

Connecting with the Community: Air Quality Workshops

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Introductions

Hello! I am Nohemi Beltran

- Geological Science Major at The University of Texas at El Paso (UTEP)
- A NOAA EPP/MSI 2019-2021 Scholar
- A member of the Atmospheric Physic Lab at UTEP under the direction of Dr. Rosa Fitzgerald



The Atmospheric Physics Lab



- Who are we?
- What kinds of research do we do?
- How important is our research?

Our research provides a scientific basis for evaluating the potential impact of air pollution on the health of the community.

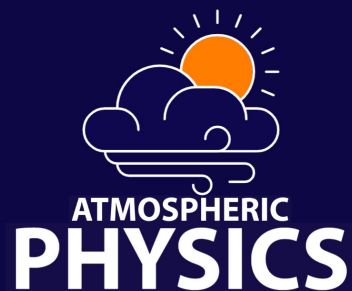
How are we connecting with the community while utilizing the research being done in the lab?



Air Quality Workshop

Establishing a Relationship with the Community





the
FRONTERA
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T E X A S



Texas Master Naturalist Program



Air Quality Workshop

Learning Objectives:

- Introduce air pollution and identify health symptoms associated with specific air pollutions (ozone and particular matter PM)
- Understand which segments of the population are most at risk from air pollution
- Describe the levels of air quality through a classification system, Air Quality Index (AQI)
- Identify preventive measures people can take to protect their health and actions during unhealthy air quality days

The Air Quality Index (AQI)

AQI Category	Color	Numerical Value	Health Concerns
Good	Green	0-50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	Yellow	51-100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	Orange	101-150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	Red	151-200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	Purple	201-300	Health alert: everyone may experience more serious health effects.
Hazardous	Maroon	>300	Health warnings of emergency conditions. The entire population is more likely to be affected.

Air Quality Index (AQI)

- Introduce the AQI to the public
- Teach the meaning and importance

Resources

Providing guided resources that the public can use



NOAA



EPA



TCEQ

Apps, widgets, and websites

National Oceanic and Atmospheric Administration's
National Weather Service

Site Map News Organization

Local forecast by "City, St" [City, St] [Go]

Sign-up for Email Alerts
XML RSS Feeds
Warnings
Current
By State/County...
UV Alerts
Observations
Radar
Satellite
Snow Cover
Surface Weather...
Observed Precip
Forecasts
Local
Graphical
Aviation
Marine
Hurricanes
Severe Weather
Fire Weather
Text Bulletins
By State
By Message Type
National
Forecast Models
Numerical Models
Statistical Models...
MOS Prod
GFS-LAMP Prod
Climate
Past Weather
Predictions
Weather Safety
Weather Radio
Hazard Assmt...
StormReady /
TsunamiReady
Skywarn™
Education/Outreach
Information Center
Tsunamis
Publications

Home > Air Quality Forecast Guidance

This map shows NOAA's National Weather Service Air Quality Forecast Guidance. Public comments and suggestions are encouraged. A FAQ page is available.

Warnings & Forecasts Graphical Forecasts National Maps Radar Water Air Quality Satellite Climate

Go to State Click on Map To View Additional Guidance

20 40 60 80 100 120 140 160

1 Hr Avg Ozone Concentration (PPB) Ending Mon Feb 22 2021 8PM EST
(Tue Feb 23 2021 01Z)

National Digital Guidance Database
12z model run Graphic created-Feb 22 11:27AM EST

Mouse over or click on the times below to change the above graphic.
1 Hour Average Ozone Concentration:
| 8pm | 9pm | 10pm | 11pm | 12am | 1am | 2am | 3am | 4am | 5am | 6am | 7am |

Additional Air Quality Forecast Guidance
1-Hr Average Ozone 1-Hr Average Ozone 1-Hr Average Ozone



Warnings & Forecasts Graphical Forecasts National Maps Radar Water Air Quality Satellite Climate

Air Quality Forecast Guidance - West Texas

Print AQI Values Help Zoom Out

Daily View Loops Point Data

Page Help

Mouse over or click on the table below to change the guidance image.

Tonight	+12hrs												
Valid Hour (EST):	7	8	9	10	11	12	1	2	3	4	5	6	
1Hr Average Ozone Concentration													
Daily 1Hr Ozone Max													
8Hr Average Ozone Concentration													
Daily 8Hr Ozone Max													
1Hr Average Surface Smoke													
1Hr Average Vertical Smoke Integration													
Surface Dust Concentration													
Column Dust Concentration													

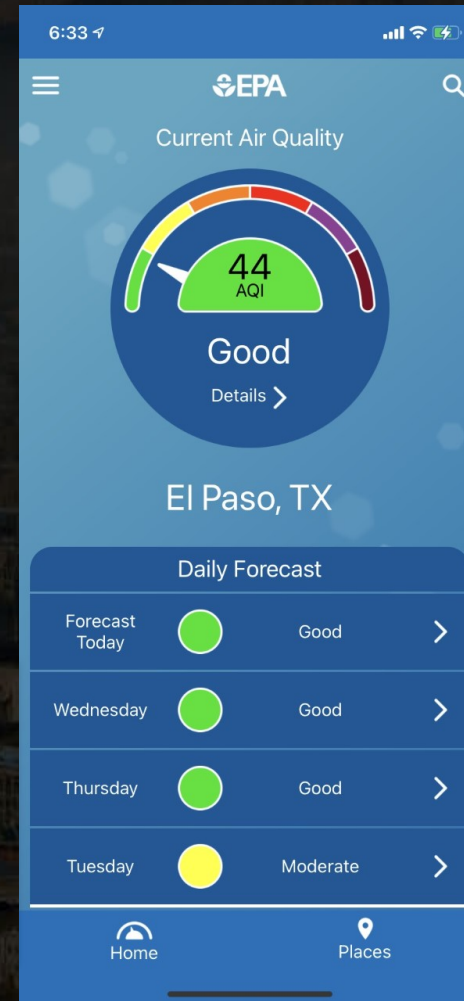
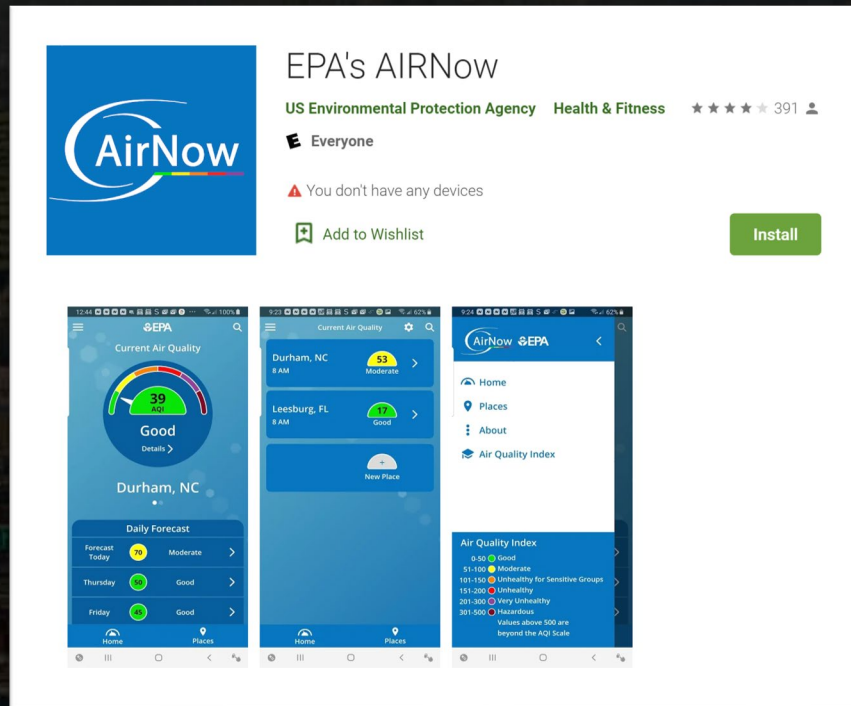
Table MouseOver Effect On v

Overview

1 Hr Avg Ozone Concentration (PPB) Ending Tue Feb 23 2021 2AM EST

Apps, widgets, and websites

EPA's Air Now Mobil App



Apps, widgets, and websites

AirNow | AirNow | AQI & Health | Fires | Maps & Data | Education | International | Resources

Get Current and Forecast Air Quality for Your Area | ZIP Code, City, or State

Create Your Widget

Your City or School

Today's Air Quality Forecast
07/06/20

OZONE ● Good
PM2.5 ● Good

Current Air Quality | Tomorrow's Forecast
Air Quality Index | Activity Guidance

Your City or School

Tomorrow's Air Quality Forecast
07/07/20

OZONE ● Moderate
PM2.5 ● Good
PM10 ● Good

Current Air Quality | Today's Forecast
Air Quality Index | Activity Guidance

Your City or School

Current Air Quality
07/06/20
8:00 AM CDT

PM2.5 ● 45 Good
OZONE ● 30 Good

Current Air Quality | Today's Forecast
Air Quality Index | Activity Guidance

Enter the name of your city or organization as you want it to appear at the top of your widget:

Enter your zipcode:

Copy and paste this code into your web page, or use the copy button to copy the code to the clipboard.

<https://www.airnow.gov/air-quality-flag-program/create-your-widget/>

Apps, widgets, and websites

The screenshot displays the Texas Commission on Environmental Quality (TCEQ) website. At the top left is the TCEQ logo. To its right are navigation links: About Us, Contact Us, Calendar, Jobs, En Español, Org Chart, and A to Z Index. A search bar labeled 'Search Site' is positioned to the right of these links. Below the navigation is a horizontal menu with icons and text for Air, Land, Water, Licenses, Permits, and Reporting, followed by a 'Sign Up for Updates' button. A large banner image shows a landscape with a waterfall. Below the banner, the main content area features a 'News' section. The first news item is titled 'Severe Cold Weather Response' and includes a list of links such as 'Temporary Fuel Waiver', 'Boil Water Notices', and 'Public Water System Guidance'. To the right of the news items is a photograph of a man in a blue cap and sunglasses speaking into a microphone, with a woman in a black mask standing behind him. Below the screenshot, the text reads: 'Severe Cold Weather Response' and 'TCEQ has posted information you may need if you are affected by the severe weather this month.' A link for 'More TCEQ News' is provided at the bottom left of the screenshot area.

Texas
Commission on
Environmental
Quality:
<https://www.tceq.texas.gov/>



Air Quality Flag Program

Establishing Community Awareness





AIR QUALITY FLAG PROGRAM

How will air pollution affect my health and activity today?

- 

GOOD
It's a great day to be active outside.
- 

MODERATE
It's a good day to be active outside. Take it easier if you are unusually sensitive to air pollution.
- 

UNHEALTHY FOR SENSITIVE GROUPS
Older adults, children and teens, people with certain health conditions, and people who are active outdoors should take it easier.
- 

UNHEALTHY
Everyone should take it easier.
- 

VERY UNHEALTHY
Sensitive groups, avoid outdoor exertion. Everyone else, avoid long or intense outdoor exertion.

Go for 150!
The CDC recommends 150 minutes of moderate-intensity activity or 75 minutes of vigorous-intensity activity every week for adults.

Watch for symptoms.
Coughing or shortness of breath are signs to take it easier. Air pollution can also make asthma symptoms worse and trigger attacks.

Take it easier.
Take breaks. Be active for a shorter amount of time. Do less intense activities, like walking instead of running.

Plan ahead for ozone.
There is less ozone in the morning, so plan your intense outdoor activities early on high ozone days.

How YOU can improve your local air quality:



Take public transportation, carpool, walk or bike.



Avoid idling and schedule errands together.



Install a programmable thermostat.



Tune your vehicle's engine and keep your tires properly inflated.

Air Quality Flag Program

The Air Quality Flag Program's goal is to help people to take action to protect their health, while keeping active, when air quality is unhealthy.



Outreach

In celebration of Earth Day, Dr. Fitzgerald was selected for a TV interview on spanish news channel Telemundo



References

- *Air Quality - Particle Pollution | CDC. (n.d.). Retrieved February 17, 2021, from https://www.cdc.gov/air/particulate_matter.html*
- *Epa Oar Oaqps, U. (2013). AirNow- AQI Toolkit for Teachers.*
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- *Season's First Ozone Alert Issued For Denver, Air Unhealthy For Sensitive Groups – CBS Denver. (n.d.). Retrieved February 22, 2021, from <https://denver.cbslocal.com/2020/05/29/ozone-alert-for-denver/>*
- *Unhealthy air prompts ozone alert in parts of Colorado | OutThere Colorado. (n.d.). Retrieved February 22, 2021, from https://www.outtherecolorado.com/news/unhealthy-air-prompts-ozone-alert-in-parts-of-colorado/article_73b935b3-8d21-5b7d-b759-bf70b74f337d.html*

Acknowledgements

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