



Ozone Design Value Predictor Tool

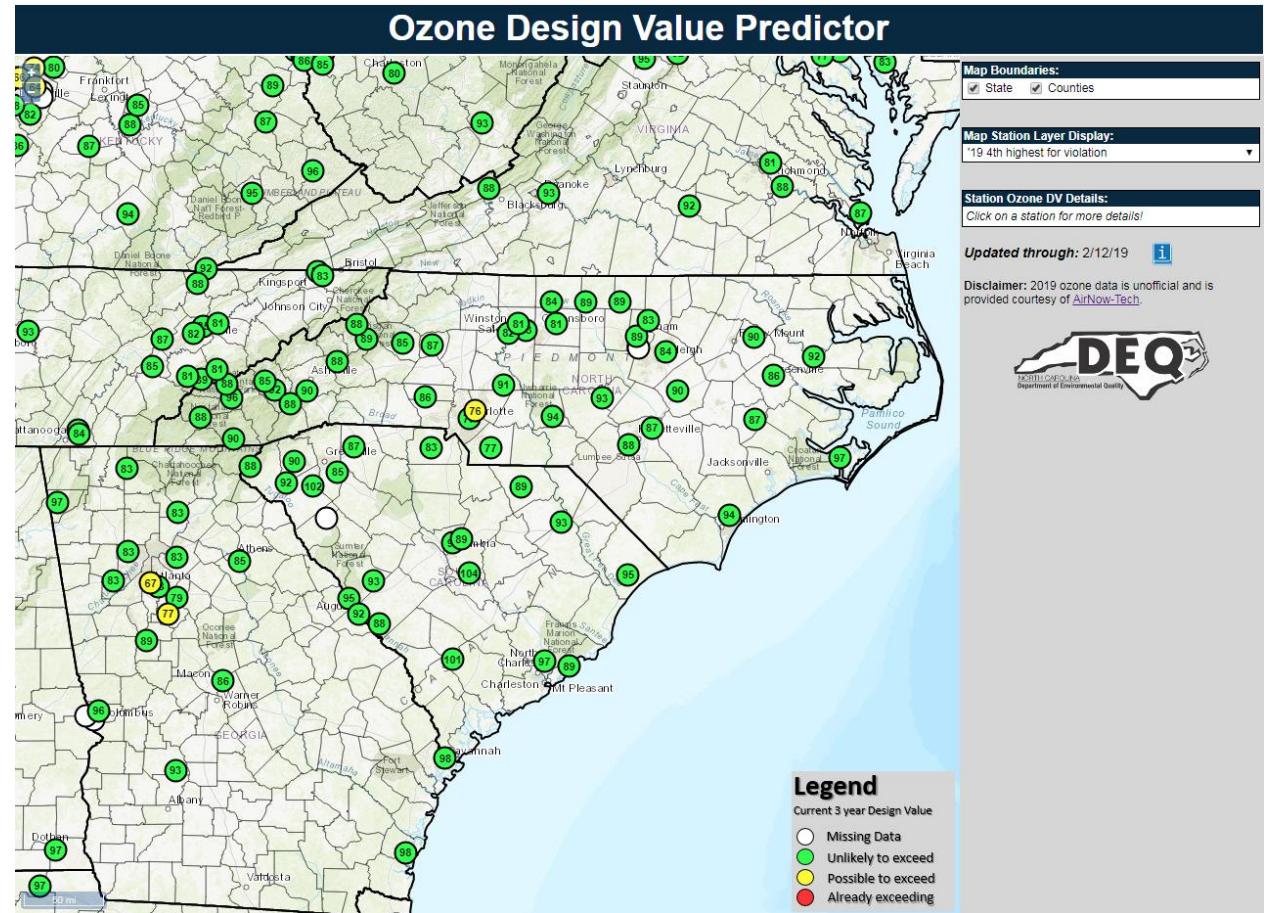
Department of Environmental Quality



Ozone Design Value Predictor

What and Why?!

- A web-based mapping tool that displays maximum 8 hr. ozone and Design Value information using current year ozone data for all ozone monitors in the U.S.
 - Updates daily through previous day
- Provides an up-to-date snapshot of ozone monitor attainment status based on current year ozone data
- Projects likely attainment status of current 3 year Design Values based on historical records
 - Computed using current 4th, 3rd, 2nd, and 1st highest days for each monitor (each a displayable layer)



Ozone Design Value Predictor

Data Sources

- Current year (and previous year until certified EPA data is released) data comes from AirNow Application Programming Interface (API) files
 - <http://files.airnowtech.org/>
- Historical data – certified – comes from EPA
- Data is updated at 1am and again at 7am each day
 - Previous 90 days are also updated to capture any corrections made to the daily data at any monitor



Ozone Design Value Predictor

Available Layer Displays

- Current year data
- Projected Design Values
- Critical Design Values

Map Station Layer Display:	
Max 8hr Ozone - 6/1/17	▼
2017 Data	
Max 8hr Ozone - 6/1/17	
'17 4th highest	
'17 3rd highest	
'17 2nd highest	
'17 1st highest	
Projected Design Values	
'15 to '17 DV (Current 4th highest)	
'15 to '17 DV (Current 3rd highest)	
'15 to '17 DV (Current 2nd highest)	
'15 to '17 DV (Current 1st highest)	
Critical Design Values	
'17 4th highest for exceedance	



Ozone Design Value Predictor

Station Details Window

Station Ozone DV Details:	
University Meadows 371190046 Mecklenburg County, NC <i>Mecklenburg County Air Quality</i>	
2017 Data	
4th Highest: 68 (5/10)	2nd Highest: 75 (5/16)
3rd Highest: 72 (7/20)	1st Highest: 75 (7/21)
2015 to 2017 Projected DV	
Using 4th Highest: 70	Using 2nd Highest: 72
Using 3rd Highest: 71	Using 1st Highest: 72
Critical 2017 4th Highest	
For Marg. Non-attainment: 70	
For Mod. Non-attainment: 100	
Historical Design Values	
2014 to 2016: 70	2012 to 2014: 73
2013 to 2015: 67	2011 to 2013: 78
Historical 4th Highest	
2016: 74	2011: 83*
2015: 69*	2010: 82*
2014: 68*	2009: 71*
2013: 66*	2008: 93*
2012: 85*	2007: 96*
* County Line monitor data	

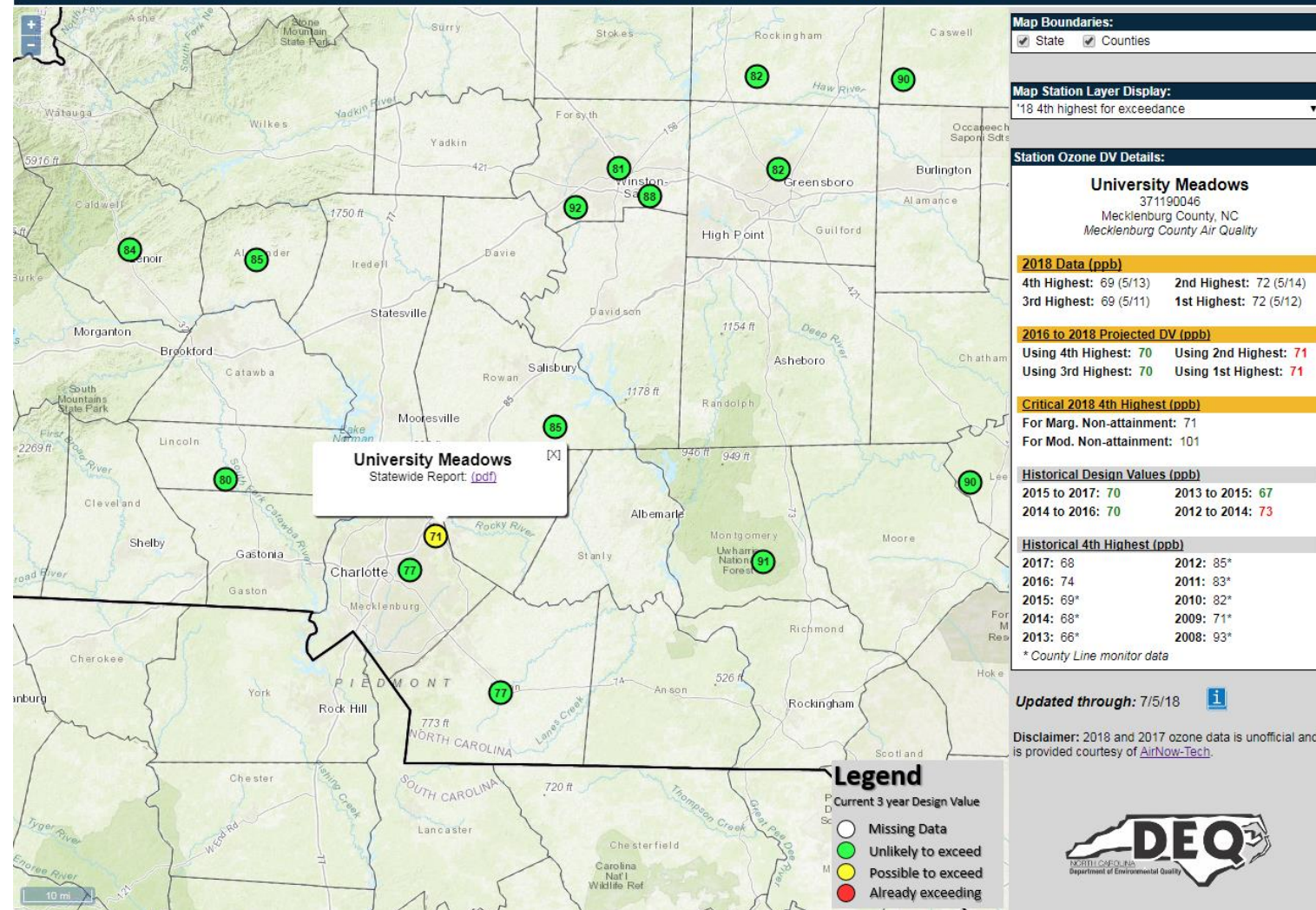
- The station details window displays all available ozone and Design Value information available for a given station.
- This window can be opened by clicking on any monitor on the map from any layer.



Ozone Design Value Predictor

Layer Category: *Critical Design Values*

Ozone Design Value Predictor



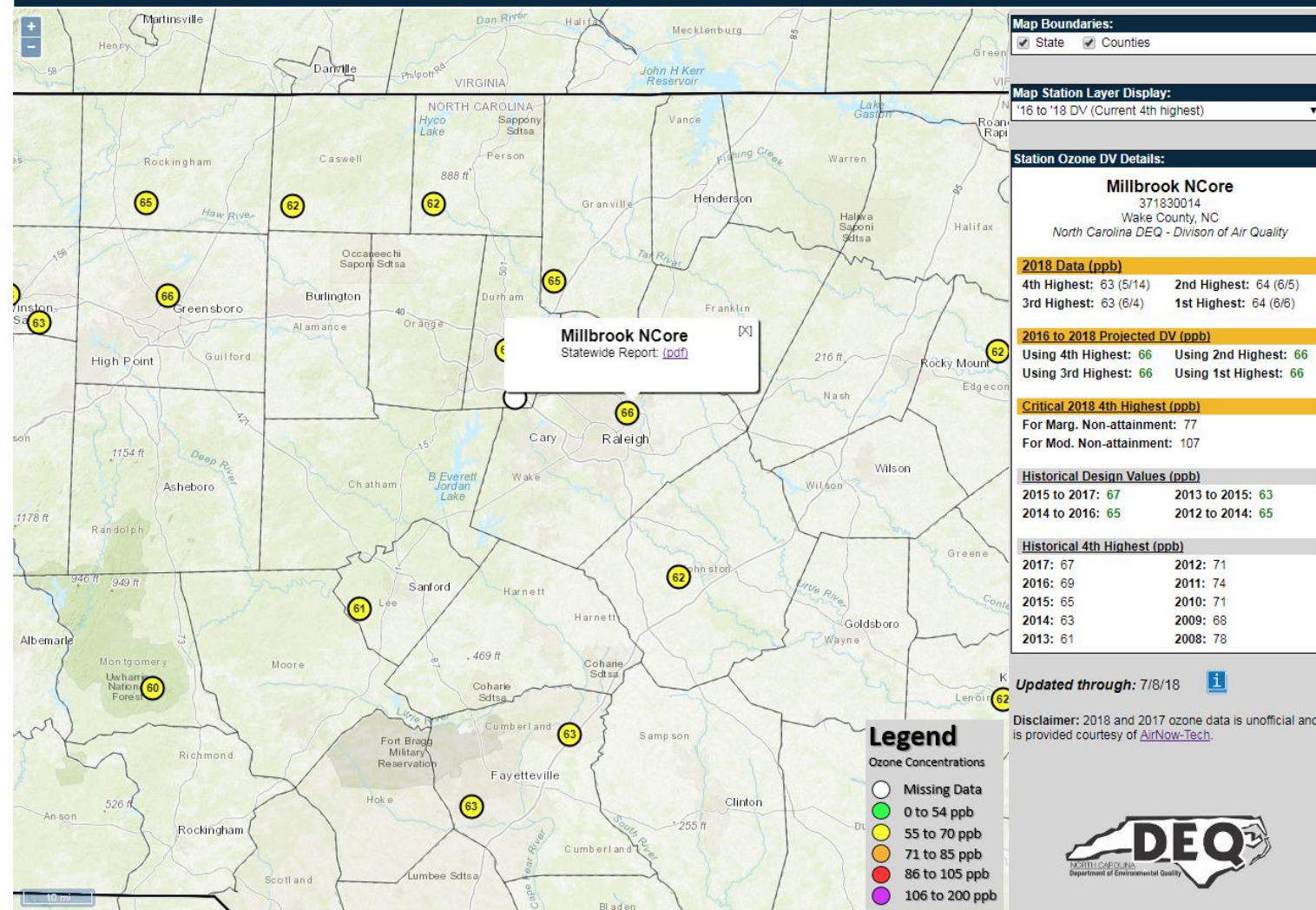
- Displays current year 4th highest value that would result in marginal non-attainment using **current year + previous year + two years ago**
- Stations in **red** already have a 4th highest concentration that will result in an exceedance if valid
- **Yellow** stations are ones that could exceed based on analysis of previous years design values
- **Green** indicates unlikely to exceed based on historical 4th highest readings



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Layer Category: *Projected Design Values*

Ozone Design Value Predictor



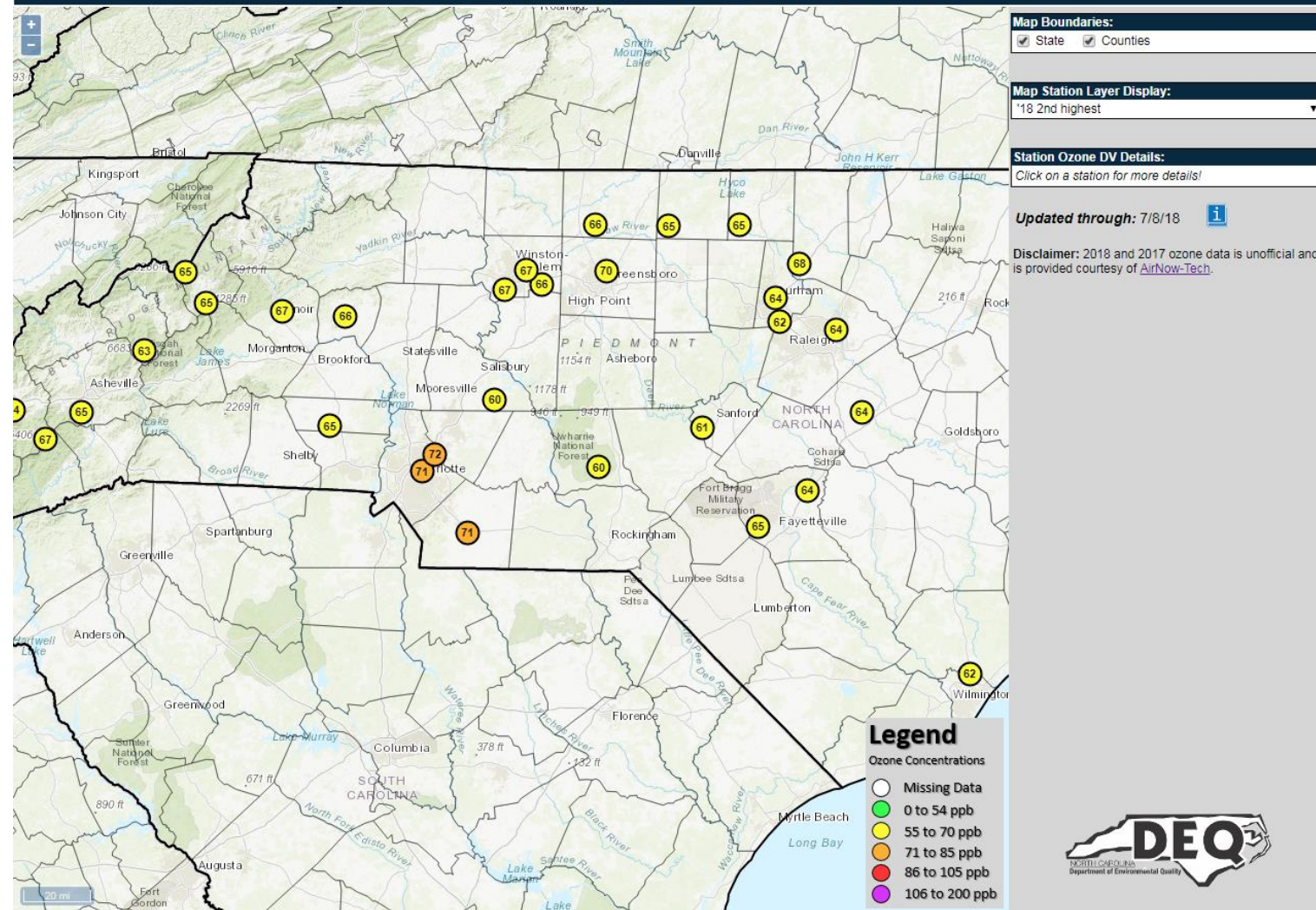
- Based on 4th highest value at each monitor for previous two years + current year 4th, 3rd, 2nd, or 1st highest as designated
- Earlier in the year, may be more useful to look at 1st or 2nd highest as more exceedance days are possible later in the ozone season



Ozone Design Value Predictor

Layer Category: *Current Year Data*

Ozone Design Value Predictor



- Updated early the next morning
 - Allows user to display current year data for each monitor
- Can plot 1st, 2nd, 3rd or 4 highest ozone day for monitors along with yesterday's maximum 8 hr. ozone concentrations



Ozone Design Value Predictor

Station Options: *Daily Ozone Monitor Report*

University Meadows (371190046)				
Mecklenburg County, NC Mecklenburg County Air Quality				
2016 Daily Max. 8 hour Ozone			Maps	
	Date	Concentration (ppb)	Weather	Air Quality
1	Wednesday, July 27th	76	*	*
2	Tuesday, June 14th	76	*	*
3	Friday, September 9th	75	*	*
4	Wednesday, May 25th	74	*	*
5	Monday, June 13th	73	*	*
6	Friday, June 10th	73	*	*
7	Thursday, June 9th	70	*	*
8	Tuesday, April 19th	70	*	*
9	Friday, June 24th	68	*	*
10	Saturday, September 10th	67	*	*
11	Thursday, September 8th	67	*	*
12	Thursday, May 26th	67	*	*
13	Tuesday, July 12th	66	*	*



Ozone Design Value Predictor

Station Options: *Statewide Report*

North Carolina Statewide Ozone Report																	
Site Name	County	'18 Current Top 4				'16 to '18 Projected DVs (Using Current Top 4)				'18 4th Highest For Non-attainment		Historical DVs		Historical 4th Highest			
		4th	3rd	2nd	1st	Using 4th	Using 3rd	Using 2nd	Using 1st	Marginal	Moderate	'15 to '17	'14 to '16	'17	'16	'15	'14
University Meadows	Mecklenburg	69	69	72	72	70	70	71	71	71	101	70	68	68	74	69*	61*
Garinger	Mecklenburg	69	71	71	72	68	69	69	69	77	107	69	69	66	70	73	65
Monroems	Union	68	70	71	71	68	68	69	69	77	107	67	68	66	70	67	67
Millbrook Ncore	Wake	63	63	64	64	66	66	66	66	77	107	67	65	67	69	65	63
Mt Mitchell	Yancey	62	63	63	65	65	66	66	66	78	108	67	68	64	71	67	67
Crouse	Lincoln	63	65	65	67	65	66	66	66	80	110	67	67	64	69	68	64
Hattieaven	Forsyth	66	67	67	71	66	66	66	67	81	111	67	67	66	66	70	65
Bethany	Rockingham	65	65	66	67	65	65	65	66	82	112	65	66	64	67	66	65
Cranberry	Avery	64	64	65	66	65	65	65	65	82	112	64	64	62	69	62	62
Mendnhai	Guilford	67	68	70	72	66	66	67	67	82	112	65	65	65	66	64	65
Butner	Granville	65	66	68	68	65	65	66	66	83	113	64	64	65	65	63	65
Lenoir	Caldwell	65	66	67	68	64	65	65	65	84	114	64	64	63	66	65	61
Frypan	Haywood	65	65	67	72	64	64	65	66	85	115	64	67	60	68	66	67
Purchase	Haywood	65	66	67	67	64	65	65	65	85	115	65	65	63	65	67	64
Rockwell	Rowan	58	59	60	61	62	62	62	63	85	115	64	65	62	66	66	64
Taylorsville	Alexander	64	65	66	70	64	64	64	66	85	115	64	65	62	66	65	64
Liledou	Wade	63	63	64	64	63	63	63	63	86	116	62	61	63	64	60	61
Honeycutt	Cumberland	62	65	65	70	63	64	64	65	86	116	63	64	63	64	62	66*
Joanbold	Graham	65	66	67	68	63	64	64	64	87	117	63	64	60	66	65	63
Johnston	Johnston	62	63	64	67	62	63	63	64	87	117	63	64	60	66	65	63
Pittagct	Pitt	64	65	66	66	63	63	64	64	87	117	62	62	61	65	60	63
Leggett	Edgecombe	62	63	64	65	62	62	63	63	88	118	62	62	61	64	61	62
Lenoircoll	Lenoir	61	64	66	73	62	63	63	66	88	118	62	63	62	63	62	65
Unioncross	Forsyth	64	64	66	66	63	63	63	63	88	118	63	63	66	59	65	67
Bushyfrk	Person	63	64	65	69	62	63	63	64	89	119	61	63	61	63	61	65
Durham Armory	Durham	62	63	64	70	62	62	62	64	89	119	61	62	61	63	61	62
Blackstone	Lee	60	60	61	61	61	61	61	61	90	120	61	62	59	64	60	64
Cherrygr	Caswell	64	65	65	69	62	62	62	64	90	120	61	63	59	64	60	67
Linville Falls	Avery	64	65	65	66	62	62	62	63	90	120	61	62	60	63	62	61
Bntcr	Buncombe	63	64	65	68	61	62	62	63	91	121	62	63	60	62	65	64
Bryson	Swain	59	59	60	61	60	60	60	61	91	121	60	60	58	64	60	58
Candor	Montgomery	59	59	60	61	60	60	60	61	91	121	60	61	60	62	59	62
Clemmons Middle	Forsyth	65	67	67	71	62	62	62	64	92	122	63	64	64	57	68	67
Coweeta	Macon	63	64	65	68	61	61	62	63	92	122	61	62	60	61	62	63
Jamesvil	Martin	61	61	61	64	60	60	60	61	92	122	60	60	60	61	59	61
Whvleisc	Haywood	62	62	64	66	61	61	61	62	92	122	61	62	59	62	64	60
Beaufort	Carteret	59	59	60	61	59	59	59	59	95	125	58	60	57	61	58	62
Castle H	New Hanover	61	61	62	62	59	59	59	59	96	126	58	60	57	60	57	63
Burdens Creek	Durham	60	61	62	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	59			

* Denotes data from a co-located monitor



Updated through: 7/8/18

