Major Winter Storm This Week

February 21, 2023
4:35 AM

A large winter system will impact the Northland today - Thursday night

📌 Key Messages

➔ Winter storm expected Today - Thursday:

- ◆ **6”+ snow is likely** across NW WI, south of Hwy 2 in MN
  - **Highest values of 12”+** from Pine Co to Price Co.
  - Lake enhancement could lead to **locally higher amounts of 14-20”** along South Shore. ***White-out conditions possible***.
  - North Hwy 2 in MN: **dusting up to 6”.**
- ◆ ***Significant travel disruptions likely*** due to heavy snow rates and blowing snow.

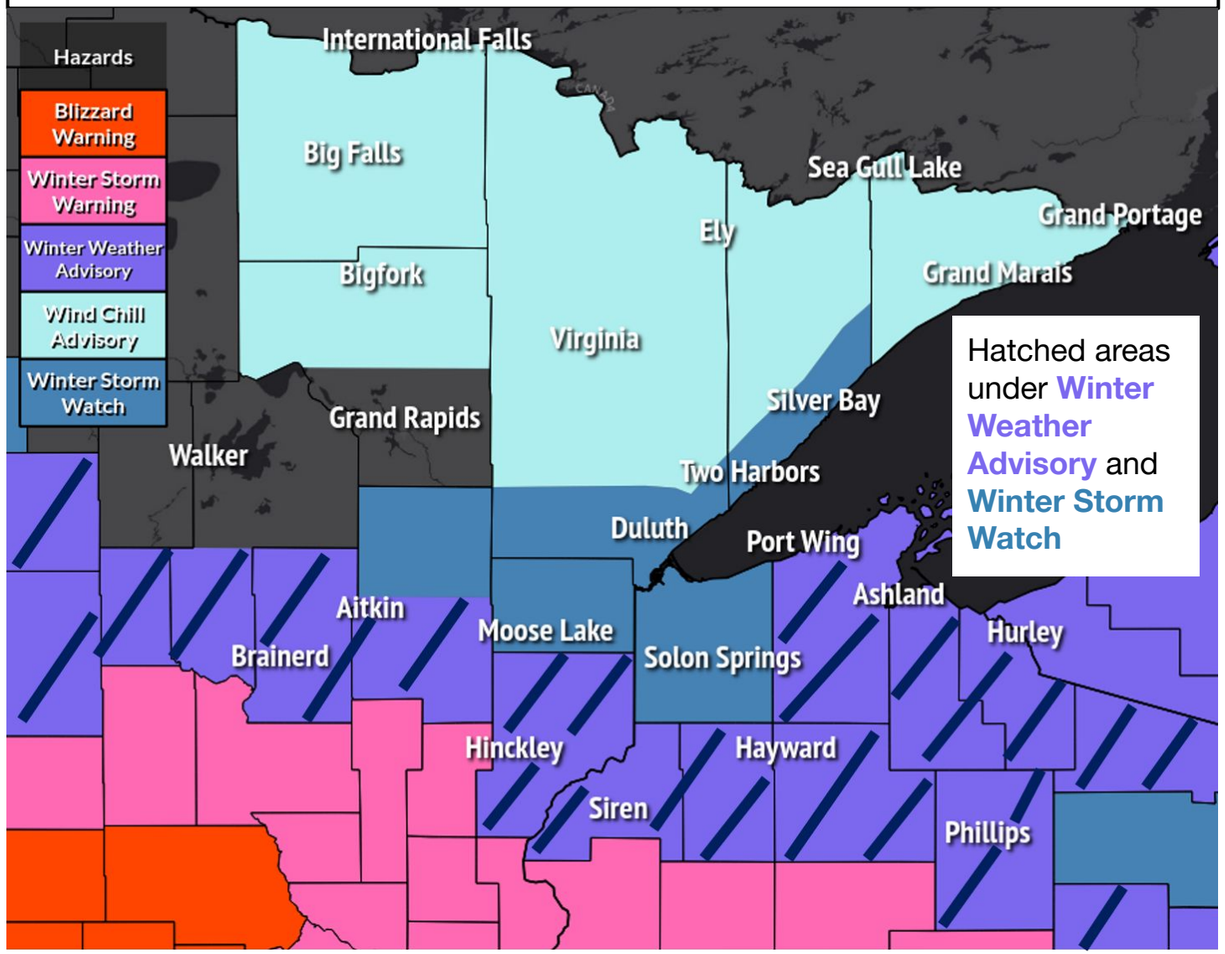
➔ Cold wind chills Tuesday night - Friday morning.

➔ **Lakeshore flooding** possible from Two Harbors to the Twin Ports to the Apostle Islands Thursday.

NEW What Has Changed

- **Winter Weather Advisory** in effect for Brainerd Lakes to Hinckley to Phillips for round 1 snow today.

Winter Weather Headlines In Effect*



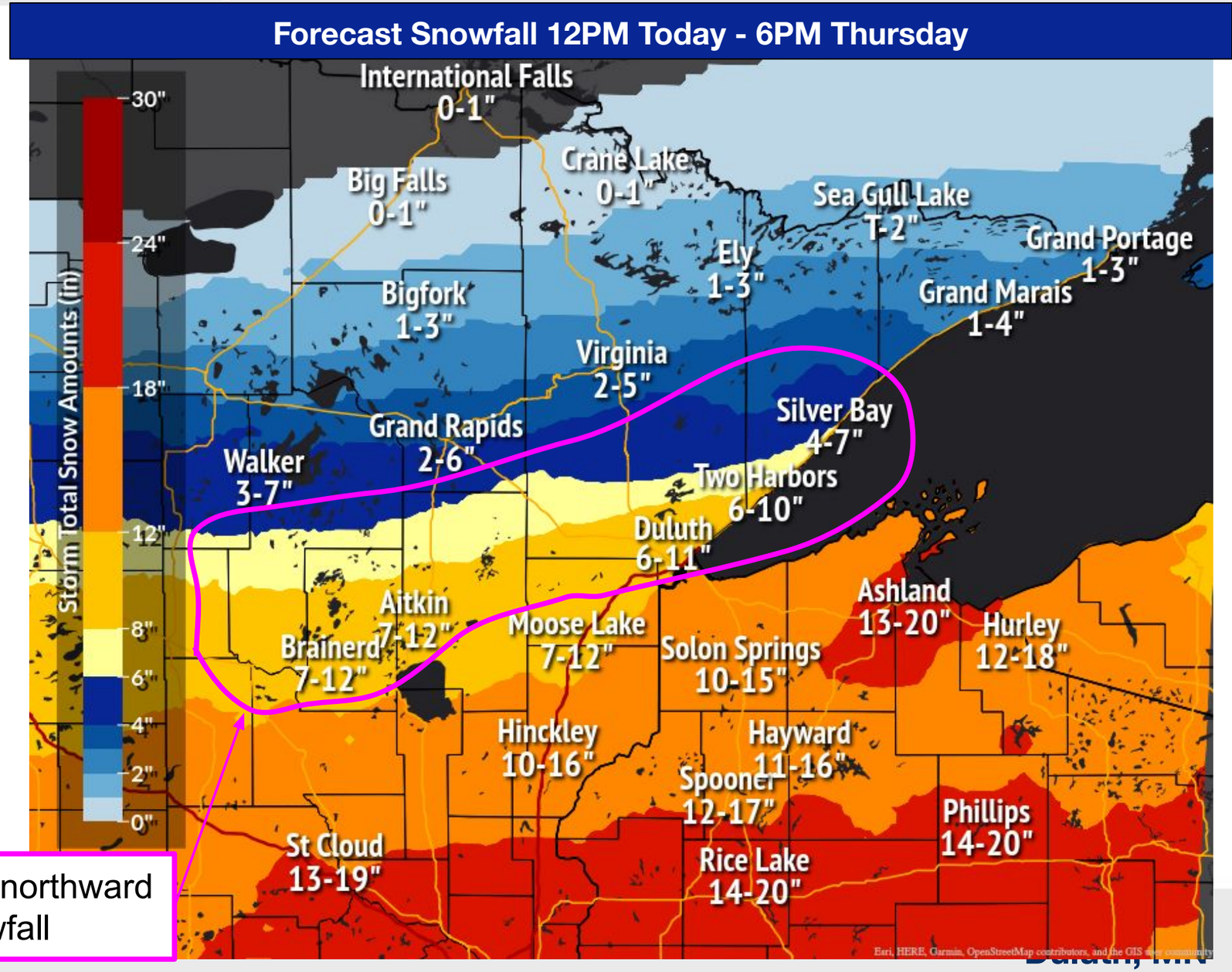
*See later slides for headline and hazard breakdown by area

Expected Snowfall Today - Thursday

February 21, 2023
4:35 AM

Heaviest Snow likely to fall Wednesday night and Thursday

- Total snowfall today through Thursday.
  - First round this afternoon through early Wednesday
  - Bulk of the snow **falls Wednesday night through Thursday midday**.
  - Highest uncertainty along the northern edge of snowfall - **snowfall amounts may cut-off more sharply than currently forecasted.**
  - Areas along the International Border may receive little to no snowfall.



Area of highest uncertainty in the northward extent of the heaviest snowfall

Snowfall Timing This Week

February 21, 2023
4:35 AM

➔ **Begins:** Tue PM - Wed AM

- **First round brings 1-6” snow** for most, except along and north of the Iron Range.

➔ **Slight lull** for most Wednesday.

- Except along WI South Shore, where lake effect begins Wed.

➔ **Heaviest snowfall:** Wednesday night through Thursday. **Dangerous travel conditions are LIKELY, especially on Thursday!**

-

➔ **Tapers:** Thursday afternoon and night.

Don’t see your city? We have you covered!

Please visit: **www.weather.gov/forecastpoints**

- Snow +

Weather Forecast

	2/21 Tue			2/22 Wed				2/23 Thu				2/24 Fri
	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am
Aitkin		65%	80%	35%		25%	50%	80%	90%	65%		
Ashland		25%	60%	55%		30%	50%	80%	95%	80%	60%	20%
Bayfield		20%	50%	50%		25%	40%	75%	90%	75%	65%	20%
Big Falls									30%			
Brainerd		75%	85%	35%		30%	55%	85%	90%	60%		
Duluth Airport		35%	55%	35%		25%	45%	75%	90%	70%		
Duluth Downtown		35%	55%	40%		25%	45%	75%	90%	70%	20%	
Ely								20%	50%	35%		
Grand Marais								25%	55%	45%		
Grand Rapids		30%	40%				25%	50%	75%	50%		
Hayward		50%	85%	65%		45%	70%	95%	100%	80%		
Hibbing		20%	30%					40%	70%	45%		
Hinckley		70%	90%	60%		45%	75%	95%	95%	70%		
Hurley	50%	25%	65%	55%	30%	40%	55%	85%	95%	90%	70%	25%
International Falls									20%			
Mellen		30%	70%	60%	25%	40%	60%	85%	100%	85%	50%	
Mercer	25%	30%	75%	60%	25%	45%	60%	85%	100%	90%	40%	20%
Moose Lake		55%	80%	50%		35%	60%	85%	95%	75%		
Phillips		40%	90%	75%	20%	50%	70%	95%	100%	85%		
Port Wing		30%	55%	45%	20%	30%	45%	75%	90%	75%	55%	
Seagull Lake									35%	30%		
Silver Bay			25%	20%			25%	50%	75%	60%		
Siren		65%	90%	70%	20%	50%	75%	100%	100%	70%		
Solon Springs		45%	75%	55%	20%	40%	65%	90%	95%	80%	25%	
Superior		40%	65%	45%		30%	50%	80%	95%	75%	20%	
Two Harbors		25%	40%	30%		20%	35%	65%	85%	70%	20%	
Walker		45%	45%				25%	55%	70%	35%		

*Created: 3 am CST Tue 2/21/2023. Shows most impactful weather for the period beginning at the time shown. Weather symbols display where Probability of Precipitation ≥ 20%.

National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Strong NE Winds Wednesday - Thursday

February 21, 2023
4:35 AM

Blowing Snow, Large Waves

Details

➔ Widespread **northeast wind gusts from 30-40 mph** will cause blowing snow late Wednesday through Thursday.

◆ **The South Shore and Twin Ports** could see **wind gusts up to 50-60 mph** off the lake which is expected to create white-out conditions.

Strong northeast winds will build **waves to 10-20 feet** over the nearshore waters of Lake Superior.

Lakeshore flooding is possible from the Two Harbors to the Twin Ports to the Apostle Islands.

Maximum Wind Gust Forecast

	2/22 Wed								2/23 Thu								2/24 Fri	
	12am	3am	6am	9am	12pm	3pm	6pm	9pm	12am	3am	6am	9am	12pm	3pm	6pm	9pm	12am	Maximum
Aitkin	21	23	24	24	29	31	29	31	33	35	33	33	24	23	21	16	12	35
Ashland	17	23	29	35	38	41	43	41	45	49	49	49	46	39	31	23	15	49
Bayfield	20	25	29	33	37	43	44	43	48	52	53	55	53	43	32	25	18	55
Big Falls	14	15	16	16	20	21	23	23	24	25	28	28	23	21	18	15	12	28
Brainerd	23	25	26	28	31	33	36	38	39	39	38	37	29	25	22	17	12	39
Duluth Airport	20	22	24	28	33	36	37	39	39	43	43	40	35	29	26	18	16	43
Duluth Downtown	20	23	25	30	35	40	43	45	46	47	48	45	37	31	25	18	17	48
Ely	13	15	15	16	20	21	21	23	25	28	30	30	26	22	22	17	15	30
Grand Marais	22	22	24	24	23	30	37	38	39	43	45	46	40	39	38	23	23	46
Grand Rapids	18	20	21	22	24	25	25	25	26	30	31	31	26	22	22	17	13	31
Hayward	18	23	26	28	33	36	35	37	38	38	38	38	33	30	28	20	16	38
Hibbing	17	20	21	21	24	25	26	28	29	31	35	35	30	25	23	17	15	35
Hinckley	21	25	28	29	35	37	36	36	36	36	36	35	32	28	25	18	14	37
Hurley	13	18	22	22	28	32	33	33	35	36	40	41	33	35	32	24	21	41
International Falls	13	14	15	15	18	20	20	22	25	28	29	29	23	21	18	15	10	29
Mellen	13	18	22	24	29	35	36	37	38	39	43	43	36	36	33	23	20	43
Mercer	13	16	21	22	26	30	31	29	29	32	36	35	28	30	30	23	20	36
Moose Lake	18	21	24	28	33	37	37	37	37	37	38	37	28	25	23	18	14	38
Phillips	16	20	23	24	28	32	33	33	35	36	37	36	29	28	28	22	18	37
Port Wing	21	26	29	32	37	40	46	47	48	52	52	52	47	36	30	24	18	52
Seagull Lake	12	13	14	15	17	20	21	23	25	26	29	30	28	24	22	18	15	30
Silver Bay	20	23	24	24	25	31	35	36	39	46	48	47	38	33	33	21	21	48
Siren	21	25	29	30	35	37	39	40	38	40	41	40	32	31	25	20	14	41
Solon Springs	17	22	25	28	33	38	40	40	41	41	41	41	35	31	26	18	15	41
Superior	17	22	25	30	35	38	39	38	37	37	45	37	35	26	24	17	15	45
Two Harbors	20	23	25	28	31	36	39	40	43	47	47	44	37	31	26	20	17	47
Walker	20	20	21	21	25	26	25	28	29	30	31	31	23	22	21	16	13	31

*Table values in mph

Don't see your city? Check out *weather.gov/forecastpoints*

National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Expected Winter Storm Impacts

February 21, 2023
4:35 AM

Moderate to Major Impacts across much of the area

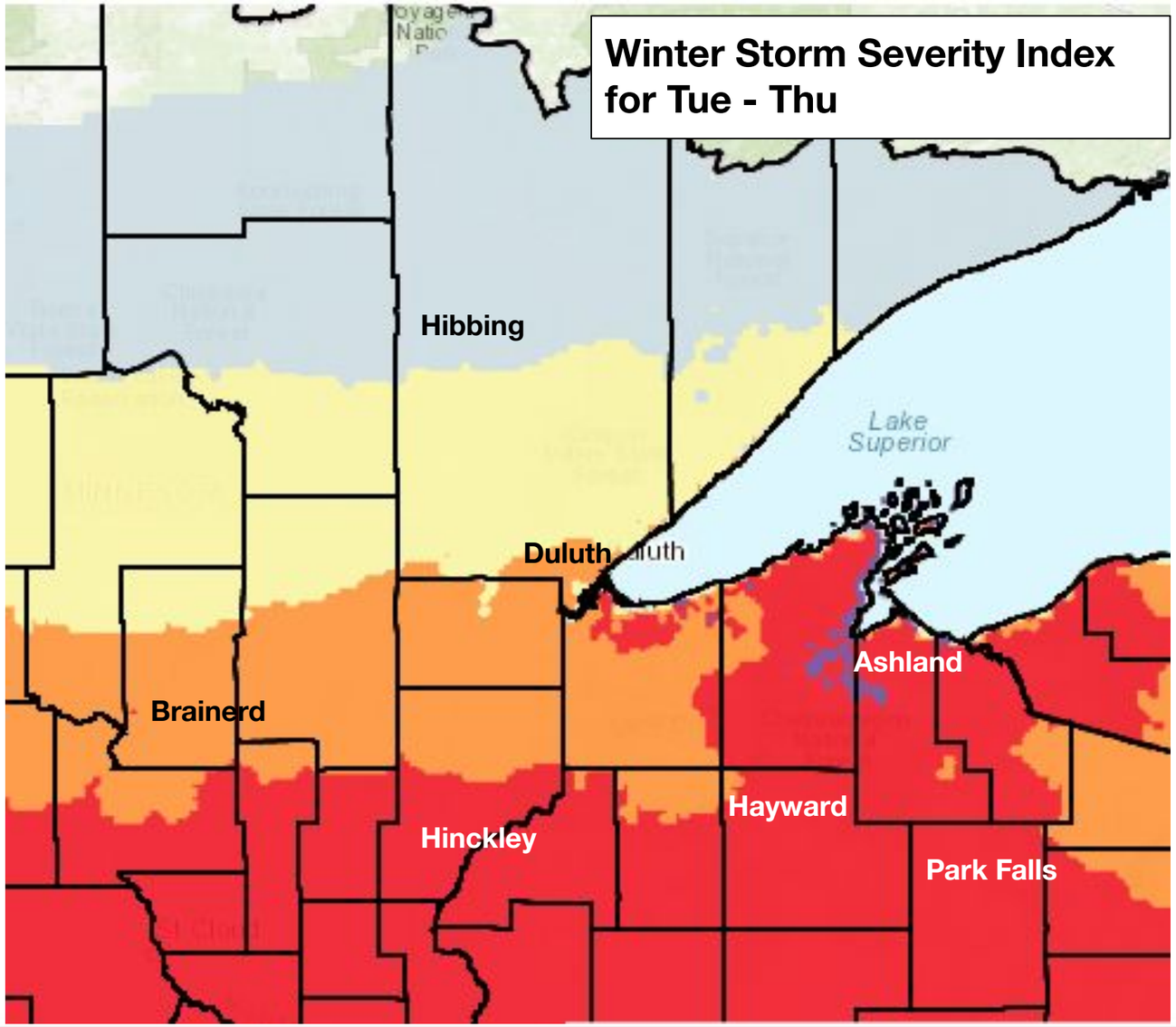
Winter Weather Area
Expect winter weather.
- Winter driving conditions. **Drive carefully.**

Minor Impacts
Expect a few inconveniences to daily life.
- Winter driving conditions. **Use Caution while driving.**

Moderate Impacts
Expect disruptions to daily life.
- Hazardous driving conditions. **Use extra caution while driving.**
- Closures and disruptions to infrastructure may occur.

Major Impacts
Expect considerable disruptions to daily life.
- Dangerous or impossible driving conditions. **Avoid travel if possible.**
- Widespread closures and disruptions to infrastructure may occur.

Extreme Impacts
Expect substantial disruptions to daily life.
- Extremely dangerous or impossible driving conditions. **Travel is not advised.**
- Extensive and widespread closures and disruptions to infrastructure may occur.
- Life-saving actions may be needed.



National Oceanic and Atmospheric Administration
U.S. Department of Commerce

National Weather Service
Duluth, MN

Iron Range/Borderlands

February 21, 2023
4:35 AM

Light Snow, Some Gusty Winds

Fairly light snow through the week, higher amounts further south. *Areas along the Int. Border could see next to no snow.*

Northeast winds will be **strongest along the shore in Cook County**, gusts up to 40mph.

For the 12 hour period beginning at:

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Wind Impact Level	*Winds 20-40 mph - blowing and drifting snow possible*					

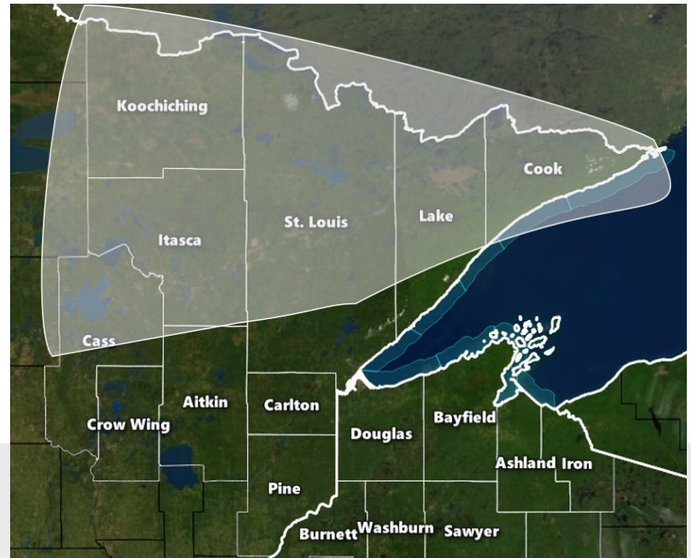
Risk Levels	Low	Minor	Moderate	Major	Extreme

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Snow Intensity	*Very light snow Tue PM*		*Light snow Thurs AM*		*Trace-3" by 6PM Thursday*	

Snowfall Intensity	Light	Moderate	Heavy

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Winter Weather Headlines	*None*					
Wind Chill Advisory			*Additional Wind Chill Advisories may be needed Thu and Fri Mornings*			

Wind Chill Advisory



National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Brainerd Lakes

February 21, 2023
4:35 AM

At Edge of Heavy Snowfall, Gusty Northeast Winds

Periods of moderate to heavy snow possible, **area of greatest uncertainty along northern snowfall gradient.**

Strong northeast winds will **lead to blowing and drifting snow.**

For the 12 hour period beginning at:

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Wind Impact Level		*Winds 30-40 mph - blowing and drifting snow likely*				

Risk Levels	Low	Minor	Moderate	Major	Extreme

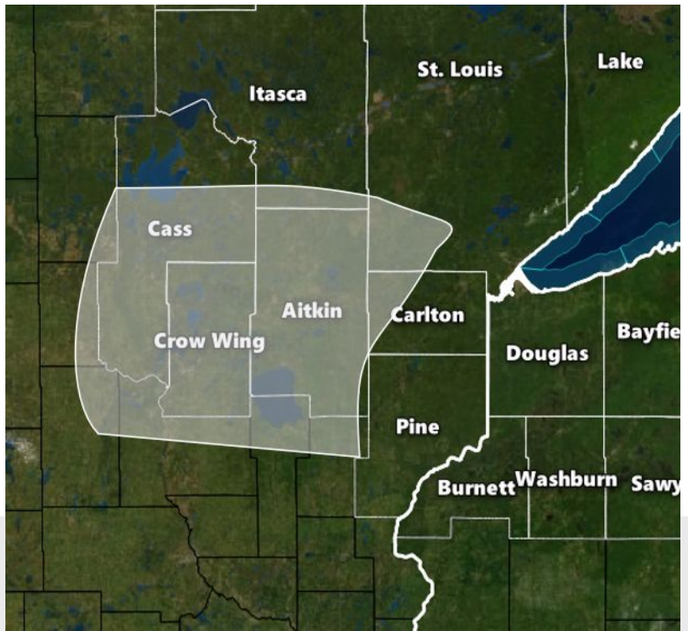
	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Snow Intensity	*Light snow Tue PM*		*Moderate snow Wed PM - Thu AM*		*5-12" by 6PM Thursday*	

Snowfall Intensity	Light	Moderate	Heavy

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Winter Weather Headlines						
Wind Chill Advisory	*None at this time - Wind Chill Advisory may be needed Thu, Fri Mornings*					

Winter Weather Advisory

Winter Storm Watch



National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Twin Ports, Southern Lake Co.

February 21, 2023
4:35 AM

At Edge of Heavy Snowfall, Strong Northeast Winds

Periods of moderate to heavy snow possible, **area of greatest uncertainty along northern snowfall gradient.**

Strong northeast winds will blow snow and create high waves, and coastal flooding may be possible.

For the 12 hour period beginning at:

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Wind Impact Level	*Winds 40-50 mph - blowing and drifting snow & coastal flooding possible*					

Risk Levels	Low	Minor	Moderate	Major	Extreme

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Snow Intensity	*Light snow Tue PM*		*Moderate snow Wed PM - Thu AM*		*6-12" by 6PM Thursday*	

Snowfall Intensity	Light	Moderate	Heavy

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Winter Weather Headlines						
Wind Chill Advisory		*None at this time - Wind Chill Advisory may be needed Fri Morning*				

Winter Storm Watch

National Oceanic and Atmospheric Administration
U.S. Department of Commerce

WI South Shore

February 21, 2023
4:35 AM

Heavy Lake Enhanced Snowfall, Strong Northeast Winds

Heavy lake enhanced snowfall Wed/Thu with high snowfall rates**.** 12”+ expected.

Strong northeast winds will blow snow and create high waves. White-out conditions expected and coastal flooding may be possible.

For the 12 hour period beginning at:

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Wind Impact Level	*Winds 45-60 mph - blowing and drifting snow expected & coastal flooding possible*					

Risk Levels	Low	Minor	Moderate	Major	Extreme

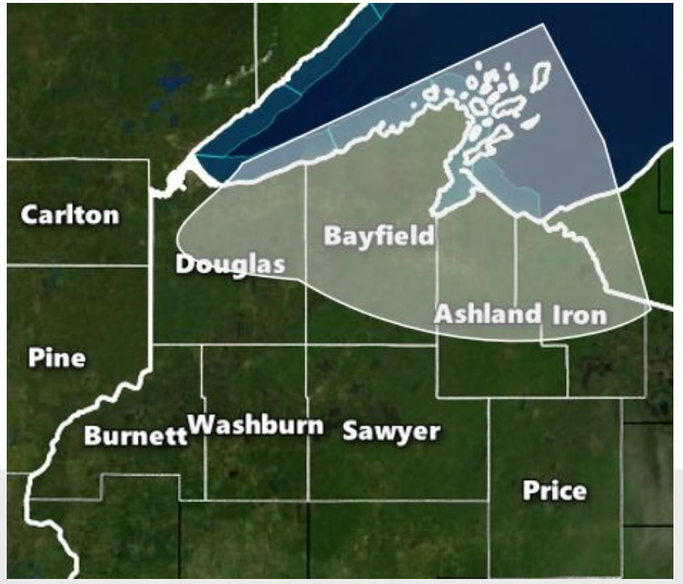
	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Snow Intensity	*Light snow Tue PM*	*Lake effect Wed*	*Moderate to heavy snow thru Thu midday*		*12-24” by 6PM Thursday*	

Snowfall Intensity	Light	Moderate	Heavy

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Winter Weather Headlines						

Winter Weather Advisory

Winter Storm Watch



National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Pine Co and across NW WI

February 21, 2023
4:35 AM

Heavy Snowfall, Strong Northeast Winds

Heaviest snowfall, especially Wed PM - Thu AM. **Dangerous to impossible travel conditions Thu morning.** **Snowfall rates in excess of 1”/hour.**

Strong northeast winds will blow snow. White-out conditions possible.

For the 12 hour period beginning at:

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Wind Impact Level	***Winds 45-60 mph - blowing and drifting snow expected & coastal flooding possible***					

Risk Levels	Low	Minor	Moderate	Major	Extreme

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Snow Intensity	***Light to moderate snow Tue PM***		***Moderate to heavy snow thru Thu midday***		***12-18” by 6PM Thursday***	

Snowfall Intensity	Light	Moderate	Heavy

	Tue, Feb 21 - 12PM	Wed, Feb 21 - 12AM	Wed, Feb 21 - 12PM	Thu, Feb 21 - 12AM	Thu, Feb 21 - 12PM	Fri, Feb 21 - 12AM
Winter Weather Headlines						

Winter Weather Advisory

Winter Storm Watch

National Oceanic and Atmospheric Administration
U.S. Department of Commerce

National Weather Service
Duluth, MN

Cold Wind Chills over N. MN

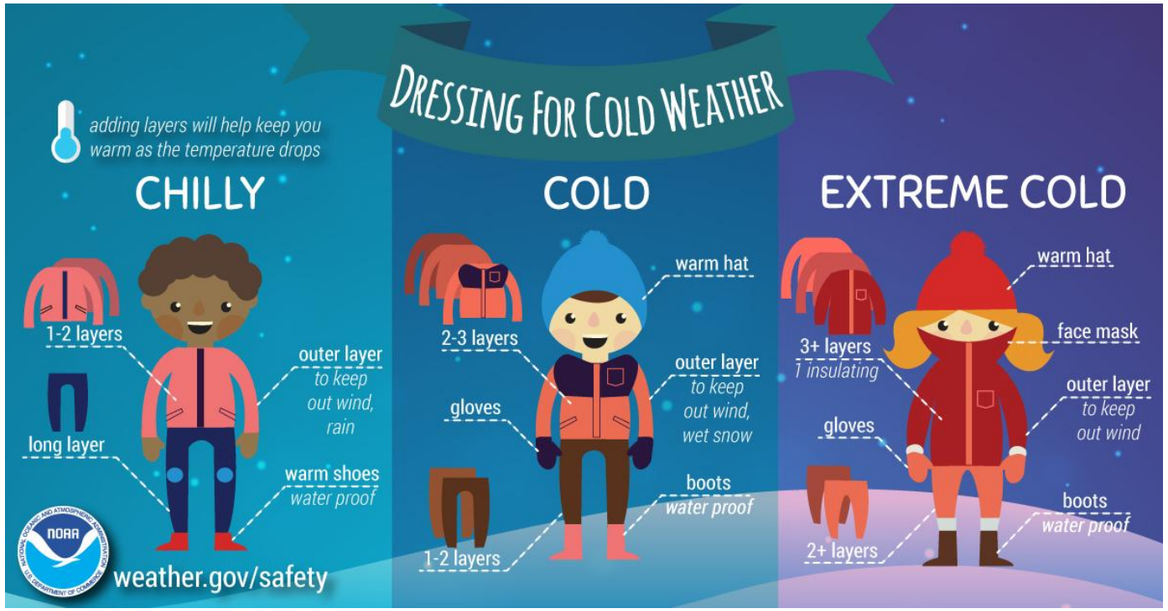
February 21, 2023
4:35 AM

➔ **Dangerously cold wind chills possibl**e over northern Minnesota Tuesday night - Friday.

- Wind chills of -20F to -35F possible.
- Wind Chill Advisory in effect for northern MN Wed morning, more may be needed.

Don't see your city? We have you covered!

Please visit: **www.weather.gov/forecastpoints**



Minimum Wind Chill Forecast

	2/21 Tue		2/22 Wed		2/23 Thu		2/24 Fri		2/25 Sat		
	12am	12pm	12am	12pm	12am	12pm	12am	12pm	12am	12pm	Minimum
Aitkin	-17	-3	-14	-13	-21	-17	-19	-11	-13	-8	-21
Ashland	-7	0	-2	-2	-11	-10	-11	-4	-5	1	-11
Bayfield	-7	1	-3	-6	-14	-12	-10	-3	-5	0	-14
Big Falls	-22	-14	-25	-22	-29	-21	-20	-13	-14	-10	-29
Brainerd	-17	-3	-15	-13	-22	-17	-18	-12	-11	-7	-22
Cloquet	-16	-3	-13	-12	-21	-18	-22	-9	-11	-8	-22
Duluth	-15	-4	-11	-12	-20	-16	-20	-8	-10	-6	-20
Ely	-19	-10	-23	-23	-30	-23	-23	-14	-15	-10	-30
Grand Marais	-16	-9	-19	-24	-29	-22	-20	-8	-7	-3	-29
Grand Rapids	-21	-8	-20	-17	-27	-20	-20	-13	-13	-10	-27
Hayward	-13	-1	-7	-5	-12	-14	-16	-8	-9	-4	-16
Hibbing	-21	-11	-21	-18	-29	-24	-23	-13	-14	-10	-29
Hinckley	-14	-1	-8	-6	-13	-15	-19	-9	-8	-6	-19
Hurley	-8	0	-6	-7	-12	-14	-13	-7	-9	-1	-14
International Falls	-25	-14	-28	-25	-33	-25	-19	-14	-15	-12	-33
Iron River	-11	0	-4	-7	-13	-13	-15	-7	-8	-3	-15
Mellen	-6	2	-4	-5	-11	-14	-12	-5	-7	-1	-14
Mercer	-9	0	-4	-5	-10	-14	-14	-8	-9	-3	-14
Moose Lake	-15	-3	-10	-9	-18	-15	-22	-9	-11	-7	-22
Phillips	-8	0	-4	-3	-6	-12	-16	-6	-9	1	-16
Silver Bay	-15	-6	-14	-15	-22	-17	-18	-5	-7	-3	-22
Siren	-12	1	-6	-4	-11	-12	-19	-6	-8	-3	-19
Solon Springs	-13	-5	-6	-7	-14	-15	-19	-9	-10	-5	-19
Superior	-14	-2	-8	-8	-18	-14	-17	-8	-8	-4	-18
Two Harbors	-15	-2	-8	-11	-17	-14	-17	-4	-7	-3	-17
Walker	-24	-9	-20	-18	-26	-19	-20	-15	-15	-11	-26

*Table values in °F

Don't see your city? Check out *weather.gov/forecastpoints*

National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Major Winter Storm Mid to Late This Week

February 21, 2023
4:35 AM

A large winter system will impact the Northland Today - Thursday night

📌 Key Messages

- Winter storm expected Today - Thursday:
  - **6”+ snow is likely** across NW WI, south of Hwy 2 in MN
    - **Highest values of 12”+** from Pine Co to Price Co.
    - Lake enhancement could lead to **locally higher amounts of 14-20”** along South Shore. ***White-out conditions possible***.
    - North Hwy 2 in MN: **dusting up to 6”.**
  - ***Significant travel disruptions likely*** due to heavy snow rates and blowing snow.
- Cold wind chills Tuesday night - Friday morning.
- **Lakeshore flooding** possible from Two Harbors to the Twin Ports to the Apostle Islands Thursday.

Next Scheduled Update

- Tuesday Afternoon

Additional Resources

[NWS Duluth Website](#)

[Snowfall Probability Maps/Table](#)

[NWS Duluth on Facebook](#)

[NWS Duluth on Twitter](#)

[Forecast Points (Hourly Details)](#)

Road Conditions

MN: [511mn.org](#)

WI: [511wi.gov](#)

National Oceanic and Atmospheric Administration
U.S. Department of Commerce

National Weather Service
Duluth, MN