

CROW WING COUNTY

Snow Event 14-2022-3 December 14-17, 2022



Reported Event Conditions

Date: 12/14-17/22
Event No: 14-2022-3
Begin Time: 12/13 3PM
End Time: 12/17 9AM
Weather: Snow
Precipitation: 15" Snow
Temperature: 34/-5
Wind: 5-30 MPH

Event Costs

Salt	\$109,113
Sand	\$255
Brine	\$5,321
Equipment/Fuel	\$86,965
Personnel Reg.	\$15,859
Personnel OT	\$18,818
Total	\$236,330
Cost Mile	\$422
Season Total:	\$468,402

Priority By Route

Priority 1

% Target 1A Met: 100%
% Target 1B Met: 100%

Priority 2

% Target 2A Met: 100%
% Target 2B Met: 100%

Priority 3

% Target 3A Met: 100%

— MnDOT Highway

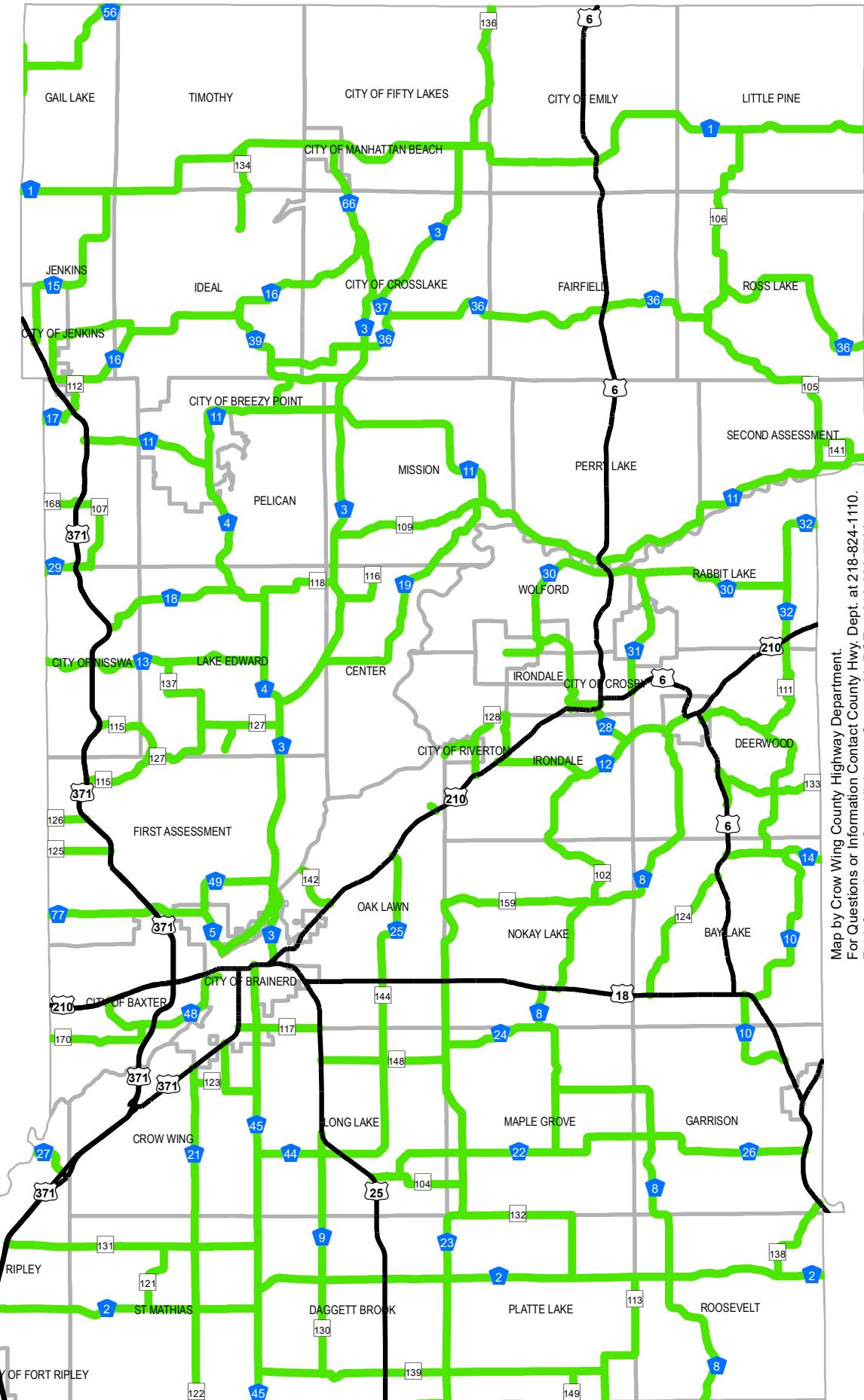
Route Priority

- 1 (ADT>5000)
- 2 (500>ADT<5000)
- 3 (ADT<500)

Route Target

- Target Achieved
- Target Partly Achieved
- Target Not Achieved

Report Date: 12/20/2022



Map by Crow Wing County Highway Department.
For Questions or Information Contact County Hwy. Dept. at 218-824-1110.
For Information on State Highways Contact MnDOT at 218-828-5700.

2022/2023 Summary For Snow Event 14-2022-3

Date 12/14-17/2022

Salt Tons	Salt \$	Sand Tons	Sand \$	Brine gal	Brine \$	Mat. Total	Equip \$	Reg. Personnel	OT \$
752.5	\$109,113	7.5	\$255	8062	\$5,321	\$114,688	\$86,965	\$15,859.00	\$18,818

Total \$236,330

53.5 Plow hrs.

\$4,415 per/hr.

856.50 Man hrs.

\$422 per/CL/mile

\$8.91 per/household for entire County

Forecast

Snow forecasted to begin falling at 3:00 pm 12/13/22. Snow will continue through 12/17/22 with 6-10" of snow forecasted. Strong 40 mph winds and warmer temperatures until 12/17. Temps will start to drop significantly Friday. Snow forecast changed on 12/14. Small lull on 12/14 after 9 a.m. but snow resumes late evening and totals increased through 12/16/22. On 12/15 forecast changed again that a majority of the snow will end 12/16 at 2 am with a chance of flurries during the afternoon.

Pre Plan

Begin plowing at 3:00 am 12/14/22. Apply 300 lbs. of salt on centerlines to keep the snow melting and to limit compaction. Return 5:00 am 12/15/22 and plow into the evening. Apply 200 lbs. to centerlines while it is snowing and 300 lbs. to centerlines if snow stops on 12/15. Resume plowing 12/16 at 5:00 am and apply 350 lbs. on centerlines. Check roads 7:00 am 12/17, apply to compacted areas.

Actual Event

Event start: 12/13/22 3:00PM

Event ended 12/17/22 9:00AM

Details/Comments

Plows started at 3 am 12/14. Applied 300 lbs. on centerline. Heavy wet snow compacted. 30 mph winds. Plows kept plowing until 5 pm 12/14. Plows began plowing again at 5 am 12/15. Heavy wet snow compacted again but the salt applied 12/14 helped it peel better than on 12/14. Plows continued until 7 pm. Plows dealt with lots of trees down across roads. Plows resumed 5 am 12/16. Plows came in to check roads on 12/17 and it started to snow again so plows began plowing.

Conditions

Rain/sleet continued initially until 8:00 pm on 12/13 before changing over to snow. About 3" at 3:00 am 12/14. Heavy snow started around 4:00 am 12/14 and continued until 9:00 am. Snow resumed at 2 am 12/15. Heavy wet snow caused trees to break and fall into the roads. Snow continued on 12/16. Snow ended at 9 am 12/17.

Road	Road Temp	Date	Time	Air Temp
Hwy 6	32	12\14\22	8:00am	31
Hwy 25	28	12\14\22	8:00am	32
Hwy 6	30	12\15\22	5:00am	31
Hwy 25	28	12\15\22	5:00am	31
Hwy 6	32	12\16\22	5:00am	28
Hwy 25	29	12\16\22	5:00am	29
Hwy 6	18	12\17\22	5:00am	14
Hwy 25	18	12\17\22	5:00am	15

Date	High	Low
12/12/2022	33	30
12/13/2022	33	30
12/14/2022	34	30
12/15/2022	33	28
12/16/2022	32	15
12/17/2022	18	-5
12/18/2022	7	-6
12/19/2022	9	-9

Source: weather.com. Monthly Weather. 56401

Summary

Long duration event with challenging snowfall rates, consistency of snow, trees falling on the roads, timing of snowfall, compaction, and then falling temps.

Decisions Made

Start times as early as possible but still allowing coverage for evening commutes, Apply salt to try to combat continued falling snow and compaction.

Lessons Learned

Wet heavy snow, even if the temps are favorable, requires some salt to keep it from compacting and sticking versus not applying salt. Early plowing and salt application worked well.

Goals Met/Not Met

	Plowing	Goals
Priority 1	Met	6 hr.
Priority 2	Met	8 hr.
Priority 3	Met	10 hr.

	Bare wheel paths	Goals
Priority 1	Met	18 Hr.
Priority 2	Met	48 hr.