



*Department of Environmental Quality
Division of Air Quality
NC Air Awareness*

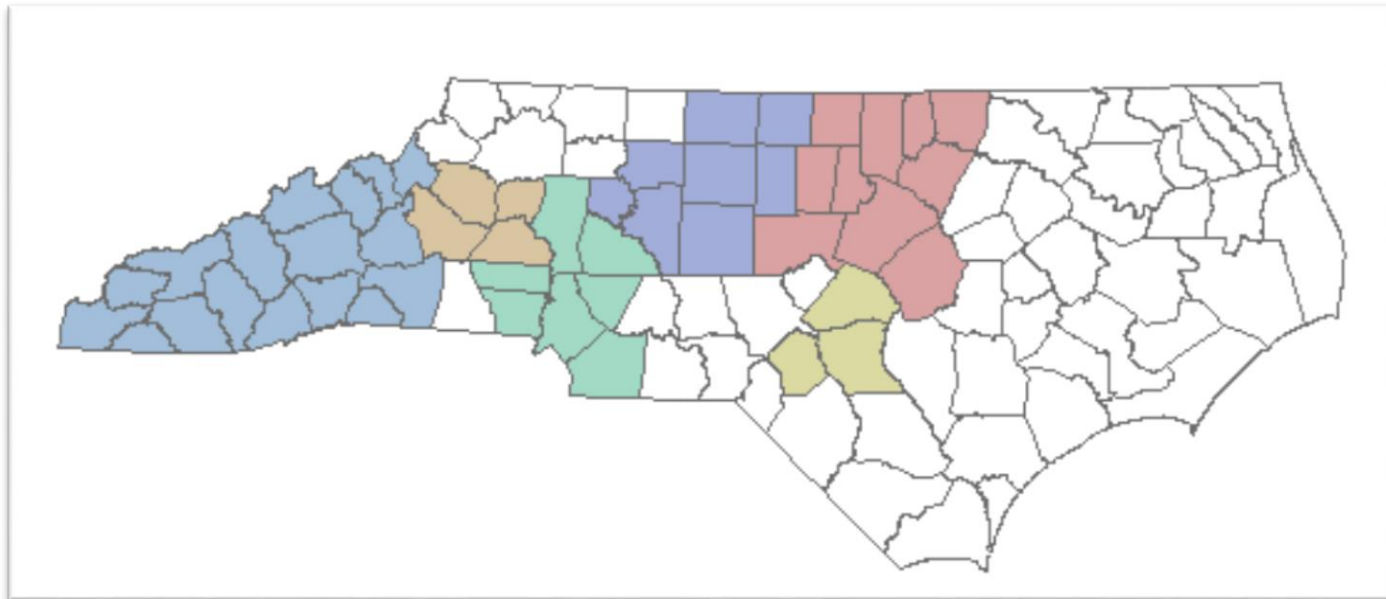
NC AIR QUALITY 101



NC Air Awareness

NC Air Awareness is an education and outreach program of the NC Division of Air Quality

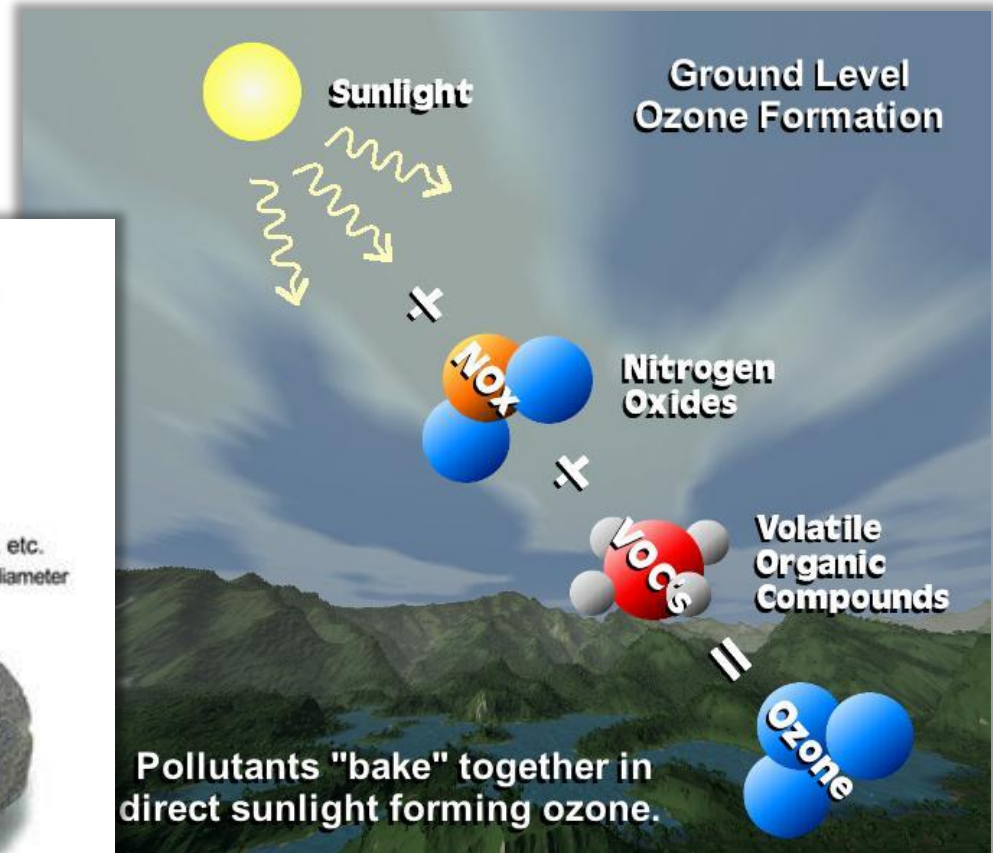
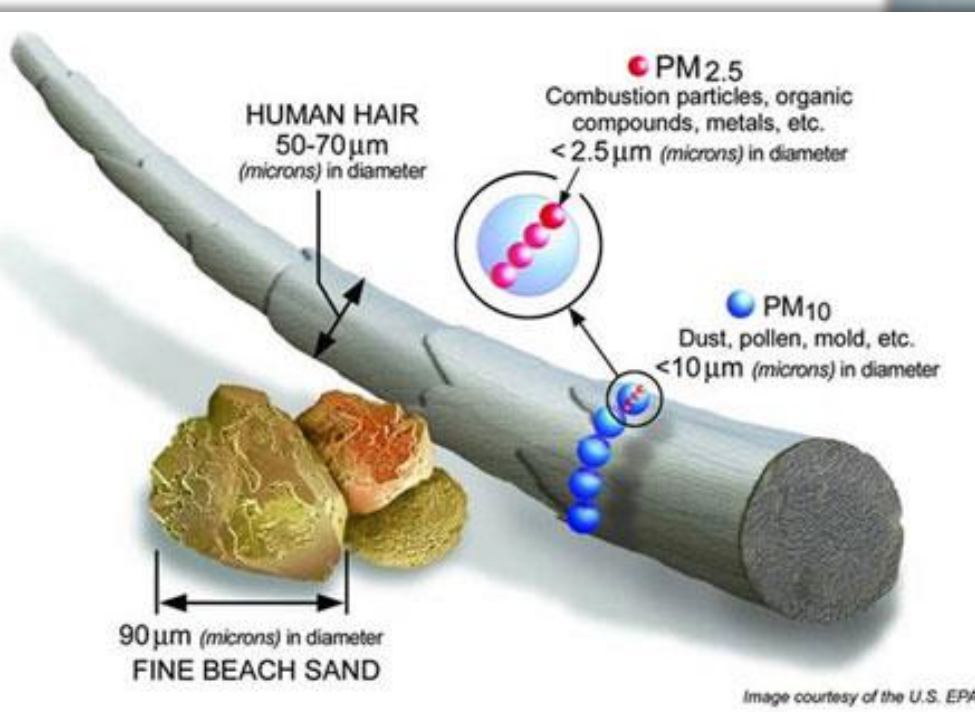
- Program includes community, partnership and **education** projects.
- Focus on voluntary actions to help solve air pollution problems.
- Provide free air quality outreach and education materials to **teachers** (That's you!).



Air Quality in North Carolina



Main Pollutants of concern in NC



Particulate Matter (PM_{2.5}) and Ground level Ozone



Where does air pollution come from?

Point Sources

- Electric power plants, refineries, industries, etc.

Area Sources

- Dry cleaners, paints, solvents, etc.

On-Road Vehicles - Mobile sources

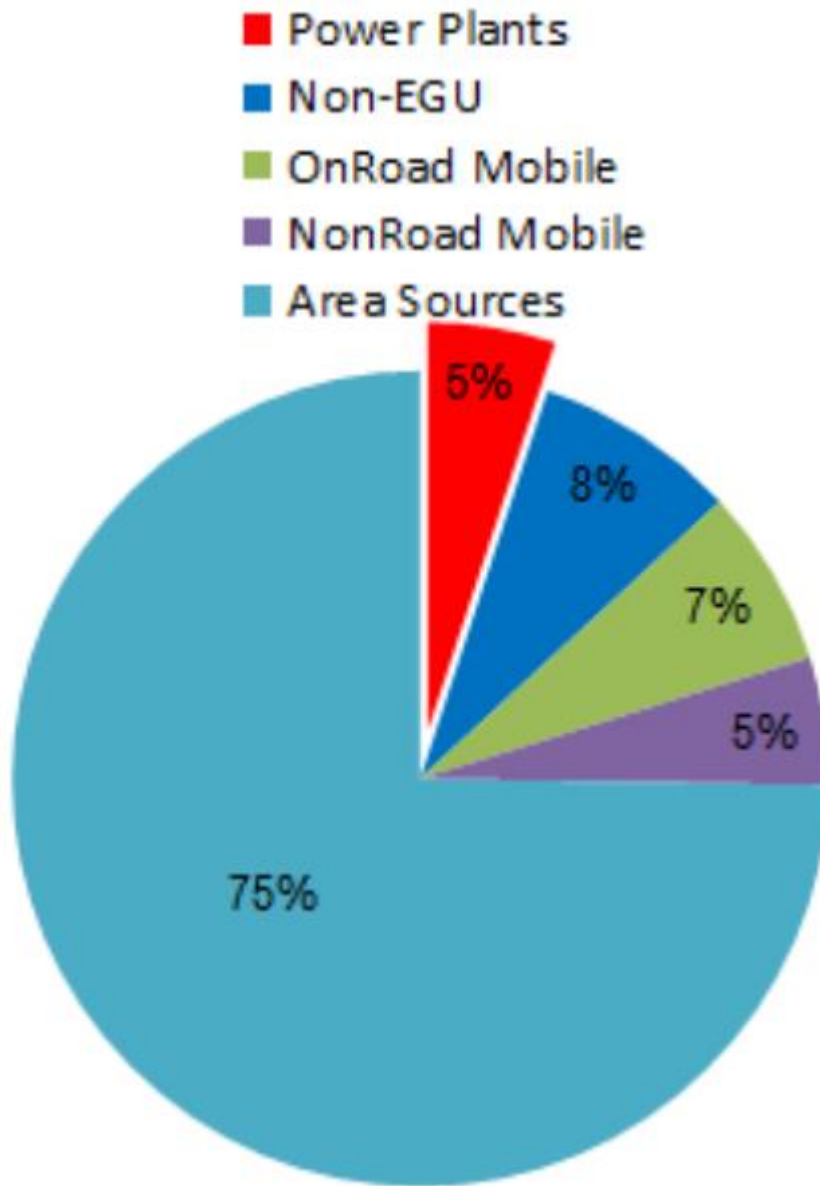
- Cars, trucks, buses

Non-Road Vehicles - Mobile sources

- ATVs, lawn mowers, construction equipment



Sources of PM_{2.5} in North Carolina

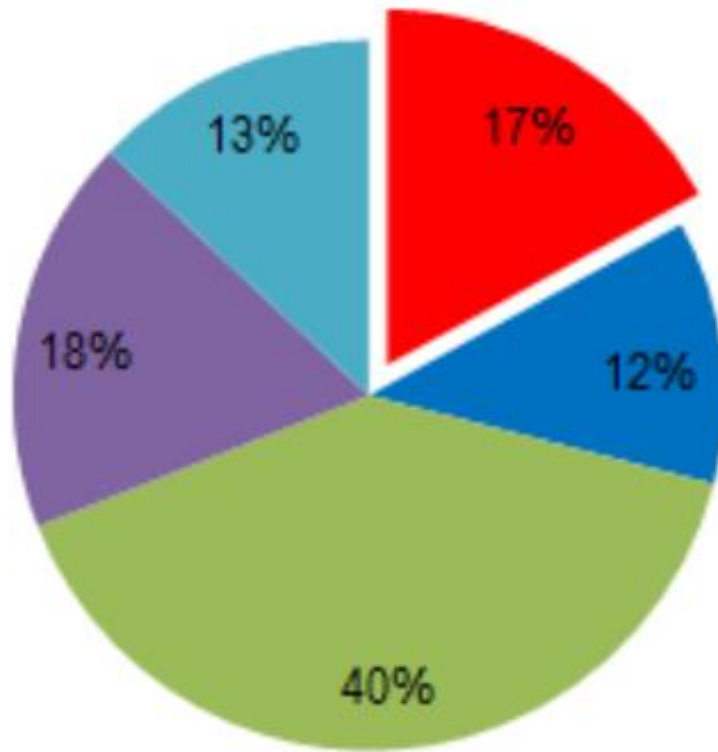


2012 Data



Sources of NO_x in North Carolina

- Power Plants
- Non-EGU
- OnRoad Mobile
- NonRoad Mobile
- Area Sources



2012 Data

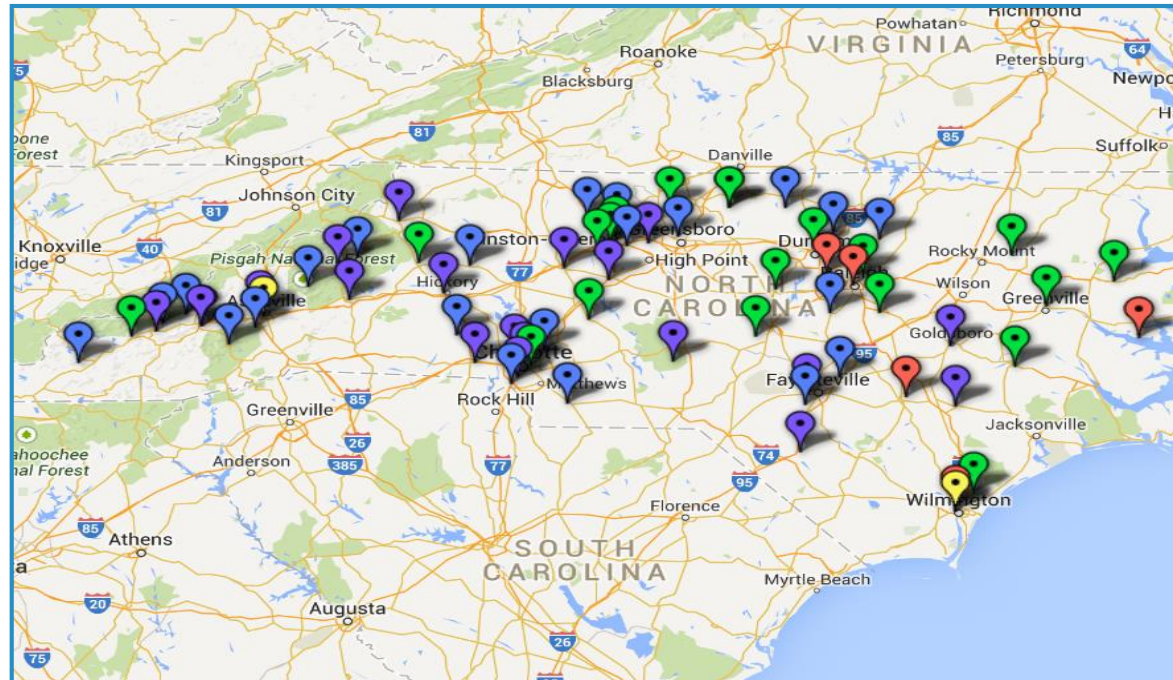


How do we know what is in the air?



Air Monitoring Stations

- How do meteorologist and citizens know what's in the air? DAQ's ambient monitoring section operates approximately air monitoring stations statewide.



Why do we care?

Air pollution can impact your health. In North Carolina, asthma or respiratory problems are one major reason our students miss school and adults miss work.



Human Impacts

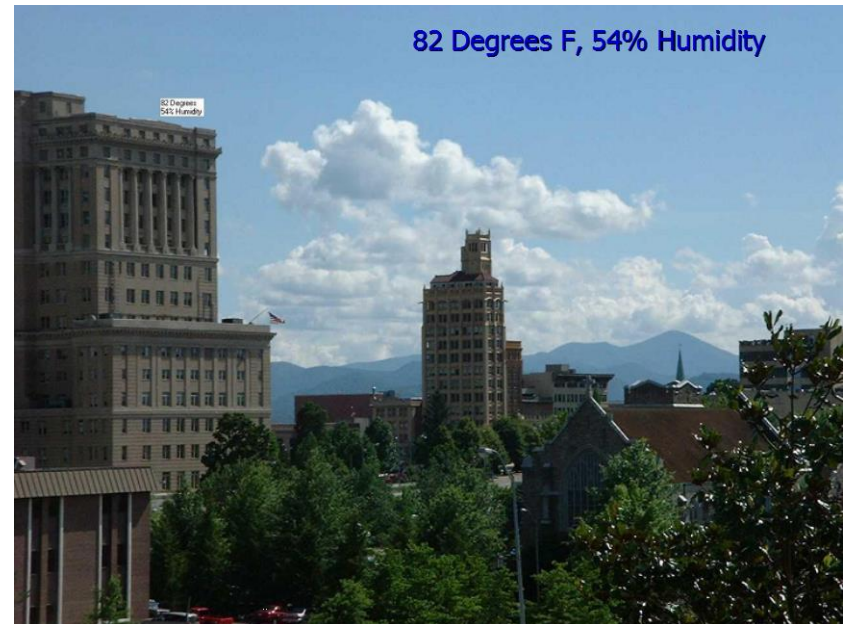
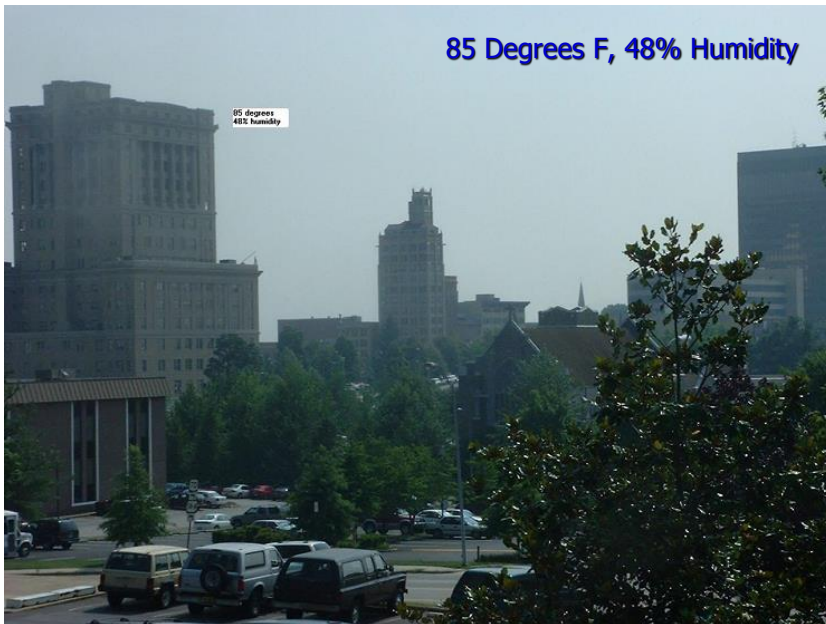


Environmental Impacts

Air pollution, such as ground level ozone, can damage many plants and crops.



Why do we care?



Air pollution impacts our economy. Degraded Visibility and Lost Tourism Revenue

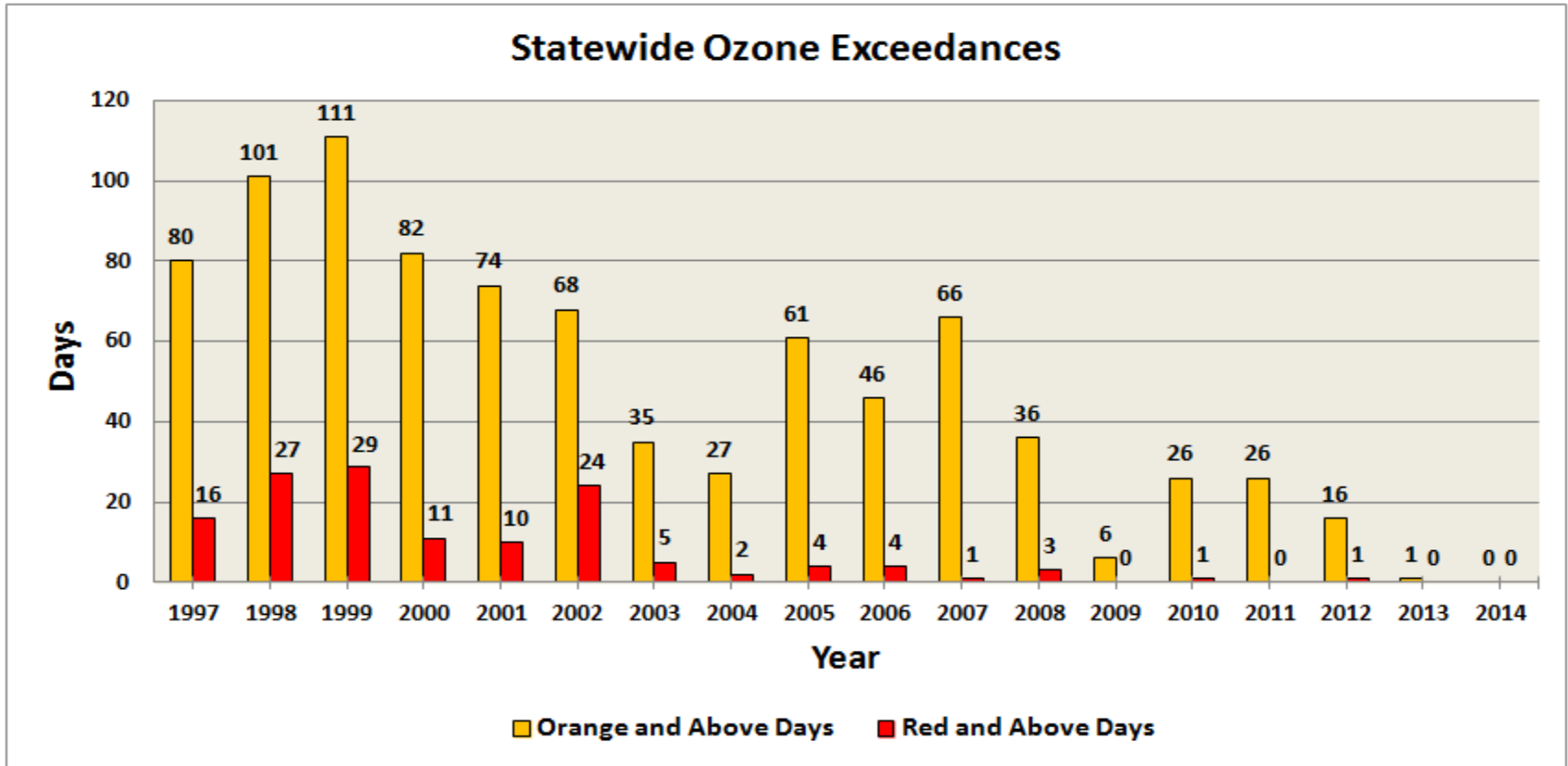


NC Air Quality is Improving!

- Due to the Federal Clean Air Act and federal laws requiring cleaner cars and fuels and other regulation, air has gotten cleaner since 1971.
- Thanks to the **North Carolina Clean Smokestacks Act**, actions taken in response to the state's lawsuit against the TVA, the NC Renewable Energy Standard, and the work of local and regional governments, North Carolina's air is getting cleaner



NC Air Quality Trends



**2013 & 2014 all-time cleanest ozone seasons by a wide-margin*



It's Our Air – Air Pollution in North Carolina



www.itsourair.org – Quick video on Air Pollution in North Carolina



Air Quality Education

K-5 (*English & Spanish*)

- The Adventure of Clair and CAM (9 activities, videos, and music)
- STEM Activity -The Magic School Bus gets Cleaned Up (3-5)

6-8

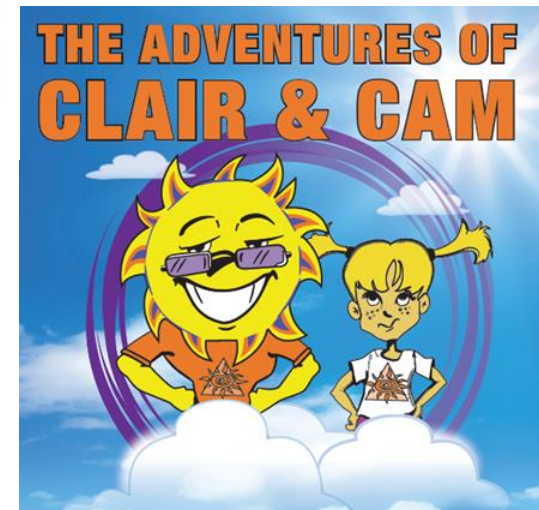
- Open Burning Lessons
- AQ-IQ Contest



9-12

- It's Our Air

www.itsourair.org



It's Our Air (IOA)

- Bring the science of air pollution to life in your North Carolina high school classroom! FREE North Carolina-specific activities and videos. 2017 Workshops!

- IOA has three Modules.

- 1) Air Pollutants and Their Sources
- 2) Predicting Air Pollution and
- 3) Air Pollution Problems and Solutions



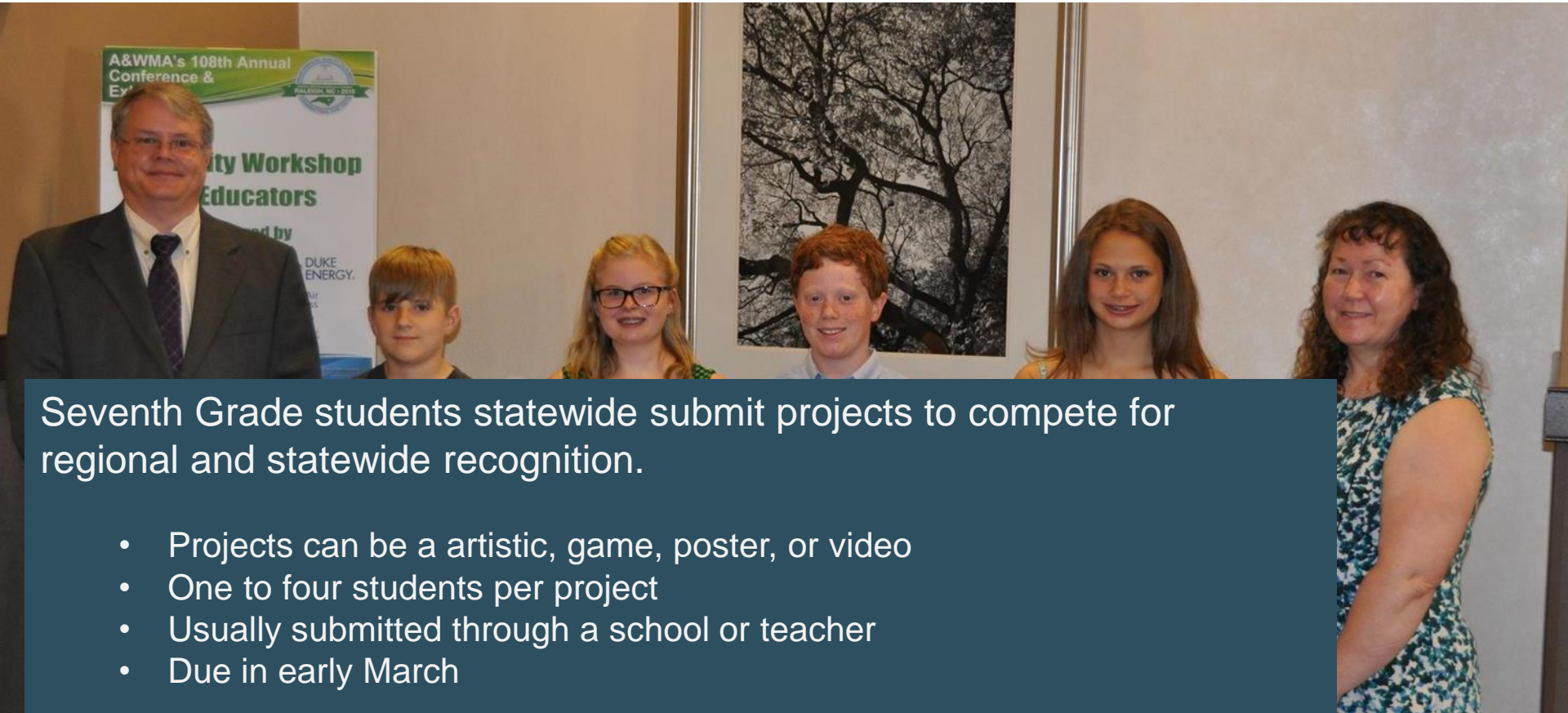
- Available free online at www.itsourair.org



Air Quality Workshops for Teachers and Educators (FREE)



AQ-IQ Contest for Seventh Grade



Seventh Grade students statewide submit projects to compete for regional and statewide recognition.

- Projects can be a artistic, game, poster, or video
- One to four students per project
- Usually submitted through a school or teacher
- Due in early March

Department of Environmental Quality



How can NC Air Awareness help K-12 schools?

Special Projects:

Idle Reduction signs and materials

- Idle Reduction Bookmarks for students
- Idle Reduction materials for businesses
- Assistance with Idle Reduction programs



**Turn Off
Your Engine**



Kids Breathe Here

N.C. Division of Air Quality
www.ncair.org



How do you protect your health? Know the Air Quality Forecast!

The Air Quality Forecast (color code) is a tool that communicates the Air Quality Index (AQI) to the general public. Learn more about AQI at <https://airnow.gov/index.cfm?action=aqibasics.aqi>

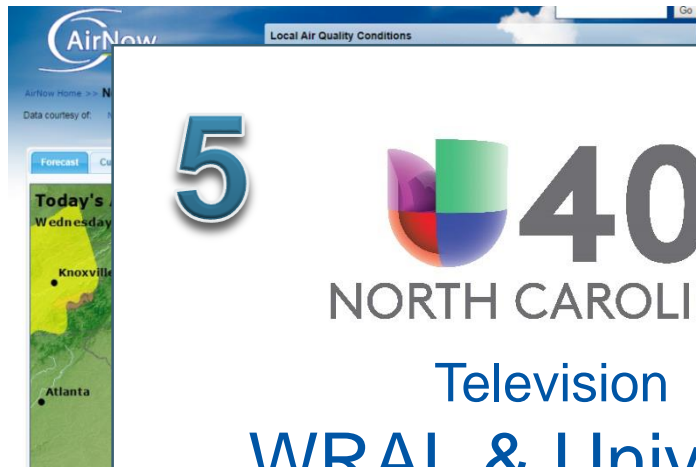
Air Quality Index (AQI) Values	Levels of Health Concern	Colors
<i>When the AQI is in this range:</i>	<i>..air quality conditions are:</i>	<i>...as symbolized by this color:</i>
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon



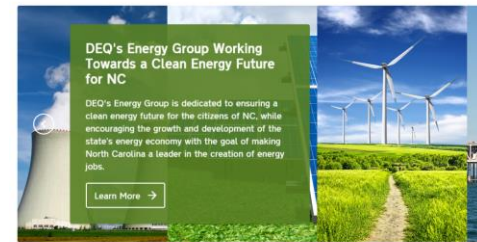
How do you protect your health? Know the Air Quality Forecast!

1

EPA: www.airnow.gov



2



deq.nc.gov

1-888-RU4NCAIR

5



Television

WRAL & Univision

3

EnviroFlash
: Air quality
forecast to
your inbox



4

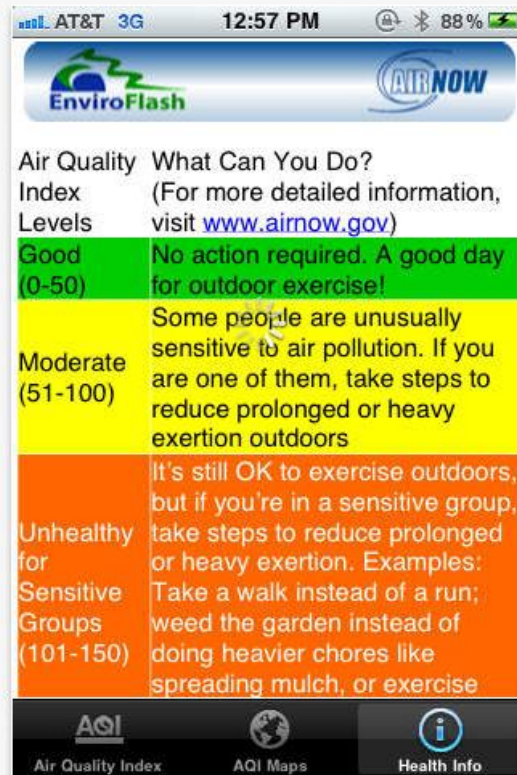
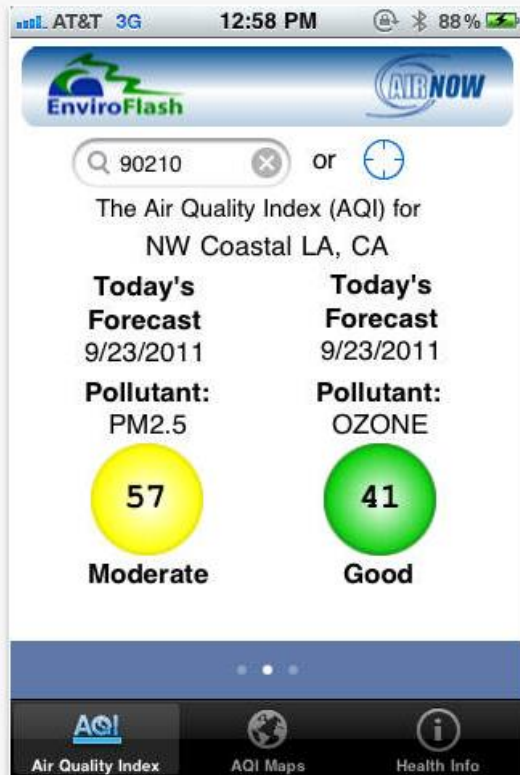
Get an
app!
mobile
solutions



Mobile Apps

You can learn about the air quality forecast via a mobile app. For example <https://itunes.apple.com/us/app/epa-airnow/id467653238?mt=8>

iPhone Screenshot



Thank You



Air Quality
ENVIRONMENTAL QUALITY

NC Air Awareness

Air.Awareness@ncdenr.gov

1-888-RU4NCAIR

(local) 919-707-8400, ask for
NC Air Awareness

Department of Environmental Quality