

NYSM Products Overview

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(please contact with questions, comments, and requests!)

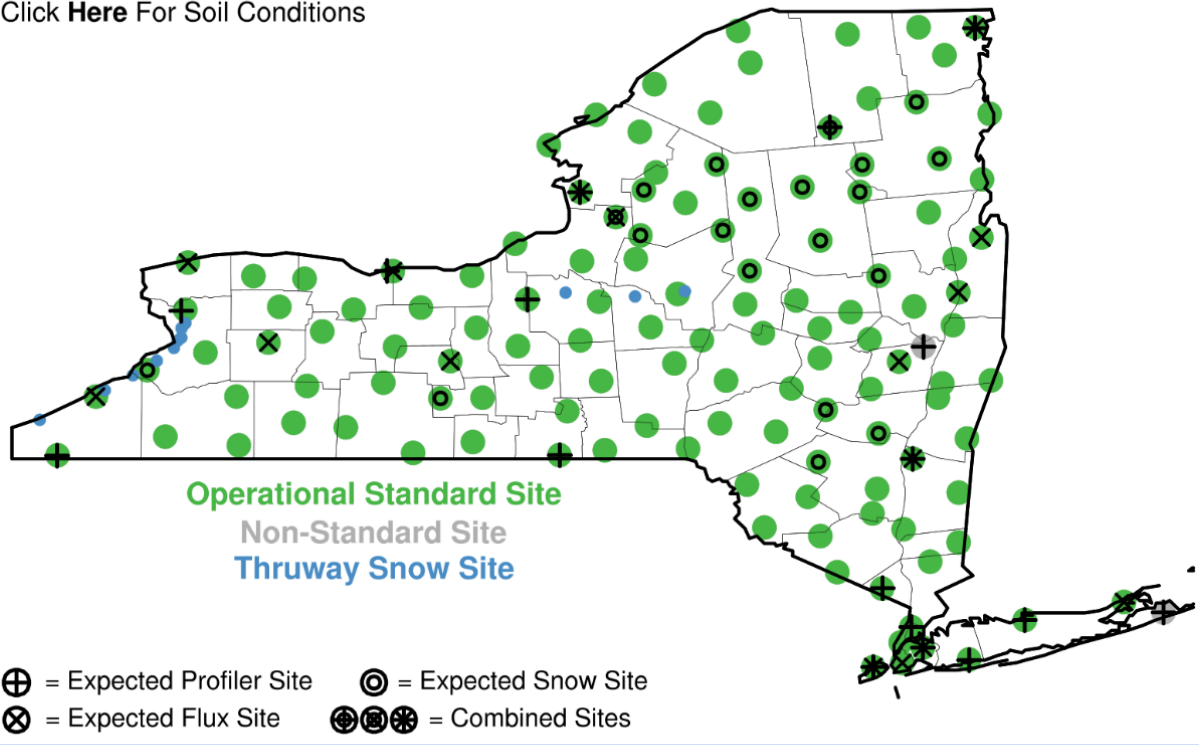
Live Data! (Click On A Circle For The Latest Information)

Statewide Data:

Click **Here** For 24 Hour Extremes

Click **Here** For Current Conditions

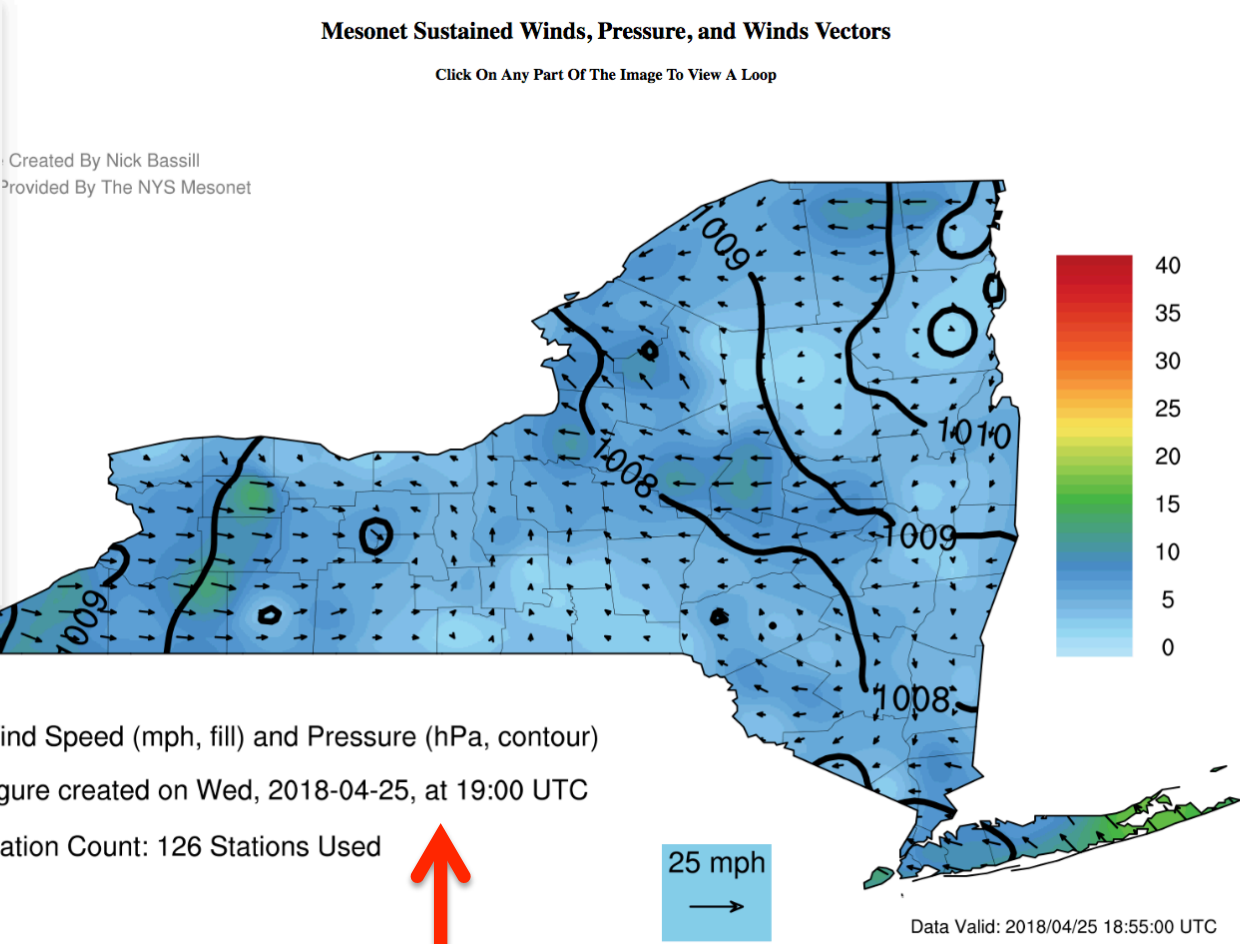
Click **Here** For Soil Conditions



For a detailed topographical map with station IDs, click [here](#) (ft) or [here](#) (m)

<http://operations.nysmesonet.org/~nbassill/>

- Temperature & Pressure
 - Temperature & Dew Point
 - Temperature & Radar
 - Wind Speed & Pressure**
 - Wind Gusts & Pressure
 - Potential Temperature & Radar
 - Eq. Pot. Temperature & Radar
 - LCL & Radar
 - Divergence & Pressure Change
 - "Feels Like" Temperature
 - Severe Weather Summary
 - Camera Map & Radar
 - Estimated Snow Depth
 - 1 Hour Snow Depth Change
 - 1 Hour Precipitation
 - 24 Hour Precipitation
 - Incoming Solar Radiation
 - 24 Hour Site Extremes
 - Current Radar
 - Current Observations
- *Maps Update Every 5 Minutes*



All maps linked in either
“Current Maps” or
“Current Loops” menus are
updated every 5 minutes



Time plot was made

Click [Here](#) For An Archive

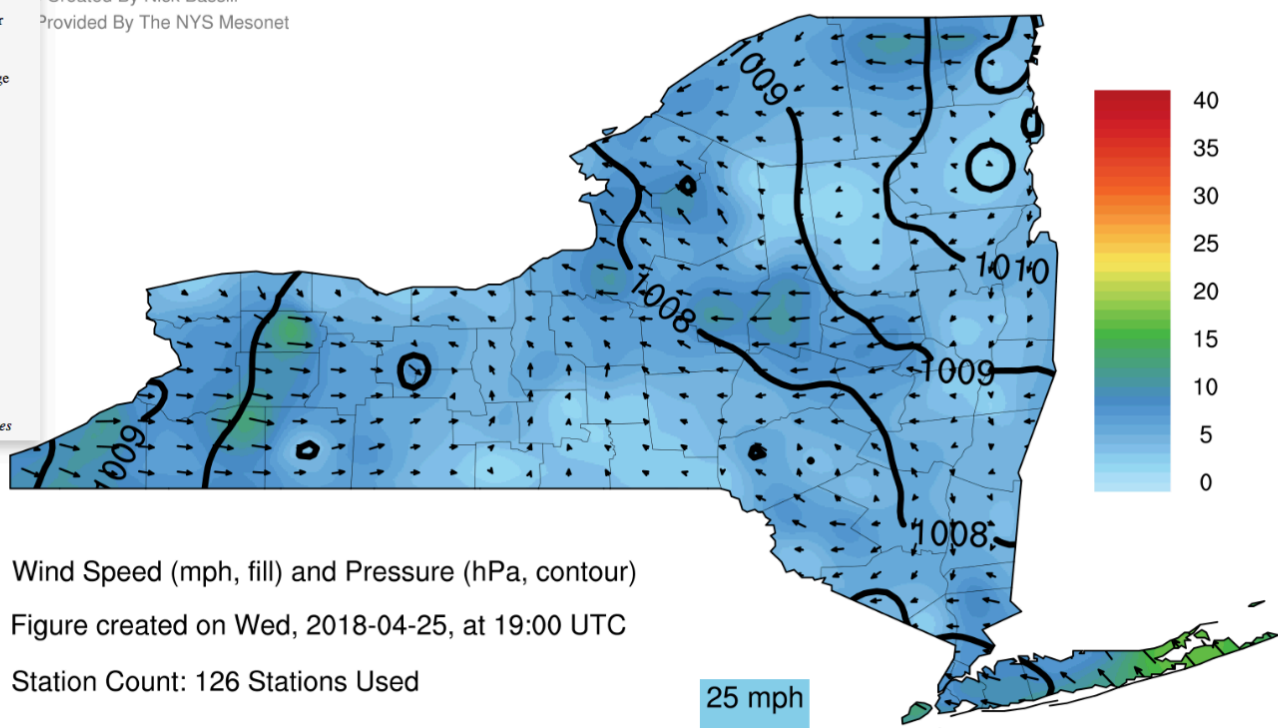


Time underlying data is valid

- Temperature & Pressure
 - Temperature & Dew Point
 - Temperature & Radar
 - Wind Speed & Pressure**
 - Wind Gusts & Pressure
 - Potential Temperature & Radar
 - Eq. Pot. Temperature & Radar
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 - 24 Hour Site Extremes
 - Current Radar
 - Current Observations
- *Maps Update Every 5 Minutes*

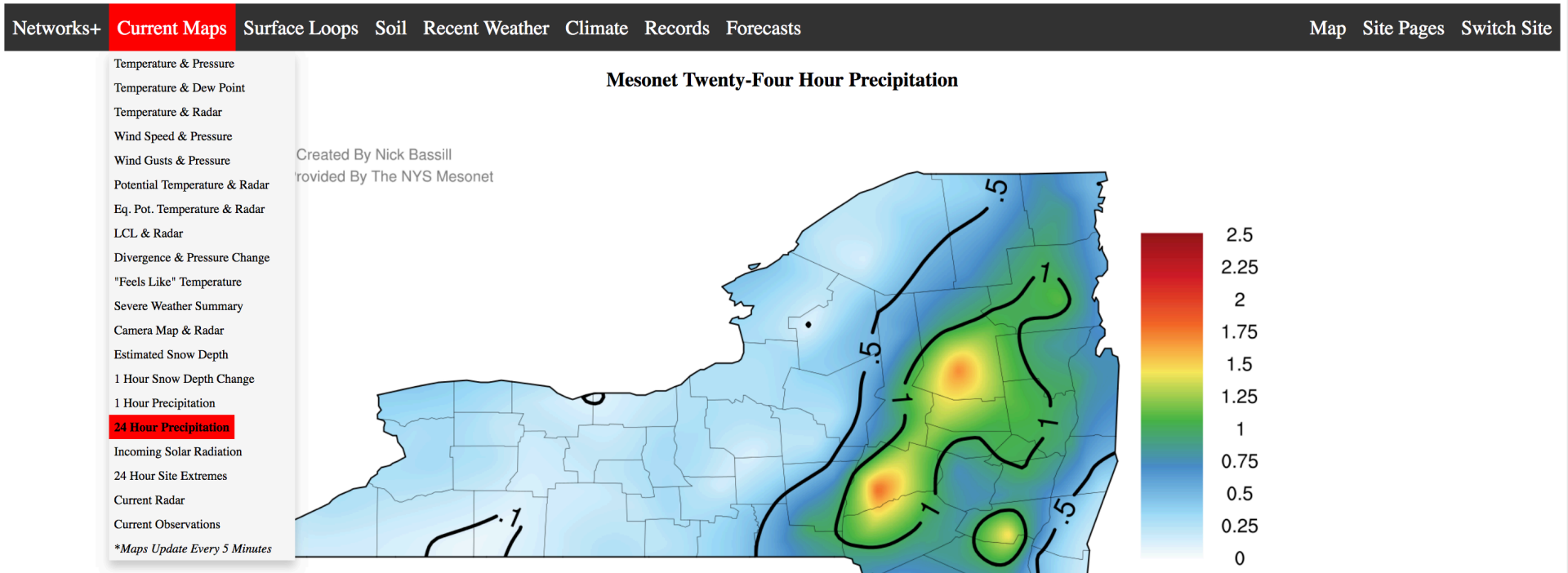
Mesonet Sustained Winds, Pressure, and Winds Vectors

Click On Any Part Of The Image To View A Loop



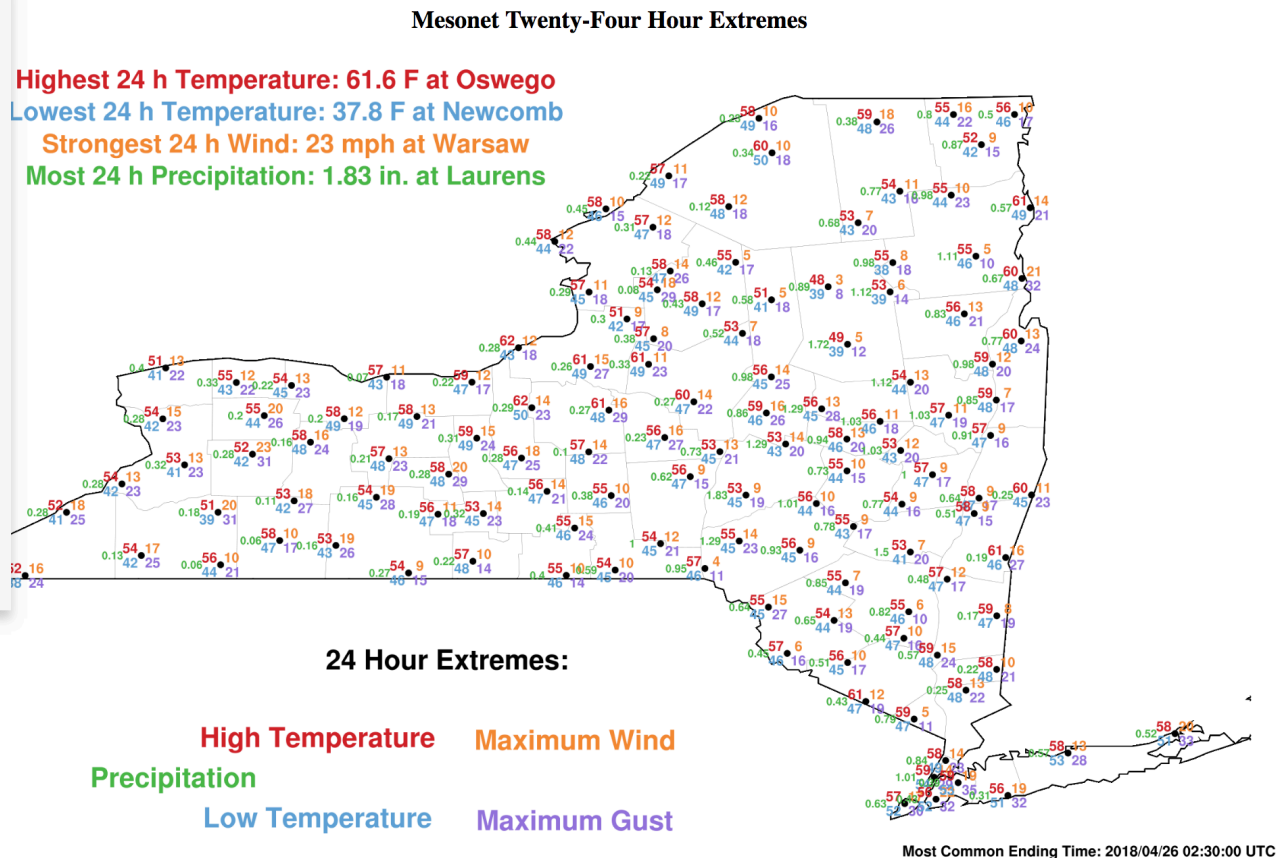
Click [Here](#) For An Archive

Most maps linked from the “Current Maps” dropdown menu can be clicked on to view a loop of that map



Maps like “24 Hour Precipitation” always list the 24-hour totals ending **right now**, when the map was created.

- Temperature & Pressure
 - Temperature & Dew Point
 - Temperature & Radar
 - Wind Speed & Pressure
 - Wind Gusts & Pressure
 - Potential Temperature & Radar
 - Eq. Pot. Temperature & Radar
 - LCL & Radar
 - Divergence & Pressure Change
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 - 1 Hour Snow Depth Change
 - 1 Hour Precipitation
 - 24 Hour Precipitation
 - Incoming Solar Radiation
 - 24 Hour Site Extremes
 - Current Radar
 - Current Observations
- *Maps Update Every 5 Minutes*

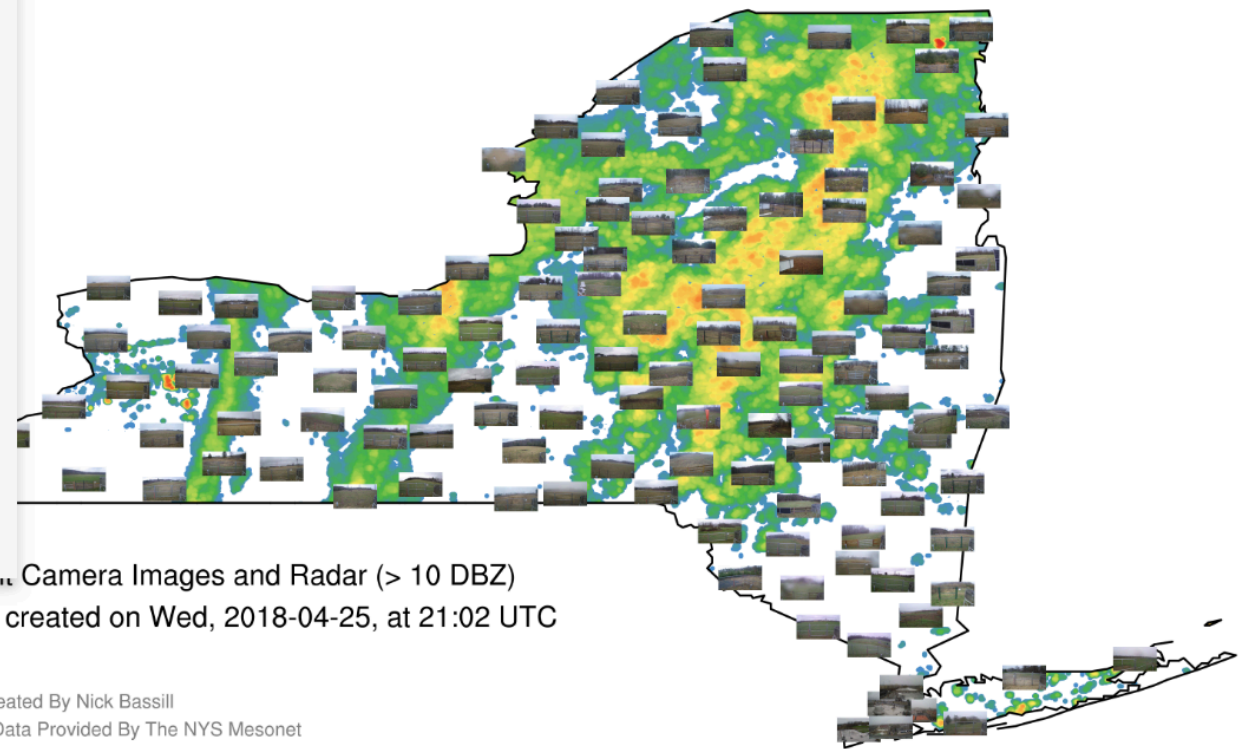


Similarly, this plot shows the 24 hour extremes of temperature, precipitation, wind speed, and wind gusts. The network extremes are also noted in the upper left.

- Temperature & Pressure
- Temperature & Dew Point
- Temperature & Radar
- Wind Speed & Pressure
- Wind Gusts & Pressure
- Potential Temperature & Radar
- Eq. Pot. Temperature & Radar
- LCL & Radar
- Divergence & Pressure Change
- "Feels Like" Temperature
- Severe Weather Summary
- Camera Map & Radar**
- Estimated Snow Depth
- 1 Hour Snow Depth Change
- 1 Hour Precipitation
- 24 Hour Precipitation
- Incoming Solar Radiation
- 24 Hour Site Extremes
- Current Radar
- Current Observations
- *Maps Update Every 5 Minutes*

Current Mesonet Camera Images and NEXRAD Radar

Click On A Camera Image To View A Loop From That Camera



Current Camera Images and Radar (> 10 DBZ)
Figure created on Wed, 2018-04-25, at 21:02 UTC

Image Created By Nick Bassill
Camera Data Provided By The NYS Mesonet

Click [Here](#) For An Archive

This plot shows the latest camera image from every site. Click on an image to view a camera loop from that site.

- Temperature & Pressure
 - Temperature & Dew Point
 - Temperature & Radar
 - Wind Speed & Pressure
 - Wind Gusts & Pressure
 - Potential Temperature & Radar
 - Eq. Pot. Temperature & Radar
 - LCL & Radar
 - Divergence & Pressure Change
 - "Feels Like" Temperature
 - Severe Weather Summary
 - Camera Map & Radar
 - Estimated Snow Depth
 - 1 Hour Snow Depth Change
 - 1 Hour Precipitation
 - 24 Hour Precipitation
 - Incoming Solar Radiation
 - 24 Hour Site Extremes
 - Current Radar
 - Current Observations
- *Maps Update Every 5 Minutes*

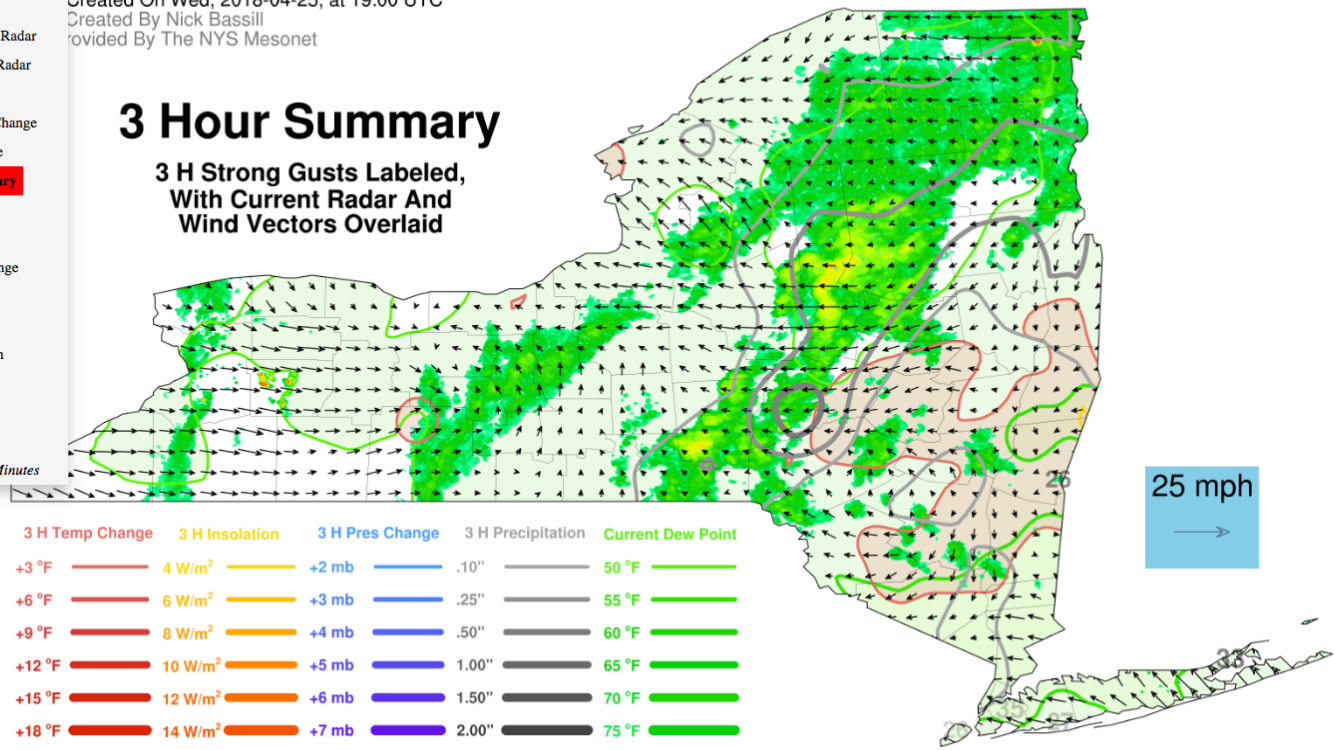
Severe Weather Summary Using Mesonet Observations and NEXRAD Radar

Click The Map To Go To Station Meteograms, Or, Click On Any Part Of The Image Outside The Map To View A Loop

Created On Wed, 2018-04-25, at 19:00 UTC
Created By Nick Bassill
provided By The NYS Mesonet

3 Hour Summary

3 H Strong Gusts Labeled,
With Current Radar And
Wind Vectors Overlaid

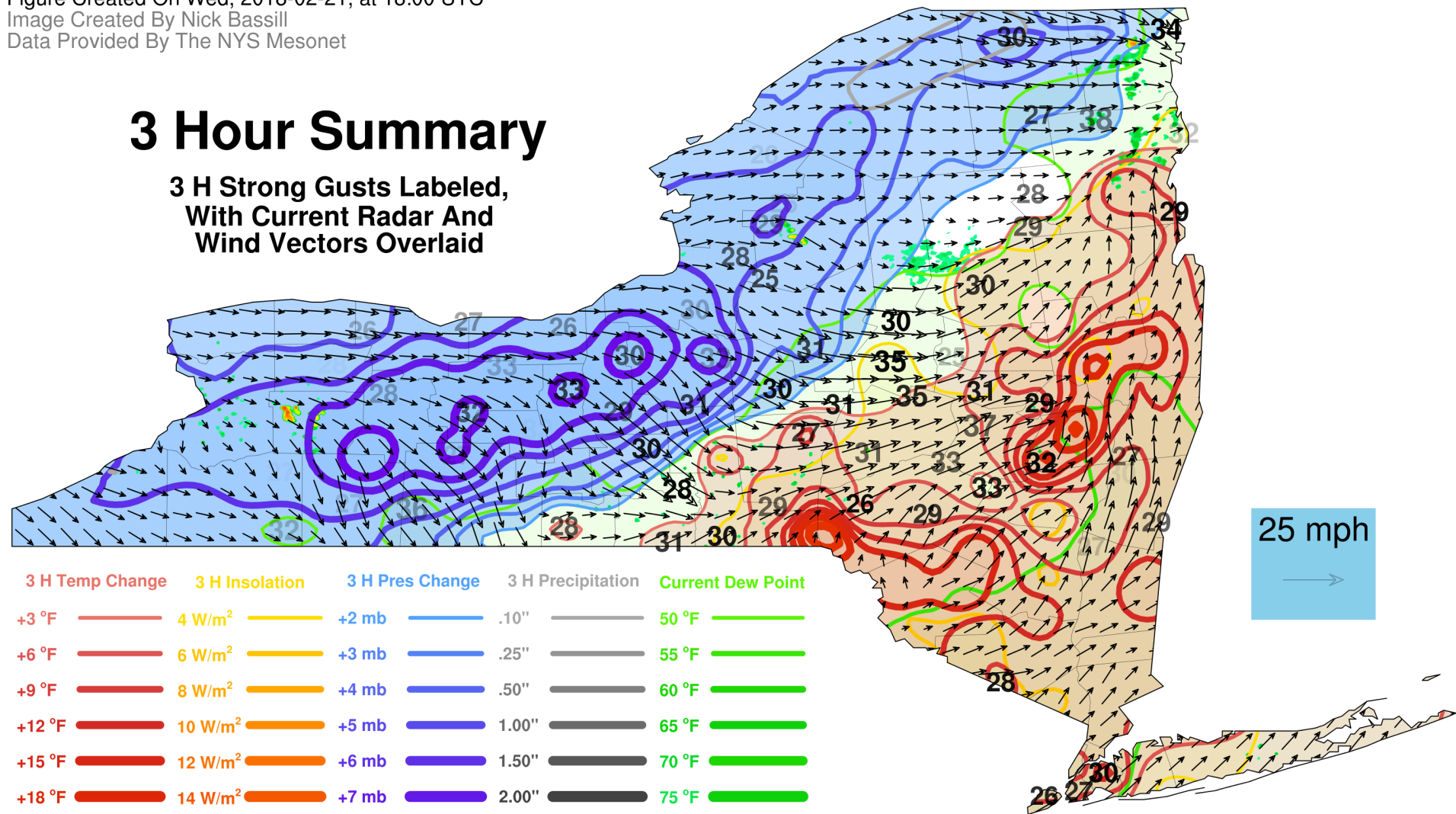


Click [Here](#) For An Archive

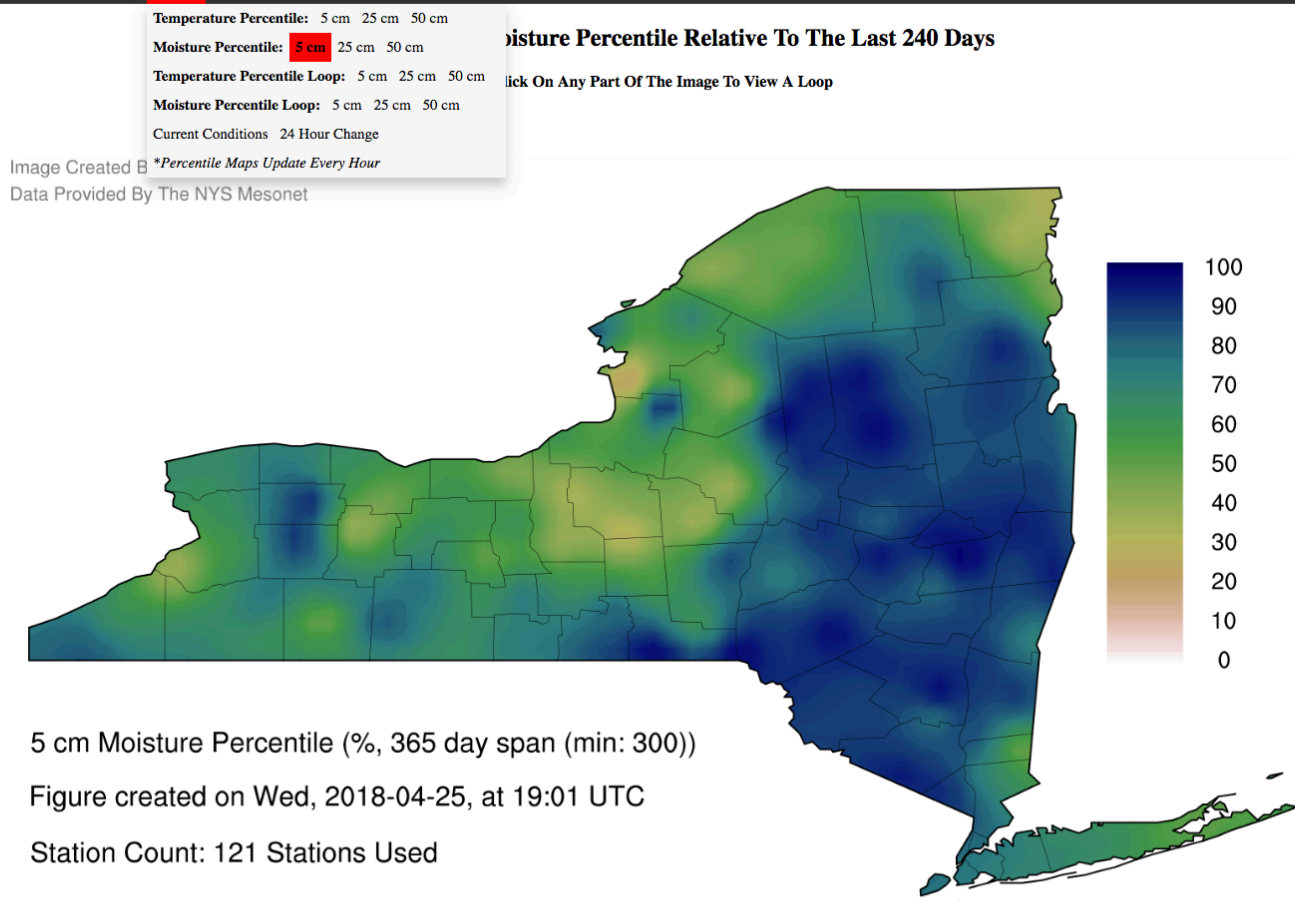
This plot combines a variety of weather information in to a single, “one-stop” plot, including radar data, recent wind gusts, wind vectors, and a variety of contoured and filled weather data

3 Hour Summary

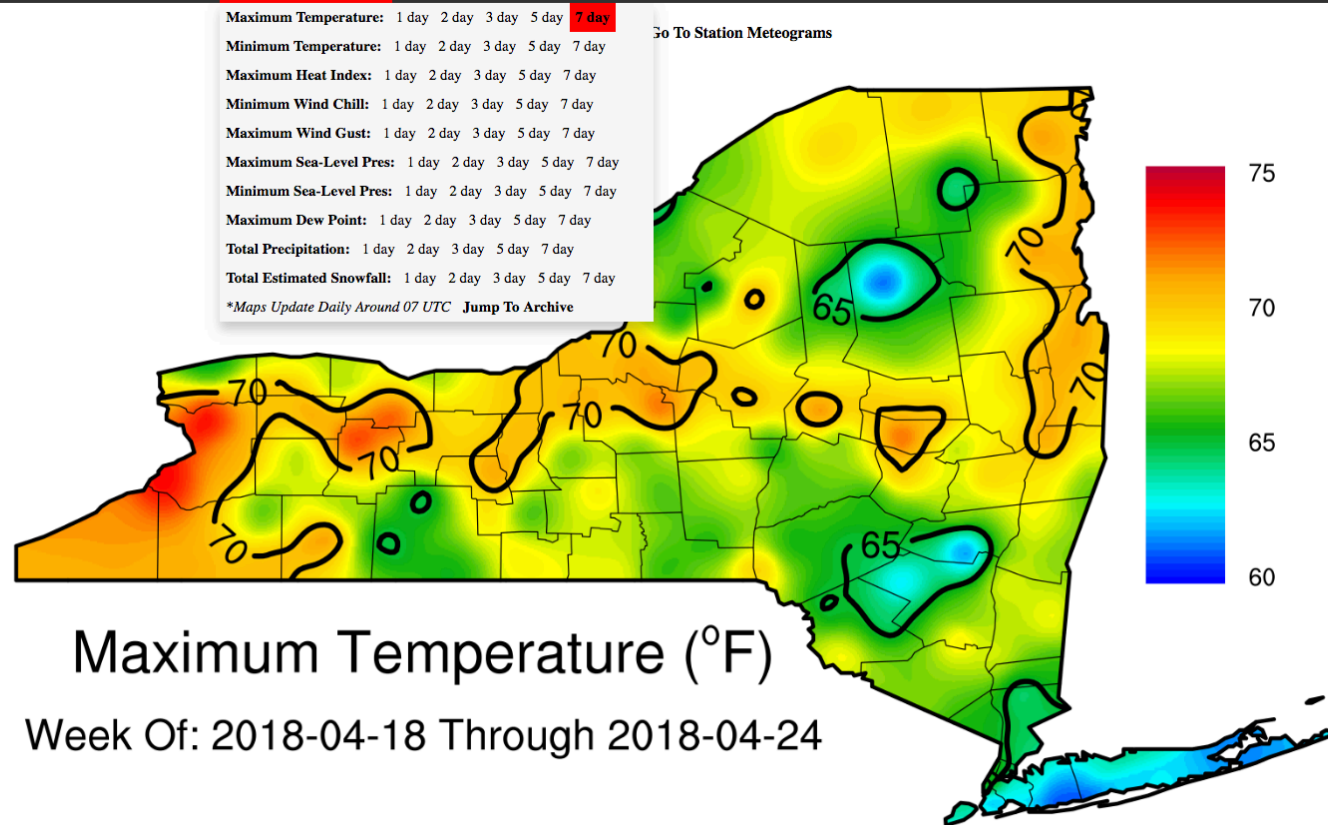
3 H Strong Gusts Labeled,
 With Current Radar And
 Wind Vectors Overlaid



Here's an example from a strong frontal passage in February. Wind gusts over 25 within the last 3 hours are shown, and their opacity indicates their recency.



Soil moisture percentile maps attempt to account for variations in soil moisture characteristics across sites. What’s shown is the percentile of current soil moisture in relation to the past year’s worth of data for that site, then interpolated.



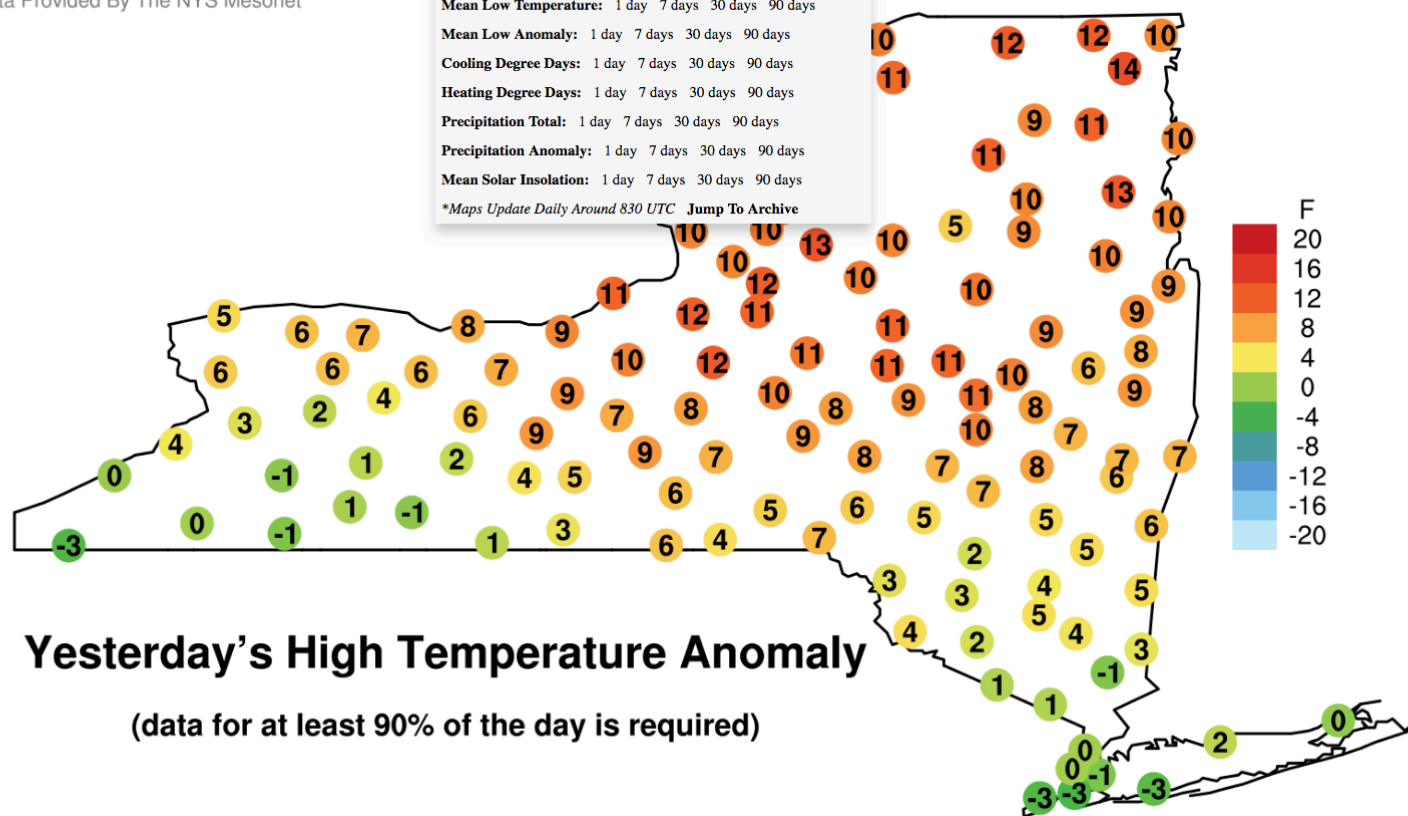
Click [Here](#) For An Archive

“Recent Weather” plots are made once daily, and attempt to depict a variety of weather extremes over the state, using an automatically scaled color-bar. The goal here is to have presentation-quality graphics ready-made.

Image Created By Nick Bassill
Data Provided By The NYS Mesonet

Mean Temperature: 1 day 7 days 30 days 90 days
Mean Temp Anomaly: 1 day 7 days 30 days 90 days
Mean High Temperature: 1 day 7 days 30 days 90 days
Mean High Anomaly: 1 day 7 days 30 days 90 days
Mean Low Temperature: 1 day 7 days 30 days 90 days
Mean Low Anomaly: 1 day 7 days 30 days 90 days
Cooling Degree Days: 1 day 7 days 30 days 90 days
Heating Degree Days: 1 day 7 days 30 days 90 days
Precipitation Total: 1 day 7 days 30 days 90 days
Precipitation Anomaly: 1 day 7 days 30 days 90 days
Mean Solar Insolation: 1 day 7 days 30 days 90 days
**Maps Update Daily Around 830 UTC [Jump To Archive](#)*

Information
and



“Climate” plots are made once-daily. While NYSM sites don’t have a 30-year climate record (yet!), climate normals are estimated from available stations from NCDC, then interpolated to NYSM locations (controlling for latitude, longitude, elevation, and distance from a major water body). Clicking on a station will take you to that site’s climate data page.

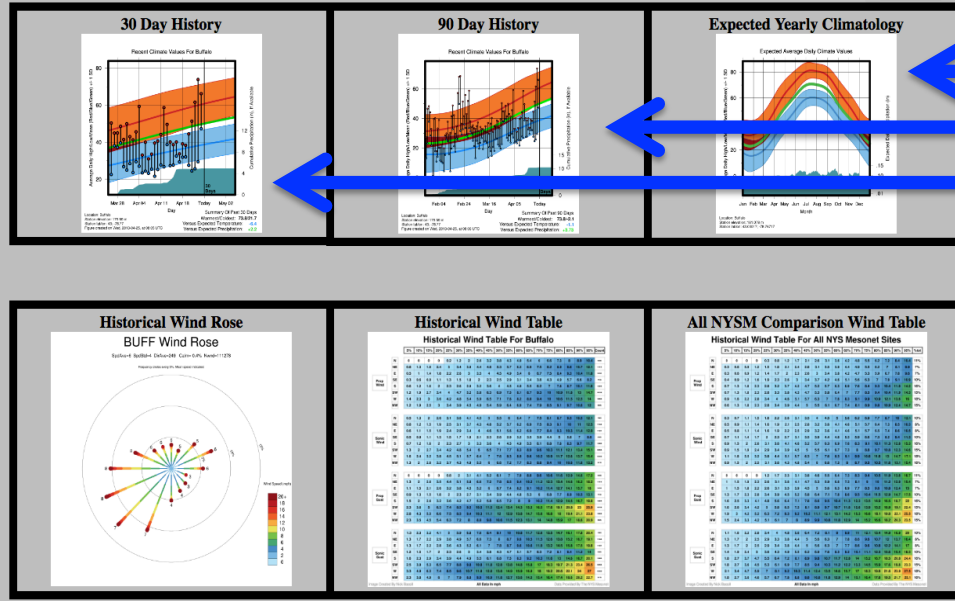
Forecasts

Length Of Climate Record: 412 Days[illegible]

Buffalo Climate Data

Site Lat, Lon: 43.0001705° N, -78.76717° W
 Site Elevation: 179.59 m
 Click [Here](#) For A Map Of The Site
 Length Of Climate Record: 412 Days

[Live Data](#)
[Records](#)
[Climate](#)
[Thruway](#)
[Forecasts](#)



Basic site information is shown at the top

Shown at right is the estimated yearly climatology for a given station. To the left are 30- and 90-day versions of this climatology, with actual highs/lows/precipitation overlain, with an estimate of how those values relate to normal over this period. Click on one of these images to view it full-sized, and to easily toggle back and forth between 30- and 90-day images.

Wind tables for each station display various percentiles' historical wind speeds for each station, for each instrument, and for sustained vs. gust. Click to view a full-sized image.

Historical wind roses for each station are updated monthly. Click to view a full-sized image.

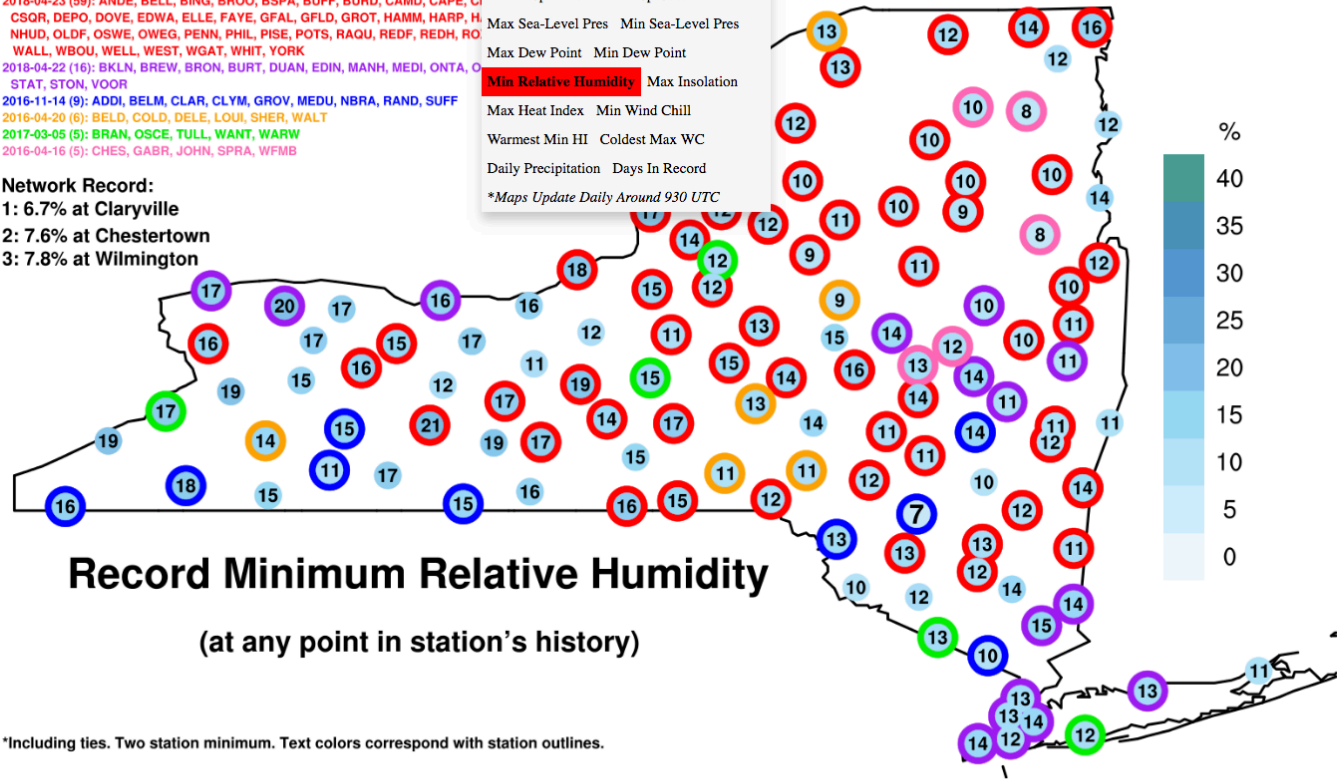
Top 5 Event Days*:

2018-04-23 (59): ANDE, BELL, BING, BROO, BSPA, BUFF, BURD, CAMD, CAPE, C
CSQR, DEPO, DOVE, EDWA, ELLE, FAYE, GFAL, GFLD, GROT, HAMM, HARP, H
NHUD, OLDF, OSWE, OWEG, PENN, PHIL, PISE, POTS, RAQU, REDF, REDH, RO
WALL, WBOU, WELL, WEST, WGAT, WHIT, YORK
2018-04-22 (16): BKLN, BREW, BRON, BURT, DUAN, EDIN, MANH, MEDI, ONTA, O
STAT, STON, VOOR
2016-11-14 (9): ADDI, BELM, CLAR, CLYM, GROV, MEDU, NBRA, RAND, SUFF
2016-04-20 (6): BELD, COLD, DELE, LOUI, SHER, WALT
2017-03-05 (5): BRAN, OSCE, TULL, WANT, WARW
2016-04-16 (5): CHES, GABR, JOHN, SPRA, WFMB

Network Record:

- 1: 6.7% at Claryville
- 2: 7.6% at Chestertown
- 3: 7.8% at Wilmington

- High TemperatureLow Temperature
- Coldest High TempWarmest Low Temp
- Max Sonic WindMax Sonic Gust
- Max Prop WindMax Prop Gust
- Max Sea-Level PresMin Sea-Level Pres
- Max Dew PointMin Dew Point
- Min Relative HumidityMax Insolation
- Max Heat IndexMin Wind Chill
- Warmest Min HIColdest Max WC
- Daily PrecipitationDays In Record
- *Maps Update Daily Around 930 UTC







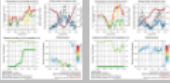

Click [Here](#) For A Detailed List Of Site Records, Listed According To Local Time

“Records” plots are made once-daily, and are meant to keep track of each station’s weather extremes for a variety of interesting variables. The top 5 event days are also denoted by the underlying circles’ color, and are listed in the upper left. These are calculated automatically, and new records are emailed to us. Clicking on a station will take you to that site’s records page.

Buffalo Site Records

Site Lat, Lon: 43.0001705° N, -78.76717° W
Site Elevation: 179.59 m
Length Of Climate Record: 412 Days

- Live Data
- Records
- Climate
- Profiler
- Thruway
- Forecasts

Record	Value	Time	Clickable Thumbnail
Maximum Temperature	90.11 °F	2017-09-25 19:10 UTC	
Minimum Temperature	-9.91 °F	2018-01-01 12:55 UTC	
Minimum High Temperature	4.10 °F	2018-01-06 20:50 UTC	
Maximum Low Temperature	70.71 °F	2017-08-19 04:50 UTC	
Maximum Daily Precipitation	2.07 in	2017-10-09	
Maximum Sonic Wind	32.01 mph from 269.28°	2018-04-04 19:30 UTC	

Each station’s records page lists basic site information at the top, followed by every record we follow. Also listed are that record’s value, when it occurred, and a link to the site’s meteogram for the day it occurred.



Panoramic view from the site (note: actual location may slightly differ)

- Live Data
- Records
- Climate
- Profiler
- Thruway
- Forecasts

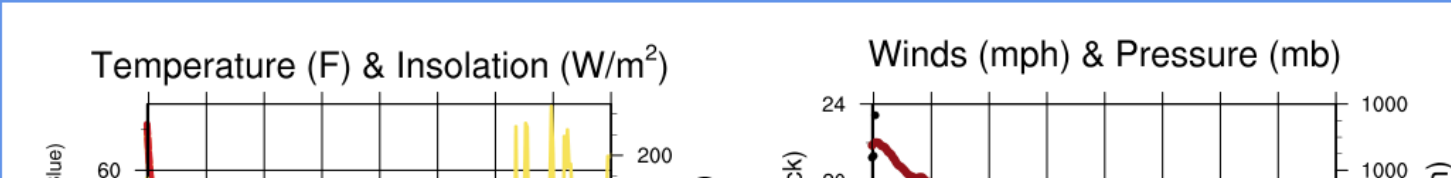
Site name: Buffalo

Click [here](#) for a map of the site location

Here's the current view from the site:



Live Daily Data For Buffalo Over The Last 24 Hours (updated every five minutes!):



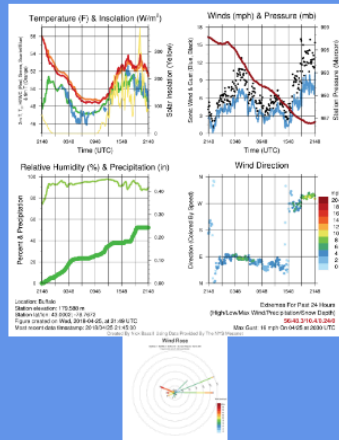
Site name: Buffalo

Click [here](#) for a map of the site location

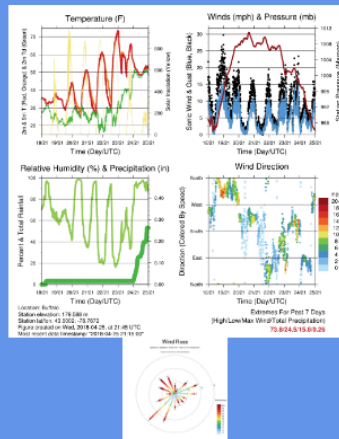
Here's the current view from the site:



Live Daily Data For Buffalo Over The Last 24 Hours (updated every five minutes!):



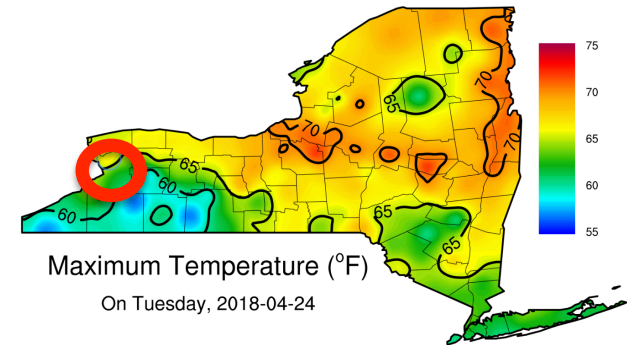
Live Data For Buffalo Over The Last 7 days (updated every hour!):



The “Live Data” pages for each site show the current camera view (click for a loop), and the latest 24 hour meteogram, updated every five minutes. Also shown are 24 hour wind roses, as well as a 7 day meteogram and wind rose, each updated once per hour. Clicking any of these figures will take you to a hard-coded URL with the link to that day’s meteogram or wind rose.

You can also view a site by clicking on the home-page map, or from any “Recent Weather” map, or from a location on the “Severe Weather Summary” map

Networks+ Current Maps Surface Loops Soil Recent Weather Climate Records Forecasts Map Site Pages Switch Site

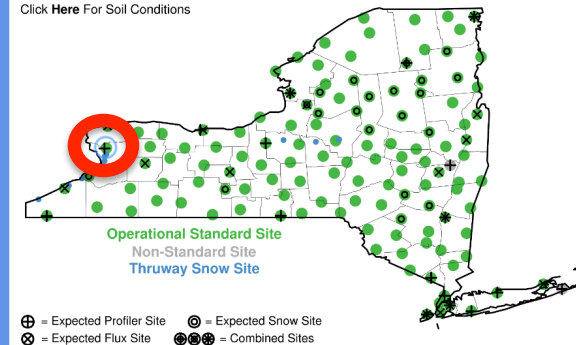


Networks+ Current Maps Surface Loops Soil Recent Weather Climate Records Forecasts Map Site Pages Switch Site

Live Data! (Click On A Circle For The Latest Information)

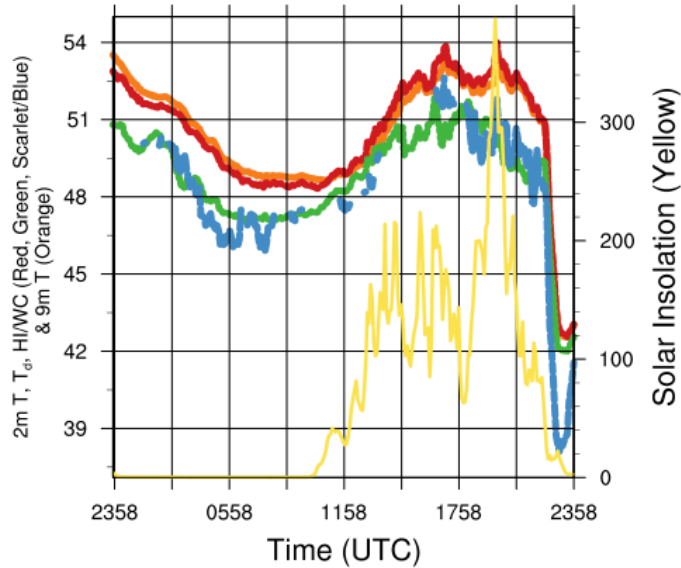
Statewide Data:

Click [Here](#) For 24 Hour Extremes
Click [Here](#) For Current Conditions
Click [Here](#) For Soil Conditions

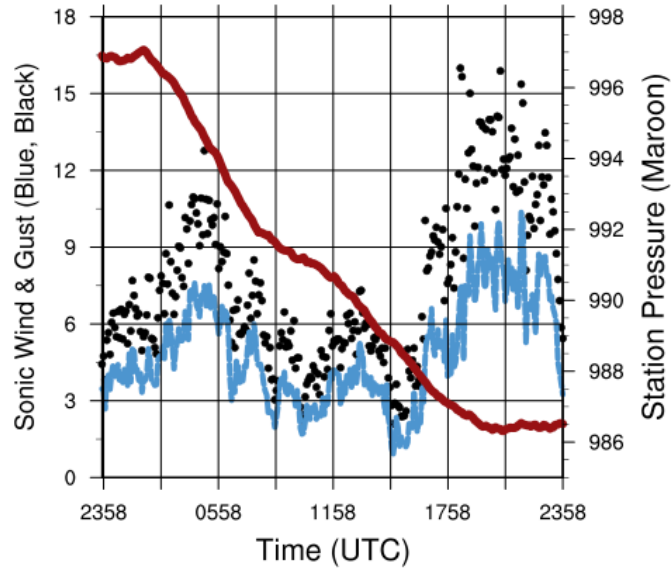


For a detailed topographical map with station IDs, click [here](#) (ft) or [here](#) (m)

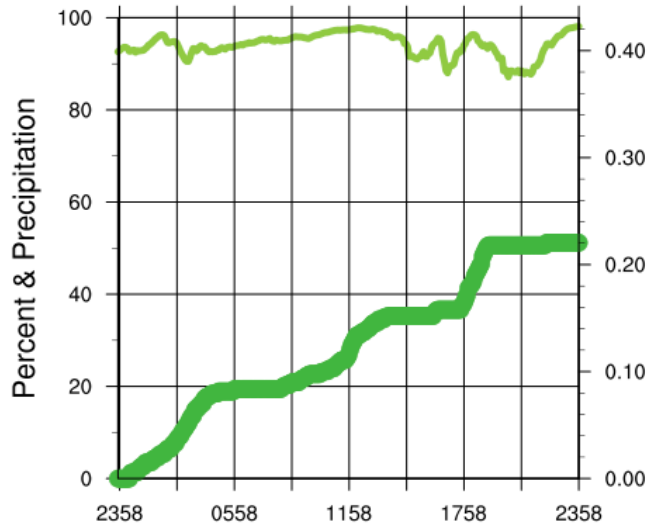
Temperature (F) & Insolation (W/m²)



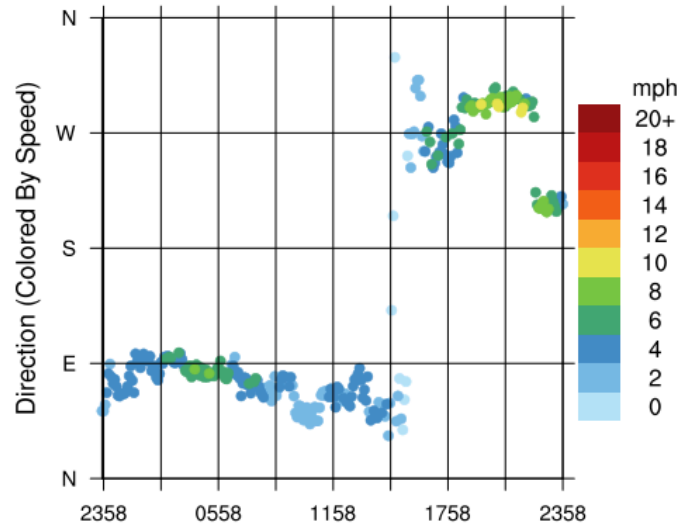
Winds (mph) & Pressure (mb)



Relative Humidity (%) & Precipitation (in)



Wind Direction



Each daily
meteogram also has
the high, low, max
sustained wind, total
precipitation, and
maximum snowfall
depth listed for the
period shown. The
maximum wind gust
and time is also
listed.

Location: Buffalo
Station elevation: 179.588 m
Station lat/lon: 43.0002; -78.7672
Figure created on Wed, 2018-04-25, at 23:59 UTC
Most recent data timestamp: 2018/04/25 23:55:00

Extremes For Past 24 Hours
(High/Low/Max Wind/Precipitation/Snow Depth)

54/42.6/10.4/0.22/0

Max Gust: 16 mph On 04/25 at 2030 UTC



Panoramic view from the site (note: actual location may slightly differ)

Site name: Buffalo

Click [here](#) for a map of the site location

Here's the current view from the site:



- ADDI ANDE BATA BEAC BELD BELL BELM BERK BING BKLN BRAN
BREW BROC BRON BROO BSPA **BUFF** BURD BURT CAMD CAPE
CHAZ CHES CINC CLAR CLIF CLYM COBL COHO COLD COPA COPE
CROG CSQR DELE DEPO DOVE DUAN Eaur EDIN EDWA ELDR
ELLE ELMI ESSX FAYE FRED GABR GFAL GFLD GROT GROV HAMM
HARP HARR HART HERK HFAL ILAK JOHN JORD KIND LAUR LOUI
MALO MANH MEDI MEDU MORR NBRA NEWC NHUD OLDF OLEA
ONTA OPPE OSCE OSWE OTIS OWEG PENN PHIL PISE POTS QUEE
RAND RAQU REDF REDH ROXB RUSH SARA SBRI SCHA SCHO
SCHU SCIP SHER SOME SOUT SPRA SPRI STAT STEP STON SUFF
TANN TICO TULL TUPP TYRO VOOR WALL WALT WANT WARS
WARW WATE WBOU WELL WEST WFMB WGAT WHIT WOLC YORK

Hovering over the “Switch Site” text will display a list of site identifiers. Clicking on any identifier will switch the page you are on to correspond to that site’s page. This works for any type of page: Live Data, Climate, Records, etc.



Hovering over the “Map” text will show a map of NY topography along with locations of NYSM sites and their 4 letter identifier.

Networks+

Current MapsSurface LoopsSoilRecent WeatherClimateRecordsForecasts

MapSite PagesSwitch Site

Standard Network

Profiler Network

Thruway Network

Forecasts

DHSES

Archive

NYSM Cases

Enter a year, month, and day and submit to view that day's archive

(The first valid date is 2015/08/13)

Year:

2018

Month:

04

Day:

25

Directory:

Top Level (once per day)

Submit

Directory:

✓ Top Level (once per day)

Spatial Analyses (30 m interval)

Radar & Station (5 m interval)

Statewide Snapsnots (5 m interval)

Meteograms (one per day per site)

Climate (one per day per variable)

Daily Extremes (one per day per variable)

Profiler (three plots per day per site)

More Recent Dates Are More Likely To Have A L

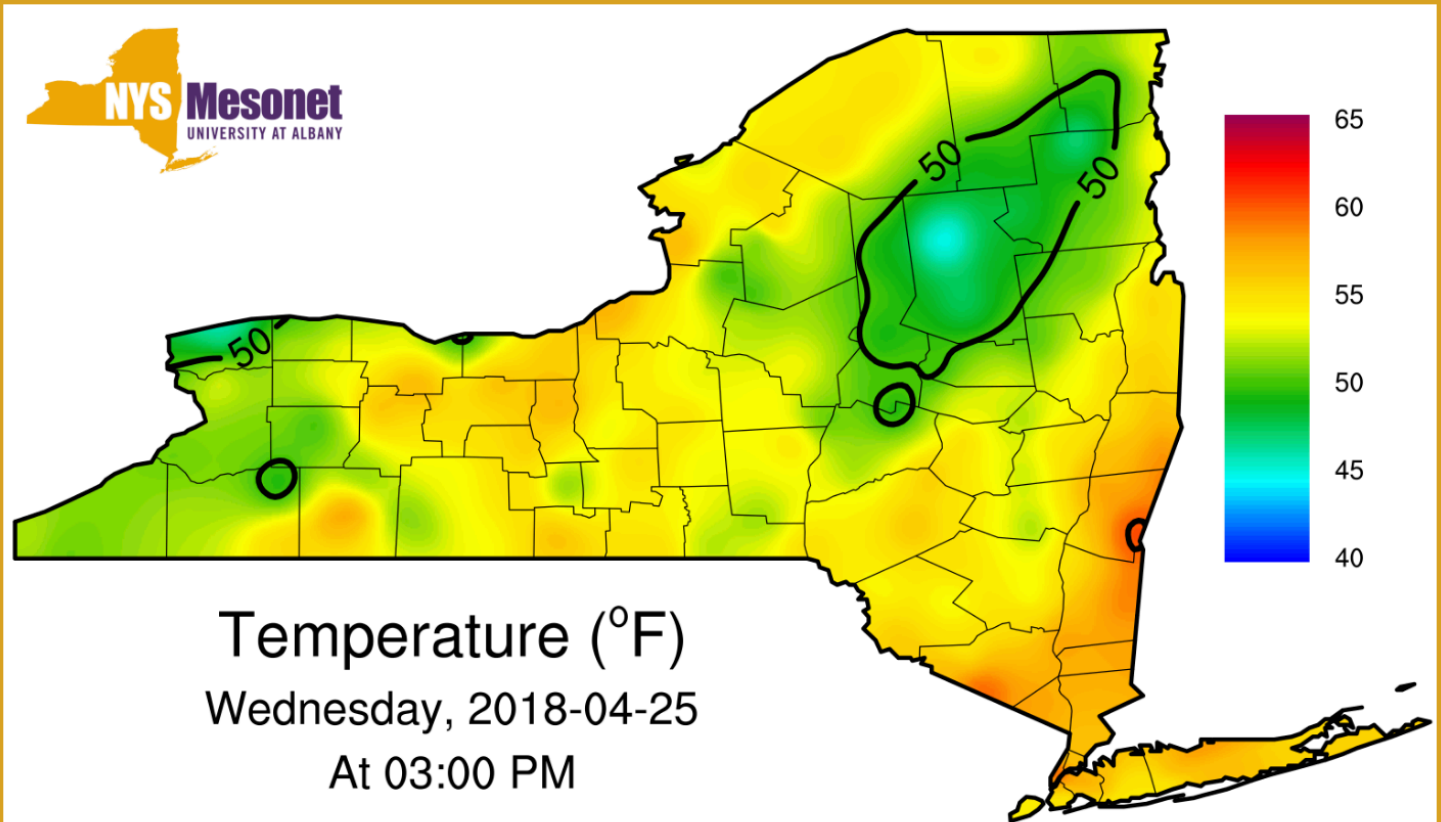
There is an archive of nearly all of these products, accessible on many pages, or from the primary Networks+ dropdown menu. You can then enter a date, and pick a directory to view, and go from there. Hopefully things are self-explanatory. “Daily Extremes” corresponds to the plots in the “Recent Weather” menu, and “Spatial Analyses” correspond to those in the “Current Maps” menu, among others.

Note: the directory corresponds to when the plots were **made** – so climate maps for today will be in tomorrow’s directory.

- Standard Network
- Profiler Network
- Thruway Network
- Forecasts
- DIHSES**
- Archive
- NYSM Cases

Latest Mesonet Temperatures

Left/Right to advance | Space = play/pause | Swipe for touchscreen | Click image for link
Hours Ago: -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0



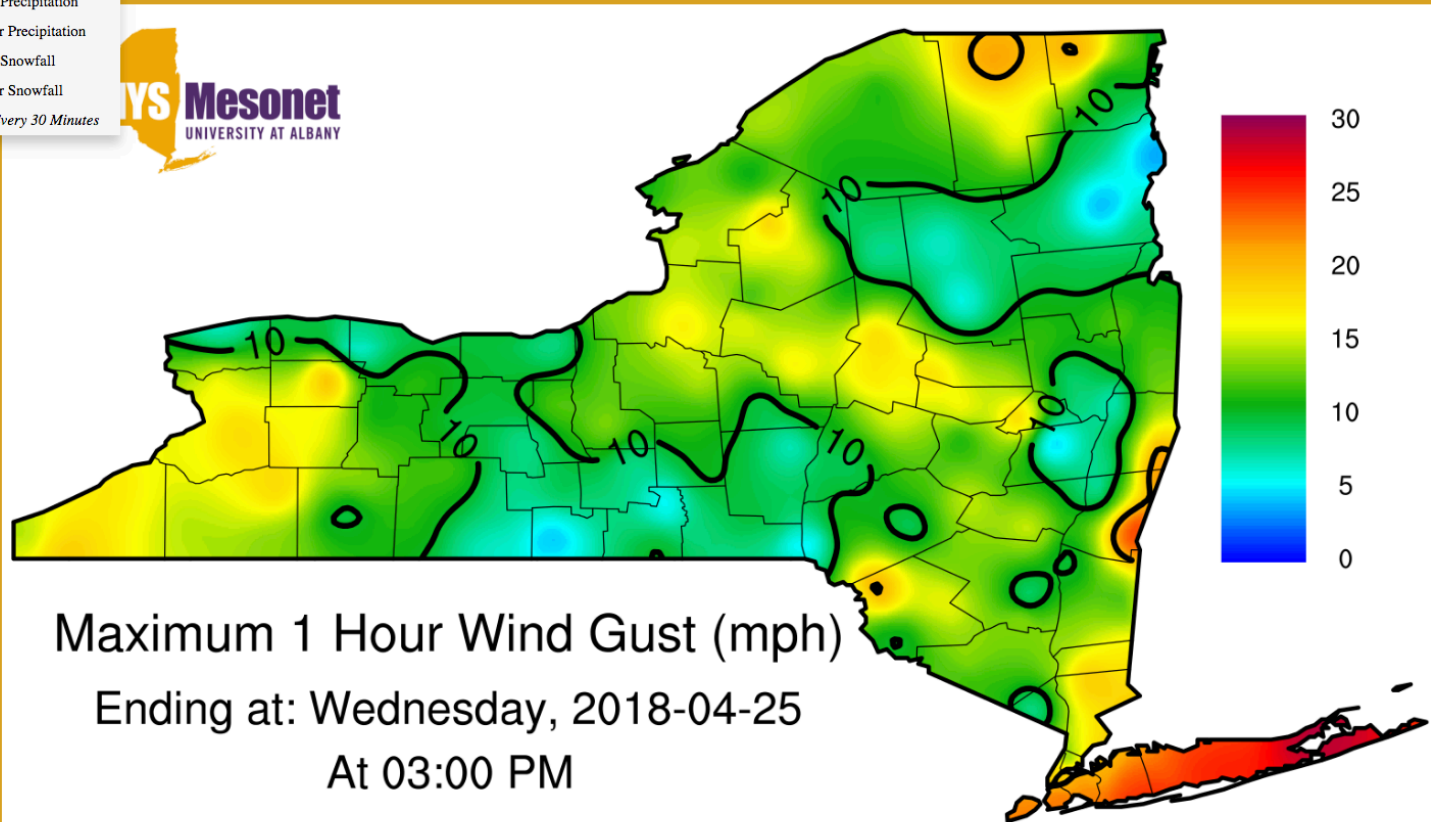
The other links in the “Networks+” menu take you to completely different types of pages, with different dropdown menus. The “DHSES” link takes you to a website made for DHSES/OEM at their request. It contains NYSM data, but is different in that all plots are created to be presentation quality. The concept is that they have a ready-made product for rapid response, if needed. Most pages have a scroll-bar that lets you look at past hours’ maps. Clicking any map will take you to a hard-coded URL for that map.

- Latest Mesonet Temperatures
- Latest Mesonet "Feels Like"
- Latest Mesonet Sustained Winds
- Latest Mesonet 1 Hour Gusts
- Mesonet 1 Hour Precipitation
- Mesonet 24 Hour Precipitation
- Mesonet 1 Hour Snowfall
- Mesonet 24 Hour Snowfall
- *Maps Update Every 30 Minutes



Latest Mesonet Sustained Winds

Left/Right to advance | Space = play/pause | Swipe for touchscreen | Click image for link
Hours Ago: -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0



The same data is plotted in both the “Filled Maps” and “Station Maps” menus. Filled maps have interpolated data.

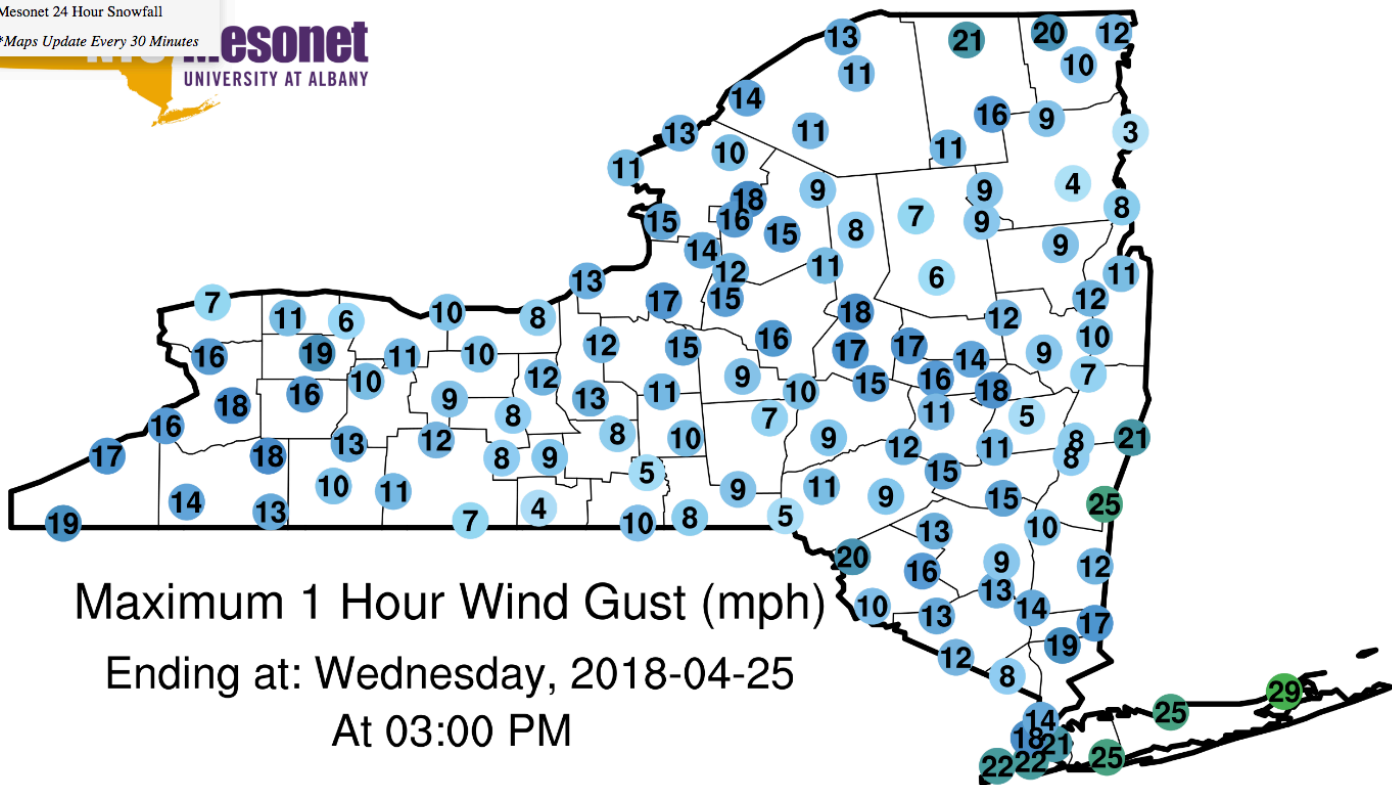
- Latest Mesonet Temperatures
- Latest Mesonet "Feels Like"
- Latest Mesonet Sustained Winds
- Latest Mesonet 1 Hour Gusts
- Mesonet 1 Hour Precipitation
- Mesonet 24 Hour Precipitation
- Mesonet 1 Hour Snowfall
- Mesonet 24 Hour Snowfall

*Maps Update Every 30 Minutes

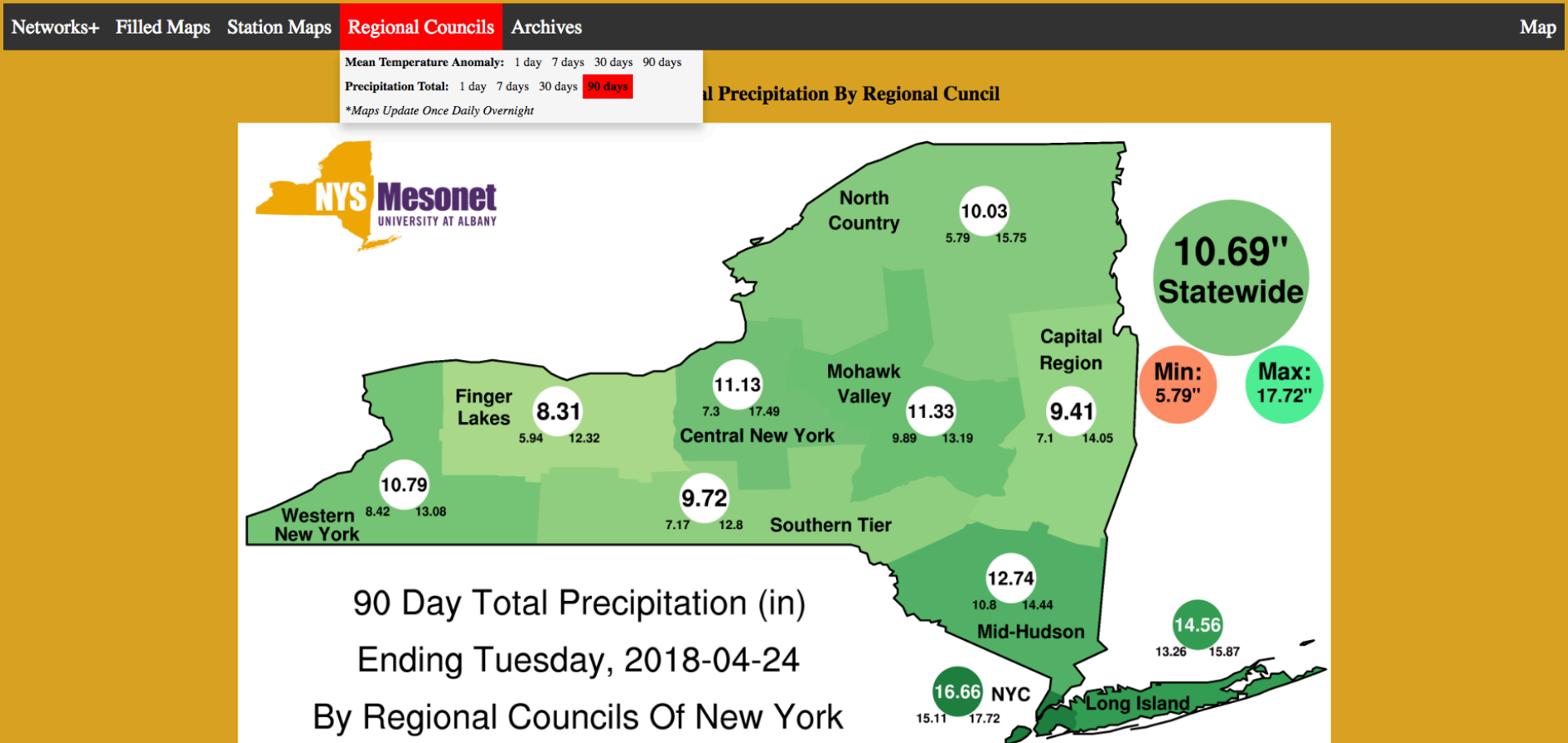


Latest Mesonet Sustained Winds

Left/Right to advance | Space = play/pause | Swipe for touchscreen | Click image for link
Hours Ago: -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0



The same data is plotted in both the “Filled Maps” and “Station Maps” menus. Station maps list raw data. Both types of maps are refreshed every 30 minutes.



The “Regional Council” plots are updated once daily, and aggregate NYSM data according to which regional council they are in. Shown are the average value (big circle), as well as the min/max of all NYSM stations in that council. The geographic region is shaded according to the mean of the data in that region.

Enter a year, month, and day and submit to view that day's archive

(The first valid date is 2018/01/31)

Year:

2018

Month:

04

Day:

25

Directory:

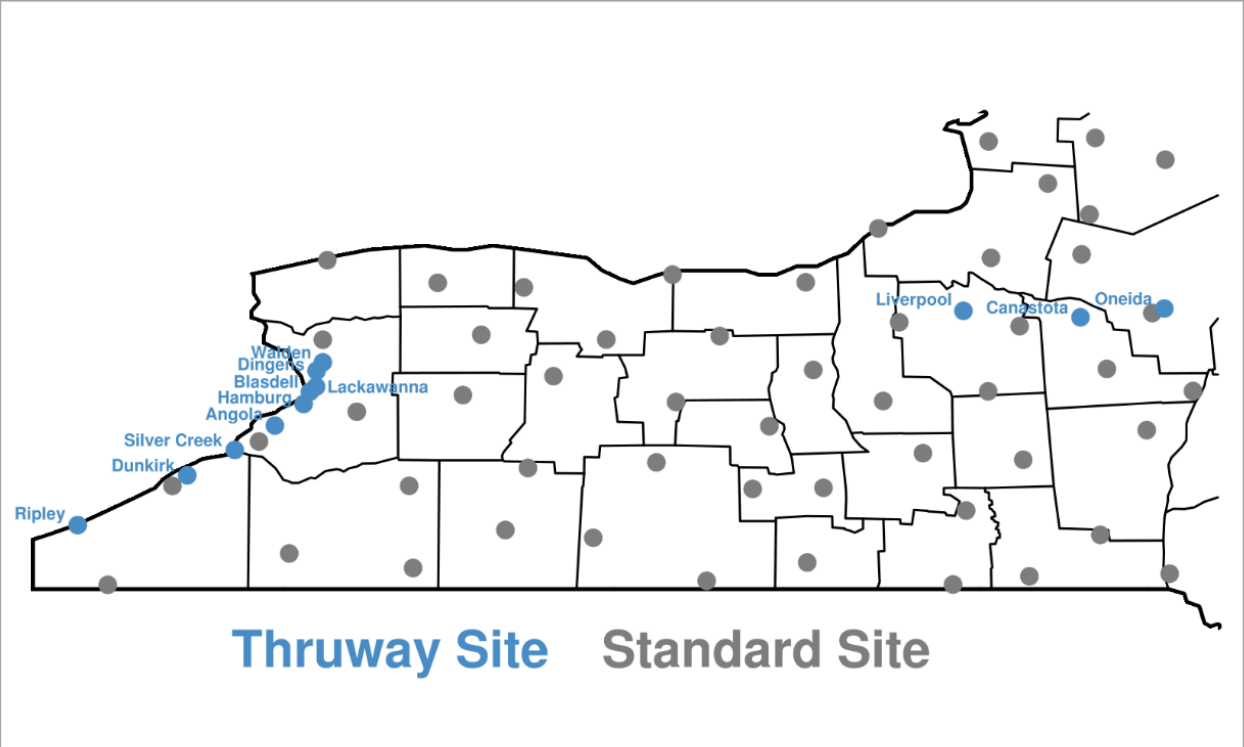
Filled Map (30 m interval)

Submit

The DHSES page has its own archive, that works just like the other archive. You can visit the other archive by clicking “Other”.

Live Thruway Data! (Click On A Blue Site Name For The Latest Information)

Note - Data Is Very Preliminary!

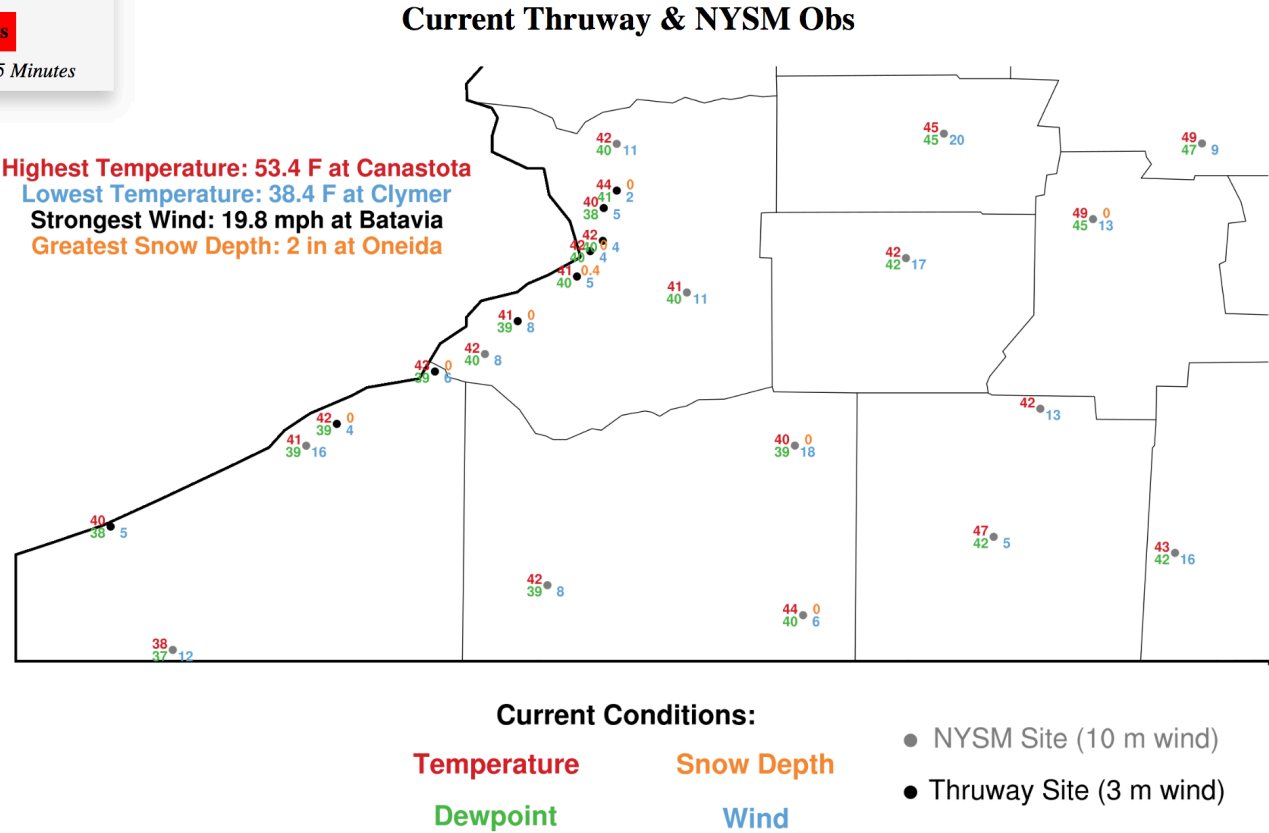


The “Thruway Network” also has its own page. Click any site name to be taken to a live data page with the camera view, meteograms, and other information similar to the standard site live data pages. “Switch Site” allows you to go back and forth between different Thruway sites.

Current Snow Depth

Current Observations

*Maps Update Every 5 Minutes



The Thruway observations are listed along with NYSM observations for a zoomed-in region near Buffalo, updated every 5 minutes. Note that snow-depth is an estimated quantity, and prone to potential error.

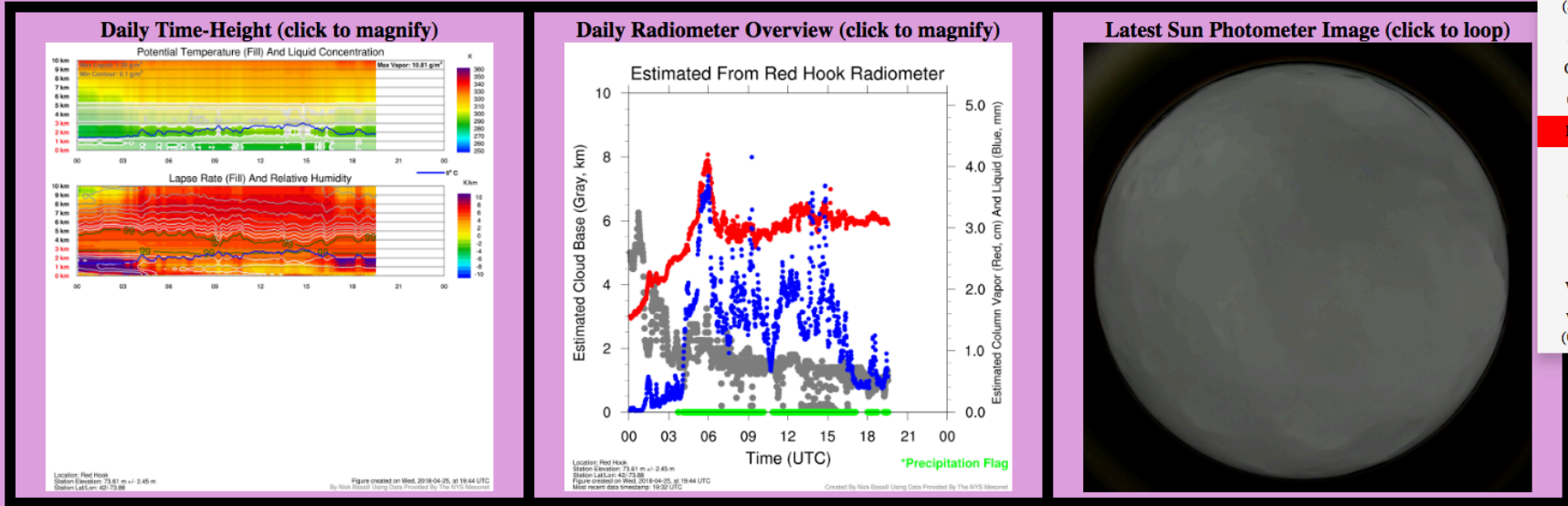
Current Profiler Data For Red Hook

(warning - data very preliminary, and prone to error!)

Hover For Skew-T:

Current -1 Hour -2 Hours -3 Hours -6 Hours -12 Hours -24 Hours

ALBA
BELL
BRON
BUFF
CHAZ
CLYM
EHAM
(SOUT)
JORD
OWEG
QUEE
REDH
STAT
STON
SUFF
TUPP
WANT
WEBS
(ONTA)



Here's sample data from Red Hook's profiler site. The left two plots contain radiometer data. The left plot has estimated quantities like lapse rate, theta, and others while the middle panel has derived quantities. The right image is the current sun photometer full-sky image, which you can click to loop. The white space in the left panel was formerly occupied by LIDAR data, and will be again once some internal data restructuring is complete.

Current Profiler Data For Red Hook

(warning - data very preliminary, and prone to error!)

Hover For Skew-T:

Current

-1 Hour

-2 Hours

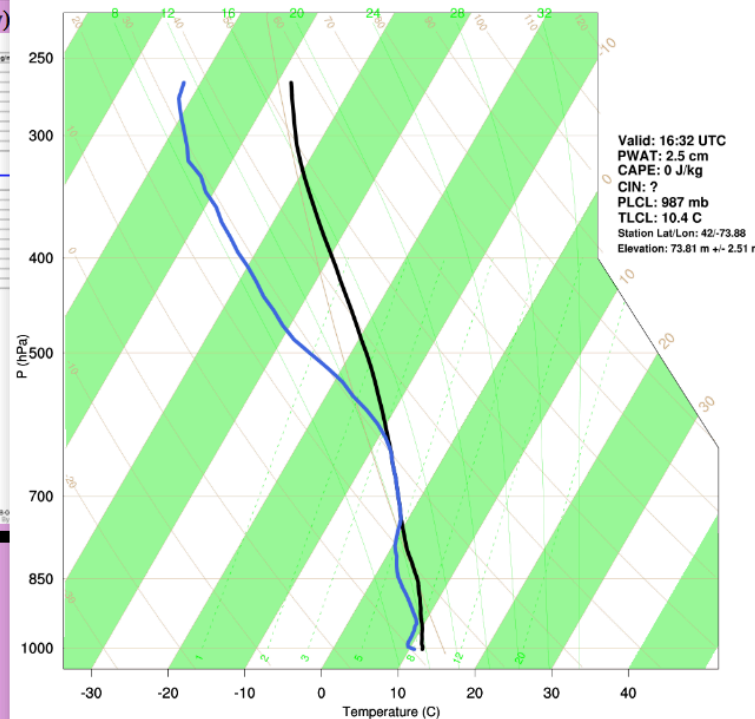
-3 Hours

-6 Hours

-12 Hours

-24 Hours

Radiometer & LIDAR Data For Red Hook



Best Sun Photometer Image (click to loop)



Skew-Ts are estimated from profiler data and displayed in the gray hover-bar, along with several derived quantities like CAPE, LCL, PW, etc.