

# Overview

The weather pattern setting up for this race is one of the most dynamic in memory. By that I am referring to the overall complex weather map evolution over the course of the race. Certainly previous years have been “dynamic” with respect to thunderstorms and frontal systems. However this year we have a seasonally unusual low pressure system that will cross the lake and then be quite slow to move away.

The cruising fleet and the racing fleet will experience two very different races:

The cruising fleet will start as a strong low pressure is approaching from the west. There will be S’ly winds for the start, moderate strength. A risk of showers and thunderstorms. Around mid-night, Saturday morning, much of the cruising fleet will sail north of the low/trough and wind will turn E’ly. This wind will increase and build as they head north Saturday and back left to NE and moderate or possibly fresh strength for later Saturday and into Sunday.

**Sea state will become an issue for boats away from the Michigan shore and further north – especially as the wind backs more NE.** Later Sunday and especially on Monday, the wind will ease and it could actually get quite light/variable during the day on Monday – with nighttime land breezes and daytime lake breeze becoming part of the mix.

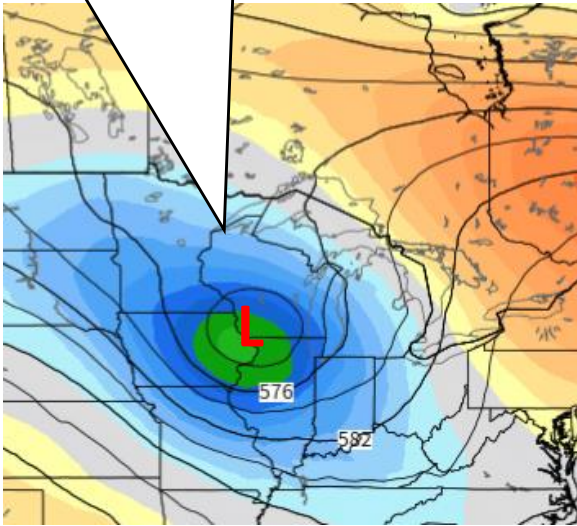
The racing fleet will more than likely start when the low is over the lake northeast or east of Chicago and moving slowly east to southeast. This will put them in the NE flow on the western periphery of the low pressure. Winds will be veering NW to N and most likely moderate to fresh (15-25). That said, if the low is still in close proximity, winds could be lighter and more variable until the low moves further away AND the fleet get a little distance up the lake. Winds will becoming more NE as the low moves away to the southeast – holding moderate and possibly fresh pressure Sunday. Conditions will moderate quickly Monday on the northern part of the lake – especially after Grey’s Reef.

**Sea state will be an issue for all the racing fleet from Saturday into early Monday morning.**

## Evolution of Upper Level Pattern

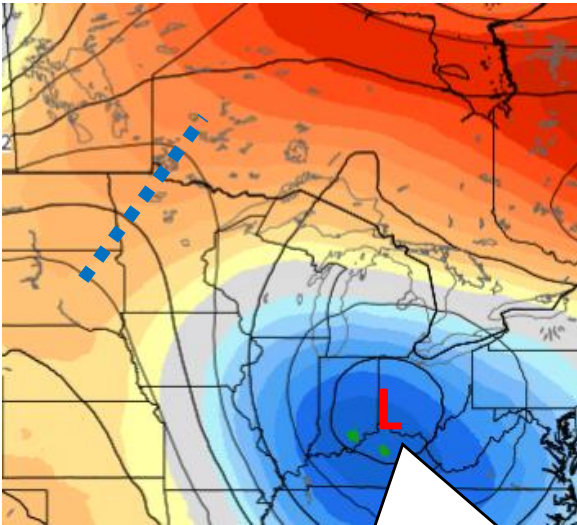
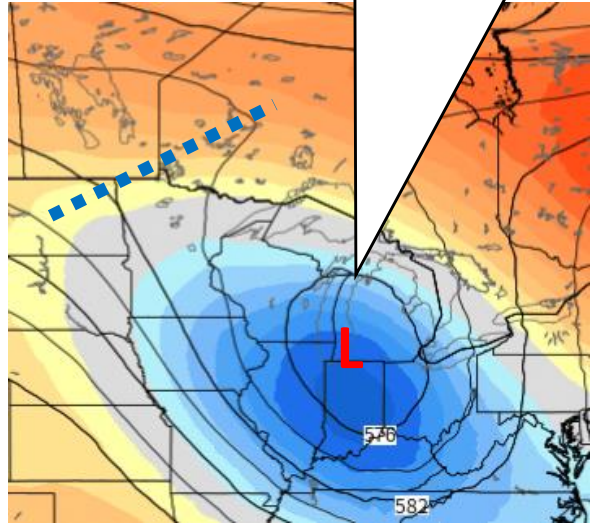
**Friday (7/20)**

Incoming upper cut-off low is deeper, further south and slower than previous forecast. This trend has been consistent over recent forecasts and is deemed highly confident.



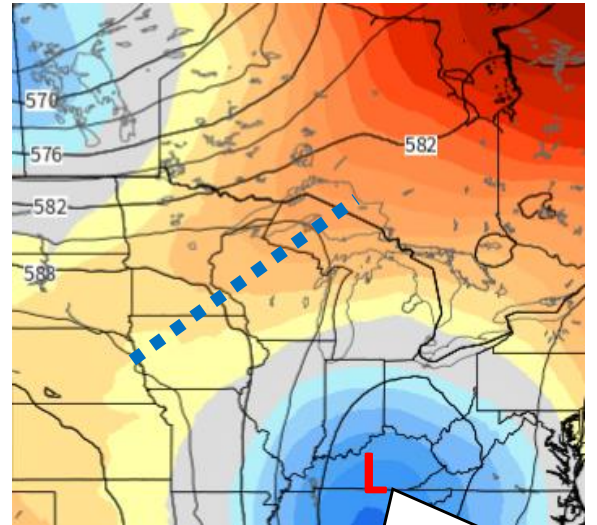
**Saturday (7/21)**

Upper low moves across Lake Saturday morning – tending to turn more Southeast (and eventually South-southeast) with time. Surface development depends on cut-off.



**Sunday (7/21)**

Peak winds on the lake (outside of rain cell impacts).



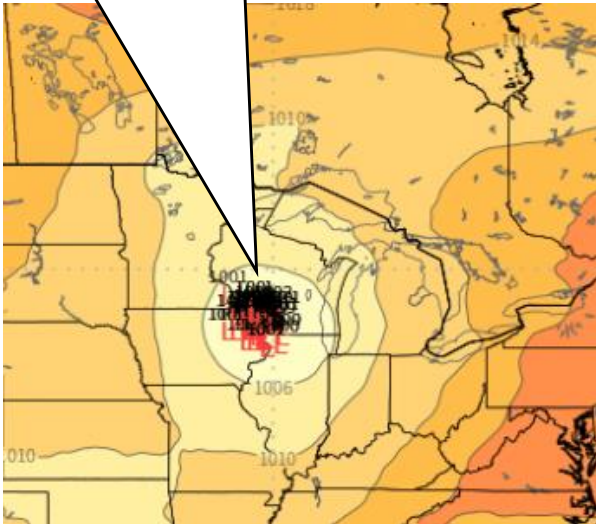
**Monday (7/22)**

Trough evacuates/weakens over eastern lakes. Ridge moves over western lakes.

## Ensemble Surface Low Positions

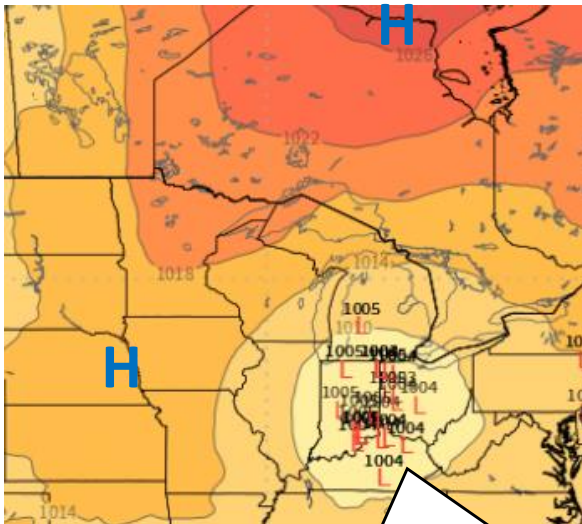
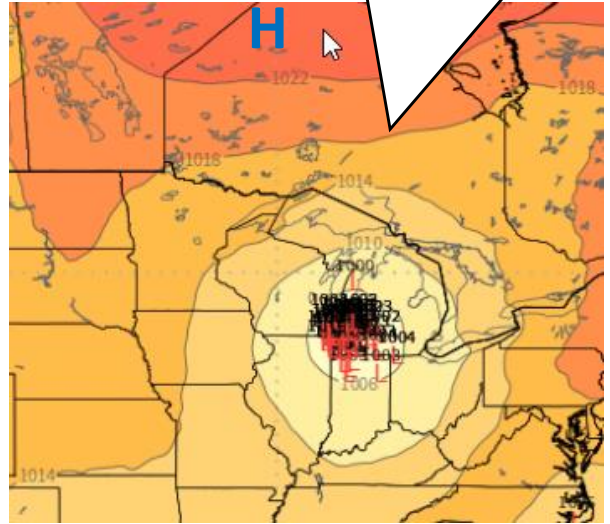
### Friday (7/20)

Ensembles members are starting to coalesce with respect to the development of the surface low developing with the incoming upper trough/cut-off low.



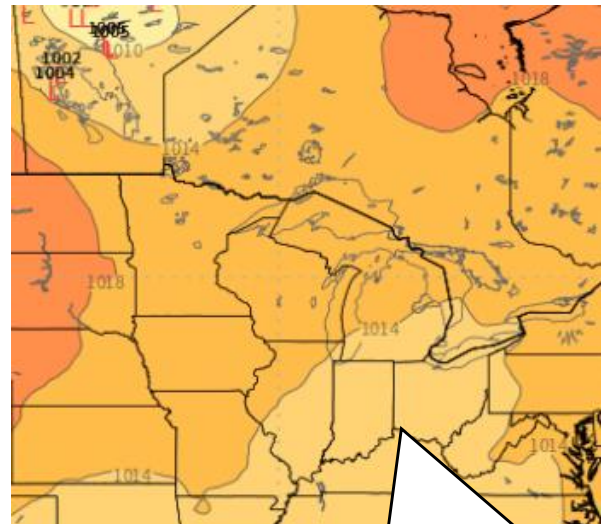
### Saturday (7/21)

As if on cue, the surface low looks like it will be passing over Southern Lake Michigan on Saturday. It will be a slow process. As the upper low deepens and cuts-off, west to east progression of the weather slows.



### Sunday (7/21)

The forecast confidence regarding the surface low starts to wane. The position of the low settles in underneath the upper low. Since the trough is still deepening, it will like push the low south/southeast. Fresh NE winds on lake.



### Monday (7/22)

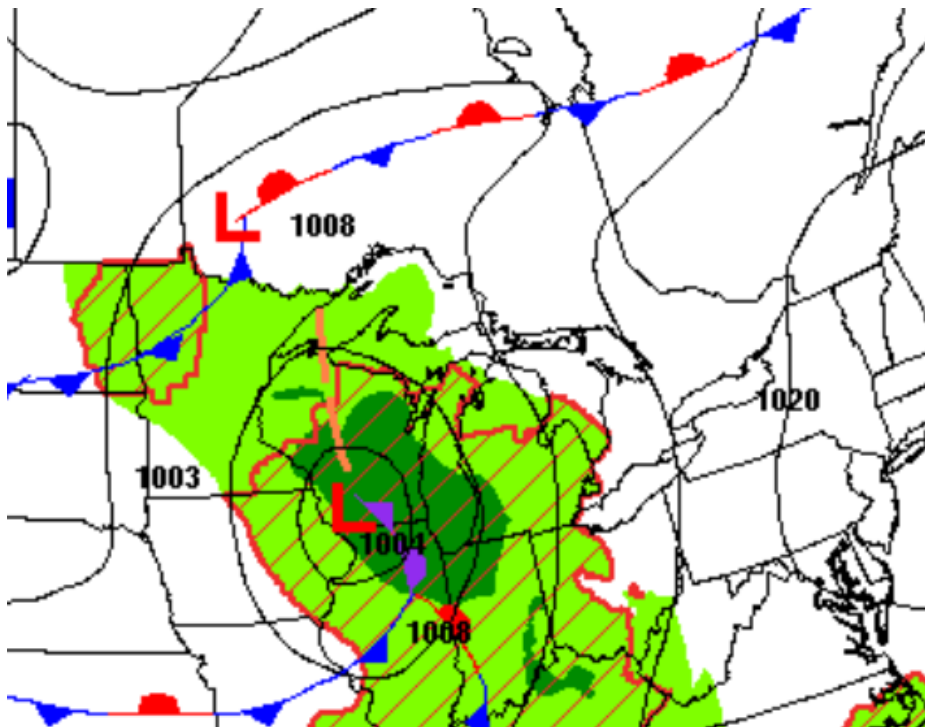
Upper and surface low weaken. Another weather system moving into central Canada breaks the high pressure ridge down and leads to weakening gradient/winds on lake and likely return to land/sea breezes.

# Summary

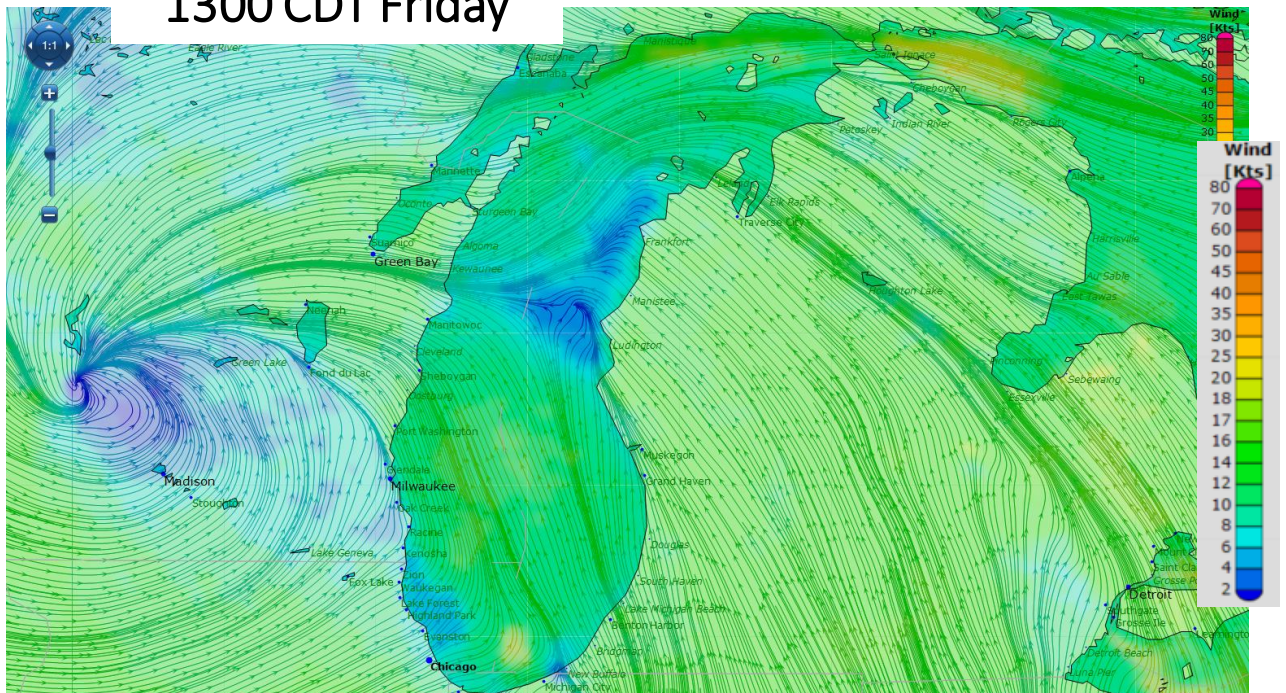
- Confidence has dramatically improved
  - While synoptic (large scale) developments are more certain, local impacts will be tricky to detail
  - Rain showers a factor Friday, Saturday. Improving on Sunday
- Following are deterministic forecasts centered on early afternoon each day Friday through Monday
  - The track, timing, and strength of the low pressure is critical to determining the actual winds that will be
  - At the moment, the confidence in the forecast is pretty good (considering complexity of the situation) but the details will be shifting around.
  - Of course with the low pressure and attendant fronts, you can expect there to be considerable rain/shower/thunderstorms activity. This will further complicate the wind field/forecast.
  - Good news is that worst of thunderstorms should be through before start of Cruising fleet Friday. Rain seems to set up in pinwheel bands around the low. Timing these is very tricky at this point. So just a “periods of showers/a few downpours” description at this point. Can’t rule out a thunderstorm with any of these.
  - Moderate to fresh NE winds seems pretty certain Saturday evening through the day on Sunday. 15-25 covers it pretty good right not. Lighter on the MI shore and stronger mid-lake/west.
  - Sea state 3-5 ft (perhaps up to 6 ft on Sunday mid-lake and west). Some relieve on the MI shore. Hard to escape though once north of the Manitous.
  - As for models, kind of seems all are equally probable at this point. No clear favorite.



# Friday

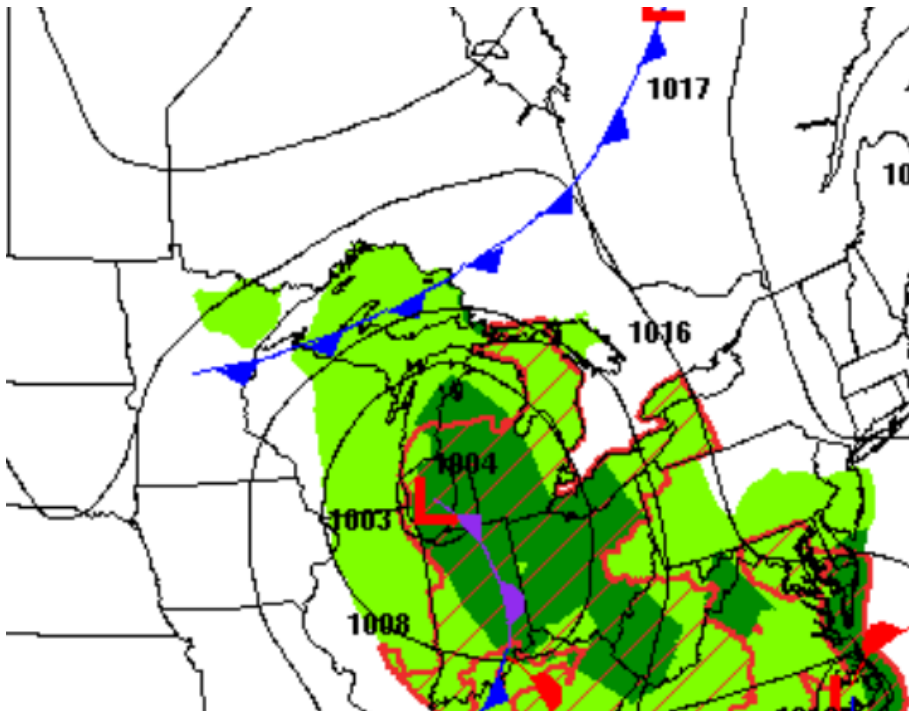


1300 CDT Friday

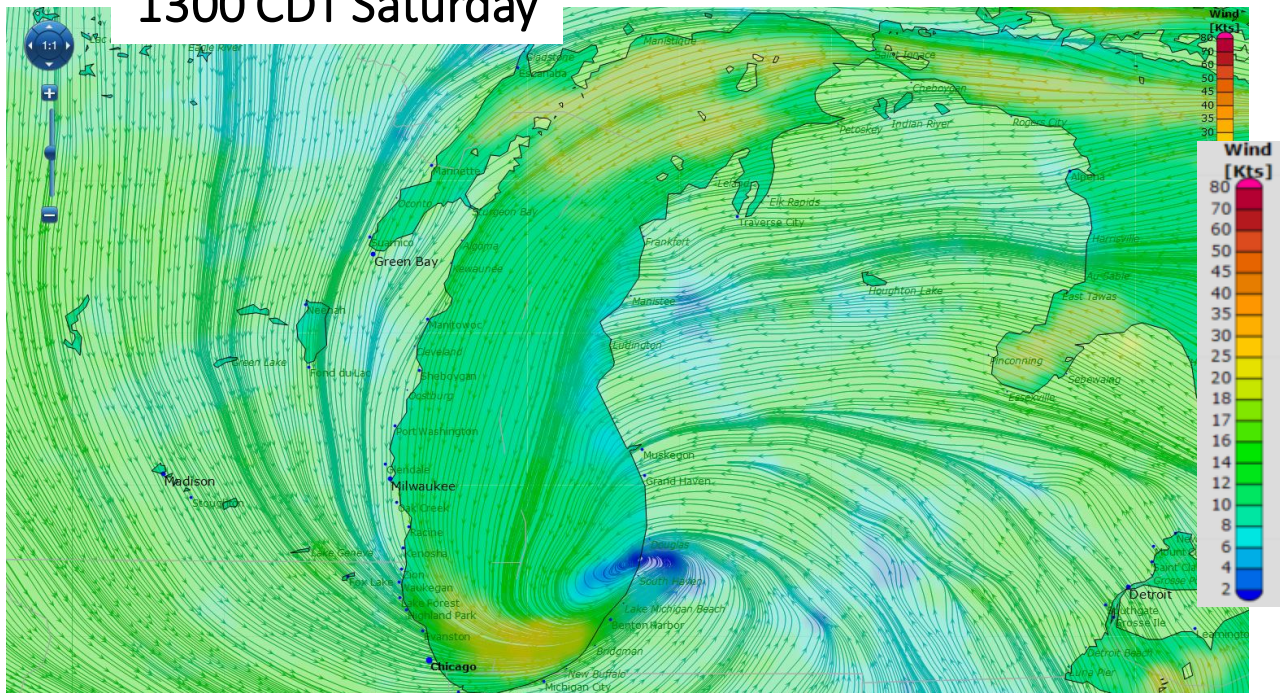




# Saturday

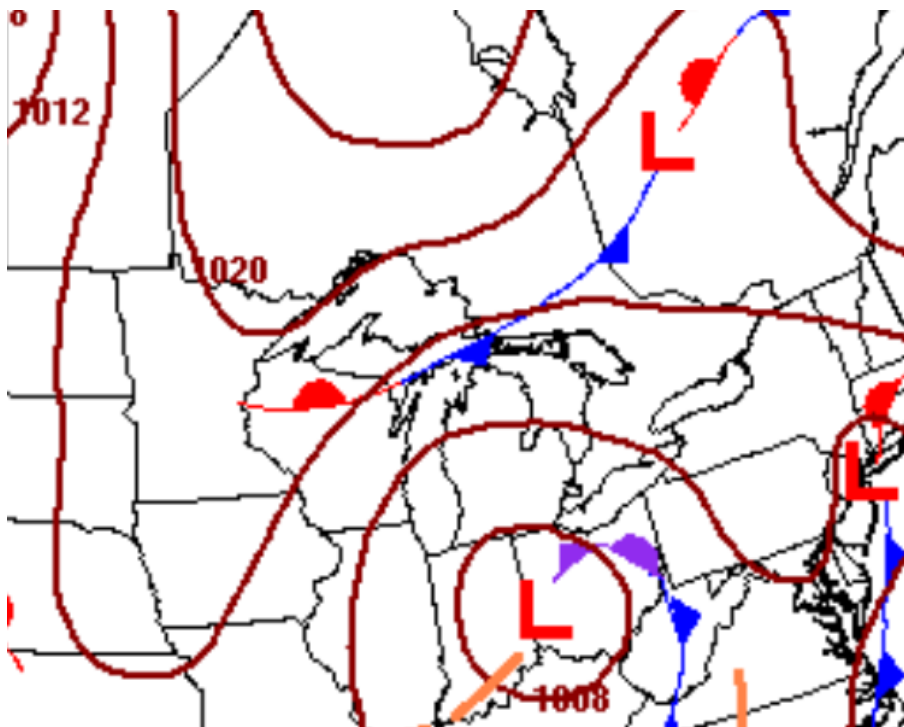


1300 CDT Saturday

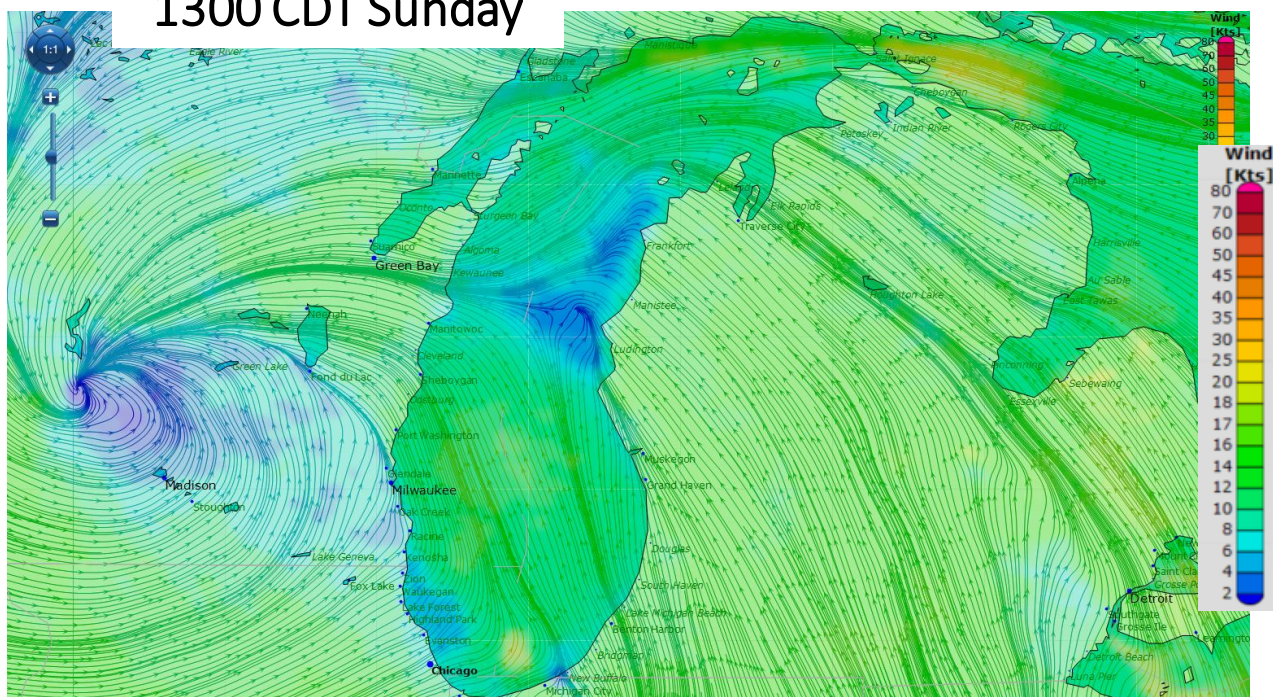




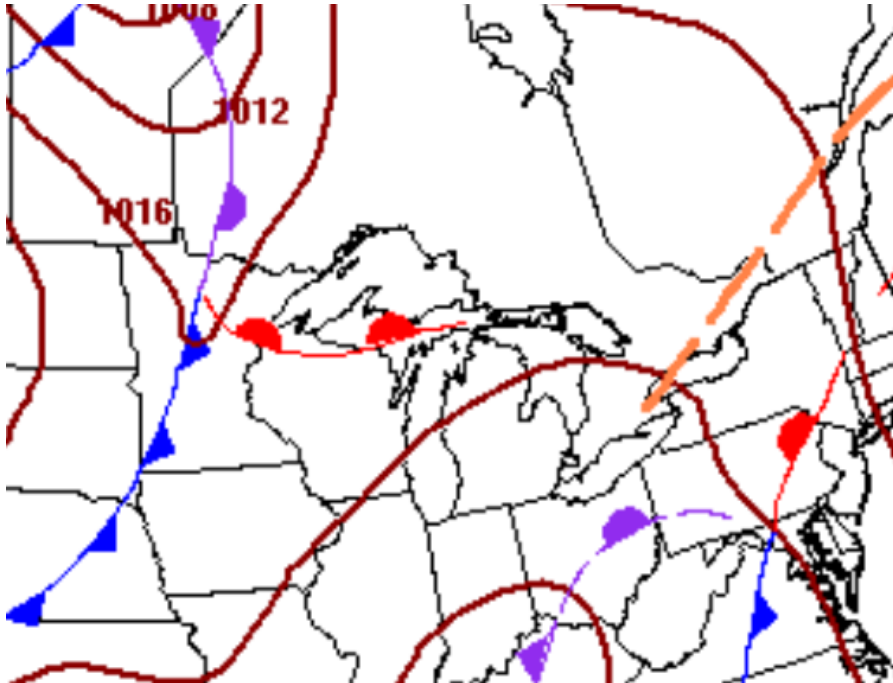
# Sunday



1300 CDT Sunday



# Monday



1300 CDT Monday

