



# Strong Fall Storm

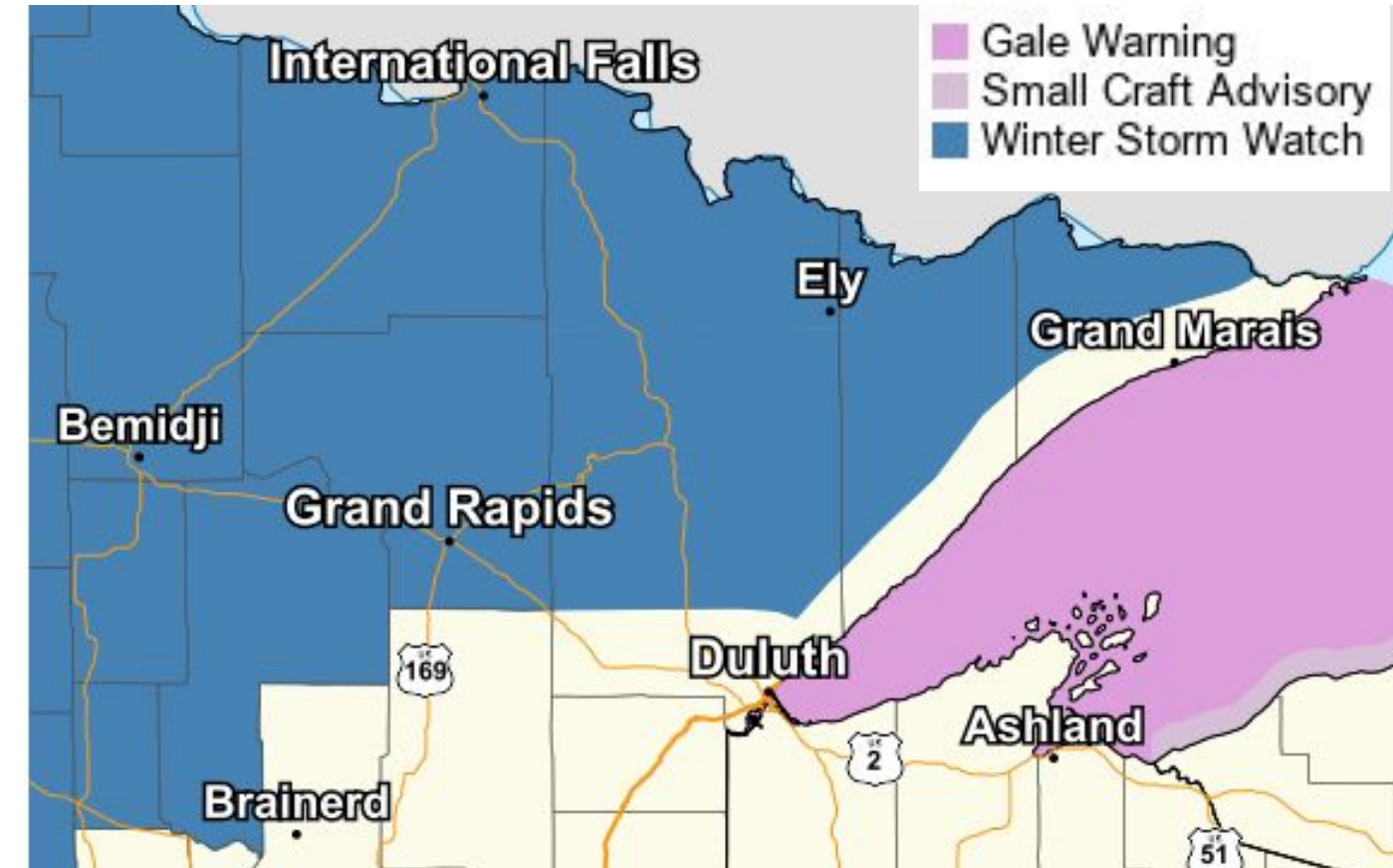
November 9, 2022

4:16 AM

Heavy Rain, Thunderstorms, Strong Winds, and Heavy Snowfall Amounts Expected

## Key Messages

- A complex fall storm will bring **heavy rain, thunderstorms, strong winds, and winter precipitation** Today - Saturday (most falls today-Friday morning).
- **Rain changes to snow** from west to east Thursday into Thursday night. *Light ice accumulations possible during the Thursday evening commute.*
- **Heavy snowfall amounts** likely Thursday into Friday morning for parts of far northern Minnesota.
- Strong northeast winds & large waves across western Lake Superior.



**Winter Storm Watch in Effect  
6AM Thursday-6AM Saturday**

## Next Scheduled Briefing

- Wednesday Afternoon



NEW

## Important Updates

- **Gale Warning** issued for western Lake Superior
- Switch to mixed precip then snow occurring sooner Thursday.





# Day-by-Day Weather Summary

November 9, 2022  
4:16 AM

## Today

Widespread rain showers.  
Chance for t-storms, mainly in northwest Wisconsin.

## Thursday

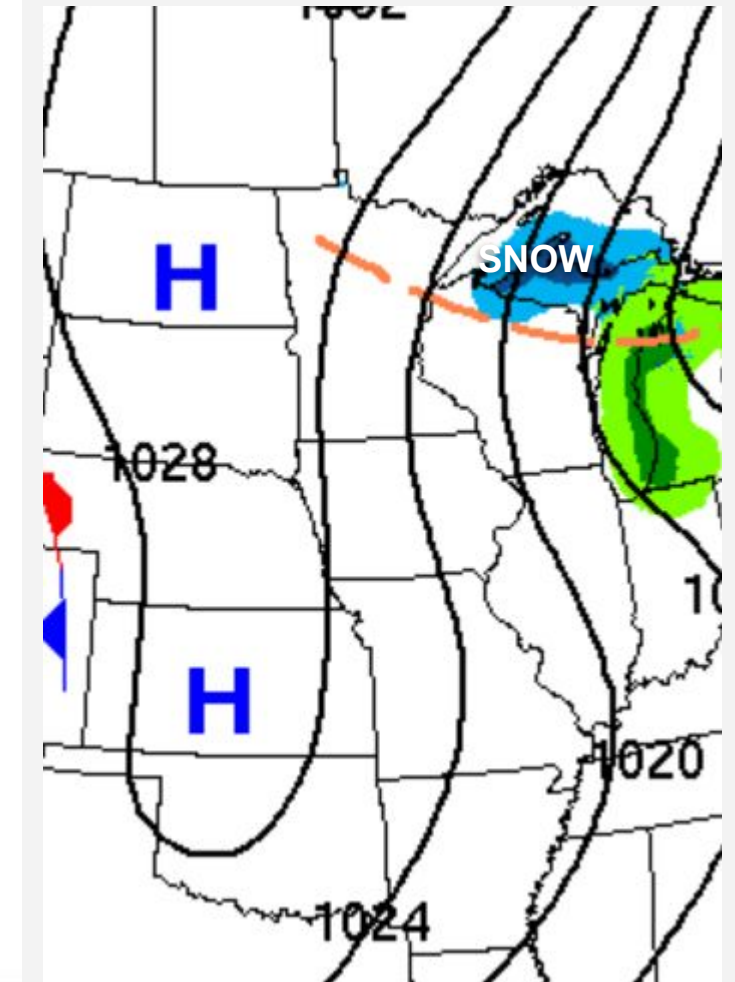
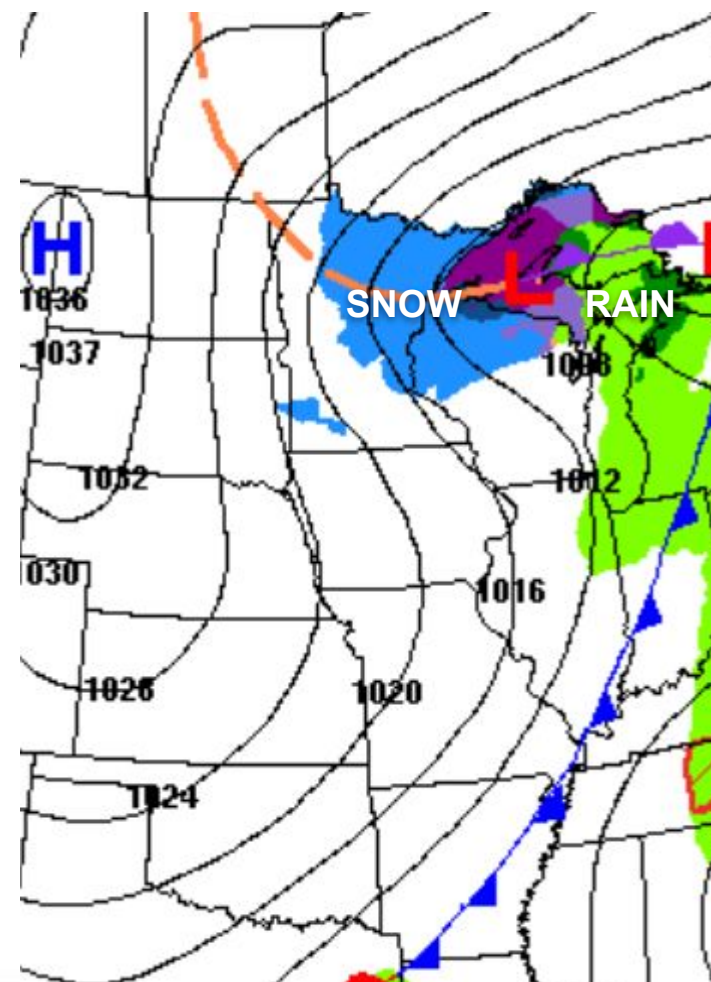
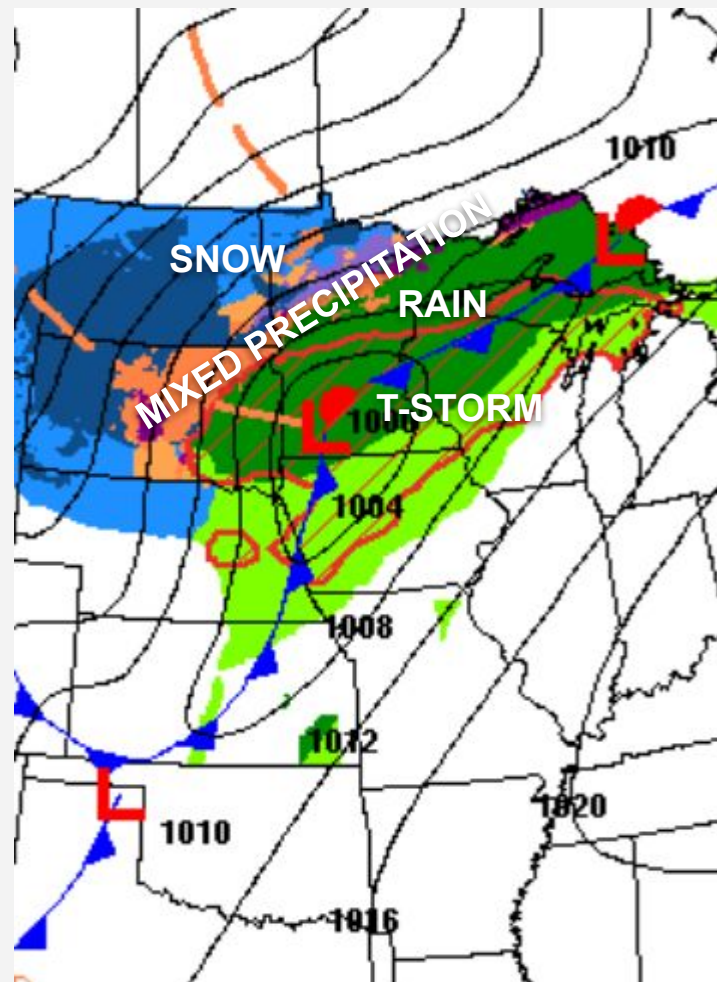
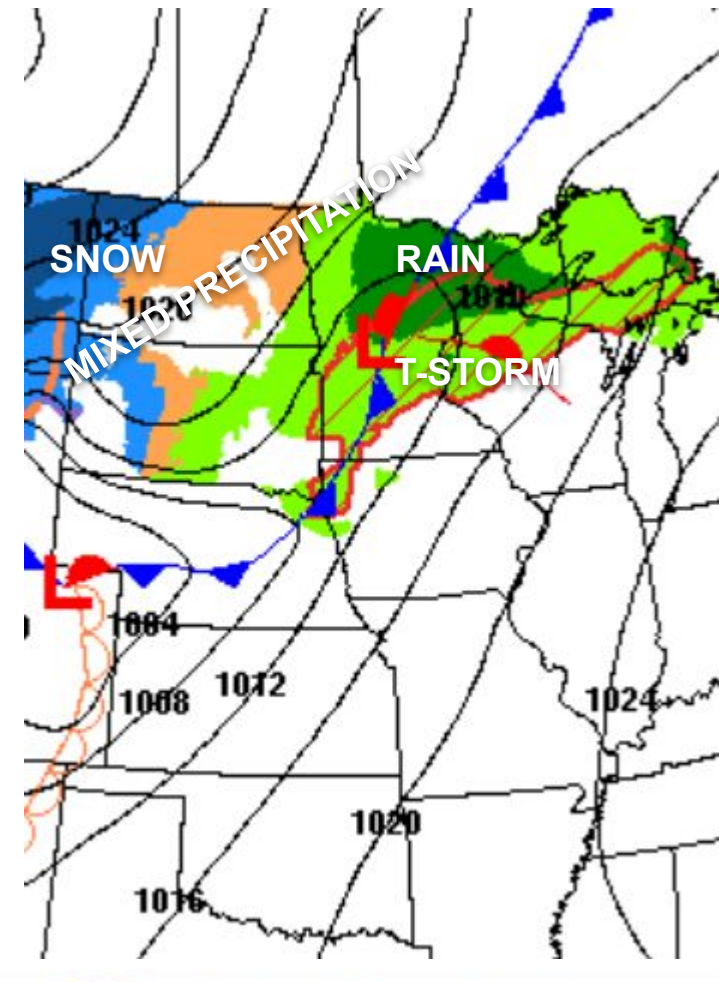
Heavy rain changing to wintry mix/snow, isolated t-storms south half. Increasing NE winds. Snow begins over north-central MN

## Thursday Night-Friday

Wintry mix to all snow, with heavy snowfall accumulations in northern Minnesota. Strong north winds.

## Saturday

Colder. North-northwest winds. Lingering lake effect snow along the south shore snow belt.





# Rain & Thunderstorms Wed-Thurs

November 9, 2022  
4:16 AM

Some storms could be severe in northern Wisconsin

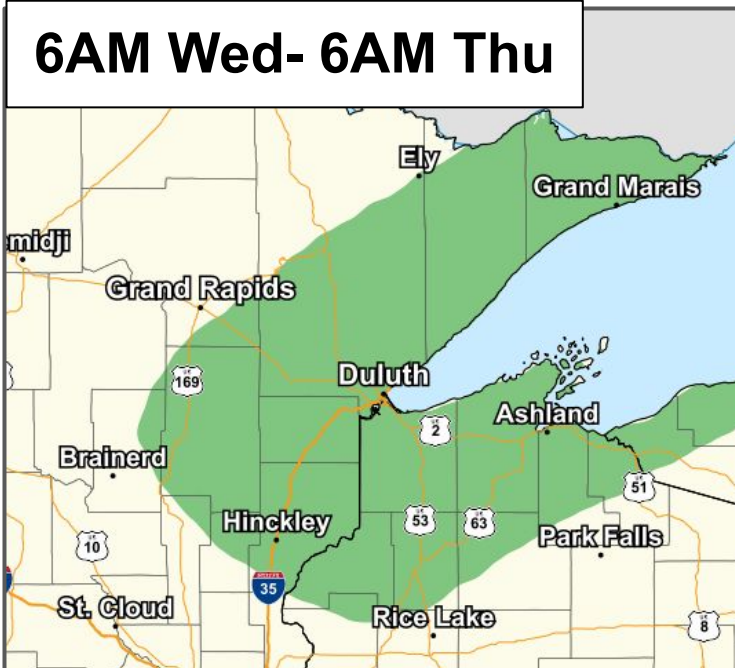
## Impact Details

- Showers and isolated thunderstorms expected Today into Thursday.
- Heavy rainfall could cause **minor flooding** in northeast Minnesota and northwest Wisconsin.

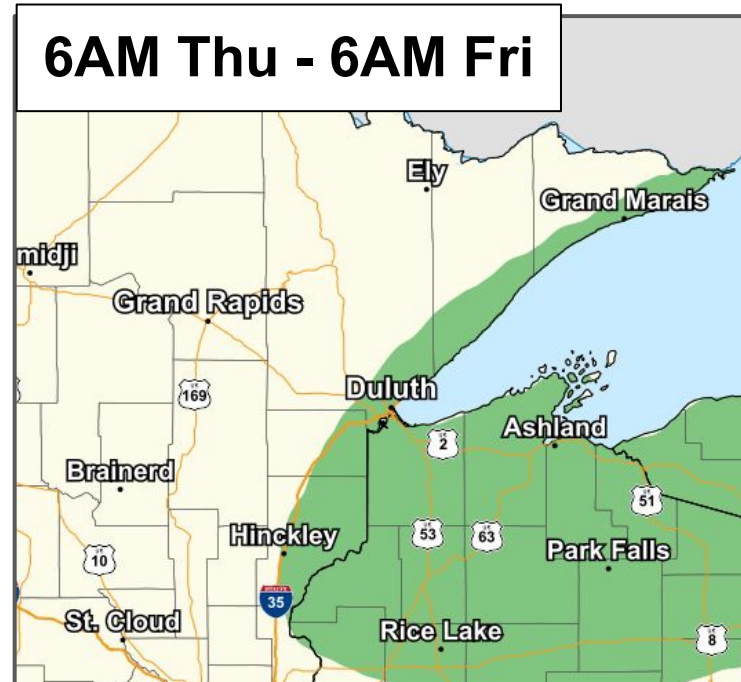
## Excessive Rain Outlook



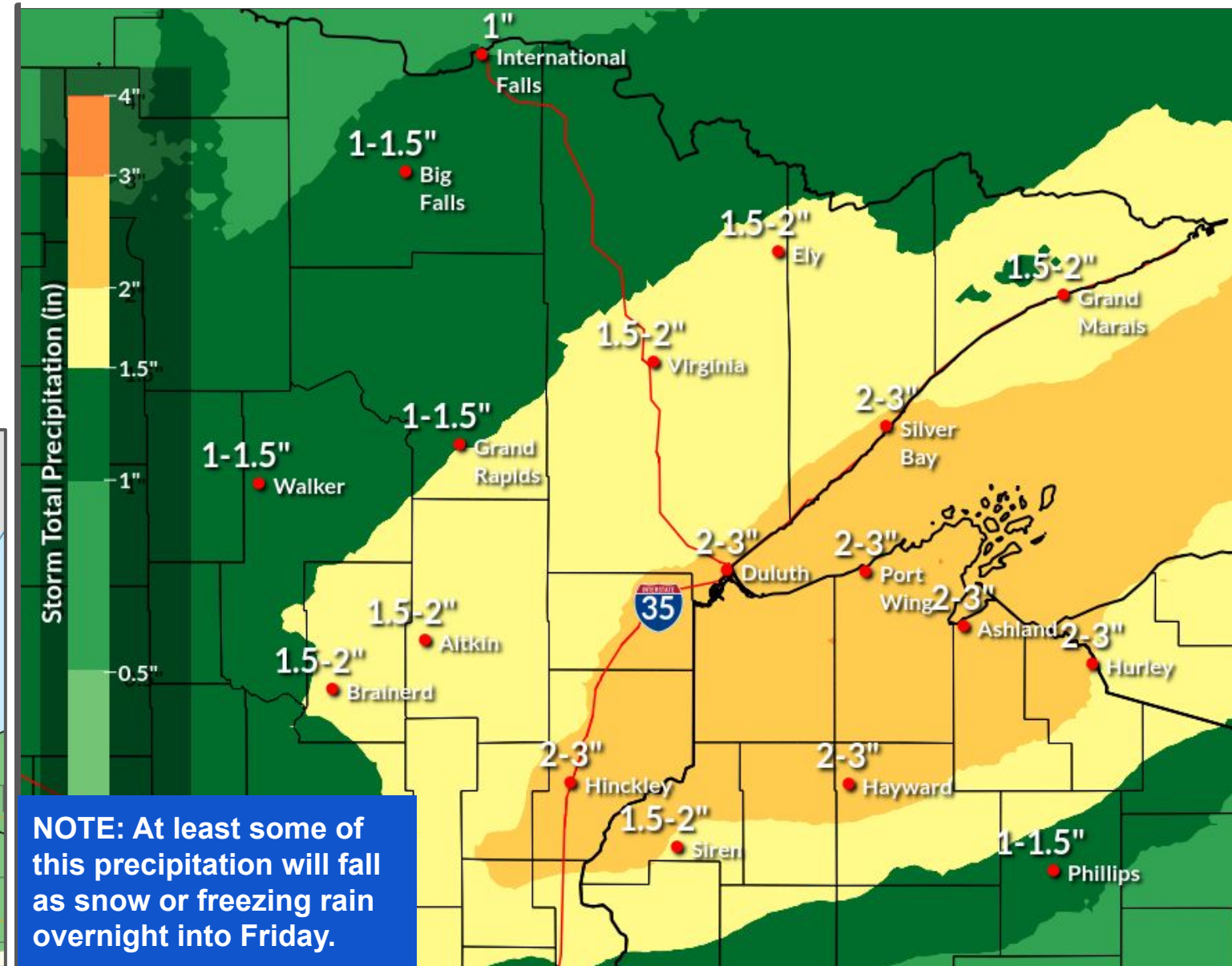
6AM Wed- 6AM Thu



6AM Thu - 6AM Fri



## Wed. - Friday Night Rainfall Amounts



**NOTE:** At least some of this precipitation will fall as snow or freezing rain overnight into Friday.



# Isolated Severe Thunderstorm Thursday

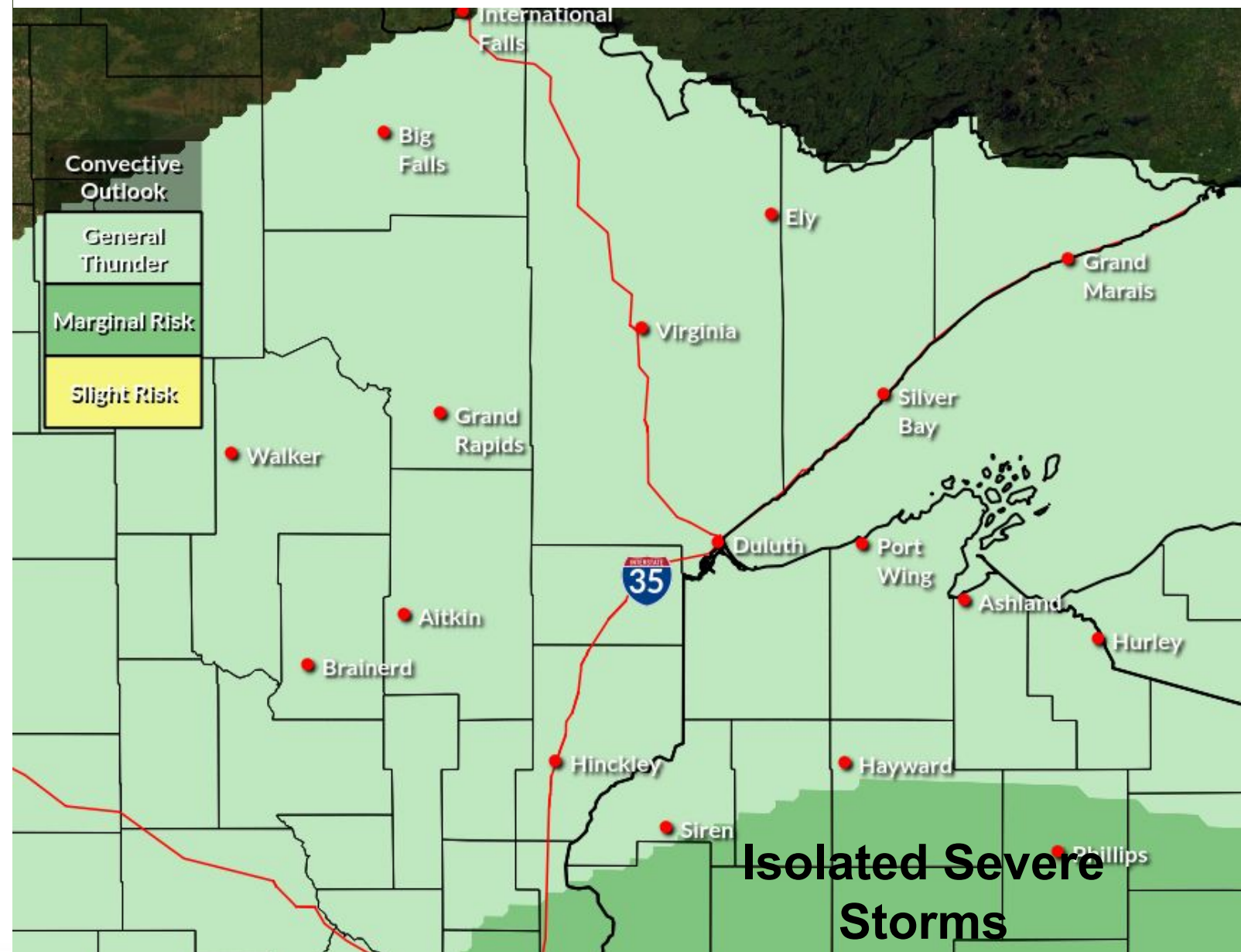
November 9, 2022  
4:16 AM

Some storms could be severe in northern Wisconsin

## Impact Details

- Thunderstorms are expected Thursday, best chance in the afternoon
- A few storms could be severe with damaging wind the main threat

## Thursday Severe Storm Outlook



Isolated Severe Storms

National Weather Service  
Duluth, Minnesota





# Rain to Snow Thursday Night-Friday

November 9, 2022  
4:16 AM

A period of wintry mix including freezing rain is possible before the change to snow



## Timing Details

- **Along and north of the Iron Range:** Rain changes to mix/snow on Thursday - possibly as early as Thursday morning. *A period of freezing rain is possible.*
- **Rest of northeast MN:** Wintry mix to snow transition from west to east late Thursday into Thursday night.
- **NW Wisconsin:** Transition to snow Thursday night. Lingering lake effect into the weekend.

For the latest hourly forecast at your location, check out [Forecast Points](#) (Click on map or enter location at top right to change location)

	Weather Forecast																			
	11/9 Wed		11/10 Thu				11/11 Fri				11/12 Sat				11/13 Sun		11/14 Mon			
	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am	12pm	6pm	12am	6am
Aitkin	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Ashland	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Bayfield	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Brainerd	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Duluth Airport	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Ely	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Grand Marais	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Grand Portage	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Grand Rapids	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Hayward	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Hibbing	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Hinckley	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Hurley	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
International Falls	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Moose Lake	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Park Falls	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Prentice	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Siren	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Spoooner	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Superior	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Two Harbors	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Virginia	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔
Walker	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔	☔

\*Created: 2 am CST Wed 11/9/2022. Shows most impactful weather for the period beginning at the time shown. Weather symbols display where Probability of Precipitation > 0%.

- Rain + - Thunderstorms + - Fz Rain + - Wintry Mix + - Snow +



# Forecast Snowfall Amounts

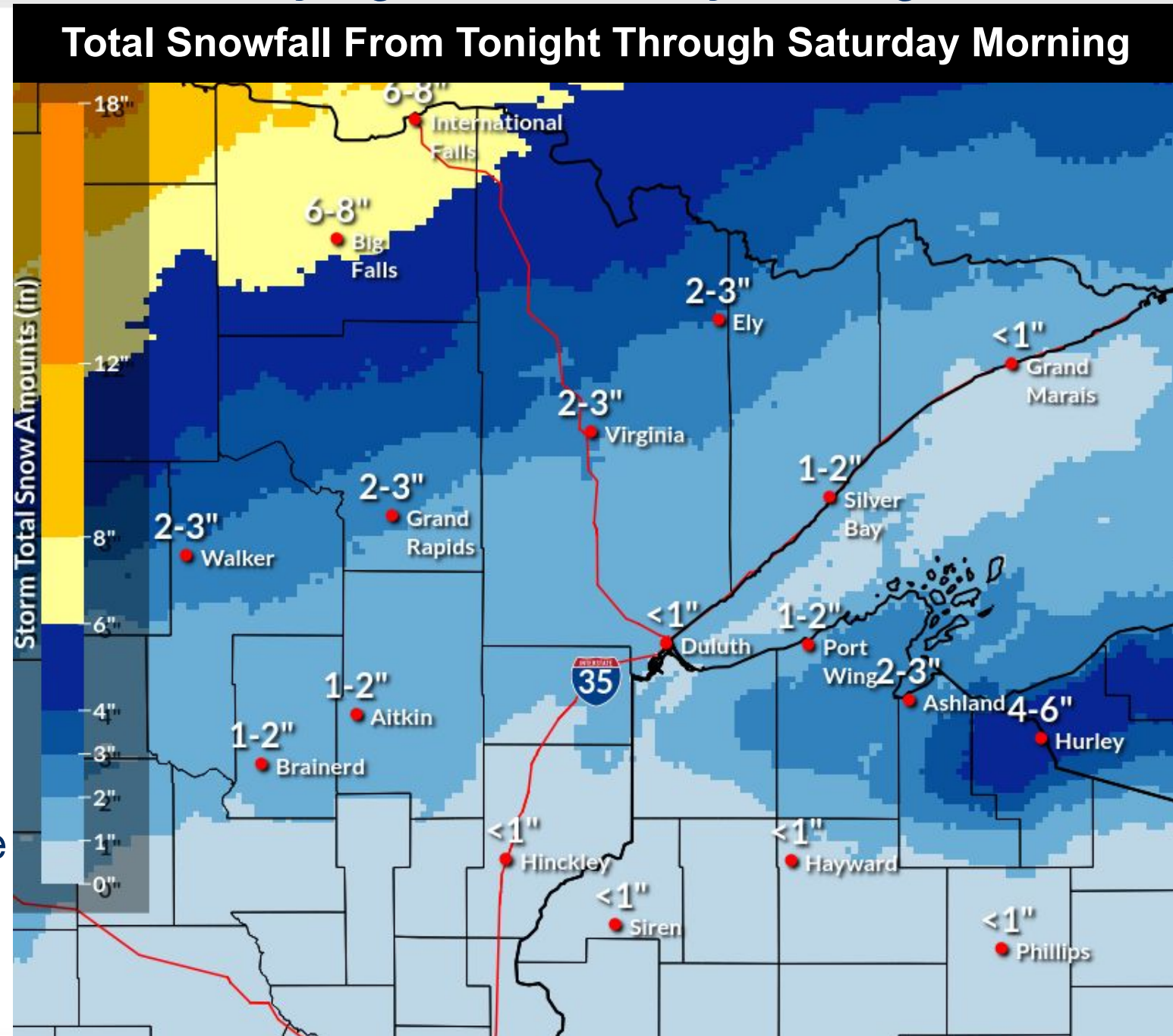
November 9, 2022

4:16 AM

Hazardous travel due to heavy snowfall possible Thursday night into Saturday Morning

## Details

- Snowfall amounts are likely (60%+) to exceed 4" across far northern Minnesota.
- Highest amounts will be north of the Iron Range.
  - ◆ Some locations could see 8" or more - best chance in northern Koochiching County.
  - ◆ Snow could begin to mix with rain by Thursday morning over portions of Koochiching, Itasca, and northern St. Louis County, with heavy snowfall rates possible Thu afternoon into Friday morning.
- Lesser snowfall amounts further south.
  - ◆ Exception: South Shore snow belts could see 4"+ as lake effect snowfall lingers into the weekend.





# Winter Storm Impact Potential

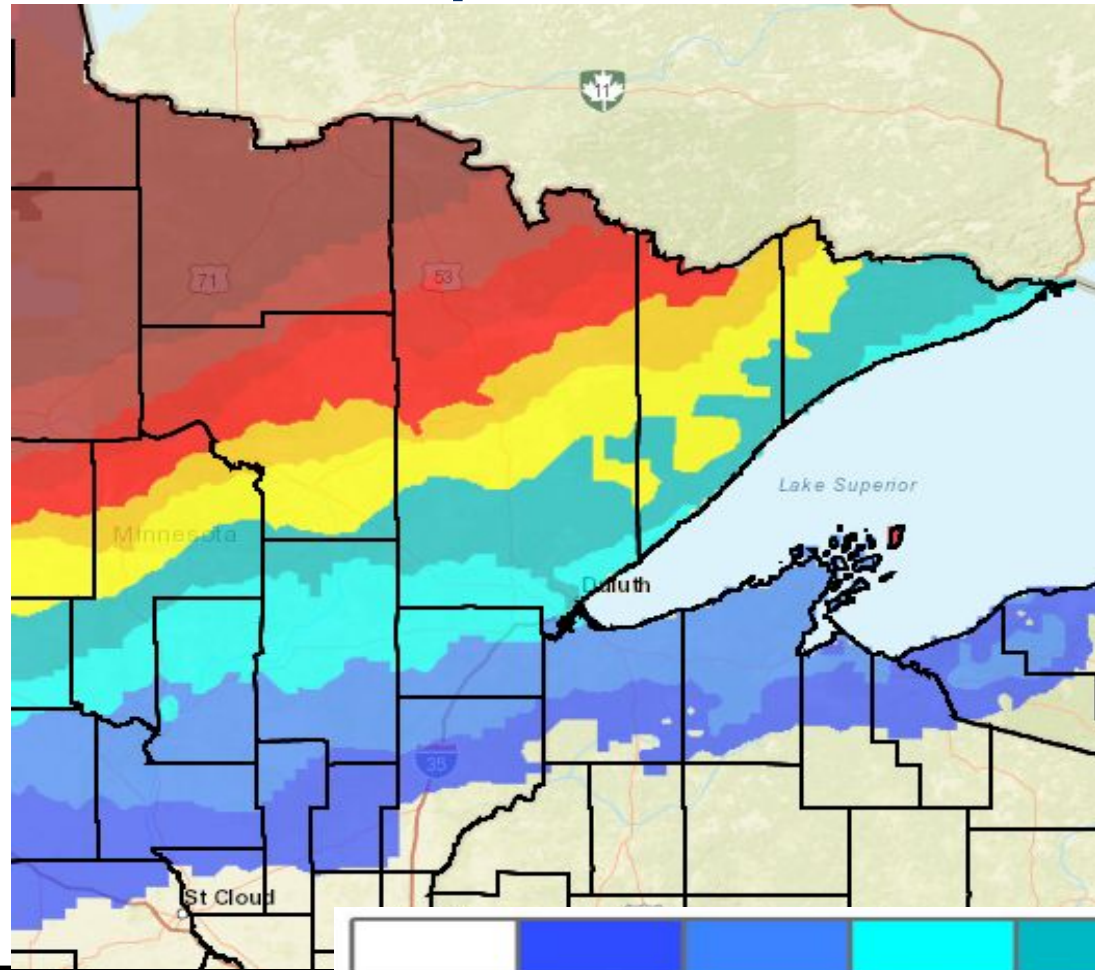
November 9, 2022  
4:16 AM

## Probability of Minor and Moderate Impacts

**How to Interpret these plots:** The graphics below are from the Probabilistic Winter Storm Severity Index. The plots below indicate the probability of each individual impact threshold, with the corresponding impact definitions listed below. The PWSSI is not a specific forecast of specific items nor is it a deterministic forecast. The primary use of this tool is to communicate a general level of potential societal impacts and their spatial distribution.

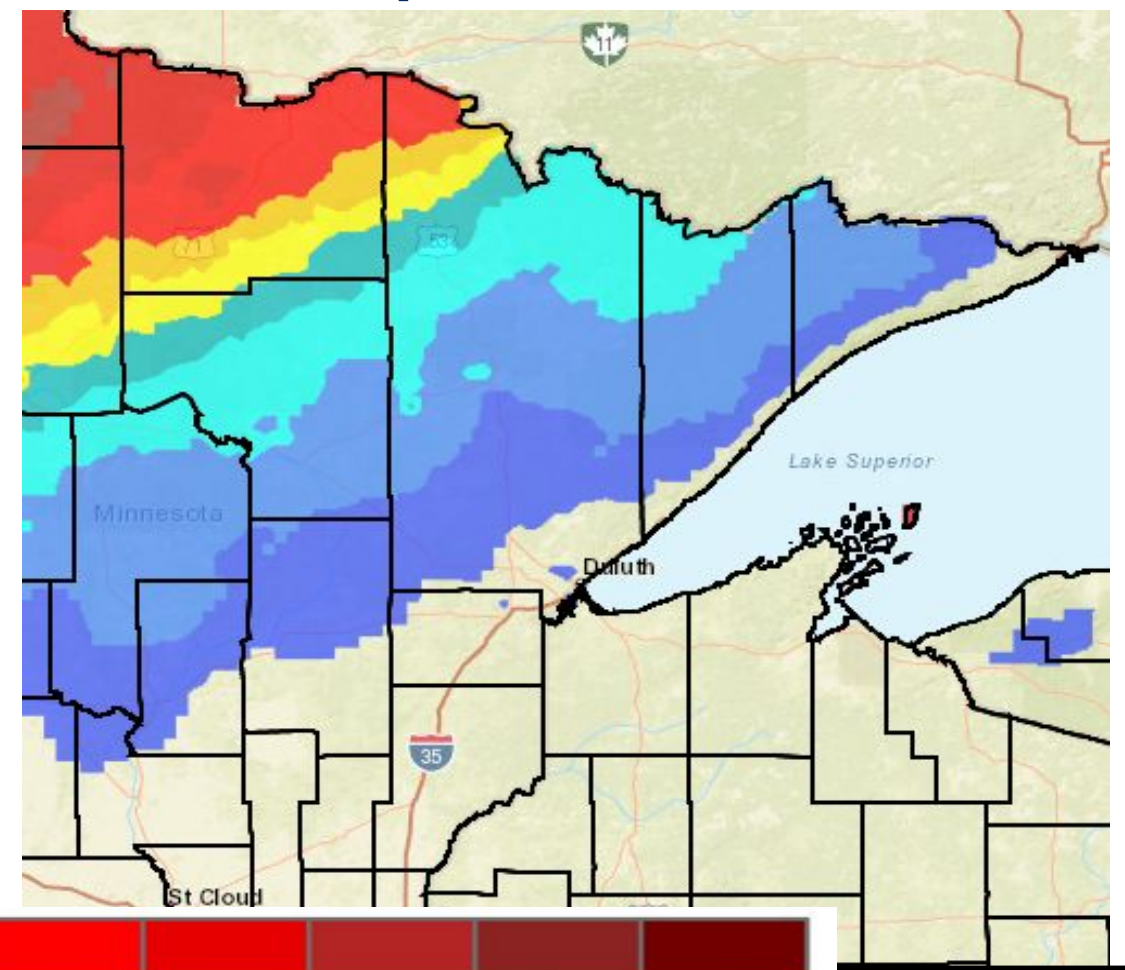
### Chance for Minor Winter Storm Impacts

- A few inconveniences to daily life.
- Winter driving conditions.



### Chance for Moderate Winter Storm Impacts

- Disruptions to daily life.
- Hazardous winter driving conditions and closures likely.





# Strong Winds & Waves on Lake Superior

November 9, 2022  
4:16 AM

NE winds will increase Thursday and become northerly Friday and remain elevated

## Gale-Force Wind Timing



Thursday through Friday morning

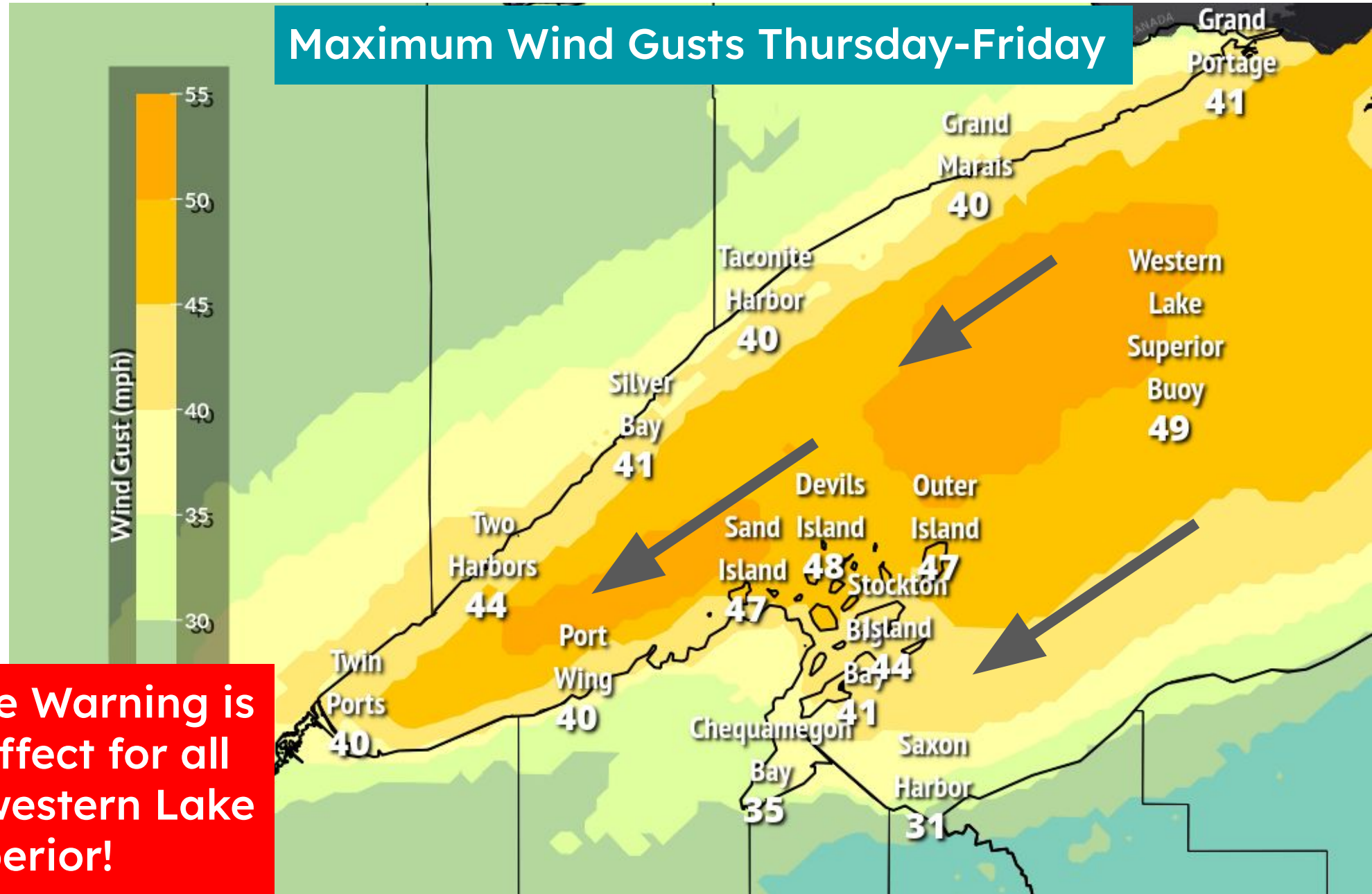


Occasional **storm-force wind gusts** ( $\geq 55$  mph) may be possible, especially Thu. night

## Wave Information



- Highest waves of **15-20 feet** will be possible in the Outer Apostle Islands on Thu. night
- Waves of **8-12 feet** will be possible around the Twin Ports, along the North Shore south of Grand Marais, and along the rest of the South Shore Thu. night







# Cold Temperatures This Weekend

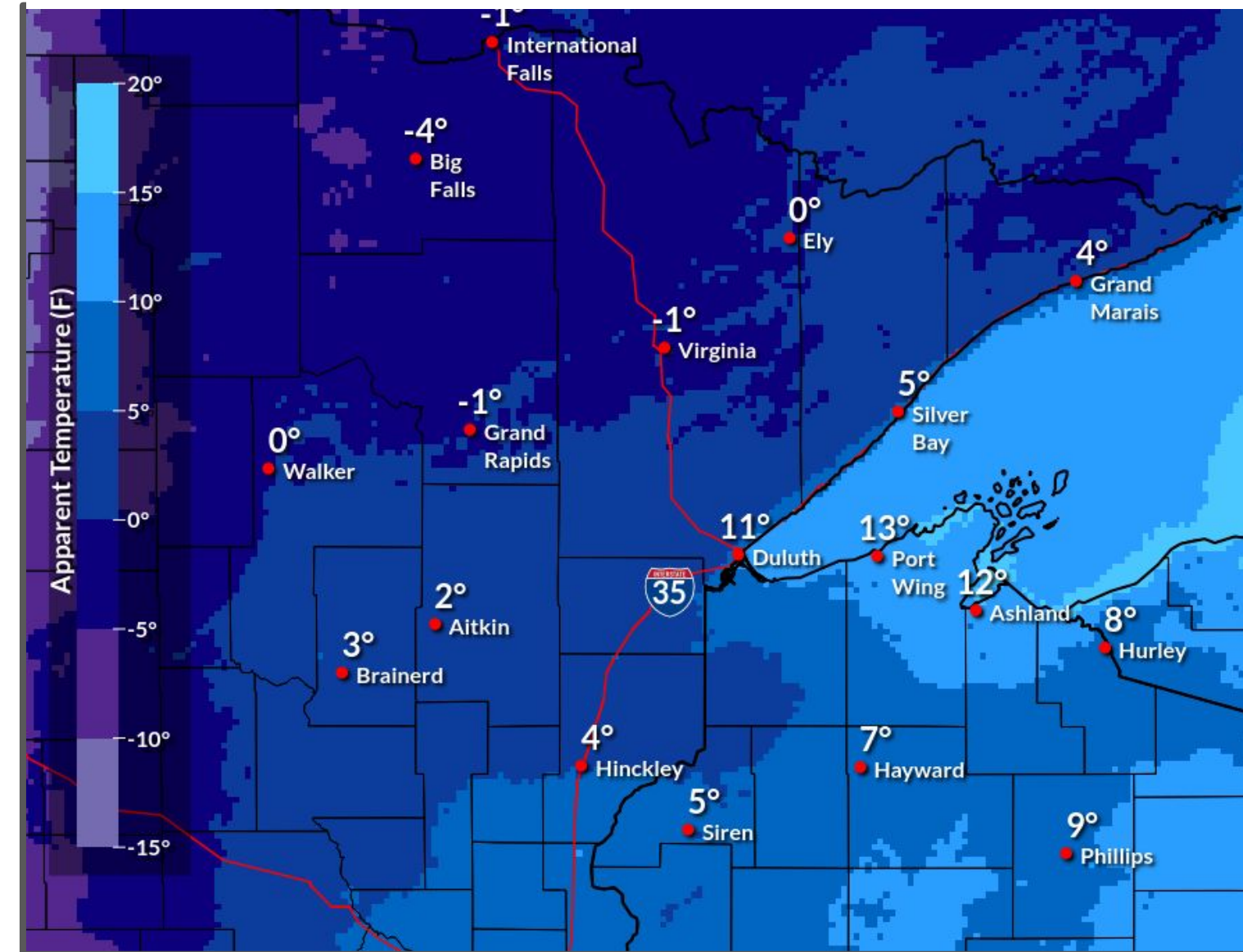
November 9, 2022  
4:16 AM

Wind chills around zero expected

- **Minimize Exposure** – Avoid exposure during the coldest wind chills.
- **Stay Dry** – Wet clothing causes body heat to be lost faster. Wear waterproof insulated boots.
- **Stay Covered** – Wear a hat and gloves! At least half your body heat is lost if your head is not covered.
- **Dress in Layers** – Trapped air between layers helps to insulate.

**Wind Chill** is the air temperature equivalent in calm wind which would result in heat loss equal to the temperature and wind together. **Body heat loss can cause frostbite and/or hypothermia.**

Minimum Wind Chills Saturday Morning





## Key Messages

- A complex fall storm will bring **heavy rain, thunderstorms, strong winds, and wintry precipitation** Today-Saturday (*most of the precipitation falls today-Friday morning*).
- **Rain changes to snow** from west to east Thursday into Friday.
- **Heavy snowfall amounts** likely Thursday into Friday morning for parts of northeast Minnesota.
  - ◆ Some ice accumulations possible during the Thursday evening commute.
- Strong northeast winds & large waves across western Lake Superior.
- **Stay tuned for updates!**

## WINTER STORMS

### What Can I Do?

#### Prepare Your Home

Make your home winter ready. Buy needed supplies before the storm arrives. Have a plan in case you lose power or are unable to leave your home.



#### Monitor Your Forecast

Stay up to date with the latest forecast information as the storm approaches, monitor your favorite source for weather information.



#### Prepare Your Vehicle

Make your vehicle weather ready. Be sure to include a safety kit, cold weather gear, and all the necessities you may need to deal with the storm ahead.



#### Have A Plan

Before weather threatens, be sure to have a communications plan, change travel plans, and prepare for the impacts to your routine.



### Know The Terms

**Winter Storm Watch:** There is potential of a significant winter weather event. Conditions are possible but not imminent.

**Winter Weather Advisory:** Winter weather is imminent and may cause inconveniences.

**Winter Storm Warning:** A significant winter storm is imminent and is a danger to life and property.

**Blizzard Warning:** A significant winter storm with strong winds, snow, and low visibility is imminent and is a danger to life and property.

**Ice Storm Warning:** Dangerous ice accumulations are imminent



[www.weather.gov/winter](http://www.weather.gov/winter)

## Additional Resources

[NWS Duluth Website](#)

[Forecast Points \(Hourly Details\)](#)

[Snowfall Probability Maps/Table](#)

**Road Conditions**

[NWS Duluth on Facebook](#)

MN: [511mn.org](http://511mn.org)

[NWS Duluth on Twitter](#)

WI: [511wi.gov](http://511wi.gov)

