

Memorandum



CITY OF DALLAS

DATE November 30, 2023

Honorable Members of the City Council Transportation and Infrastructure Committee:
TO Omar Narvaez (Chair), Zarin Gracey (Vice Chair), Tennell Atkins, Cara Mendelsohn,
Kathy Stewart, Jaynie Schultz, Jaime Resendez

SUBJECT **Public Works Snow and Ice Events Preparations**

Background

During a winter weather event, there are two strategies used to prep icy roads for travel: anti-icing and deicing. **Anti-icing** is a proactive process of pretreating roads before freezing weather occurs to decrease the likelihood of snow or ice bonding to pavement surfaces. **De-icing** involves the application of chemicals or pre-wetted rock salt to break the bond **after** ice adheres to the road surface.

Historically, the City of Dallas has relied upon de-icing applications (such as sanding operations) to respond to ice and snow events. However, the City of Dallas has added a brine pre-treatment solution for future winter weather operations; this new maintenance process will add a level of anti-icing protection ahead of existing de-icing solutions.

Brine Pre-Treatment Solution

Identified through a study of best practices for snow and ice operations, the City's new anti-icing mixture is a brine solution of salt and water. Used as a pre-treatment to prior to snow and ice conditions, the brine solution protects roadways from freezing as brine has a lower freezing point than pure water. It is extremely important to apply the brine solution before the pavement freezes as the mixture will not work when applying after a freeze, and more brine cannot be added to the roadway until the road is dry.

Brine is recognized as a product to reduce or remove slippery surfaces and keep roads safe and open. Brine uses one-quarter to one-fifth as much salt as other de-icing applications, which makes the solution a more cost effective and environmentally safer treatment compared to other anti-icing and de-icing applications.

Prioritization of Treatments

Understanding the new pre-treatment and existing snow and ice operations, during 24-hour snow and ice events, Public Works and Dallas Water Utilities crews prioritize treatments and operate as follows:

- Prioritize treatments for bridges, overpasses, inclines, and intersections on most major thoroughfares (working from the central city outward),
- Treatments are also applied to DART bus routes and other areas critical to public safety, such as hospitals and fire stations,
- The City does not treat TxDOT highways,

DATE **November 30, 2023**
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PAGE **2 of 2**

- The City does not treat residential streets unless requested for emergency access for Dallas Police Department or Dallas Fire and Rescue.

For additional questions regarding the City's winter weather de-icing and anti-icing solutions, please contact Ali Hatefi, Director of Public Works Department.



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Assistant City Manager

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