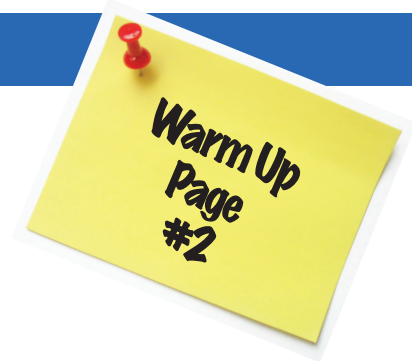


FORECAST DISCUSSION

FROM A SUMMER MORNING IN NORTH CAROLINA

(Meteorologists were concerned about Code Orange in the Charlotte region and discussed the relevant forecast concerns of the day)

A strong upper-level ridge is the dominating weather feature for the region today, resulting in sunny skies and hot temperatures across the state. With light winds and a drier air mass, ozone levels have the potential to elevate into the Code Orange range in the Charlotte area. Some models are showing the development of showers and thunderstorms in the Charlotte region this afternoon, which would significantly reduce ozone production in that region and allow for concentrations to only elevate into the Code Yellow range. Whether or not the Charlotte area achieves ozone concentrations in the Code Orange range will depend upon whether or not this convection occurs. Elsewhere across the state, ozone concentrations in the Code Yellow range are expected. Particle pollution concentrations across most of North Carolina are expected to remain around the upper Code Green/lower Code Yellow threshold statewide.



Ozone Measurements and the AQI

Air Quality Index	8-Hour Ozone
Good 0-50 Code Green	0-59 ppb
Moderate 51-100 Code Yellow	60-75 ppb
Unhealthy for Sensitive Groups 101-150 Code Orange	76-95 ppb
Unhealthy 151-200 Code Red	96-115 ppb
Very Unhealthy 201-300 Code Purple	116-374 ppb

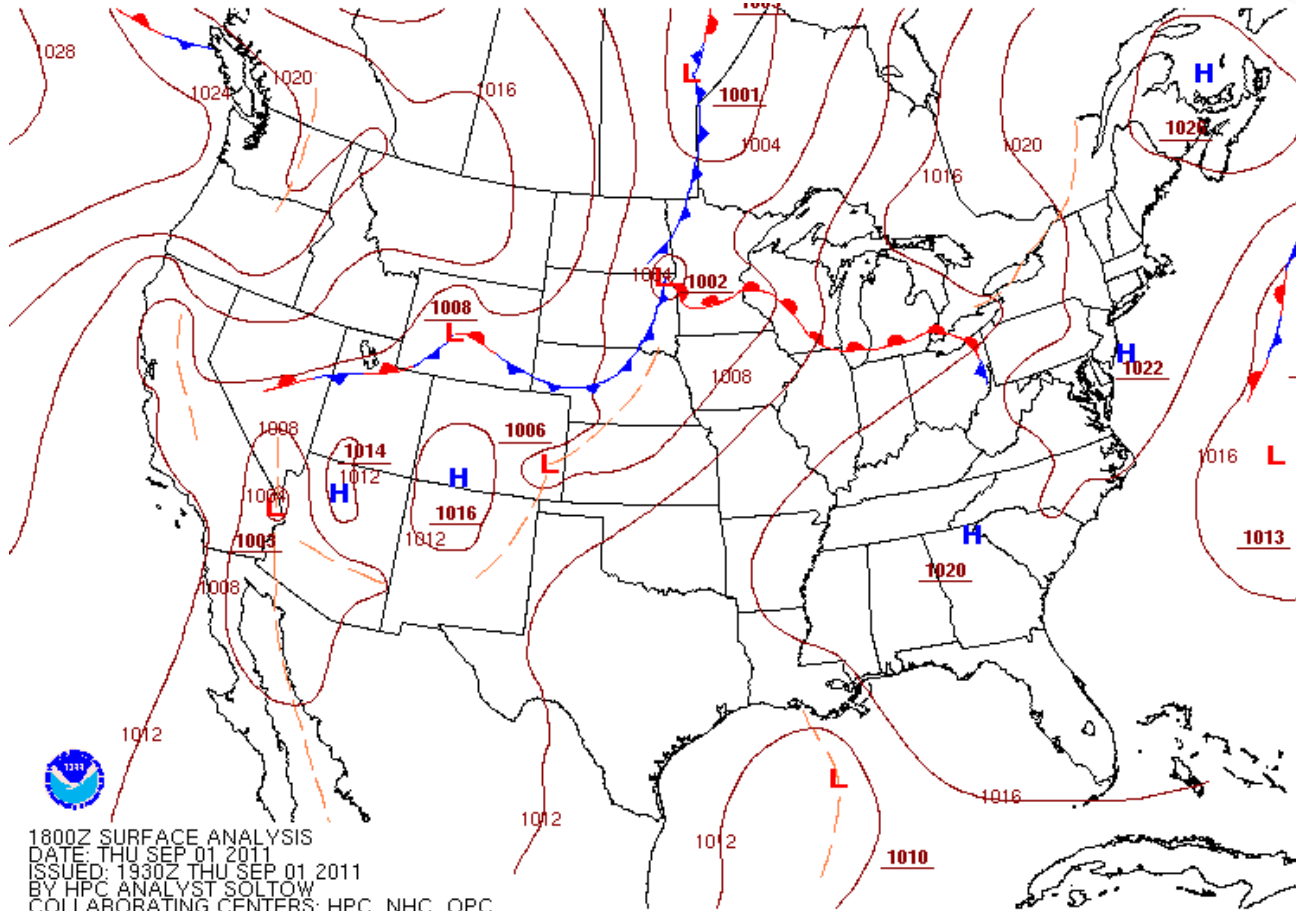
Source: <http://daq.state.nc.us/monitor/aqi/codeChart.shtml>



Forecasting Air Quality

Part A
Questions 1-9
Data Page #1

Surface Analysis Map (ground-level air pressure) for September 1, 2011 @ 2 pm



1800Z SURFACE ANALYSIS
DATE: THU SEP 01 2011
ISSUED: 1930Z THU SEP 01 2011
BY HPC ANALYST SOLTOW
COLLABORATING CENTERS: HPC, NHC, OPC

Source: <http://www.hpc.ncep.noaa.gov/>

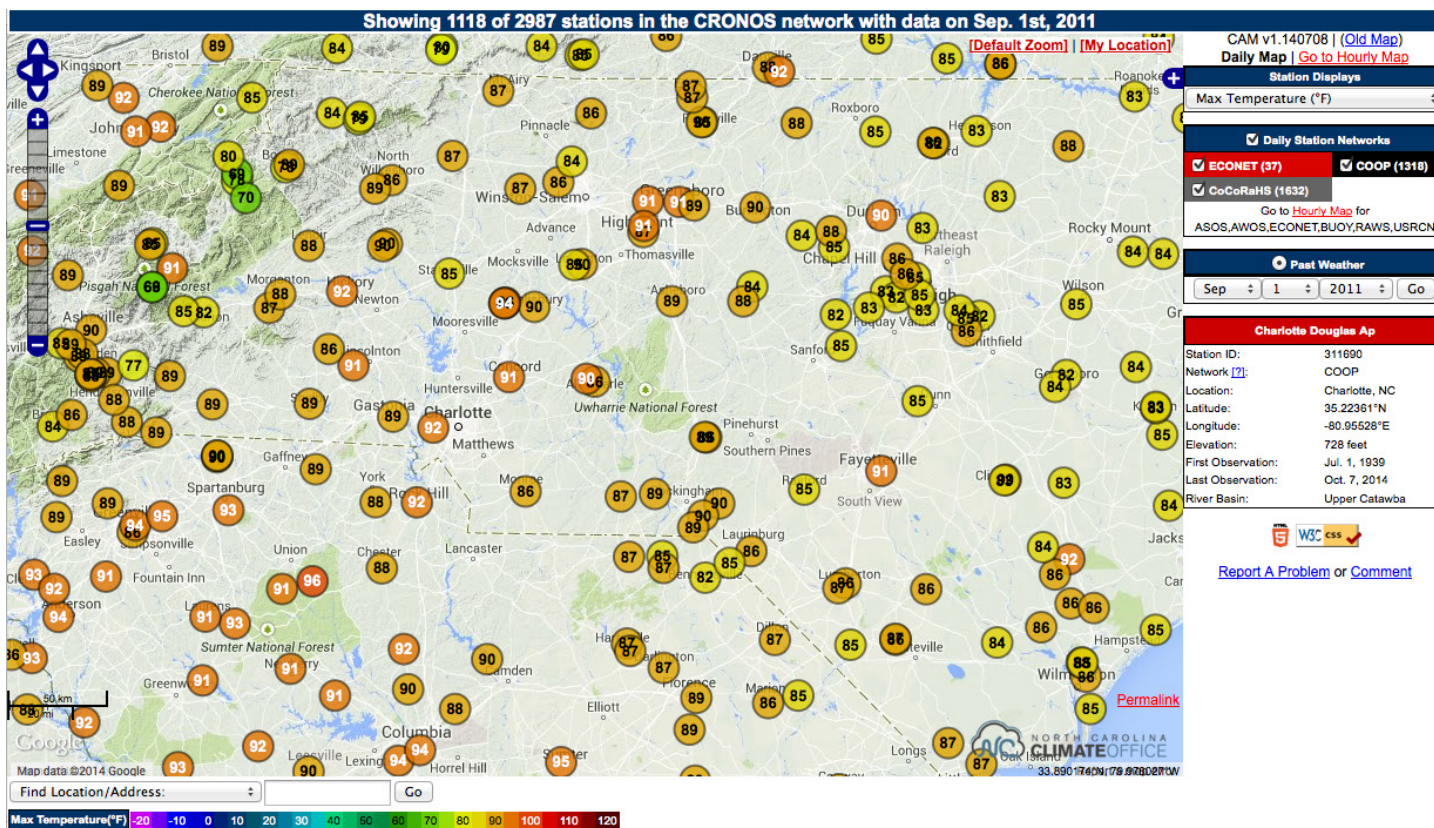
A product of the NC Air Awareness Program



Forecasting Air Quality

Part A
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Data Page #2

Maximum Temperatures for September 1, 2011



Source: <http://nc-climate.ncsu.edu/map/>

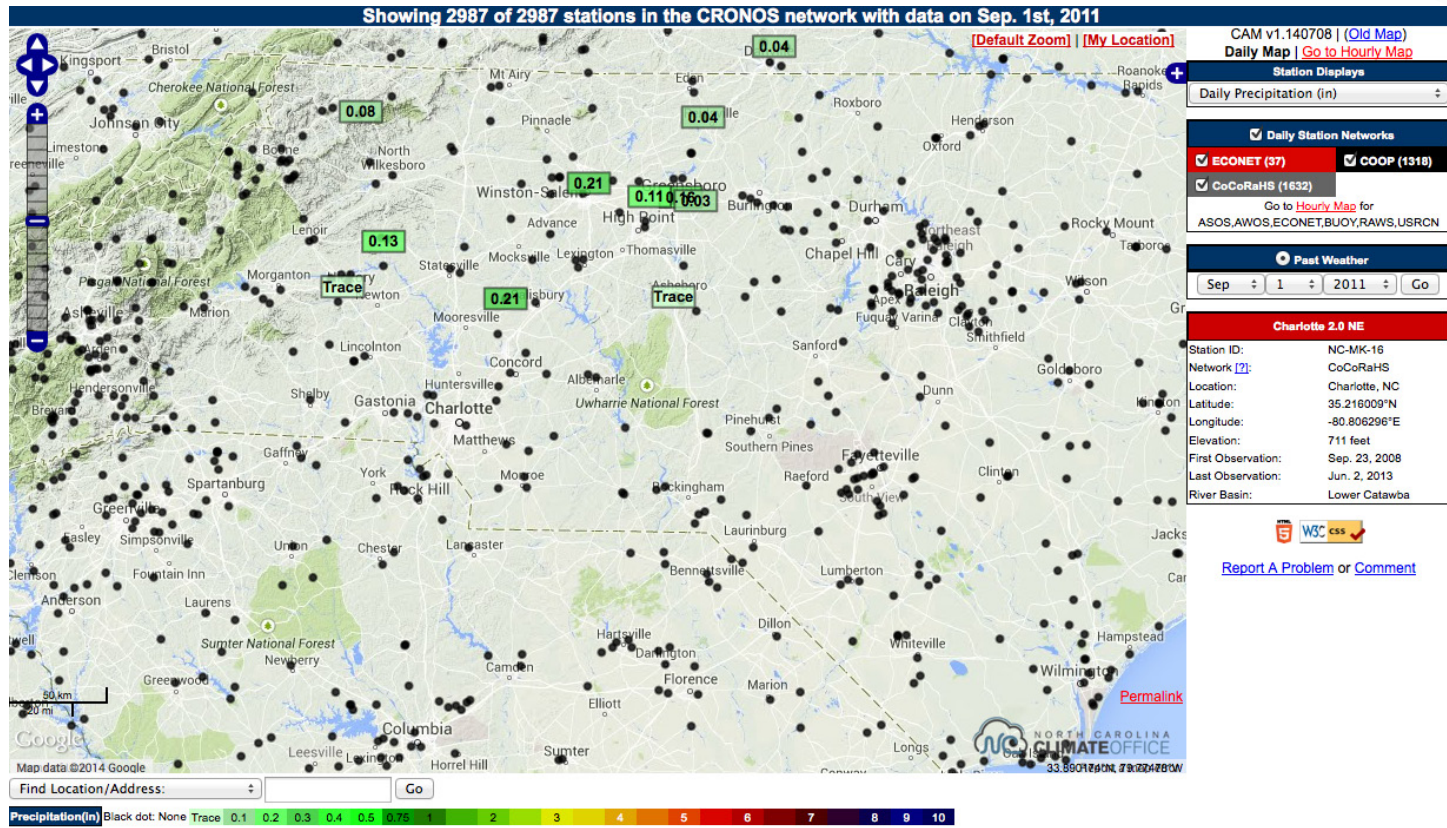
A product of the NC Air Awareness Program



Forecasting Air Quality

Precipitation for September 1, 2011

Part A
Questions 1-9
Data Page #3



Source: State Climate Office of North Carolina (custom image not available from their website)

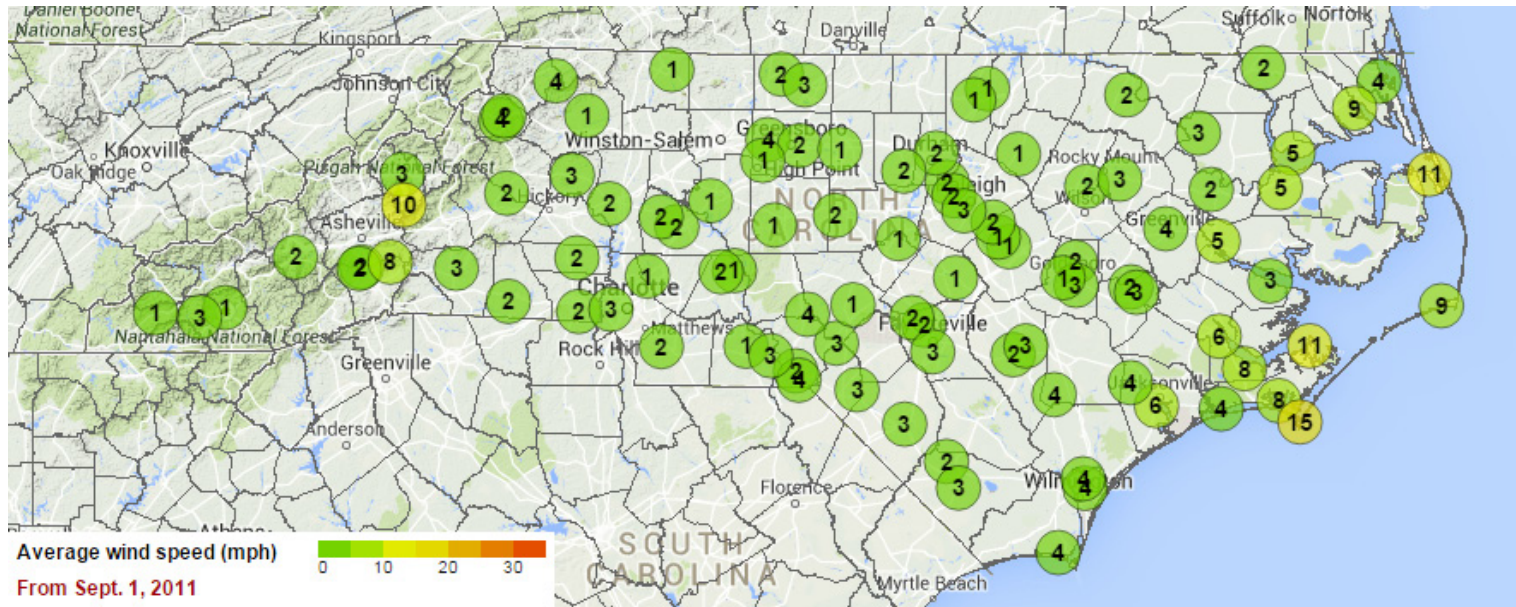
A product of the NC Air Awareness Program



Forecasting Air Quality

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Questions 1-9
Data Page #4

Average Wind Speeds for September 1, 2011

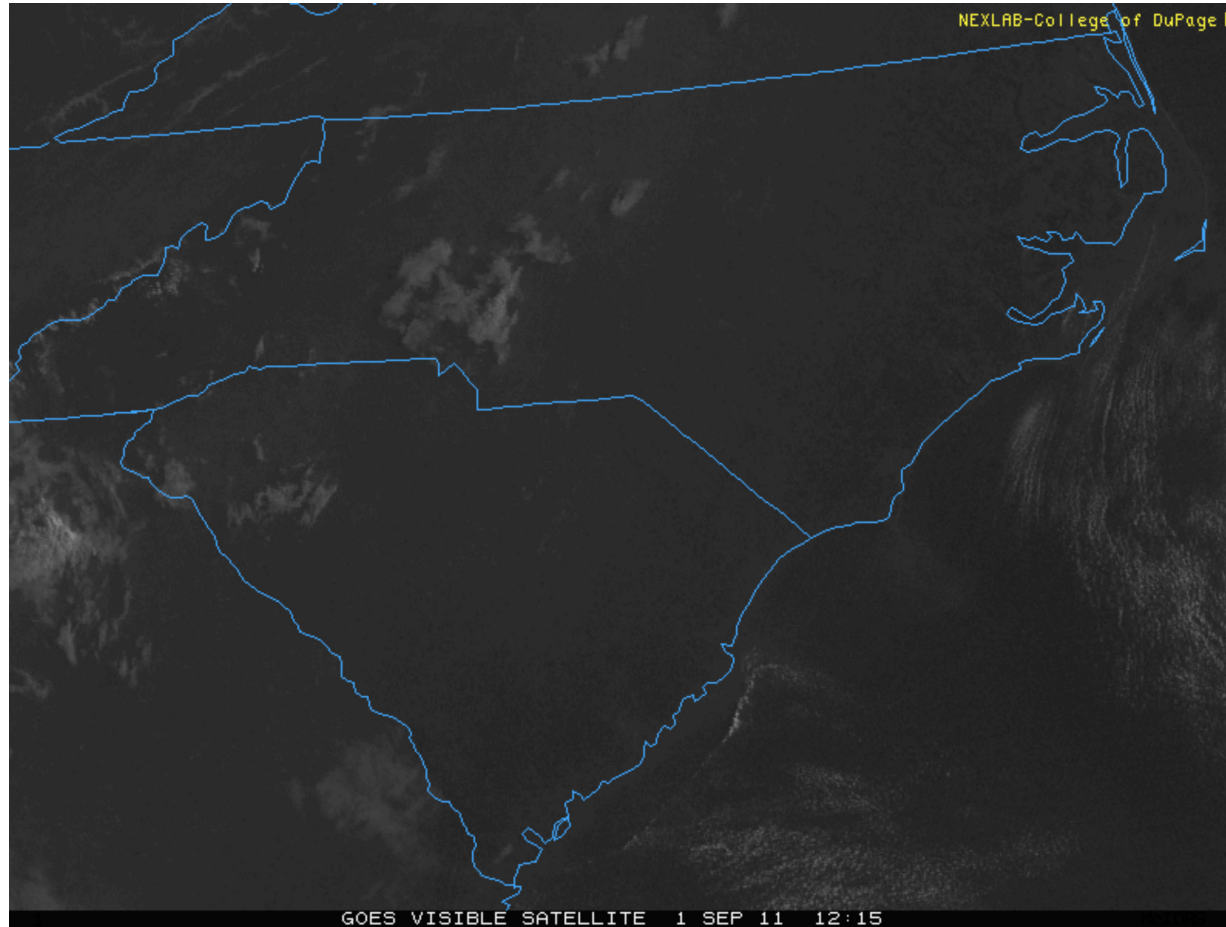


Source: <http://nc-climate.ncsu.edu/map/>



Forecasting Air Quality

Satellite Image for 8:15 am on September 1, 2011



Source: <http://weather.cod.edu/>

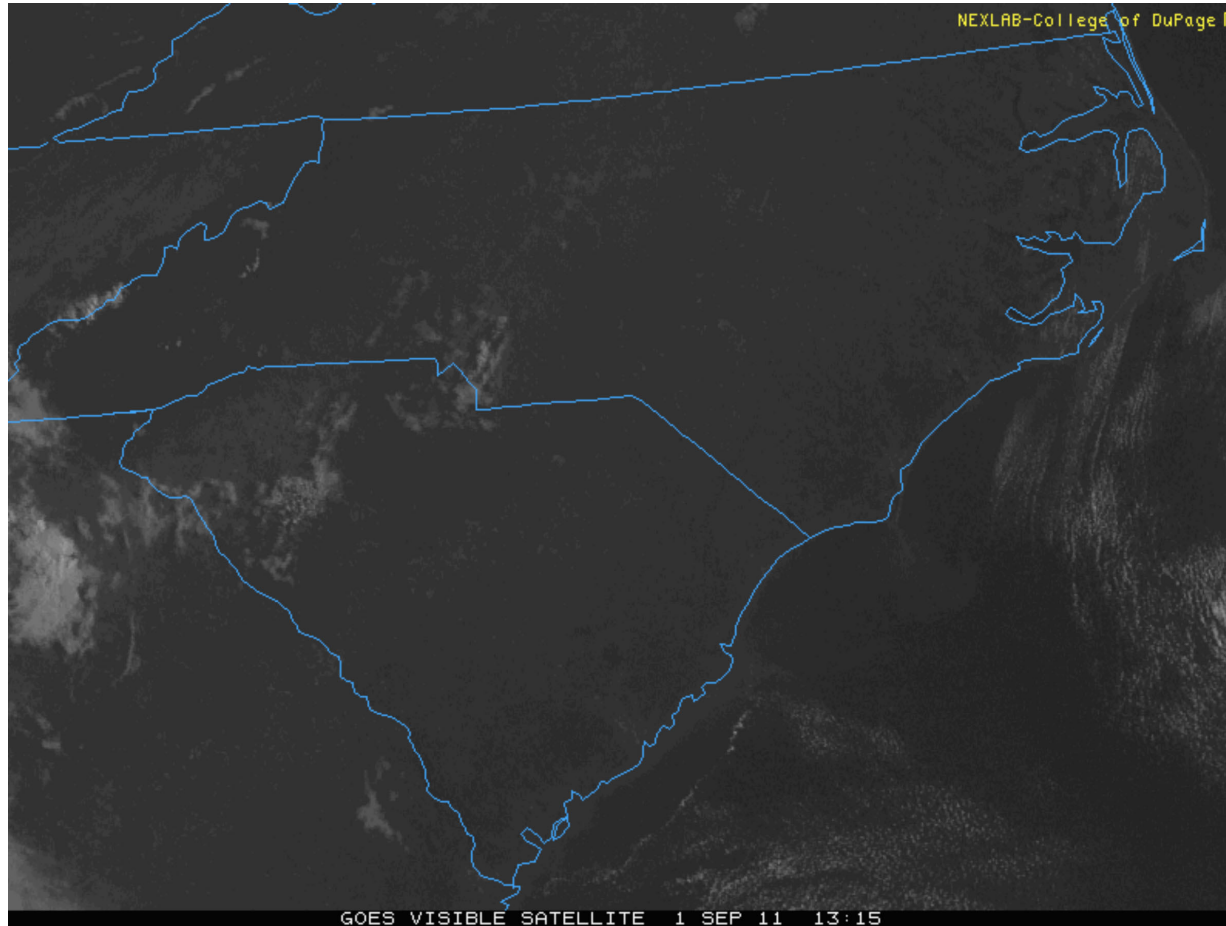
A product of the NC Air Awareness Program





Forecasting Air Quality

Satellite Image for 9:15 am on September 1, 2011



Source: <http://weather.cod.edu/>

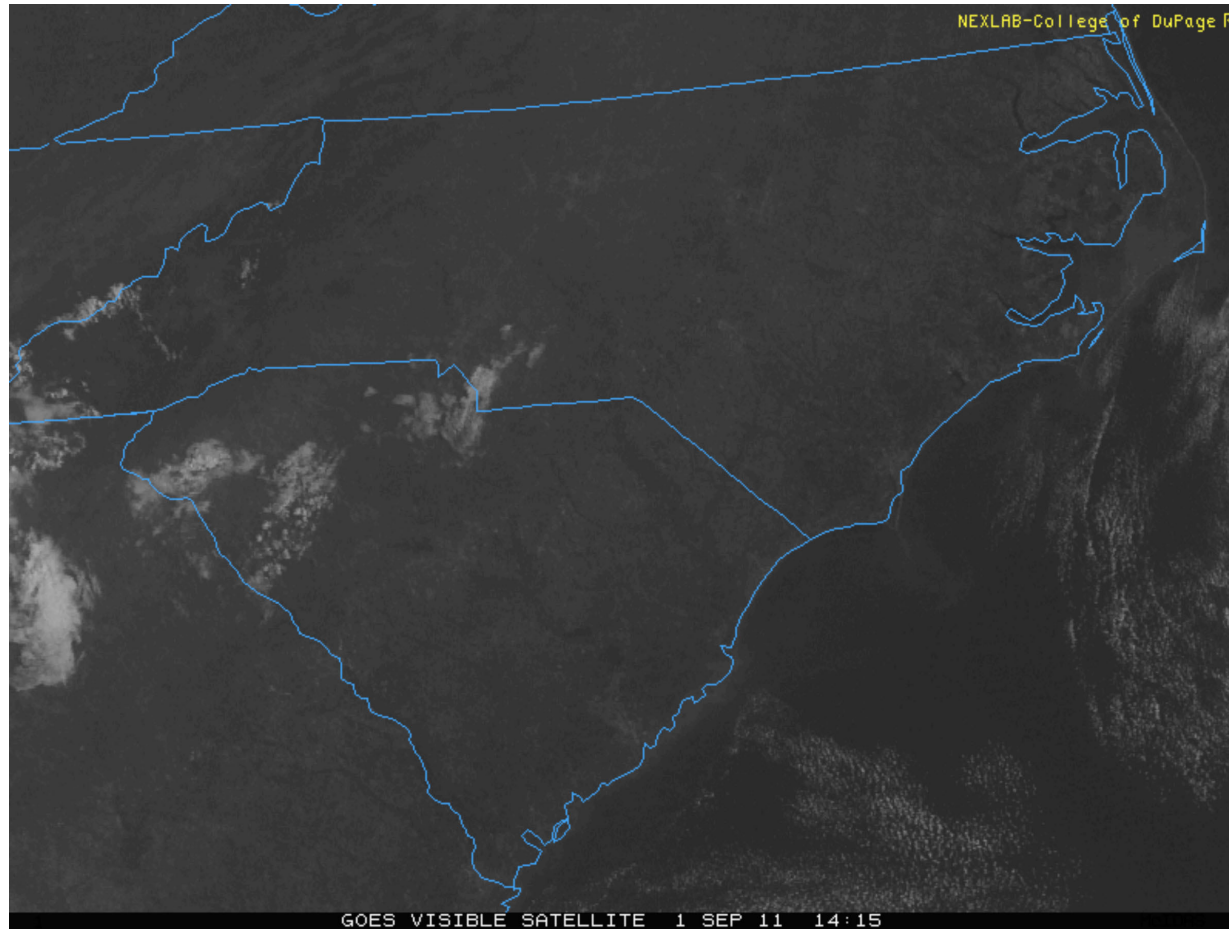
A product of the NC Air Awareness Program





Forecasting Air Quality

Satellite Image for 10:15 am on September 1, 2011



Source: <http://weather.cod.edu/>

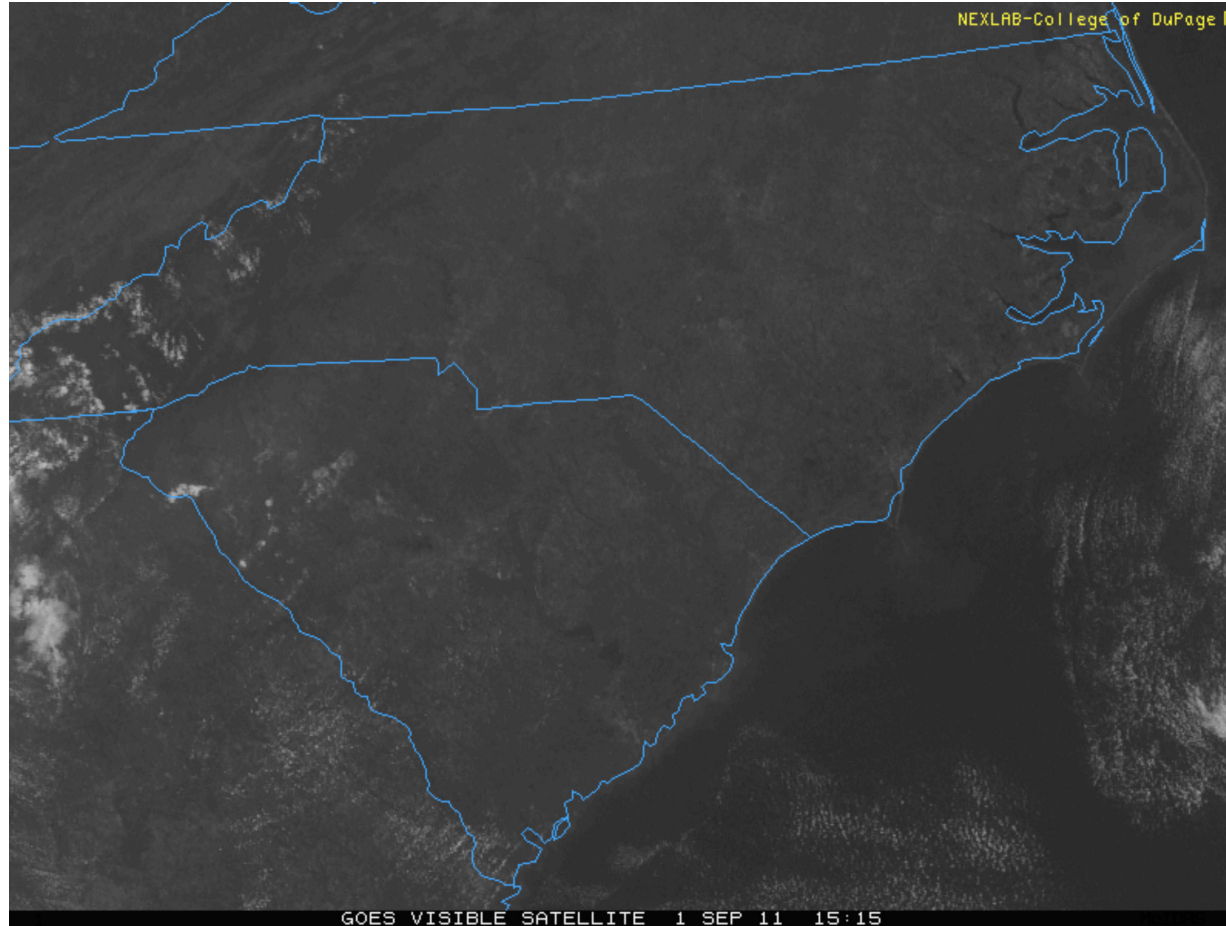
A product of the NC Air Awareness Program





Forecasting Air Quality

Satellite Image for 11:15 am on September 1, 2011



Source: <http://weather.cod.edu/>

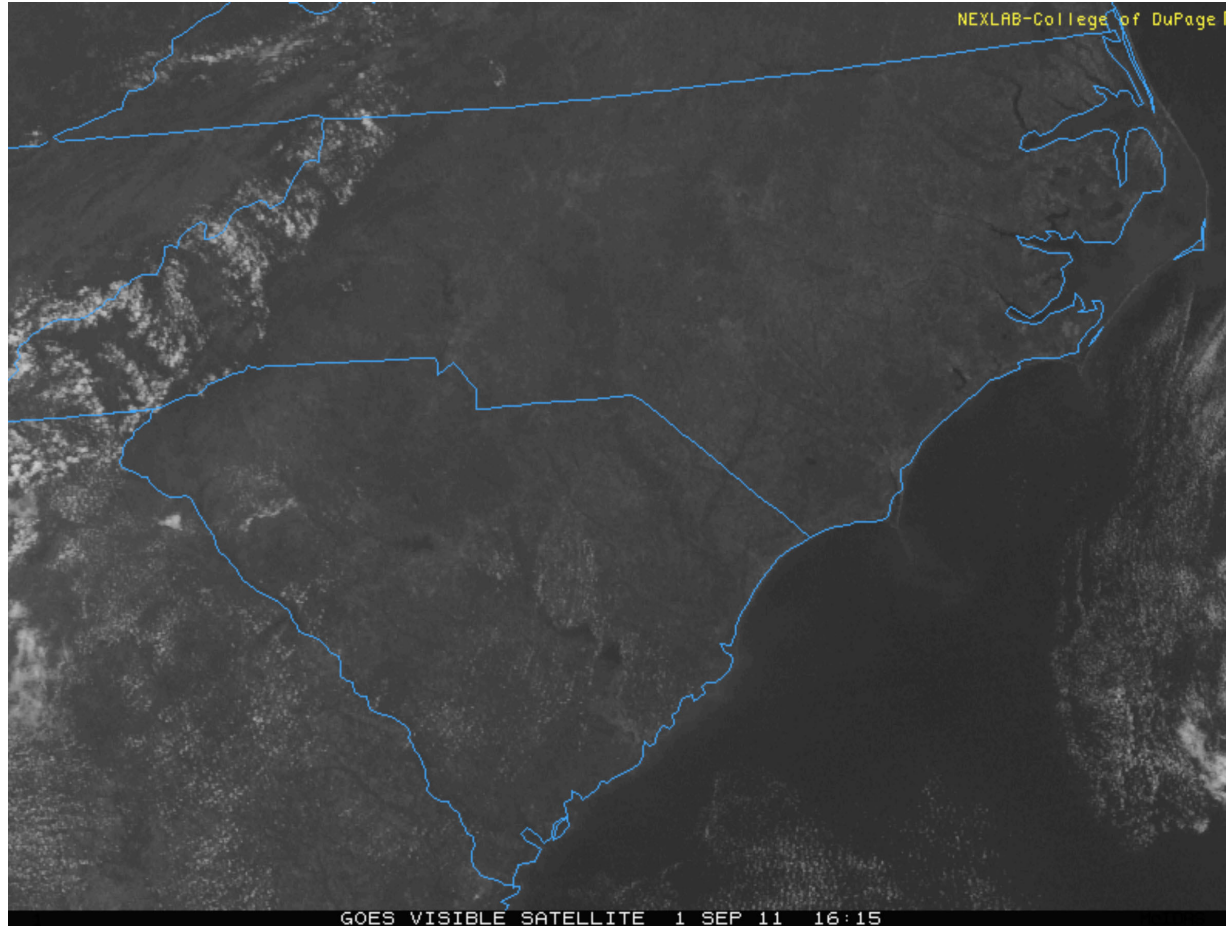
A product of the NC Air Awareness Program





Forecasting Air Quality

Satellite Image for 12:15 pm on September 1, 2011



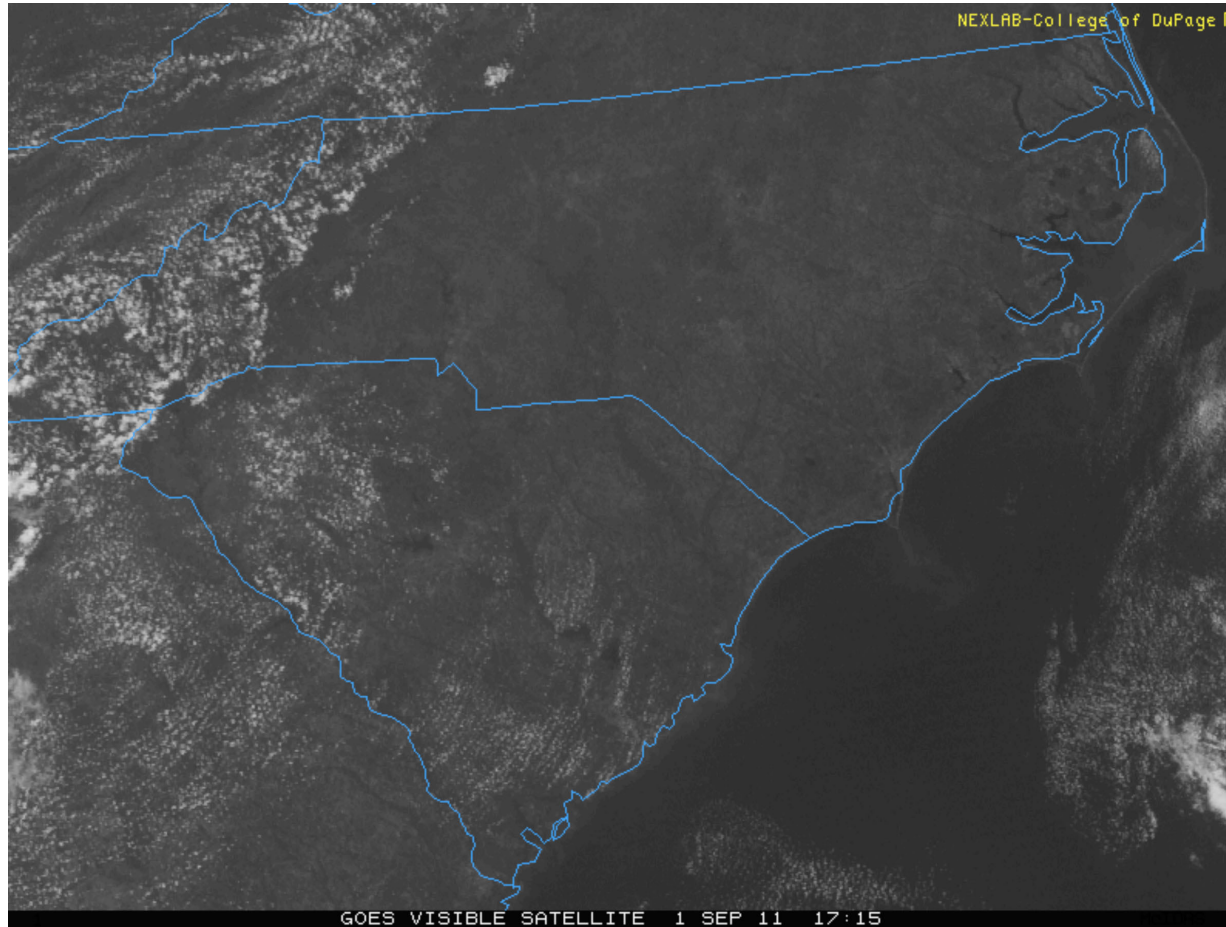
Source: <http://weather.cod.edu/>

Part A
Questions 1-9
Data Page #9



Forecasting Air Quality

Satellite Image for 1:15 pm on September 1, 2011



Source: <http://weather.cod.edu/>

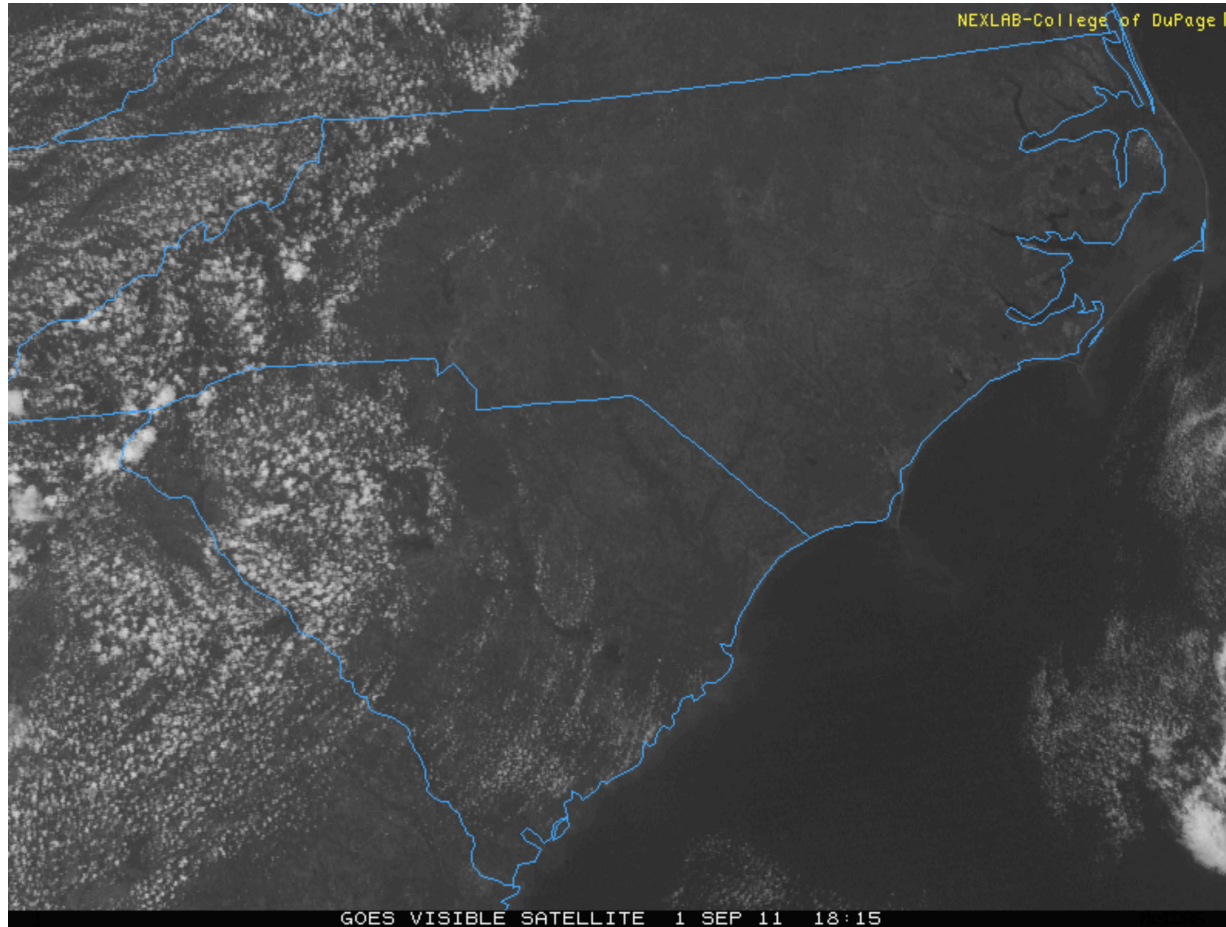
A product of the NC Air Awareness Program

Part A
Questions 1-9
Data Page #10



Forecasting Air Quality

Satellite Image for 2:15 pm on September 1, 2011



Source: <http://weather.cod.edu/>

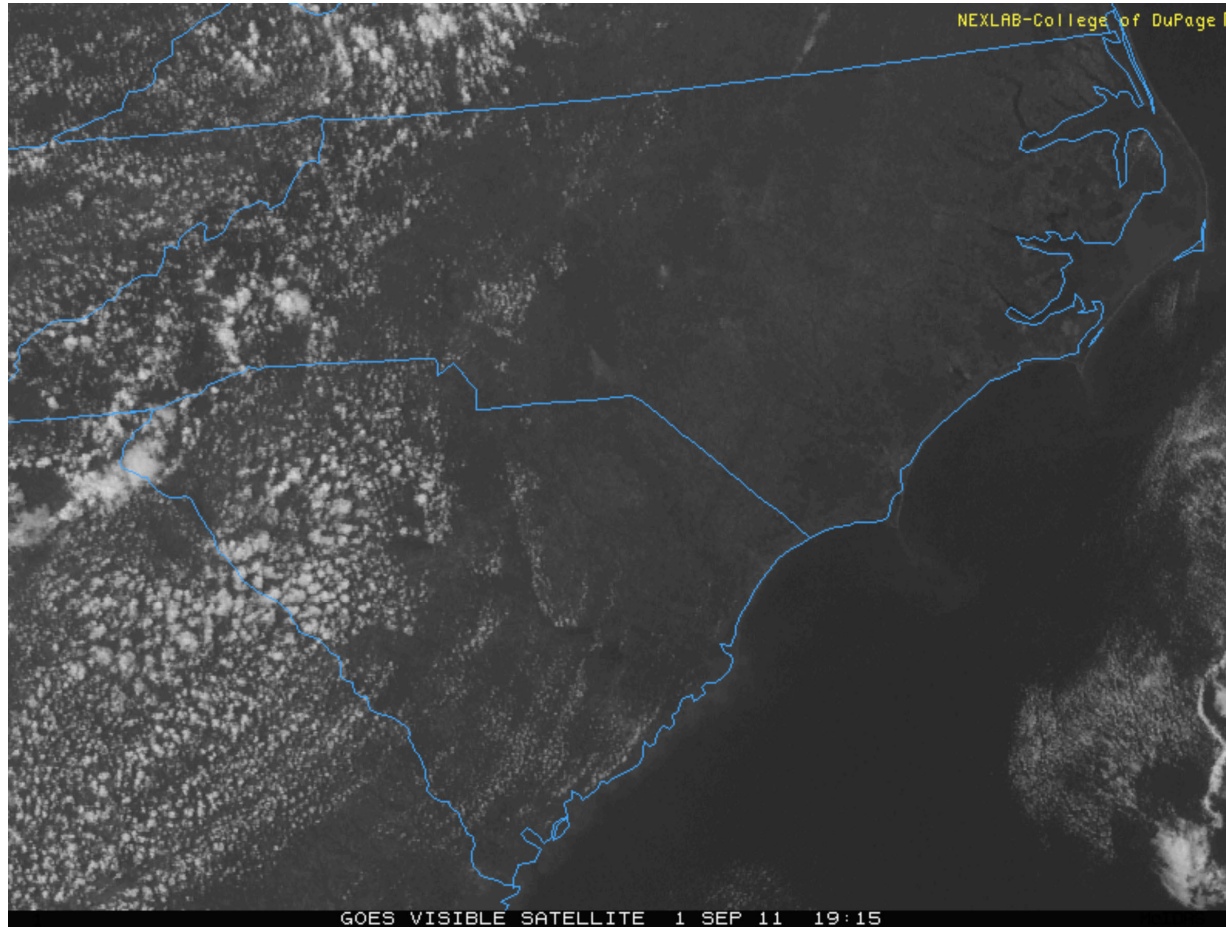
A product of the NC Air Awareness Program





Forecasting Air Quality

Satellite Image for 3:15 pm on September 1, 2011



Source: <http://weather.cod.edu/>

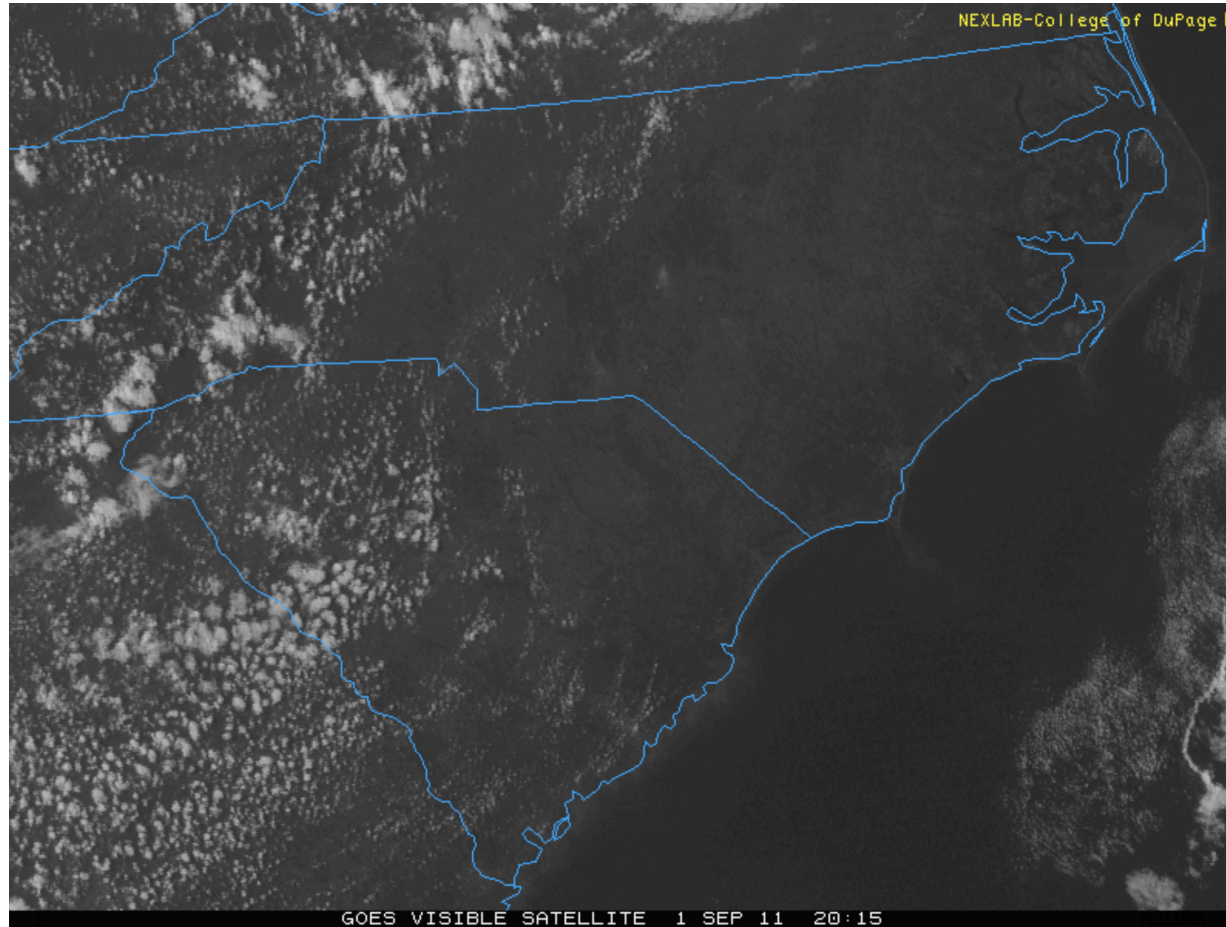
A product of the NC Air Awareness Program





Forecasting Air Quality

Satellite Image for 4:15 pm on September 1, 2011



Source: <http://weather.cod.edu/>

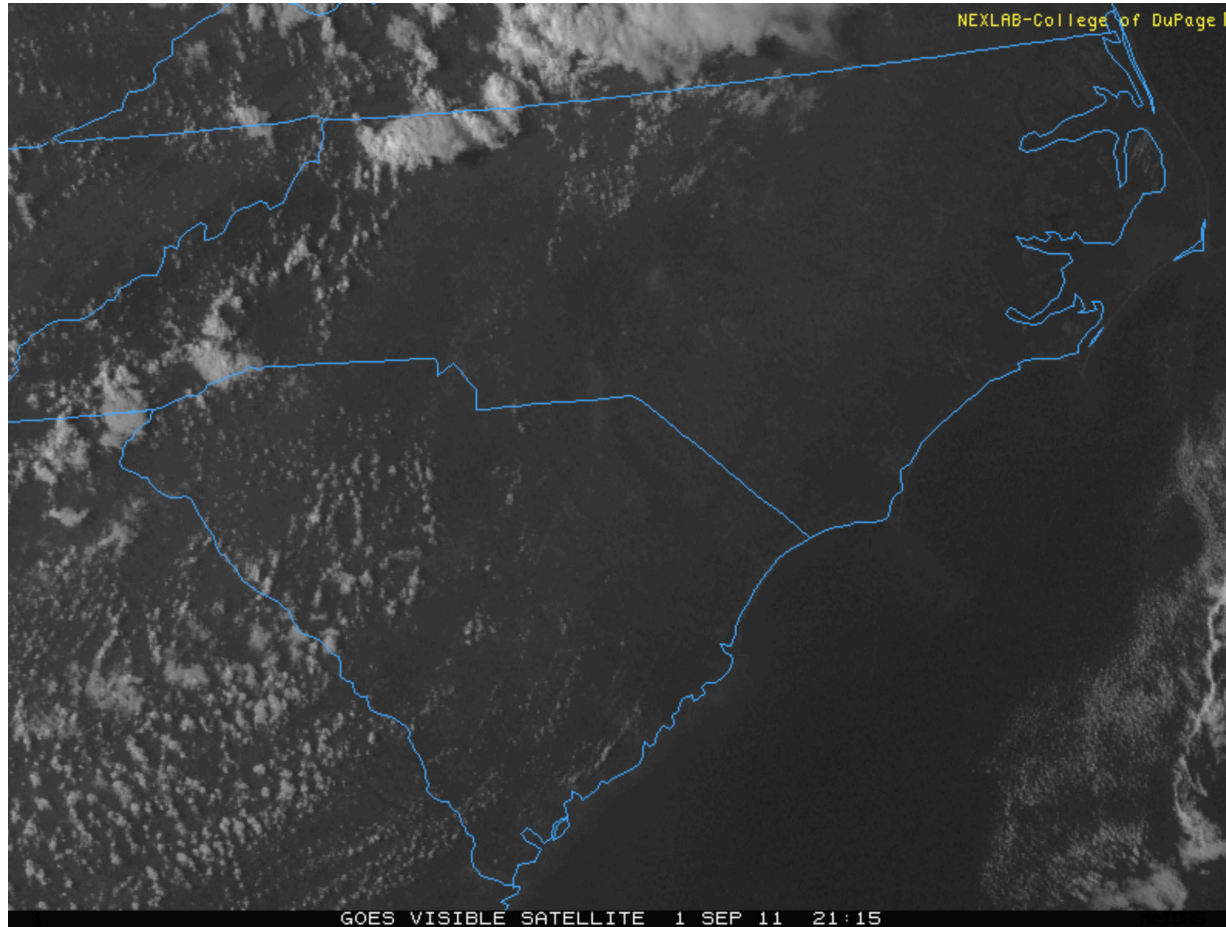
A product of the NC Air Awareness Program





Forecasting Air Quality

Satellite Image for 5:15 pm on September 1, 2011



Source: <http://weather.cod.edu/>

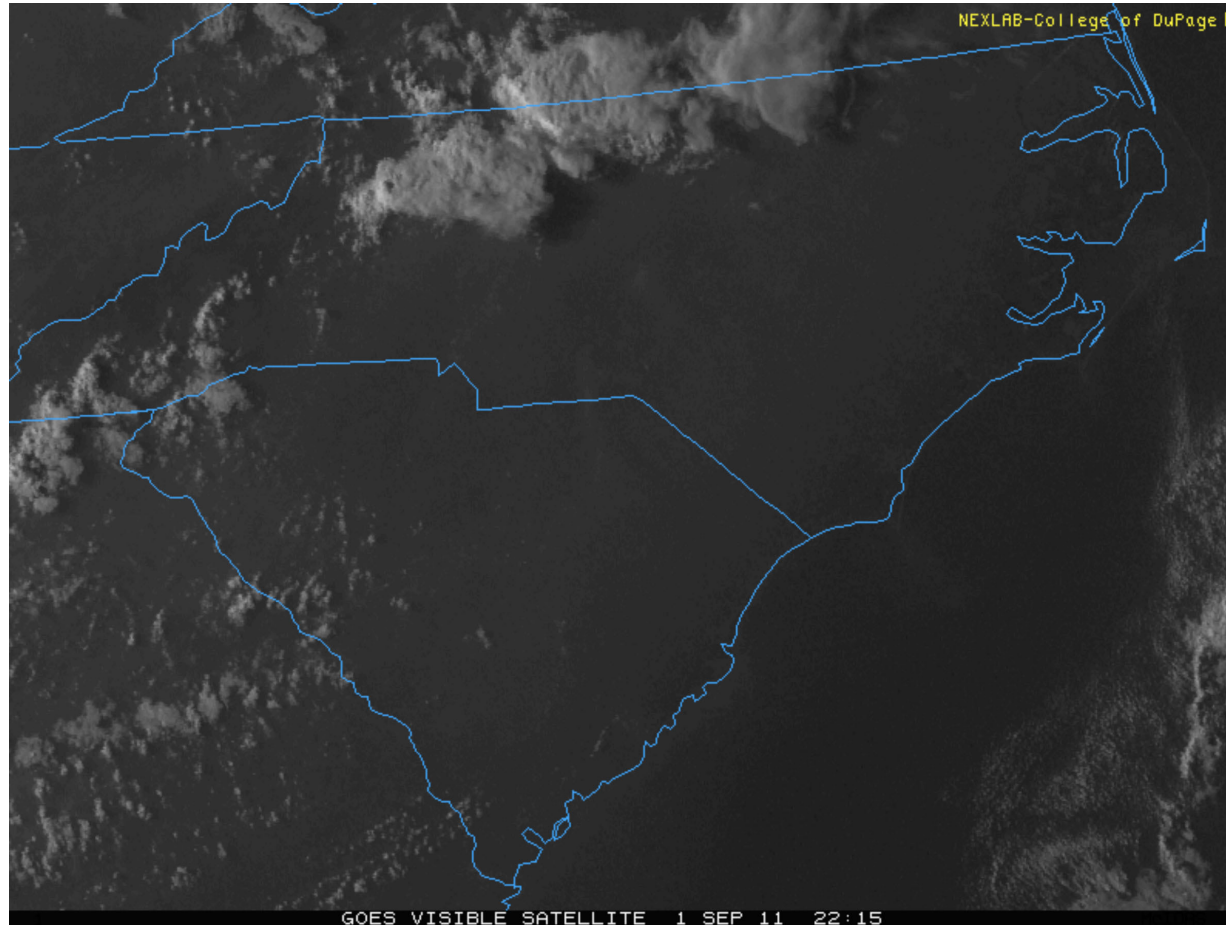
A product of the NC Air Awareness Program

Part A
Questions 1-9
Data Page #14



Forecasting Air Quality

Satellite Image for 6:15 pm on September 1, 2011



Source: <http://weather.cod.edu/>

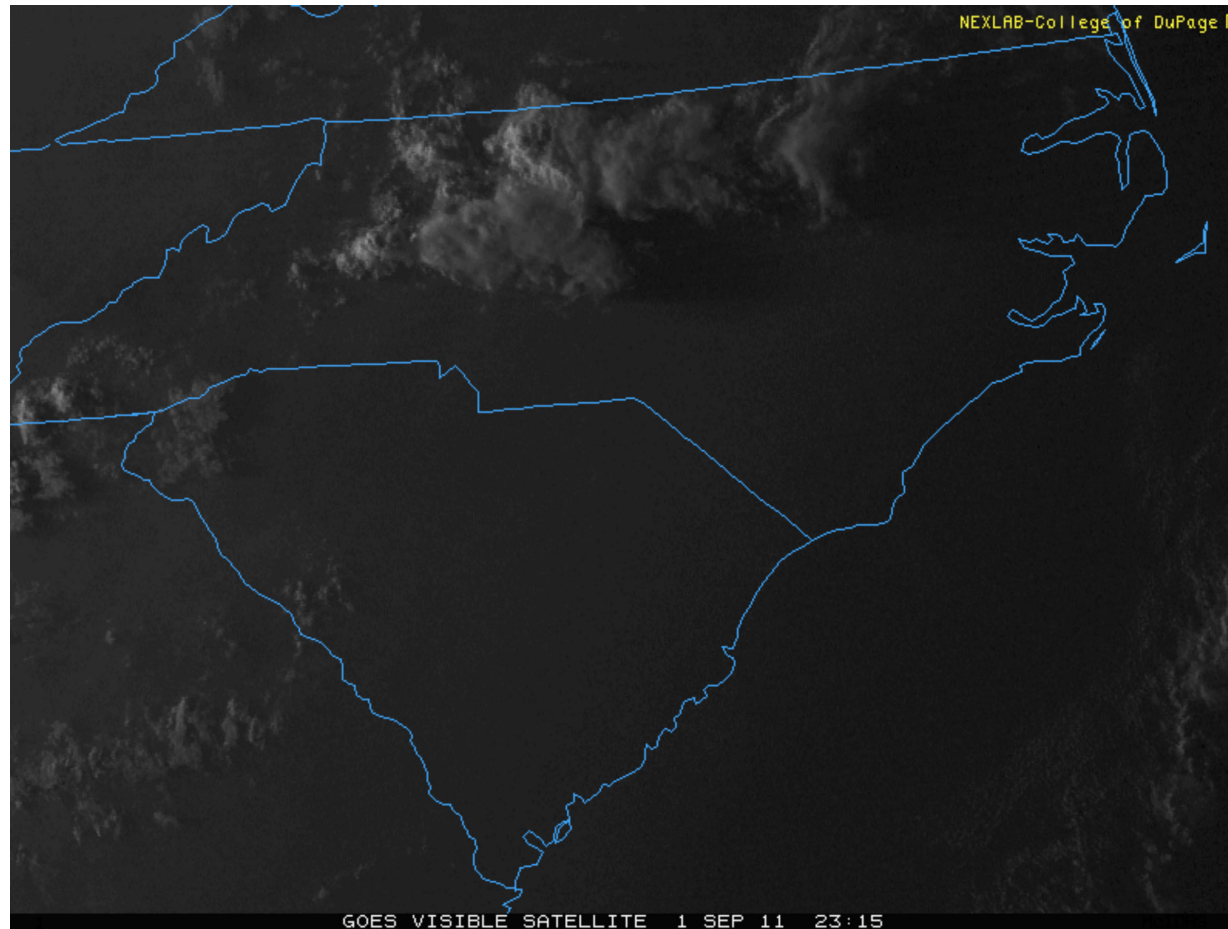
A product of the NC Air Awareness Program





Forecasting Air Quality

Satellite Image for 7:15 pm on September 1, 2011



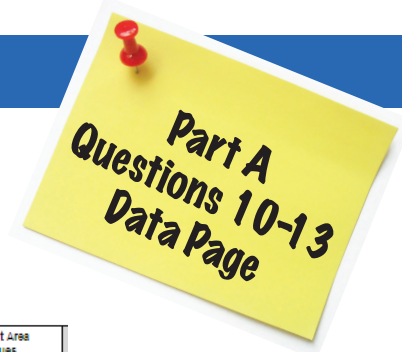
Source: <http://weather.cod.edu/>

Part A
Questions 1-9
Data Page #16



Forecasting Air Quality

Ozone Forecast History for the Month of August, 2011



August, 2011
Ozone Forecast Verification Table

Date	Asheville Ridge Tops Ozone Values			Asheville Valleys Ozone Values			Hickory Area Ozone Values			Charlotte Area Ozone Values			Triangle Area Ozone Values			Fayetteville Area Ozone Values			Rocky Mount Area Ozone Values		
	Highest 8-Hr Average (AQI)	Observed Code	Forecast Code	Highest 8-Hr Average (AQI)	Observed Code	Forecast Code	Highest 8-Hr Average (AQI)	Observed Code	Forecast Code	Highest 8-Hr Average (AQI)	Observed Code	Forecast Code	Highest 8-Hr Average (AQI)	Observed Code	Forecast Code	Highest 8-Hr Average (AQI)	Observed Code	Forecast Code	Highest 8-Hr Average (AQI)	Observed Code	Forecast Code
08/01/2011	61	YELLOW	GREEN	47	GREEN	GREEN	90	YELLOW	YELLOW	90	YELLOW	YELLOW	87	YELLOW	YELLOW	87	YELLOW	YELLOW	40	GREEN	YELLOW
08/02/2011	67	YELLOW	YELLOW	51	YELLOW	YELLOW	77	YELLOW	YELLOW	106	ORANGE	ORANGE	93	YELLOW	YELLOW	93	YELLOW	YELLOW	48	GREEN	YELLOW
08/03/2011	64	YELLOW	YELLOW	51	YELLOW	YELLOW	54	YELLOW	YELLOW	104	ORANGE	ORANGE	97	YELLOW	ORANGE	97	YELLOW	YELLOW	61	YELLOW	ORANGE
08/04/2011	47	GREEN	YELLOW	47	GREEN	GREEN	90	YELLOW	YELLOW	90	YELLOW	ORANGE	93	YELLOW	YELLOW	100	YELLOW	YELLOW	45	GREEN	YELLOW
08/05/2011	50	GREEN	GREEN	47	GREEN	GREEN	36	GREEN	GREEN	36	GREEN	YELLOW	43	GREEN	YELLOW	43	GREEN	GREEN	33	GREEN	GREEN
08/06/2011	58	YELLOW	GREEN	40	GREEN	GREEN	45	GREEN	GREEN	54	YELLOW	GREEN	42	GREEN	GREEN	50	GREEN	GREEN	24	GREEN	GREEN
08/07/2011	49	GREEN	GREEN	45	GREEN	GREEN	43	GREEN	GREEN	48	GREEN	GREEN	51	YELLOW	GREEN	51	YELLOW	GREEN	42	GREEN	GREEN
08/08/2011	50	GREEN	YELLOW	46	GREEN	YELLOW	49	GREEN	YELLOW	87	YELLOW	YELLOW	58	YELLOW	YELLOW	58	YELLOW	YELLOW	47	GREEN	YELLOW
08/09/2011	47	GREEN	YELLOW	42	GREEN	YELLOW	47	GREEN	YELLOW	54	YELLOW	YELLOW	61	YELLOW	YELLOW	58	YELLOW	YELLOW	54	YELLOW	YELLOW
08/10/2011	54	YELLOW	GREEN	47	GREEN	GREEN	61	YELLOW	GREEN	87	YELLOW	YELLOW	77	YELLOW	YELLOW	93	YELLOW	YELLOW	47	GREEN	YELLOW
08/11/2011	47	GREEN	GREEN	42	GREEN	GREEN	50	GREEN	GREEN	50	GREEN	YELLOW	84	YELLOW	YELLOW	77	YELLOW	YELLOW	43	GREEN	YELLOW
08/12/2011	54	YELLOW	GREEN	49	GREEN	GREEN	54	YELLOW	YELLOW	61	YELLOW	YELLOW	49	GREEN	GREEN	49	GREEN	GREEN	44	GREEN	GREEN
08/13/2011	47	GREEN	GREEN	45	GREEN	GREEN	44	GREEN	GREEN	44	GREEN	GREEN	42	GREEN	GREEN	38	GREEN	GREEN	39	GREEN	GREEN
08/14/2011	43	GREEN	GREEN	42	GREEN	GREEN	40	GREEN	GREEN	58	YELLOW	GREEN	42	GREEN	GREEN	41	GREEN	GREEN	30	GREEN	GREEN
08/15/2011	47	GREEN	GREEN	43	GREEN	GREEN	42	GREEN	GREEN	49	GREEN	GREEN	47	GREEN	GREEN	47	GREEN	GREEN	42	GREEN	GREEN
08/16/2011	47	GREEN	GREEN	49	GREEN	GREEN	51	YELLOW	GREEN	67	YELLOW	YELLOW	80	YELLOW	YELLOW	80	YELLOW	GREEN	43	GREEN	GREEN
08/17/2011	51	YELLOW	YELLOW	50	GREEN	GREEN	106	ORANGE	ORANGE	106	ORANGE	ORANGE	58	YELLOW	YELLOW	64	YELLOW	YELLOW	41	GREEN	YELLOW
08/18/2011	58	YELLOW	YELLOW	44	GREEN	YELLOW	48	GREEN	YELLOW	87	YELLOW	ORANGE	74	YELLOW	YELLOW	51	YELLOW	YELLOW	42	GREEN	YELLOW
08/19/2011	58	YELLOW	YELLOW	47	GREEN	YELLOW	48	GREEN	YELLOW	100	YELLOW	YELLOW	51	YELLOW	YELLOW	51	YELLOW	YELLOW	49	GREEN	YELLOW
08/20/2011	49	GREEN	YELLOW	43	GREEN	YELLOW	93	YELLOW	ORANGE	93	YELLOW	ORANGE	58	YELLOW	ORANGE	58	YELLOW	YELLOW	40	GREEN	YELLOW
08/21/2011	49	GREEN	YELLOW	43	GREEN	GREEN	43	GREEN	GREEN	54	YELLOW	YELLOW	42	GREEN	YELLOW	37	GREEN	YELLOW	31	GREEN	YELLOW
08/22/2011	43	GREEN	GREEN	41	GREEN	GREEN	42	GREEN	GREEN	49	GREEN	YELLOW	47	GREEN	YELLOW	47	GREEN	YELLOW	38	GREEN	GREEN
08/23/2011	42	GREEN	GREEN	42	GREEN	GREEN	51	YELLOW	YELLOW	51	YELLOW	YELLOW	51	YELLOW	GREEN	47	GREEN	GREEN	42	GREEN	GREEN
08/24/2011	48	GREEN	GREEN	46	GREEN	GREEN	47	GREEN	YELLOW	71	YELLOW	YELLOW	48	GREEN	YELLOW	43	GREEN	GREEN	41	GREEN	GREEN
08/25/2011	58	YELLOW	YELLOW	58	YELLOW	YELLOW	50	GREEN	YELLOW	71	YELLOW	YELLOW	41	GREEN	YELLOW	31	GREEN	GREEN	21	GREEN	GREEN
08/26/2011	51	YELLOW	YELLOW	51	YELLOW	GREEN	40	GREEN	GREEN	40	GREEN	YELLOW	23	GREEN	GREEN	20	GREEN	GREEN	0	GREEN	GREEN
08/27/2011	45	GREEN	YELLOW	45	GREEN	YELLOW	44	GREEN	GREEN	42	GREEN	GREEN	33	GREEN	GREEN	31	GREEN	GREEN	0	GREEN	GREEN
08/28/2011	45	GREEN	GREEN	43	GREEN	GREEN	47	GREEN	GREEN	64	YELLOW	GREEN	47	GREEN	GREEN	46	GREEN	GREEN	0	GREEN	GREEN
08/29/2011	44	GREEN	YELLOW	44	GREEN	GREEN	42	GREEN	YELLOW	61	YELLOW	YELLOW	71	YELLOW	GREEN	71	YELLOW	GREEN	0	GREEN	GREEN
08/30/2011	44	GREEN	YELLOW	45	GREEN	YELLOW	74	YELLOW	YELLOW	74	YELLOW	YELLOW	40	GREEN	GREEN	38	GREEN	GREEN	0	GREEN	GREEN
08/31/2011	51	YELLOW	YELLOW	61	YELLOW	YELLOW	67	YELLOW	YELLOW	80	YELLOW	YELLOW	49	GREEN	GREEN	47	GREEN	GREEN	0	GREEN	GREEN

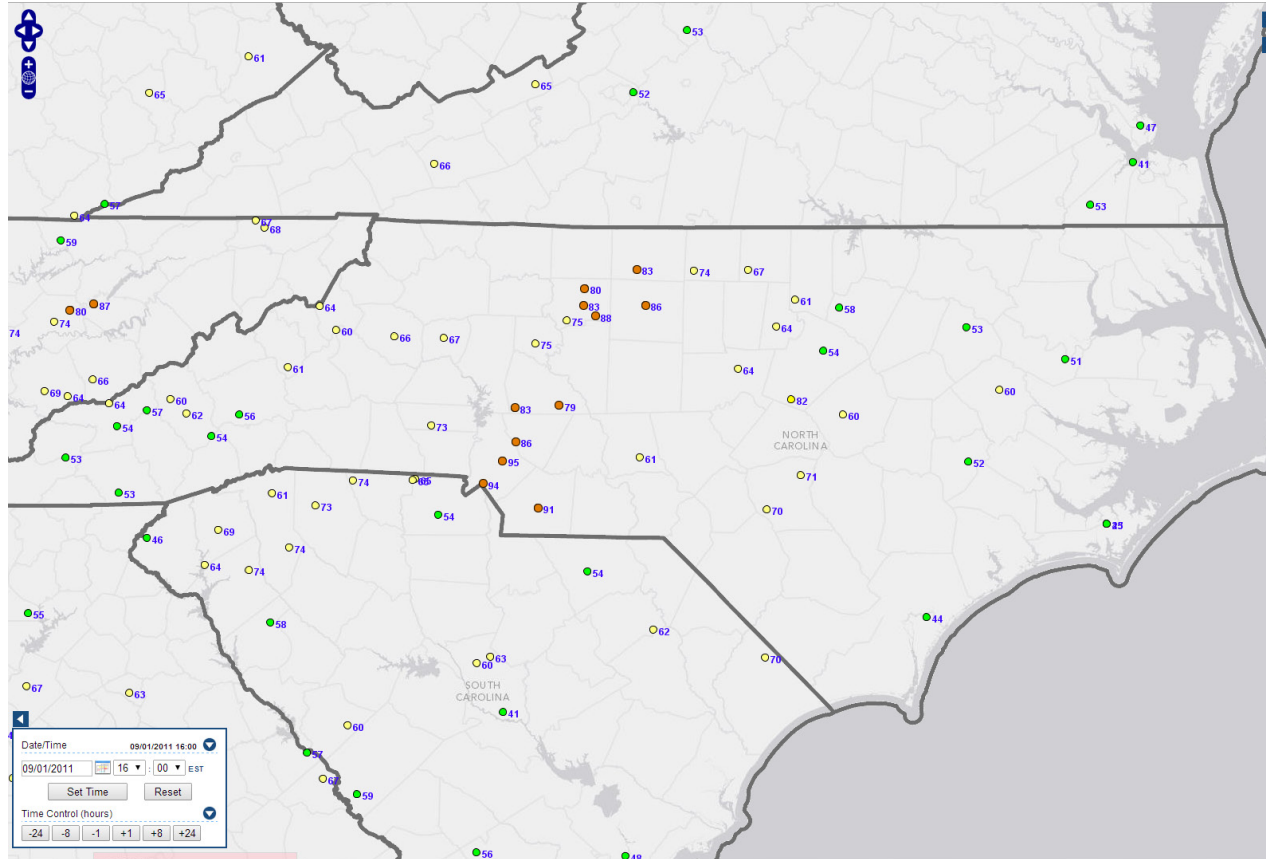
Source: <http://www.ncair.org/>



Forecasting Air Quality

Ozone Data from September 1, 2011

Part A
Questions 14-15
Data Page



Source: <http://airnowtech.org/>

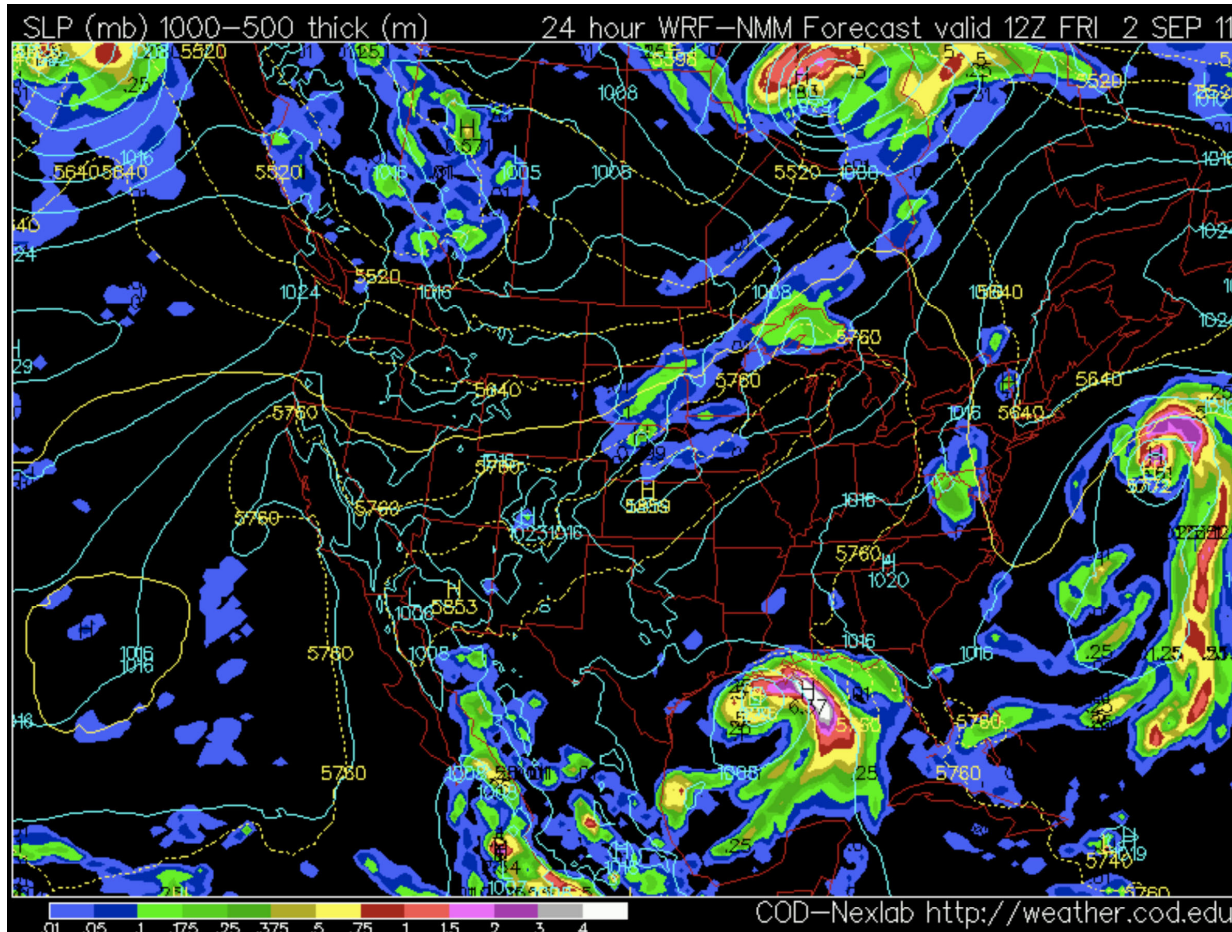
A product of the NC Air Awareness Program



Forecasting Air Quality

Precipitation Forecast Model A – 7:00 am September 2, 2011

Part B
Questions 1-6
Data Page #1



Source: <http://weather.cod.edu/>

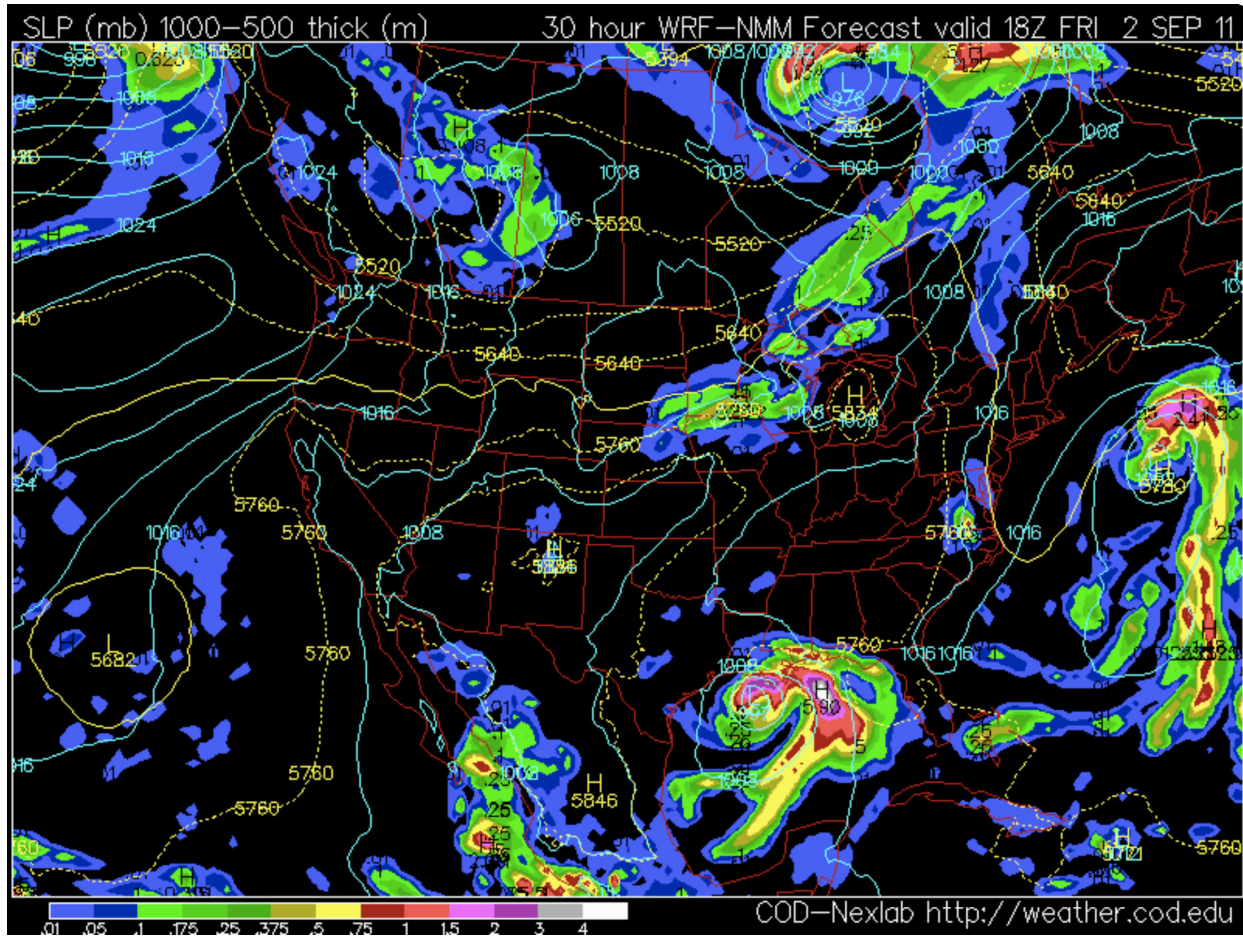
A product of the NC Air Awareness Program



Forecasting Air Quality

Precipitation Forecast Model A – 2:00 pm September 2, 2011

Part B
Questions 1-6
Data Page #2



Source: <http://weather.cod.edu/>

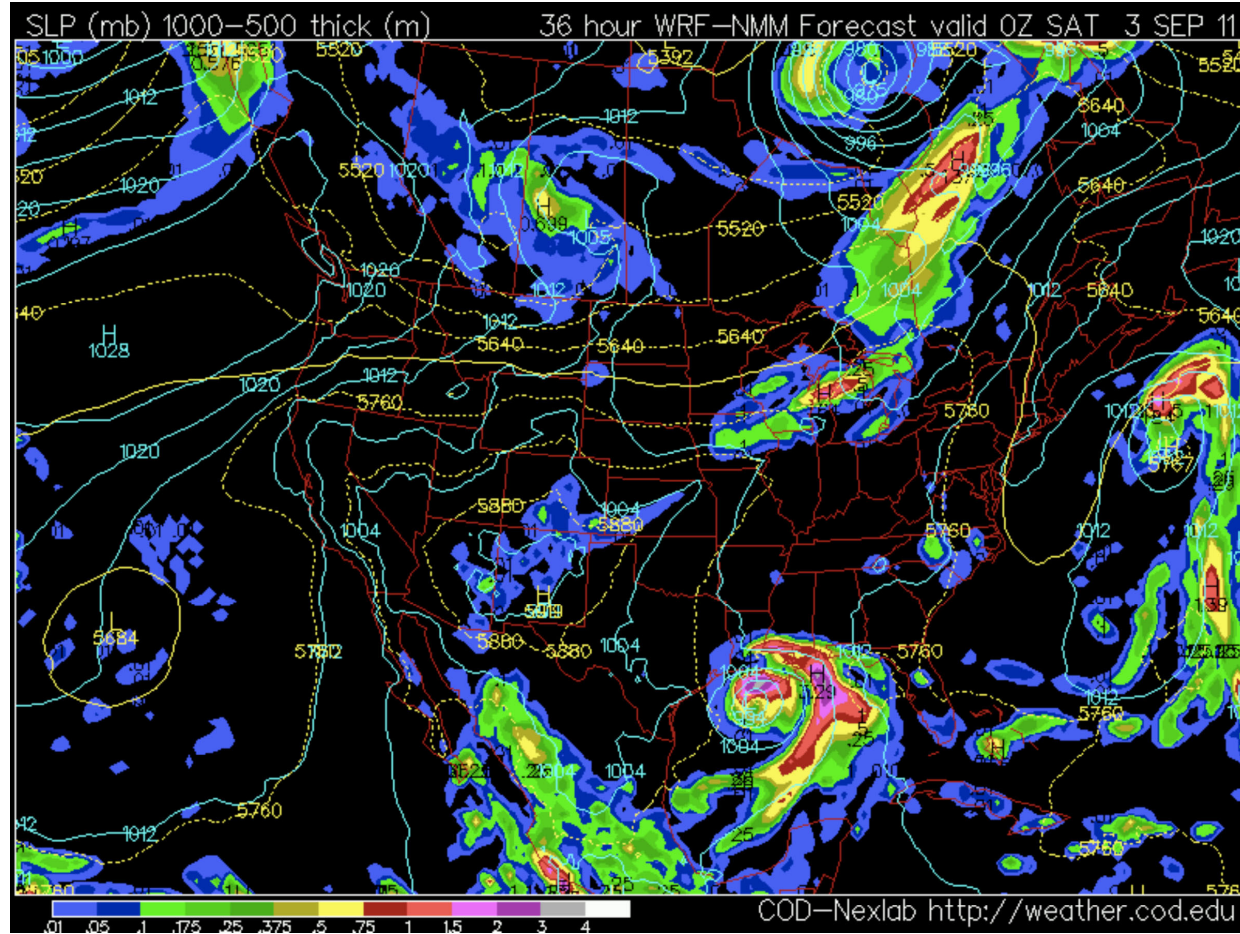
A product of the NC Air Awareness Program



Forecasting Air Quality

Precipitation Forecast Model A – 8:00 pm September 3, 2011

Part B
Questions 1-6
Data Page #3



Source: <http://weather.cod.edu/>

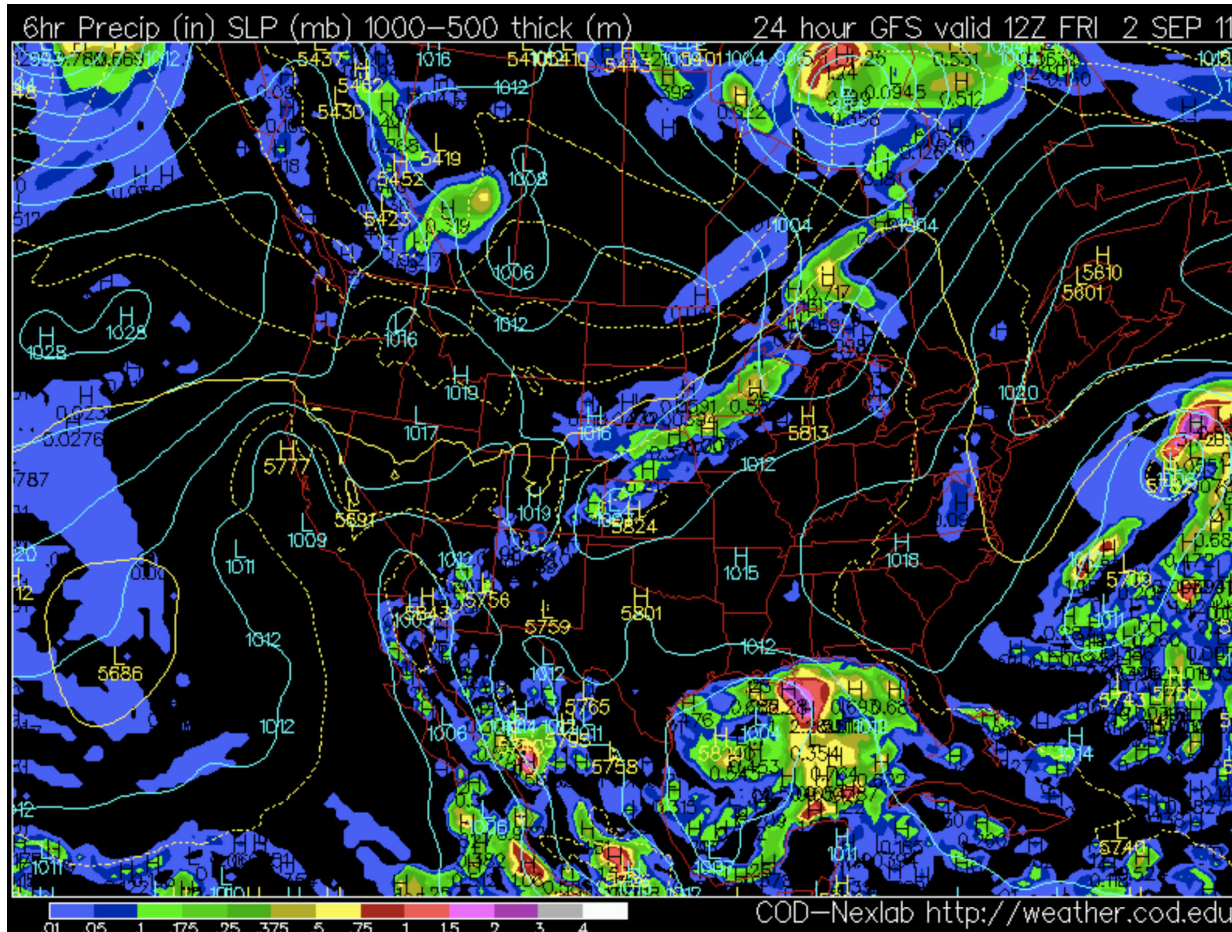
A product of the NC Air Awareness Program



Forecasting Air Quality

Precipitation Forecast Model B – 7:00 am September 2, 2011

Part B
Questions 1-6
Data Page #4



Source: <http://weather.cod.edu/>

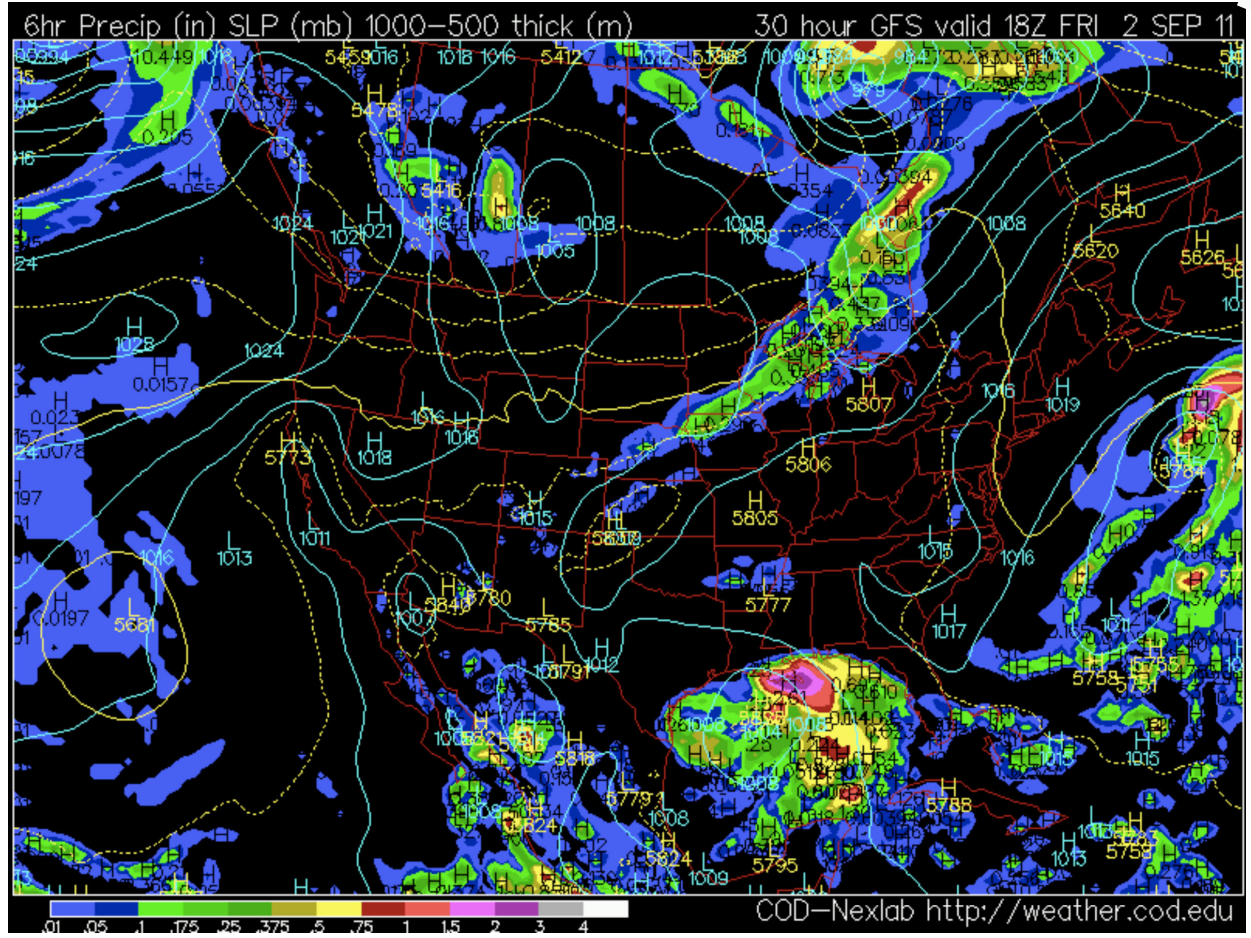
A product of the NC Air Awareness Program



Forecasting Air Quality

Precipitation Forecast Model B – 2:00 pm September 2, 2011

Part B
Questions 1-6
Data Page #5



Source: <http://weather.cod.edu/>

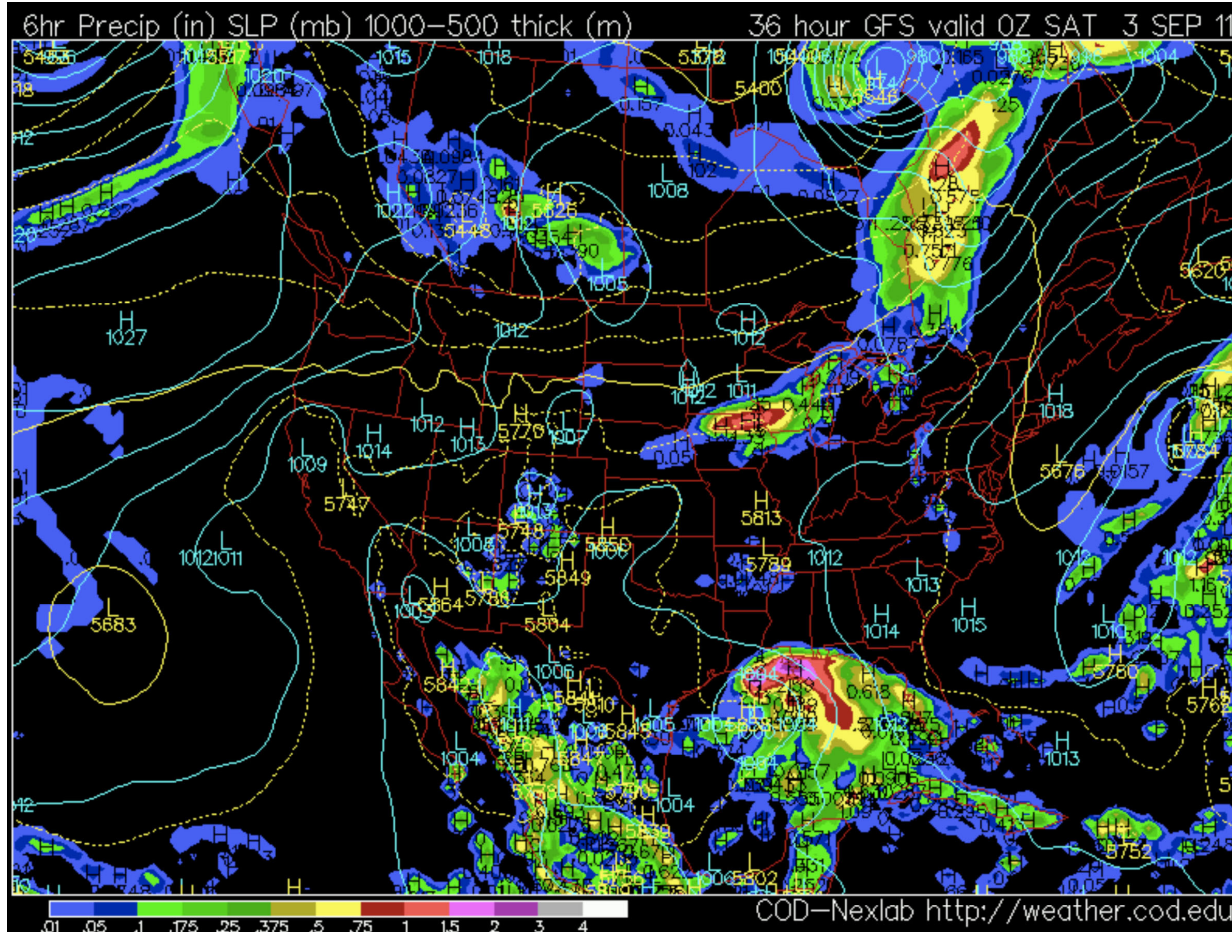
A product of the NC Air Awareness Program



Forecasting Air Quality

Precipitation Forecast Model B – 8:00 pm September 3, 2011

Part B
Questions 1-6
Data Page #6



Source: <http://weather.cod.edu/>

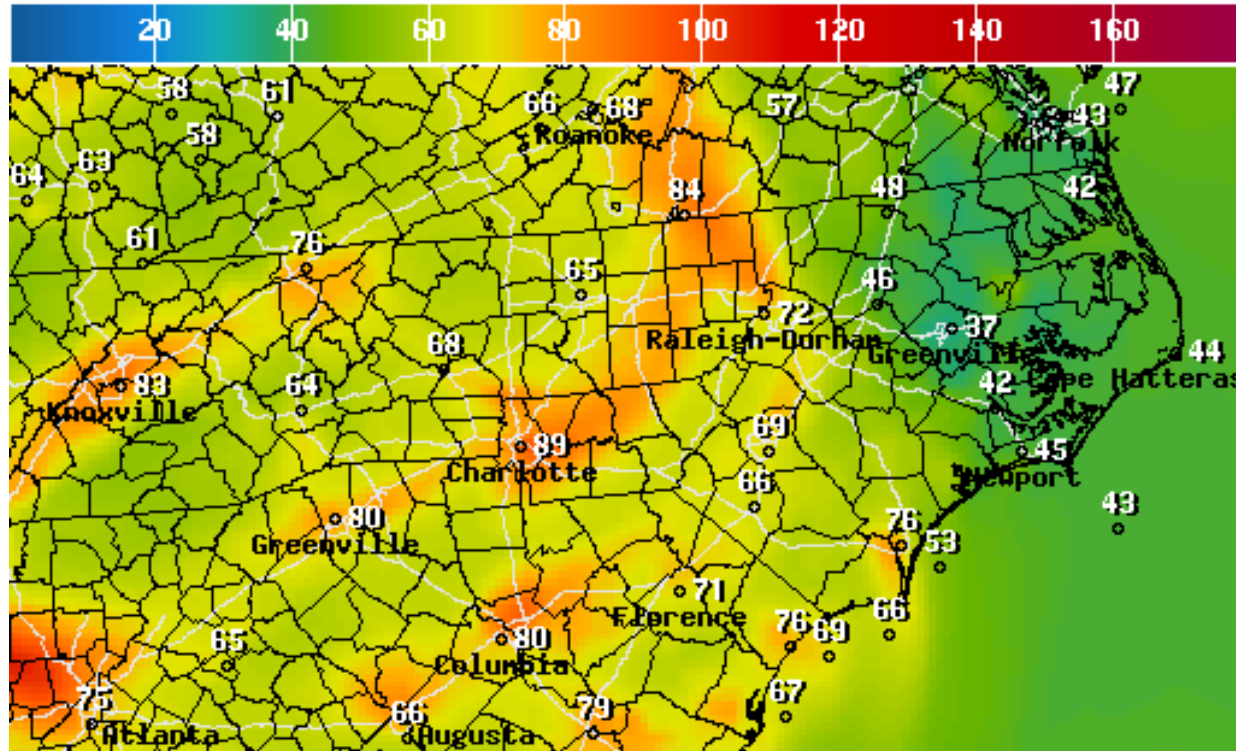
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Forecasting Air Quality

NOAA Maximum 8-Hour Ozone Forecast Model – September 2, 2011

Part B
Questions 7-8
Data Page



Maximum 8hr Ozone (PPB) Ending Sat Sep 03 2011 7AM EDT
(Sat Sep 03 2011 11Z)



National Digital Guidance Database

12z model run Graphic created-Sep 01 1:36PM EDT



Source: <http://airquality.weather.gov/sectors/midatlantic.php>

A product of the NC Air Awareness Program