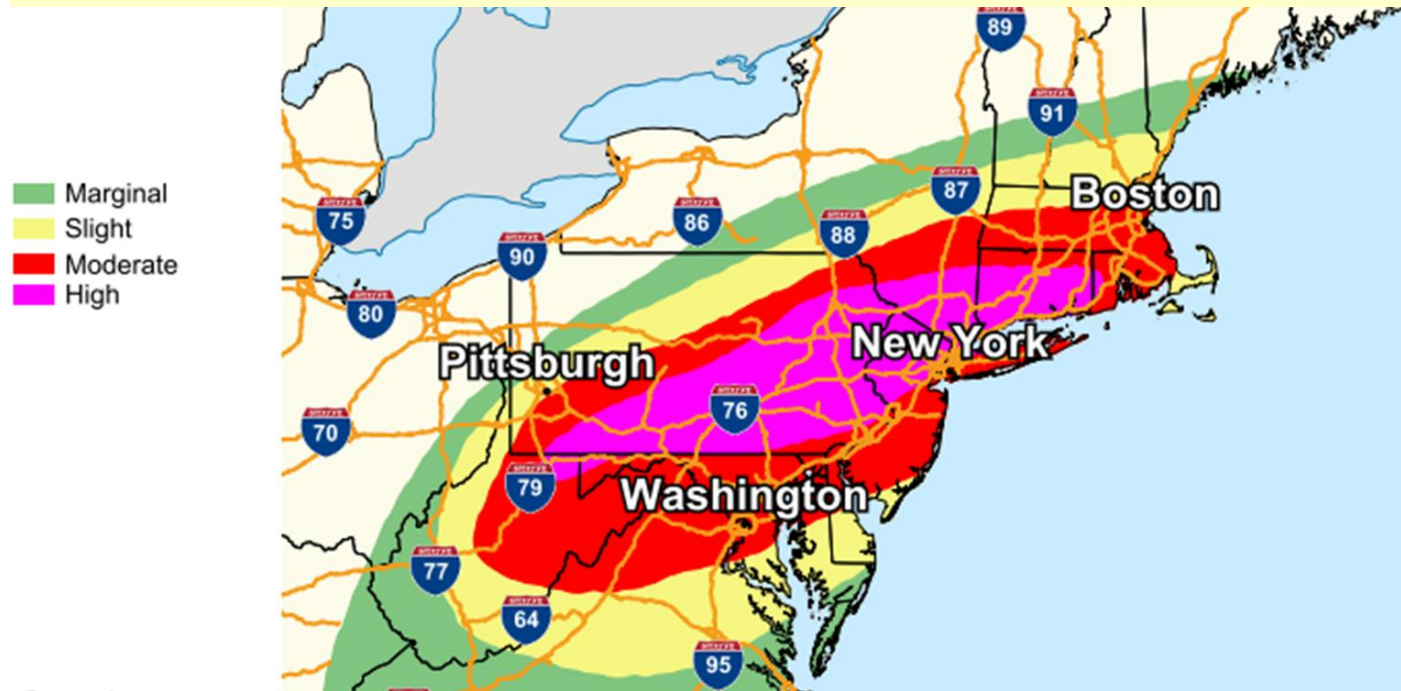


Post-Hurricane Ida's Effects on New York City— Natural Rainfall, Excessive Runoff, Poor Drainage NOT Human-Caused Global Warming



Bob Endlich

bendlich@msn.com

Cruces Atmospheric Sciences Forum

19 Sep 2021

Outline

Rainfall, Flooding, in the New York City area, evening of 1 Sep 2021, Cliff Mass Weather Blog

NWS Graphical forecast on Twitter

US Rainfall Records from NOAA

NOAA's Measured rainfall events for NYC area, 1 Sep 2021

Historical list of heavy tropical system rainfall events for NYC, southeastern NY.

Photos of NYC-area flooding

Selected News Stories, some from NYC, some quite old 'news'...

Urban Heat Islands—A likely contributor.

Review of surface and upper air reporting protocols. Meteorological Analysis.

It was UHI, geography, timing, and weather, not Human-caused CO₂-fueled Global Warming

The Narrative Continues...

The New York Times' and NOAA's roles in the false narrative

Two Recent stories of Deception, Outright Lying, about CO2 effects, from the New York Times

“New Data show “Extraordinary” rise in US Coastal Flooding”

“Climate Change is Bankrupting America's Small Towns”

And, from NOAA, 'Hottest Ever' Summer?

From the US Climate Reference Network? Hardly. Not even close.

Satellite Measurements? Greenhouse Temperatures are not near record levels.

Cliff Mass Weather Blog

This blog discusses current weather, weather prediction, climate issues, and current events

September 02, 2021

More people died in the New York area from the "remnants" of Hurricane Ida than over Louisiana and Mississippi as one of the most powerful hurricanes of the century made landfall on a low-lying coastal zone.

My editing tries to clarify dates and times.
The catastrophic flooding was in the evening of 1 Sep 2021,
the early morning of 2 Sep 2021, Zulu Time.

Heavy rain, flooding, and even tornadoes struck in a relatively narrow band stretching southwest-northeast from Pennsylvania and New Jersey, through New York, Connecticut and Massachusetts, as shown by a precipitation analysis by the NOAA/NWS Weather Prediction Center for the storm's 48-hours.

A fairly large area of more than 6 inches of rainfall, with some locations hitting 8-10 inches.

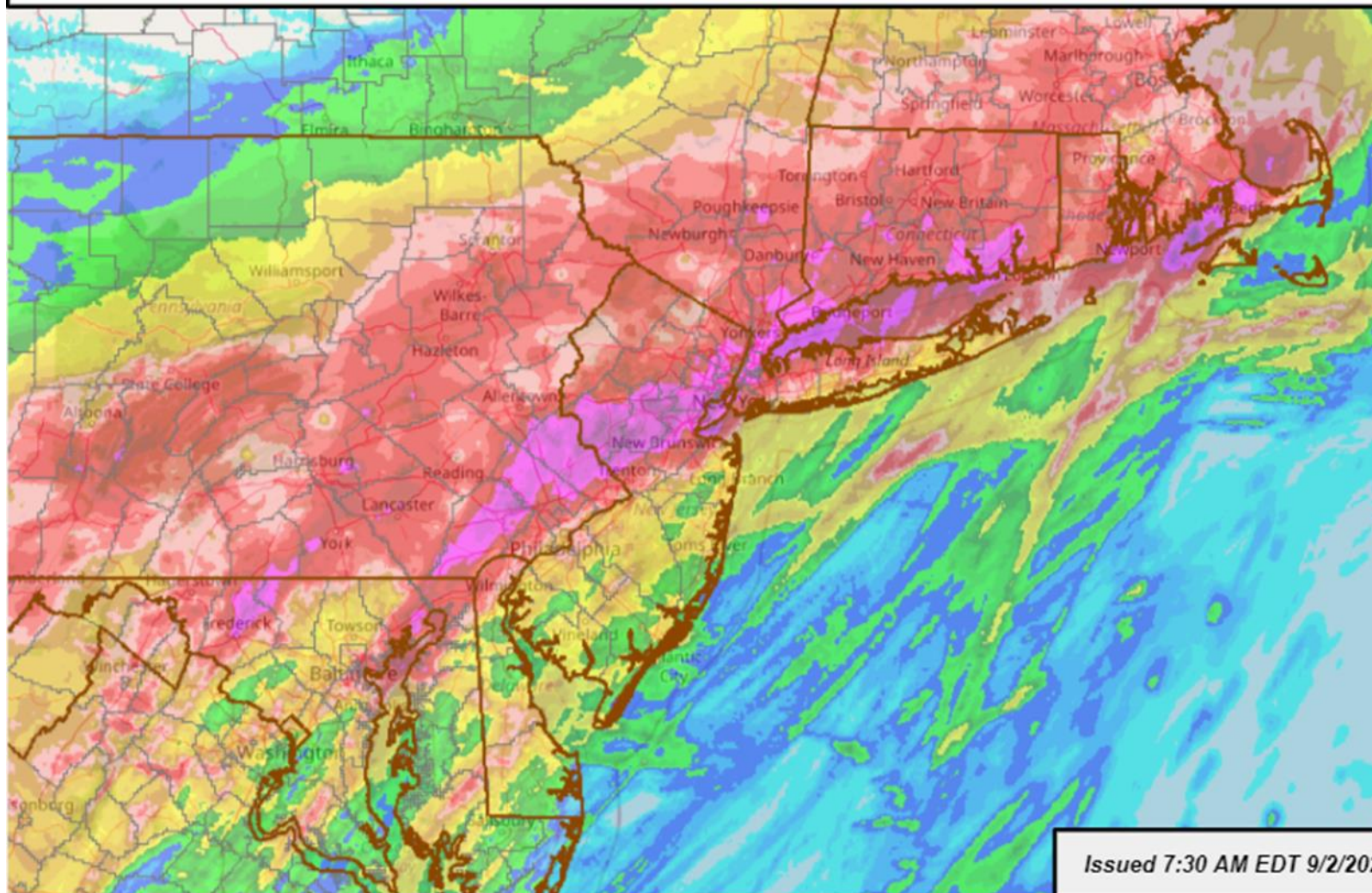


WEATHER PREDICTION CENTER

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



Estimated 48-hr Rainfall; Ending 6 AM EDT, Wednesday, September 2



Preliminary Rainfall Summary

- Widespread 3-8", isolated 9-10"
- Extreme rain rates of 2-3" per hour along Philadelphia to NYC corridor

Intense 1-hour Rain Totals

- 3.24" Newark, NJ (8-9 PM EDT)
- 3.15" Central Park, NY (9-10 PM EDT)
- 2.83" Somerset, NJ (7-8 PM EDT)
- 2.18" Trenton, NJ (7-8 PM EDT)

Preliminary Storm Total Observations

- 8.44" Newark, NJ
- 7.19" Central Park, NY
- 6.52" Harrisburg, PA
- 4.67" Trenton, NJ
- 4.73" Hartford, CT
- 4.13" Baltimore-Washington (BWI)
- 3.95" Pittsburgh, PA

Issued 7:30 AM EDT 9/2/2021

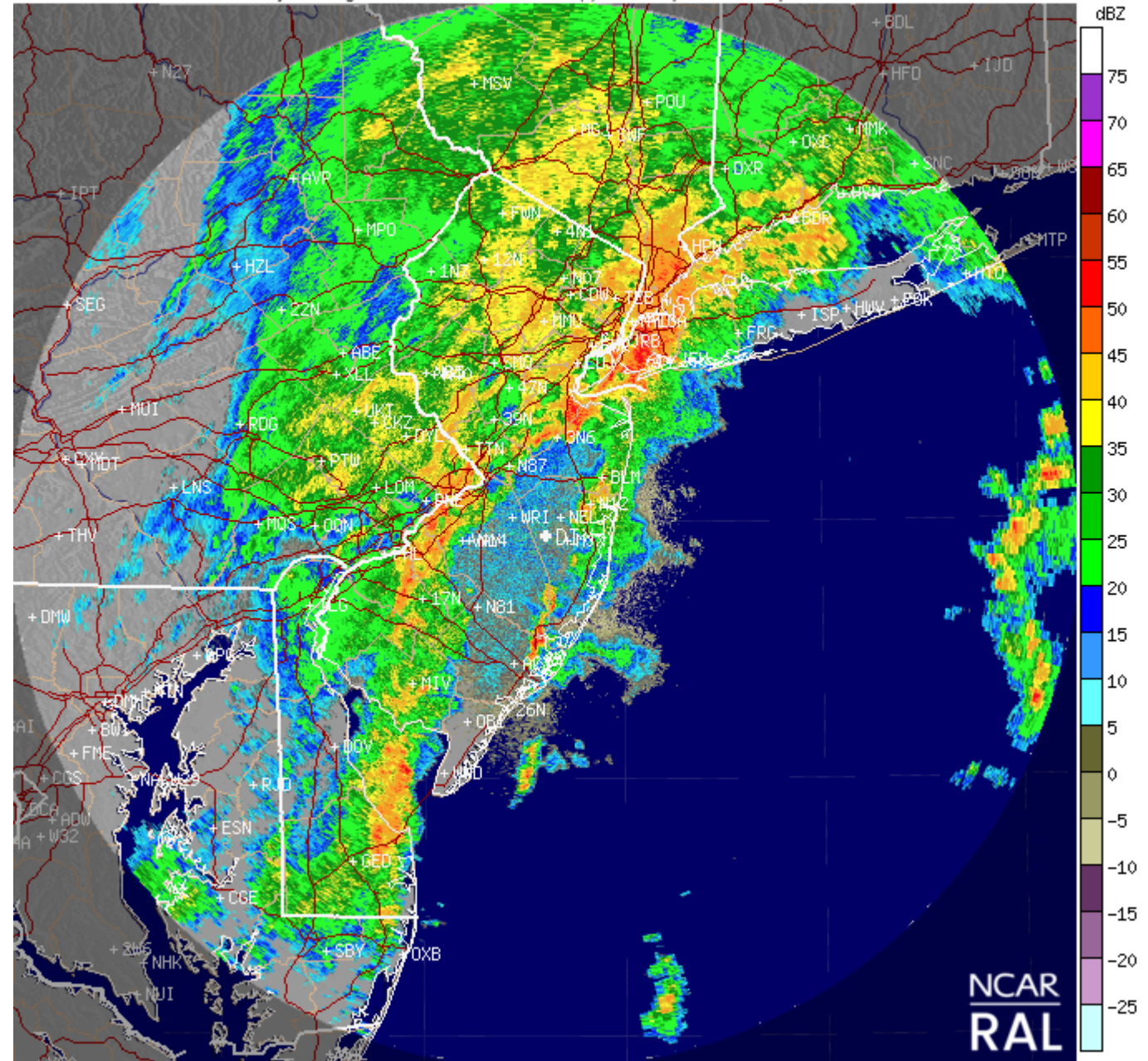
Much of that rain fell during short intense bursts of precipitation associated with thunderstorms.

Newark, NJ, experienced 3.24 inches **in one hour**, with NY Central Park hit by 3.15 inches in one hour. Both are hourly records for those sites.

KDIX Philadelphia, PA/Wrightstown, NJ 01:50:28 UTC Thu 02 September 2021

NEXRAD Level II Base reflectivity: 0.5 degrees

(c) UCAR <http://weather.rap.ucar.edu/radar/>



The intense convective (thunderstorm) nature of the rain is illustrated by a weather radar image at 9:50 PM EDT, with the red colors indicating extraordinarily high rainfall rates.

After landfall, Hurricane Ida transitioned into a tropical storm and then underwent extratropical transition in which it took on the characteristics of a midlatitude cyclone. The National Weather Service sometimes calls the resulting storm a Post-Tropical Cyclone.

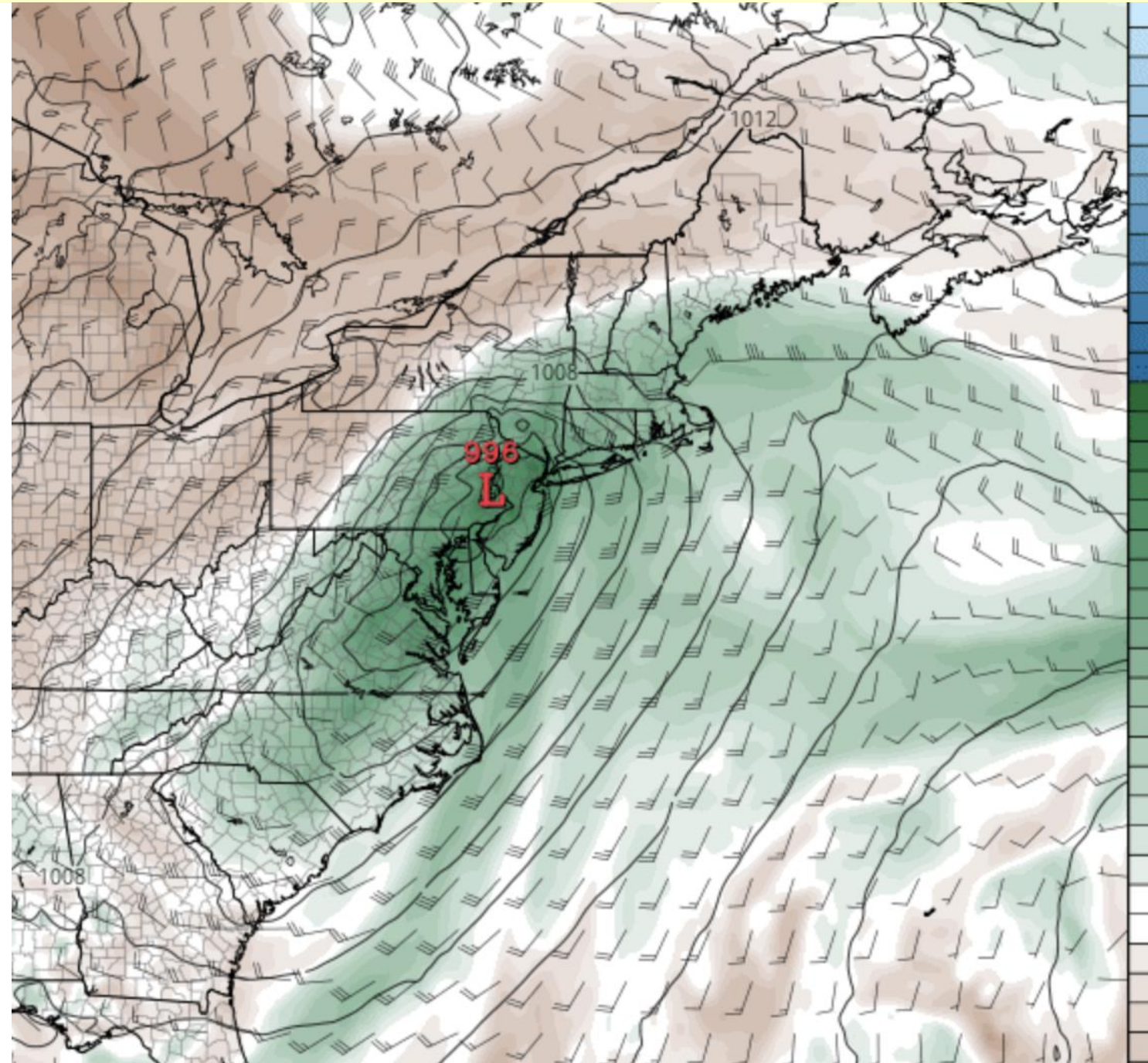
But there was a real danger in this transition.

Extratropical cyclones have strong upward motion, often associated with frontal zones, where temperatures and winds change rapidly. And tropical storms undergoing transition often entrain large amounts of tropical moisture that can result in heavy precipitation as the moist air is forced to rise by the storm circulation. This moisture can be converted to rain very rapidly in strong thunderstorms/convection.

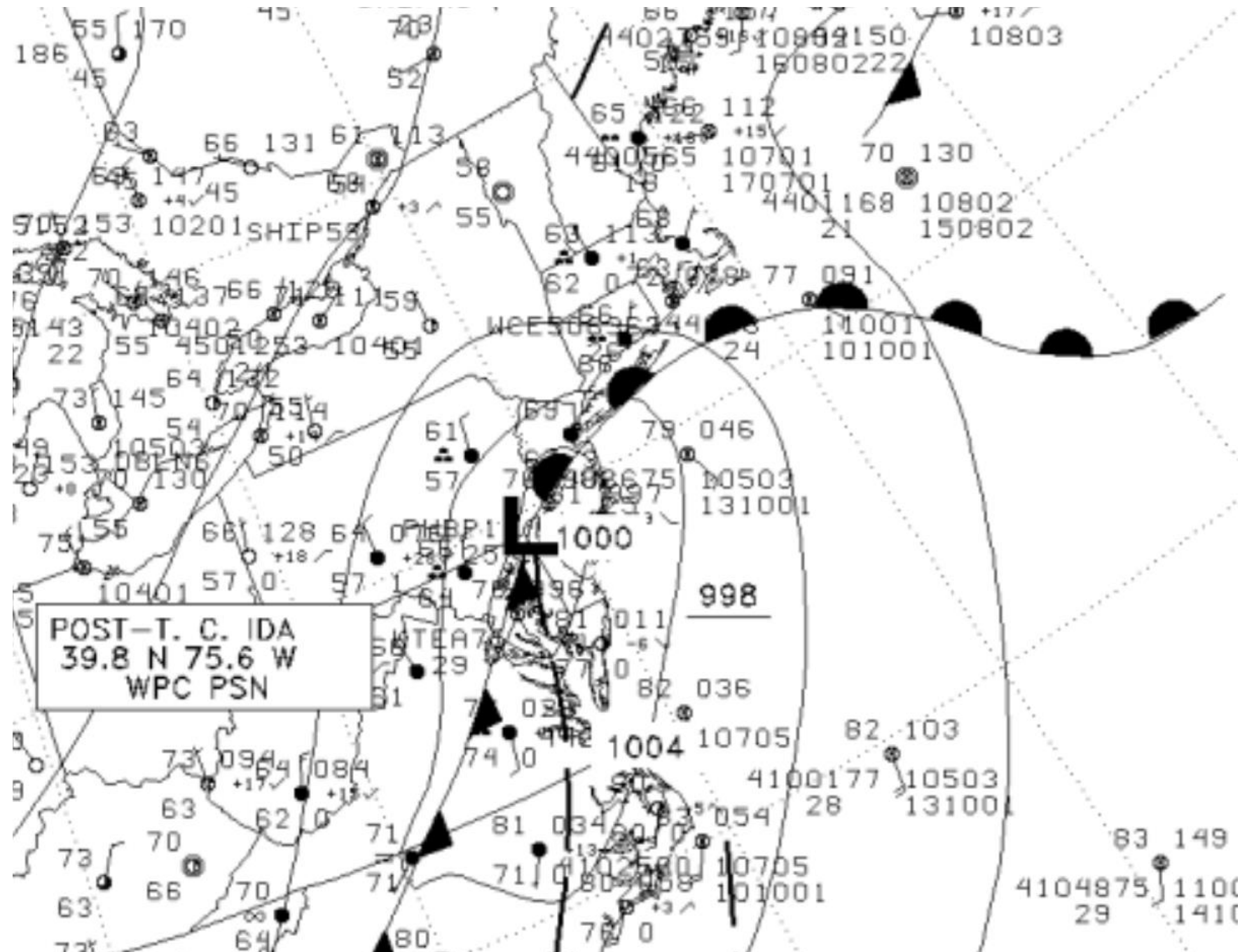
This is exactly what happened.

Map of sea level pressure and atmospheric moisture (called precipitable water) for 10 PM PDT;

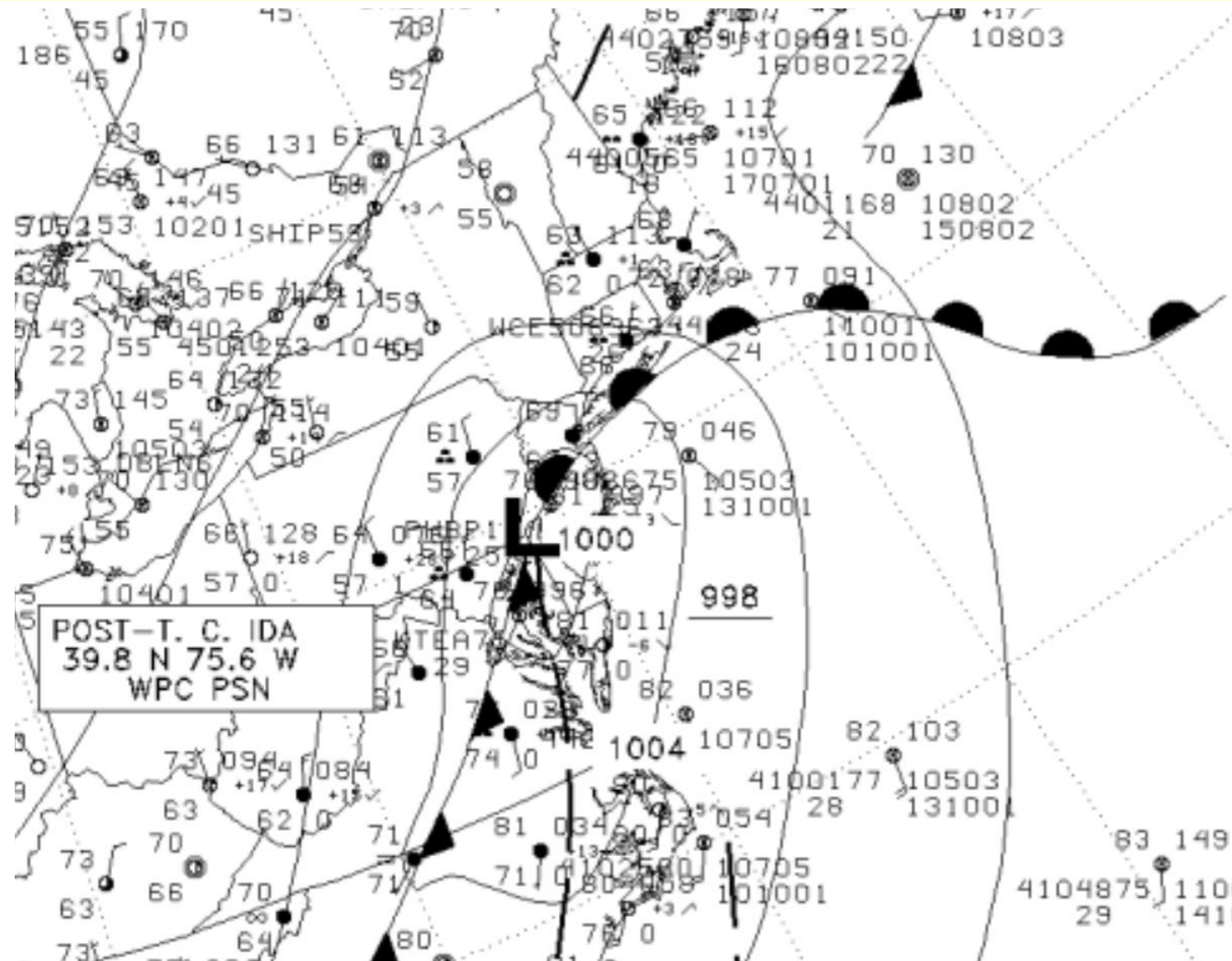
you can see the low-pressure center and the plume of moisture (green colors) moving in from the southwest.



To the east of the low center, there was a warm front, as indicated by the National Weather Service analysis for 8 PM EDT (indicated by the black half circles)



The warm front had warm, southerly winds on the south side and cooler, easterly winds on the north side, with the warm, moist, unstable air to the south forced to rise by the front, resulting in heavy convective showers to the north of the line. That is why the intense precipitation paralleled the front.



Flash Flood Watch

In Effect From Wednesday Afternoon Through Thursday Afternoon

Weather Forecast Office

New York, NY

Issued Aug 30, 2021 3:27 PM EDT



The Forecast

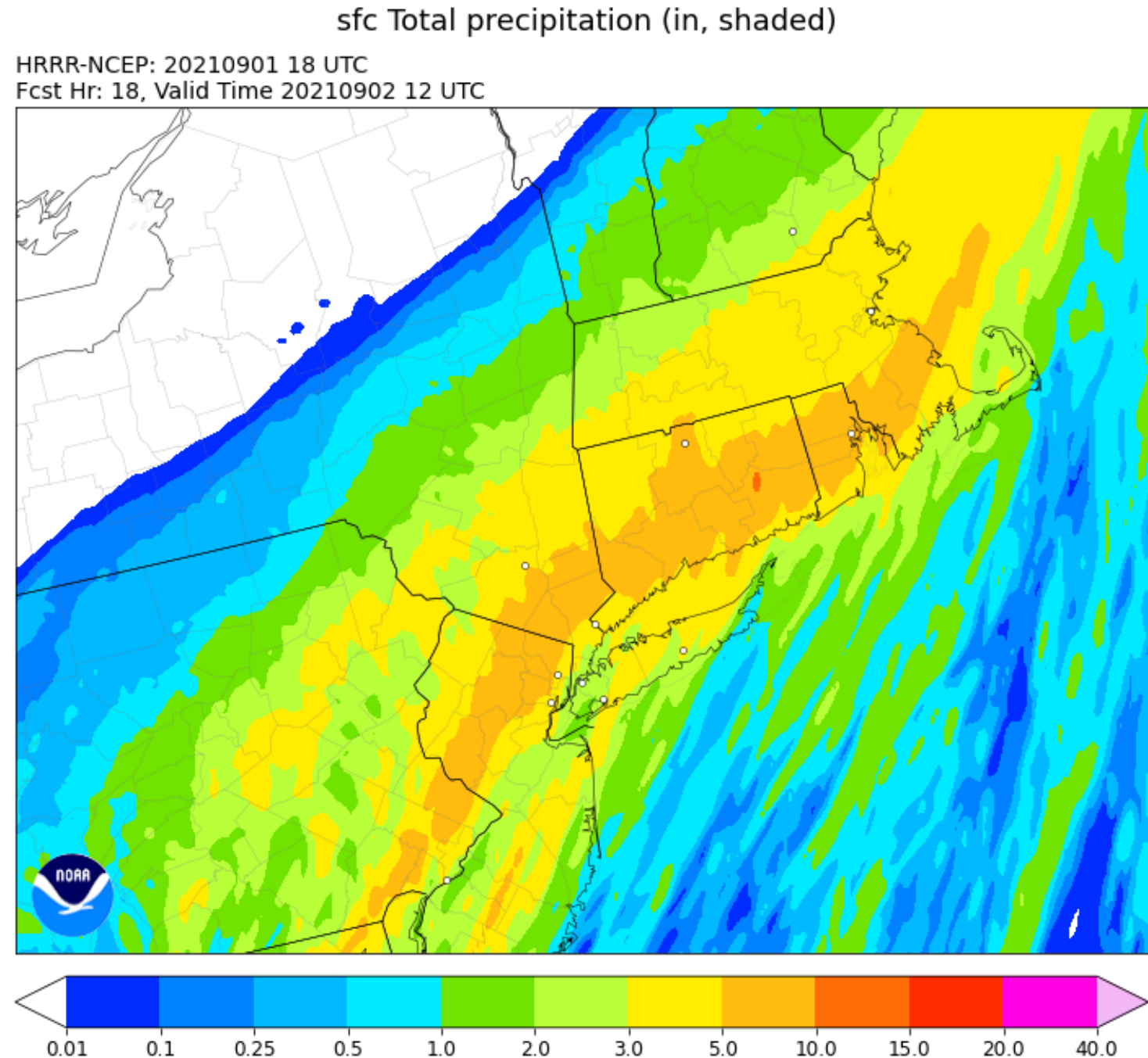
My colleagues at the National Weather Service had warnings out much of yesterday for heavy precipitation and the potential for flash flooding, with a flash flood watch out more than a day ahead of time.

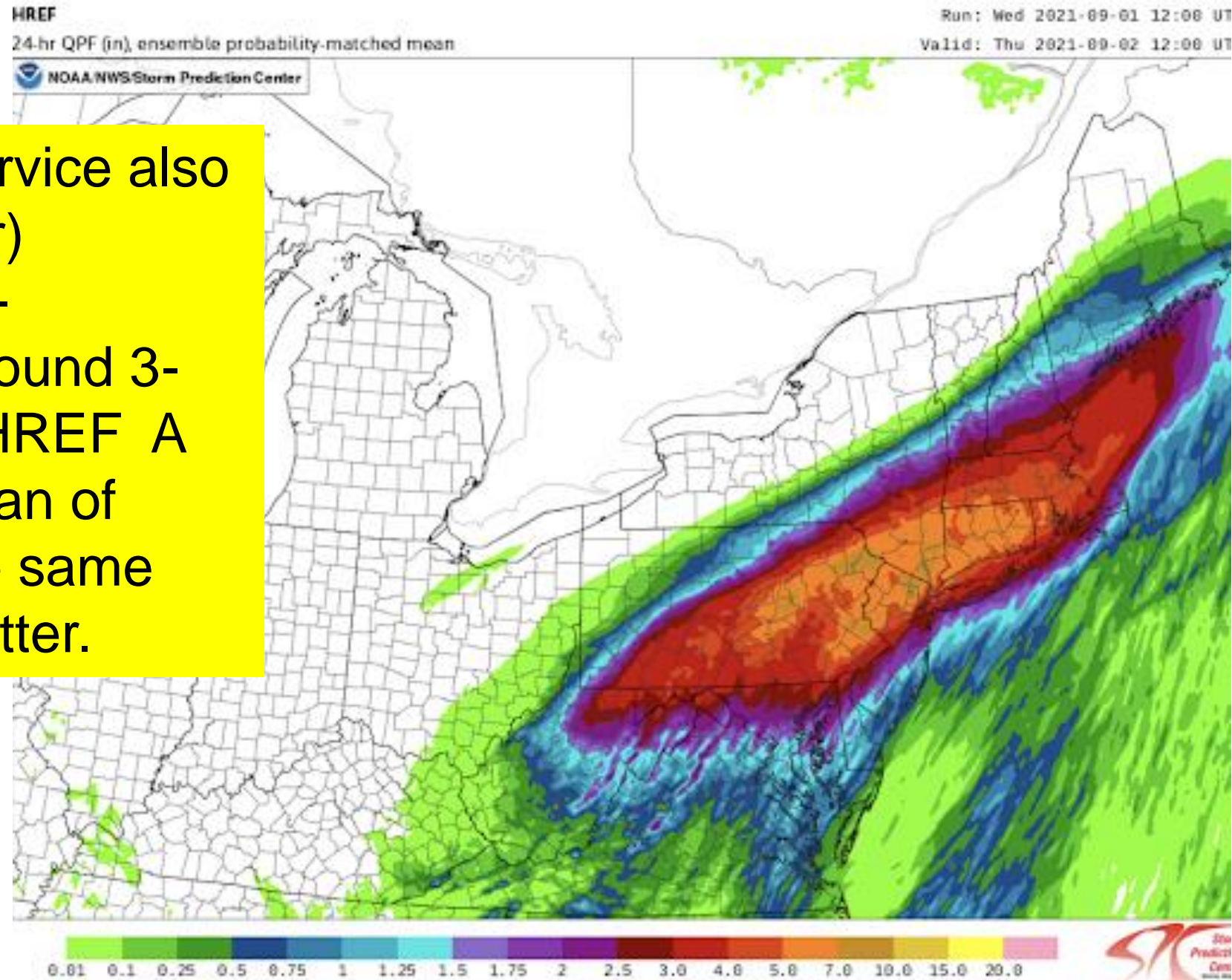


Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

The highest resolution model run by the National Weather Service several times a day is the HRRR model....the High-Resolution Rapid Refresh Model, run with 3-km grid spacing.

Its total precipitation for a run starting at 8 AM on Wednesday for precipitation for the next day showed the band, but it was displaced a bit north and somewhat underplayed the precipitation intensity.





The National Weather Service also runs a small (7-8 member) ensemble of several high-resolution simulations (around 3-km grid spacing), called HREF. A statistically enhanced mean of these runs (starting at the same time) is shown below. Better.

All following are Bob's graphics:

I found this NWS forecast on Twitter on 6 Sep 21.

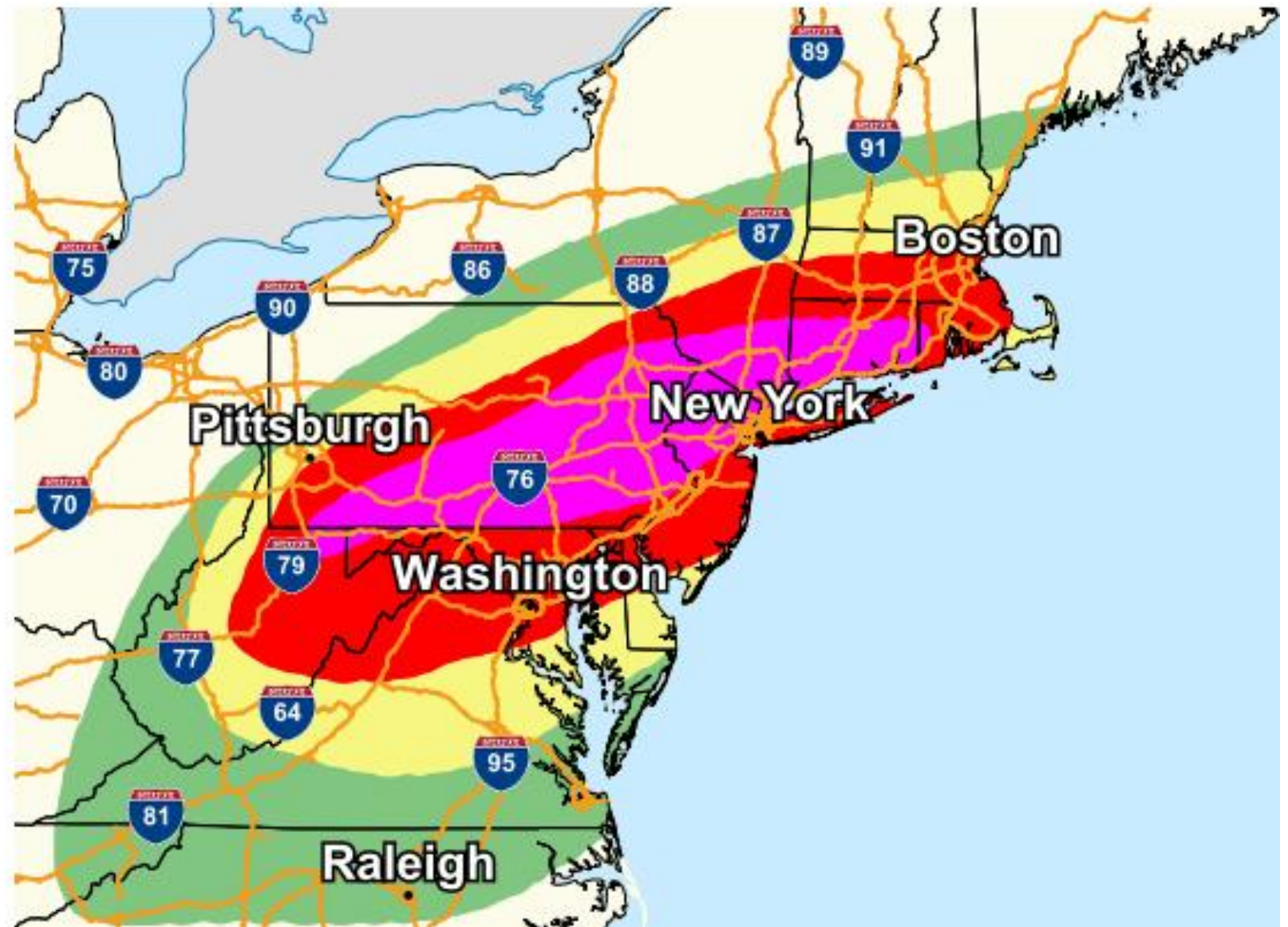
It was issued 15 hours prior to the event.

Looks like a forecast hit to me.



Day One Excessive Rainfall Outlook

- Marginal
- Slight
- Moderate
- High

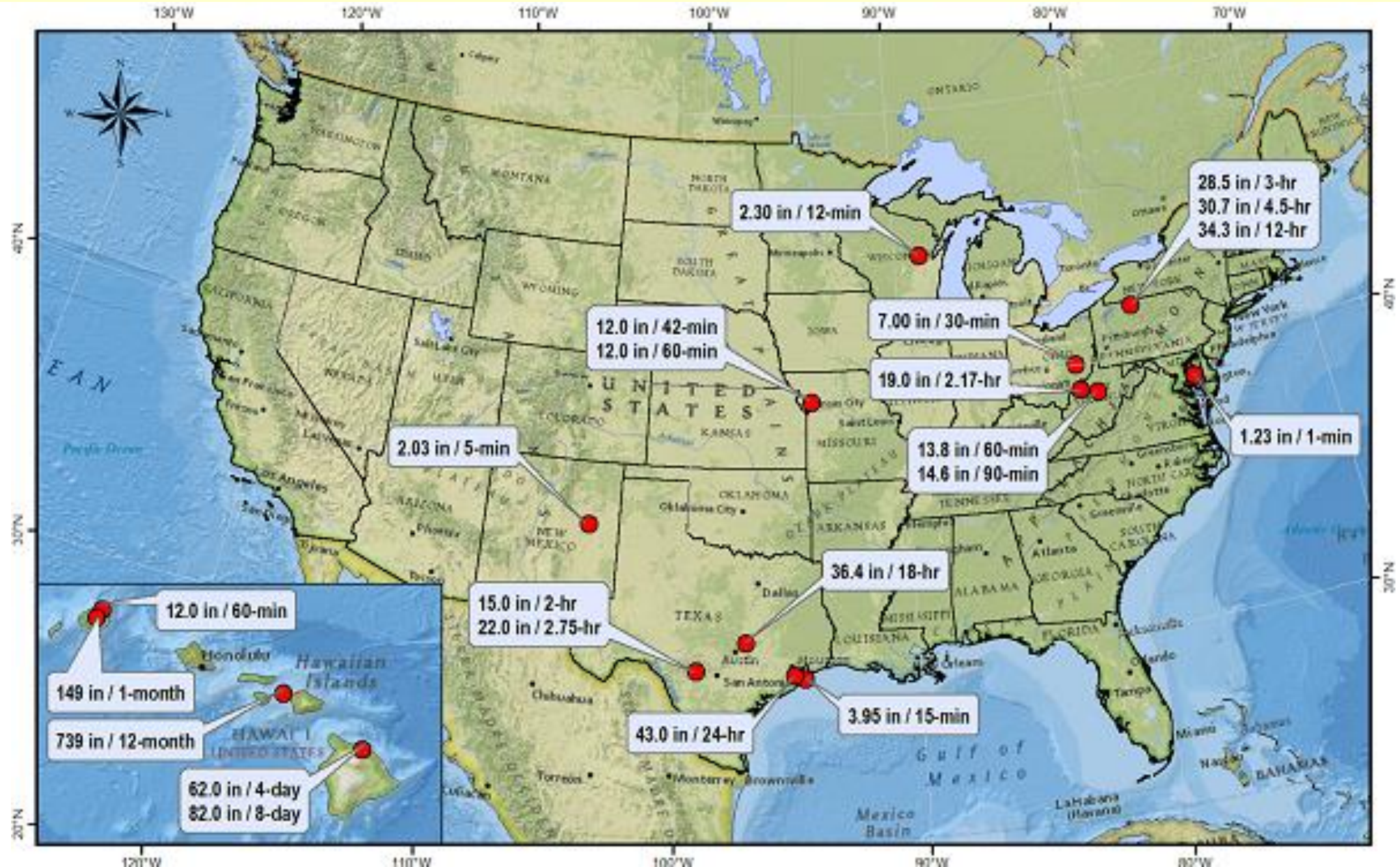


Graphic Created
September 1st, 2021
4:55 AM EDT

US Rainfall Records from NOAA's National Weather Service

https://www.nws.noaa.gov/ohd/hdsc/record_precip/record_precip_us.html

| Duration | Amount (in) | Amount (mm) | Location | Lat (deg) | Long (deg) | Start date |
|----------|-------------|-------------|-------------------------------------|-----------|------------|-------------|
| 1-min | 1.23 | 31.2 | Unionville, MD | 38.80 | -76.13 | 4 Jul 1956 |
| 5-min | 2.03 | 52 | Alamogordo Creek, NM | 34.66 | -104.39 | 5 Jun 1960 |
| 12-min | 2.30 | 58 | Embarrass, WI | 44.67 | -88.71 | 28 May 1881 |
| 15-min | 3.95 | 100 | Galveston, TX | 29.29 | -94.79 | 4 Jun 1871 |
| 30-min | 7.00 | 178 | Cambridge, OH | 40.00 | -81.58 | 16 Jul 1914 |
| 42-min | 12.0 | 305 | Holt, MO | 39.45 | -94.33 | 22 Jun 1947 |
| 60-min | 13.8* | 351* | Burnsville 6 WNW, WV | 38.88 | -80.77 | 4 Aug 1943 |
| | 12.0 | 305 | Holt, MO | 39.45 | -94.33 | 22 Jun 1947 |
| | 12.0 | 305 | Kilauea Sugar Plantation, Kauai, HI | 22.21 | -159.41 | 24 Jan 1956 |
| 90-min | 14.6* | 371* | Burnsville 6 WNW, WV | 38.88 | -80.77 | 4 Aug 1943 |
| 2-hr | 15.0 | 381 | Woodward Ranch (D'Hanis), TX | 29.49 | -99.38 | 31 May 1935 |
| 2.17-hr | 19.0 | 483 | Rockport, WV | 39.07 | -81.55 | 18 Jul 1889 |
| 2.75-hr | 22.0 | 559 | Woodward Ranch (D'Hanis), TX | 29.49 | -99.38 | 31 May 1935 |
| 3-hr | 28.5 | 724 | Smethport, PA | 41.80 | -78.45 | 18 Jul 1942 |
| 4.5-hr | 30.7 | 780 | Smethport, PA | 41.80 | -78.45 | 18 Jul 1942 |
| 12-hr | 34.3 | 871 | Smethport, PA | 41.80 | -78.45 | 17 Jul 1942 |
| 18-hr | 36.4 | 925 | Thrall, TX | 30.59 | -97.30 | 9 Sep 1921 |
| 24-hr | 43.0 | 1092 | Alvin, TX | 29.42 | -95.24 | 25 Jul 1979 |
| 4-day | 62.0 | 1575 | Kukaiau, Hamakua, HI | 20.02 | -155.37 | 27 Feb 1902 |
| 8-day | 82.0 | 2083 | Kukaiau, Hamakua, HI | 20.02 | -155.37 | 28 Feb 1902 |
| 1-month | 149 | 3800 | Mt. Waialeale, Kauai, HI | 22.07 | -159.50 | 1 Mar 1982 |
| 12-month | 739 | 18780 | Kukui, Maui, HI | 20.90 | -156.60 | 1 Dec 1981 |



Note the dates of occurrence.

The newest CONUS Rainfall record was 43 Inches in 24 hours, 1979, Alvin, Texas.

Next newest CONUS record was 1960, 61 years ago, 2 Inches in 5 minutes, in NM.

There is no modern rainfall record newer than 42 years ago.

Higher <CO₂> is not setting modern rainfall accumulation records.

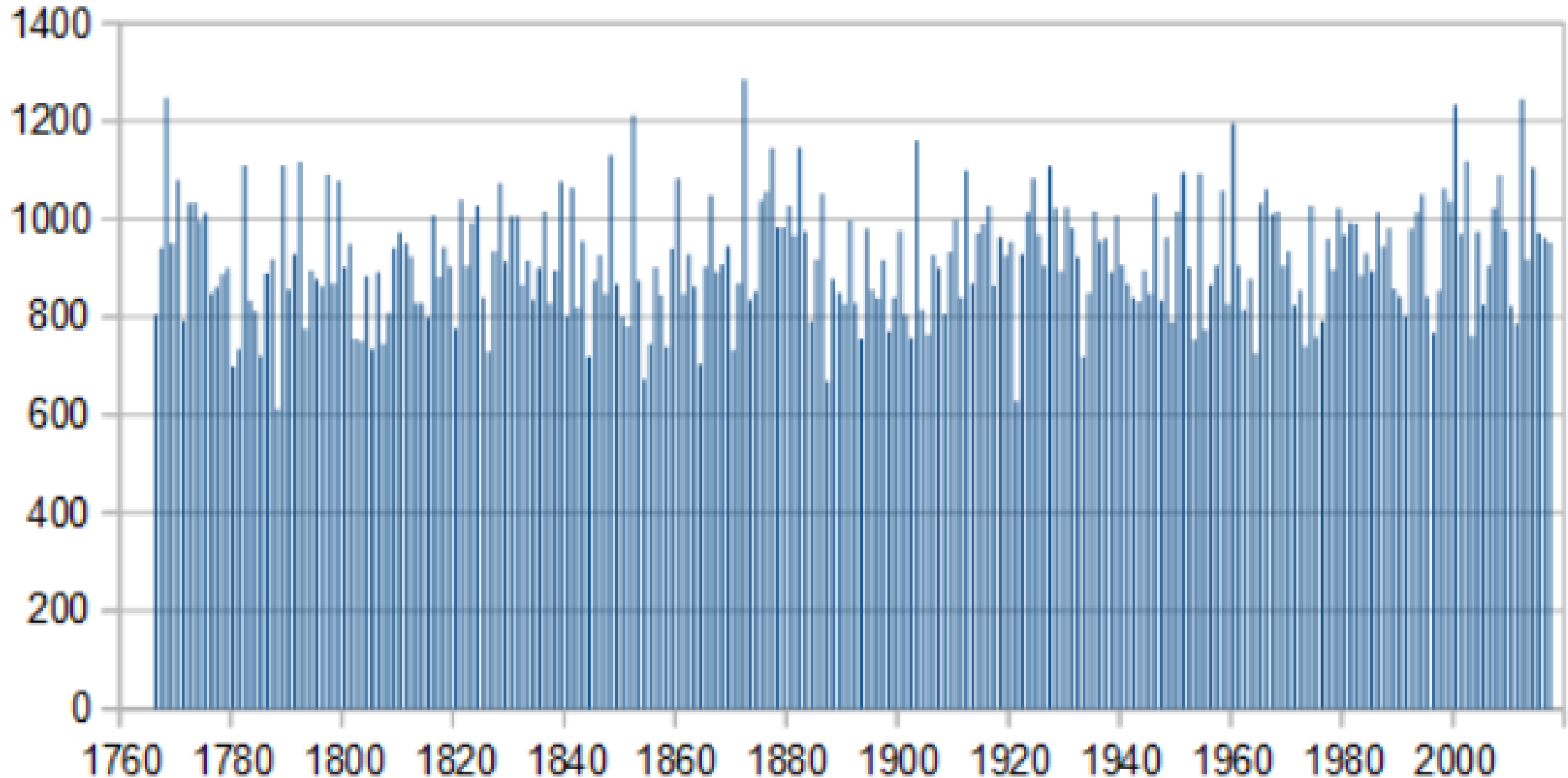
U.S. Record Point Rainfalls

| <i>Time</i> | <i>Rainfall</i> | <i>Location</i> | <i>Date</i> |
|--------------------|-----------------|------------------------------|---------------|
| 1 minute | 1.23* | Unionville, MD | 7/4/1956 |
| 5 minutes | 2.03* | Alamogordo Creek, NM | 6/5/1960 |
| 12 minutes | 2.30* | Embarrass, WI | 5/28/1881 |
| 15 minutes | 3.95* | Galveston, TX | 6/4/1871 |
| 30 minutes | 7.00* | Cambridge, OH | 7/16/1914 |
| 40 minutes | 9.25* | Guinea, VA | 8/24/1906 |
| 42 minutes | 12.00* | Holt, MO | 6/22/1947* |
| 1 hour | 13.80* | Central WV | 5/4-5/1943 |
| 1 hour 30 minutes | 14.60* | Central WV | 5/4-5/1943 |
| 2 hours | 15.00* | Woodward Ranch, (D'Hanis) TX | 5/31/1935 |
| 2 hours 30 minutes | 19.00* | Rockport, WV | 7/18/1889 |
| 2 hours 45 minutes | 22.00* | Woodward Ranch, (D'Hanis) TX | 5/31/1935* |
| 3 hours | 28.50*est. | Smethport, PA | 7/18/42* |
| 4 hours 30 minutes | 30.70* | Smethport, PA | 7/18/42* |
| 12 hours | 34.30* | Smethport, PA | 7/17-18/1942 |
| 18 hours | 36.40* | Thrall, TX | 9/9/1921 |
| 24 hours | 43.00* | Alvin, TX | 7/25-26/1979 |
| 4 days | 62.00* | Kukaiau, Hamakua, HI | 2/27-3/2/1902 |
| 8 days | 82.00* | Kukaiau, Hamakua, HI | 2/27-3/6/1902 |
| 1 month | 148.83* | Mt. Waialeale, Kauai, HI | 3/1982 |
| 1 month (mainland) | 71.54* | Helen Mine, CA | 1/1909 |
| 1 year | 704.83* | Kukui, Kauai, HI | 1982 |
| 1 year | 332.29* | MacLeeod Harbor, AK | 1976 |
| 1 year (mainland) | 204.12* | Laurel Mountain, OR | 1996 |

*constitutes a world record

England & Wales Annual Rainfall 1766 - 2017

Beginning 1766 to the present, there has been no increase in rainfall associated with increases in <CO₂>.



Observed Rainfall NYC area, 1 Sep 2021

<https://forecast.weather.gov/product.php?site=NWS&issuedby=EWR>

...THE NEWARK NJ [CLIMATE](#) SUMMARY FOR SEPTEMBER 1 2021...

[CLIMATE](#) [NORMAL](#) PERIOD 1991 TO 2020
[CLIMATE](#) RECORD PERIOD 1893 TO 2021

| WEATHER ITEM | OBSERVED VALUE | TIME (LST) | RECORD VALUE | YEAR | NORMAL VALUE | DEPARTURE FROM NORMAL | LAST YEAR |
|----------------------------|----------------|------------|--------------|--------------|------------------------------|---------------------------------------|-----------|
| | | | | | | | |
| TEMPERATURE (F) | | | | | | | |
| YESTERDAY | | | | | | | |
| MAXIMUM | 79 | 1230 AM | 98 | 2010 | 82 | -3 | 79 |
| MINIMUM | 65 | 1159 PM | 50 | 1934 | 65 | 0 | 68 |
| AVERAGE | 72 | | | | 74 | -2 | 74 |
| PRECIPITATION (IN) | | | | | | | |
| YESTERDAY | 8.41R | | 2.22 | 1959 | 0.12 | 8.29 | 0.12 |
| MONTH TO DATE | 8.41 | | | | 0.12 | 8.29 | 0.12 |
| SINCE SEP 1 | 8.41 | | | | 0.12 | 8.29 | 0.12 |
| SINCE JAN 1 | 45.95 | | | | 31.64 | 14.31 | 30.91 |
| SNOWFALL (IN) | | | | | | | |
| YESTERDAY | 0.0 | | 0.0 | 2001 2002 | 0.0 | 0.0 | 0.0 |
| MONTH TO DATE | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| SINCE SEP 1 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| SINCE JUL 1 | T | | | | 0.0 | 0.0 | 0.0 |
| SNOW DEPTH | 0 | | | | | | |

Newark Airport, NJ

Tmax 79, 26C

Rainfall 8.41 in Record

<https://forecast.weather.gov/product.php?site=NWS&issuedby=NYC>

Central Park, Manhattan, NYC.

Tmax 78

Rainfall 7.13 In. Record.

...THE CENTRAL PARK NY [CLIMATE](#) SUMMARY FOR SEPTEMBER 1 2021...

[CLIMATE](#) [NORMAL](#) PERIOD 1991 TO 2020
[CLIMATE](#) RECORD PERIOD 1869 TO 2021

| WEATHER ITEM | OBSERVED VALUE | TIME (LST) | RECORD VALUE | YEAR | NORMAL VALUE | DEPARTURE FROM NORMAL | LAST YEAR |
|----------------------------|----------------|------------|--------------|--------------|------------------------------|---------------------------------------|-----------|
| | | | | | | | |
| TEMPERATURE (F) | | | | | | | |
| YESTERDAY | | | | | | | |
| MAXIMUM | 78 | 1247 AM | 97 | 1953 | 81 | -3 | 77 |
| MINIMUM | 63 | 1159 PM | 51 | 1869 | 67 | -4 | 66 |
| AVERAGE | 71 | | | | 74 | -3 | 72 |
| PRECIPITATION (IN) | | | | | | | |
| YESTERDAY | 7.13R | | 3.84 | 1927 | 0.14 | 6.99 | 0.23 |
| MONTH TO DATE | 7.13 | | | | 0.14 | 6.99 | 0.23 |
| SINCE SEP 1 | 7.13 | | | | 0.14 | 6.99 | 0.23 |
| SINCE JAN 1 | 49.06 | | | | 33.01 | 16.05 | 27.99 |
| SNOWFALL (IN) | | | | | | | |
| YESTERDAY | 0.0 | | 0.0 | 2001 2002 | 0.0 | 0.0 | 0.0 |
| MONTH TO DATE | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| SINCE SEP 1 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| SINCE JUL 1 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| SNOW DEPTH | 0 | | | | | | |

<https://forecast.weather.gov/product.php?site=NWS&issuedby=ISP>

...THE ISLIP NY CLIMATE SUMMARY FOR SEPTEMBER 1 2021...

CLIMATE NORMAL PERIOD 1991 TO 2020

CLIMATE RECORD PERIOD 1963 TO 2021

Islip, Long Island, NY

Tmax 77.

Rainfall 1.53 In. Record

| WEATHER ITEM | OBSERVED VALUE | TIME (LST) | RECORD VALUE | YEAR | <u>NORMAL</u> VALUE | DEPARTURE FROM <u>NORMAL</u> | LAST YEAR |
|--------------|-------------------|---------------|-----------------|------|------------------------|------------------------------------|--------------|
|--------------|-------------------|---------------|-----------------|------|------------------------|------------------------------------|--------------|

.....
TEMPERATURE (F)

YESTERDAY

| | | | | | | | |
|---------|----|---------|----|------|----|----|----|
| MAXIMUM | 77 | 1111 PM | 93 | 2010 | 79 | -2 | 78 |
| MINIMUM | 68 | 1159 PM | 49 | 1991 | 64 | 4 | 67 |
| AVERAGE | 73 | | | | 71 | 2 | 73 |

PRECIPITATION (IN)

| | | | | | | |
|---------------|-------|------|------|-------|------|-------|
| YESTERDAY | 1.53R | 1.33 | 1981 | 0.12 | 1.41 | T |
| MONTH TO DATE | 1.53 | | | 0.12 | 1.41 | T |
| SINCE SEP 1 | 1.53 | | | 0.12 | 1.41 | T |
| SINCE JAN 1 | 33.82 | | | 30.42 | 3.40 | 25.52 |

SNOWFALL (IN)

| | | | | | | |
|-------------------|-----|----|----|-----|-----|-----|
| YESTERDAY | 0.0 | MM | MM | 0.0 | 0.0 | 0.0 |
| MONTH TO DATE | 0.0 | | | 0.0 | 0.0 | 0.0 |
| SINCE SEP 1 | 0.0 | | | 0.0 | 0.0 | 0.0 |
| SINCE JUL 1 | 0.0 | | | 0.0 | 0.0 | 0.0 |
| <u>SNOW DEPTH</u> | 0 | | | | | |

<https://forecast.weather.gov/product.php?site=NWS&issuedby=LGA>

La Guardia Airport NYC

Tmax 80F 26.6C

Rainfall 0.14 inches

...THE LAGUARDIA NY CLIMATE SUMMARY FOR SEPTEMBER 1 2021...
VALID TODAY AS OF 0400 PM LOCAL TIME.

CLIMATE NORMAL PERIOD 1991 TO 2020
CLIMATE RECORD PERIOD 1939 TO 2021

| WEATHER ITEM | OBSERVED VALUE | TIME (LST) | RECORD VALUE | YEAR | NORMAL VALUE | DEPARTURE FROM NORMAL | LAST YEAR |
|--------------------|-------------------|---------------|-----------------|------|-----------------|-----------------------------|--------------|
| | | | | | | | |
| TEMPERATURE (F) | | | | | | | |
| TODAY | | | | | | | |
| MAXIMUM | 80 | 241 AM | 96 | 2010 | 82 | -2 | 81 |
| MINIMUM | 71 | 903 AM | 55 | 1967 | 69 | 2 | 68 |
| AVERAGE | 76 | | | | 75 | 1 | 75 |
| PRECIPITATION (IN) | | | | | | | |
| TODAY | 0.14 | | 1.20 | 1952 | 0.13 | 0.01 | 0.18 |
| MONTH TO DATE | 0.14 | | | | 0.13 | 0.01 | 0.18 |
| SINCE SEP 1 | 0.14 | | | | 0.13 | 0.01 | 0.18 |
| SINCE JAN 1 | 34.07 | | | | 30.49 | 3.58 | 24.86 |
| SNOWFALL (IN) | | | | | | | |
| TODAY | 0.0 | | MM | MM | 0.0 | 0.0 | 0.0 |
| MONTH TO DATE | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| SINCE SEP 1 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| SINCE JUL 1 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| SNOW DEPTH | 0 | | | | | | |

...THE KENNEDY NY CLIMATE SUMMARY FOR SEPTEMBER 1 2021...
VALID TODAY AS OF 0400 PM LOCAL TIME.

CLIMATE NORMAL PERIOD 1991 TO 2020
CLIMATE RECORD PERIOD 1948 TO 2021

JFK Airport, NYC

Tmax 78F

Rainfall 0.15 in.

| WEATHER ITEM | OBSERVED VALUE | TIME (LST) | RECORD VALUE | YEAR | <u>NORMAL</u> VALUE | DEPARTURE FROM <u>NORMAL</u> | LAST YEAR |
|--------------------|-------------------|---------------|-----------------|--------------|------------------------|------------------------------------|--------------|
| | | | | | | | |
| TEMPERATURE (F) | | | | | | | |
| TODAY | | | | | | | |
| MAXIMUM | 78 | 142 AM | 92 | 2010 2012 | 80 | -2 | 79 |
| MINIMUM | 70 | 903 AM | 54 | 1967 1985 | 65 | 5 | 67 |
| AVERAGE | 74 | | | | 73 | 1 | 73 |
| PRECIPITATION (IN) | | | | | | | |
| TODAY | 0.15 | | 0.63 | 2002 | 0.12 | 0.03 | 0.20 |
| MONTH TO DATE | 0.15 | | | | 0.12 | 0.03 | 0.20 |
| SINCE SEP 1 | 0.15 | | | | 0.12 | 0.03 | 0.20 |
| SINCE JAN 1 | 32.33 | | | | 29.08 | 3.25 | 25.06 |

<https://forecast.weather.gov/product.php?site=OKX&issuedby=BDR&product=CLI&format=CI&version=23&glossary=0>

Bridgeport Airport, CT

Tmax 75F

Rainfall 0.10 in

...THE BRIDGEPORT CT CLIMATE SUMMARY FOR SEPTEMBER 1 2021...
VALID TODAY AS OF 0400 PM LOCAL TIME.

CLIMATE NORMAL PERIOD 1991 TO 2020
CLIMATE RECORD PERIOD 1948 TO 2021

| WEATHER ITEM | OBSERVED VALUE | TIME (LST) | RECORD VALUE | YEAR | NORMAL VALUE | DEPARTURE FROM NORMAL | LAST YEAR |
|--------------------|----------------|------------|--------------|------|--------------|-----------------------|-----------|
| | | | | | | | |
| TEMPERATURE (F) | | | | | | | |
| TODAY | | | | | | | |
| MAXIMUM | 75 | 121 AM | 93 | 2010 | 80 | -5 | 79 |
| MINIMUM | 69 | 1014 AM | 52 | 1970 | 64 | 5 | 70 |
| | | | | 2017 | | | |
| AVERAGE | 72 | | | | 72 | 0 | 75 |
| PRECIPITATION (IN) | | | | | | | |
| TODAY | 0.10 | | 1.97 | 1981 | 0.12 | -0.02 | 0.00 |
| MONTH TO DATE | 0.10 | | | | 0.12 | -0.02 | 0.00 |
| SINCE SEP 1 | 0.10 | | | | 0.12 | -0.02 | 0.00 |
| SINCE JAN 1 | 28.95 | | | | 29.32 | -0.37 | 26.42 |
| SNOWFALL (IN) | | | | | | | |
| TODAY | 0.0 | | 0.0 | 2001 | 0.0 | 0.0 | 0.0 |
| | | | | 2002 | | | |

List of tropical systems which affected NY or NYC with heavy rainfall



https://en.wikipedia.org/wiki/List_of_New_York_hurricanes

List of New York hurricanes

List shows only tropical NY systems with heavy rainfall

From Wikipedia, the free encyclopedia

August 9, 1817: A tropical storm produces **heavy rainfall in New York City** and Long Island.

September 17, 1903: The 1903 Vagabond Hurricane produces wind gusts in excess of 65 mph (105 km/h) and **3 inches (75 mm) of rain in Central Park.**

August 25, 1933: The 1933 Chesapeake–Potomac hurricane produces up to **6 inches (150 mm) of rain in Southeast New York State**

September 10, 1954: Hurricane Edna tracks to the east of Long Island producing **9 inches (230 mm) of rain**

August 13, 1955: Hurricane Connie produces **13.24 inches (370 mm) of rain in Southeast New York...**

October 1, 1959: The remnants of Hurricane Gracie track into Central New York and drops **up to 6 inches (150 mm) of rain**

September 10, 1969: **Rainfall up to 3 inches (75 mm) is reported on Long Island and in portions of Southeastern New York** associated with Hurricane Gerda



WIKIPEDIA
The Free Encyclopedia

Article Talk

https://en.wikipedia.org/wiki/List_of_New_York_hurricanes

List of New York hurricanes

From Wikipedia, the free encyclopedia

This list shows only tropical systems with heavy rainfall

August 28, 1971: Tropical Storm **Doria produces up to 8 inches (200 mm) of rain in New York City** and Upstate New York causing **moderate to severe flooding and floods subways in New York City**

June 22, 1972: Hurricane Agnes makes landfall near New York City and produces up to **12 inches (300 mm) of rain in Southeastern New York State** and much of Western New York, with locally higher amounts

August 11, 1976: Hurricane Belle makes landfall on Long Island as a Category 1 hurricane on the Saffir–Simpson hurricane scale, producing **up to 6 inches (150 mm) of rain**

September 27, 1985: Hurricane Gloria makes landfall on Long Island as a Category 2 hurricane. Wind gusts of up to 100 mph (160 km/h) **and 3.4 inches (86 mm) of rain**

August 19, 1991: Hurricane Bob comes within a short distance of making landfall on the eastern tip of Long Island as a category 2 hurricane. **Heavy rainfall up to 7 inches (175 mm)...**

September 16, 1999: Hurricane **Floyd produces rainfall up to 13 inches (325 mm)** and wind gusts of up to 60 mph (95 km/h) affect Southeastern New York



WIKIPEDIA
The Free Encyclopedia

Article Talk

https://en.wikipedia.org/wiki/List_of_New_York_hurricanes

List of New York hurricanes

From Wikipedia, the free encyclopedia

This list shows only tropical systems with heavy rainfall

June 17, 2001: The remnants of Tropical Storm **Allison** produce moderate rainfall up to 3 inches (75 mm), although it fell in just a couple hours causing minor to moderate flash flooding.

August 4, 2004: Hurricane Alex drops 2.83 inches (70 mm) of rain on Long Island

August 13, 2004: Tropical **Storm Bonnie** produces rainfall peaking at 4 inches causing several rivers to swell to at or slightly above flood stage

September 9, 2004: The remnants of Hurricane **Frances** produces heavy rainfall up to 7 inches (175 mm) which causes extensive flooding in central New York

October 5, 2005: Tropical Storm Tammy's remnants contribute to a rainstorm which turns into the Northeast U.S. flooding of October 2005. **Up to 13 inches (325 mm) of rain cause severe flooding throughout the Hudson Valley**

June 5, 2007: Tropical Storm **Barry** produces 3.91 inches (99 mm) of rain in New York City



WIKIPEDIA
The Free Encyclopedia

Article

Talk

https://en.wikipedia.org/wiki/List_of_New_York_hurricanes

List of New York hurricanes

From Wikipedia, the free encyclopedia

This list shows only tropical systems with heavy rainfall

June 7–8, 2013: Remnants of Tropical Storm **Andrea** impact New York with **4+ inches of rain...**

August 4, 2020: **Tropical Storm Isaias** brought **3 to 6 inches of rain...**

September 1, 2021: The remnants of Hurricane Ida reached the New Jersey and the New York City area, with heavy rainfall and flooding.

I count 20 prior instances of rainfall exceeding 3 inches in New York City or close by.

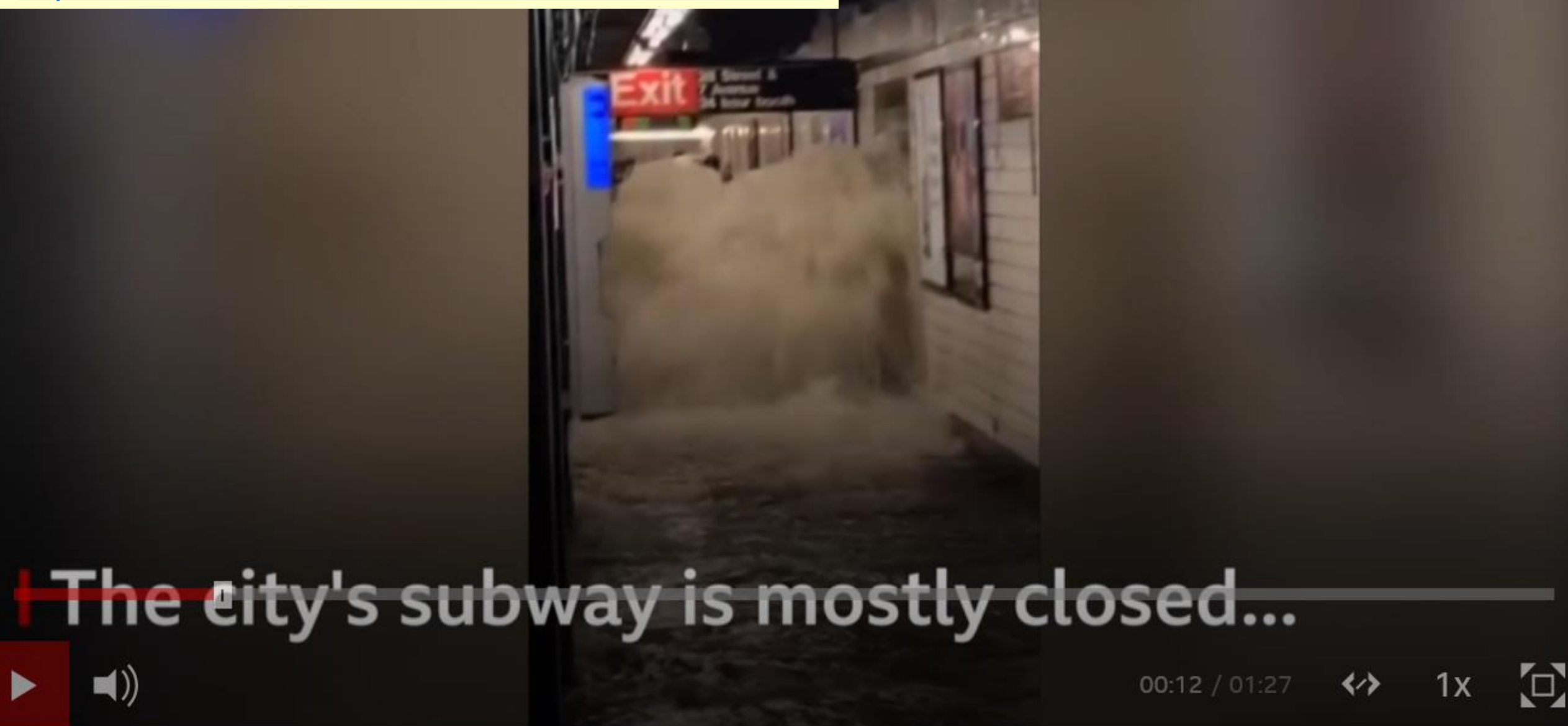
Photos of NYC urban flooding.



9 July 2021, seven weeks before remnants of Ida caused more flooding



Storm Ida: Flash flooding in New York and New Jersey kills nine



Storm Ida: Flash flooding in New York and New Jersey kills nine

ALEX ETTLING VIA STORYFUL

Up
point

Jefferson
Street

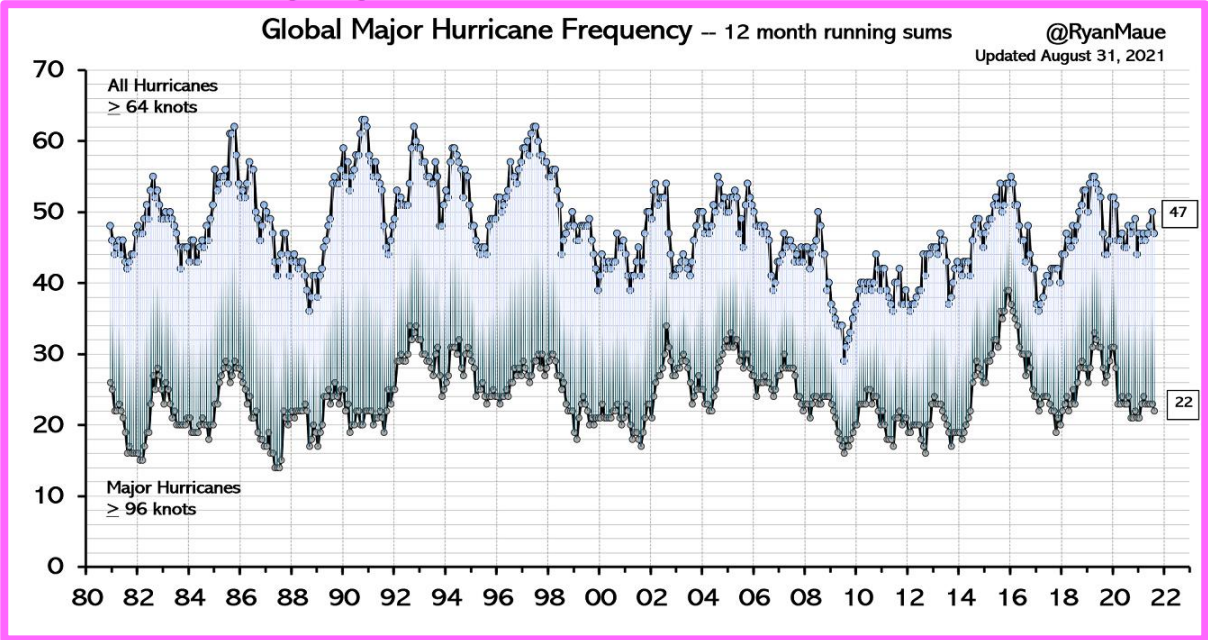
USA
TODAY

storyful

Selected News stories on this event, some not new news.

Biden: Hurricane Ida Is An ‘Opportunity’ to Act on ‘Global Warming’ – ‘We either act or we’re going to be in real, real trouble’

Biden on September 7, 2021: "This is an opportunity. I think the country's finally acknowledged the fact that global warming is real. And it's moving at an incredible pace and we've got to do something about it." ... "I think we are at one of those inflection points where we either act or we're going to be - we're going to be in real, real trouble. Our kids are going to be in real trouble."



“No Longer Subject To Debate”

Posted on [September 15, 2021](#) by [tonyheller](#)



Fox News 
@FoxNews

Biden says climate change causing severe weather is
'no longer subject to debate'



It's Been Nearly 5 Years Since the Last EF5 Tornado Struck the U.S.



By **Homeland Security Today** March 29, 2018

<https://gothamist.com/news/why-nyc-was-so-unprepared-for-idas-flash-flooding>



News | Arts & Entertainment | Food | Governor Hochul | COVID Updates

In some ways, everyone saw Ida coming, and no one saw Ida coming. On Thursday, Mayor Bill de Blasio blamed weather projections for being inaccurate. Emergency declarations weren't made until well after the storm hit the area with tornadoes and a deluge. But in truth, atmospheric scientists and weather forecasts had predicted between 10-14 inches of rain across much of the mid-Atlantic as early as Monday.

"Monday" was 30 August 2021. The storm hit the evening of Wednesday, 1 Sep 2021

Despite all of the whining about "Human-caused CO2-Fueled Global Warming" there was little real work done to make New York City and the Metro Area more resilient and more prepared to heed storm and hurricane warnings.

These stories tell the tale.

REPORT - MARCH 2014

2014!

CAUTION AHEAD: OVERDUE INVESTMENTS FOR NEW YORK'S AGING INFRASTRUCTURE

While Superstorm Sandy focused much-needed attention on key pieces of New York City's infrastructure, the city faces a number of other infrastructure vulnerabilities that have little to do with storm-preparedness—from aging water mains and deteriorating roads to crumbling public schools. If left unchecked, they could wreak havoc on the city's economy and quality of life.

by Adam Forman

Center
for an
Urban
Future

www.nycfuture.org MARCH 2014

CAUTION AHEAD

Overdue Investments for New York's Aging Infrastructure

While Superstorm Sandy focused much-needed attention on key pieces of New York City's infrastructure, the city faces a number of other infrastructure vulnerabilities that have little to do with storm-preparedness—from aging water mains and deteriorating roads to crumbling public schools. If left unchecked, they could wreak havoc on the city's economy and quality of life.



The New York Times

PLAY THE CROSSWORD

Account ▾

it ▾

SYSTEM FAILURE

How Politics and Bad Decisions Starved New York's Subways

Disruptions and delays have roiled the system this year. But the crisis was long in the making, fueled by a litany of errors, a Times investigation shows.

investigation shows.

2017(!) New York Times (!) story on errors, and not spending on infrastructure, "starved" NYC Subways

While many politicians have contributed to the decline of the subway over the years, the problems reached a fever pitch under Mr. Cuomo, who as governor appoints the M.T.A. chairman and effectively controls the authority.

Mr. Cuomo, a Democrat who is expected to seek a third term next year and is also seen as a potential presidential candidate in 2020, tried to stave off the emergency by committing additional funding to capital construction and getting involved in decisions about how to spend it.

But several transit leaders said that the interference backfired, and that the governor would have helped more if he had introduced any legislation to boost funding for core maintenance.

New York Times Investigation Exposes Cuomo's "Summer of Hell" Complicity

MTA's "Summer of Hell" was a terror for New York commuters and Governor Andrew Cuomo's poll numbers. This weekend, a New York Times investigation has exposed the large degree to which Governor Cuomo's years-long mismanagement of MTA contributed to this summer's crisis. As the New York Times laid bare, the problems with the New York [...]

November 20, 2017



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TUESDAY, SEPTEMBER 7, 2021 | REPORTING FOR NEW YORKERS

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What Are Officials Doing?

Disaster preparation isn't strictly an individual undertaking. Mayor Bill de Blasio has made multiple calls in recent weeks for investment into infrastructure and the subway to prevent future floods.

“When you looked at that horrible flooding, that was a symptom of something that’s gone unaddressed for decades,” de Blasio told reporters on July 15. “I’m calling upon the state, the MTA: Own the problem, take the steps needed, get this revenue, help us fix this problem.”



WEATHER

Ida-Deluged NYC Drainage System All But Forgotten in Climate Battle

Recent projects have expanded sewer capacity in some neighborhoods. But antiquated storm pipes leave the city vulnerable to the new normal of massive rain storms. “We need to rainproof New York City,” one expert said.

Planning had already been underway for years.

De Blasio's OneNYC climate and infrastructure strategies are evolutions of former Mayor Mike Bloomberg's 2007 PlaNYC, which identified what the city would need to address flash floods and upgrade the drainage system.



2007 was fourteen years ago!

We will see this is plainly NOT TRUE

The unprecedented rainfall that remnants of Hurricane Ida dumped made New York City's climate vulnerabilities starkly visible, less than two weeks after Tropical Storm Henri broke previous rain records.

Recent deluges highlight how heavy rains have been largely left out of the equation, experts told THE CITY.

Flooding from Ida occurred because an overloaded, century-old drainage system was not built to accommodate that much water, city officials acknowledge.

Ida's downpour — more than 7 inches in all in many parts of the city — overwhelmed a sewer system already hard-pressed to handle run-of-the-mill heavy rain.

Faster Action

“This kind of radical change in weather is beyond the understanding, beyond the reach of our typical measuring tools,” de Blasio said. “Things are happening that our projections can’t track with accuracy or consistency, which means we have to assume the worst in a way we never had before.”

Bob Comments:

The list of at least 20 New York Hurricanes containing heavy rain and their flooding events is telling.

Political Leaders obviously have NOT had their staffs, or they themselves, have NOT conducted a “Maximum Credible Hazard Analysis” for New York City hurricane strikes.

At least 20 hurricanes have struck New York City or nearby with the rainfall amounts and rates comparable to the event of 1 Sep 2021 described here.

Mayor deBlasio’s statement this storm and its effects were “radical” and “beyond the understanding” are wimperings of an official who has not taken severe weather history and weather warnings seriously.

“This kind of radical change in weather is beyond the understanding, beyond the reach of our typical measuring tools,” de Blasio said. “Things are happening that our projections can’t track with accuracy or consistency, which means we have to assume the worst in a way we never had before.”

Bob Comments:

In the USA, the record 1-hour rainfall, 13.8 inches is Near Burnsville in Central WV, in 1943.

The Burnsville record in Central West Virginia had more than FOUR TIMES the 3.15 inches reported in an hour at Central Park, New York City the evening of 1 Sep 2021.

Mayor de Blasio’s cry that 3.15 inches of rainfall in an hour is a “radical change in weather,” is a statement of his clear ignorance of known weather events.

Benjamin Franklin wrote, “some are weatherwise, some are otherwise.” **Yep.**

Review of meteorological conventions

Upper Air data from Rawinsondes

Surface data from Surface Charts

.

DOD Skew-T Log P diagram.

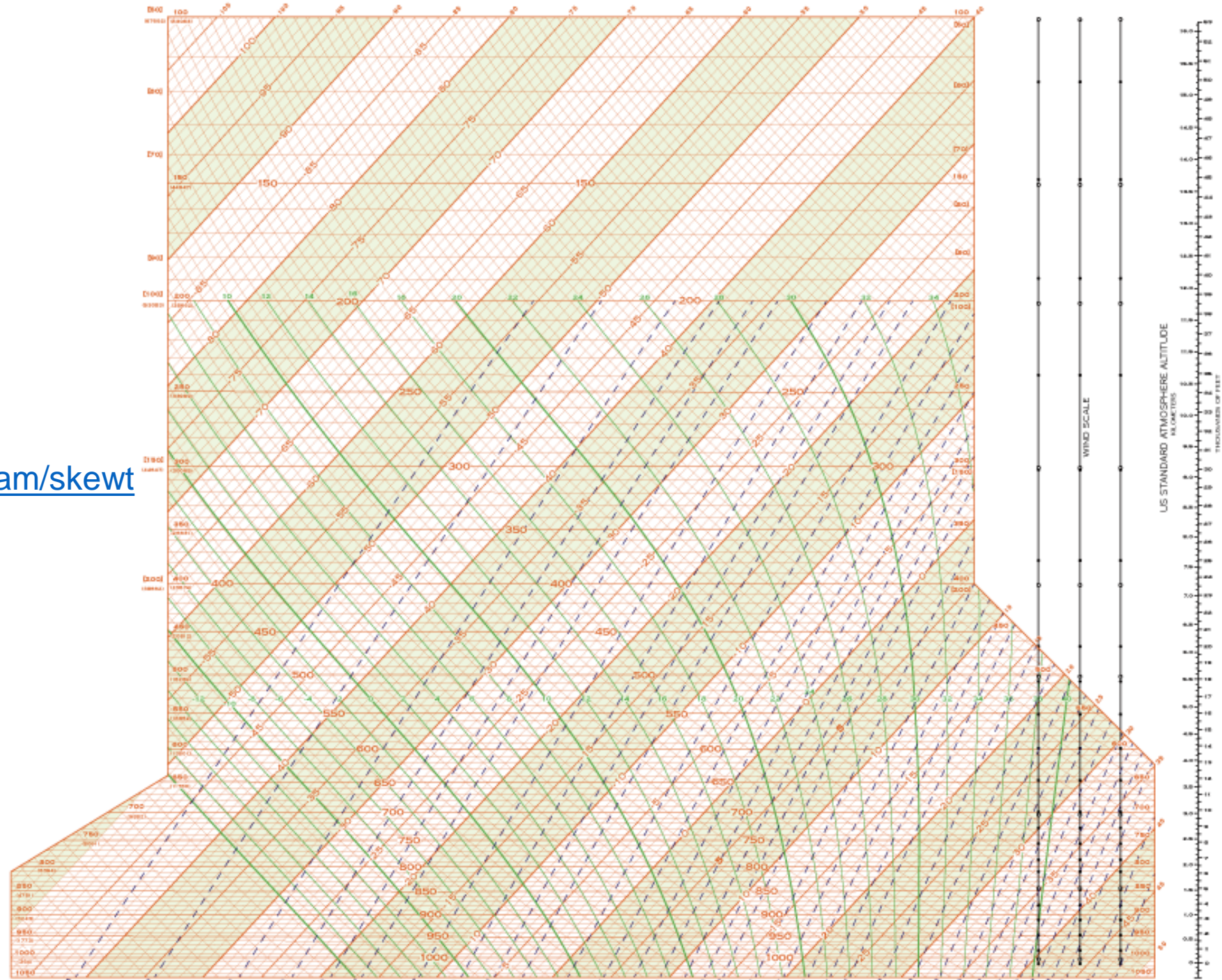
Now a standard “everywhere”

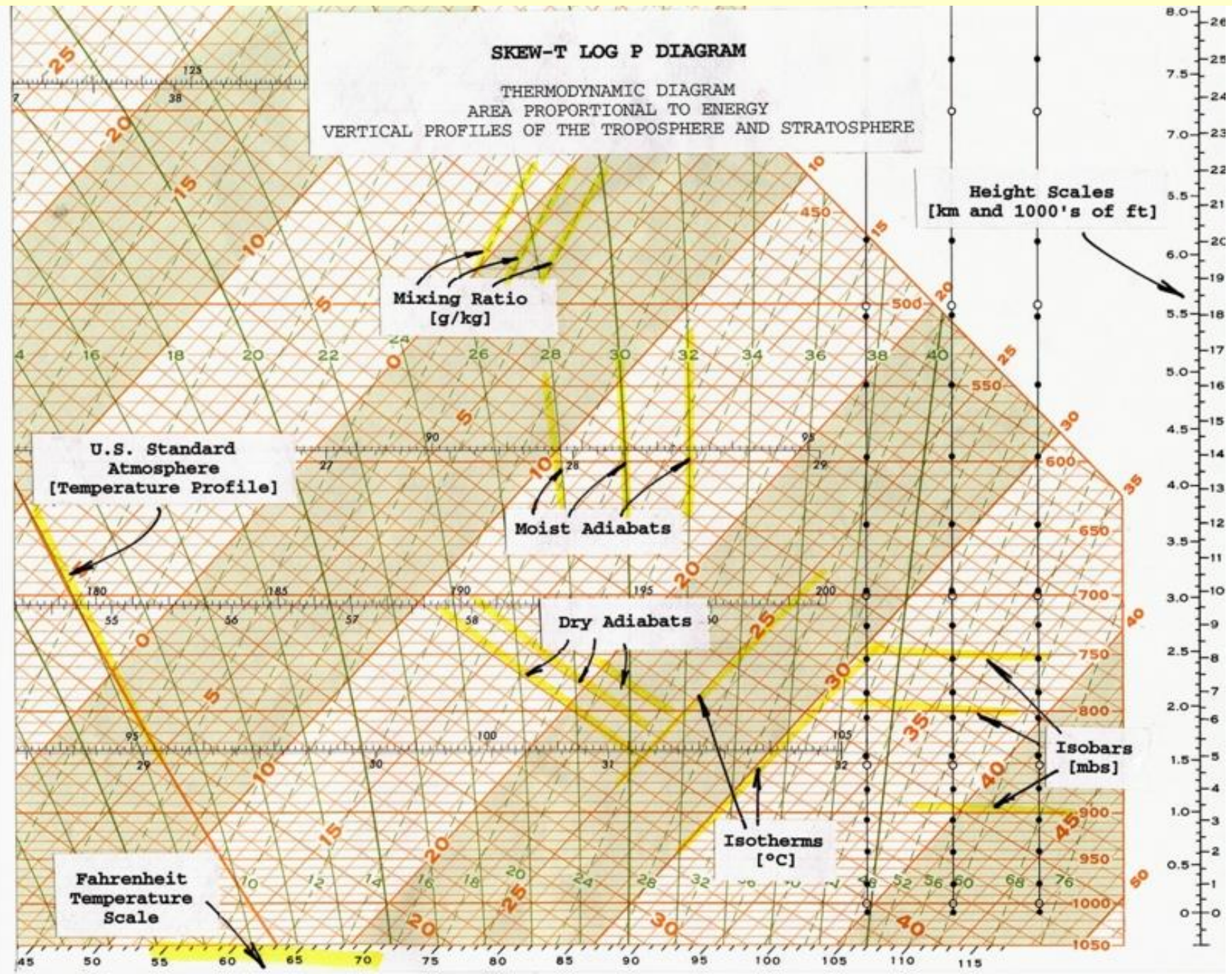
This one from NWS.

<https://www.weather.gov/jetstream/skewt>

Skewed Temperatures

Pressures, on a log scale in the vertical.



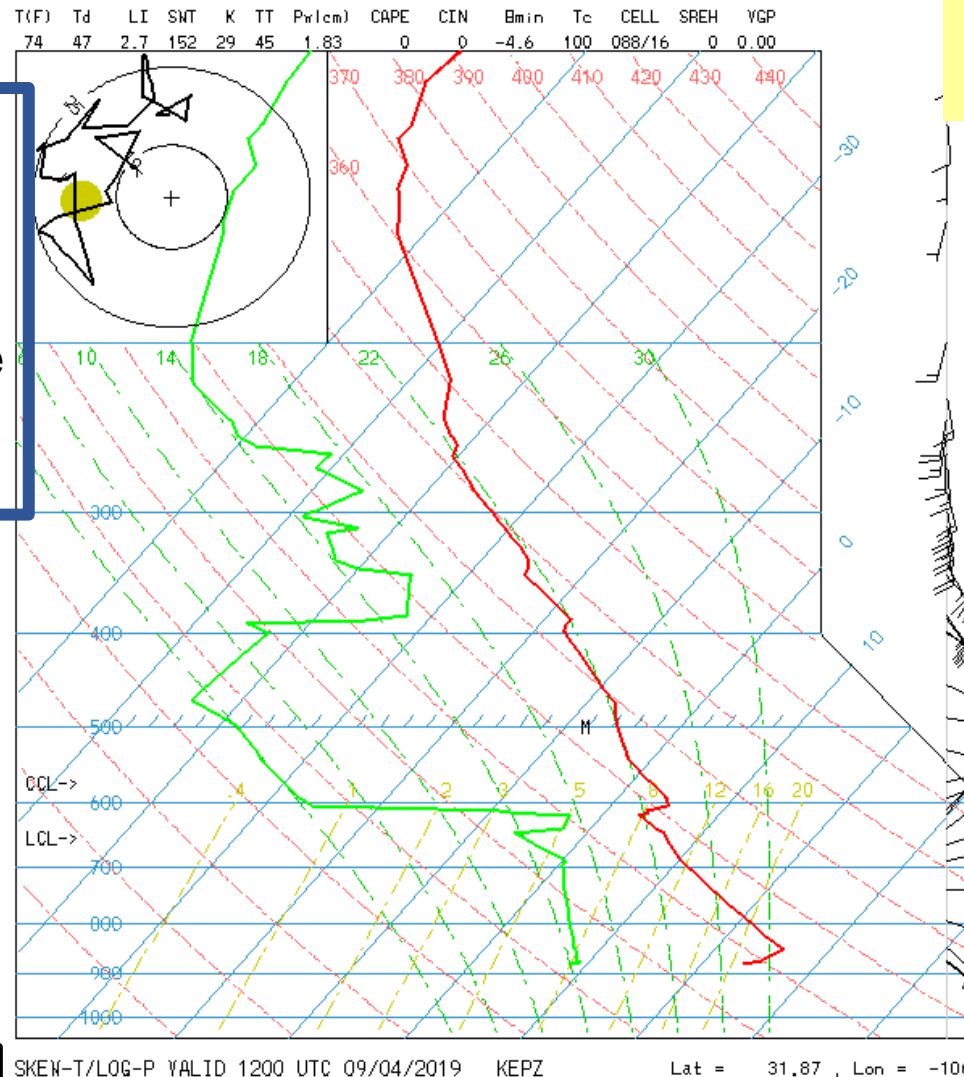


Pw = 1.83 cm

Also Blue
in the Vertical
Pressures decrease
logarithmically

The GREEN LINE
is the Dew Point
temperature
from the same
sounding.

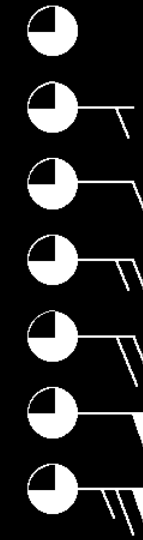
4 Sep 2019/1200Z



**“Graph paper” for
Meteorologists**

The RED line is
the temperature
from the weather
balloon sounding

Skewed Temperatures in Blue



Calm

5 Knots

10 Knots

15 Knots

20 Knots

50 Knots

65 Knots

Department of Atmospheric Sciences
University of Illinois at Urbana-Champaign

The Skew-T allows easy calculation of dozens of thermodynamic variables

El Paso sounding
12 Sep 2021/1200Z 0600L
EPZ means Santa Teresa NM
Airport.

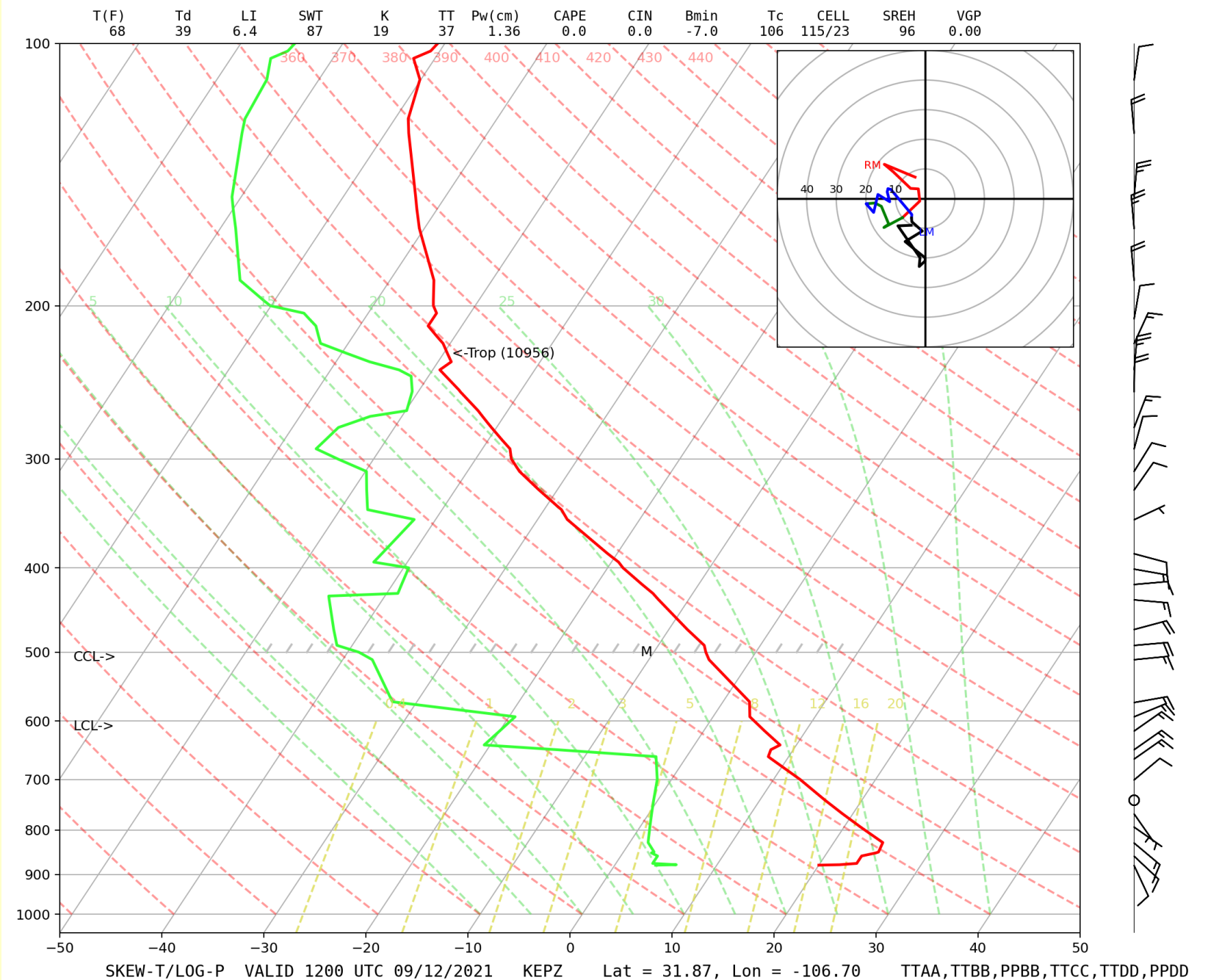
Under the Subtropical Ridge with
Numerous Subsidence Inversions.

Prominent surface inversion
(of temperature, which increases
with height, the inverse of the typical
daytime case)

All winds from East, except from
North above 300 mb or 30,000 ft
MSL.

One of the last soundings with
winds from the East.

We're at the end of the Monsoon
(Season) with Easterly winds.



El Paso sounding for 13 Sep 2021
at 0000Z or 1800L

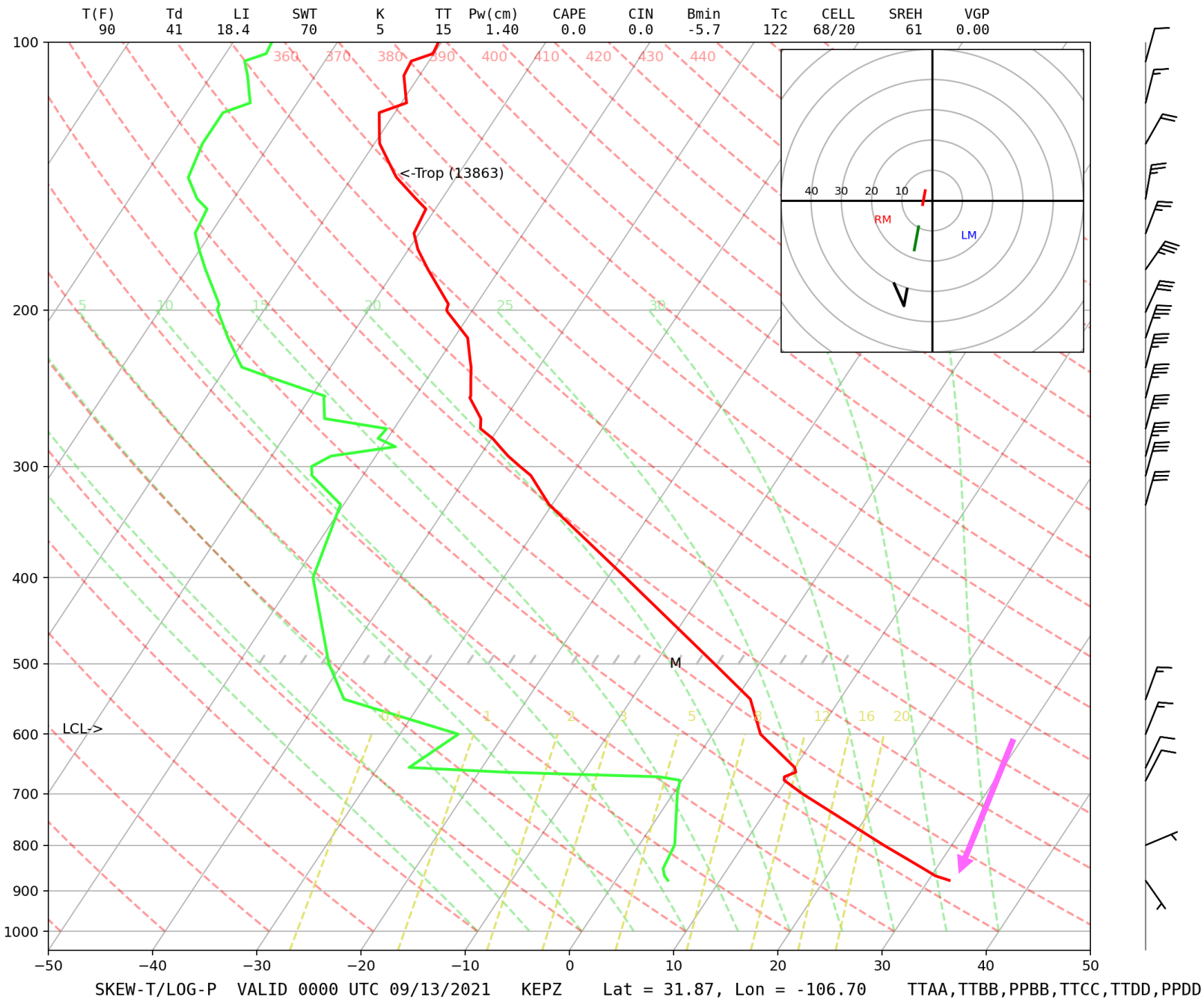
Well-developed planetary boundary
layer, PBL, surface to 680 mb or
about 11,000 ft MSL.

Surface boundary layer is super-
adiabatic. (Magenta Arrow)
The surface boundary layer “runs”
convection in the PBL.

Air in the PBL is well mixed through
convection.

The water vapor “q” is well mixed
and about constant at 5 parts per
thousand.

At 32C saturation mixing ratio is
35 parts/thousand
 $RH = q/q_s = 5/35$ about 14%



This is a September 2019 Sounding for EPZ.

Shows distinct superadiabatic Surface Layer, Magenta Arrow, which “runs” the PBL

Strong winds aloft abv, esp abv 30,000 Ft
“Leaved” tropopause

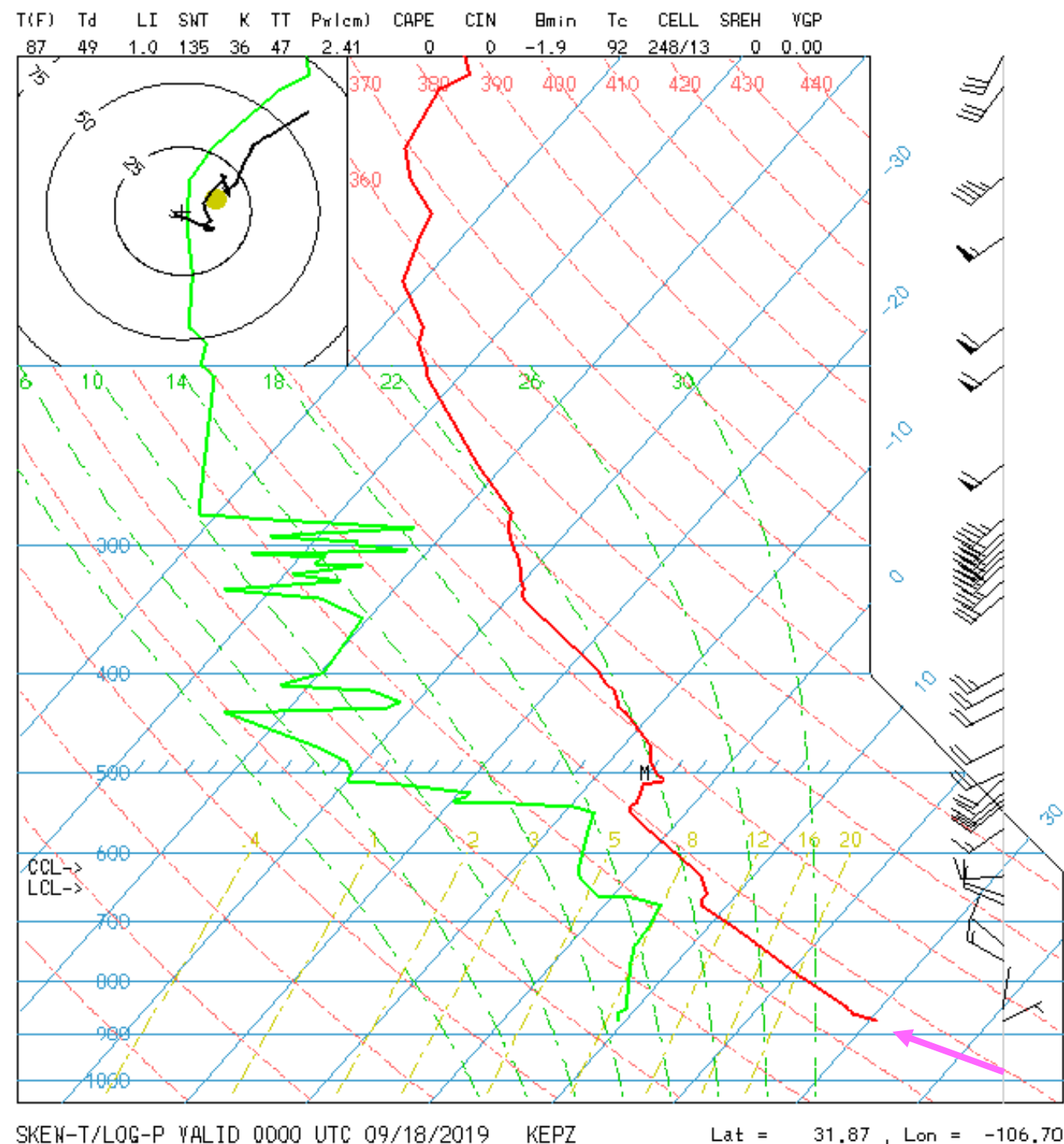
Subsidence inversions in Troposphere

Moist layers cirrus clouds

Two lower cloud layers
16,000 Ft

12,000 Ft

Planetary Boundary Layer
Surface Layer



http://weather.rap.ucar.edu/imagemap/imap_skewt.gif

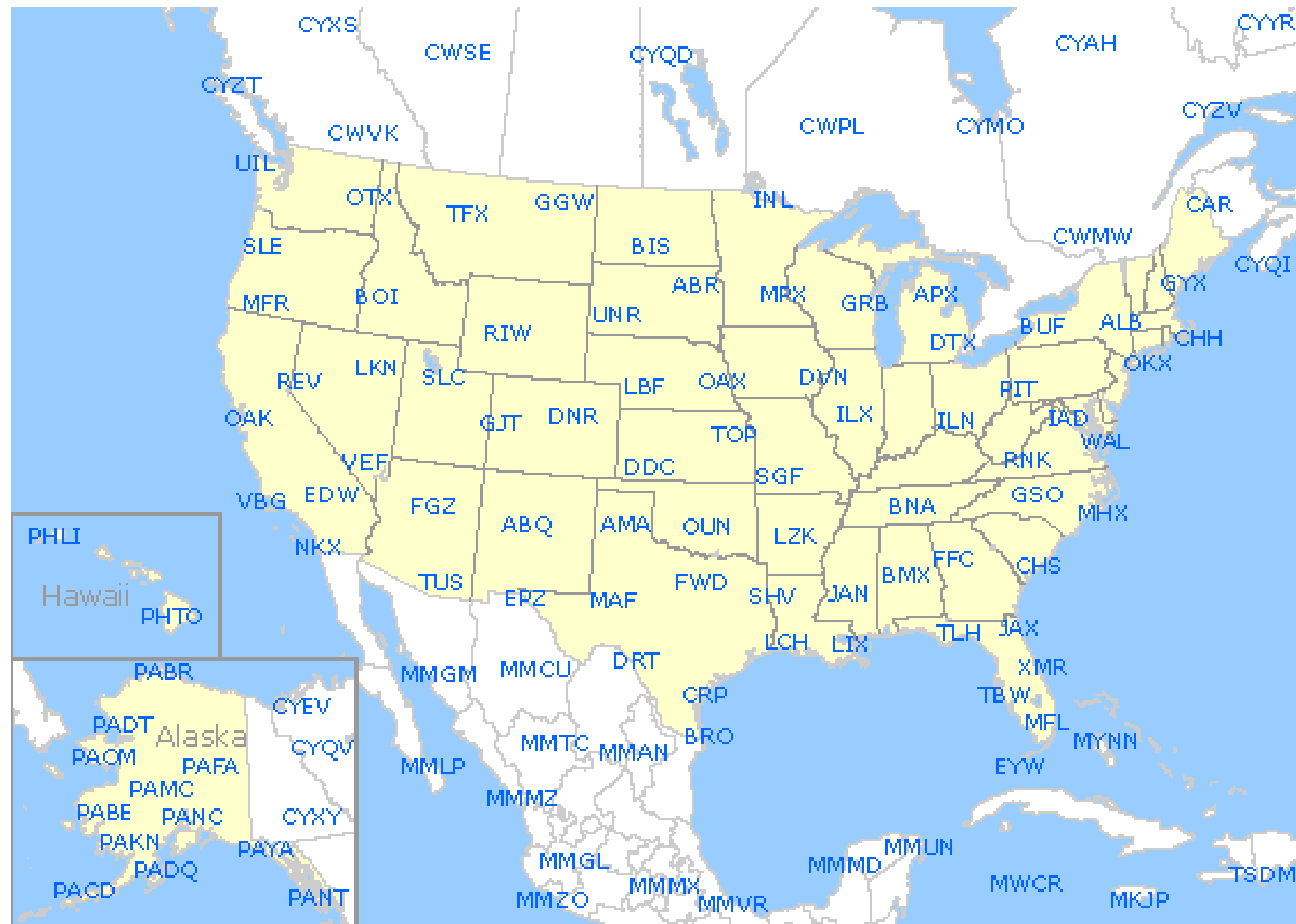
Map showing Rawinsonde stations.

For the US, they are the 3-letter locations.

OKX is Upton, Long Island NY, 65 miles east of NYC.

CHH is Chatham, MA, on the elbow of Cape Cod.

I did not find soundings from Chatham on the net on 2 Sep 0000z the evening of 1 Sep 2021.

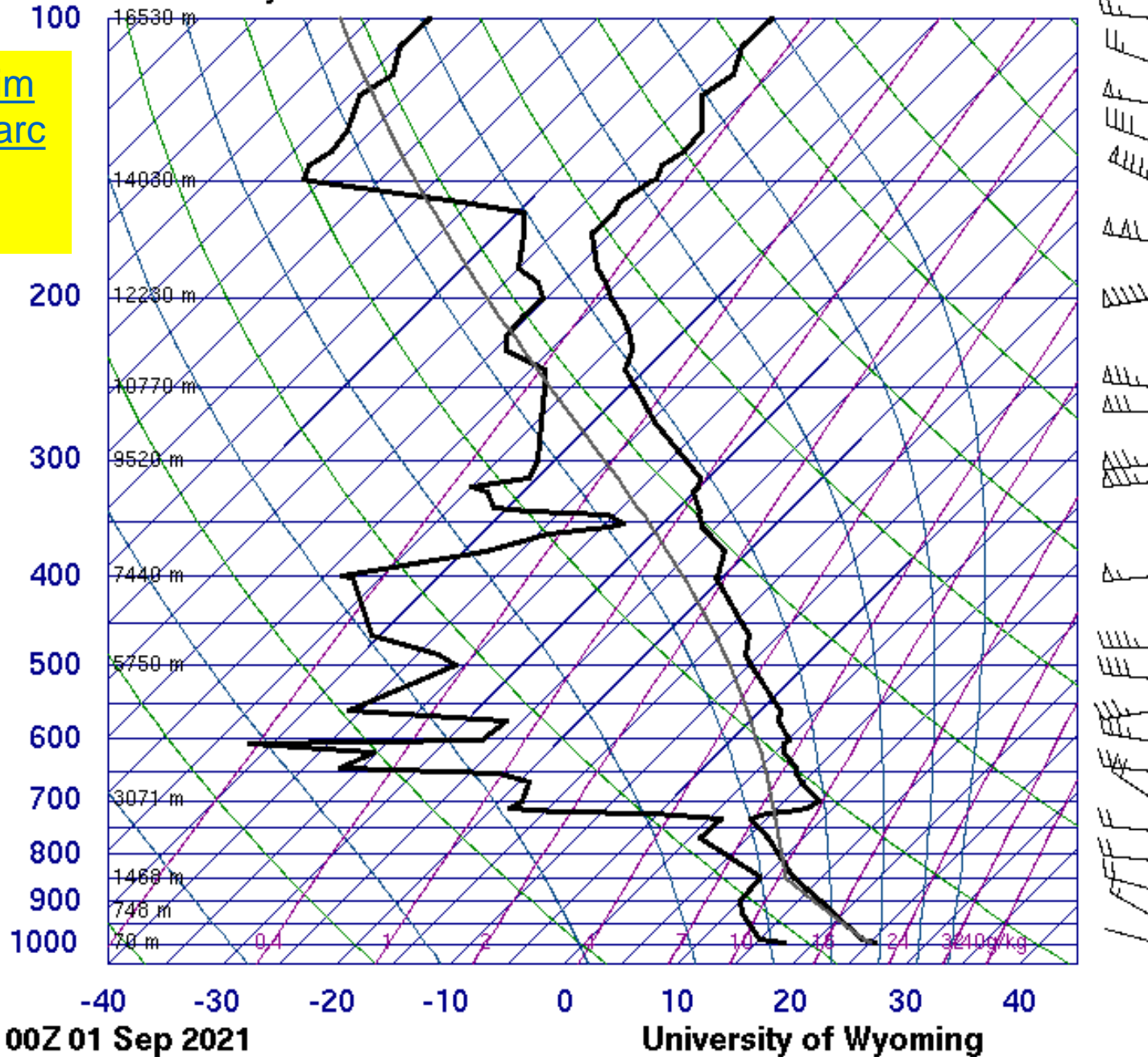


<http://weather.uwyo.edu/upperair/imagages/2021090100.72518.skewt.parc.gif>

Here is the
Albany, NY, sounding at
00Z on 1 Sep 2021

72518 ALB Albany

100



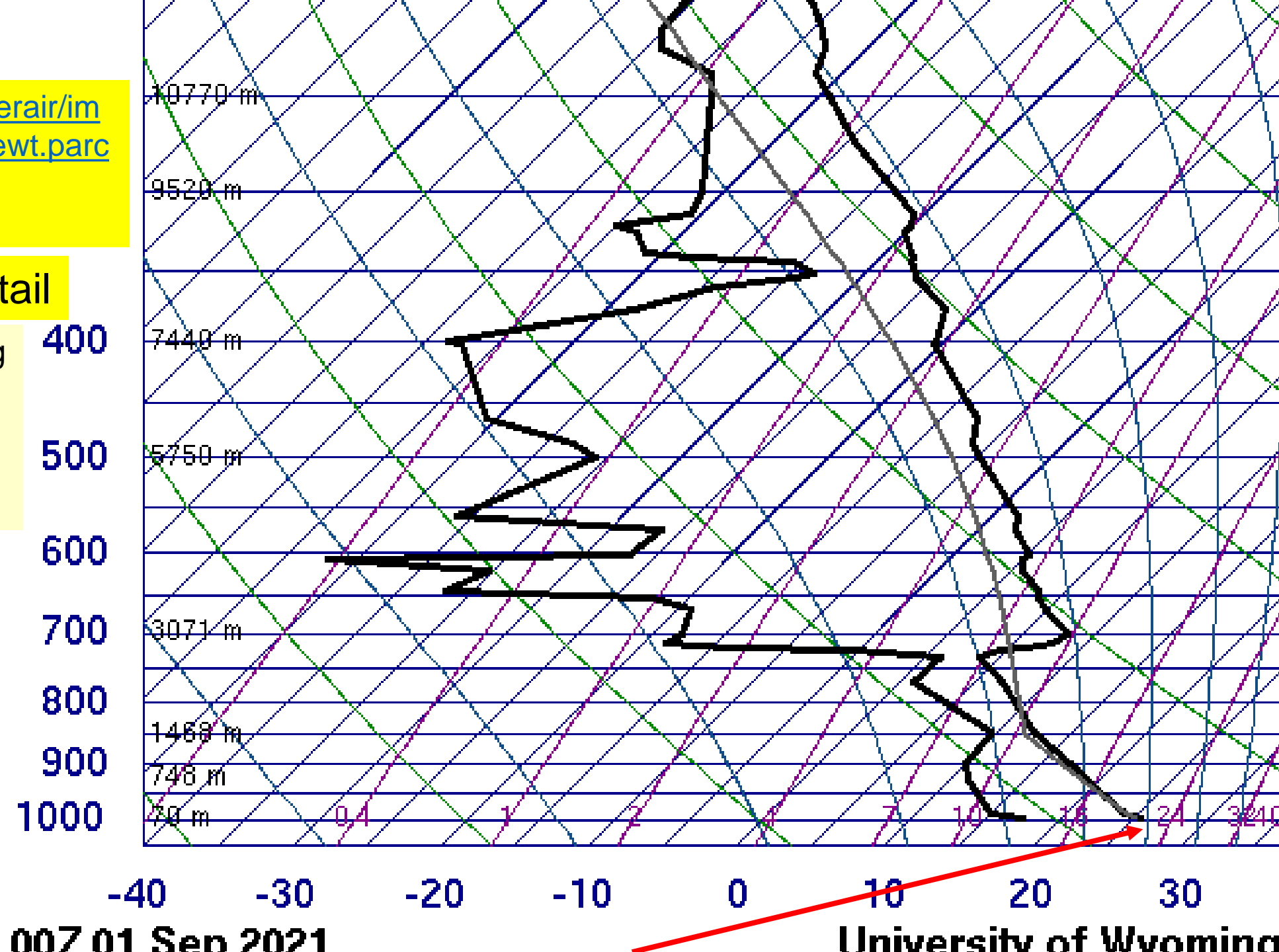
| | |
|------|--------|
| SLAT | 42.69 |
| SLON | -73.83 |
| SELV | 95.00 |
| SHOW | 3.55 |
| LIFT | 1.89 |
| LFTV | 1.45 |
| SWET | 195.4 |
| KINX | 6.20 |
| CTOT | 19.40 |
| VTOT | 22.50 |
| TOTL | 41.90 |
| CAPE | 35.94 |
| CAPV | 55.10 |
| CINS | -23.7 |
| CINV | -13.0 |
| EQLV | 721.3 |
| EQTV | 719.2 |
| LFCT | 815.1 |
| LFCV | 831.0 |
| BRCH | 1.25 |
| BRCV | 1.92 |
| LCLT | 285.2 |
| LCLP | 853.3 |
| LCLE | 329.3 |
| MLTH | 298.5 |
| MLMR | 10.56 |
| THCK | 5680. |
| PWAT | 24.88 |

<http://weather.uwyo.edu/upperair/images/2021090100.72518.skewt.parc.gif>

Albany sounding detail

The shape of this sounding is an indication of severe weather. There were tornadoes in the NYC area the evening of 1 Sep 2021

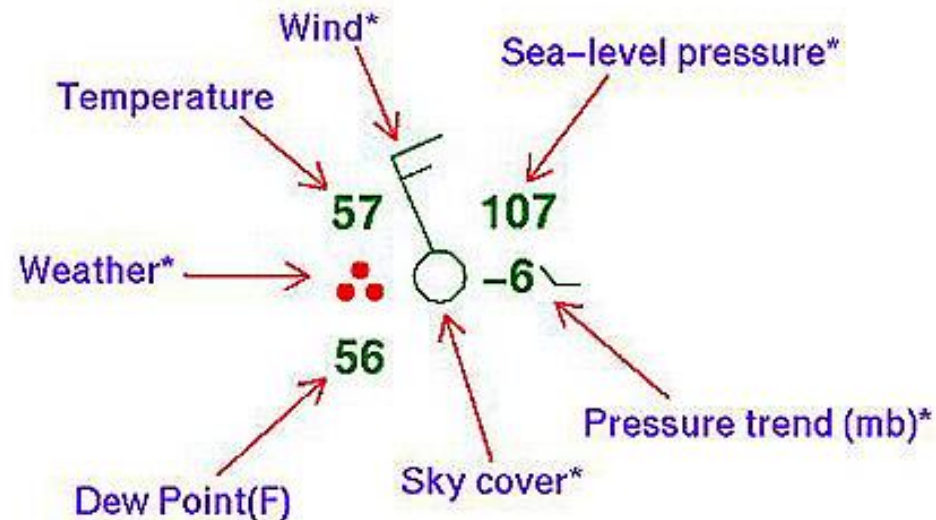
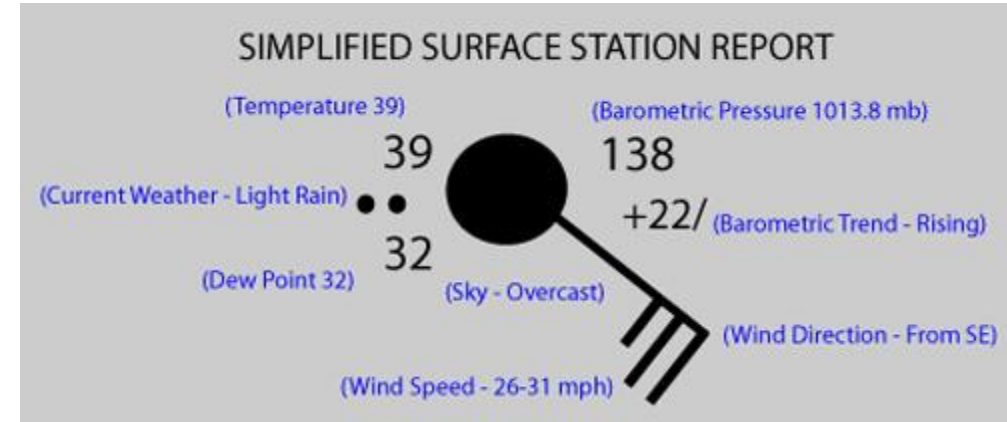
Superadiabatic Surface Layer (Red Arrow)



007 01 Sep 2021

University of Wyoming

Surface weather observations are plotted on a map in this stylistic manner:

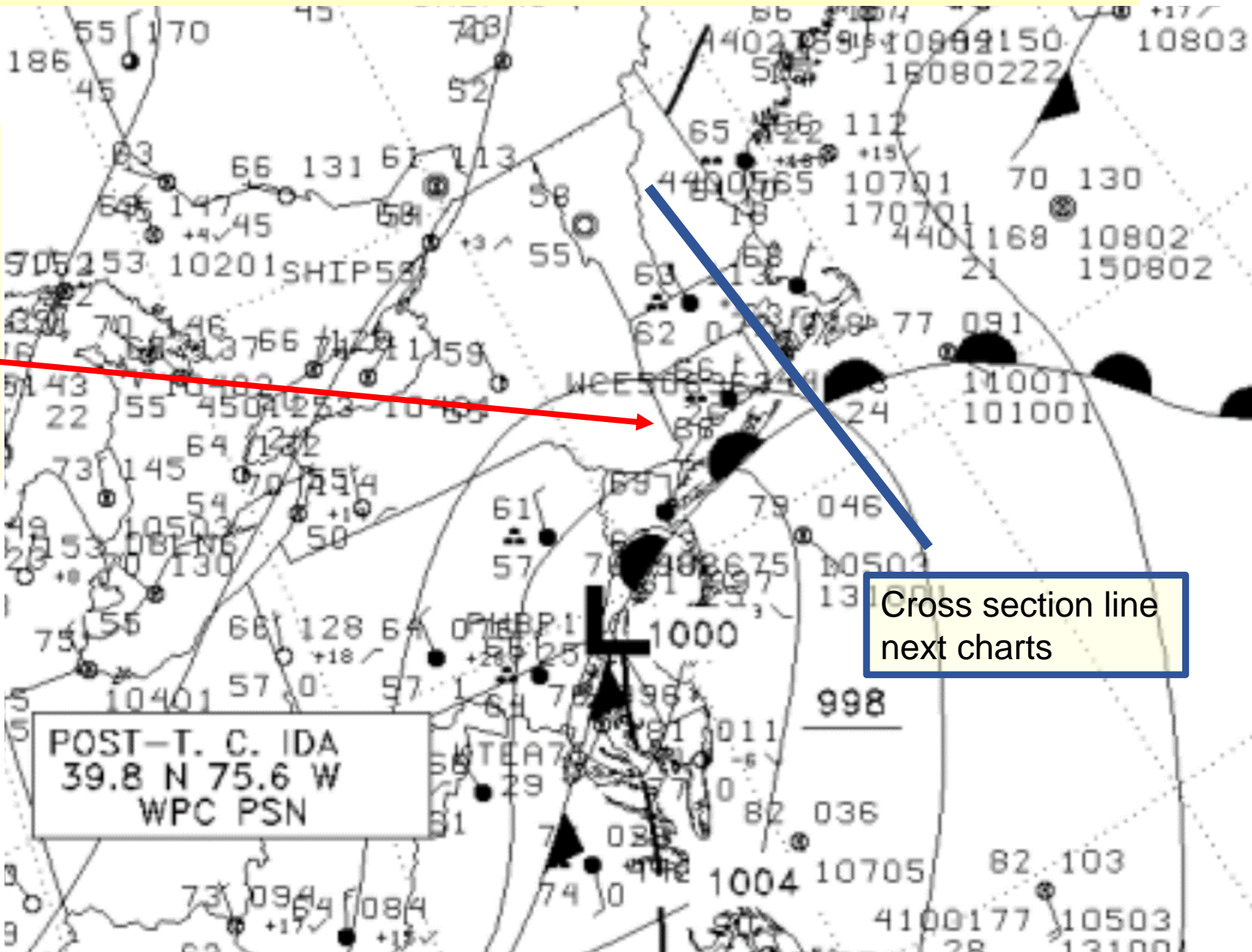


Let's try to find the max credible surface temperatures that would feed the thunderstorms over NYC and a lifting mechanism, the frontal surface

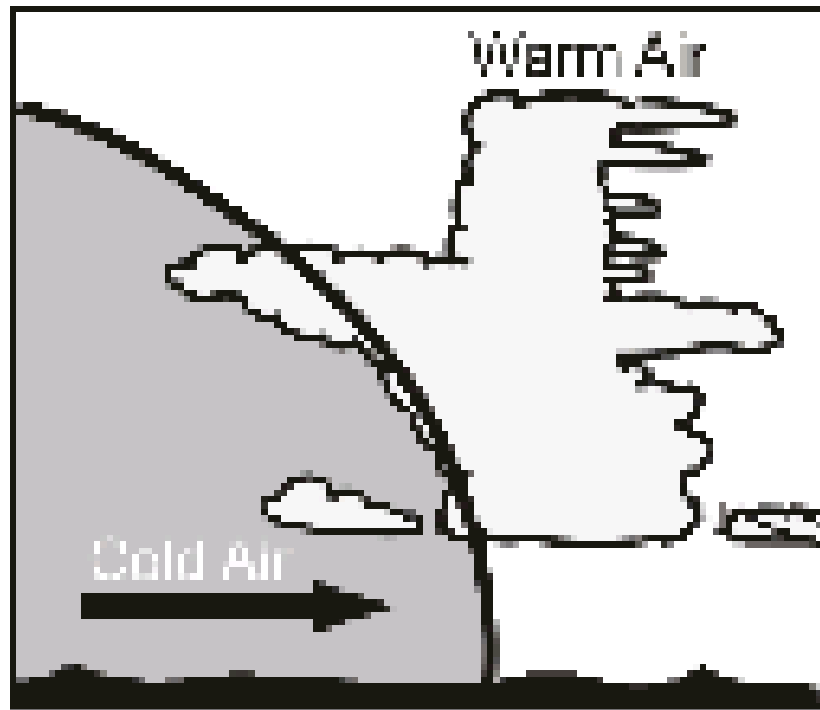
Surface Map from Cliff Mass' blog post.

This looks like a surface temperature of 86F, or 30C

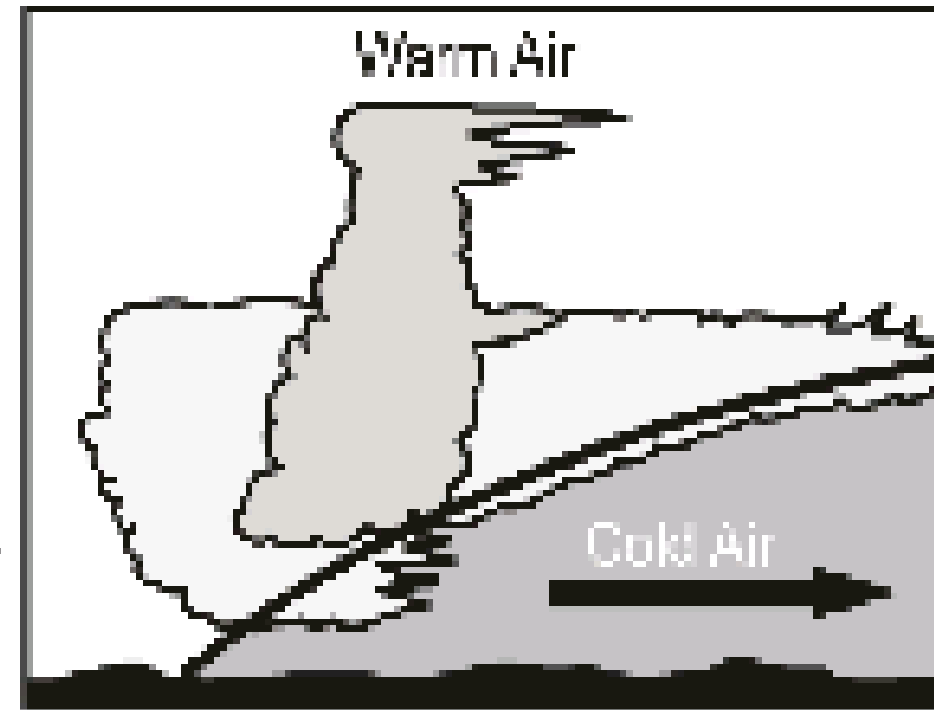
In Blue, cross-section line for warm front.



COLD FRONT



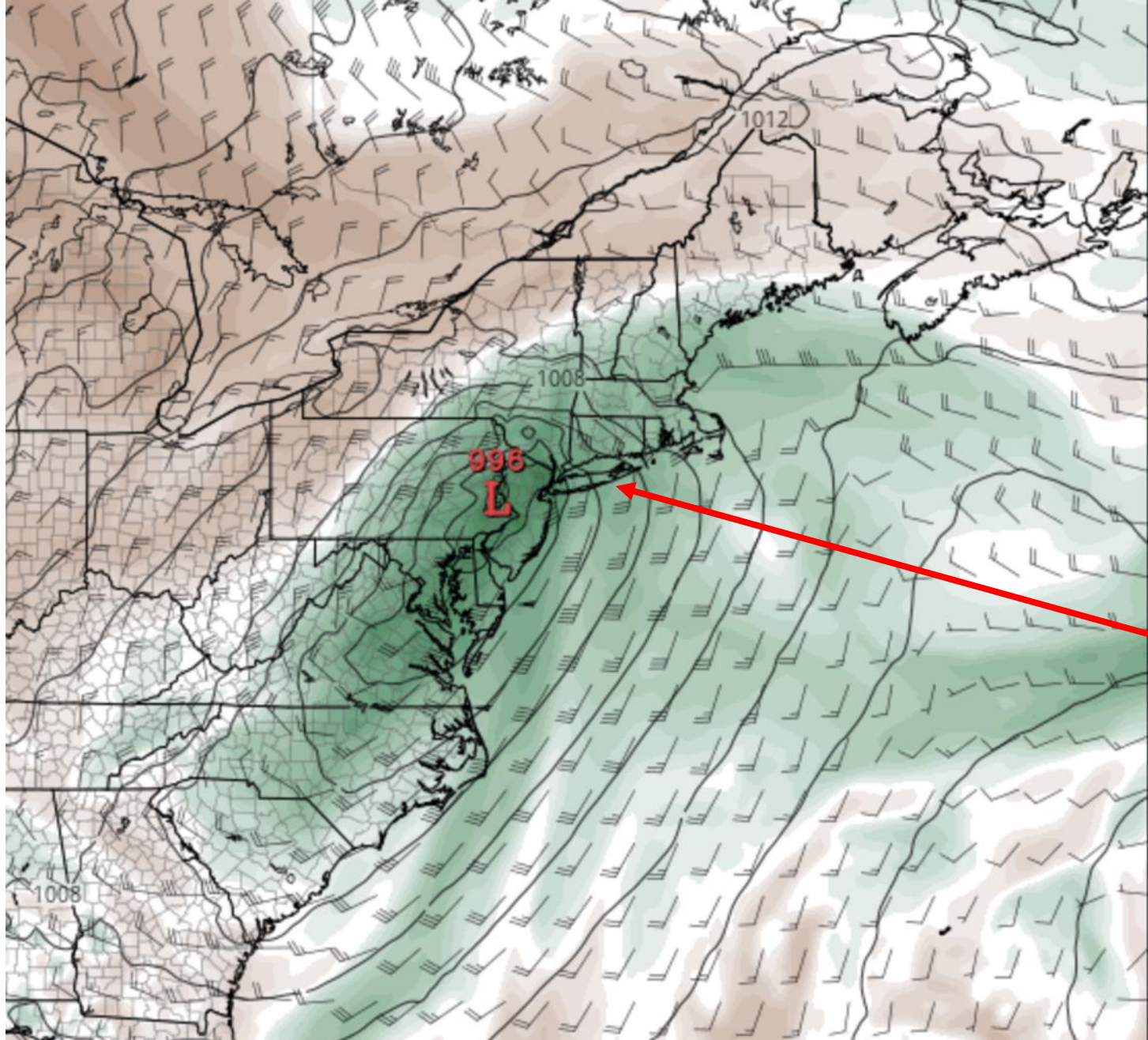
WARM FRONT



The slope of a cold front is steeper than that of a warm front because of the friction between the cold air and surface.



Geography reinforces the effects of the approaching low-pressure system



Wind flow over the ocean is less affected by surface friction.

When the winds come onshore surface friction increases.

Surface friction is increased by NYC skyscrapers.

There is local low level convergence.

The lifting by the convergence is aided by the Urban Heat Island Effect.

Lifting is aided by the warm front

The warm water vapor over the ocean fuels the thunderstorms

Urban Heat Island effect

EPA Characterizes the UHI

Table 1: Basic Characteristics of Surface and Atmospheric Urban Heat Islands (UHIs)⁴

| Feature | Surface UHI | Atmospheric UHI |
|---|---|---|
| Temporal Development | <ul style="list-style-type: none">• Present at all times of the day and night• Most intense during the day and in the summer | <ul style="list-style-type: none">• May be small or non-existent during the day• Most intense at night or predawn and in the winter |
| Peak Intensity (Most intense UHI conditions) | <ul style="list-style-type: none">• More spatial and temporal variation:<ul style="list-style-type: none">▪ Day: 18 to 27°F (10 to 15°C)▪ Night: 9 to 18°F (5 to 10°C) | <ul style="list-style-type: none">• Less variation:<ul style="list-style-type: none">▪ Day: -1.8 to 5.4°F (-1 to 3°C)▪ Night: 12.6 to 21.6°F (7 to 12°C) |
| Typical Identification Method | <ul style="list-style-type: none">• Indirect measurement:<ul style="list-style-type: none">▪ Remote sensing | <ul style="list-style-type: none">• Direct measurement:<ul style="list-style-type: none">▪ Fixed weather stations▪ Mobile traverses |
| Typical Depiction | <ul style="list-style-type: none">• Thermal image | <ul style="list-style-type: none">• Isotherm map• Temperature graph |

1.1 Surface Urban Heat Islands

On a hot, sunny summer day, the sun can heat dry, exposed urban surfaces, like roofs and pavement, to temperatures 50 to 90°F (27 to 50°C) hotter than the air,⁵ while shaded or moist surfaces—often in more rural surroundings—remain close to air temperatures. Surface urban heat islands are typically present day and night, but tend to be strongest during the day when the sun is shining.

Roofs and Pavement 27C to 50C hotter than the air

How Weather Influences Urban Heat Islands

Summertime urban heat islands are most intense when the sky is clear and winds are calm. Heavy cloud cover blocks solar radiation, reducing daytime warming in cities. Strong winds increase atmospheric mixing, lowering the urban-rural temperature difference. This document, *Reducing Urban Heat Islands: Compendium of Strategies*, focuses on mitigating summertime heat islands through strategies that have maximum impact under clear, calm conditions.

https://casf.me/wp-content/uploads/2017/03/PDF_Measuring-the-Las-Cruces-Urban-Heat-Island_1_Apr_2013.pdf

Urban Heat Island Las Cruces, NM

17 Feb 2013

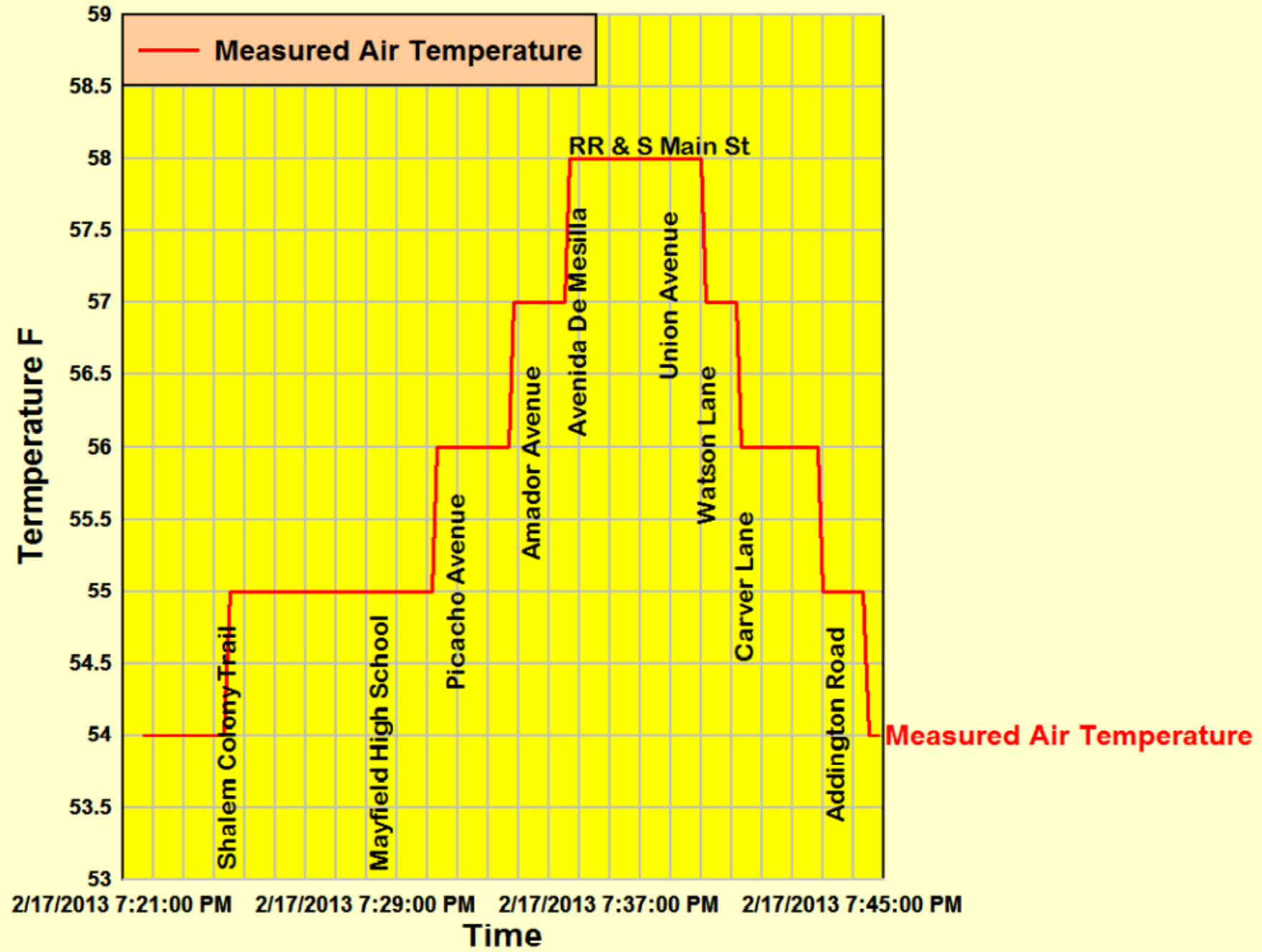
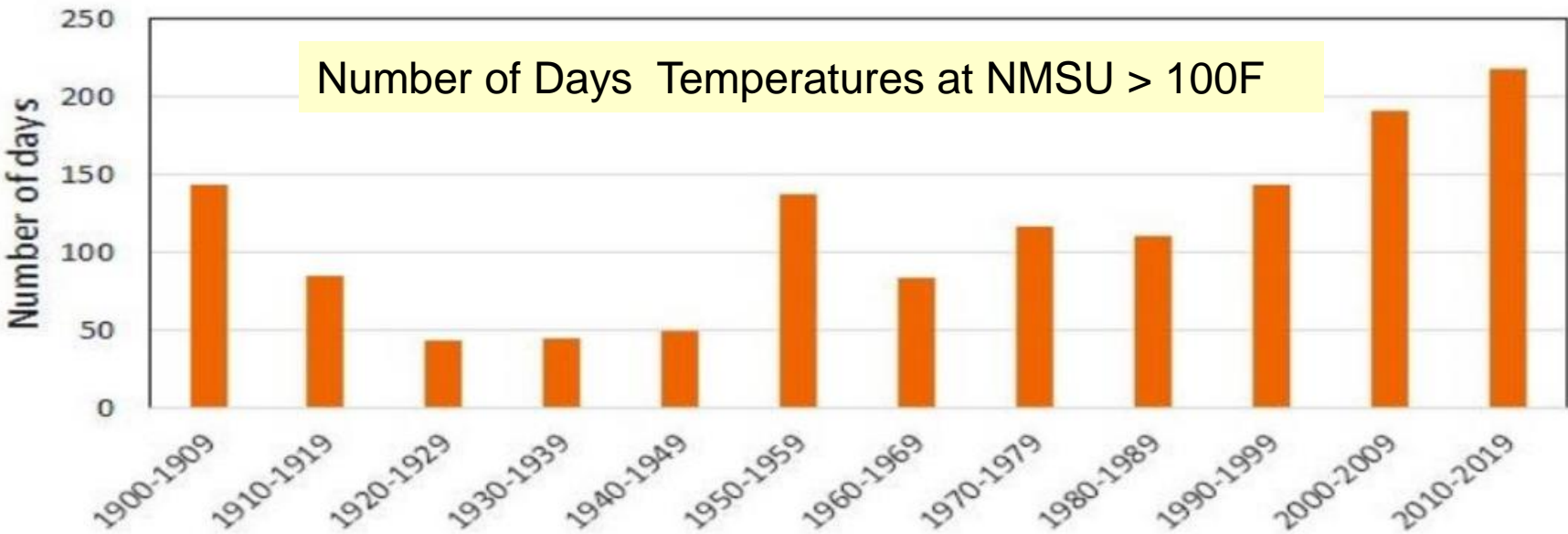
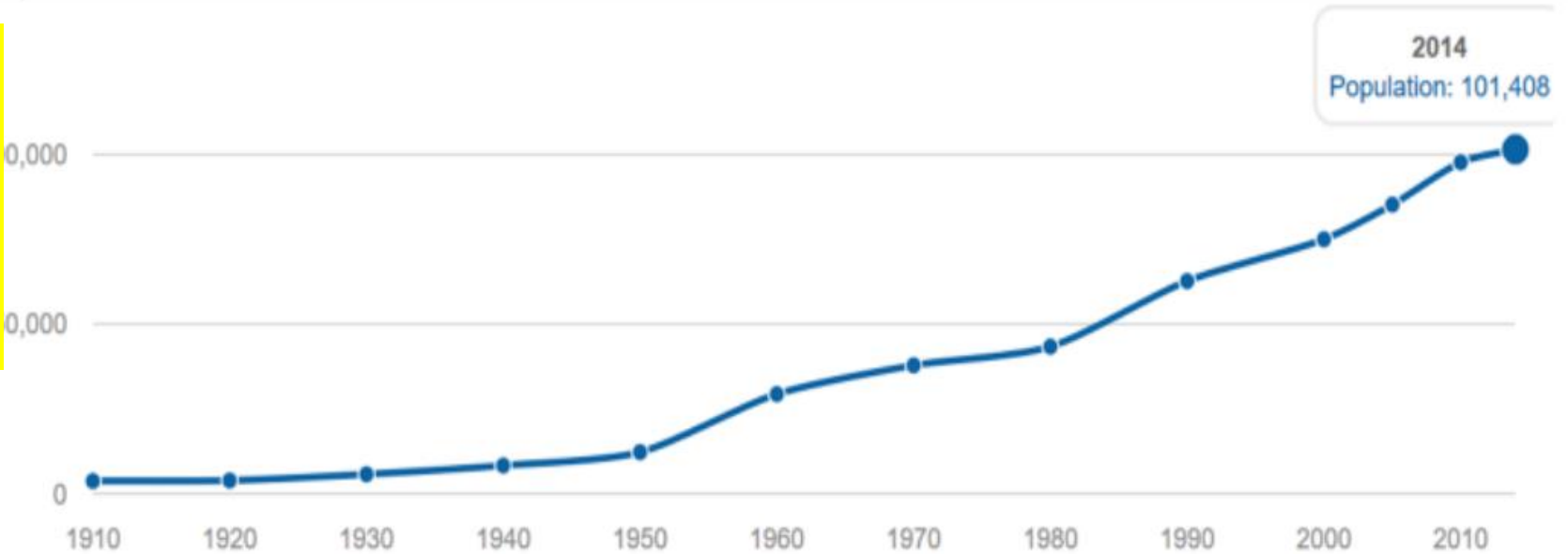


Chart right shows the number of days NMSU's surface temperatures exceed 100F, top, and Las Cruces' population since NM was a territory of the USA, bottom.



Except for severe drought years of the 1950s, for the past century, the number of days hotter than 100F parallels the urban growth of Las Cruces, NM.



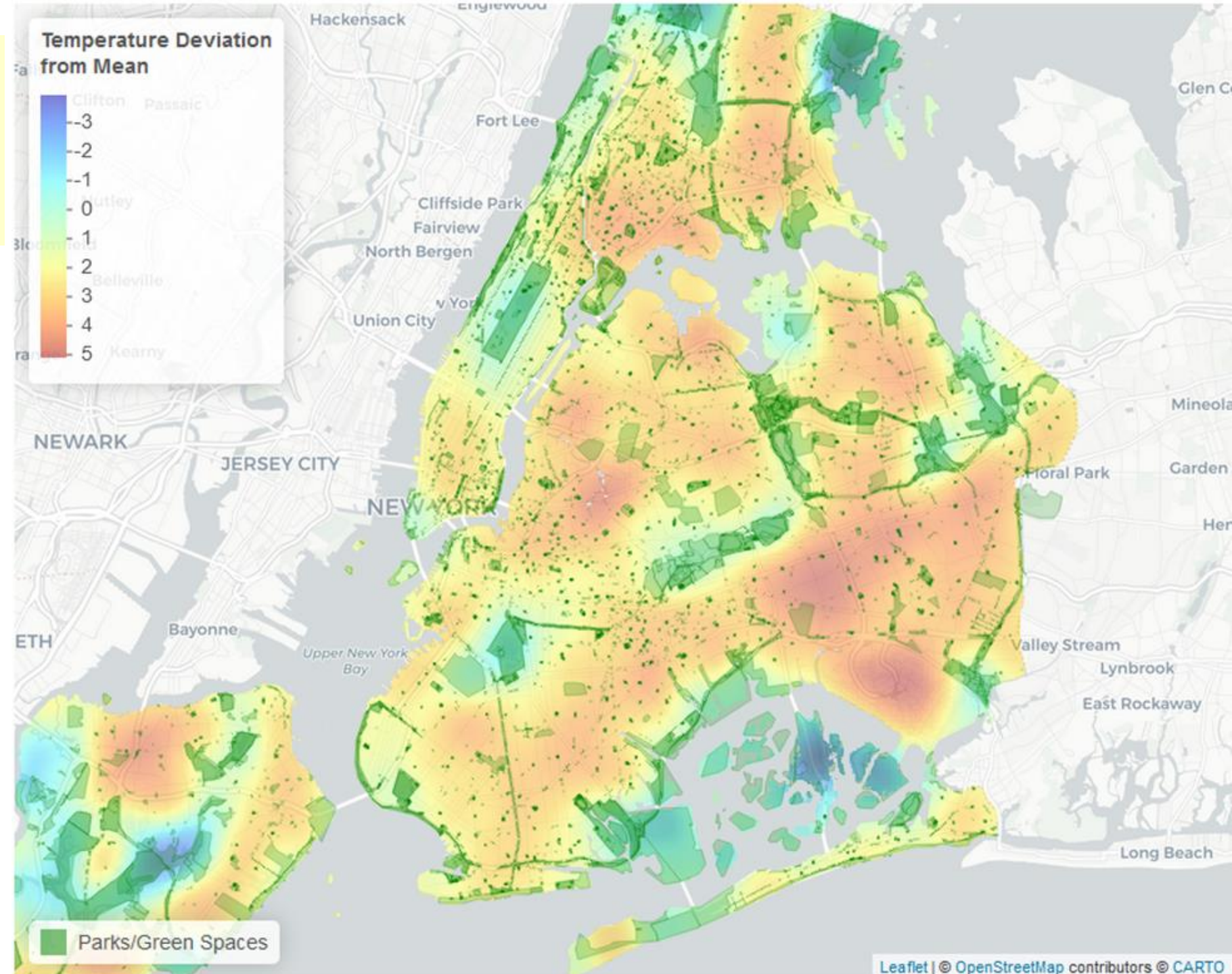
Heat island map from
New York City Council:

<https://council.nyc.gov/data/heat/>

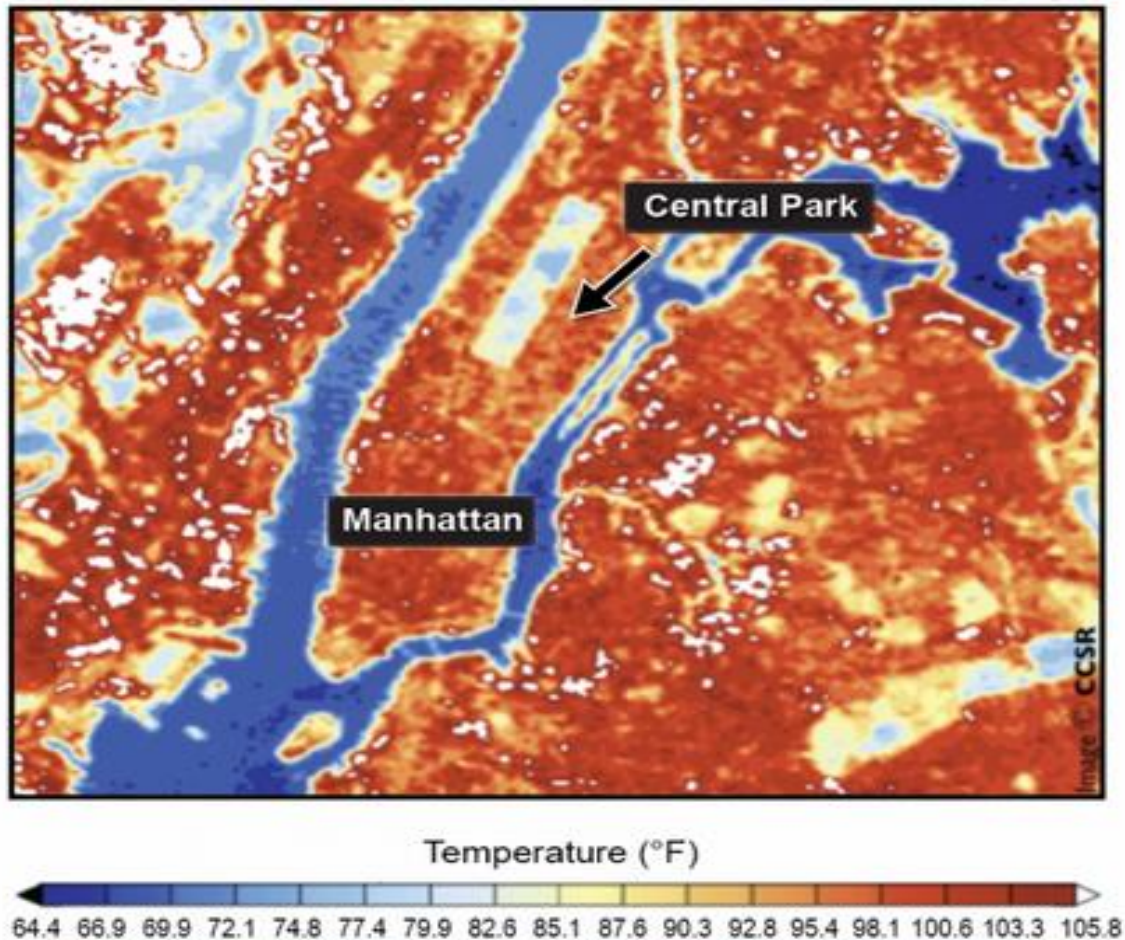
My interpretation of deep
red-orange areas:

The scarcity of green
dots, lines, or areas indicates
paved-over, roofed-over
or otherwise, areas of little
or no grassy areas where
excess rainfall can soak into
the earth.

Heavy rainfall runs off.



Urban Heat Island



My interpretation
of deep red-orange areas:

The scarcity of blue
dots, lines or areas indicates
paved-over, roofed-over
or otherwise, areas of little
or no grassy areas where
excess rainfall can soak into
the earth.

Heavy rainfall runs off.

Surface temperatures in New York City on a summer's day show the "urban heat island," with temperatures in populous urban areas being approximately 10°F higher than the forested parts of Central Park. Dark blue reflects the colder waters of the Hudson and East Rivers. (Figure source: Center for Climate Systems Research, Columbia University).

Map from a UHI study published by the AMS
https://coolrooftoolkit.org/wp-content/uploads/2012/05/NYC-2009_Rosenzweig_etal.pdf

not particularly useful since it was at sunrise

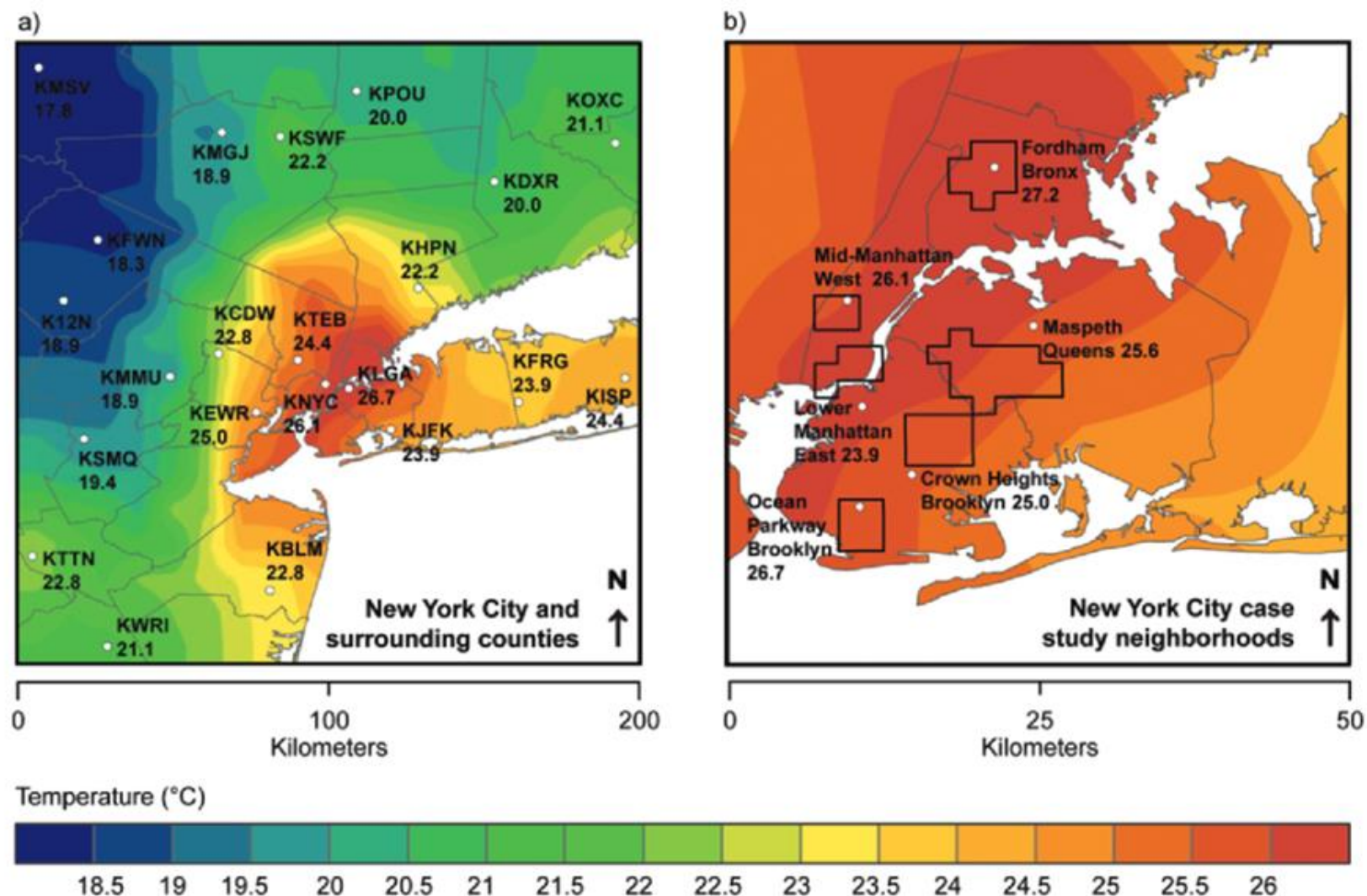
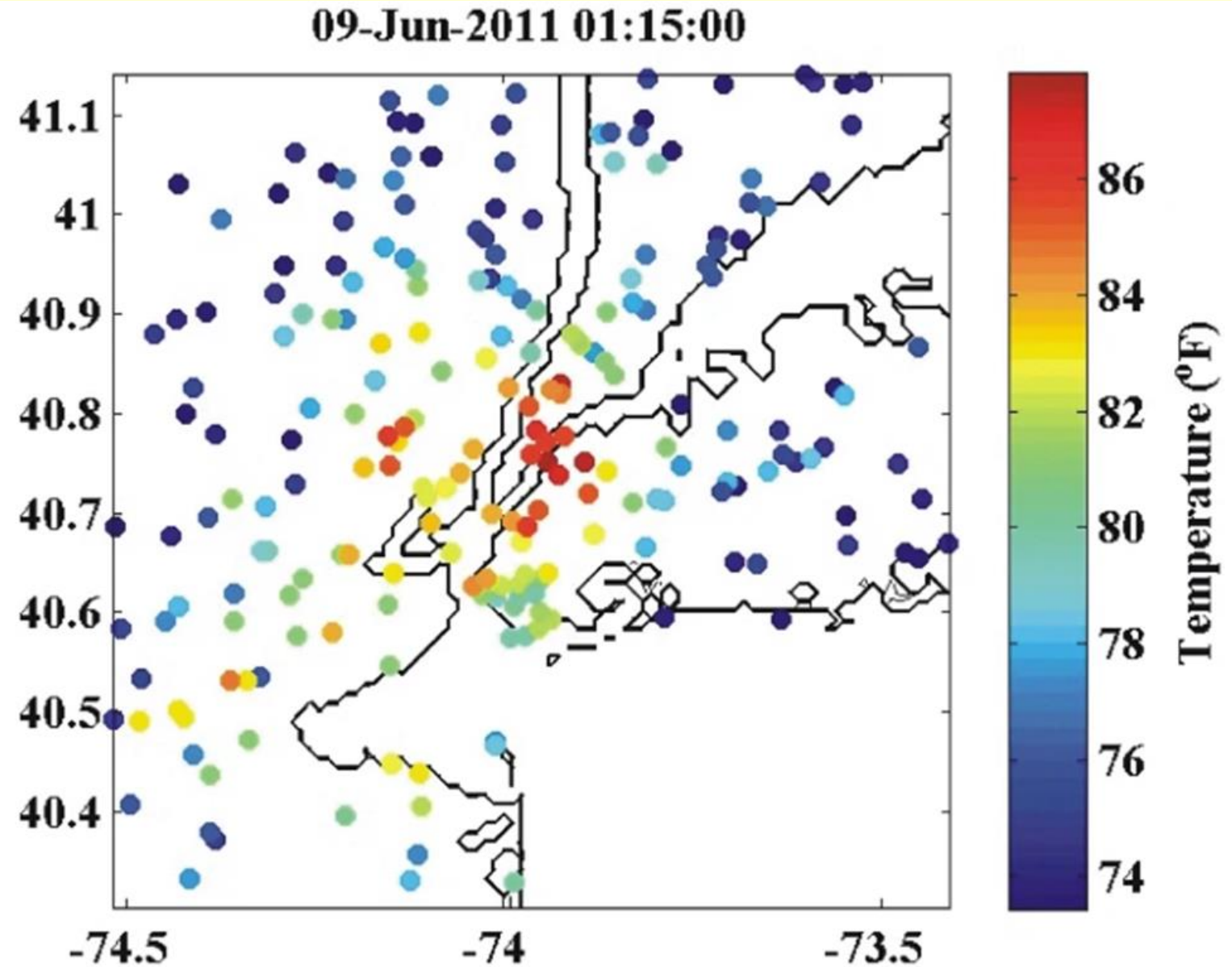


FIG. 1. New York City's urban heat island at 0600 EST 14 Aug 2002 based on surface air temperature readings taken at NWS and WeatherBug stations. (a) New York City and surrounding counties, with locations of NWS stations. (b) New York City case study neighborhoods, with locations of WeatherBug stations. Note: Inverse-weighted-distance interpolation with three neighbors, a power value of 1, a variable search radius, and an output grid size of 0.1° were applied to meteorological data. All NWS and WeatherBug data shown were used in the interpolation, with the exception of the WeatherBug station representing Lower Manhattan East, which was excluded because of low confidence in data quality. Because multiple neighboring points contributed to the interpolation, contours may differ from individual station temperatures.

Map of temperatures taken at 0115 Local showing 12F UHI ten years ago. Temperatures in Newark nearly as hot as Queens:
<https://seaandskyny.com/2011/09/23/fall-colors-and-the-urban-heat-island/>



Climate Central blurts out this: New York City is up to 20F warmer than suburbs:
<https://www.climatecentral.org/news/urban-heat-islands-threaten-us-health-17919>

SUMMER IN THE CITY New York ▼

CLIMATE  CENTRAL

SUMMER HEAT IN

New York

UP TO

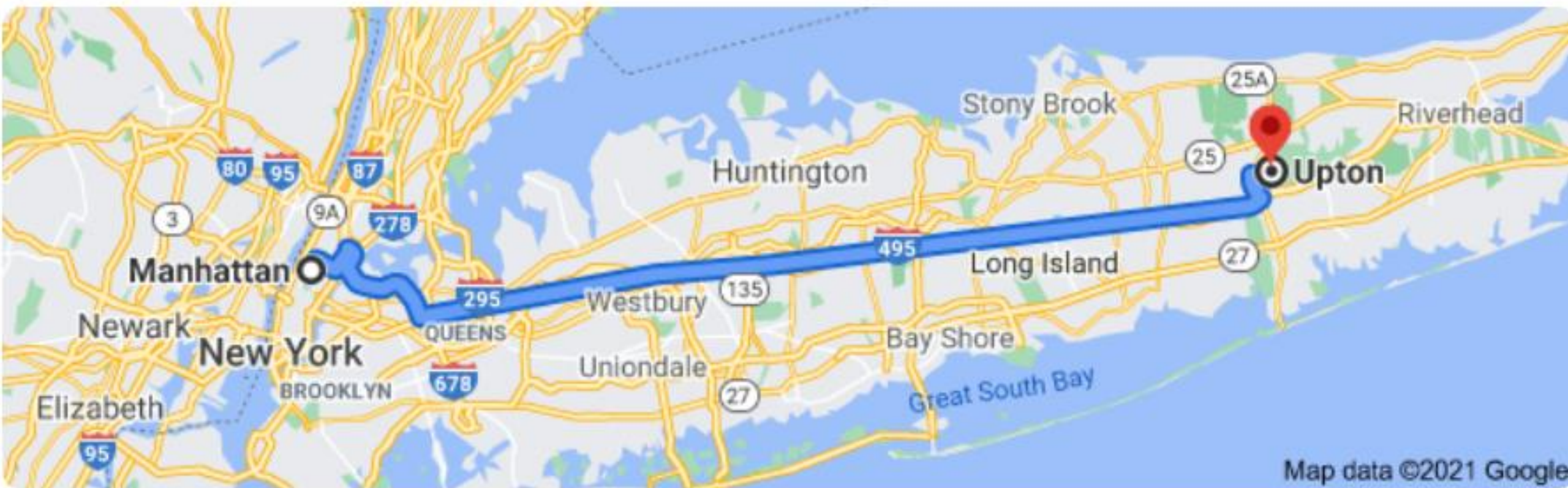
20.0° HOTTER IN THE CITY
THAN IN NEARBY
RURAL AREAS

AVERAGE

2.7° CITY SUMMERS ARE
HOTTER THAN IN
RURAL AREAS

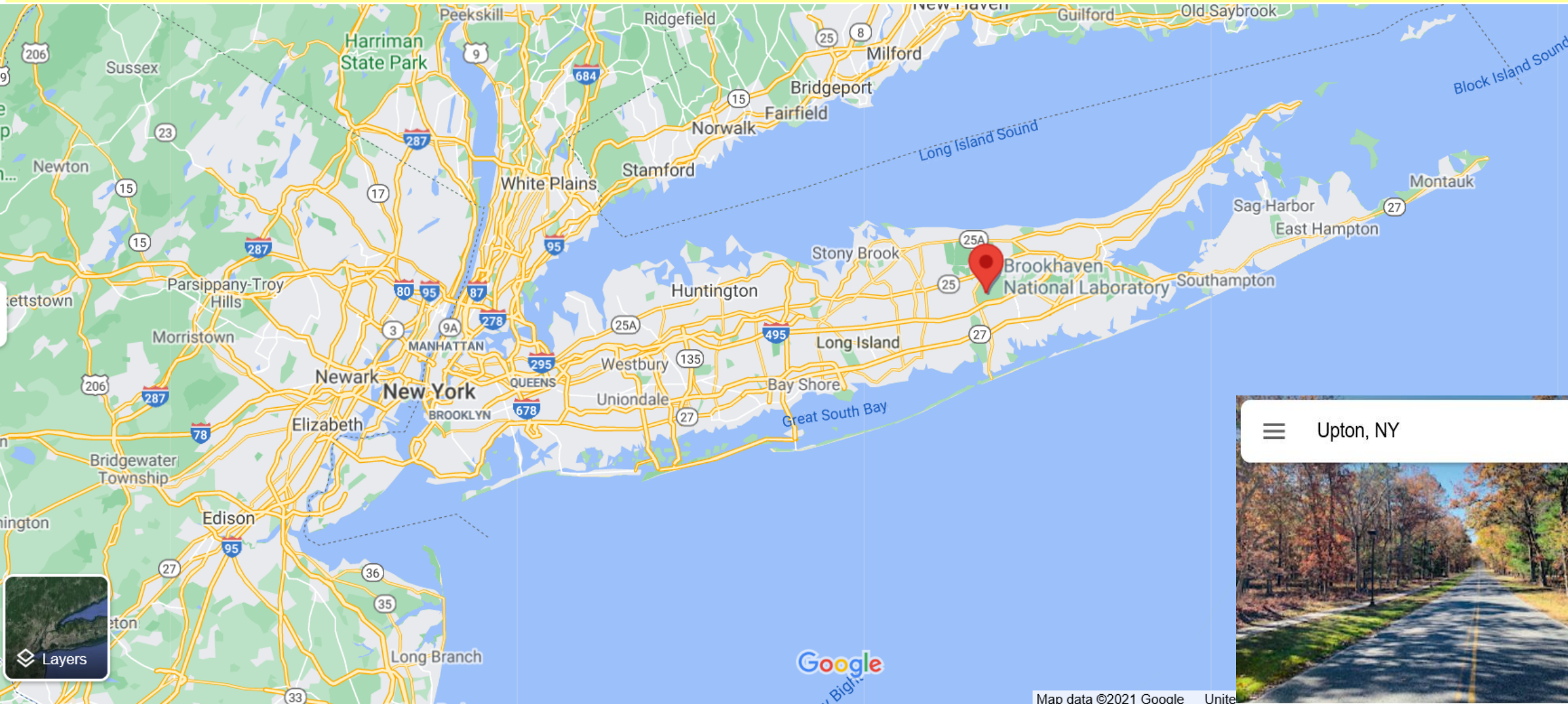


It is about 65 miles from Manhattan to Upton, NY, where the closest sounding to NYC is made.



<https://www.google.com/maps/place/Upton,+NY/@40.8322092,-73.7353486>

Upton, New York is a hamlet and census-designated place on Long Island in the town of Brookhaven. It is the home of the Brookhaven National Laboratory and a National Weather Service weather forecast office. Upton is located on eastern Long Island in Suffolk County, New York, in the United States. *Wikipedia*



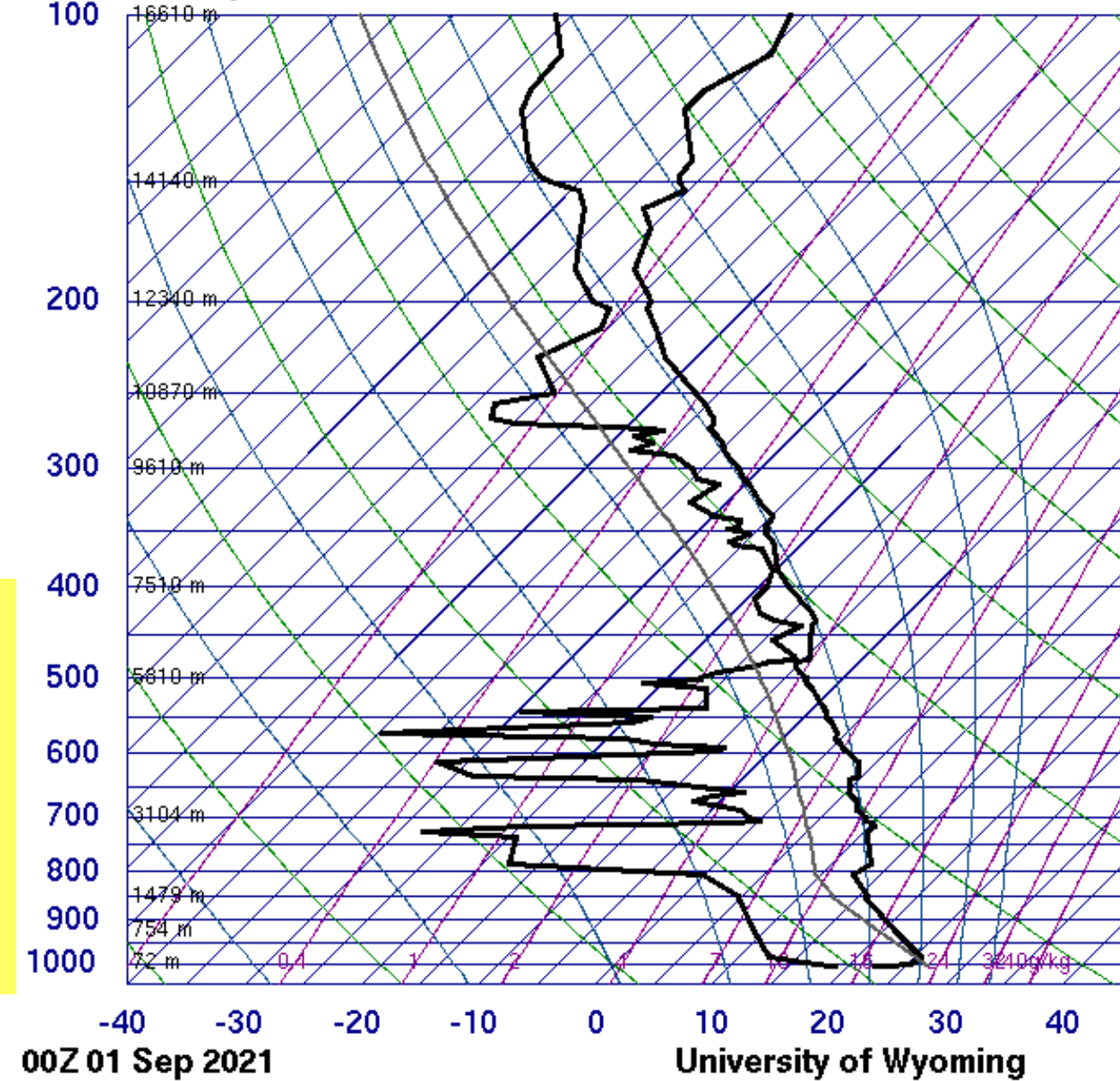
<http://weather.uwyo.edu/upperair/imag es/2021090100.72501.skewt.parc.gif>

The sounding is not representative of New York City.

The sounding was taken around sunset with thunderstorms, even tornadoes in the NYC area, yet the sounding here eastern Long Island, shows an inversion of temperature.

Contrast with Albany, poleward, with superadiabatic surface layer.

72501 OKX Upton



| | | |
|--|------|--------|
| | SLAT | 40.87 |
| | SLON | -72.86 |
| | SELV | 20.00 |
| | SHOW | 7.22 |
| | LIFT | 3.91 |
| | LFTV | 3.75 |
| | SWET | 113.6 |
| | KINX | 18.70 |
| | CTOT | 12.90 |
| | VTOT | 23.90 |
| | TOTL | 36.80 |
| | CAPE | 0.00 |
| | CAPV | 0.00 |
| | CINS | 0.00 |
| | CINV | 0.00 |
| | EQLV | -9999 |
| | EQTV | -9999 |
| | LFCT | -9999 |
| | LFCV | -9999 |
| | BRCH | 0.00 |
| | BRCV | 0.00 |
| | LCLT | 283.6 |
| | LCLP | 825.8 |
| | LCLE | 328.5 |
| | MLTH | 299.6 |
| | MLMR | 9.89 |
| | THCK | 5738 |
| | PWAT | 26.61 |

72501 is the WMO Block Station Number
for Upper Air Observations,
Station Number 501 in WMO Block 72

My analysis means
that instead of
surface temperature
of 22.4C it would
be at least 30C.

OTOH, the EPA, others have indicated
that the UHI daytime heating effect is in the
range from +10C to +50C

In this case, from 25C to 35C, even higher.

72501 OKX Upton Observations at 00Z 01 Sep 2021

| PRES hPa | HGHT m | TEMP C | DWPT C | RELH % | MIXR g/kg | DWCT deg | SKNT knot | THTA K | THTE K | THTV K |
|-------------|-----------|-----------|-----------|-----------|--------------|-------------|--------------|-----------|-----------|-----------|
| 1006.0 | 20 | 22.4 | 19.0 | 81 | 13.94 | 0 | 0 | 295.1 | 335.2 | 297.5 |
| 1005.0 | 29 | 23.8 | 18.8 | 74 | 13.78 | 360 | 0 | 296.5 | 336.5 | 299.0 |
| 1001.0 | 63 | 25.0 | 17.0 | 61 | 12.32 | 359 | 1 | 298.1 | 334.1 | 300.3 |
| 1000.0 | 72 | 25.2 | 17.2 | 61 | 12.50 | 359 | 1 | 298.4 | 334.9 | 300.6 |
| 986.0 | 196 | 25.6 | 12.6 | 44 | 9.38 | 355 | 2 | 300.0 | 327.8 | 301.6 |
| 925.0 | 754 | 21.2 | 9.2 | 46 | 7.95 | 340 | 9 | 301.0 | 324.8 | 302.4 |
| 851.0 | 1469 | 15.8 | 4.8 | 48 | 6.37 | 320 | 17 | 302.6 | 322.0 | 303.8 |
| 850.0 | 1479 | 15.8 | 4.8 | 48 | 6.38 | 320 | 18 | 302.7 | 322.1 | 303.9 |
| 806.0 | 1928 | 12.8 | -0.2 | 41 | 4.70 | 307 | 23 | 304.1 | 318.7 | 305.0 |
| 786.0 | 2139 | 13.4 | -17.6 | 10 | 1.23 | 301 | 26 | 307.0 | 311.1 | 307.2 |
| 734.0 | 2710 | 10.6 | -19.4 | 10 | 1.13 | 285 | 33 | 310.0 | 313.8 | 310.2 |
| 725.0 | 2813 | 10.2 | -27.8 | 5 | 0.54 | 282 | 34 | 310.6 | 312.6 | 310.7 |
| 717.0 | 2905 | 10.4 | -19.6 | 10 | 1.13 | 279 | 35 | 311.8 | 315.8 | 312.0 |
| 711.0 | 2975 | 9.8 | -2.2 | 43 | 4.60 | 277 | 36 | 311.9 | 326.7 | 312.8 |
| 707.0 | 3022 | 9.2 | 0.2 | 53 | 5.52 | 276 | 37 | 311.8 | 329.3 | 312.8 |
| 704.8 | 3048 | 9.1 | -0.2 | 52 | 5.36 | 275 | 37 | 311.9 | 329.0 | 312.9 |
| 700.0 | 3104 | 8.8 | -1.2 | 49 | 5.03 | 280 | 34 | 312.2 | 328.3 | 313.1 |
| 690.0 | 3223 | 7.6 | -2.4 | 49 | 4.67 | 281 | 34 | 312.1 | 327.1 | 313.0 |
| 674.0 | 3416 | 6.8 | -7.2 | 36 | 3.32 | 283 | 33 | 313.4 | 324.2 | 314.0 |
| 665.0 | 3527 | 5.8 | -6.2 | 42 | 3.64 | 284 | 33 | 313.4 | 325.3 | 314.1 |
| 661.0 | 3576 | 5.4 | -3.6 | 52 | 4.46 | 284 | 33 | 313.5 | 327.9 | 314.4 |
| 654.4 | 3658 | 5.0 | -6.6 | 43 | 3.58 | 285 | 33 | 314.0 | 325.7 | 314.7 |
| 639.0 | 3853 | 4.2 | -13.8 | 26 | 2.07 | 275 | 30 | 315.2 | 322.2 | 315.6 |
| 635.0 | 3904 | 4.8 | -28.2 | 7 | 0.59 | 273 | 29 | 316.5 | 318.6 | 316.6 |
| 614.0 | 4178 | 3.6 | -32.4 | 5 | 0.41 | 259 | 25 | 318.1 | 319.7 | 318.2 |
| 607.3 | 4267 | 2.8 | -22.8 | 13 | 1.01 | 255 | 24 | 318.2 | 321.8 | 318.4 |
| 598.0 | 4392 | 1.6 | -9.4 | 44 | 3.15 | 255 | 23 | 318.2 | 328.8 | 318.8 |
| 591.0 | 4486 | 0.8 | -9.2 | 47 | 3.24 | 255 | 23 | 318.4 | 329.2 | 319.0 |
| 586.0 | 4555 | 0.4 | -15.6 | 29 | 1.95 | 255 | 22 | 318.7 | 325.4 | 319.1 |
| 578.0 | 4665 | -0.5 | -18.5 | 24 | 1.55 | 255 | 21 | 318.9 | 324.3 | 319.2 |
| 572.0 | 4749 | -0.7 | -39.7 | 3 | 0.21 | 255 | 21 | 319.6 | 320.4 | 319.6 |
| 562.9 | 4877 | -1.6 | -26.3 | 13 | 0.80 | 255 | 20 | 320.0 | 322.9 | 320.1 |
| 558.0 | 4946 | -2.1 | -19.1 | 26 | 1.52 | 258 | 20 | 320.2 | 325.6 | 320.5 |
| 549.0 | 5075 | -3.1 | -18.1 | 30 | 1.68 | 265 | 19 | 320.5 | 326.4 | 320.9 |
| 543.0 | 5162 | -3.5 | -29.5 | 11 | 0.62 | 269 | 18 | 321.1 | 323.3 | 321.2 |
| 541.6 | 5182 | -3.7 | -26.1 | 16 | 0.85 | 270 | 18 | 321.1 | 324.1 | 321.2 |
| 540.0 | 5206 | -3.9 | -21.9 | 23 | 1.23 | 271 | 18 | 321.1 | 325.5 | 321.3 |
| 537.0 | 5250 | -4.1 | -14.1 | 46 | 2.41 | 272 | 18 | 321.4 | 329.6 | 321.8 |
| 535.0 | 5280 | -4.3 | -14.3 | 46 | 2.37 | 272 | 19 | 321.5 | 329.6 | 321.9 |

Average ocean temperature in °F

| | Cape May | Atlantic City | Sandy Hook |
|-----------|----------|---------------|------------|
| January | 37 | 37 | 37 |
| February | 37 | 35 | 36 |
| March | 42 | 42 | 40 |
| April | 50 | 48 | 46 |
| May | 59 | 56 | 55 |
| June | 68 | 63 | 62 |
| July | 73 | 70 | 69 |
| August | 74 | 73 | 72 |
| September | 72 | 70 | 68 |
| October | 61 | 61 | 59 |
| November | 52 | 53 | 51 |
| December | 42 | 44 | 43 |
| Annual | 55 | 54 | 53 |

Hot Ocean Temperatures on 1 Sep, every year!

<https://www.currentresults.com/Oceans/Temperature/new-jersey-average-water-temperature.php>

The First of September is the date of the hottest water temperature of the year!



Heat island map from
New York City Council:
<https://council.nyc.gov/data/heat/>

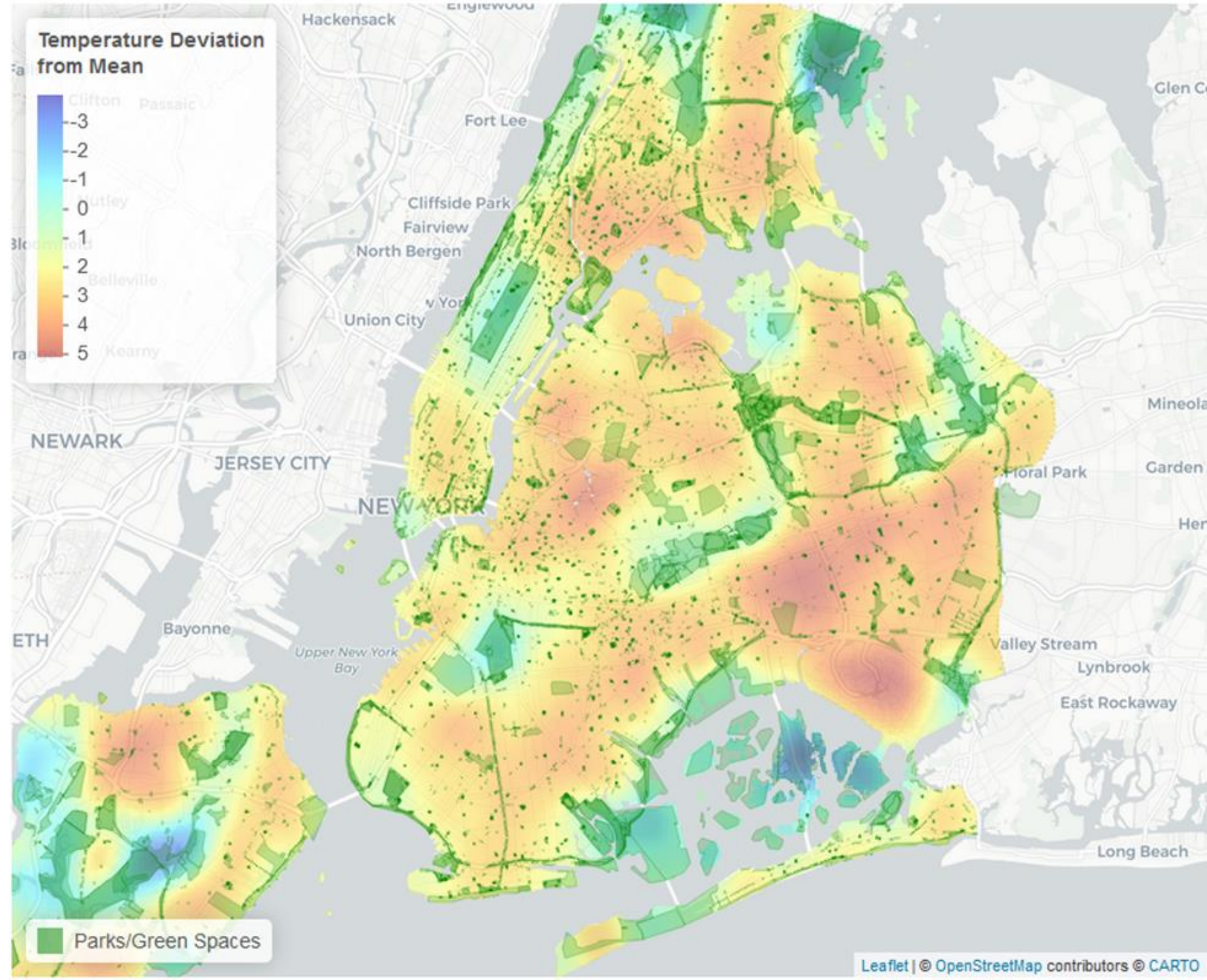
Natural Geographical features:
Shape of New York Harbor.

Anthropogenic Geography
shown by the map:

Warm Colors show impervious
surfaces. They have the elevated
temperature deviations over wide
areas of Brooklyn, Queens, the
Bronx.

Roofs, sidewalks, roads,
parking lots, residential and
industrial areas.

All contribute to rain runoff, not
rain entering permeable soil
surfaces.



Natural phenomena brought extremely heavy rain, excessive runoff to NYC on 1 Sep 2021

Water temperatures hottest of the year brought warm water vapor to fuel thunderstorms

Warm Frontal surface lifted the air as it reached NYC

Strong vertical motion as remnants of Ida became an “Extratropical Storm”

Center of low and warm front reached NYC at time of maximum temperature for the day.

EPA report says add 18F to 27F Urban Heat Island effect (10C to 15C hotter)

Forecast Thunderstorms brought extreme vertical motion, heavy rainfall, even tornadoes.

Anthropogenic Effects

Exaggerated Heat Island Effect. Over 8 million live in NYC. Friction of skyscrapers.

Areas of Bronx, Brooklyn, Queens, Manhattan, Richmond (Staten Island) and Newark have over 90% impermeable surface. Rainfall runs off.

“Flooding from Ida occurred because an overloaded, century-old drainage system was not built to accommodate that much water,” city officials acknowledged

SIDEBARS:

The New York Times and NOAA:

feeding the Narrative

Story: “Extraordinary increase in US Coastal Flooding”

Deception and outright lying by the New York Times

14 July 2021

CLIMATE

The New York Times

New Data Shows an ‘Extraordinary’ Rise in U.S. Coastal Flooding

Rising seas are bringing water into communities at record rates, the National Oceanic and Atmospheric Administration said Tuesday.

“Climate change and carbon emissions are a factor at play when we look at how tides are rising,” Ms. LeBoeuf acknowledged in the call with reporters, adding the paper had not been reviewed or edited by political officials. But she emphasized that the report, strictly speaking, was limited to data collected from the tide gauges.

The question of what is causing seas to rise is, she said, “a little different.”



A flooded street in Key Largo, Fla., in October.

<https://www.nytimes.com/2020/07/14/climate/coastal-flooding-noaa.html>

“NOAA defines high-tide flooding, also called sunny-day or nuisance flooding, as water rising more than half a meter, or about 20 inches, above the normal daily high-tide mark.

The frequency of that flooding has increased because of rising sea levels, which were roughly 13 inches higher nationally last year than in 1920, the agency reported.

The number of days with high-tide flooding set or tied records in 19 places around the country last year, including Corpus Christi, Texas, which recorded 18 days of flooding; Galveston, Texas (18 days); Annapolis, Md. (18 days); and Charleston, S.C. (13 days).

The place with the greatest number of recorded flood days was Eagle Point, Texas, in Galveston Bay; it reported high-tide flooding on 64 days, or almost one day out of five.”

SeaLevel.info

About

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Blogs etc.

Data

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Photo credit: Kanaha Beach kitesurfers, by Patti Cadiz, H5Twindsurfing.com, Maui

Your one-stop source for sea-level information, with interactive tools for linear and quadratic regression analysis, and graphing, of measured sea-level trends, at over 1200 locations.

The web site, <https://www.sealevel.info/>
is run by my friend from the Climate Change
Conferences, Dave Burton.

Unlike many of the other sea level sites, Dave Burton
plots $\langle \text{CO}_2 \rangle$ over time from Mauna Loa and the Ice
Cores, reputable sources.

The data clearly show these features:

Rate of sea level rise is unrelated to $\langle \text{CO}_2 \rangle$, and

There is no acceleration in the rate of sea level rise.

Search for a tide gauge's sea-level measurement record

Enter any of the following:

- A seven-digit NOAA station ID number
- A one to four-digit PSMSL station ID number
- A coastline-station pair, in the form ccc-sss (must be seven characters total)
- All or part of a station location name

Enter tide gauge:

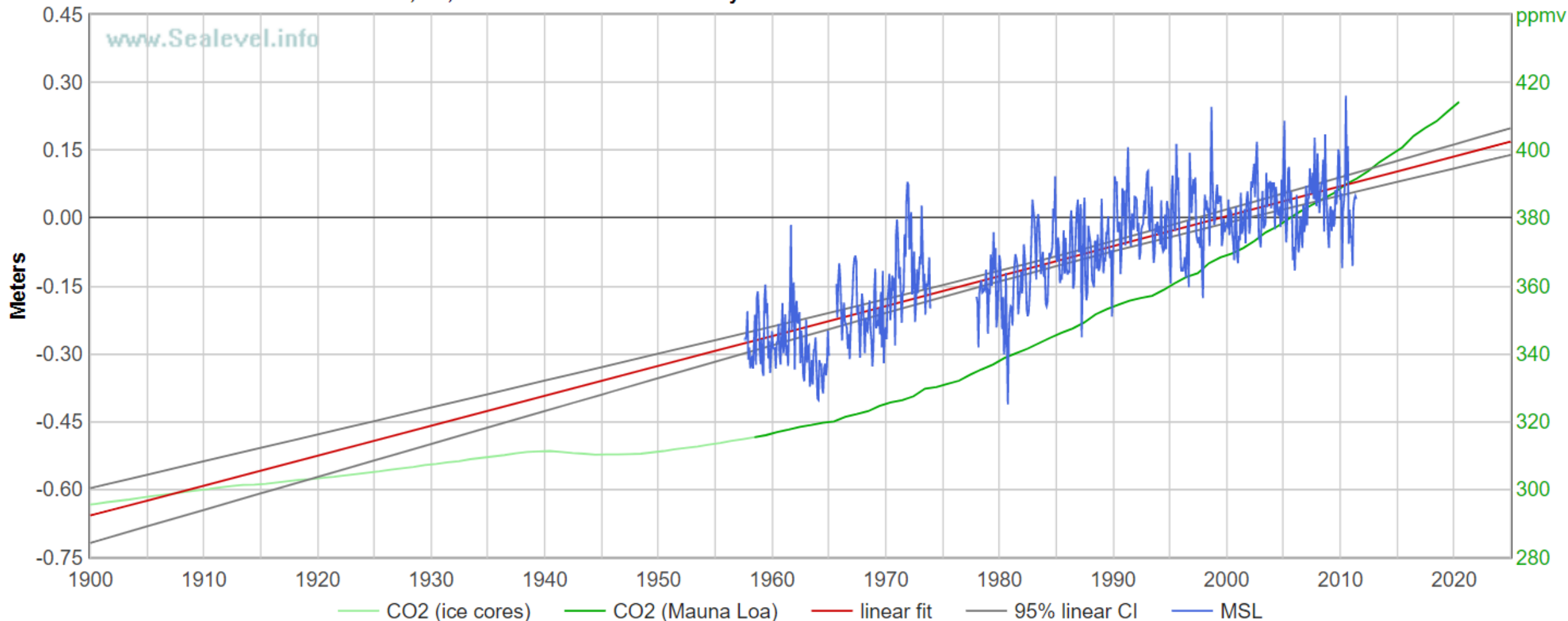
E.g., these examples all find the San Diego, CA, USA tide gauge:

- (NOAA station number)
- (PSMSL station number)
- (coastline 823 & station 081)
- (station name)
- (you may substitute "%20" for a space)
- (or just omit part of the name)

[Sealevel.info](#) → [Data](#) → 8771510

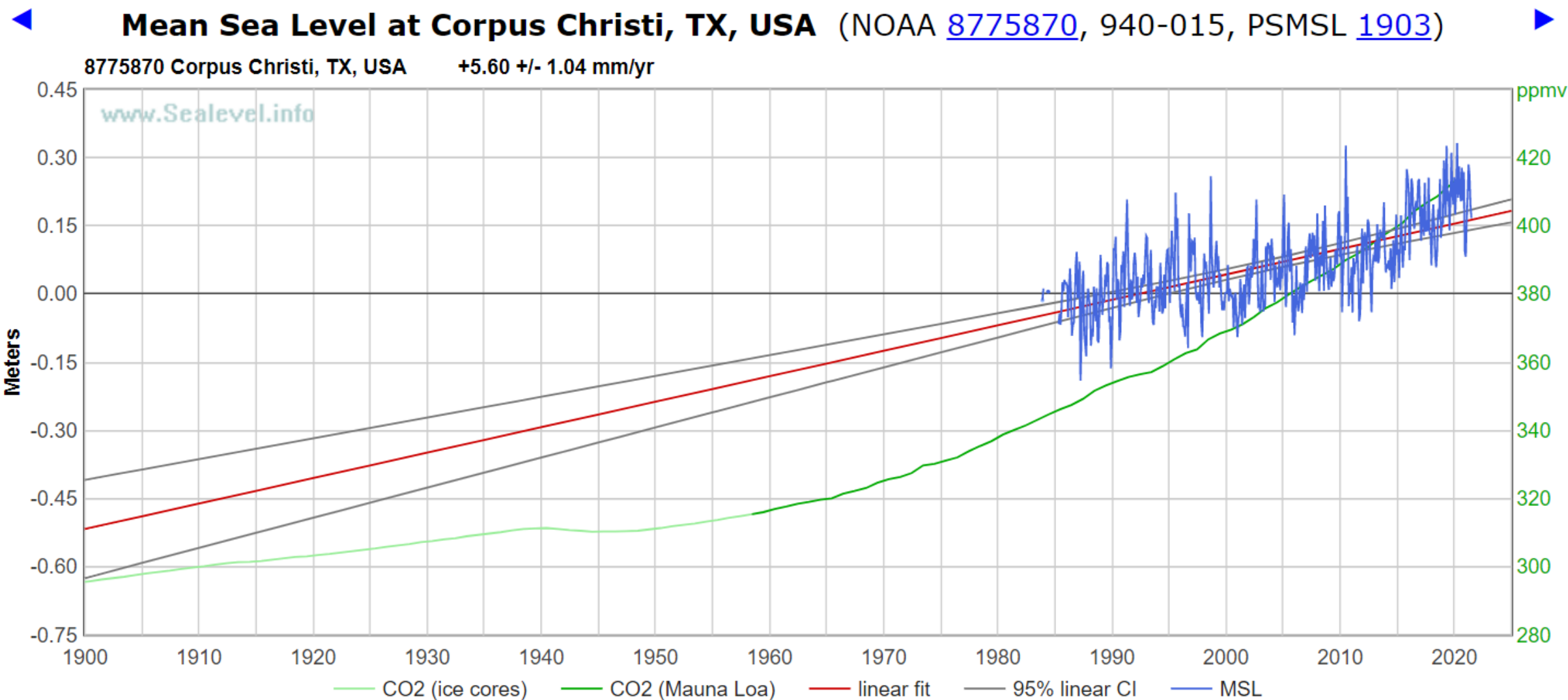
◀ Mean Sea Level at Galveston Pleasure Pier, TX, USA (NOAA [8771510](#), 940-007, PSMSL [828](#)) ▶

8771510 Galveston Pleasure Pier, TX, USA $+6.62 \pm 0.70$ mm/yr



The mean sea level (MSL) trend at Galveston Pleasure Pier, TX, USA is $+6.62$ mm/year with a 95% confidence interval of ± 0.70 mm/year, based on monthly mean sea level data from 1957/9 to 2011/6. That is equivalent to a change of 2.17 feet in 100 years. ([R-squared](#) = 0.653)

[Sealevel.info](https://www.sealevel.info) → [Data](#) → 8775870

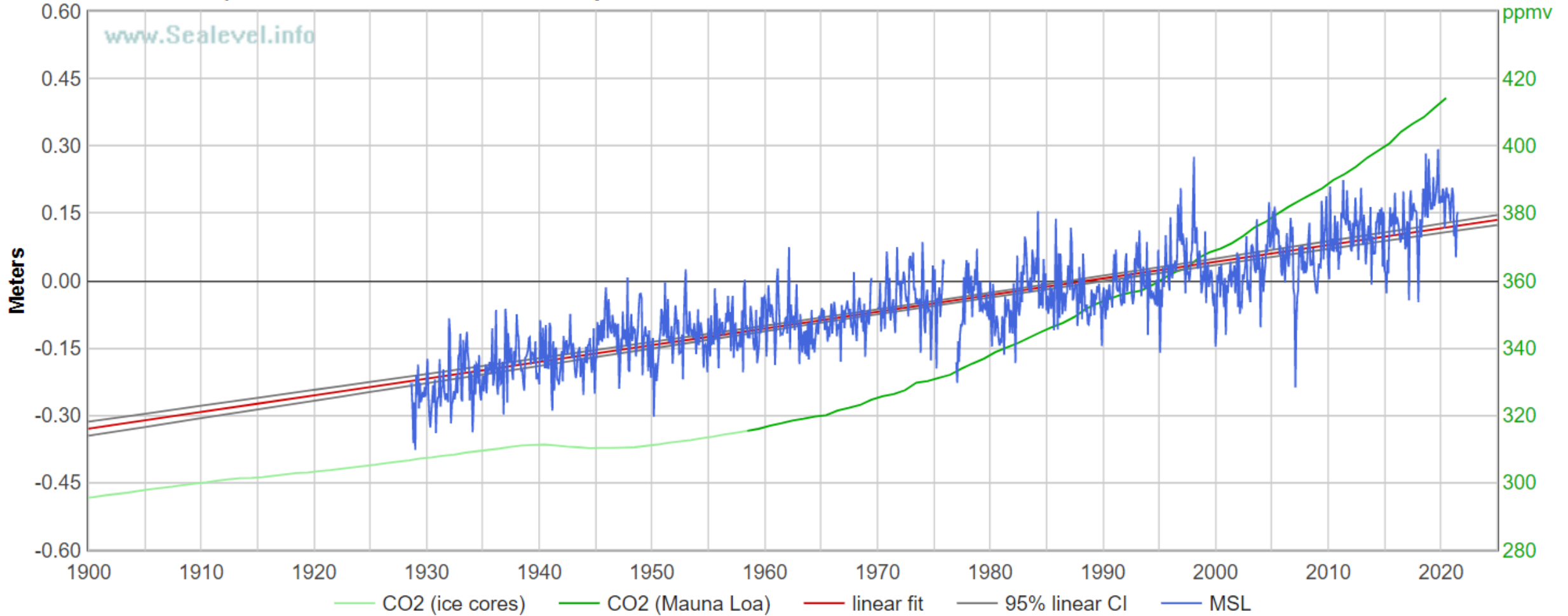


The mean sea level (MSL) trend at Corpus Christi, TX, USA is +5.60 mm/year with a 95% confidence interval of ± 1.04 mm/year, based on monthly mean sea level data from 1983/12 to 2021/7. That is equivalent to a change of 1.84 feet in 100 years. ([R-squared](#) = 0.410)

[Sealevel.info](https://www.sealevel.info) → [Data](#) → 8575512

Mean Sea Level at Annapolis, MD, USA (NOAA [8575512](#), 960-080, PSMSL [311](#))

8575512 Annapolis, MD, USA +3.72 +/- 0.20 mm/yr

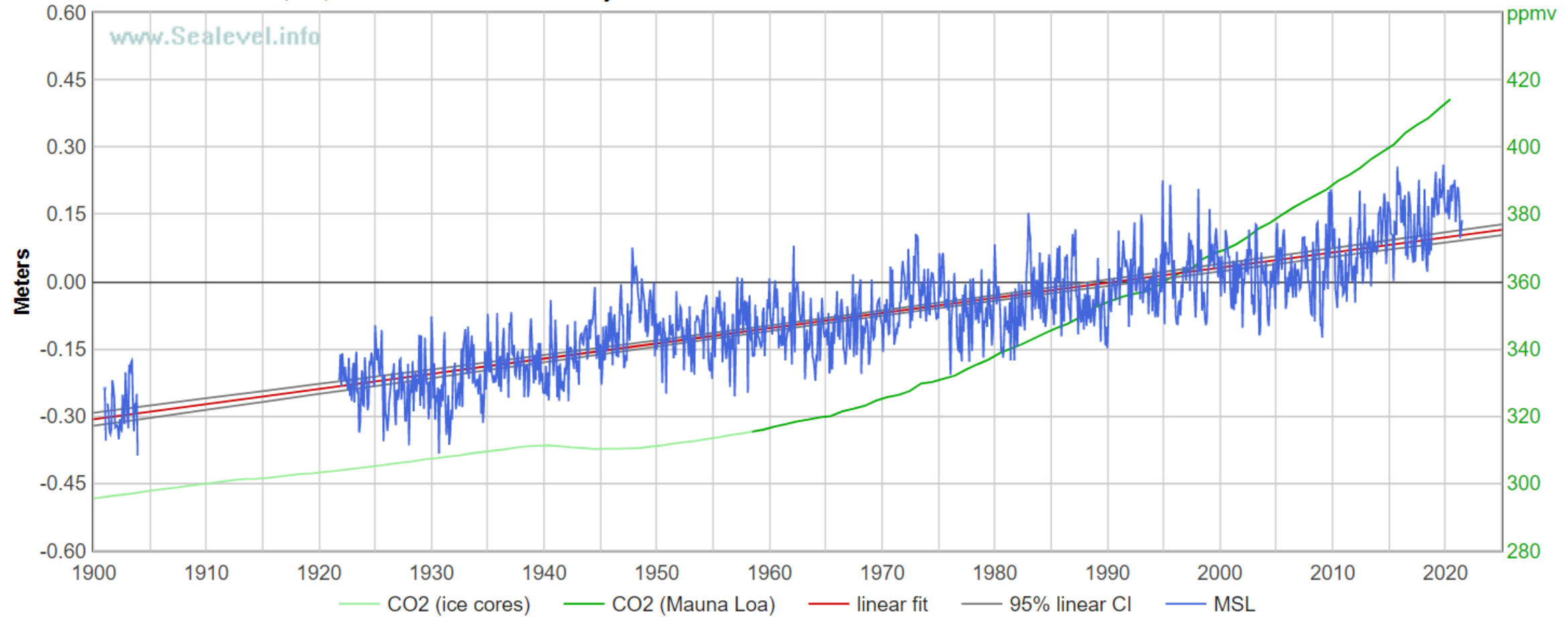


The mean sea level (MSL) trend at Annapolis, MD, USA is +3.72 mm/year with a 95% confidence interval of ± 0.20 mm/year, based on monthly mean sea level data from 1928/9 to 2021/7. That is equivalent to a change of 1.22 feet in 100 years. ([R-squared](#) = 0.742)

[Sealevel.info](#) → [Data](#) → 8665530

Mean Sea Level at Charleston, SC, USA (NOAA [8665530](#), 960-041, PSMSL [234](#))

8665530 Charleston, SC, USA +3.38 +/- 0.19 mm/yr



The mean sea level (MSL) trend at Charleston, SC, USA is +3.38 mm/year with a 95% confidence interval of ± 0.19 mm/year, based on monthly mean sea level data from 1901/1 to 2021/7. That is equivalent to a change of 1.11 feet in 100 years. ([R-squared](#) = 0.710)

This quote from the Times story,

“Climate change and carbon emissions are a factor at play when we look at how tides are rising,” is clearly wrong.

A look at plots of the level of the sea from the tide gages over time and <CO2> vs time on the same plot shows that the quote is just wrong.

This points to one of two circumstances:

ONE: The New York Times is ignorant of the facts of the story,

TWO: The New York Times knows the facts and allows a falsehood in the story to carry the story line, The Narrative of human-caused CO2 fueled sea level rise, which is plainly natural sea level rise.

No matter what, either ignorance or deliberate falsehood, the New York Times is often unworthy of trust in its contents. You must do your own research.

Story: “Climate Change is Bankrupting America’s Small Towns”

Deception and outright lying by the New York Times

2 Sep 2021



Climate Change Is Bankrupting America's Small Towns

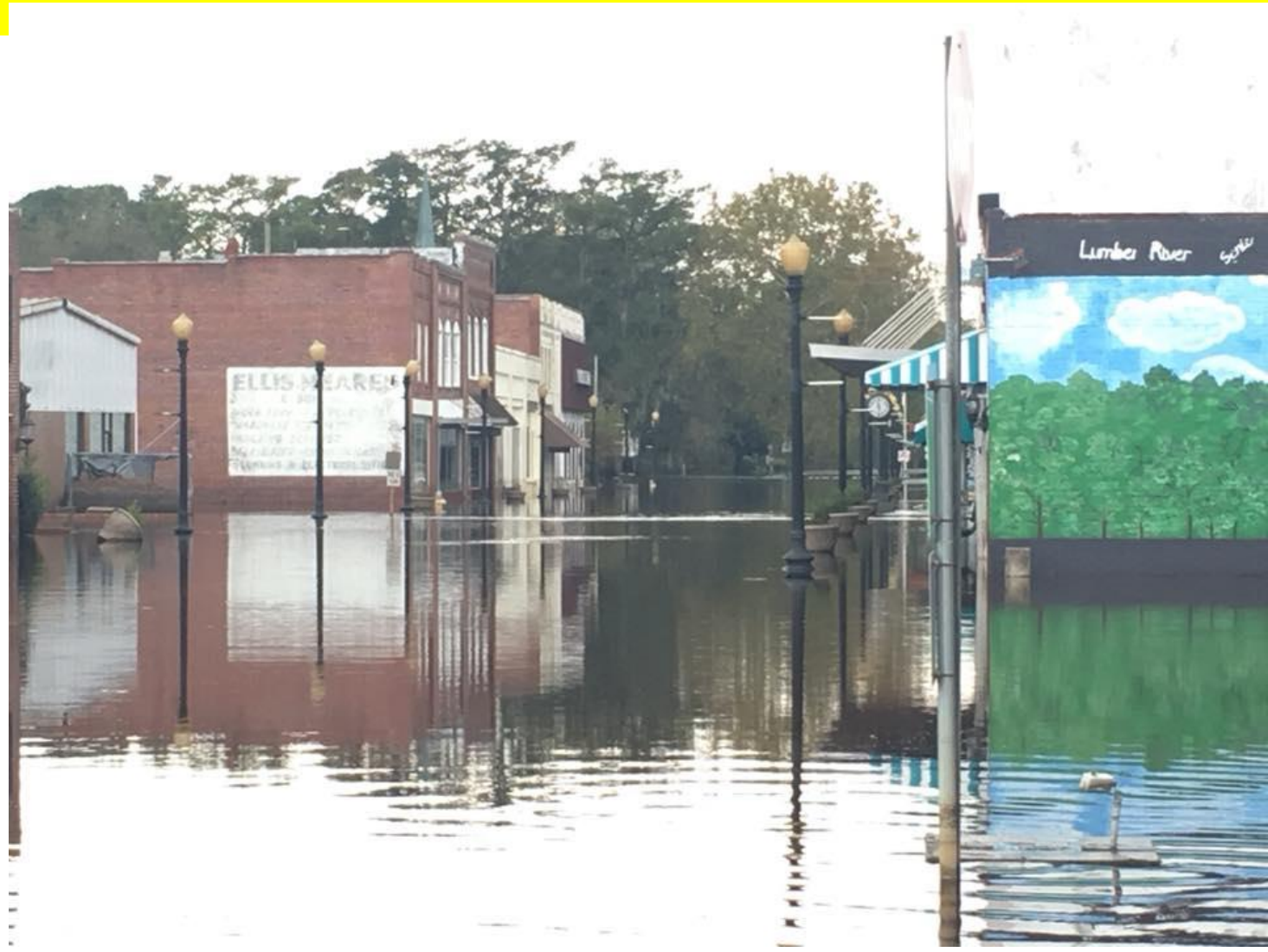
Repeated shocks from hurricanes, fires and floods are pushing some rural communities, already struggling economically, to the brink of financial collapse.

<https://www.nytimes.com/2021/09/02/climate/climate-towns-bankruptcy.html>

Fair Bluff is small-town idyllic, nestled among fields of corn and tobacco near the South Carolina border, shielded from the Lumber River by a narrow bank of tupelo gum, river birch and bald cypress trees. But its main road offers a sobering glimpse of what climate change could mean for communities that can't defend themselves.



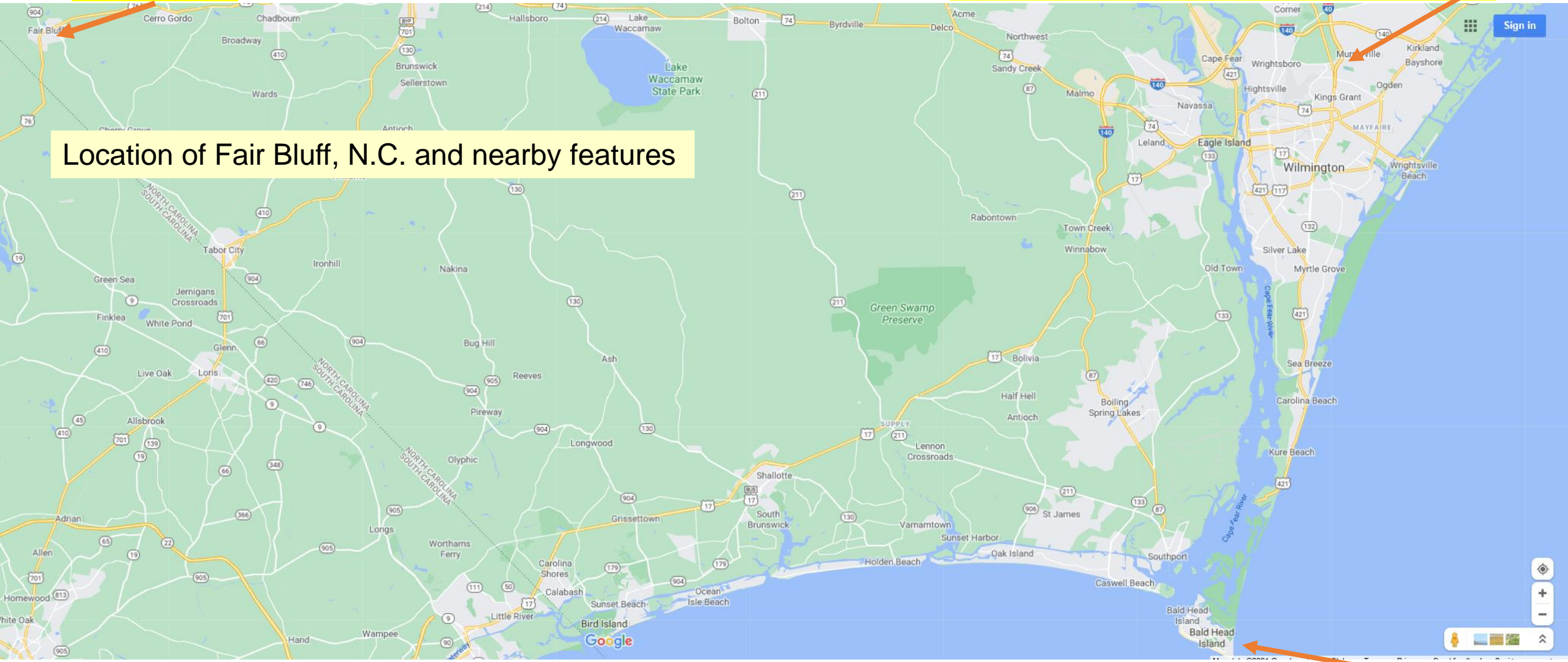
Elevation of Fair Bluff is 66 ft MSL



Fair Bluff

I-40 begins outside Wilmington, NC

Location of Fair Bluff, N.C. and nearby features



Cape Fear, N.C.



YouTube

DRONE: Floodwater covers much of Fair Bluff, North Carolina

Uploaded by: AccuWeather, Feb 21, 2017

610 Views · 2 Likes

Oct 15, 2016; 12:26 PM ET This drone video shows the entire town of Fair Bluff, North Carolina still underwater. Residents still struggle from th...



It's no coincidence that small towns in eastern North Carolina are among the first in the country to face an existential threat from climate change. Many were already struggling from the decline of the tobacco and textile industries, and **the area's flat terrain makes it especially vulnerable to flooding from powerful hurricanes that are coming more often.** (bold added)

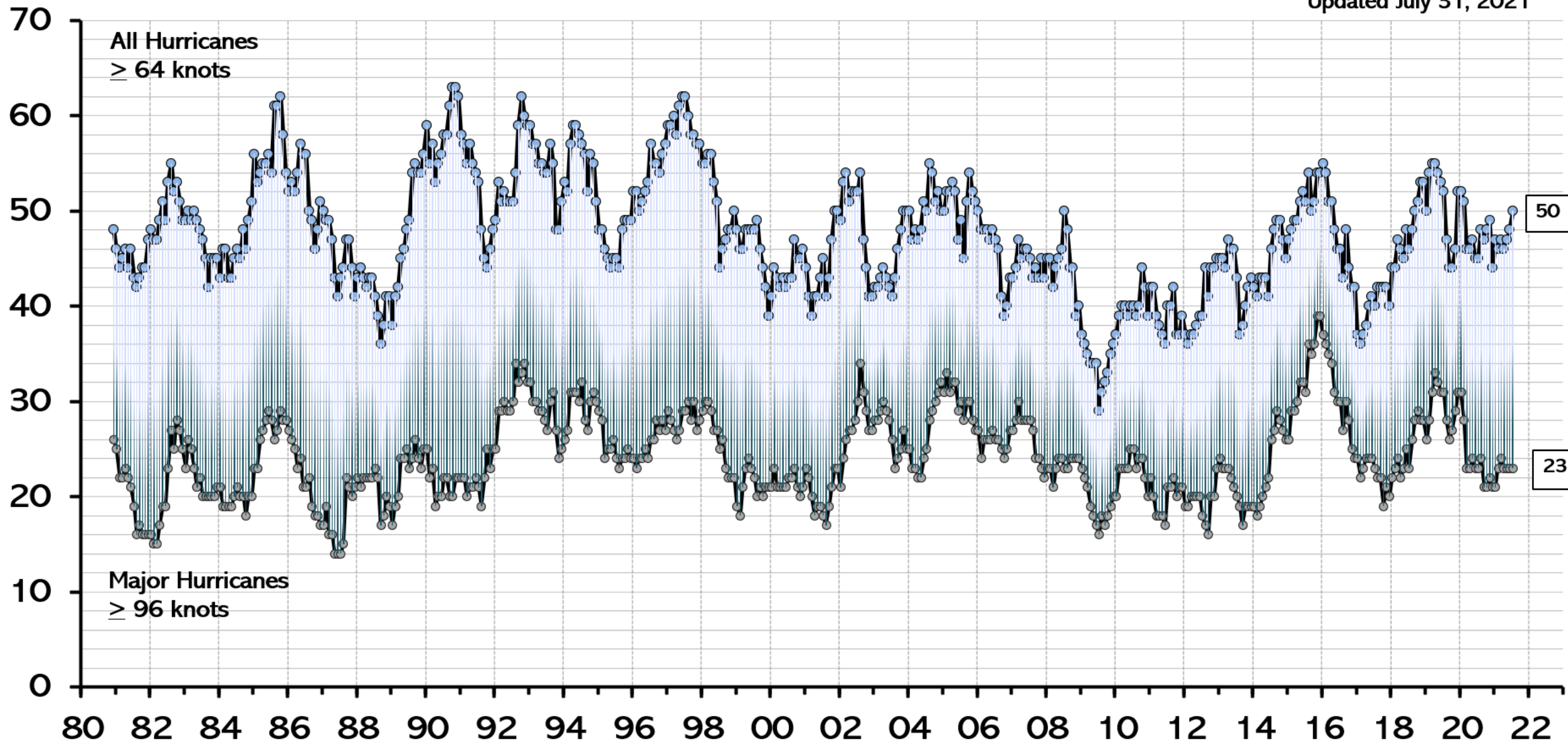
Between 1954 and 2016, North Carolina was hit by 19 hurricanes severe enough to produce a federal disaster declaration, about one every three years. By contrast, four hurricanes have cleared that bar since 2018

The New York Times says that powerful hurricanes are coming more often. What do the data say? Next slide...

Global Major Hurricane Frequency -- 12 month running sums

@RyanMaue

Updated July 31, 2021

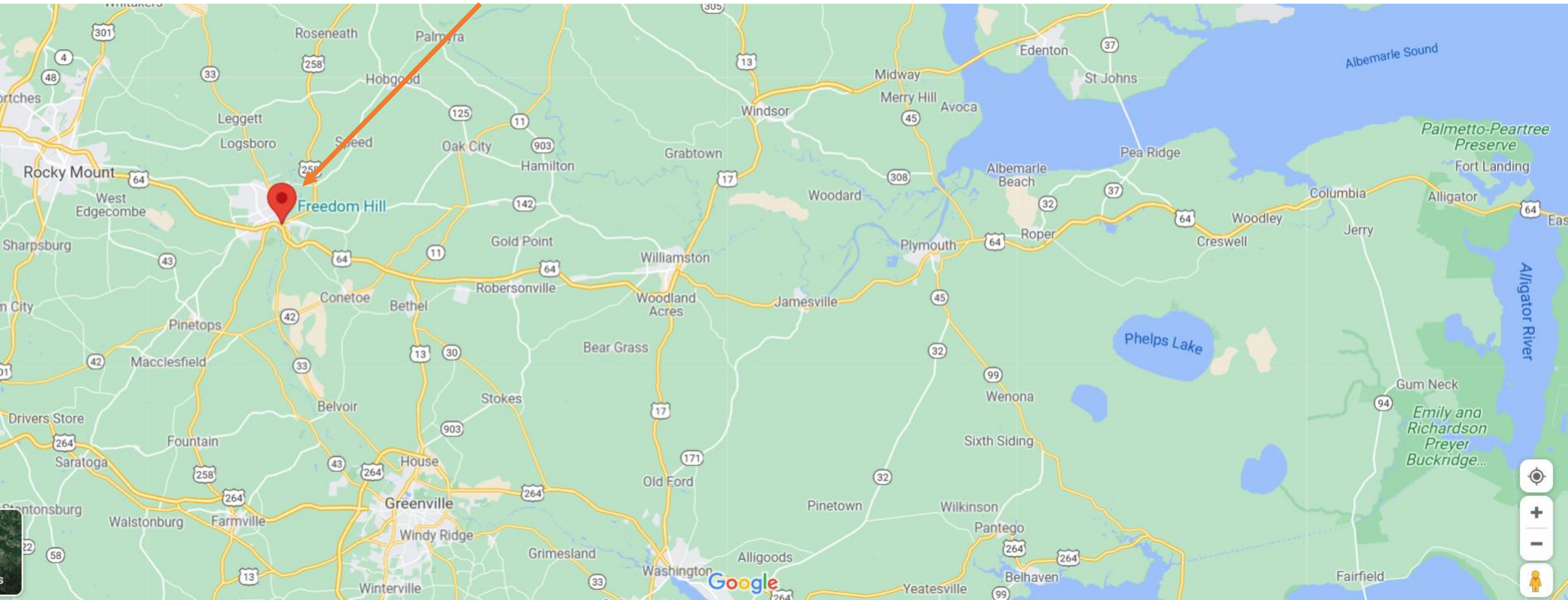




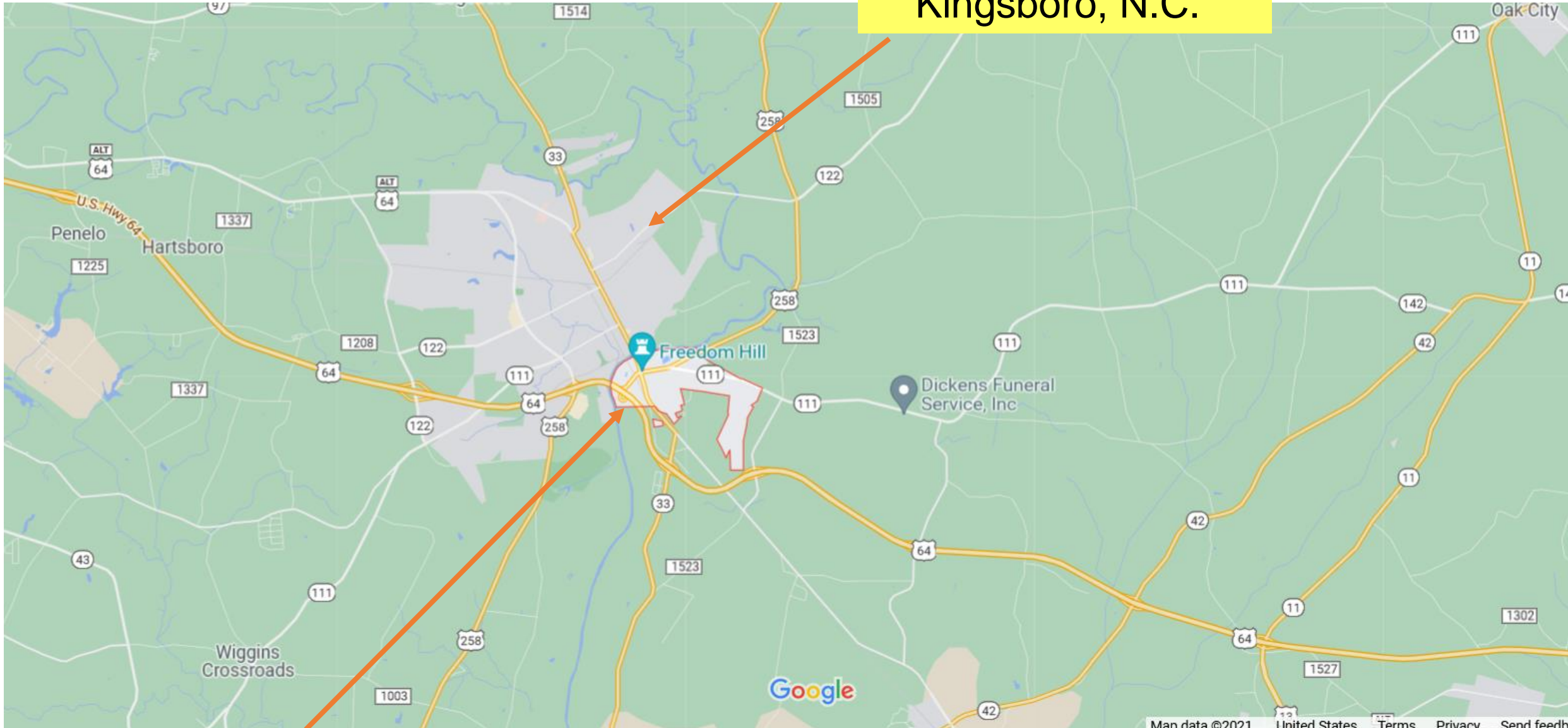
Climate Change Is Bankrupting America's Small Towns

Repeated shocks from hurricanes, fires and floods are pushing some rural communities, already struggling economically, to the brink of financial collapse.

Princeville, N.C. is one of the New York Times' "small towns being bankrupted by climate change"



Kingsboro, N.C.



Princeville, N.C.



Princeville, N.C.

Elevation: 30 ft MSL.

Threat

<https://tclf.org/sites/default/files/microsites/landslide2018/princeville.html>

Flooding on the main street of Princeville in 1919.

Courtesy of the North Carolina State Archives

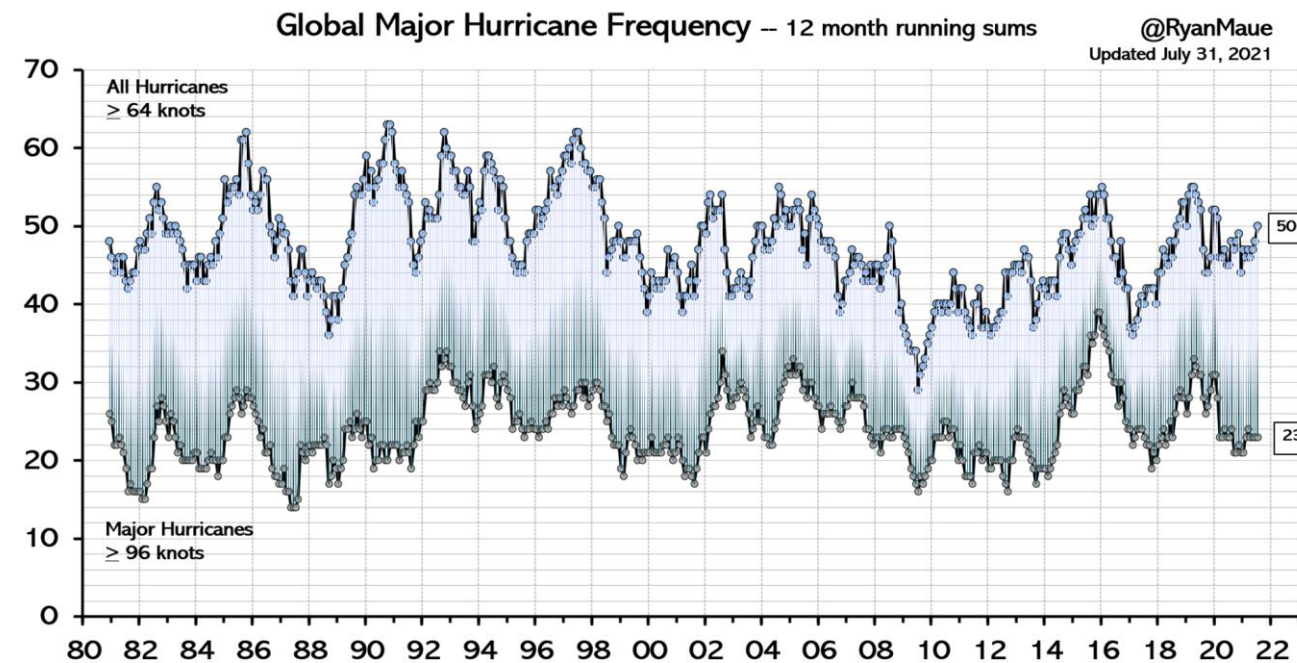
Princeville's cultural landscape faces threats that are both immediate and ongoing. Climate change threatens to increase the frequency and severity of local floods, which, bringing losses of property and population, will only compound the social and economic challenges already facing Princeville as a small rural town. Every year, from June to November, the threat of flood is imminent, and evidence suggests the threat will grow as hurricanes become more frequent and intense. The capacity of the community to rebuild continually is also uncertain, and as long as the cultural landscape is undefined and under-acknowledged, its long-term fate is equally in doubt.





A house on piers near the Tar River in Princeville, N.C.
1981 *Photo Courtesy Architectural Survey.*

“Every year, from June to November, the threat of flood is imminent, and evidence suggests the threat will grow as hurricanes become more frequent and intense.”



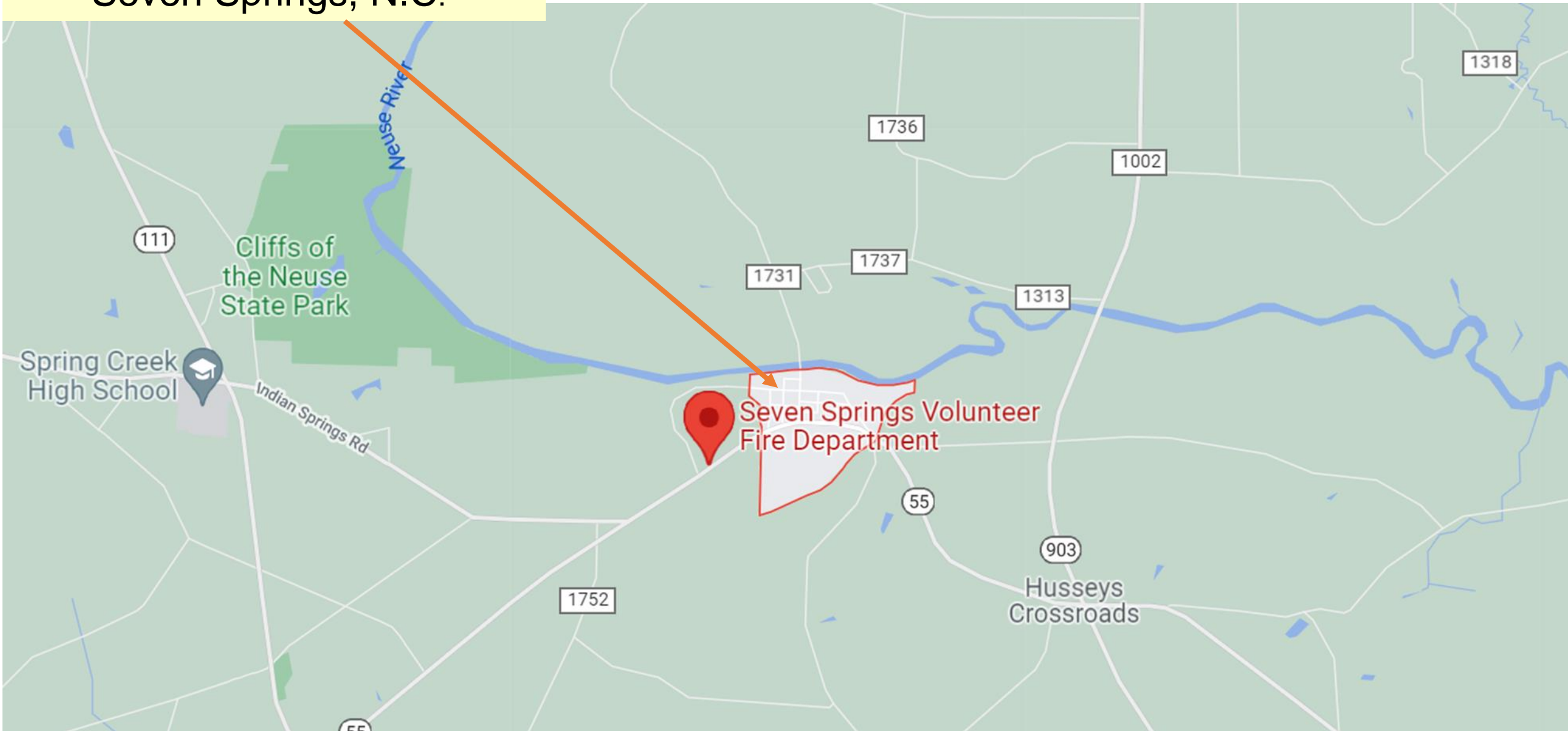
Within this site, photos of floods, this house on piers. Floods have been a problem for at least a century. Data are clear. Yet, NYT and this site continue...fairy tale of “hurricanes...more frequent and intense.”



Climate Change Is Bankrupting America's Small Towns

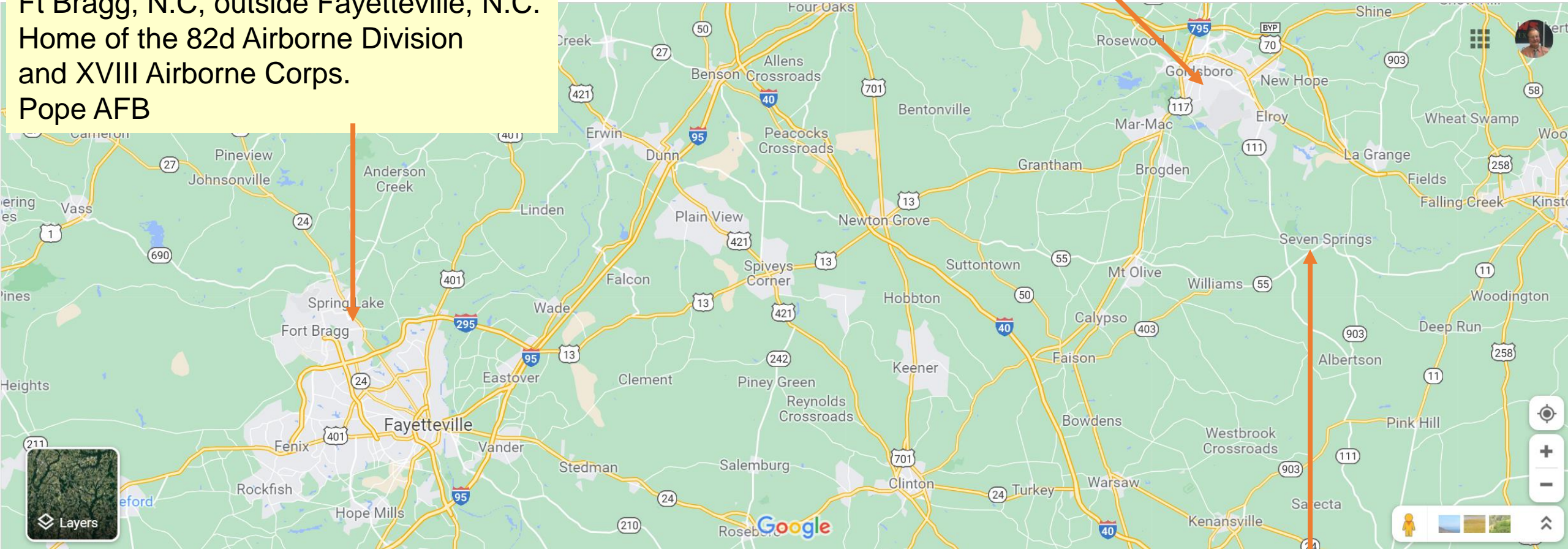
Repeated shocks from hurricanes, fires and floods are pushing some rural communities, already struggling economically, to the brink of financial collapse.

Seven Springs, N.C.



Goldsboro, N.C.
Home of Seymour Johnson AFB.

Ft Bragg, N.C, outside Fayetteville, N.C.
Home of the 82d Airborne Division
and XVIII Airborne Corps.
Pope AFB



Seven Springs, N.C. Elevation 53 ft MSL



Water on Sunday was still surrounding homes in Seven Springs, a town that lost nearly half of its residents following Hurricane Floyd.



FLORENCE RECOVERY

twitter

@WNCT9

LOCAL COMMUNITIES DEALING WITH FLOODING

SEVEN SPRINGS

An abandoned home in Seven Springs.



All that's left of the town of Seven Springs is a few dozen buildings on the south bank of the Neuse River, land that rises gently to a highway a few hundred feet away. The effect is like a bathtub — which is what the town became when Hurricane Floyd sent the Neuse over its banks in 1999. Hurricane Matthew flooded the town again in 2016.

Hurricane Florence repeated the damage in 2018.

Floyd cut the population of Seven Springs by about half; Matthew cut it again. Of the 30 or so houses left between the river and the highway, maybe a dozen are still occupied, said Stephen Potter, the mayor. The population, which peaked at 207 in 1960, had dwindled to 55 by last year.



Once Seven Springs became too small to maintain its own jail, officials used the building to store lawn mowers that volunteers could use to keep up the town. Now the jail is abandoned, and the lawn mowers are, too.

Let's summarize: Fair Bluff, Princeville and Seven Springs are all small towns on the outer coastal plain of North Carolina.

The outer coastal plain of North Carolina has very low, almost flat, almost featureless terrain, and a very shallow slope towards the Atlantic Ocean.

Any rain from a tropical system here has the potential to dump heavy rain, which will tend to remain in place, or run off slowly, producing flooding.

The data show that hurricane frequency has multidecadal fluctuations unrelated to the monotonic increase in $\langle \text{CO}_2 \rangle$.

Hurricane frequency has been falling since 1996.

The New York Times plainly is not telling the truth in this story.

The Narrative continues well into September 2021

Hottest Summer On Record In The US

Posted on [September 10, 2021](#) by [tonyheller](#)

NOAA says this past summer was hotter than 1936.

Summer 2021 Was Hottest on Record in the Contiguous U.S., NOAA Says

By [Chris Dolce](#) · 3 hours ago

At a Glance

- The Lower 48 had its hottest summer on record in 2021.
- 2021 barely edged out 1936 for the top spot.
- Areas from the West to the nation's northern tier had the most extreme heat compared to average.

0.01 of a degree, NOAA said.

[Summer 2021 was the hottest in 126 years of records](#) for the contiguous United States, according to a report released by NOAA on Thursday.

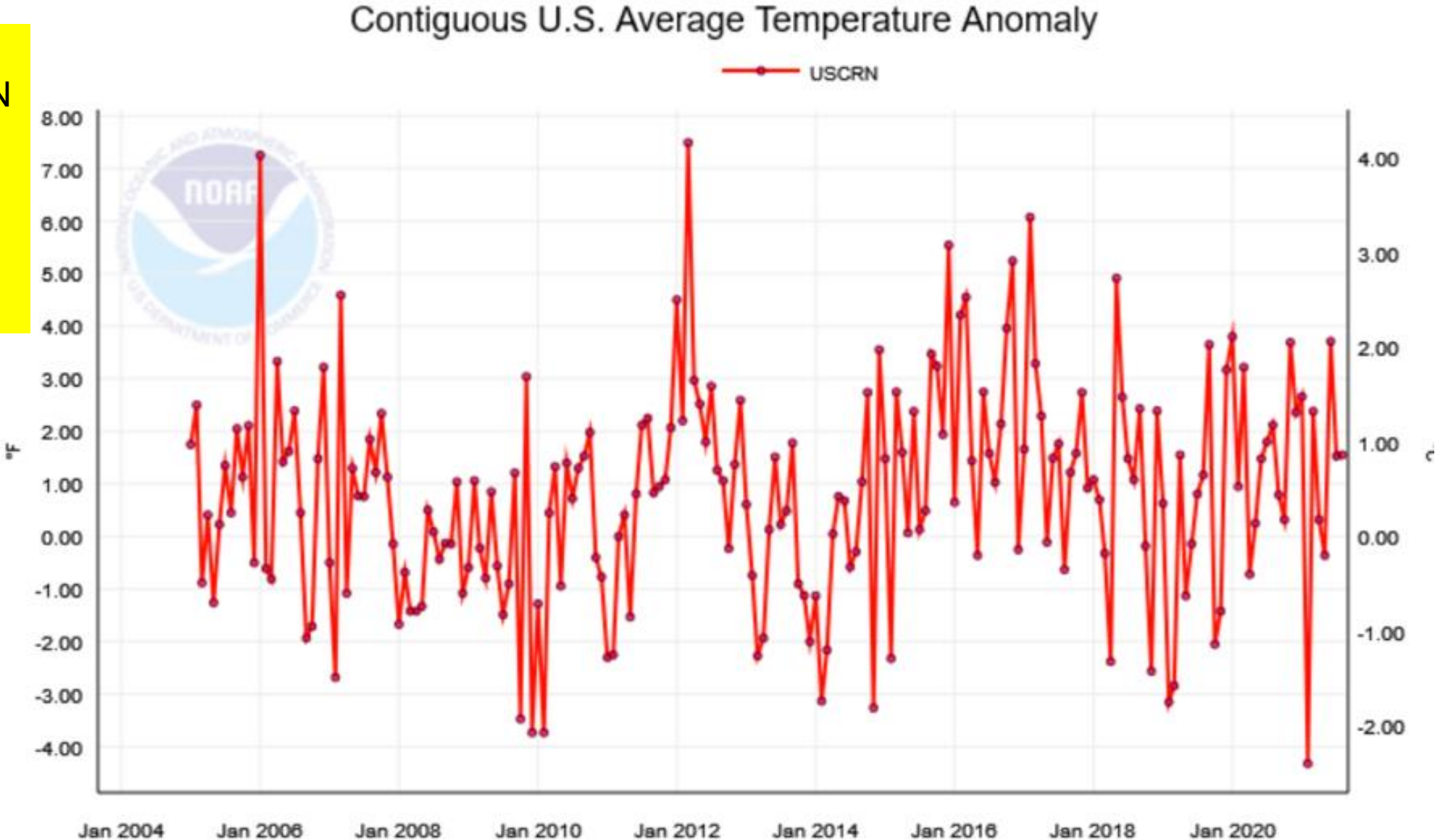
The average temperature for all of the Lower 48 states from June through August was 74.0 degrees Fahrenheit, or 2.6 degrees above average. That barely edged out the Dust Bowl summer of 1936 for the top spot by less than

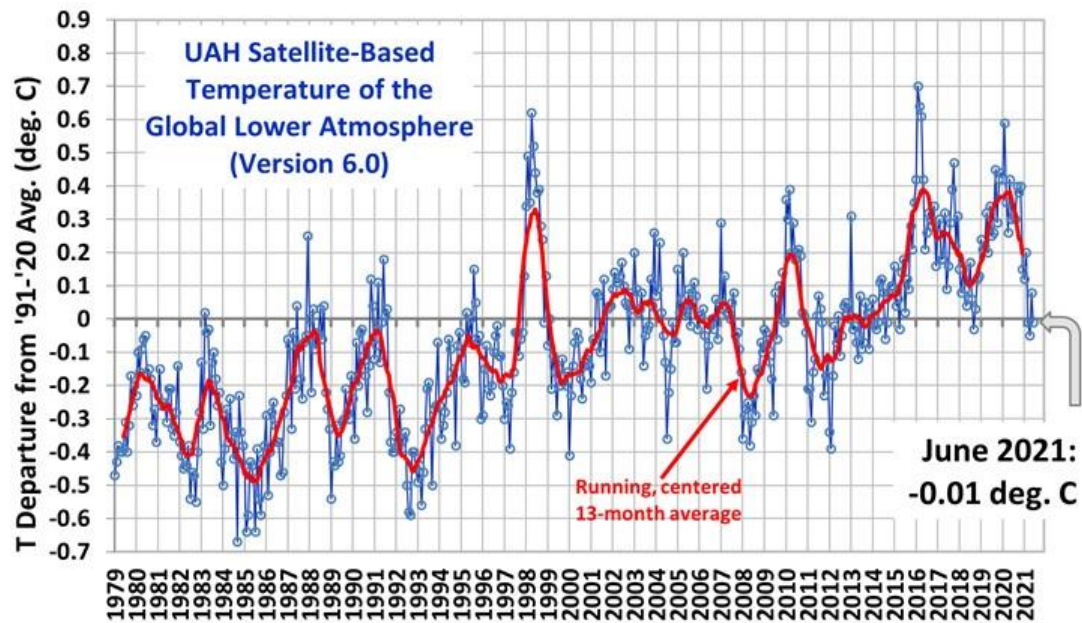
<https://realclimatescience.com/2021/09/hottest-summer-on-record-in-the-us/>

Place mouse on axis and left-click to **pan**; wheel up/down for **zoom** in/out (or shift key+left-click).

And what does the
“Unimpeachable” USCRN
data set say?

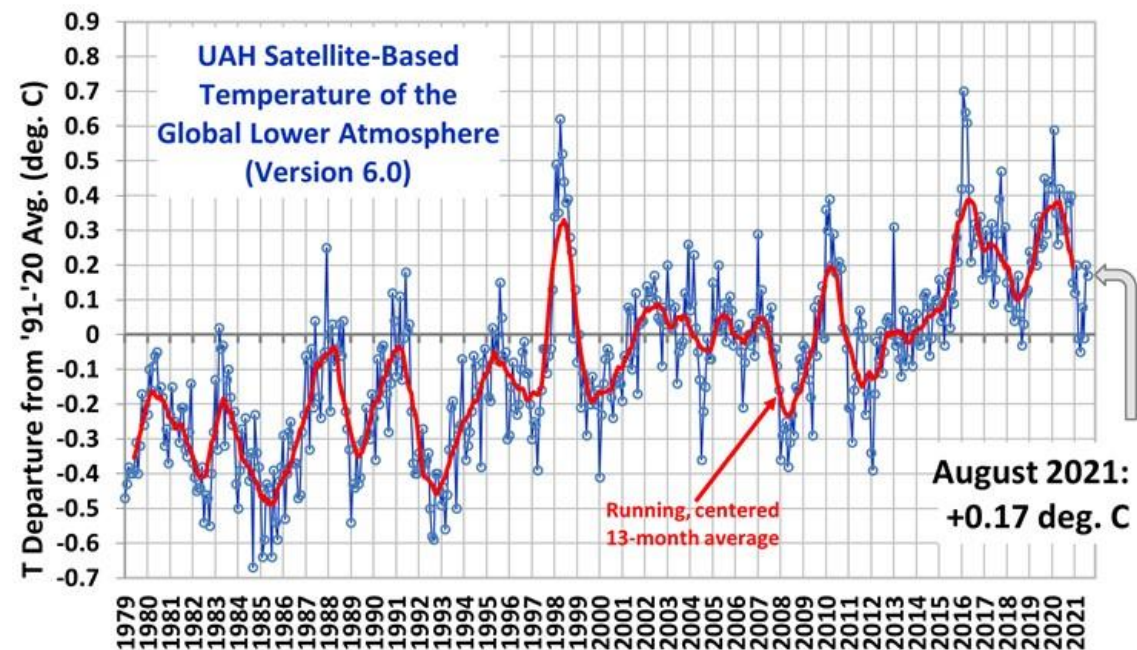
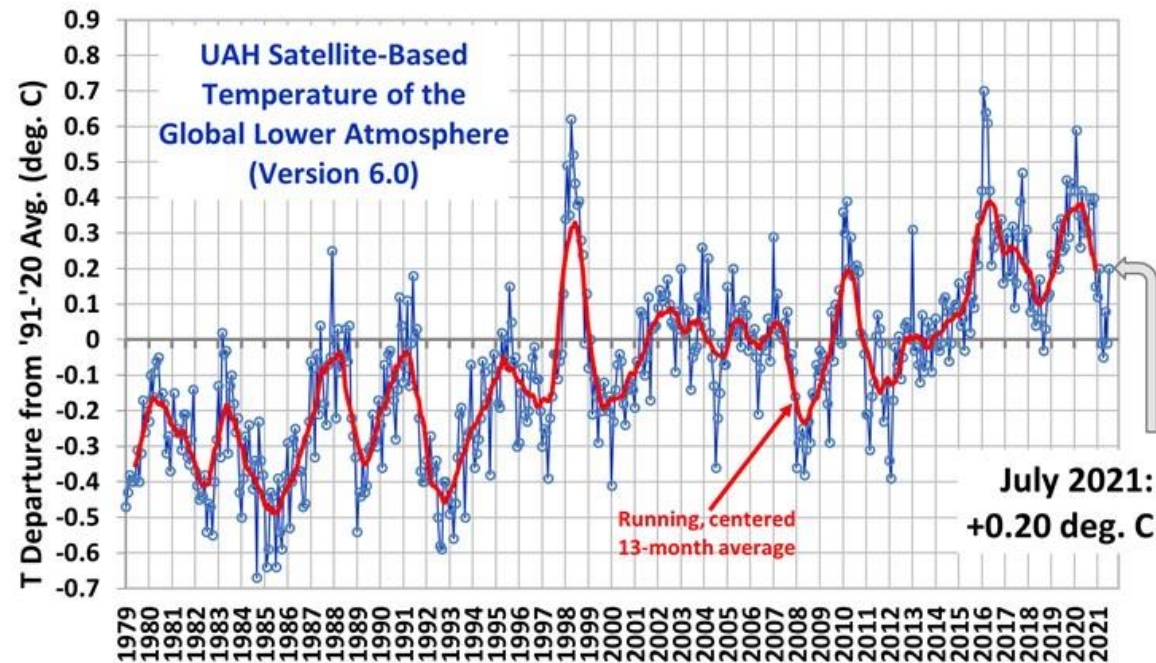
“not a chance...”





And the Greenhouse Temperatures, in the Troposphere?

UAH measures the temperatures IN THE GREENHOUSE



June, July, and August 2021 were nowhere close to the hottest in the satellite record.

What have we learned?

Remnants of post-hurricane Ida brought a heavy rain event to NYC

The NWS had a good handle on the timing, severity and effects (flash flooding) and disseminated warnings.

NYC rain event was only ONE QUARTER the 1943 rainfall near Burnsville, West Virginia , the US 1-hour rainfall record.

The Urban Terrain of NYC cannot handle ordinary heavy rain events; immediate runoff occurs.

Little improvement in drainage in NYC the last century.

Offshore water was warmest of the year, brings more water vapor for thunderstorms.

Geography, Urban Heat Island, Timing (near historical high temperature for the day) all contributed

Political Leaders claim climate crisis yet offer little in maintenance of subway and drainage systems.

They blame “Human-Caused CO₂-fueled Global Warming” for a routine heavy rain event and the runoff which is sure to occur.

The Media and Deep State operatives gladly jump on the Climate Narrative.

Careful examination of the facts disproves The Narrative. Critical Thought is rare.



Sidebar:

Unreliable Commercial Weather Sites

▼ **Wed, Sep 1st 2021**

[illegible]

<https://forecast.weather.gov/product.php?site=NWS&issuedby=EWR>

...THE NEWARK NJ [CLIMATE](#) SUMMARY FOR SEPTEMBER 1 2021...

[CLIMATE](#) [NORMAL](#) PERIOD 1991 TO 2020
[CLIMATE](#) RECORD PERIOD 1893 TO 2021

| WEATHER ITEM | OBSERVED VALUE | TIME (LST) | RECORD VALUE | YEAR | NORMAL VALUE | DEPARTURE FROM NORMAL | LAST YEAR |
|----------------------------|----------------|------------|--------------|--------------|------------------------------|---------------------------------------|-----------|
| | | | | | | | |
| TEMPERATURE (F) | | | | | | | |
| YESTERDAY | | | | | | | |
| MAXIMUM | 79 | 1230 AM | 98 | 2010 | 82 | -3 | 79 |
| MINIMUM | 65 | 1159 PM | 50 | 1934 | 65 | 0 | 68 |
| AVERAGE | 72 | | | | 74 | -2 | 74 |
| PRECIPITATION (IN) | | | | | | | |
| YESTERDAY | 8.41R | | 2.22 | 1959 | 0.12 | 8.29 | 0.12 |
| MONTH TO DATE | 8.41 | | | | 0.12 | 8.29 | 0.12 |
| SINCE SEP 1 | 8.41 | | | | 0.12 | 8.29 | 0.12 |
| SINCE JAN 1 | 45.95 | | | | 31.64 | 14.31 | 30.91 |
| SNOWFALL (IN) | | | | | | | |
| YESTERDAY | 0.0 | | 0.0 | 2001 2002 | 0.0 | 0.0 | 0.0 |
| MONTH TO DATE | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| SINCE SEP 1 | 0.0 | | | | 0.0 | 0.0 | 0.0 |
| SINCE JUL 1 | T | | | | 0.0 | 0.0 | 0.0 |
| SNOW DEPTH | 0 | | | | | | |

Newark Airport, NJ

Tmax 79, 26C

Rainfall 8.41 in Record

Newark, NJ Past Weather

▼ **Wed, Sep 1st 2021**

High: 78.98°F @12:51 AM **Low:** °F @7:00 AM **i Approx. Precipitation / Rain Total:** 0.784 in.

| Time (EDT) | Temp. (°F) | Humidity (%) | Dew Point (°F) | Barometer (inHG) | Wind Speed (mph) | Wind Direction | Wind Gust (mph) | 1hr. Precip / Rain Total (in.) | Snow Depth |
|-----------------|------------|--------------|----------------|------------------|------------------|----------------|-----------------|--------------------------------|------------|
| 10:00 PM | 66.2 | 93.94 | 64.4 | 29.53 | 26 | n | | 32 | - |
| 9:56 PM | 66.92 | 90.49 | 64.04 | 29.54 | 24 | n | | 31 | 0.07 |
| 9:55 PM | 66.2 | 93.94 | 64.4 | 29.54 | 22 | n | | - | 0.05 |
| 9:51 PM | 66.92 | 93.37 | 64.94 | 29.55 | 26 | n | | 31 | 1.82 |
| 9:50 PM | 66.2 | 93.94 | 64.4 | 29.55 | 25 | n | | - | 1.82 |
| 9:45 PM | 66.2 | 93.94 | 64.4 | 29.55 | 22 | n | | - | 1.74 |
| 9:15 PM | 66.2 | 93.94 | 64.4 | 29.53 | 22 | n | | - | 1.25 |
| 9:10 PM | 66.2 | 93.94 | 64.4 | 29.53 | 18 | n | | - | 0.96 |
| | | | | | | | | | |
| | | | | | | | | | |

THIS IS NOT REPRESENTATIVE

I do not recommend using commercial internet sites such as these.

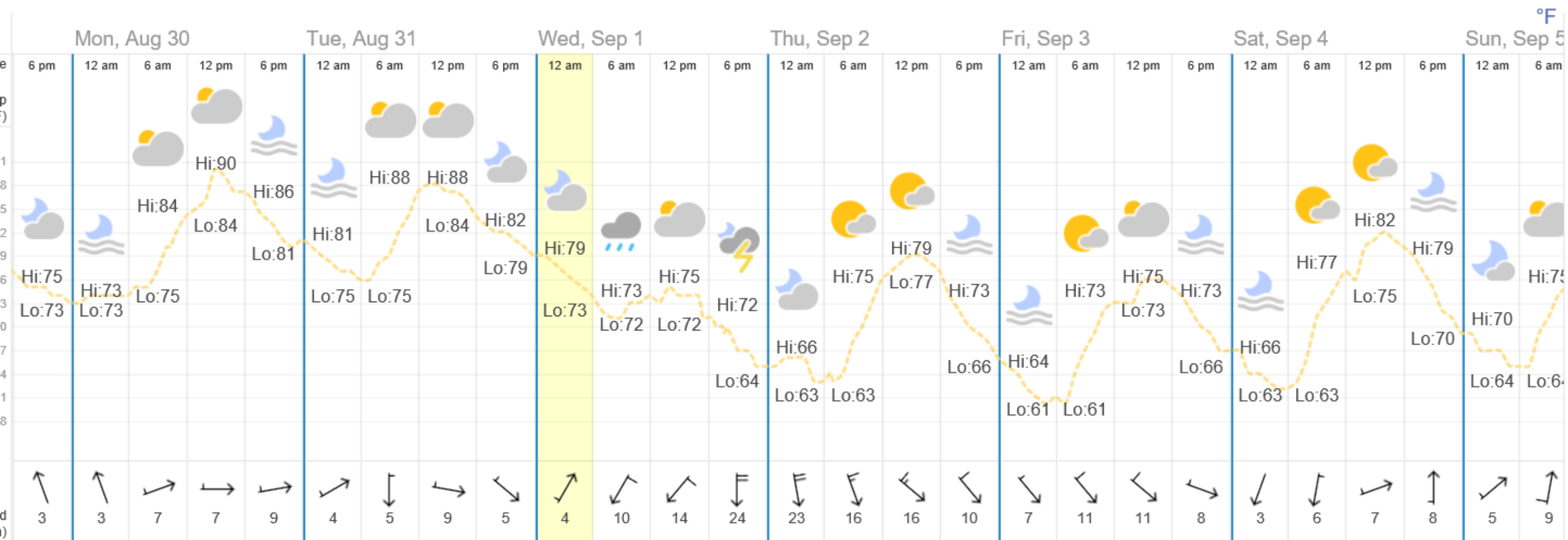
Lots of work, wrong info: Dead End.

<https://www.timeanddate.com/weather/usa/newark/historic>

This commercial site gives no indication that on 1 Sept 2021, an evening downpour brought the rainfall total to 8.41, a new record for the date.

For serious work STAY AWAY!

Past Weather in Newark — Graph



Wednesday, September 1, 2021, 12:00 am — 6:00 am



79 / 73 °F

Mostly cloudy.

Humidity: 68%

Barometer: 29.79 "Hg



SSW

Wind: 4.35 mph

