

 <p style="text-align: center;">Council Communication Office of the City Manager</p>	Date:	November 21, 2016
	Agenda Item No.	37
	Roll Call No.	<u>16-2005</u>
	Communication No.	<u>16-651</u>
	Submitted by:	Jonathan A. Gano, P.E., Public Works Director

AGENDA HEADING:

Approving sole source purchase of brine maker for Snow and Ice Control Program.

SYNOPSIS:

The Public Works Department has been able to reduce salt usage by developing a robust anti-icing (brining) program. Crews apply a salt water mixture on the streets prior to a storm event to reduce the bonding of snow and/or ice to the street surface. This allows plows to remove snow more easily and leave little or no snow residual. Any remaining residual is removed from the snow routes by applying rock salt. It costs \$3.00 per lane mile for a brine treatment, this reduces the need for treatment with rock salt which costs \$4.81 per lane mile.

FISCAL IMPACT:

Amount: \$124,573.50

Funding Source: Fiscal Year 2017 Recommended Operating Budget Page 234, PW240402, 544090

ADDITIONAL INFORMATION:

The Public Works Department recommends purchasing the Ultimate Brine Maker sold by Henderson Truck Equipment (916 South 10th Street, Manchester, Iowa, 52057, Marty Ward Owner/President) due to the following necessary advantages over other brine maker models:

- The ability to fill trucks with a blended material. Due to brine truck configurations with multiple tanks, staff must have a blended fill to avoid one (1) tank with all brine and one (1) tank with all additive such as Geomelt. This would risk the brine freezing on contact with the street as Geomelt is blended to reduce the freezing temperature of the liquid.
- This is the only model with a self-cleaning auger. All other models require the salt hopper be disconnected from all hoses and removed from the building with a forklift to be cleaned. Cleaning occurs at least once every 12 hour shift. This will reduce wear and tear on the equipment and save downtime during the anti-icing operation.
- This model has a brine production rate of 9,000 gallons per hour. This is 50% greater than the next highest model. This will reduce downtime for drivers who must wait for brine to be created before filling the tanks on their trucks. This will reduce the anti-icing operation by approximately 3.5-hours per event resulting in a savings of over \$20,000 per season.

- This model has pneumatic diaphragm valves and butterfly valves. These valves have a very low rate of failure in the challenging salt-water environment. The City of West Des Moines has been using a similar model for over seven (7) years without a valve failure.

PREVIOUS COUNCIL ACTION(S):

Date: October 12, 2009

Roll Call Number: [09-1866](#)

Action: Bids from the following:

- (F) [MacQueen](#) Equipment (Bill Garber, CEO), per State of Minnesota Contract, for replacement brine system to be used by the Street Maintenance Division, \$79,260. ([Council Communication No. 09-706](#)) Moved by Mahaffey to adopt. Motion Carried 7-0.

BOARD/COMMISSION ACTION(S): NONE

ANTICIPATED ACTIONS AND FUTURE COMMITMENTS: NONE

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