommendation:

THAT Council receives, for information, the Report from Infrastructure Operations dated November 4, 2024, regarding Snow & Ice Control Program preparedness.

Purpose:

To update Council on action underway to prepare for 2024/2025 winter snow and ice control.

Council Priority Alignment:

Transportation

Background:

The City of Kelowna delivers winter maintenance services for the mobility network, parks, and civic properties. The program is referred to as Snow and Ice Control (SNIC). Within these categories there are:

- 1725 lane km of roadways, 463 km of sidewalks, 308 km of bike lanes, 104 km of multi-use corridors, three pedestrian overpasses and 615 bus stops and 101 parking lots
- 77 Parks and 25 Civic properties are serviced under the winter maintenance program as well.
- Service is also provided to 60 km of public laneways that provide essential access for fire and solid waste removal vehicles.

Private roads and lanes within residential and commercial properties are not maintained by the City. SNIC measures for MoTI's Highways 97 and 33 are provided by AIM, while snow and ice measures for the Bennett bridge are provided by Atkins Realis.

Discussion:

Preparations:

The City of Kelowna begins preparing for winter operations after the Labor Day weekend. The team conducts a review of past performance and issues, plans for equipment readiness, converts equipment for winter operations, and renews supplier contracts.

On October 1, the annual shift change notice was posted, allowing for a morning and afternoon shift starting November 18. The dual shift strategy expands regular scheduled hours to 16 hours per day. This standard shift structure helps avoid incurring overtime costs. During snow events, this schedule allows for easy coverage increases to a 24-hour service cycle to respond to the weather and utilize equipment throughout the day. When there is no snow maintenance required, our crews return to their regular duties such as pothole patching, crack sealing, and general maintenance.

Equipment:

The city has a diverse fleet of vehicles, most of which are dual purpose, converting from regular duties to winter service by adding snow and ice appendages. The city-owned fleet consists of tandem axle and single axle trucks with slip-in sanders and belly blade plows, one-ton trucks with front-mounted blade plows and rear sanders, trackless tractors with brush and/or front plows (for city-maintained sidewalk service), and numerous other supporting pieces of equipment such as graders and deicing units.

Contract Services:

The city has contracted out a portion of the snow and ice control measures in certain areas. This approach increases winter staff and equipment availability only when needed. Contractors are providing snow and ice control measures in 5 of the 21 roadways service areas. Additionally, winter services for city owned parking lots, parkades, transit pullouts, and three overpasses are also contracted out.

The 2024 budget for snow and ice specific services is \$2,800,000, with the current cost at \$ 1,700.00 (Jan -Mar 2024 response).

Snow Event Planning and Forecasting:

The city's weather response is guided by forecasts from Weathernet, a private third-party forecasting company. This year, the city is augmenting the forecasting services by using an additional local forecasting company. This will provide the team with increased accuracy based on local knowledge, allowing them to better prepare an appropriate response. Advanced warning is essential to scheduling crews and preparing equipment.

Extreme Weather Protocols:

During extended periods of sustained or heavy snow (or ice), various systems are in place to ensure a continued service delivery across the infrastructure. Media availability is planned before the event starts to provide the most accurate information to our citizens. During events, the team hosts twice-daily

conference calls for stakeholders in the community at large, such as SD23, RCMP, Fortis BC, and BC Ambulance. During these calls, updates on the anticipated weather and route clearing progress are provided. The team will issue parking bans in the 7 snow areas to facilitate winter maintenance if needed. When snow accumulation creates operational or traffic issues, the snow removal program will be activated. The city has created 6 snow-dumping areas in various parts of town where the removed snow will be stored.

Digital Transformation:

With the introduction of Cityworks in 2021, the teams are transitioning to a digital approach for snow and ice response. The snow and ice dashboard demonstrates adherence to council policy for each logged event, with digitally tracked routes and completion rates displayed in near real-time. Digital displays are being introduced in the cabs of the snow clearing equipment, with a plan to start the transition to "In Cab" service requests. This means that when an operator completes their route, a display will show all the open service requests for action, and each request can be marked off as complete in real-time. Further improvements to the near real-time map and dashboard overviews are required before creating public-facing versions for citizens.

Changes vs. 2023

Based on past performance reviews and non-compliance, several improvements and changes were made to the program as part of the continuous improvement cycle to enhance service levels across the various mobility networks:

- The 7 recommendations from the root cause analyses of the February 27, 2024, weather event were implemented in the current response. These recommendations addressed key issues such as forecast monitoring, forecast accuracy, and a response that was non-compliant with procedures, along with four contributing factors.
- The response zones were redrafted to deliver more consistent services across the various areas. Previously, there were 19 zones; now there are 21 zones with a truck dedicated to each zone.
- The sidewalk program has been moved to Parks Services and combined with the parks and civic properties snow program. This change aims to achieve higher efficiencies and deliver services within council-specified timelines.
- Enhanced local forecasting of events has resulted in better response planning.

Conclusion:

The City of Kelowna delivers a winter maintenance program that aims to create good winter surface conditions for sidewalks, pathways, civic properties and roads promptly and efficiently, balancing staff, equipment levels and contractors without unduly impacting property taxes.

Considerations applicable to this report:

Legal/Statutory Authority:

Traffic Bylaw 8120

Legal/Statutory Procedural Requirements:

Code of Practice for Environmental Management of Road Salts (ECC).

National Safety Code (NSC)

Existing Policy:

Council Policy 332

Council Policy 374

Financial/Budgetary Considerations:

Current Budget FY 2024 & 2025

Considerations not applicable to this report:

Consultation and Engagement:

Communications Comments:

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