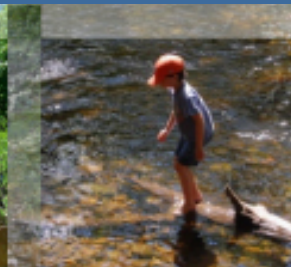
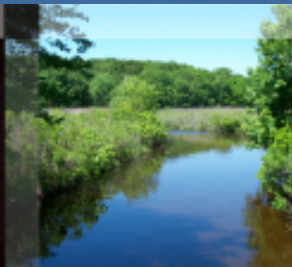




Connecticut Department of Energy and Environmental Protection



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

April 22, 2016 Ozone Event

Analyzed by
Michael Geigert



Connecticut Department of Energy and Environmental Protection

OTC Ozone Monitors

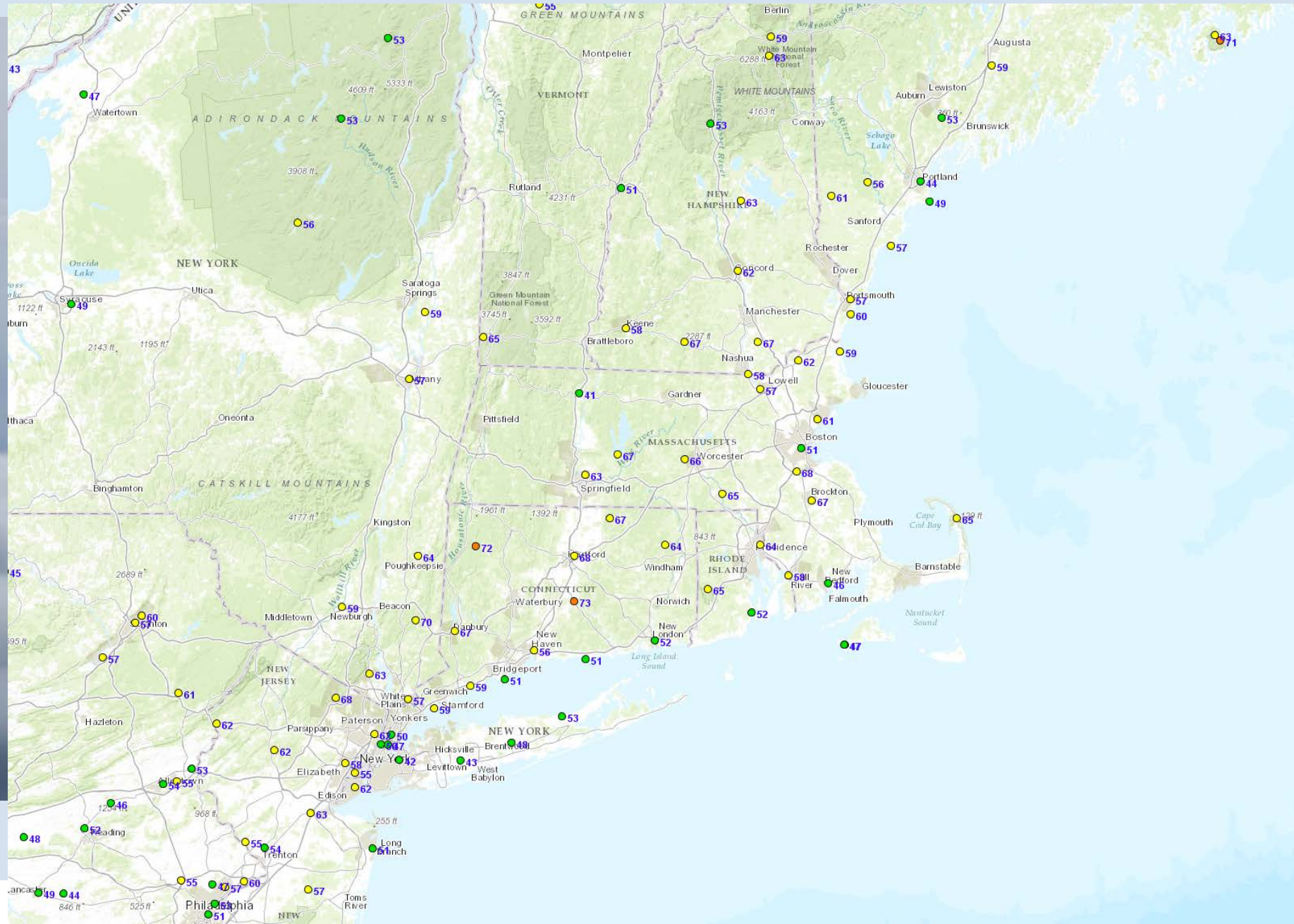
- 2 CT Exceedances
- 1 Maine Exceedance

Site	Site AQS	Date (LST)	8-hr Ozone
Middletown	90070007	4/22/2016	73
Cornwall	90050005	4/22/2016	72
Bar Harbor - Ca	230090102	4/22/2016	71
Mt Ninham	360790005	4/22/2016	70
E. Milton - Blu	250213003	4/22/2016	68
East Hartford	90031003	4/22/2016	68
Ramapo	340315001	4/22/2016	68
Brockton	250230005	4/22/2016	67
Danbury	90011123	4/22/2016	67
Londonderry - M	330150018	4/22/2016	67
Miller State Pa	330115001	4/22/2016	67
Stafford	90131001	4/22/2016	67
WARE	250154002	4/22/2016	67
Worcester	250270015	4/22/2016	66
Bennington	500030004	4/22/2016	65
TRURO	250010002	4/22/2016	65
Uxbridge	250270024	4/22/2016	65
W Greenwich	440030002	4/22/2016	65
Abington	90159991	4/22/2016	64
E Providence	440071010	4/22/2016	64
Millbrook	360270007	4/22/2016	64
Acadia NP - McF	230090103	4/22/2016	63
CHICOPEE	250130008	4/22/2016	63
Laconia	330012004	4/22/2016	63
Rockland Cty	360870005	4/22/2016	63
Rutgers Univers	340230011	4/22/2016	63
SUMMIT	330074001	4/22/2016	63
Chester	340273001	4/22/2016	62
Columbia	340410007	4/22/2016	62
Concord	330131007	4/22/2016	62
Haverhill	250095005	4/22/2016	62
Leonia	340030006	4/22/2016	62
Susan Wagner	360850067	4/22/2016	62

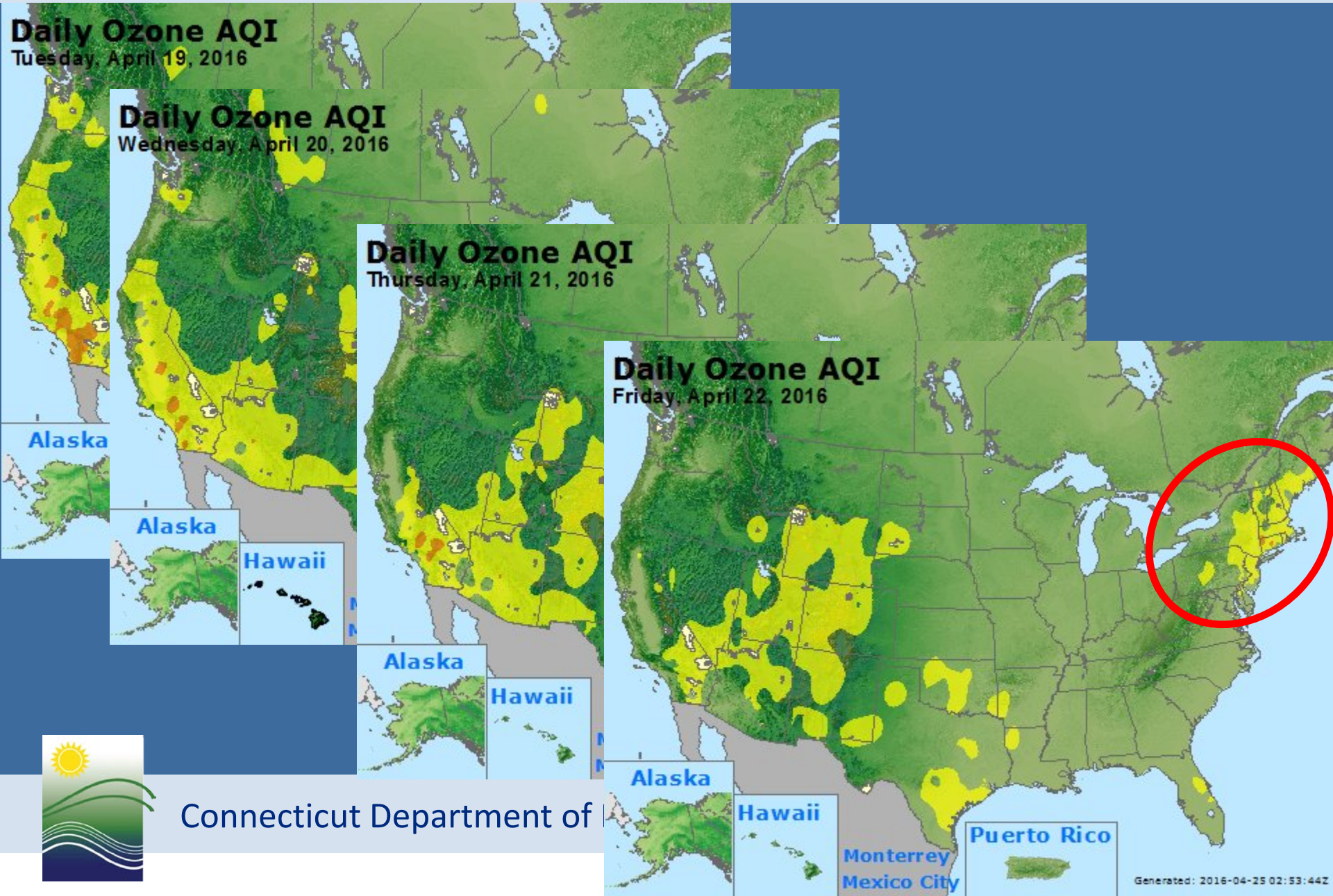


April 22, 2016

Map of April 22, 2016 Maximum 8-hr Ozone (ppb)

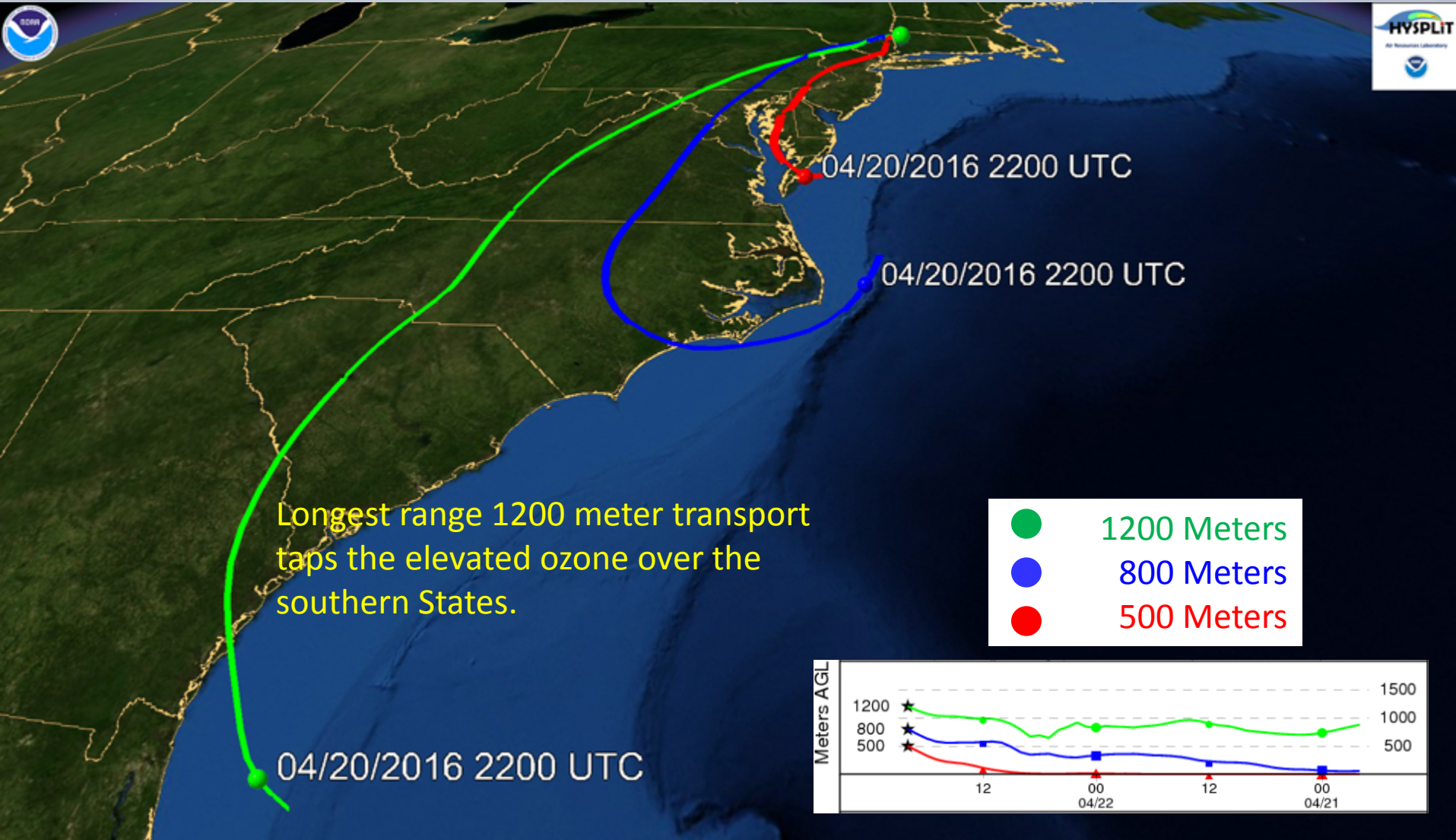


Persistent Elevated Ozone over the Southeast



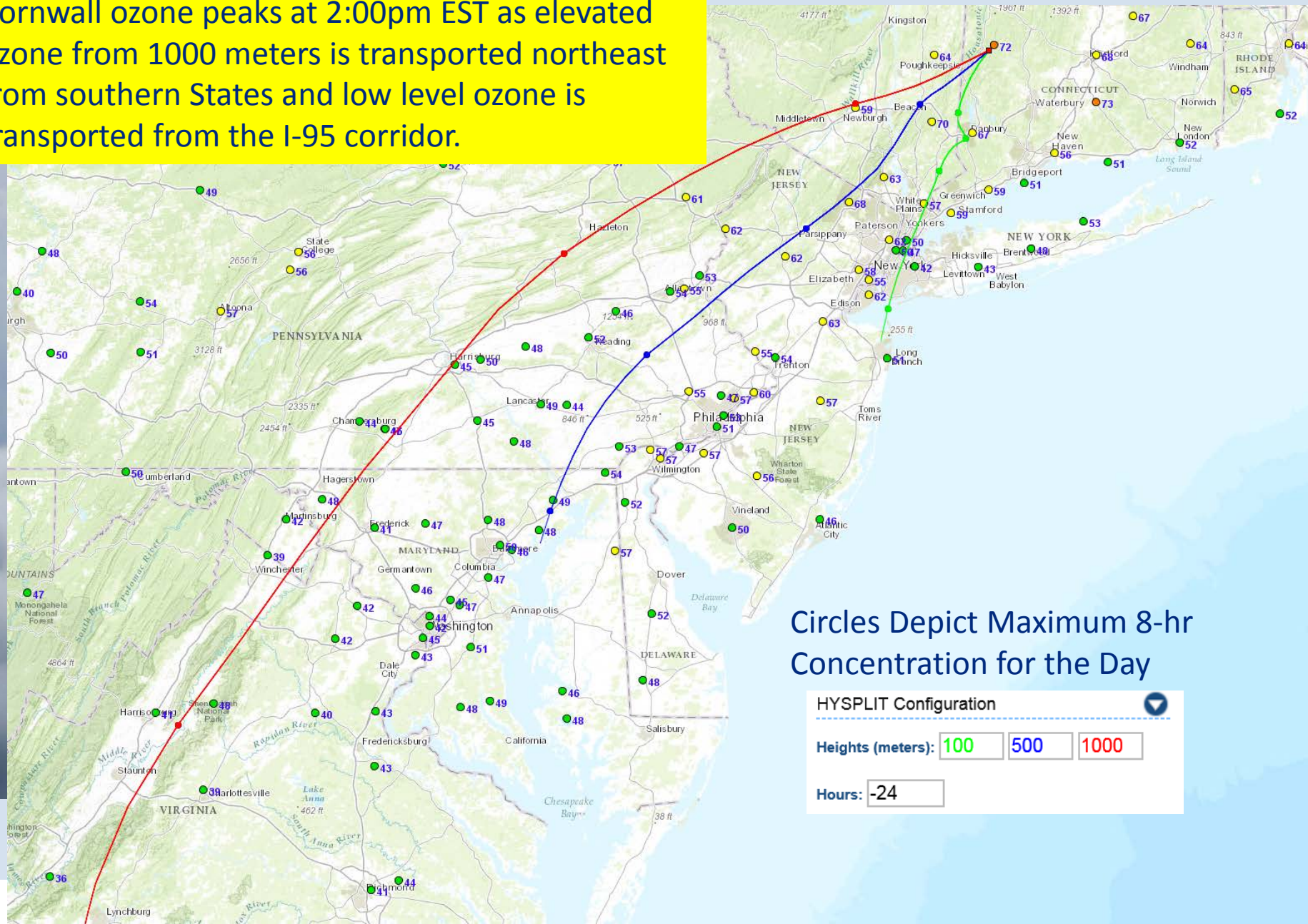
Connecticut Department of

Cornwall 48-hr Back Trajectories 20z April 22, 2016



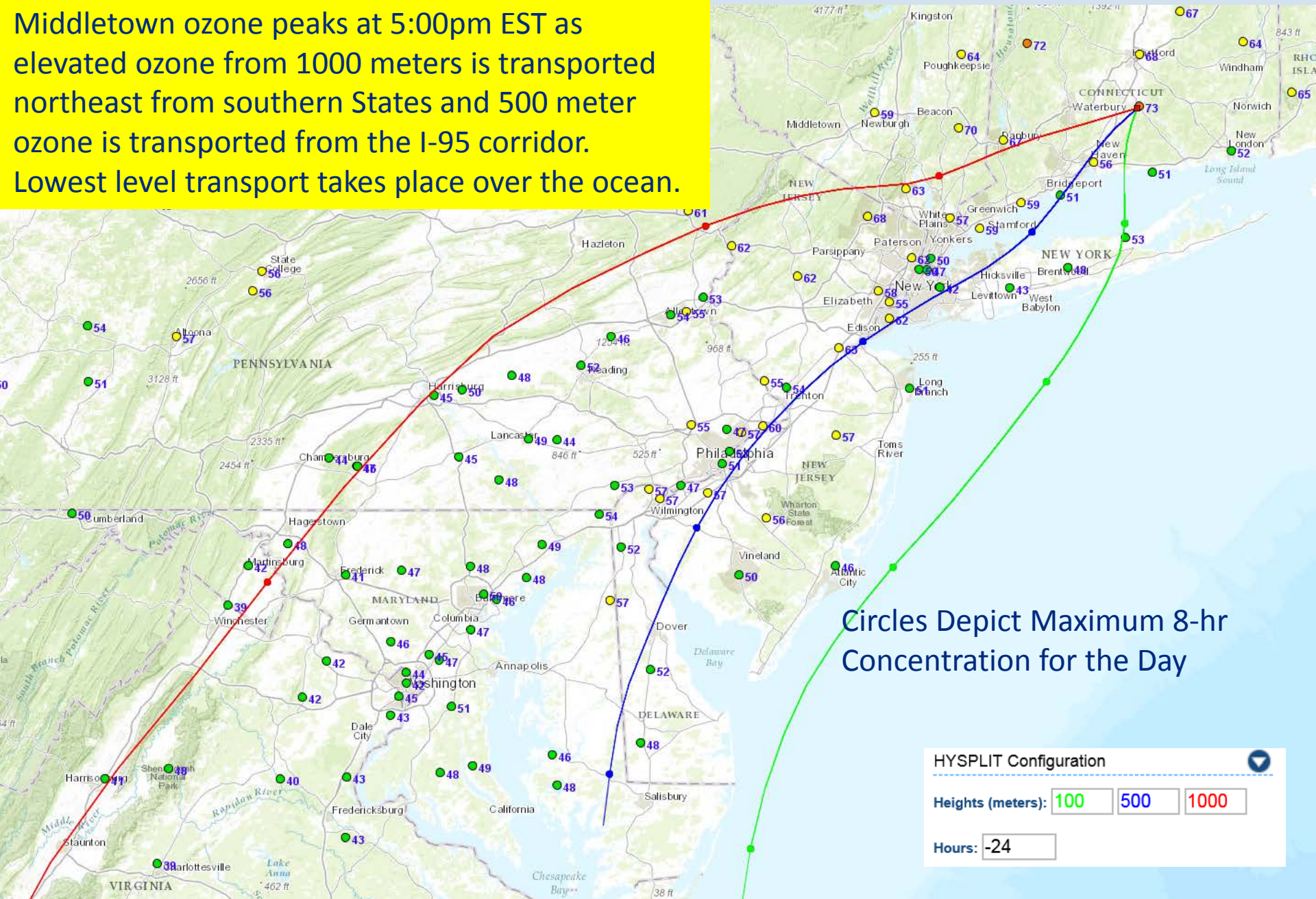
Cornwall 24-hr back Trajectory (2:00pm)

Cornwall ozone peaks at 2:00pm EST as elevated ozone from 1000 meters is transported northeast from southern States and low level ozone is transported from the I-95 corridor.



Middletown 24-hr back Trajectory (5:00pm)

Middletown ozone peaks at 5:00pm EST as elevated ozone from 1000 meters is transported northeast from southern States and 500 meter ozone is transported from the I-95 corridor. Lowest level transport takes place over the ocean.



Circles Depict Maximum 8-hr Concentration for the Day

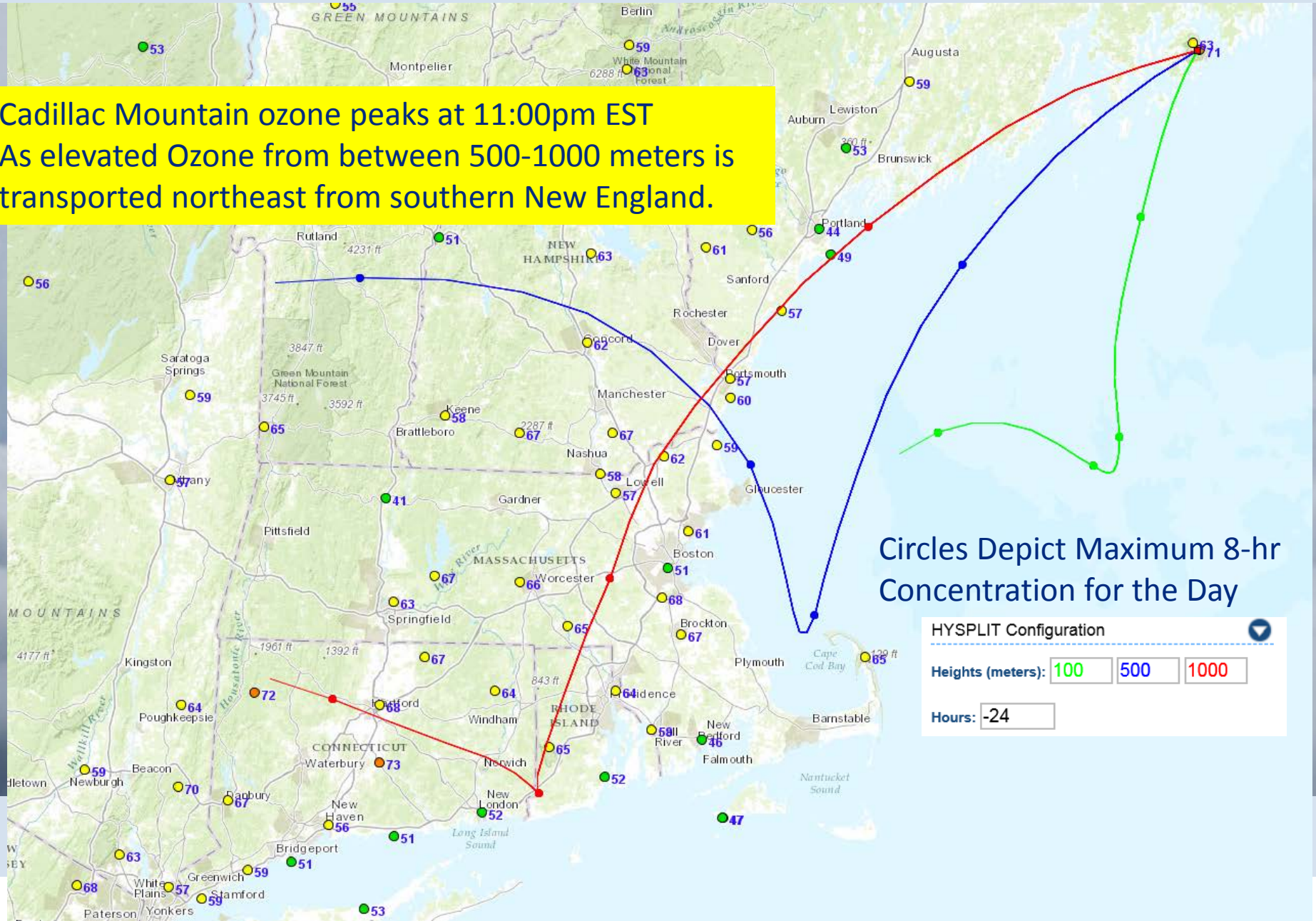
HYSPLIT Configuration

Heights (meters):

Hours:

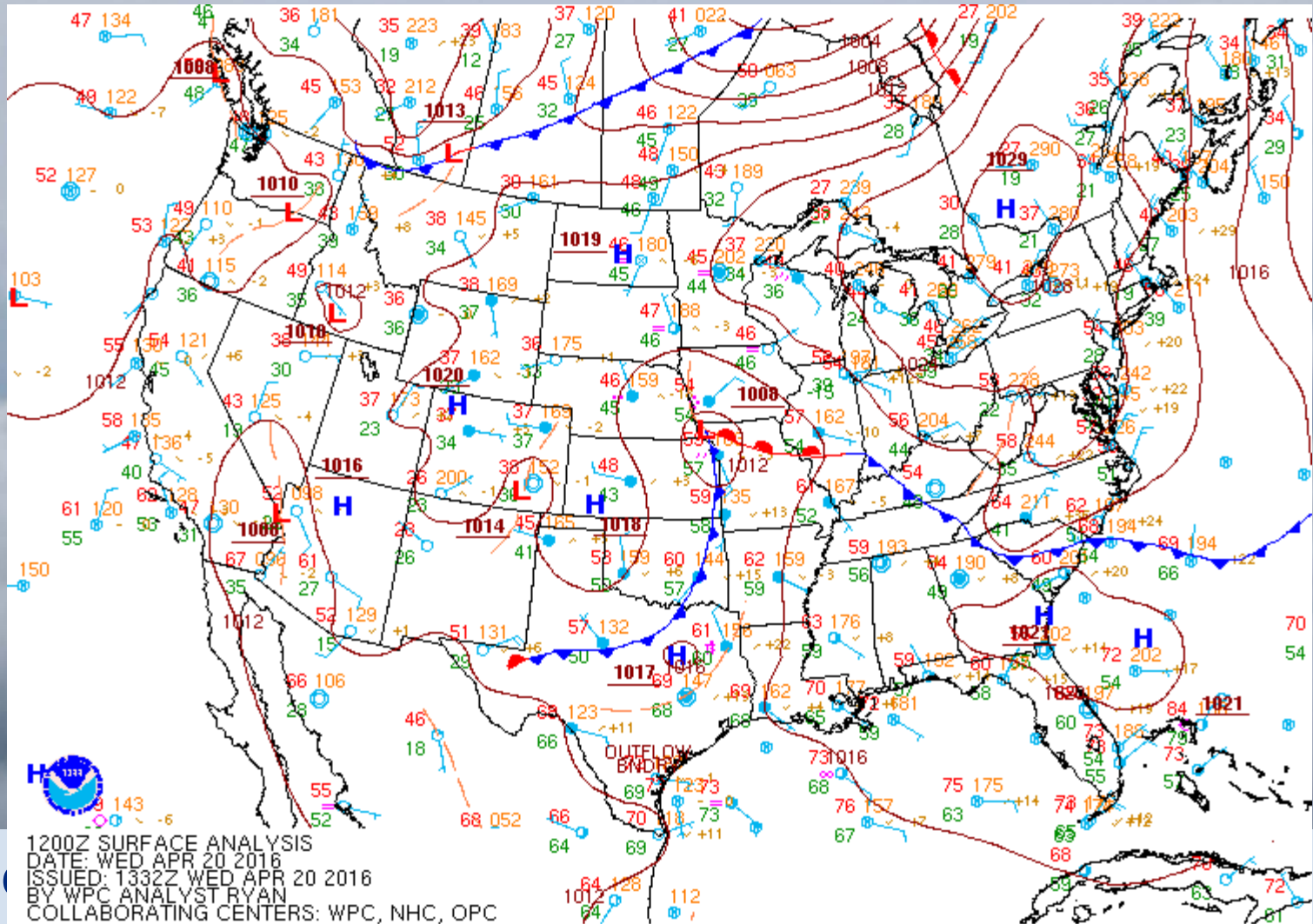
Cadillac MT 24-hr back Trajectory (11:00pm)

Cadillac Mountain ozone peaks at 11:00pm EST
As elevated Ozone from between 500-1000 meters is transported northeast from southern New England.

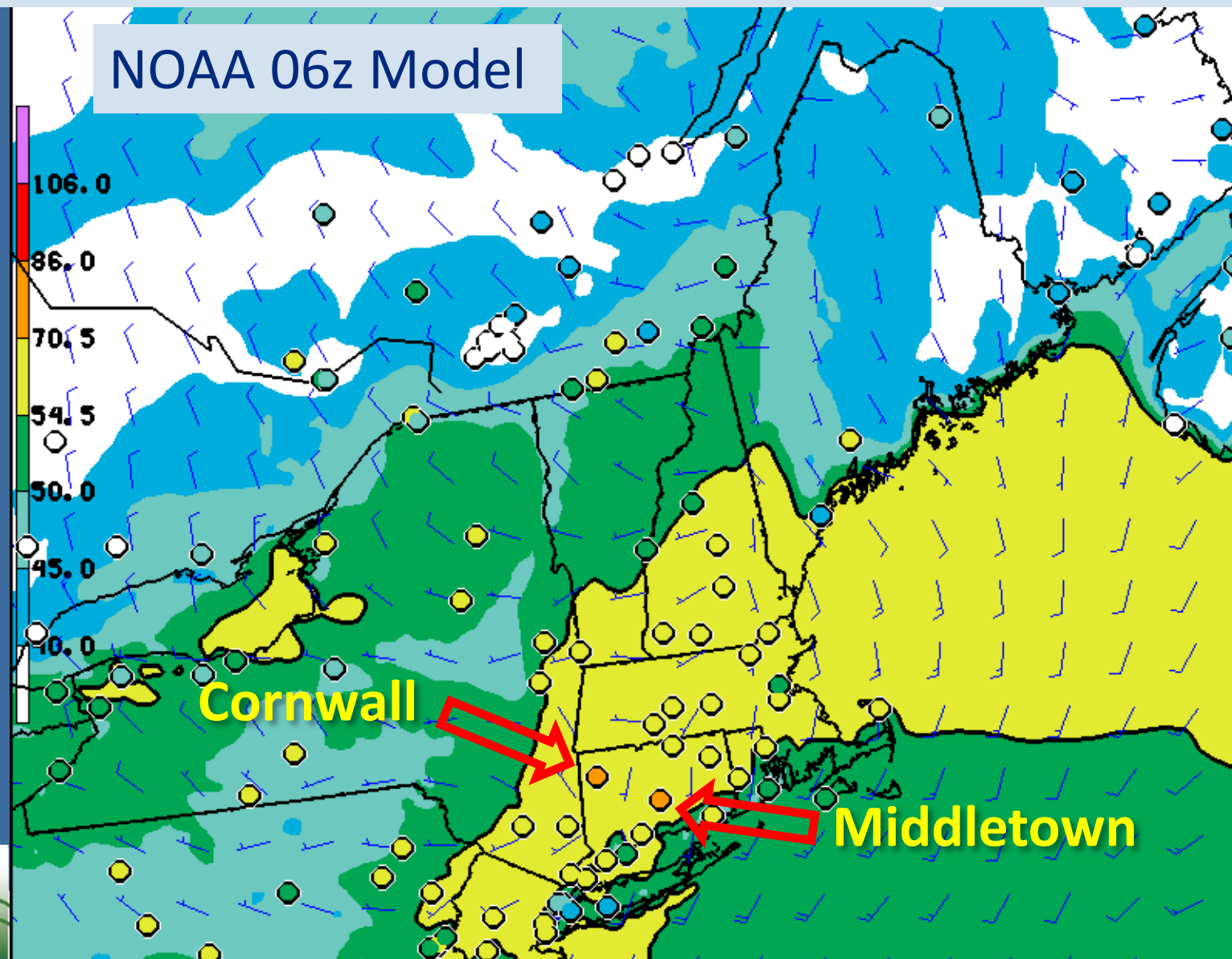


Surface Front Animation: April 20-22, 2016

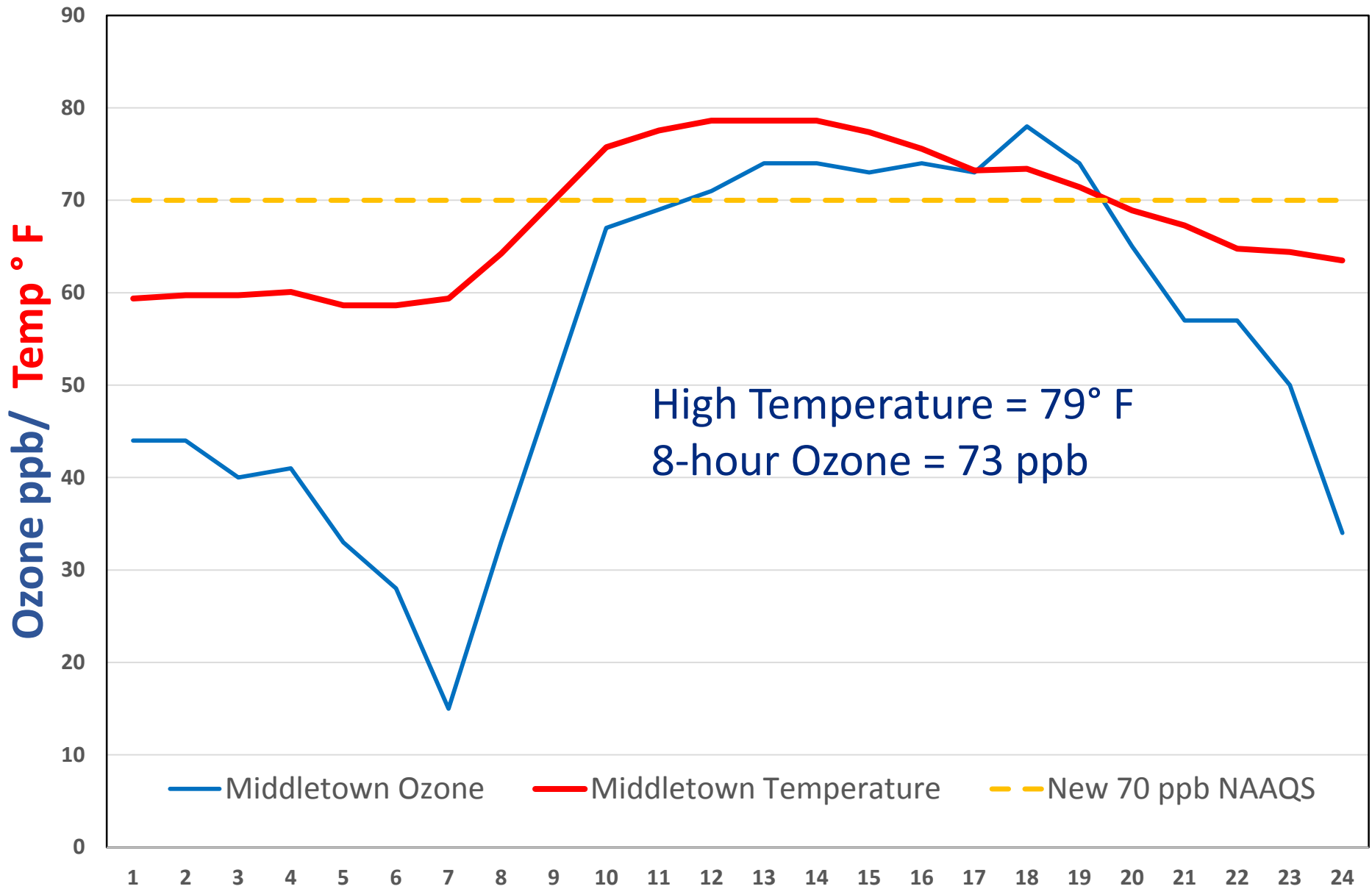
Note the 'High Pressure Center' moving off the coast, setting up Connecticut for a southwest surface wind on Wednesday.



April 22nd: NOAA Model Nearly Correct!



Temperature vs. Ozone



Conclusions

- Weather setup was conducive for elevated ozone;
- Ozone reservoir was building up over the Southeast States, combining with low level transport from the I-95 corridor, which contributed to the exceedances;
- High temperatures barely reached 80 °F, which normally would not alert forecasters to a possible exceedance;
- NOAA model performed well, but slightly under-predicted, so forecasters had no firm basis to expect exceedance.

