

CROW WING COUNTY

Snow Event 16-2023-21 April 20-21, 2023



Reported Event Conditions	
Date:	4/20-21/2023
Event No:	16-2023-21
Begin Time:	4/19 6AM
End Time:	4/21 9PM
Weather:	Rain/Snow
Precipitation:	.28" R/6.5" S
Temperature:	41/26
Wind:	10-20 MPH

Event Costs	
Salt	\$12,485
Sand	\$34
Brine	\$407
Equipment/Fuel	\$27,035
Personnel Reg.	\$4,196
Personnel OT	\$5,234
Total	\$49,391
Cost Mile	\$88
Season Total:	2.38M

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%

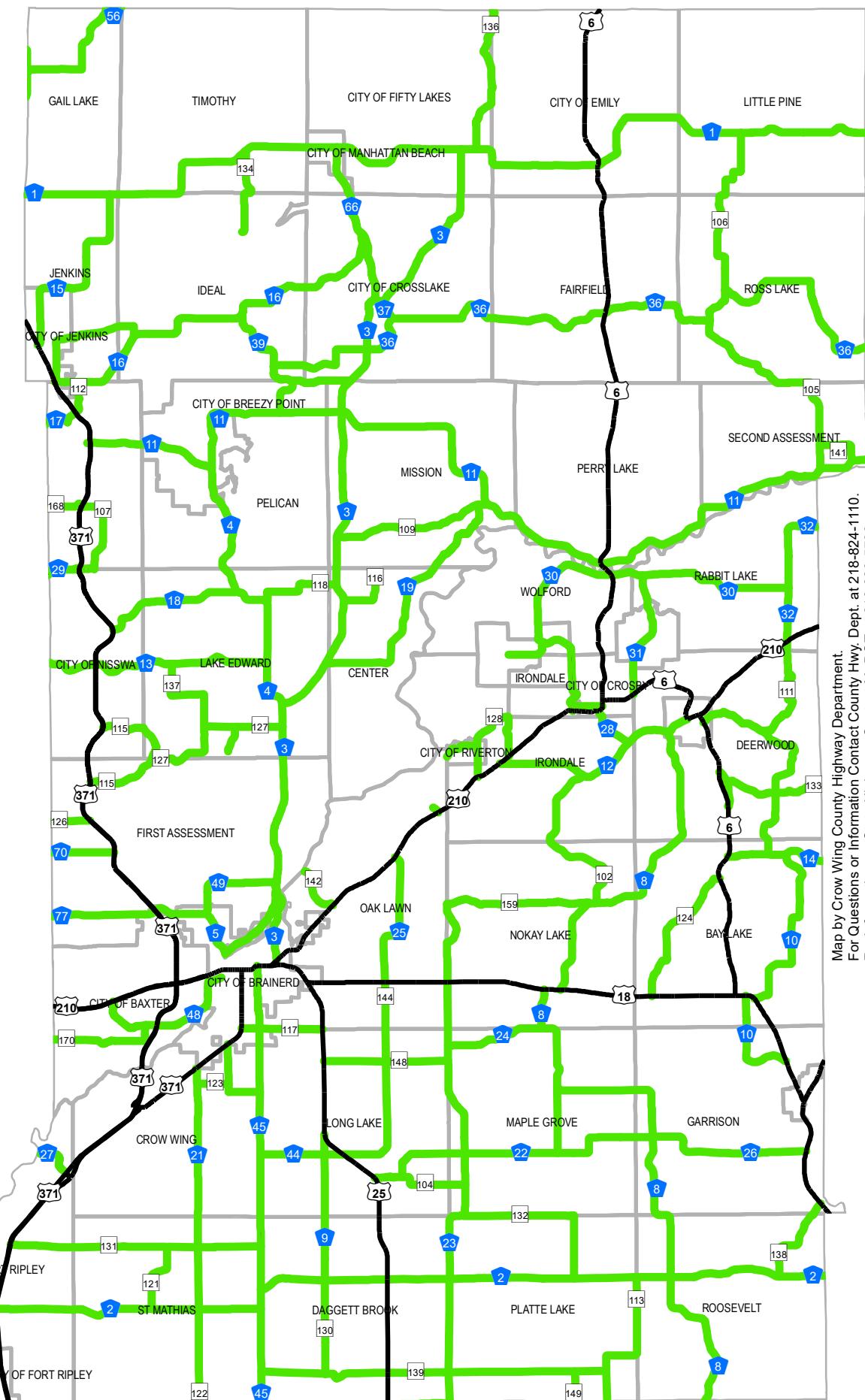
— MnDOT Highway

Route Priority

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

Route Target

- Target Achieved
- Target Partly Achieved
- Target Not Achieved



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

Date 4-21-23 & 4-22-23

Salt Tons	Salt \$	Sand Tons	Sand \$	Brine gal	Brine \$	Mat. Total	Equip \$	Reg. Personnel	OT \$
86.1	\$12,485	1	\$34	617	\$407	\$12,926	\$27,035	\$4,196.00	\$5,234

Total \$49,391

11.7 Plow hrs.

\$4,237 per/hr.

187 Man hrs.

\$88 per/CL/mile

\$1.86 per/household for entire County

Forecast

Rain starting at 6:00 am 4/19/23, changing to snow 4-20-23 at 1:00 pm, and continuing until 9:00 pm 4-21-23. 7.5" snow and .28" of rain forecasted with 10 -30 mph.

Pre Plan

Begin plowing if the snow sticks to the roads in the afternoon on 4-20. Start at 3 or 4 4-21-23 and apply salt if needed because of ice.

Actual Event

Event start: 4-19-23 6am

Event ended 4-21-23 9pm

Details/Comments

Began plowing at 2:00 pm 4-20-23 because the snow fell at 3/4" hour and could not melt off the roads. 4" by 6:00 pm 4-20-23. The plows continued until 8:00 pm 4-20-23. Some priority 3 roads were not plowed due to timing and focusing on keeping priority 1 and 2's open to limit the probability of accidents. Resumed plowing at 4:00 am 4-21-23. Applied salt at 200-300 lbs. only where needed. Roads scraped down to pavement with the wet sloppy snow/slush. Shoulders were not scraped due to softness.

Conditions

6.5" north, 5" south of wet heavy, sloppy snow. Wind was not a factor.

Road	Road Temp	Date	Time	Air Temp
Hwy 6	37	4/20/23	1:00pm	34
Hwy 23	34	4/20/23	1:00pm	33
Hwy 6	32	4/20/23	8:00pm	32
Hwy 23	33	4/20/23	8:00pm	33
Hwy 6	30	4/21/23	3:00am	29
Hwy 23	34	4/21/23	3:00am	32
Hwy 6	35	4/21/23	1:00pm	34
Hwy 23	35	4/21/23	1:00pm	35

Date	High	Low
4/18/2023	53	38
4/19/2023	41	32
4/20/2023	35	28
4/21/2023	36	26
4/22/2023	37	21
4/23/2023	40	22

Source: weather.com. Monthly Weather. 56401

Summary

Roads cleaned up well. With the late snowfall on 4-20-23, the plows could not cover all of the roads. Some priority 3 roads were not plowed on 4-20, but were on 4-21.

Decisions Made

Start plowing at 2:00 pm 4-20 and continue until 8:00 pm. Resume plowing at 4:00 am 4-21. Apply 200-300 lbs. of salt only where needed 4-21 to melt ice and keep it melting as forecasted snow continued to fall into the evening on 4-21.

Lessons Learned

We anticipated a lot of the snow to melt as it fell with the warmer pavement temps. The one outlier was the snowfall rate and if it fell too fast and could not melt, which happened. The snowfall rate added up quickly on roads in the afternoon on 4-20. Plowing later helped keep the roads navigable. Coming in early 4-21 allowed the roads to clean up well by mid morning.

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.