



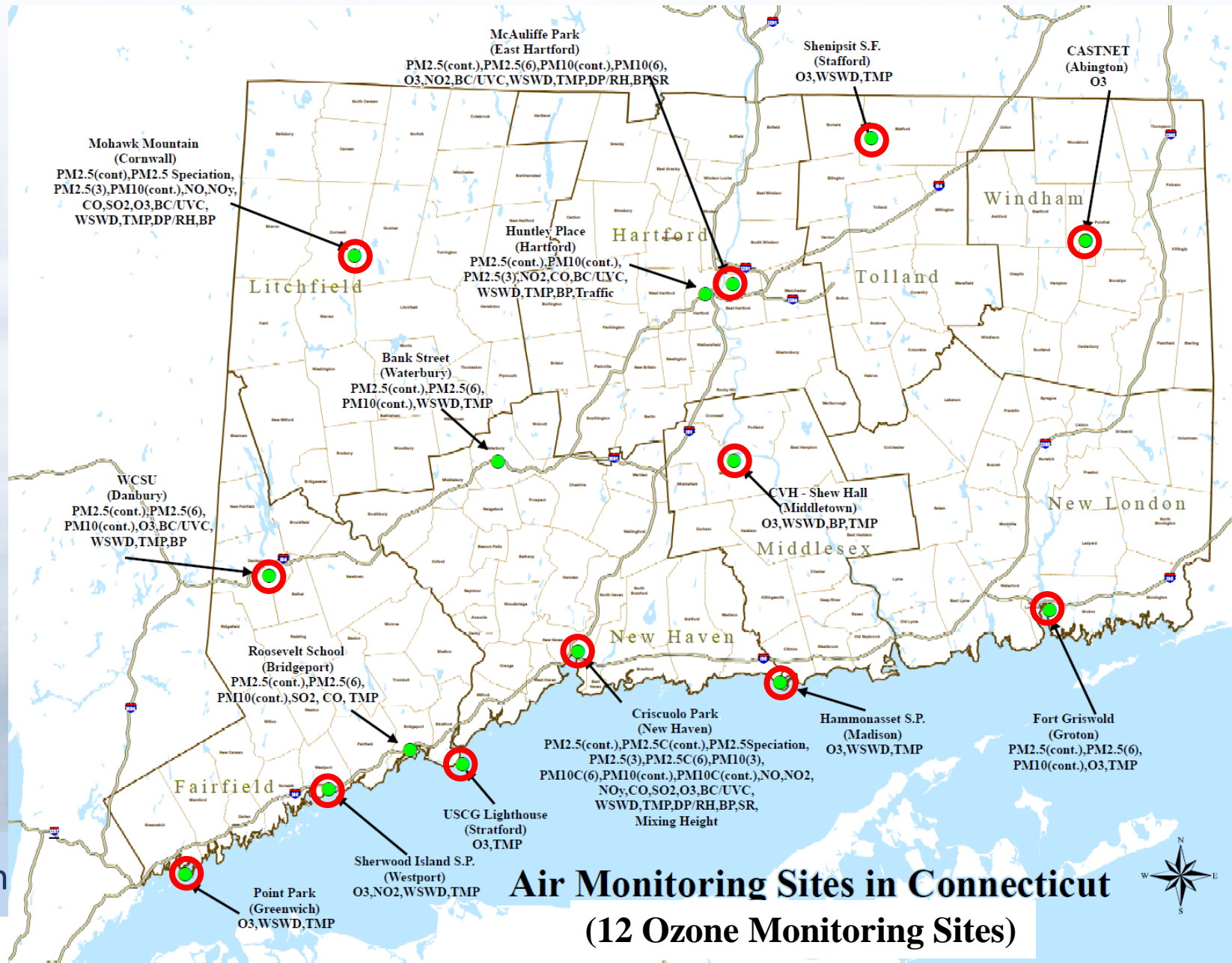
Connecticut Department of Energy and Environmental Protection



Recent Ozone Exceedances in Connecticut

Amanda Fritz

CT Air Monitoring Sites



Conn

**Air Monitoring Sites in Connecticut
(12 Ozone Monitoring Sites)**



Ozone Exceedance Days in 2021

Connecticut Department of Environmental Protection 2021 8-Hour Ozone Daily Maximums

2021 Site	May		June		
	21	26	5	6	7
Abington	48	58	82	68	62
Cornwall	76	70	61	63	57
Danbury	64	75	63	64	71
East Hartford	58	66	62	61	74
Greenwich	49	59	71	82	72
Groton	38	40	79	74	43
Madison	43	47	83	77	51
Middleton	58	60	86	71	68
New Haven	44	40	76	47	49
Stafford	67	71	62	62	66
Stratford	47	50	86	78	57
Westport	49	56	80	86	66
# days > Federal Standard	1	2	3	4	5

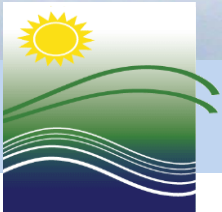
Good (0-54 ppb)

Moderate (55-70 ppb)

Unhealthy for Sensitive Groups (71-85 ppb)

Unhealthy (86-105 ppb)

Very Unhealthy (>106 ppb)



Connecticut

Ozone Forecasts for Connecticut 2021

Actual Exceedance Days = 5
Forecast Exceedance Days = 4

Month	Actual Dates	Forecast Dates
May	21 & 26	26
June	5, 6, & 7	5, 6, & 7*



* Upgraded forecast

CT Ozone 2021 Design Values

		2021 Compliance Status							
		x = Violating NAAQS							
	Site Name	To Date: Prelim 2021 DV	2015 NAAQS	2008 NAAQS	1997 NAAQS	# Needed to Next NAAQS in Violation (key monitors in each NA are highlighted in RED)			
SWCT Portion of NYC Area	Danbury	67				3	more days > 73	ppb day(s) violate the	2015 NAAQS
	Greenwich	75	X			1	more days > 66	ppb day(s) violate the	2008 NAAQS
	Madison	76	X	X		4	more days > 90	ppb day(s) violate the	1997 NAAQS
	Middletown	69				1	more days > 67	ppb day(s) violate the	2015 NAAQS
	New Haven	66				3	more days > 66	ppb day(s) violate the	2015 NAAQS
	Stratford	73	X			2	more days > 69	ppb day(s) violate the	2008 NAAQS
	Westport	73	X			2	more days > 73	ppb day(s) violate the	2008 NAAQS
Greater CT	Cornwall	63				4	more days > 87	ppb day(s) violate the	2015 NAAQS
	East Hartford	65				4	more days > 76	ppb day(s) violate the	2015 NAAQS
	Groton	70				1	more days > 66	ppb day(s) violate the	2015 NAAQS
	Stafford	67				4	more days > 76	ppb day(s) violate the	2015 NAAQS
	Abington	63				4	more days > 84	ppb day(s) violate the	2015 NAAQS
Number of Exceedance Days to Date			5		The 1997 standard was repealed with the 2008 implementation rule. Effective April 6, 2015				

Design value triggers for the NAAQS:

1997 = 85 ppb

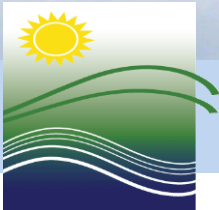
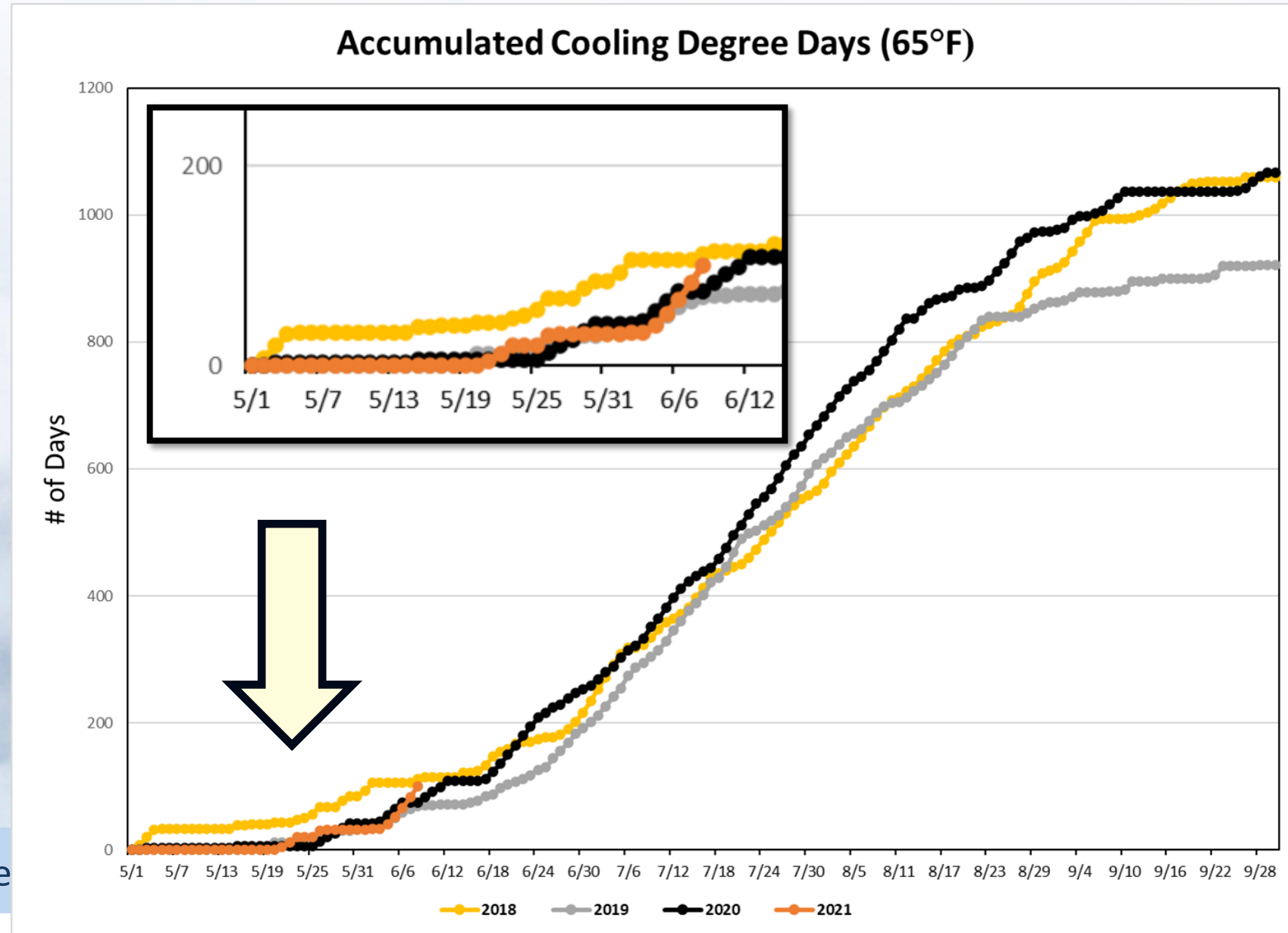
2008 = 76 ppb

2015 = 71 ppb



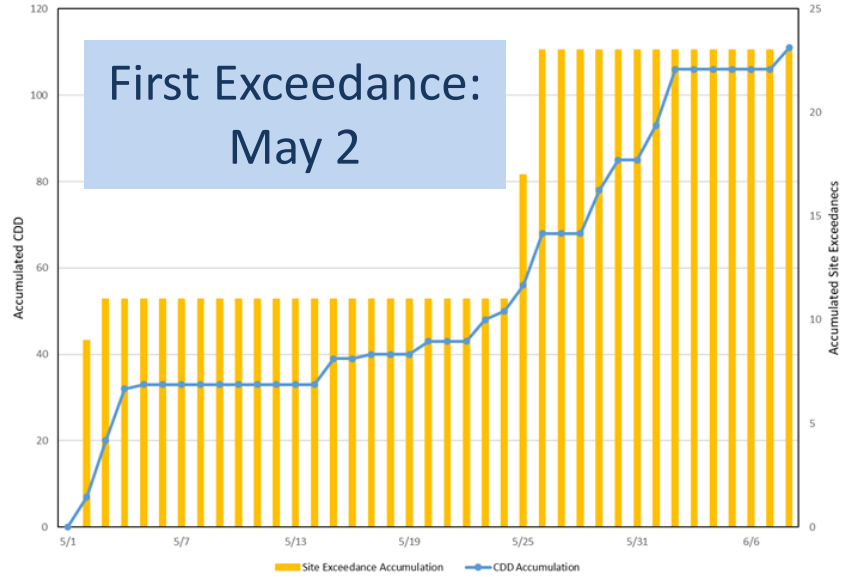
Cooling Degree Days

- A cooling degree day (CDD) is a measure of how hot the average temperature was on a given day compared to a threshold of 65°F
- If a day's average temperature is 75°F, that day has a CDD of 10

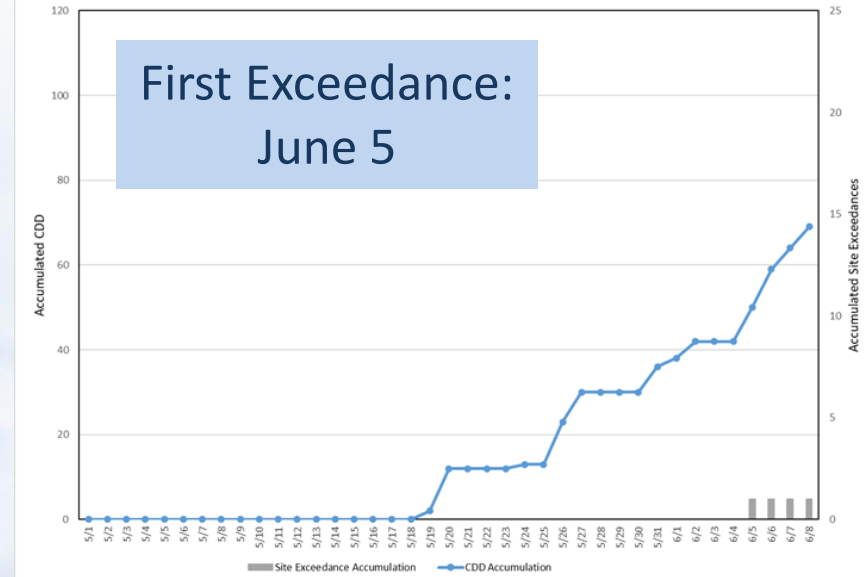


Cooling Degree Days

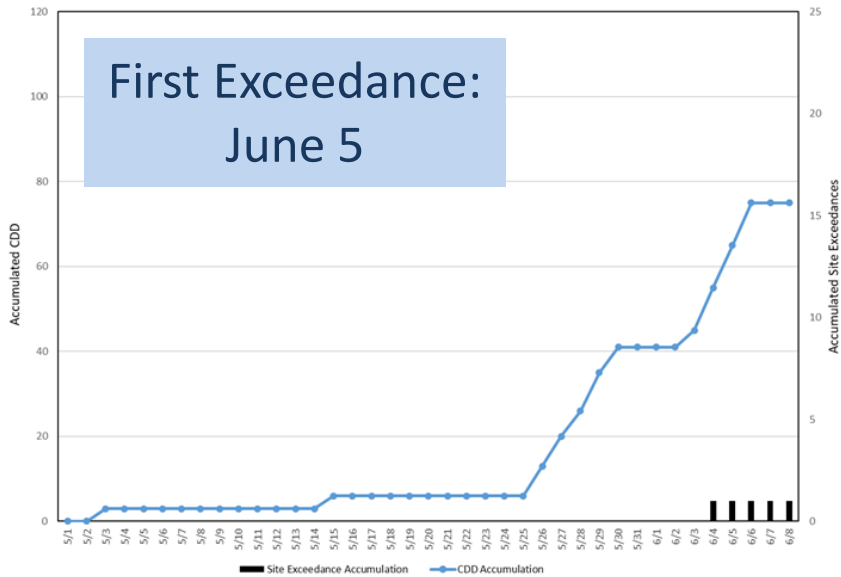
2018



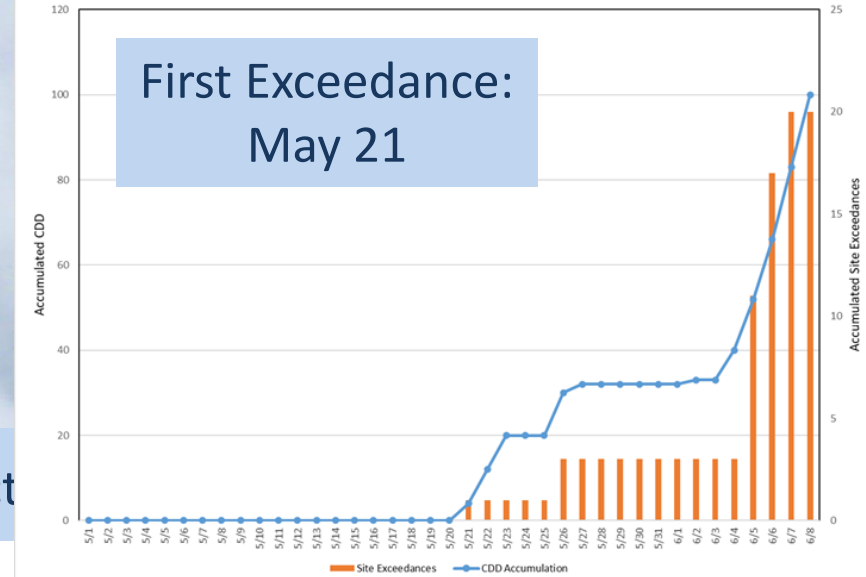
2019



2020



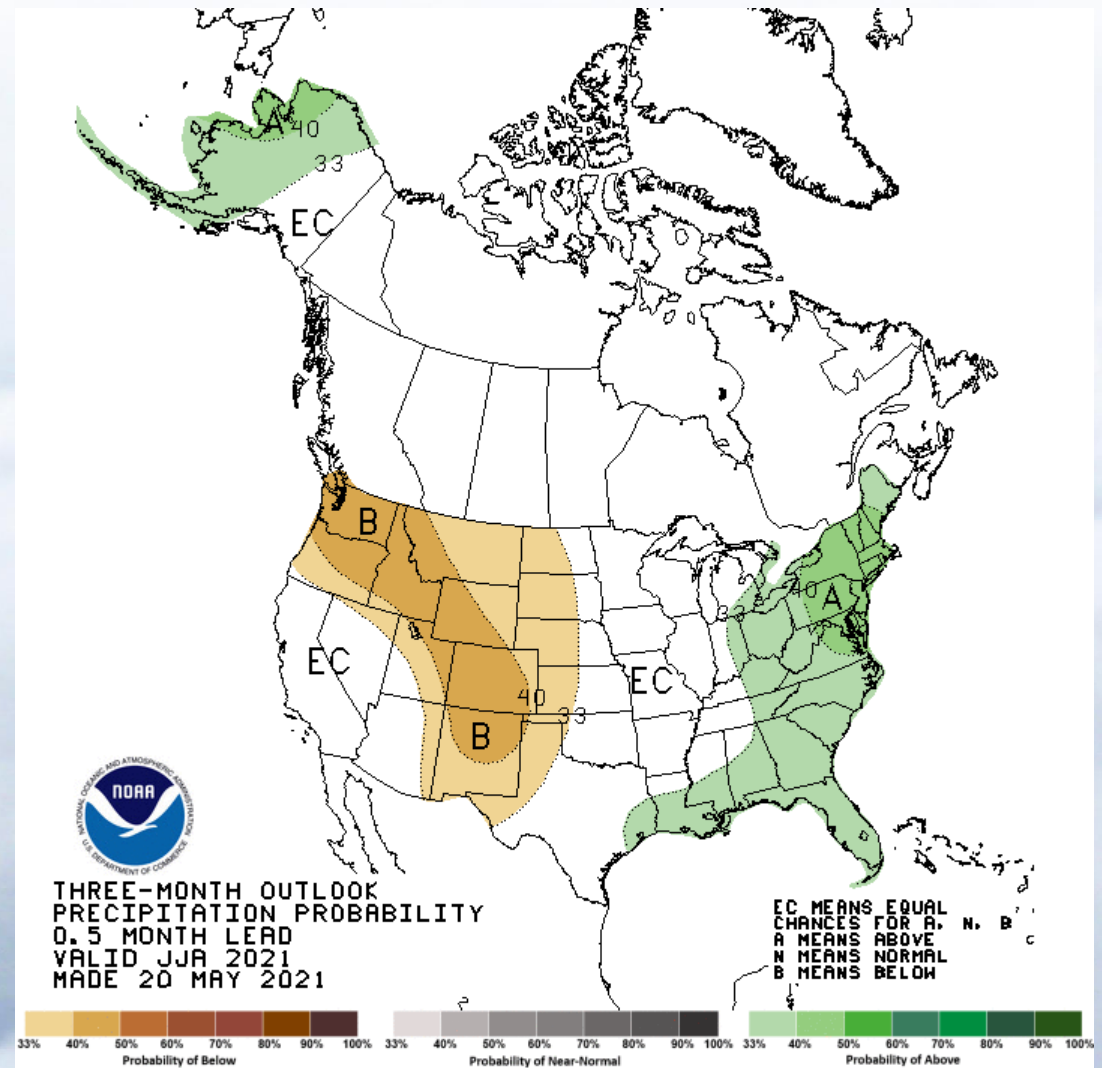
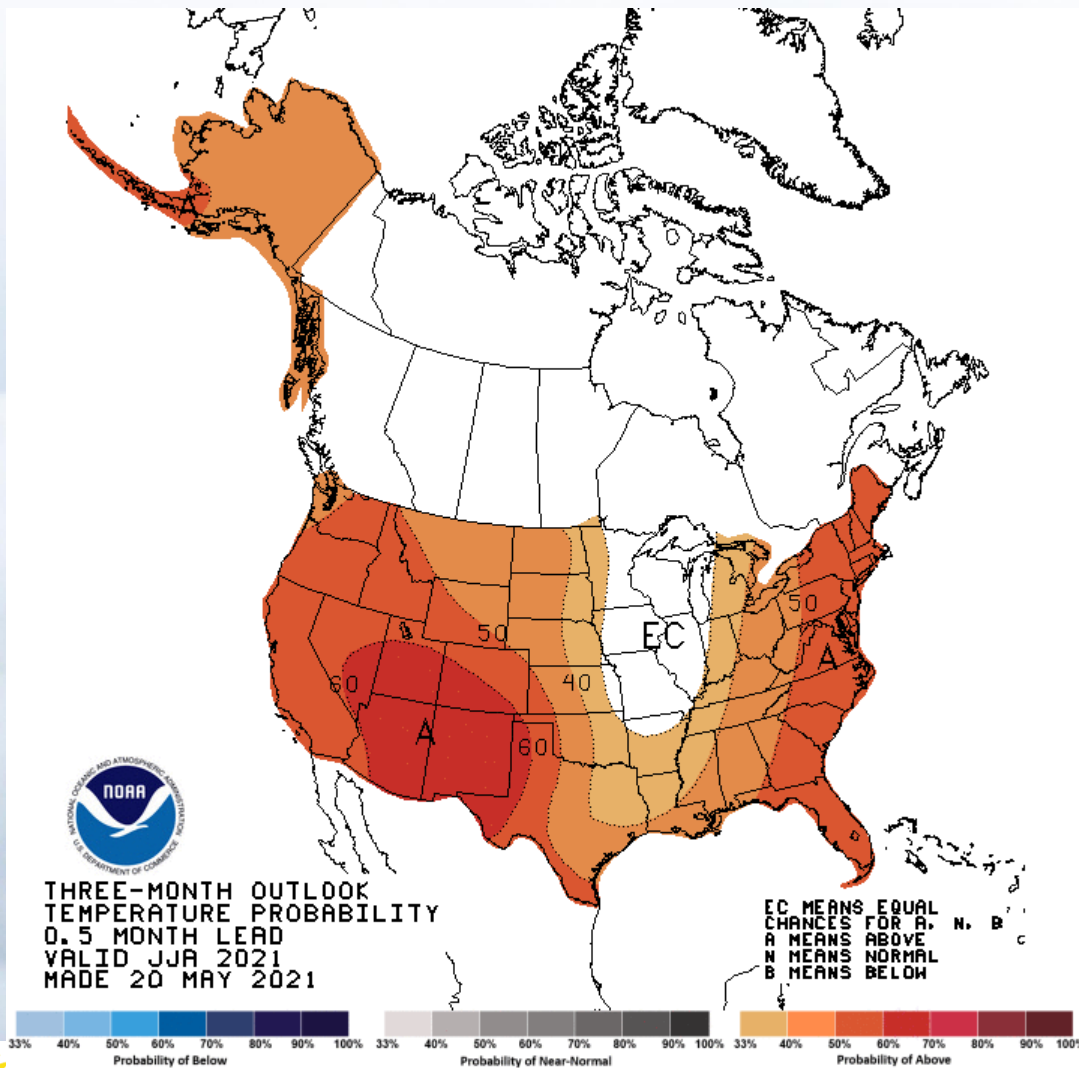
2021



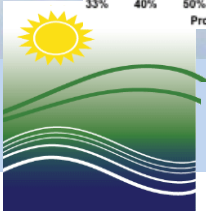
- As of June 8th:
- 2018 had 111 CDD and 23 site exceedances.
 - 2019 had 69 CDD and 1 site exceedance.
 - 2020 had 75 CDD and 1 site exceedance.
 - 2021 has 100 CDD and 20 site exceedances.

of Energy and Environmental Protect

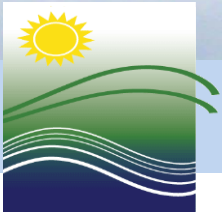
2021 Forecast Temperature and Precipitation



Forecasted above normal temperatures may counteract the full effects of reduced emissions



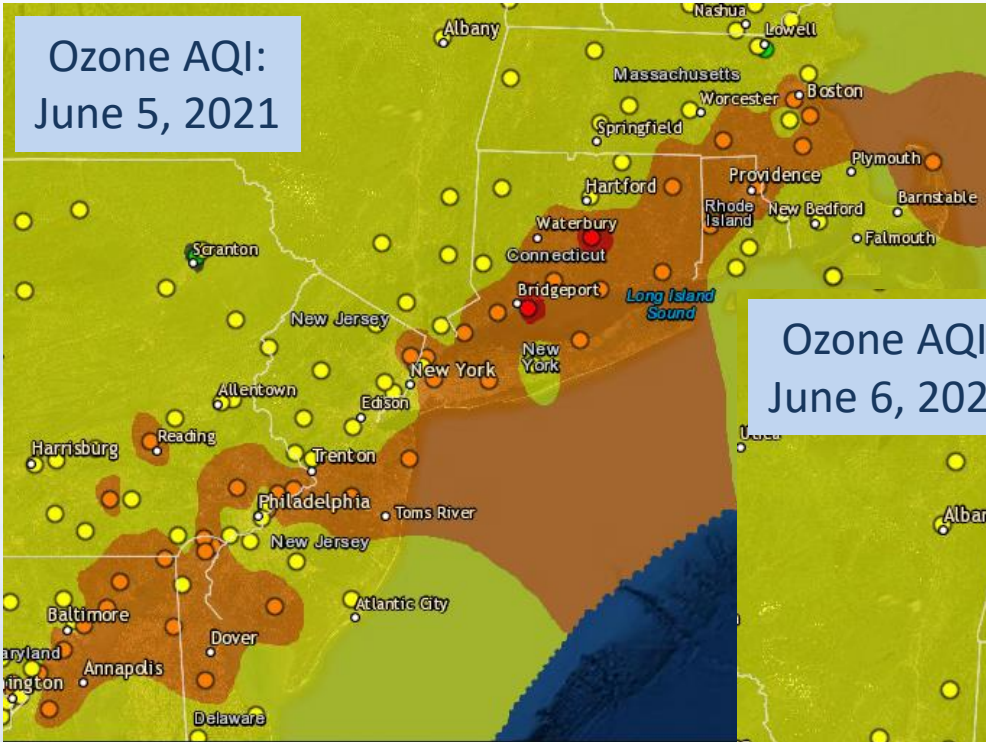
Ozone Exceedance Event: June 5, 6, & 7



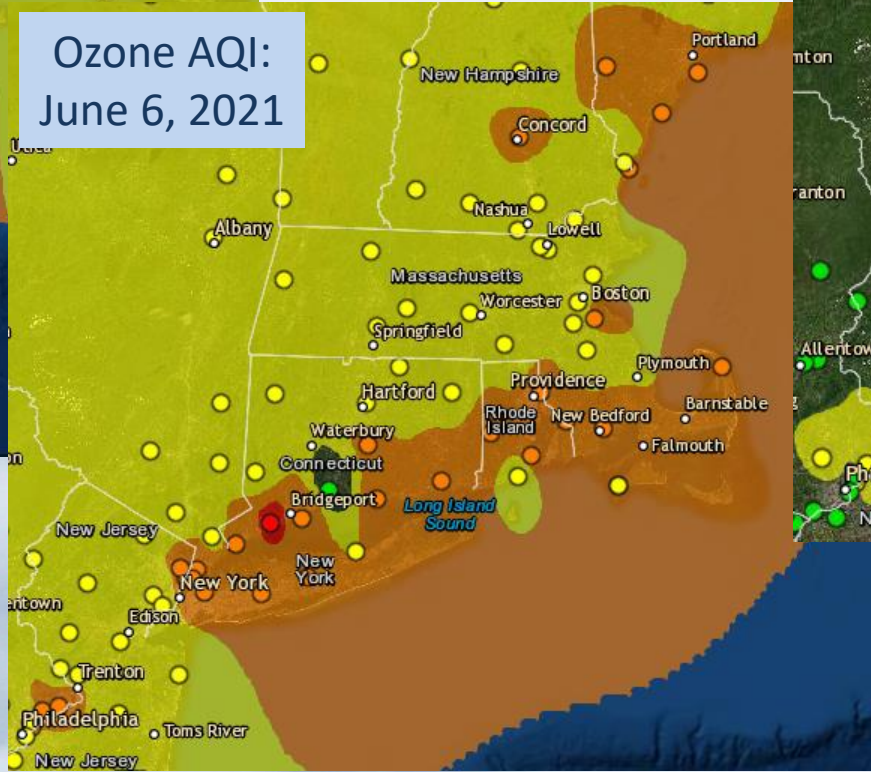
Connecticut Department of Energy and Environmental Protection

Introduction

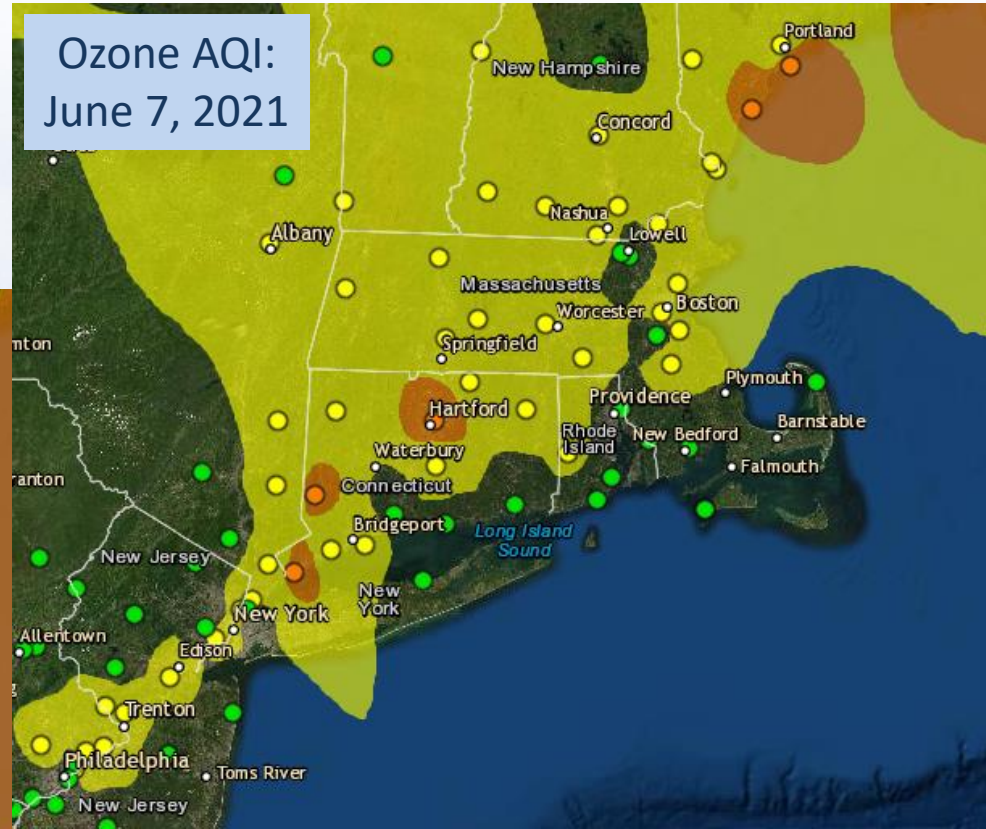
Ozone AQI:
June 5, 2021



Ozone AQI:
June 6, 2021

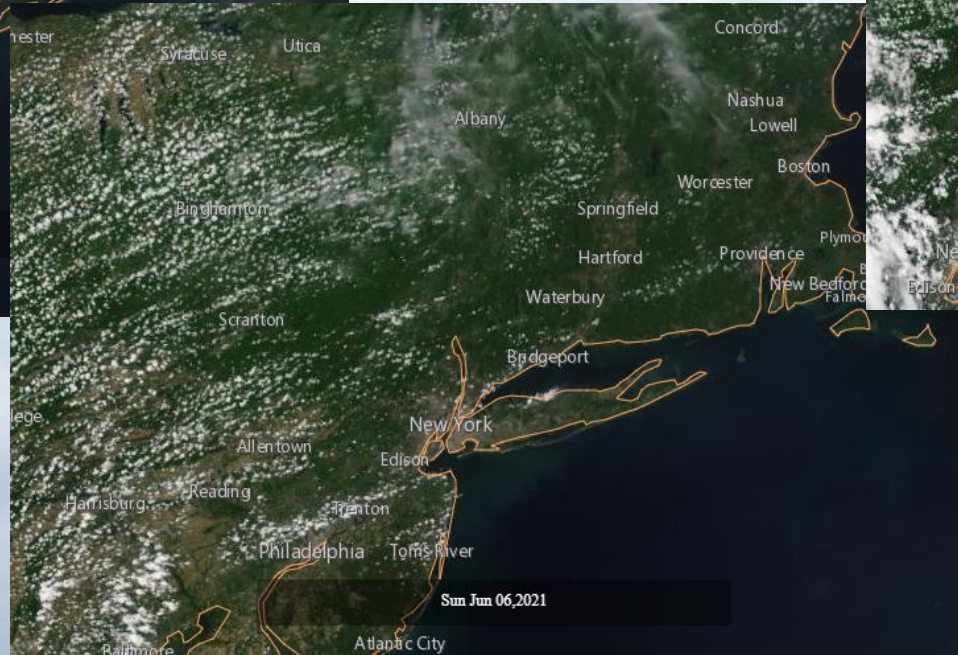
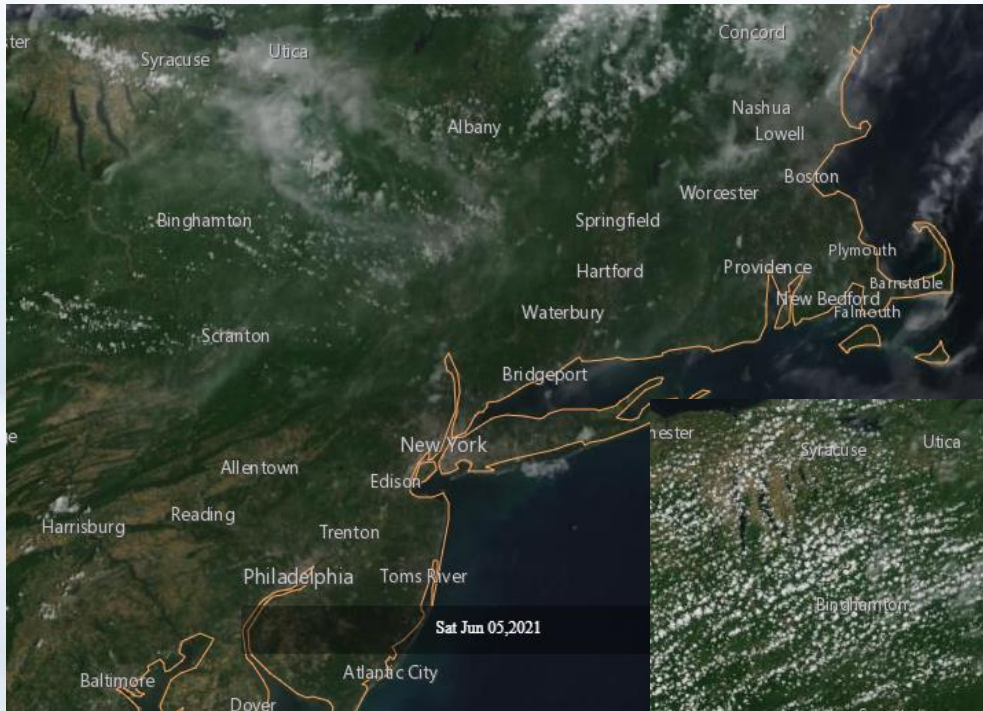


Ozone AQI:
June 7, 2021



On Saturday, an ozone plumed developed along the I-95 corridor from Maryland to Boston; On Sunday, exceedances mostly occur in coastal areas from New York to Maine; On Monday, exceedances in Connecticut and Maine with wide area of MODERATES

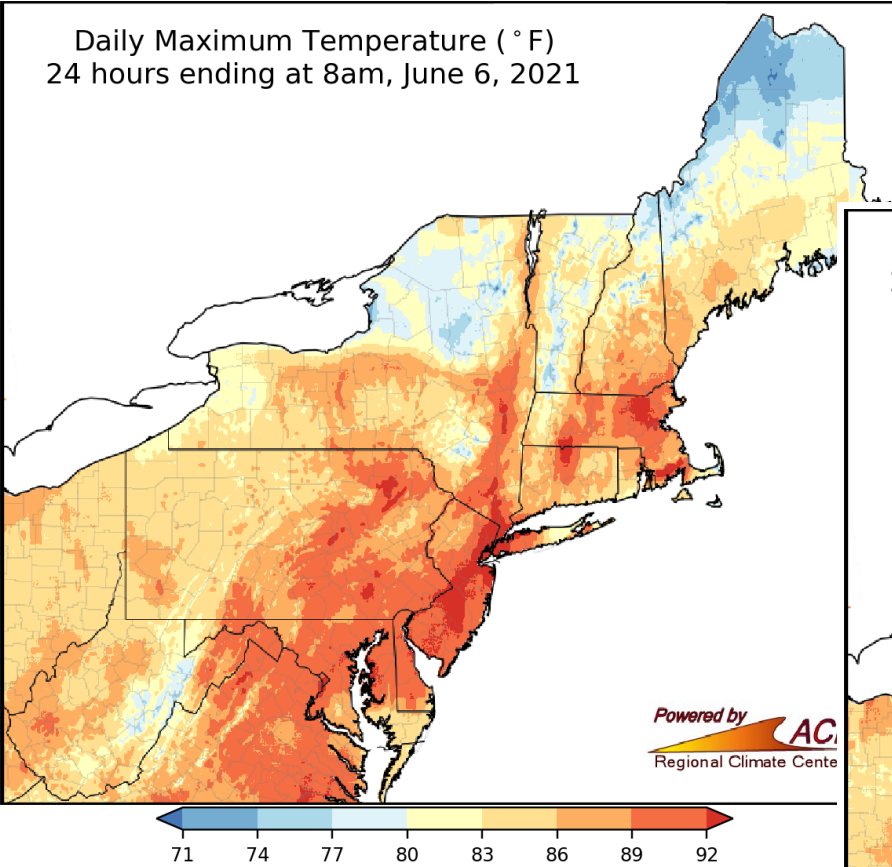
Satellite Imagery



Saturday featured mostly sunny skies for the Mid-Atlantic region and southern New England; Sunday featured mostly sunny skies with clouds moving into the Mid-Atlantic; Monday featured more clouds than the previous two days, but it remained partly to mostly sunny across the Northeast

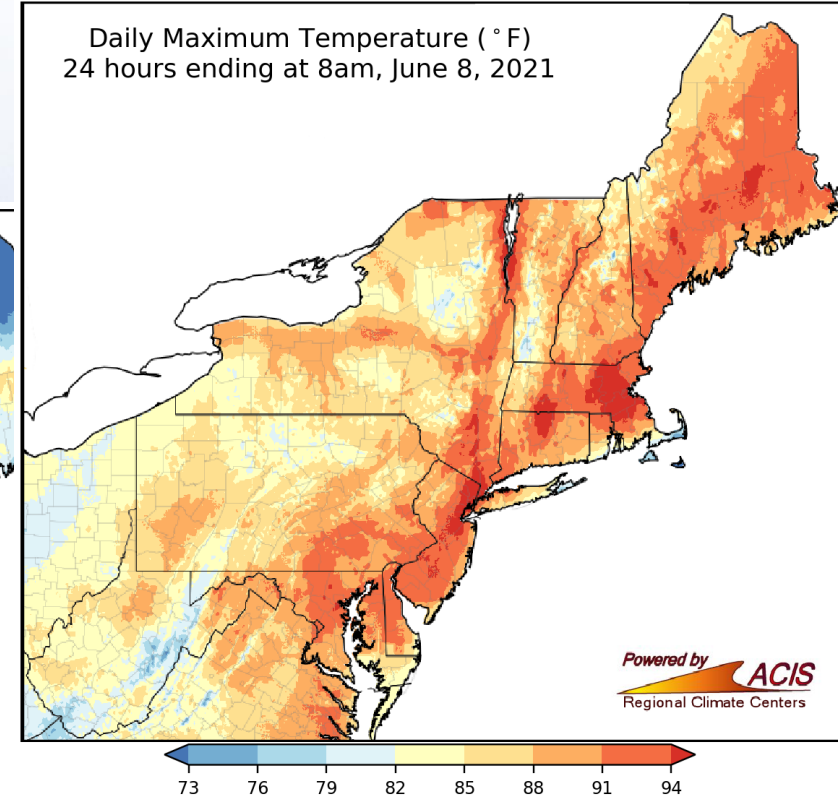
Maximum 24-Hr Temperature

Daily Maximum Temperature (°F)
24 hours ending at 8am, June 6, 2021

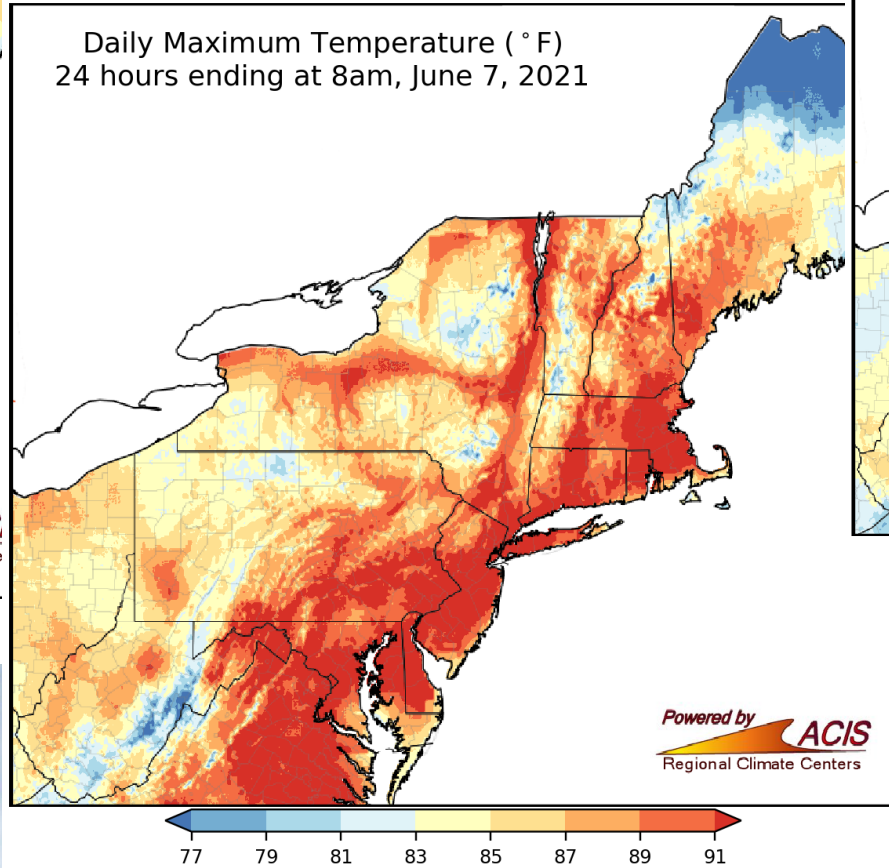


June 6, 2021

Daily Maximum Temperature (°F)
24 hours ending at 8am, June 8, 2021



Daily Maximum Temperature (°F)
24 hours ending at 8am, June 7, 2021



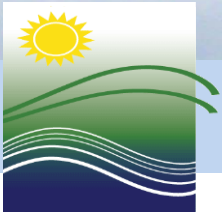
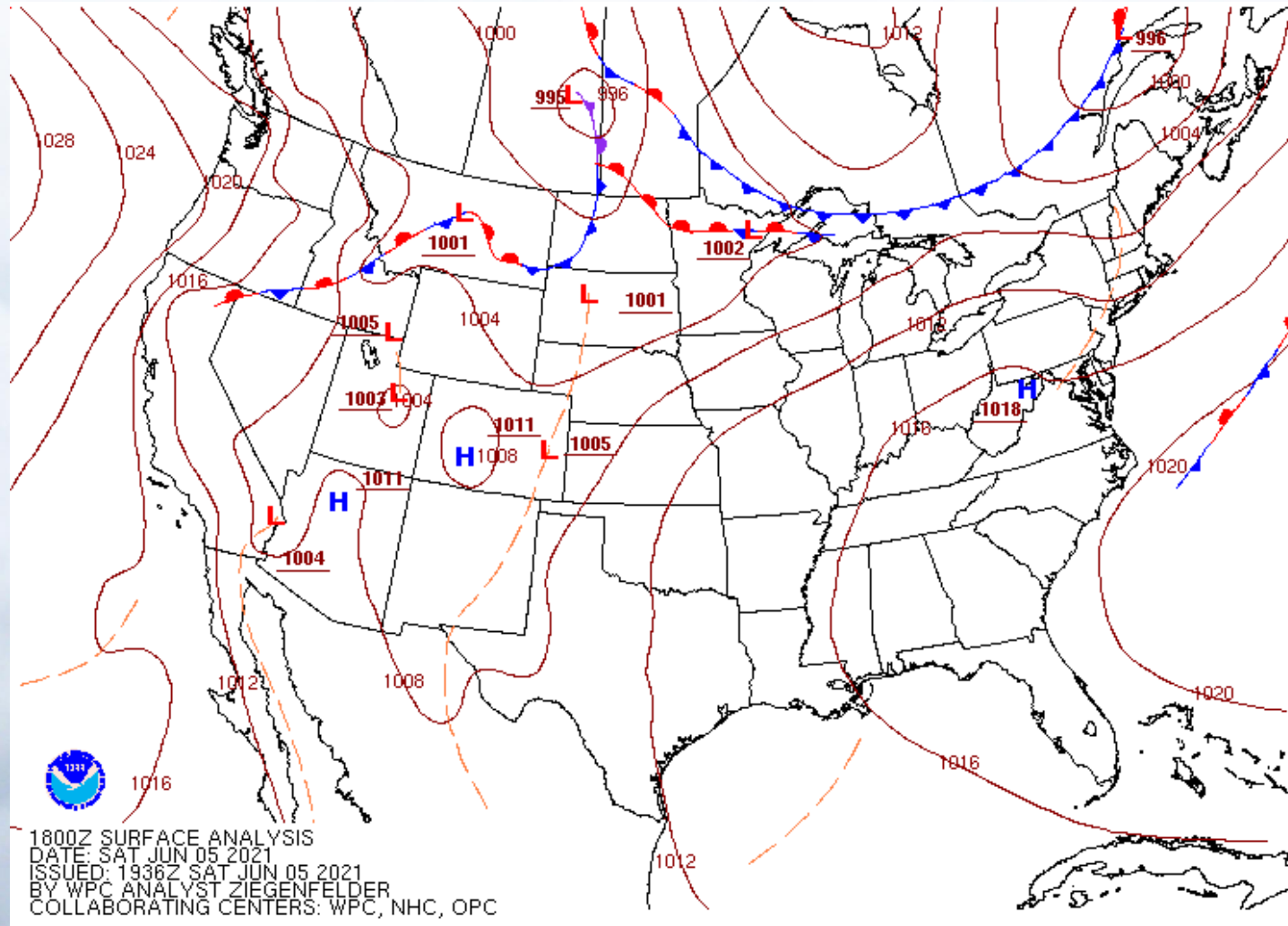
June 7, 2021

June 5, 2021

On Saturday, temperatures were in the mid/upper 80s to low 90s for most of Eastern Mid-Atlantic region and southern New England; Sunday and Monday was even warmer with temperatures above 85 into the 90s for the I-95 corridor

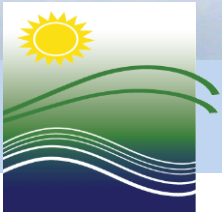
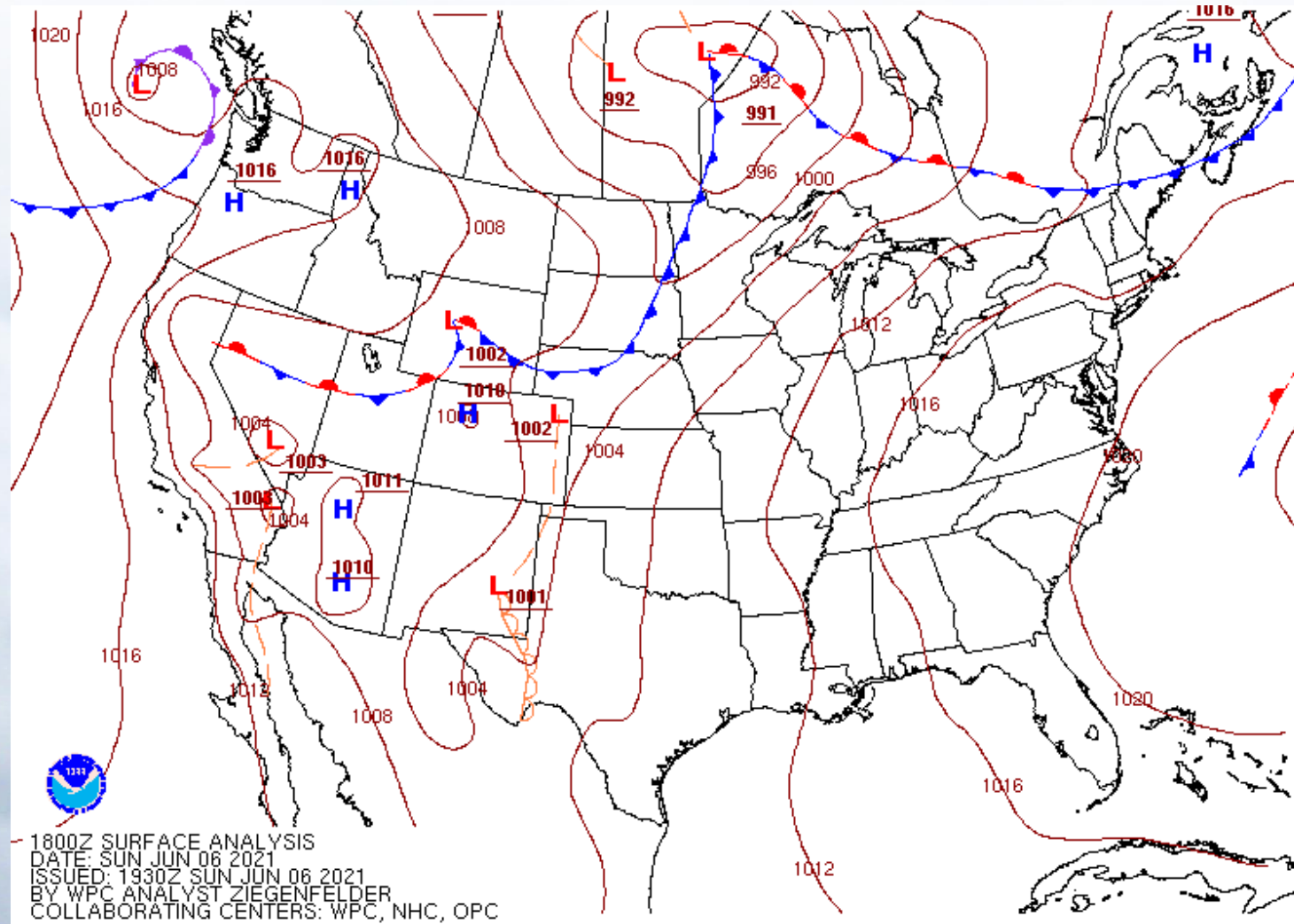


Surface Analysis: June 5 at 18Z



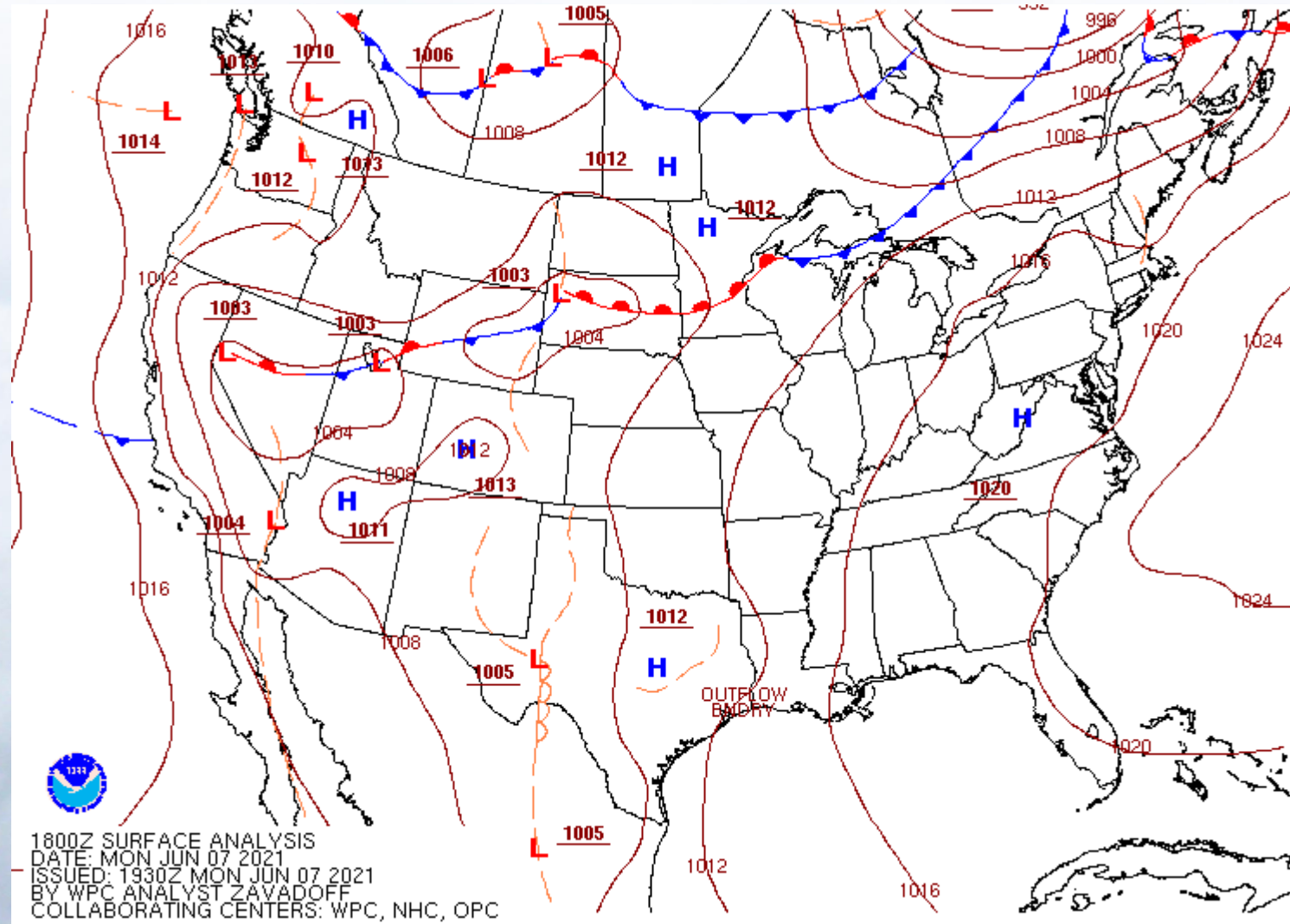
High pressure over southeastern US and Mid Atlantic nudging into Northeast causing southwest winds

Surface Analysis: June 6 at 18Z



Area of high pressure moves northward into the Northeast allowing for continued southwest winds

Surface Analysis: June 7 at 18Z

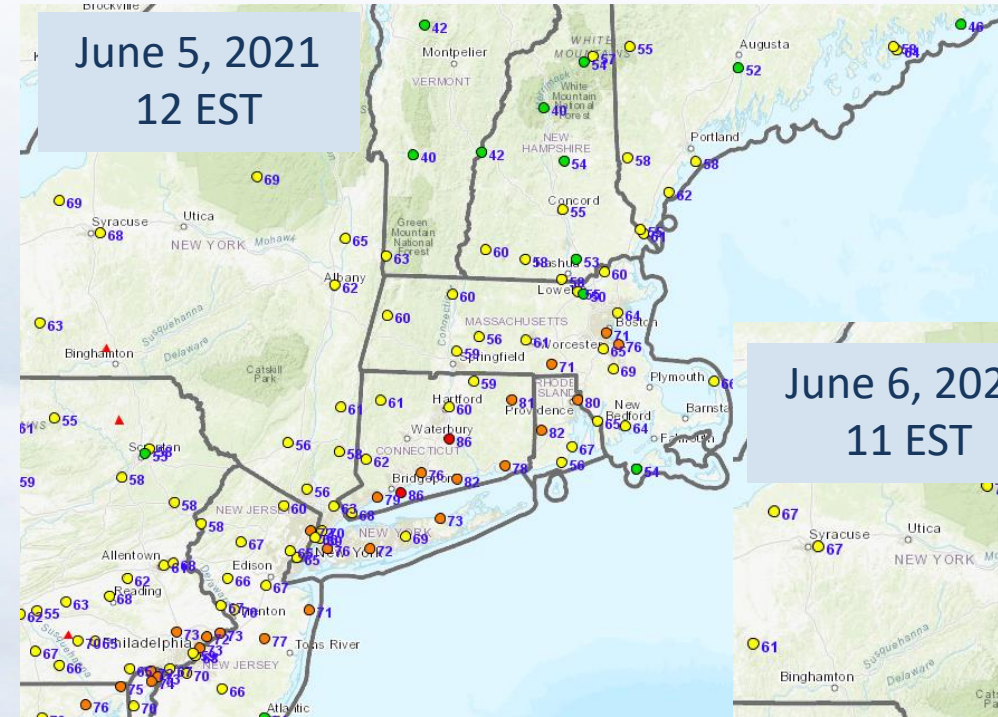


High pressure remains in control across Eastern US with continued southwest winds for Connecticut and the Northeast

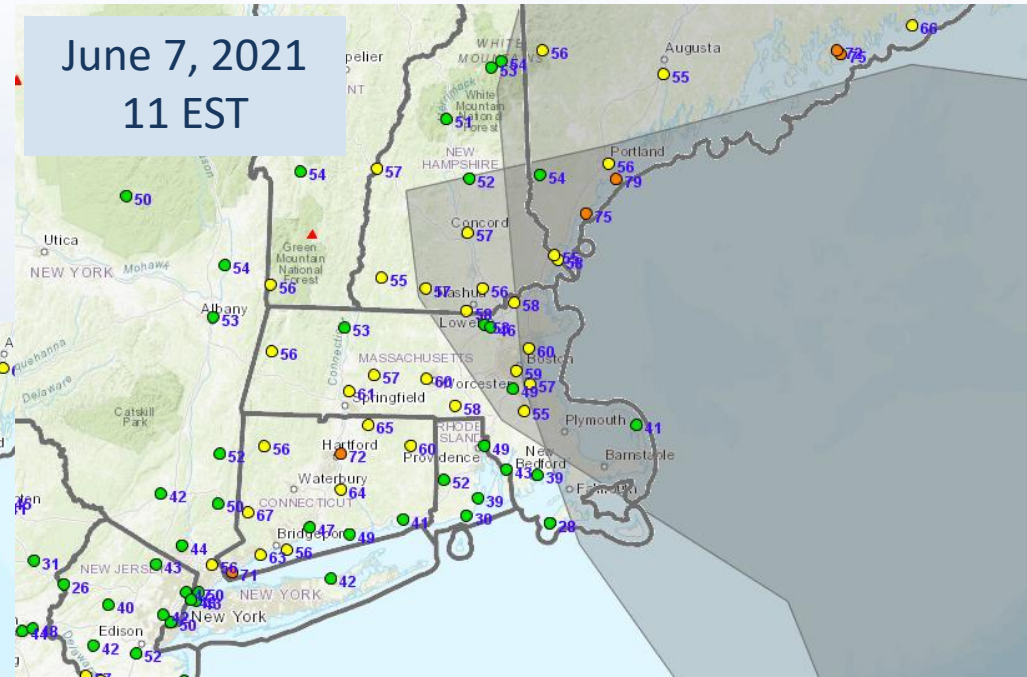


HMS Fires & Smoke

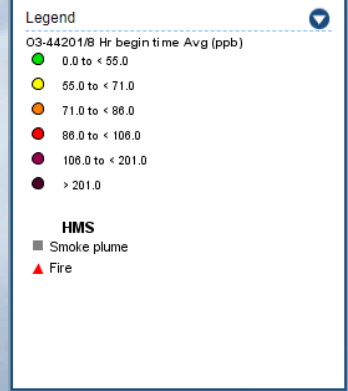
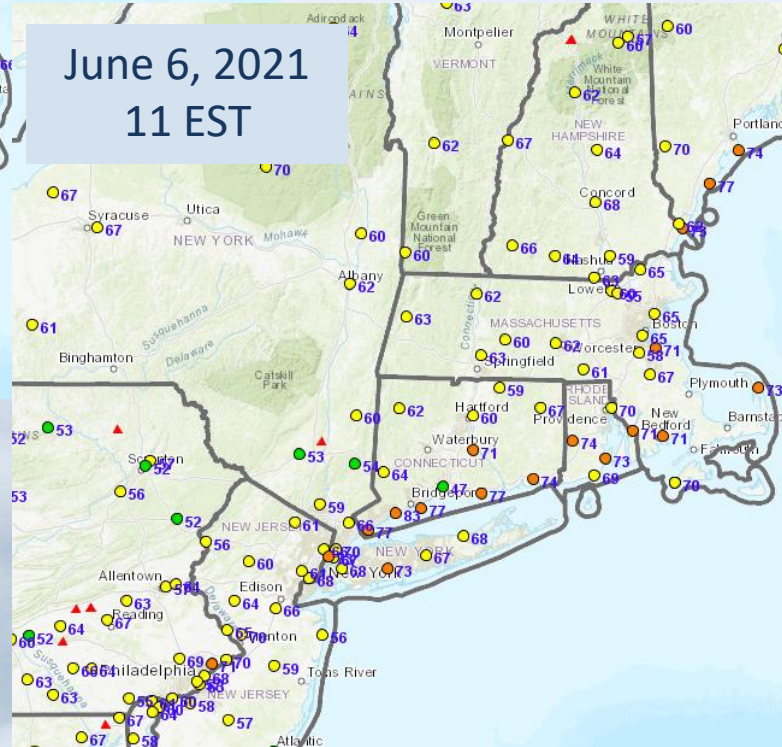
June 5, 2021
12 EST



June 7, 2021
11 EST



June 6, 2021
11 EST



On Saturday and Sunday, HMS fires to our west in Pennsylvania & New York; On Monday, smoke plume for easternmost portions of the Northeast

Takeaways

- Five exceedance days so far in 2021; Four were forecasted with June 7 being an upgraded forecast
- Design values for sites in Greater Connecticut have yet to exceed the 2008 & 2015 NAAQS this year; Southwest CT is violating the 2008 NAAQS for Madison and violating the 2015 NAAQS for about half of the sites
- For the recent June event, high pressure remained in control in Eastern US allowing for sunny skies, warm temperatures, and southwest winds to persist for all three days; conducive for ozone formation and transport
- Expect a warmer & wetter than average summer

