



## Memorandum

**TO:** Mayor Laurel Lunt Prussing and Members of the City Council

**FROM:** William R. Gray, Public Works Director  
John Collins, Operations Manager

**DATE:** May 7, 2015

**RE:** 2014/2015 Winter Summary

It was somewhat refreshing to have an “average” winter. This year’s winter season in all respects was an average winter, which included a few record high and low temperatures along with two icing events and minimal blowing snow.

This year’s winter season started with the first snow fall on November 13<sup>th</sup> and ended with the last measurable snow fall on March 28<sup>th</sup>. During this time the Operations Division responded to 12 separate snow or ice related events. The Illinois State Water Survey recorded 26.1 inches of snow this winter; an average winter snow fall is around 24 inches. Also during this time, Urbana experienced 65 days of precipitation, record low temperatures on November 21<sup>st</sup> and February 23<sup>rd</sup>-24<sup>th</sup>, record high temperature on November 30<sup>th</sup>, and 8.3 inches of snow on March 1<sup>st</sup>.

The total cost for addressing this year’s winter season events was **\$367,617**. Listed below is a breakdown of expenses for this year’s winter season.

Salt*	\$76,134
Salt Brine	940
Calcium Chloride	3,001
Ice Melt**	2,610
Employee Hours/Cost	62,736
Employee O/T Hours/Cost	88,748
Equipment Cost	118,098
Contractual Cost	15,530
<b>Total Cost</b>	<b>\$367,617</b>

Salt\* This cost includes salt used by the Mass Transit District, the Urbana School District, and the Urbana Champaign Sanitary District.

Ice Melt\*\* This is treated salt for use at the Parking Deck and on the brick sidewalks at the City Building.

Miscellaneous notes from this past winter season:

**Materials consumed**

- 1,263 tons of salt
- 3,750 gallons of salt brine
- 4,194 gallons of calcium chloride
- 4,555 lbs. of Ice Melt\*\*

**Employee and equipment hours**

- 1,908 employee hours worked (397 hours on sidewalks)
- 2,519 employee overtime hours worked (52 hours on sidewalks)
- 3,310 equipment hours (320 hours on sidewalks)

**Materials carried over for next season**

- 436 tons of salt
- 1,700 gallons of calcium chloride

The City's Sidewalk Snow Removal Ordinance was enacted five times throughout the season. The overall response and coverage from the affected business areas was very good in the Central Business District however, Public Works did need to respond a few times to the South Philo Road Business District.

The Operations Division will continue working to reduce the cost of the City's winter operations, however it has been and will continue to be accomplished in small steps. Taking this approach will ensure that gaps in coverage are minimized to protect the safety of Urbana's citizens, motorists, pedestrians, and the biking community.

This year the Operations Division trained six new employees for snow removal and they all did a great job. Once again, everyone came together as a team to complete another successful winter season.

Attached is a spreadsheet of the past winter material, equipment, contractual and labor costs for comparison.

For any question regarding this matter please feel free to contact this office.

**7 YEAR SNOW SEASON COMPARISON 2007/08-2013/14**

	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
Snowfall in Inches	26.3	18.7	27.1	41	11.4	23.3	43.2	26.1
Number of Snow/Ice Events	17	30	22	16	13	15	26	12
Plowing Events	4	5	5	7	1	4	9	8
Salting Only Events	13	25	17	9	12	11	17	4
Salt Usage in Tons	1,500	1,508	2,868	2,286	772/850*	755/817*	2149/2296*	1149/1263*
Salt Usage Per Inch of Snow in Tons	57	81	106	56	68	32.4	50	44
Salt Cost per Inch of Snow	\$2,166	\$5,231	\$7,079	\$3,730	\$5,047	\$2,193	\$3,334	\$2,652
Total Salt Cost	\$56,962	\$97,822	\$191,841	\$152,911	\$57,537	\$51,106	\$144,025	\$69,262
Salt Brine In Gallons				25,515	15,444	12,665	7,730	3,750
Salt Brine Per Inch of Snow				622	1355	135.9	179	144
Salt Brine Cost per Inch of Snow				\$156	\$339	\$34	\$45	\$36
Total Salt Brine Cost				\$6,379	\$3,861	\$3,166	\$1,933	\$940
Calcium Chloride in Gallons	7530	6,315	3,864	5,850	1500	0	5,230	4,194
Calcium Chloride Usage Per Inch of Snow	286	338	143	143	132	0	121	160
Calcium Chloride Cost Per Inch of Snow	\$123	\$161	\$93	\$97	\$89	\$0	\$79	\$115
Total Calcium Chloride Cost	\$3,238	\$3,009	\$2,512	\$3,978	\$1,020	\$0	\$3,400	\$3,001
Ice Melt in Lbs.	6,500	7,000	3650	4,750	3220	2,820	4,400	4,555
Ice Melt Usage Lbs. Per Inch of Snow	247	374	135	116	282	121	102	175
Ice Melt Cost Per Inch of Snow	\$89	\$139	\$54	\$46	\$113	\$48	\$41	\$100
Total Ice Melt Cost	\$2,340	\$2,598	\$1,460	\$1,900	\$1,288	\$1,128	\$1,760	\$2,610
Employee Regular Labor Cost	\$128,236	\$91,482	\$81,031	\$123,733	\$31,286	\$88,418	\$138,561	\$62,736
Employee Overtime Cost	\$51,914	\$40,253	\$66,198	\$95,038	\$26,390	\$56,806	\$153,600	\$88,748
Employee Cost Per Inch of Snow	\$6,850	\$7,045	\$5,433	\$5,336	\$5,059	\$6,233	\$6,763	\$5,804
Total Employee Cost	\$180,150	\$131,735	\$147,229	\$218,771	\$57,676	\$145,225	\$292,161	\$151,484
Equipment Cost	\$90,440	\$77,380	\$133,482	\$158,864	\$42,363	\$94,326	\$243,629	\$118,098
Equipment Cost Per Inch of Snow	\$3,439	\$4,138	\$4,926	\$3,875	\$3,716	\$4,048	\$5,640	\$4,524
Contractual Cost	\$5,520	\$4,947	\$8,724	\$10,674	\$3,873	\$16,176	\$25,903	\$15,350
Total Cost for Winter Operations	\$338,650	\$317,491	\$485,248	\$551,577	\$167,618	\$315,323	\$712,811	\$364,917
Total Cost Per Inch of Snow	\$12,876	\$16,978	\$17,905	\$13,453	\$14,703	\$13,533	\$16,500	\$13,982
* This includes salt used by the C-U Mass Transit District, Urbana School District and the Urbana Champaign Sanitary District								
Salt Brine was not used prior to the 2010/2011 Winter Season								