



NOVEMBER 2014 WESTERN NEW YORK STORM



Nov 2014 WNY Storm



- The November 2014 Storm in Western New York was really a combination of several storm “events” over a two-week period
- Lake effect snows fell from Monday through Wednesday with a 12-hour respite before re-developing and continuing through Friday
- As low pressure approached, rain and warming temperatures began melting the snow increasing the threat of flooding
- The associated cold front brought winds gusting to 60 mph the following Monday (24th)



-
- 348PM Wednesday November 12
 - The Area Forecast Discussion (AFD) mentioned the potential for a “significant lake effect event” at the start of the next week
 - 339 PM Thursday November 13
 - AFD continued to discuss lake effect: “Position of the 500mb trough favorable for a major lake effect event”
 - 311 PM Friday November 14
 - AFD stated that “a potentially strong, long-lived lake effect event may be underway east of both Lakes (Erie and Ontario) Tuesday and Tuesday Night with feet of snow possible under the lake bands”



-
- 338PM Saturday November 15
 - **LAKE EFFECT SNOW WATCH**
 - Issued for Monday evening through Wednesday morning
 - Erie, Genesee, Wyoming, Chautauqua, Cattaraugus and Allegany Counties off Lake Erie
 - 348 PM Sunday November 16
 - **LAKE EFFECT SNOW WARNING**
 - Issued for Monday evening through Wednesday morning
 - Winds gusting to 45 mph at times producing significant blowing and drifting snow and near blizzard conditions at times
 - Erie, Genesee, Wyoming, Chautauqua, and Cattaraugus Counties off Lake Erie



Monday November 17



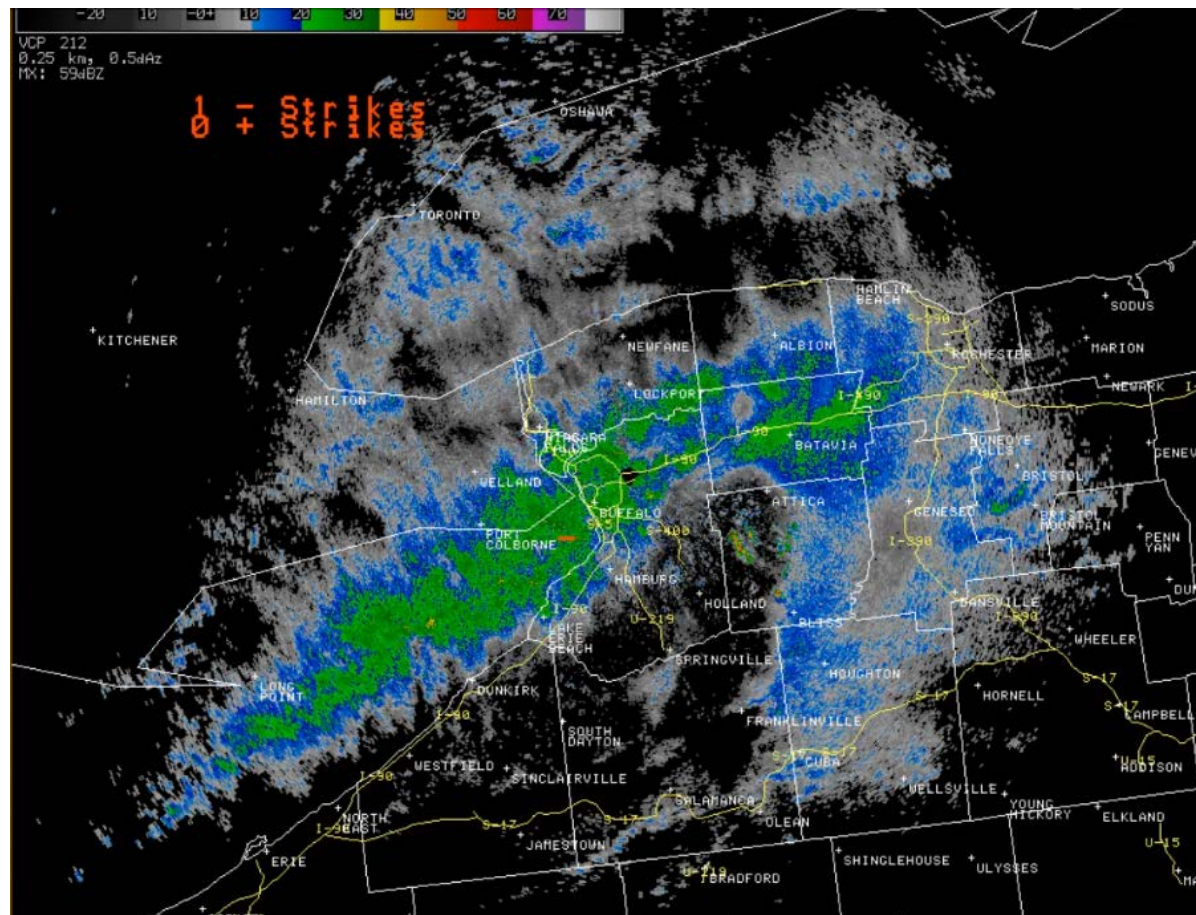
- Initial briefing package email sent 755AM
 - Off Lake Erie
 - Lake snows begin to develop after sunset mainly across southern Erie and Wyoming counties
 - The snow will consolidate into a single band and lift across the Buffalo metro area by daybreak.
 - Winds extend this lake effect snow across Genesee into western Monroe county
 - Already discussed the second lake effect event Thursday / Friday and the warmup for the weekend into the start of next week
- Conference call conducted at 1100AM



Monday November 17



- Lake effect snow began to develop around 6PM with frequent reports of thunder and lightning
- By 10 PM—reports of up to 8" had already fallen
- By Midnight—reports of up to 14"



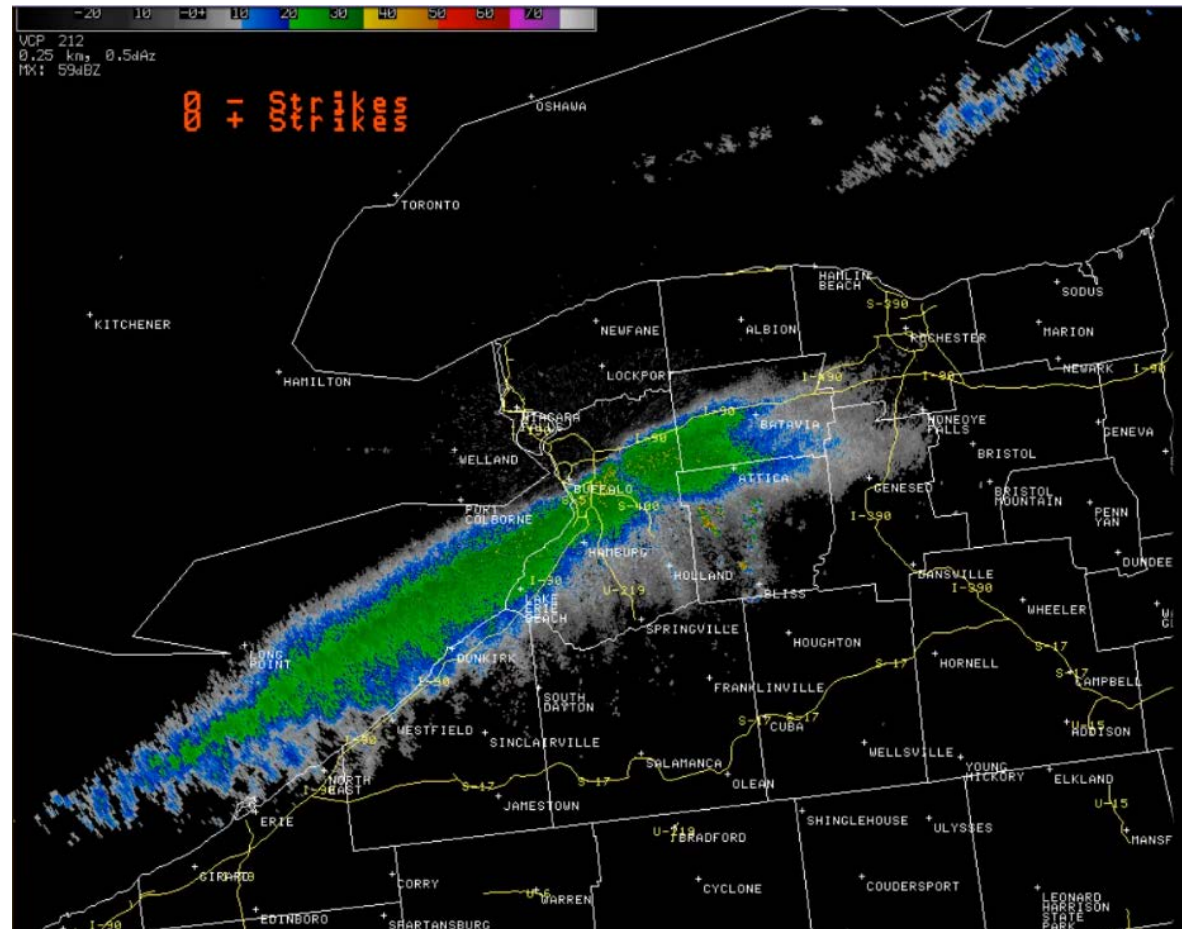
8PM Monday 11/17



Tuesday November 18



- With daybreak, reports of two to three feet were coming in across central Erie County
- Two conference calls were held—11AM and 4PM



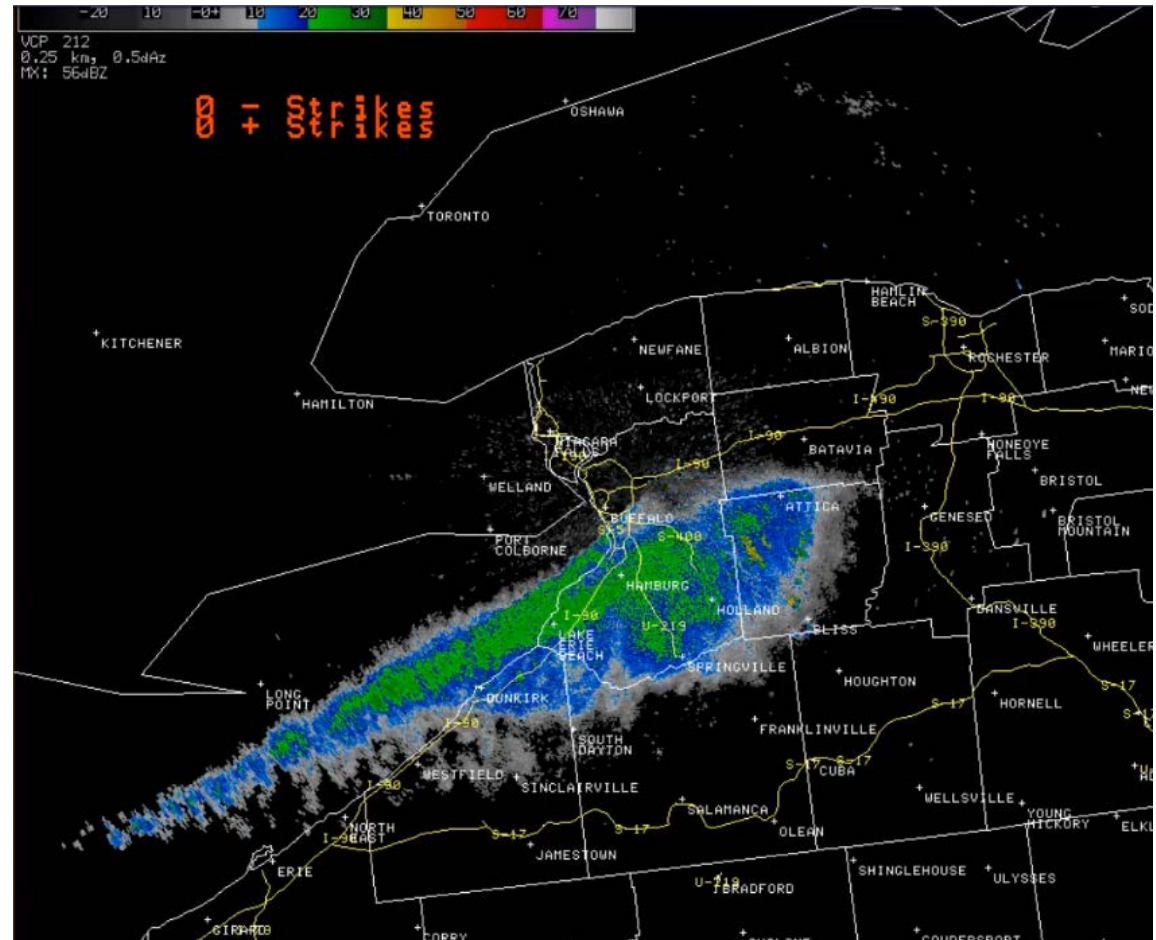
7AM Tuesday 11/18



Tuesday Night



- Lake snows drift about five miles south and continue overnight



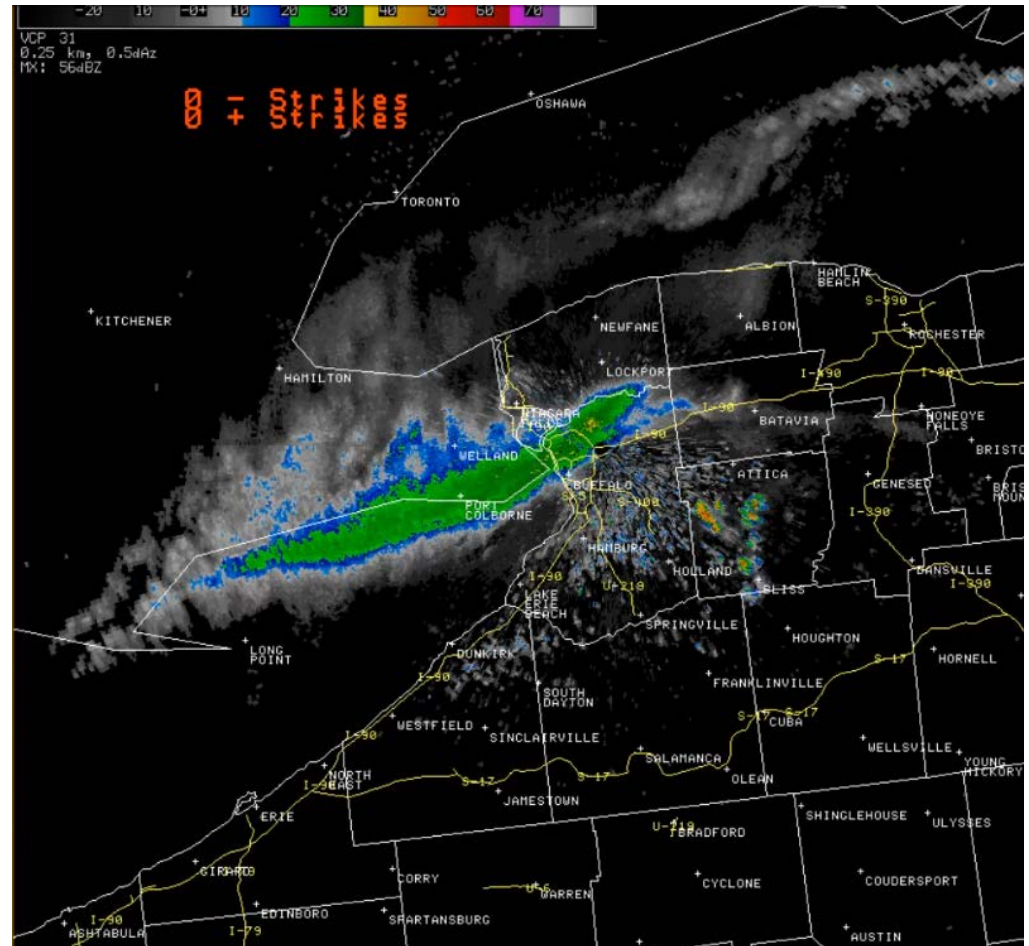
1AM Wednesday 11/18



Wednesday November 19



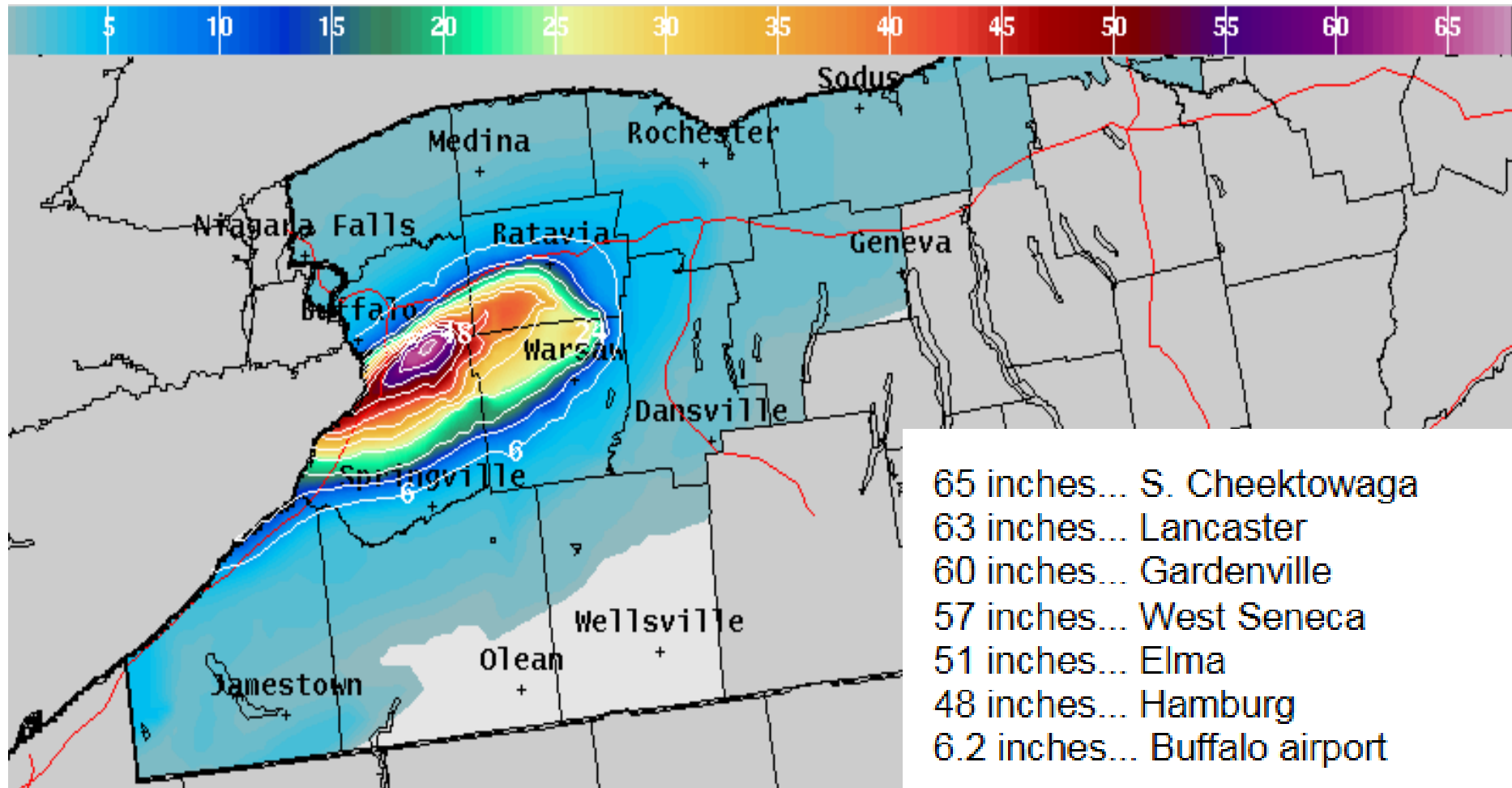
- The lake snows lift north across Erie and Niagara counties as winds shift to south
- Lake effect snows end for about 12 hours before re-developing late Wednesday



8AM Wednesday 11/19



Snowfall Totals Monday-Wednesday

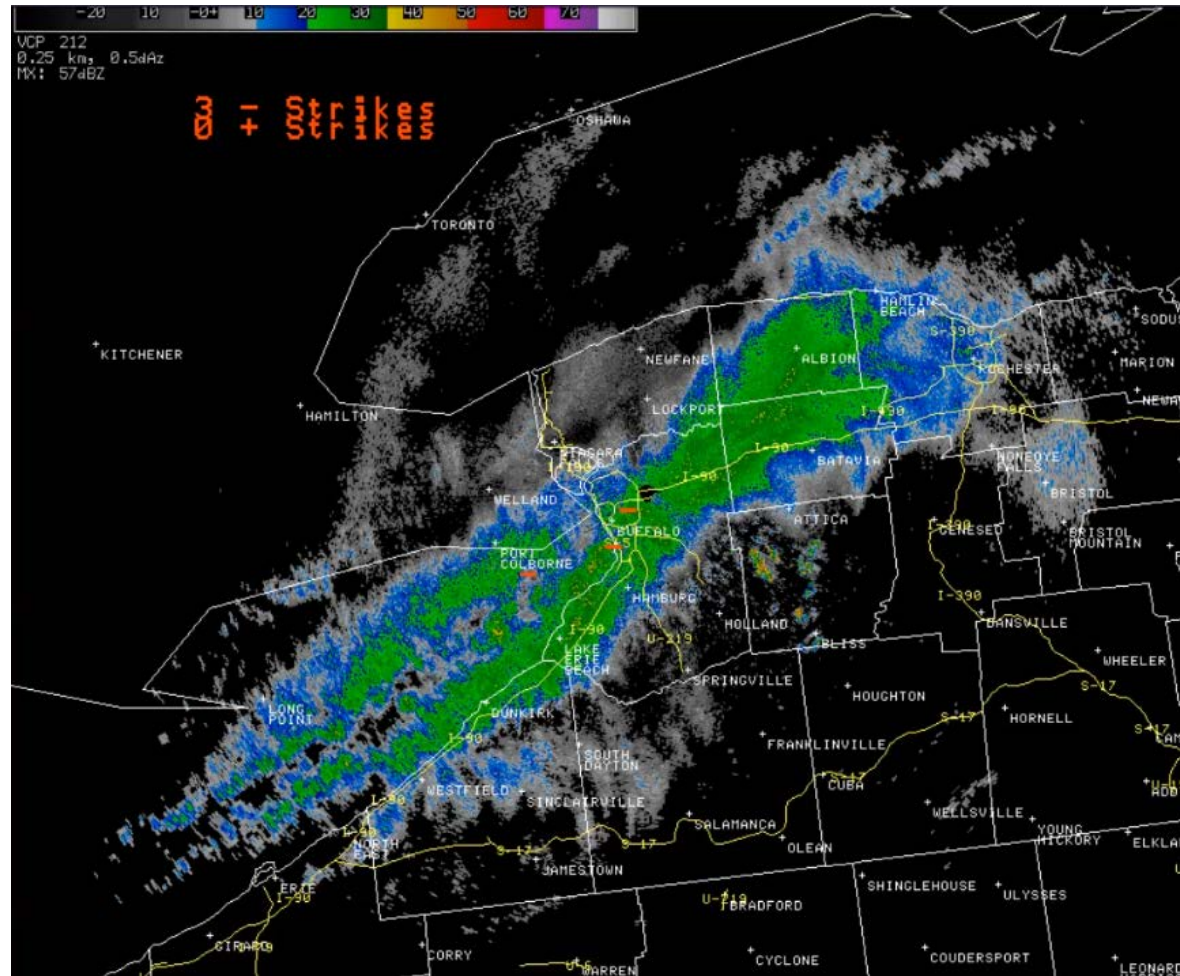




Thursday November 20



- Lake snows drift from north to south during the early morning hours



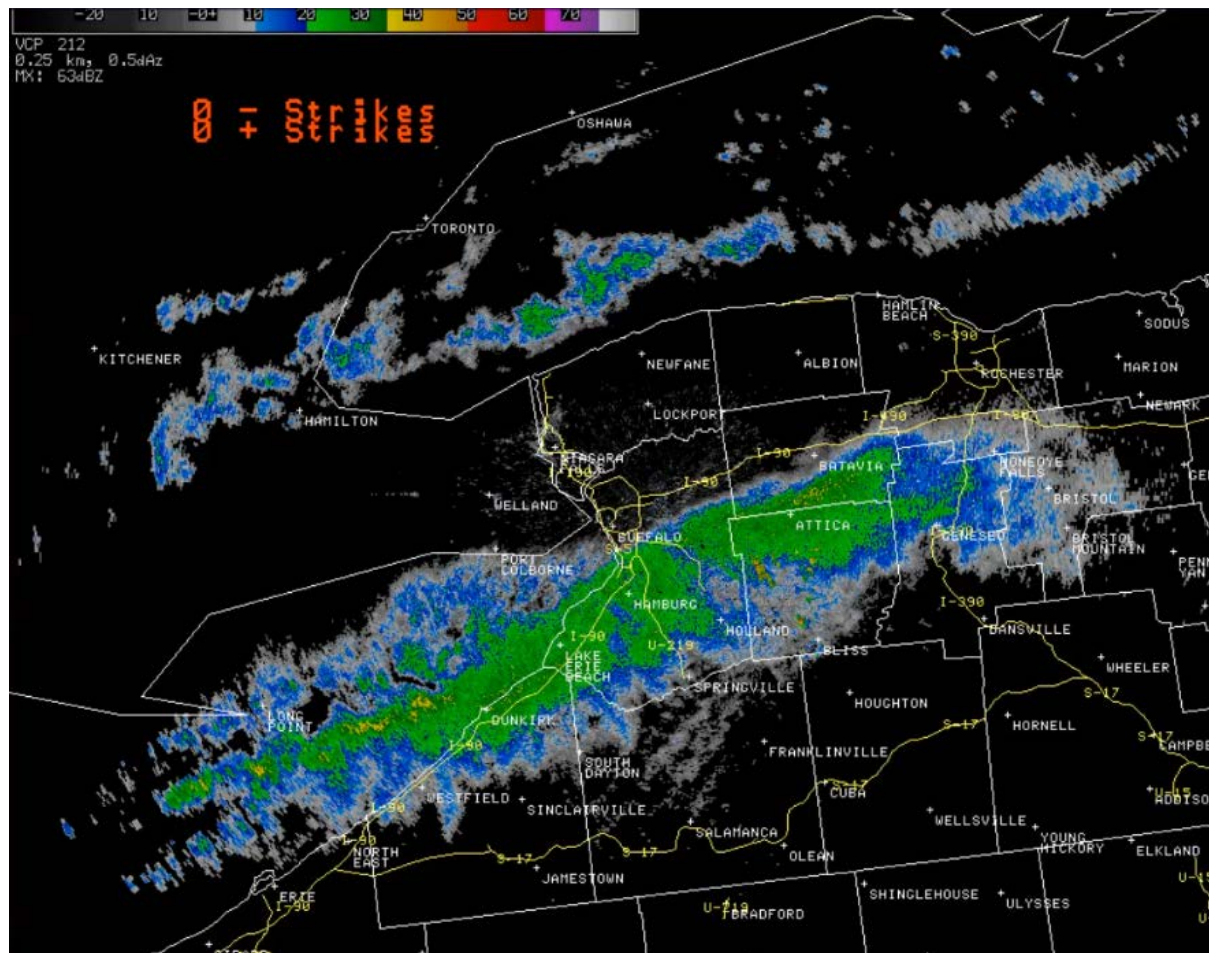
5AM Thursday 11/20



Thursday November 20



- Lake snows settle across much of the same area hit by the first lake effect snows...perhaps just a few miles south



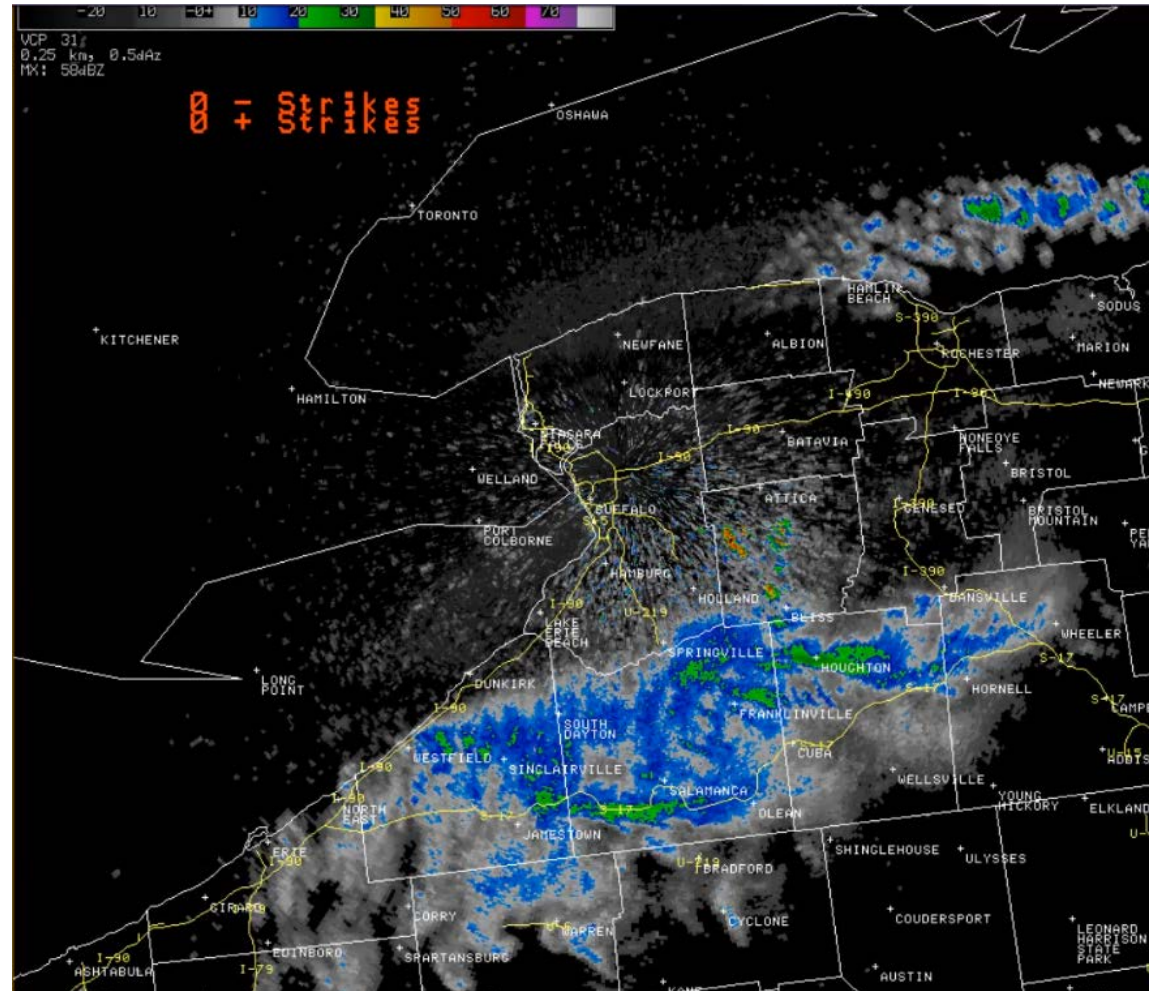
2PM Thursday 11/20



Thursday Night



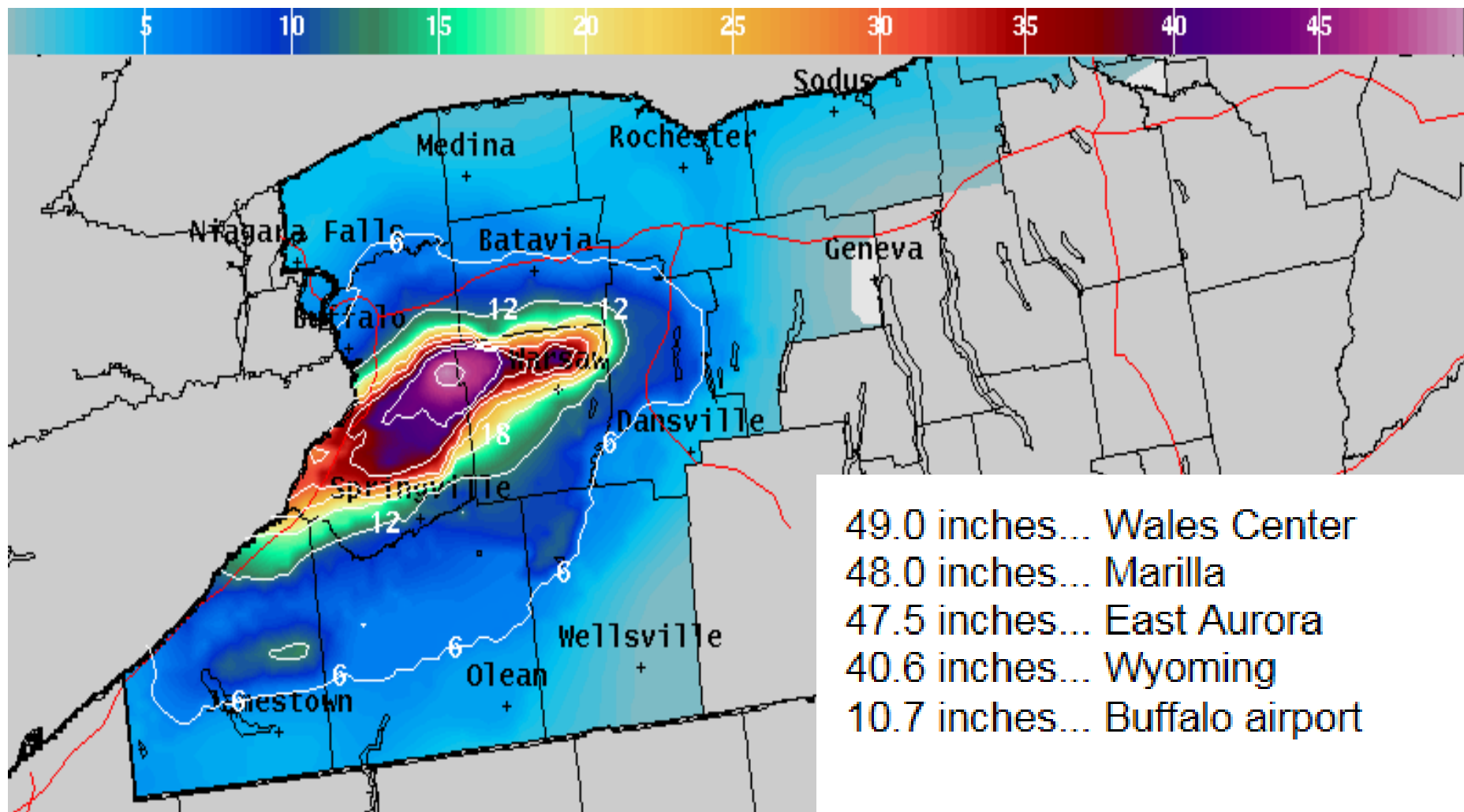
- Lake effect snow settles further south over the western southern tier dissipates in the early morning hours of Friday



11PM Thursday 11/20



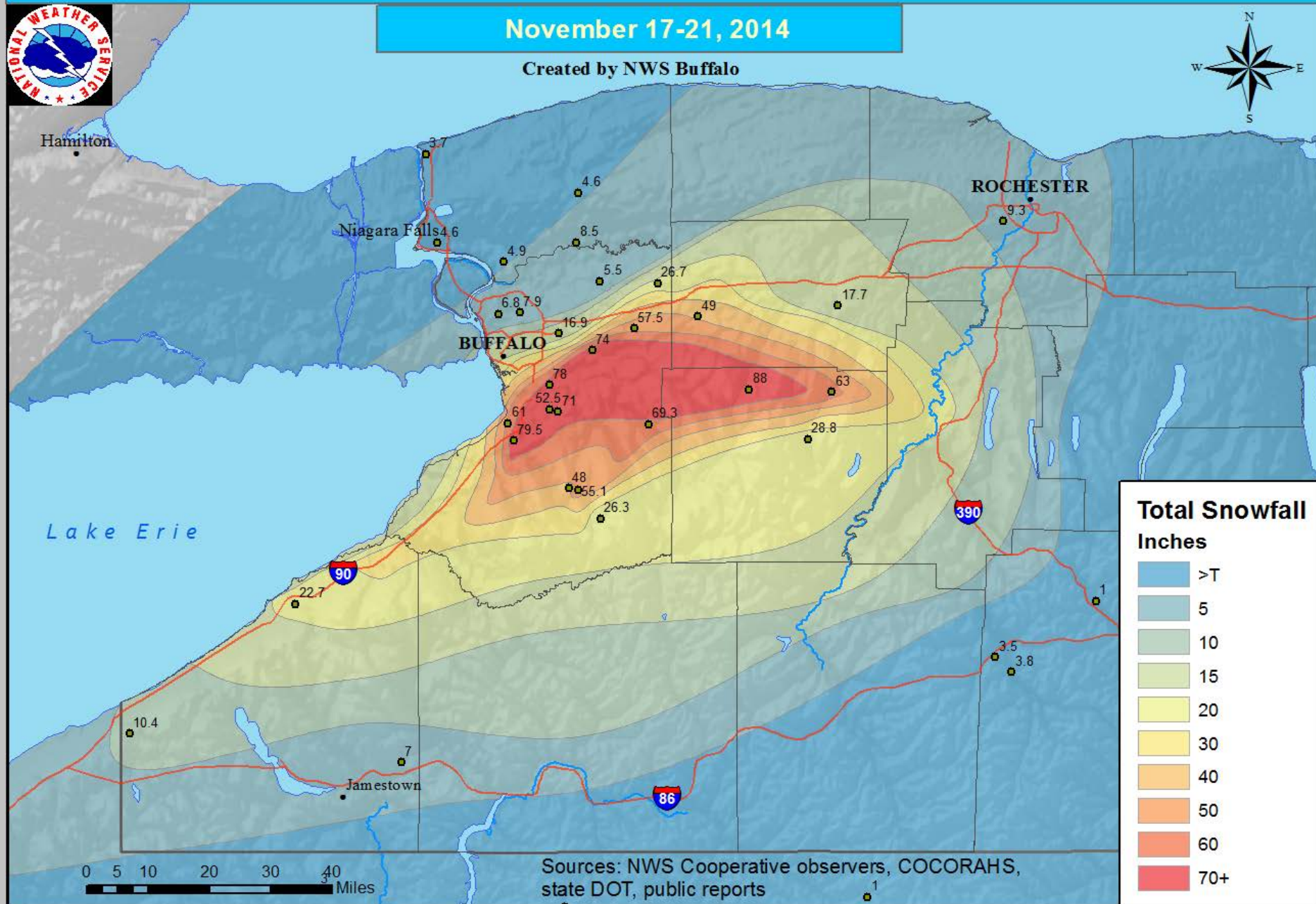
Snowfall Totals Wednesday - Friday



Western NY Storm Total Snowfall

November 17-21, 2014

Created by NWS Buffalo





Weekend Warm-up Forecast

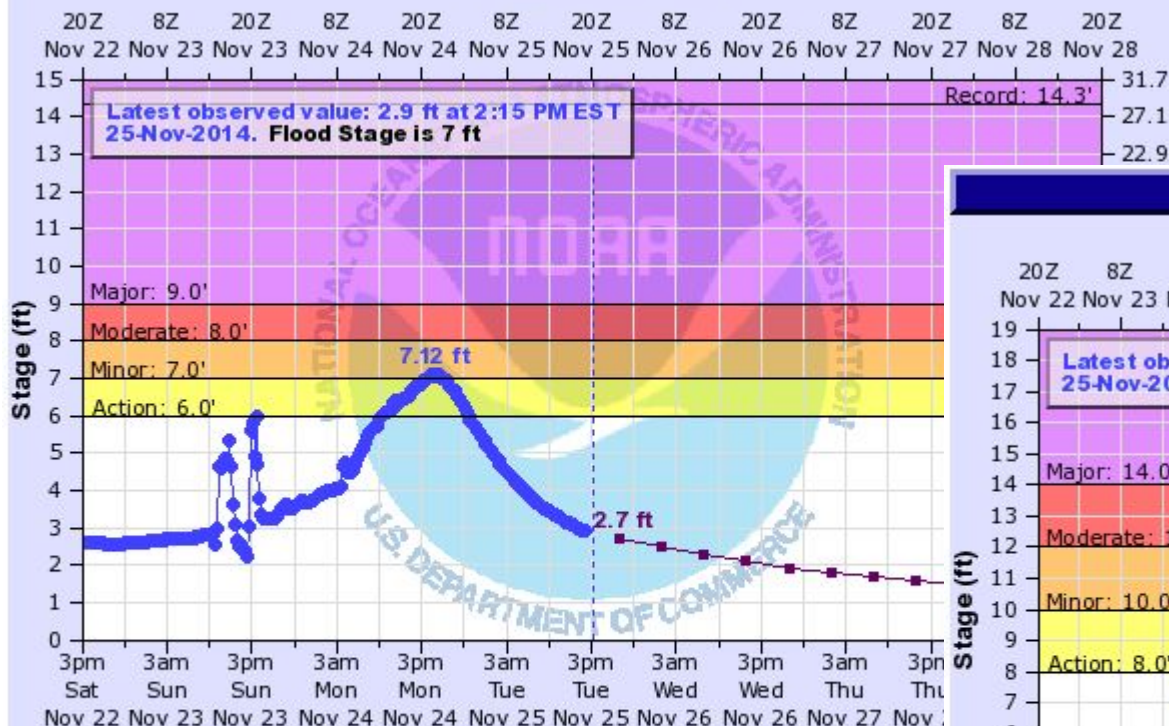


- Combination of rain and snowmelt brought flooding concerns in areas of maximum lake effect snow
 - Measured four to six inches of water in the snowpack
 - Forecasted $\frac{1}{2}$ - $\frac{3}{4}$ inch of rain
- Flood Potential late Sunday 11/22 through Tuesday 11/25
- Areas of concern:
 - Areas streams and creeks
 - Urban areas of heavy lake effect snow
 - Snow blocked storm drains and storm sewer limitations will likely result in urban flooding
 - Basement flooding and possible failure



BUFFALO CREEK AT GARDENVILLE

Universal Time (UTC)



Site Time (EST)

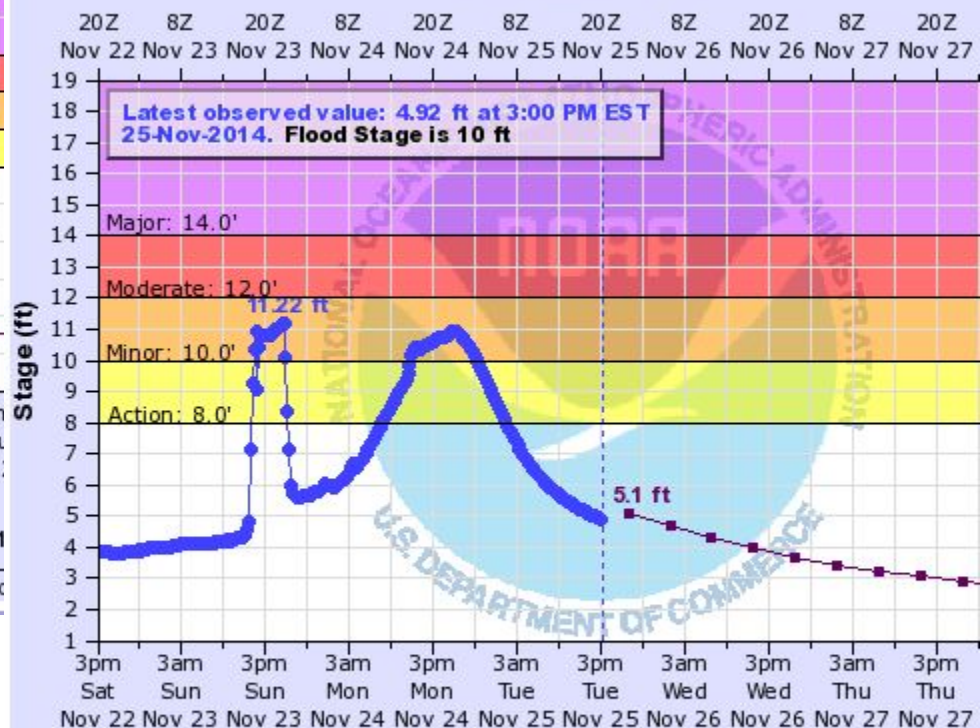
----- Graph Created (3:16PM Nov 25, 2014) —●— Observed —■— Forecast (issued 11:11 AM Nov 25, 2014)

GDVN6(plotting HGIRG) "Gage 0" Datum: 603.65'

Observations courtesy of U.S. Department of Commerce

CAZENOVIA CREEK AT EBENEZER

Universal Time (UTC)



Site Time (EST)

----- Graph Created (3:15PM Nov 25, 2014) —●— Observed —■— Forecast (issued 11:11 AM Nov 25, 2014)

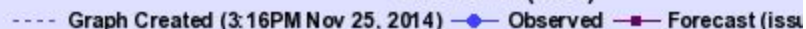
EBZN6(plotting HGIRG) "Gage 0" Datum: 604.86'

Observations courtesy of U.S. Department of Commerce



Universal Time (UTC)

**Latest observed value: 5.92 ft at 2:30 PM EST
25-Nov-2014. Flood Stage is 8 ft**



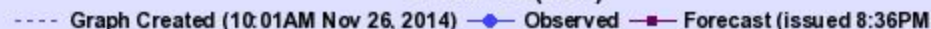
Site Time (EST)

LCSN6(plotting HGIRG) "Gage 0" Datum: 672.02'

Observations courtes

Universal Time (UTC)

**Latest observed value: 7.48 ft at 9:15 AM EST
26-Nov-2014. Flood Stage is 8 ft**



WILN6(plotting HGIRG) "Gage 0" Datum: 586.41'

Observations courtesy of U.S. Geological Survey



November 17-26, 2014





Snowpocalypsenadocaine 2014



- Winters Knife
- Snow#@^*vember
- Federal Declaration 4204





@JamesAFry

It's Black & White It's About Partnerships

Before the Snow
Before the Plows
Before the Declarations



Face Time



In the beginning.....

- Routine-Limited activation of E.O.C.
 - “Situation Unit”
 - Key players for the purpose of monitoring
 - Been there done that! (2 Blizzards in Jan.& Feb.)
 - Big Problem



Eventually!



- The EOC would grow to 150.
- County ES, DPW, SMART, Health, DISS, ECSO, CPS, NYS DOT, SP, DHS, State Fire, State OEM, DEC, National Guard, to name a few.
- Tracked over 5,000 responders including, teams from FDNY, Rochester, Syracuse and neighboring States.
- Working in partnership with the state we were also tracking hundreds and ultimately thousands of resources.



E.O.C. Activation



Initial actions included notifications to all of the towns, villages and city Emergency Managers of EOC activation, scheduled conference calls, EOC phone numbers, and DLAN incident creation.



Snow/Debris/Towing/Collapse/Flooding





360 Assessment





Key Issues



Credit: @JayMcKee74 via Twitter

- Vehicles
- Volume of Snow
- Equipment on Hand
- Emergency Response
- Debris Management
- Collapse



Vehicles



Abandoned & Occupied





What Were They Thinking







Volume, Volume, Volume!





Plowing? Really?





Knife to Gunfight





Time to re-write the book



- With snowfall rates in excess of 4 inches per hour and zero visibility snow removal crews were quickly rendered ineffective





Drastic times require drastic measures; this would not be a routine event:



“By dawn it was obvious that this would be an event of duration and that traditional snow removal tactics would not be effective.”

- CE requesting available state DOT resources
- Activation of the National Guard.
- A contract was executed for Union Concrete to coordinate private sector equipment. (Focus on primary then secondary)
- When it became clear that snow removal was further complicated by abandoned vehicles, a contract was executed to tow, on the county dime, vehicles impeding progress.



Equipment





Emergency Response required creativity





Dust off Debris Management







Collapse Issues





Town of Evans #1 Employer





Knock-Knock





Teamwork





Sunshine Doesn't Mean Lollipops



- Rapid melt
- Who's going to pay
- Let the politics begin
- SBA
- FEMA





Small Business Administration



- Rapid assessment-not just during the event
- 50% of structure & no insurance
- Individual & business
- Location





FEMA



- New Snowstorm Rules-snowfall of record
- High 48 hours
- Insurance
- Damage Survey
- No rest for the weary
- State partners

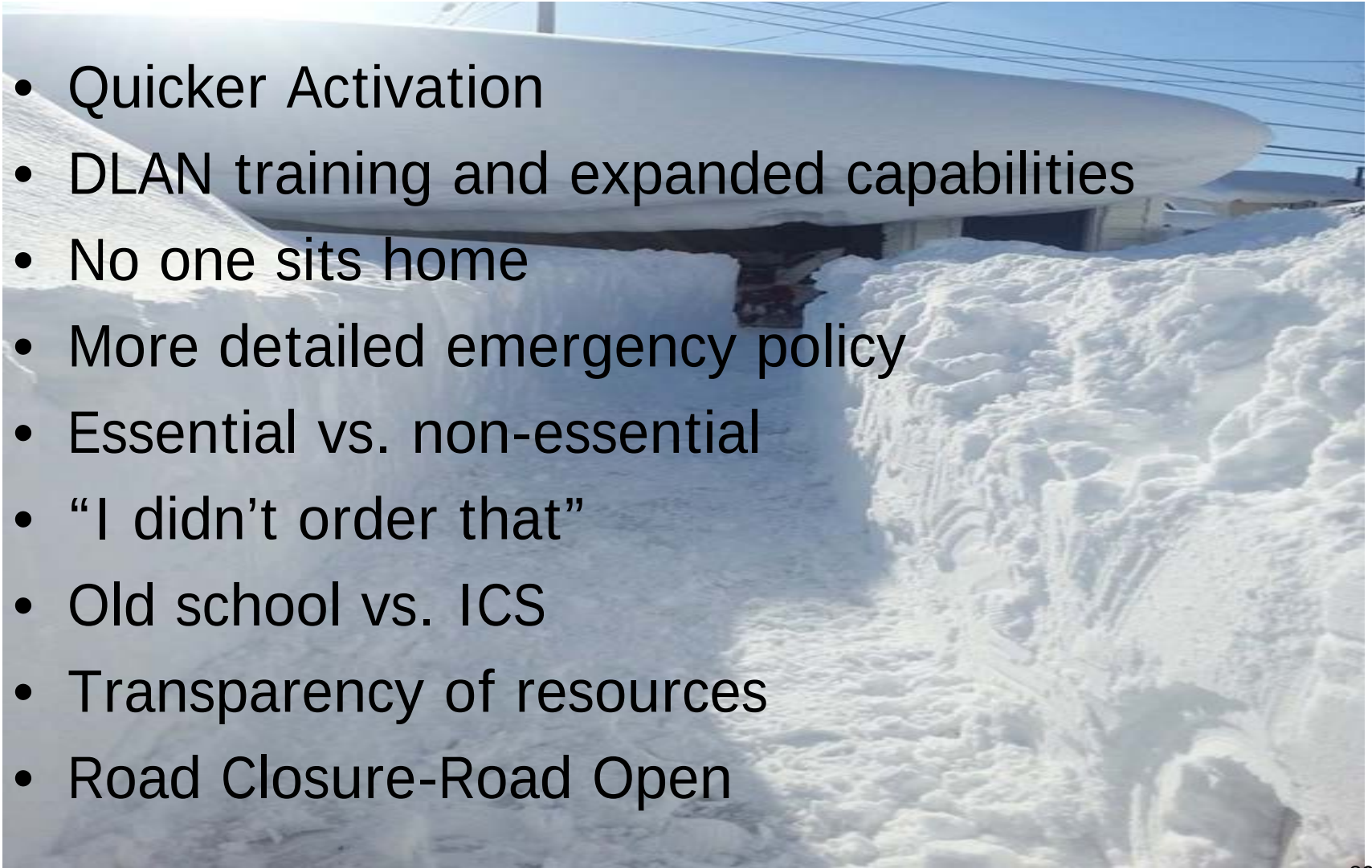




After Action



- Quicker Activation
- DLAN training and expanded capabilities
- No one sits home
- More detailed emergency policy
- Essential vs. non-essential
- "I didn't order that"
- Old school vs. ICS
- Transparency of resources
- Road Closure-Road Open





All Dressed up, nowhere to go.





Shallow Gene Pool Hall of Fame





NFL's Finest





Surfs Up





No Lifeguard On Duty





Questions?

