

Noise Mitigation at City of Saskatoon Snow Management Sites

ISSUE

The City receives complaints from nearby residents about noise that originates from the City's snow management sites. This report summarizes the ongoing continuous improvement investigation to mitigate this concern, which is primarily due to tailgate slamming from snow hauling trucks.

BACKGROUND

City Council at its Regular Business Meeting held on September 27, 2021, considered the Roadways Emergency Response Plan for Extreme or Unusual Snow Event report, and resolved, in part:

- "2. That Administration report to the appropriate committee with respect to the results of ongoing continuous improvement investigations to mitigate noise nuisance at snow storage sites for nearby residents."

The City currently operates three snow management sites. The sites are located at 1) the Civic Operations Center (COC), 2) on Wanuskewin Road, and 3) at the north end of Central Avenue. The facility at the COC is an engineered facility which has been in operation since 2017. The Wanuskewin Road and Central Avenue sites are not engineered facilities and have been operating in their current locations for more than ten years.

In the winter months, all three sites are open to the public 24 hours per day and 7 days per week. Approximately 25% of the total volume of snow received at these sites is from City operations, while the remaining 75% is from private companies removing snow from private property (e.g., parking lots and private roadways).

On average, the Administration receives one or two formal noise complaints each year regarding tailgate slamming. Five noise complaints were received after the extreme snow event in November 2020 when a temporary overflow snow storage area was established at the COC north of the permanent site, and closer to a residential neighbourhood. The overflow area was needed for the abnormally large quantities of snow hauled to the site. This trend of higher volumes of complaints has not persisted.

The Administration did not receive any noise complaints from the Wanuskewin Road and Central Avenue sites in the 2020-21 winter season.

The Administration has not received any formal noise complaints thus far in the 2021-2022 winter season for any of the three snow management sites. The Saskatoon Police Service has received one formal noise complaint in the 2021-22 winter season, reported from the residential area adjacent to the COC snow management site.

CURRENT STATUS

City of Saskatoon's Current Approach

The snow management site at the COC has an earth berm located along the north boundary of the site. The berm was constructed in 2016-2017 as part of the COC construction project. In addition to the constructed berm, the snow placement plan at the snow management site includes the creation of a snow berm along the north side of the active snow dumping and placement area to mitigate noise from the snow storage site.

The main noise concern is the result of truck tailgate slamming. The slamming at the snow management sites occurs when the tailgate on trucks and trailers slams back on the box frame immediately after the snow is unloaded. It may also occur as the truck moves forward following unloading. Due to the sudden change in inertia, the tailgate slams back causing a loud, abrupt sound.

As part of the measures to minimize the noise due to tailgate slamming, there are "No Tailgate Slamming" signs installed at all three snow management facilities. The existing signs are somewhat small and might be missed by some users of the site. The City includes tailgate slamming prohibition clauses within City trucking and snow removal contracts with private companies. This provides an option for contractual enforcement if City staff observe the City's contractors slamming their tailgates. During past site visits by City staff, it was observed that very little intentional tailgate slamming was occurring (i.e., the clutch and brake are used to slam the tailgate to jar all snow out of the box). It was primarily unintentional tailgate slamming which occurs as the truck pulls ahead and the pile of snow slides from the box. This can be difficult to avoid or eliminate entirely. Snow haulers that subscribe to snow storage site email updates are advised and reminded of the tailgate slamming rules at least twice per season. This information is also found on the City's external website.

As an additional measure, load sticking prevention (e.g., plastic box liners) is also a requirement written into the City's trucking assistance contracts.

Private contractors and the public that use the snow management sites are not under any contractual obligations with the City.

Past Public Engagement

Public feedback regarding general noise at the COC was previously gathered by the Planning and Development Department as part of the Montgomery Place Local Area Plan (LAP). The Montgomery Place LAP was brought forward to City Council in 2018.

Below is a summary of findings:

- Sound mitigation was a key topic throughout the engagement and is a section of the final LAP report.
- Environmental noise monitoring was performed in fall 2016 and spring 2017 to assess the industrial sound levels within the neighbourhood, including potential noise originating from the COC site. The sound measurements were completed during construction of the COC, so the data provides a pre-operational baseline

that can help determine if there has been an increase in the level of sound now that the COC is operational.

- The environmental noise study did not observe sound levels from the COC exceeding appropriate standards, defined as 65db. The final LAP report did indicate that “during a major snow event, the Snow Management Facility is expected to be heard in the southern portion of the neighbourhood due to the volume of snow hauling vehicles and snow moving equipment on site”. The environmental noise study also indicated that winter conditions (temperatures, atmospheric conditions, snow and ice cover, etc.) can affect the propagation of sound, which could lead to different noise study results.

Planning and Development staff have advised that noise from the COC, in terms of tailgate slamming and some engine retarder brake noise, continues to be a concern to the community, particularly those residents living in the southern portion of the neighbourhood.

Approaches in Other Jurisdictions

Fourteen municipalities across Alberta, Saskatchewan, Manitoba, and Ontario were contacted regarding their approach to noise mitigation at their snow management sites. Nine responses were received. All cities that responded indicated no noise issues or complaints from the operations of their snow management sites. The following information that was received likely contributes to the absence of issues and complaints:

- The snow management sites are in industrial locations or situated on the outskirts of the city, all well away from residential neighbourhoods.
- Some cities’ snow management sites are only used by their own City operations and contracted haulers; they are not open to the public.
- Some cities have set hours to their snow management sites or are only open at set times for snow deliveries.
- One city has snow management facility oversight, surveillance, and management contracted out to a third party which increases onsite compliance of site rules.

DISCUSSION/ANALYSIS

Noise Bylaw Implications

The City Solicitor’s Office was consulted regarding the applicability of employing Bylaw No. 8244, The Noise Bylaw, 2003 (Bylaw) at the snow management sites. The Noise Bylaw’s application is limited to unreasonably loud or excessive noises, disturbances, or commotions.

The Bylaw considers the following factors in determining whether a noise is unreasonably loud or excessive:

- Proximity to sleeping facilities;
- Land use and zoning;
- Time of day;
- Duration and nature of sound;

- Whether the sound is recurrent, intermittent, or constant; and
- The nature of the event or activity from which the sound emanates.

It is likely that based on the above factors, the tailgate slamming at the snow management sites would not be considered unreasonably loud or excessive. The facts currently do not support a violation of the Noise Bylaw.

Furthermore, Section 7(f) of the Bylaw specifically exempts sounds resulting from “the construction, repair and maintenance of streets, bridges, sidewalks, alleys, water mains, storm sewer mains, sanitary sewer mains, electrical facilities, and any other works by or on behalf of the City”, from Bylaw application. The tailgate slamming is the direct result of street maintenance (i.e., snow removal) and is therefore considered exempt from application of the Bylaw.

Noise Study Validation

As part of an Industrial-Residential Interface Study that will begin in 2022, the Planning and Development Department will be completing noise monitoring within the next 6 to 12 months for the areas of the city where heavy industrial and residential uses are in close proximity. The noise study will also include measurements of Circle Drive as part of implementation work from the Montgomery Place LAP.

The Roadways, Fleet and Support (RFS) Department plans to partner with the Planning and Development Department on the noise study project to collect noise data from the COC snow management site to better understand its potential noise propagation to the nearby neighbourhood. Although the total cost of the study has not been determined, the cost of the sound measurements and analysis relating to the COC is estimated to be \$15,000 to \$30,000. This expenditure will be funded by the Snow and Ice Management service line.

The Administration will further evaluate noise mitigation options if the study confirms that snow management operations cause sound levels to exceed the nuisance threshold.

Potential Improvement Options

1. Complete a noise reduction awareness campaign with the goal of providing no-tailgate slamming educational and awareness materials to site users. The estimated Communications expenses are approximately \$7,000.
2. Install additional larger “No Tailgate Slamming” signs at the entrances of the snow management sites. The estimated cost for the supply and installation of larger signs at the three snow management sites is approximately \$2,000.

FINANCIAL IMPLICATIONS

Both improvement options considered in this report would be completed within currently allocated budget under the Snow and Ice Management service line. The cost of the sound measurements and analysis relating to the COC site, estimated at \$15,000 to \$30,000, will also be funded by the Snow and Ice Management service line.

OTHER IMPLICATIONS

There are no privacy, legal, social, or environmental implications identified.

NEXT STEPS

The Administration will continue to monitor and record any noise complaints due to tailgate slamming at the City's snow management facilities.

Unless otherwise directed, the following improvement options will be implemented prior to the next winter:

- Additional large "No Tailgate Slamming" signs will be installed at the entrances to the three snow management sites; and
- Noise reduction awareness campaign with the goal of providing no-tailgate slamming educational and awareness materials to site users. Deliverables may include a video and targeted advertising leading into next winter.

Noise data at the COC site will be collected in the 2022-2023 winter season to inform the Administration if additional sound mitigation controls are warranted.

Report Approval

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