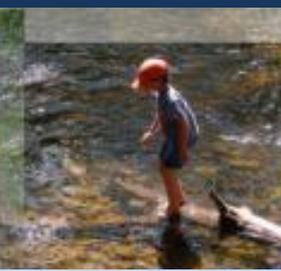




# Connecticut Department of Energy and Environmental Protection



Connecticut Department of  
**ENERGY &  
ENVIRONMENTAL  
PROTECTION**

# 2012 Ozone Season Forecasting

May 10, 2012  
Sam Sampieri  
SIPRAC Meeting



Connecticut Department of Energy and Environmental Protection

# 2011 Ozone Season Re-Cap

- 10 less exceedences in 2011 (**14**) vs. 2010 (**24**)
- Several early (June & July) heat-waves 15 days with 90° responsible for 14 USG events with several monitors reaching Unhealthy levels.
- Battle zone between the upper level ridge across the mid-section of the country and trough just to the north, caused more clouds and heavy rains. Thus, a much wetter August and September with just one USG day on August 20<sup>th</sup>
- Lower Emissions Due to NOx Controls and continued a slow economy?
- Same Ozone Season for 2012 as the standard stays @ 75ppb



# 2012 Ozone Season

- Ozone Season May 1<sup>st</sup> through September 30, 2012
- AQI levels 0-50 GOOD (0-59ppb), 51-100 MODERATE (60-75ppb), 101-150 USG (96-115ppb) & 151-200 Unhealthy (116-374ppb). 2008 Ozone standard based on an 8-hour averaging period
- Standard is 75ppb. Forecasted 8-Hour O<sub>3</sub> concentrations of  $\geq 76$ ppb - Unhealthy Sensitive Groups (USG); Regulated Community restricted to operate back-up/test generators.
- Same AQI forecast models (NOAA and MAQSIP) used to predict the next days' ozone levels.
- Forecasters: Sam Sampieri, Michael Geigert and Jude Catalano..(Kurt Keschull - numerous exceedance studies)

# April 2012 8-Hour O3 Concentrations

Site	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Cornwall	43	48	52	50	43	47	48	51	48	53	37	40	49	59	55	73	46	41	62	63	59	28	29	51	55	52	41	55	57	55
Danbury	35	44	51	49	40	46	48	49	50	52	32	36	47	57	55	68	44	38	53	58	54	29	24	48	50	45	37	50	55	49
East Hartford	34	47	51	49	39	47	48	45	48	51	30	4	7	9	9	12	47	40	52	57	53	32	29	45	50	49	37	53	56	48
Greenwich	38	48	55	55	42	49	51	52	51	54	36	40	50	55	58	56	51	42	47	48	47	30	31	51	50	49	41	51	59	52
Groton	53	34	16	19	22	14	M	M	52	56	M	M	48	58	69	50	49	52	47	51	48	41	42	55	57	55	45	54	60	55
Madison	49	48	49	50	44	48	50	50	54	55	39	35	23	M	M	67	50	49	46	49	43	38	39	52	54	31	M	M	M	M
Middletown	44	50	53	52	42	48	50	48	50	55	42	39	48	59	66	70	48	41	53	58	55	31	31	50	51	53	41	55	58	52
New Haven	38	45	50	50	39	46	48	47	45	45	37	36	40	44	57	55	45	35	33	50	46	24	28	41	42	50	37	44	56	46
Stafford	47	52	54	56	47	52	53	52	53	50	M	M	65	64	68	79	49	45	51	56	49	35	37	53	54	51	43	52	54	55
Stratford	48	49	55	50	44	49	50	52	52	M	M	41	51	55	65	61	52	46	43	51	46	28	34	53	48	55	40	53	59	55
Westport	37	47	55	54	41	48	50	52	52	53	36	35	52	56	64	62	45	44	45	49	48	29	31	52	50	48	39	53	60	53
# days > Federal Standard																														

Good (0-59 ppb)

Moderate (60-75 ppb)

Unhealthy for Sensitive Groups (76-95 ppb)

Unhealthy (96-115 ppb)

Very Unhealthy (116 > ppb)

Units - parts per billion (ppb)

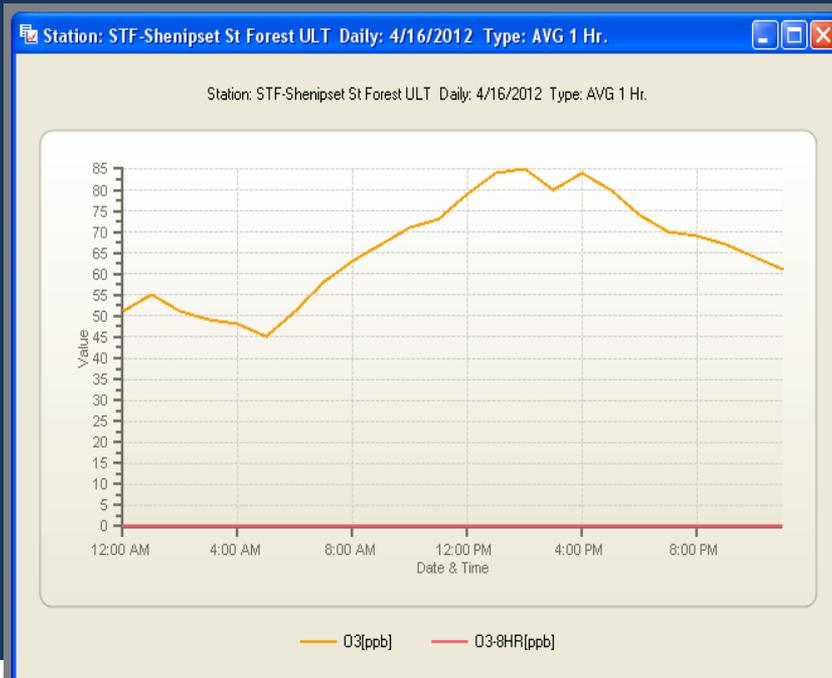
Federal Standard = 75 ppb

M = missing data

\* Data is preliminary and has not been quality assured



# 2012: Starts off with an exceedance before May 1. Oh-No is this a sign of a hot summer?

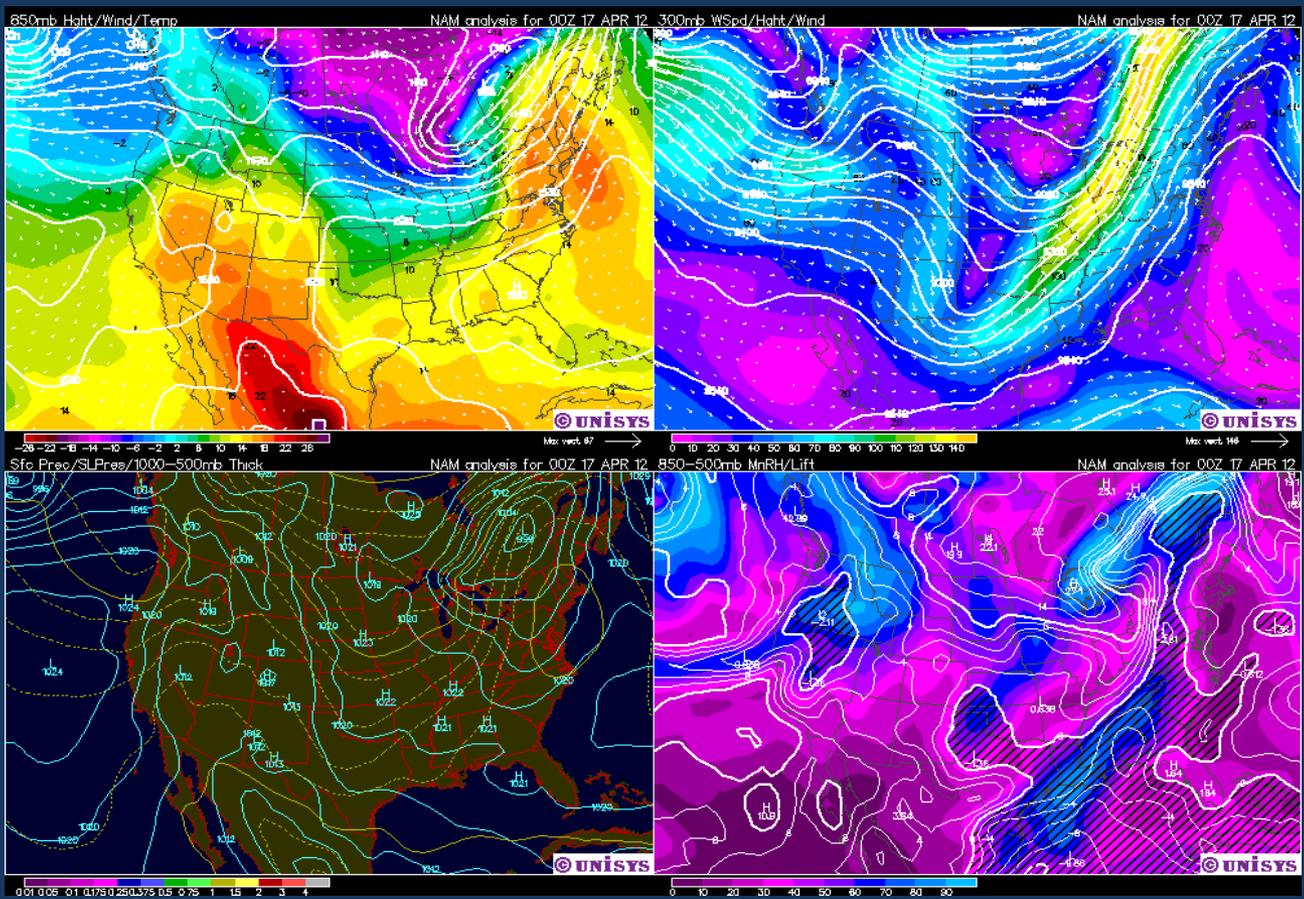


Column1	Column2	Column3
O3[ppb] Stafford Monitor: 4/16/2012 12:00 AM-4/17/2012 11:00 PM Type: AVG 1 Hr.		
Date & Time	O3	o38hr
	ppb	ppb
4/16/2012 12:00 AM	51	51
4/16/2012 1:00 AM	55	52.5
4/16/2012 2:00 AM	51	54
4/16/2012 3:00 AM	49	56.5
4/16/2012 4:00 AM	48	59.5
4/16/2012 5:00 AM	45	63.375
4/16/2012 6:00 AM	51	68.25
4/16/2012 7:00 AM	58	72.5
4/16/2012 8:00 AM	63	75.25
4/16/2012 9:00 AM	67	77.875
4/16/2012 10:00 AM	71	79.5
4/16/2012 11:00 AM	73	79.875
4/16/2012 12:00 PM	79	79.5
4/16/2012 1:00 PM	84	78.25
4/16/2012 2:00 PM	85	76.125
4/16/2012 3:00 PM	80	73.5
4/16/2012 4:00 PM	84	71.125
4/16/2012 5:00 PM	80	67.625
4/16/2012 6:00 PM	74	64
4/16/2012 7:00 PM	70	60.75
4/16/2012 8:00 PM	69	57.25
4/16/2012 9:00 PM	67	54.375
4/16/2012 10:00 PM	64	52.125





- April 16, 2012 Weather Map Analysis





# Questions?

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