

Breathing Room

Improving Air Quality Beyond the Ozone Health Standard

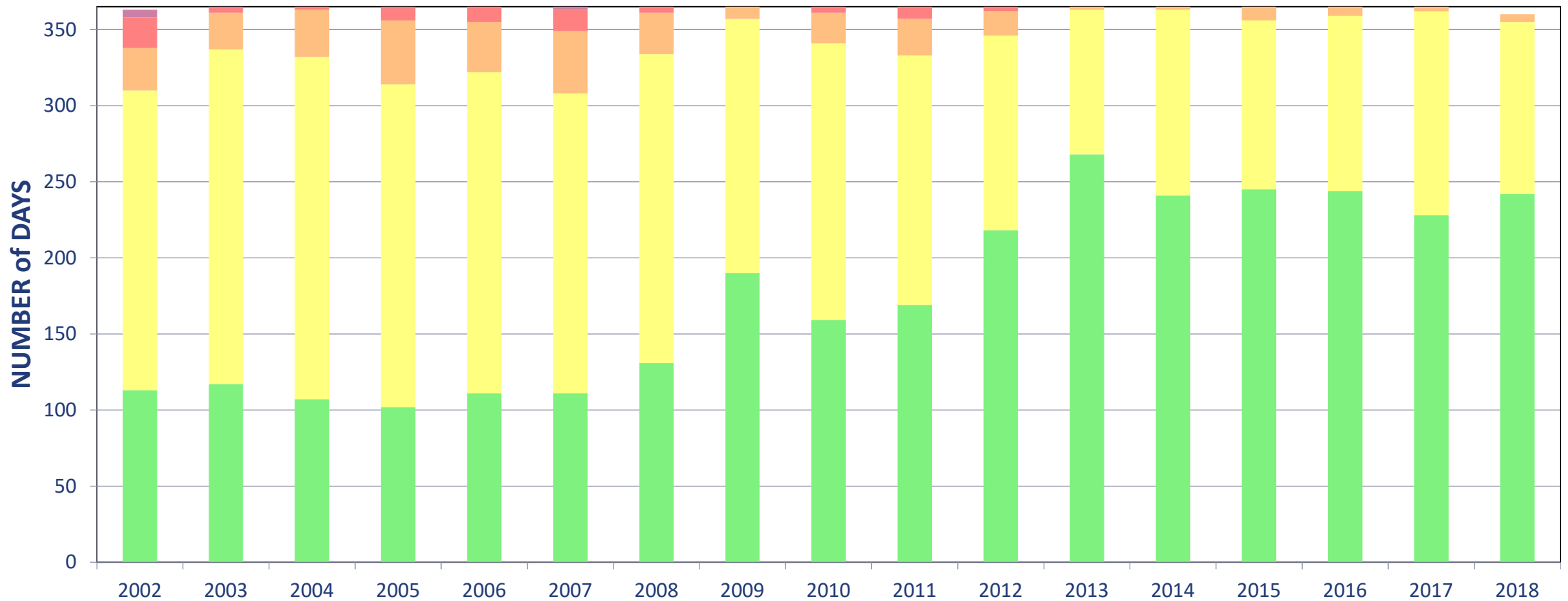
Megan Green - Air Quality Division

Mecklenburg County Land Use and Environmental Services Agency

Good Days Have Doubled Since 2002

Number of Days by Air Quality Index Color

Mecklenburg County, NC



MECKLENBURG COUNTY

Good

Moderate

Unhealthy for Sensitive Groups

Unhealthy

Very Unhealthy

AIR QUALITY

Air Quality in Mecklenburg County Meets All Federal, Health-based Standards

Mecklenburg County
Ozone Compliance Value

70 ppb



Federal
Ozone Standard

70 ppb

MECKLENBURG COUNTY

AIR QUALITY

ADVANCE

A U.S. Environmental Protection Agency Program

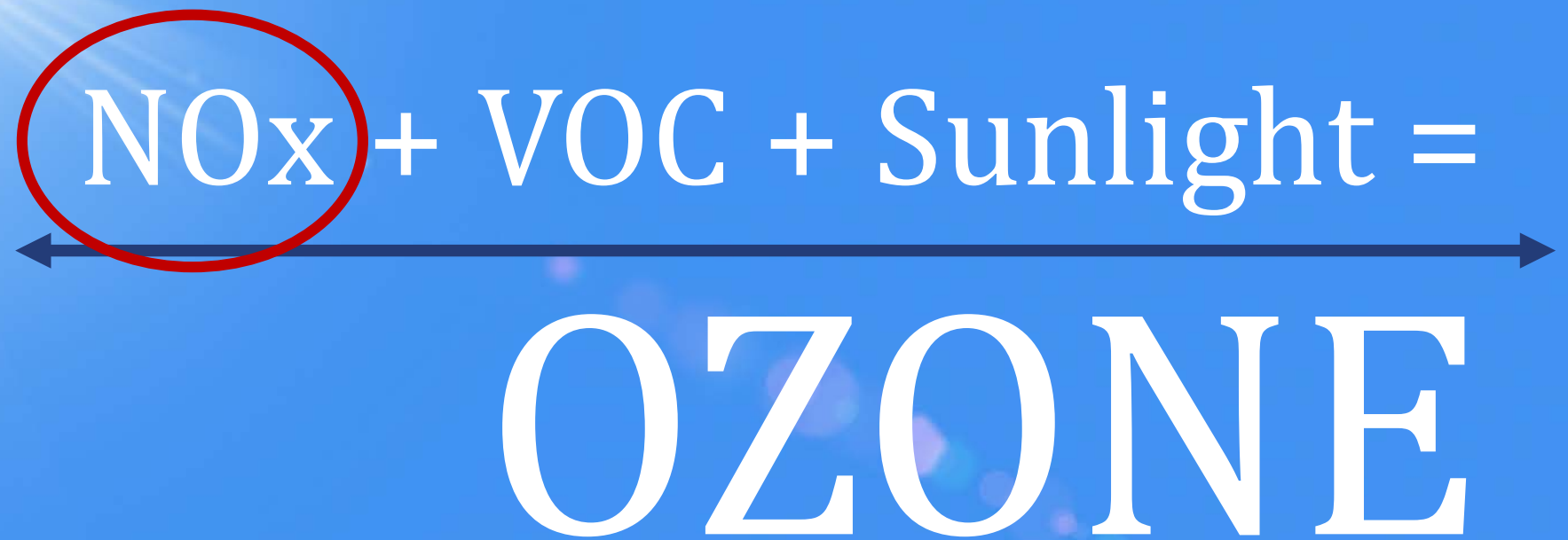
MECKLENBURG COUNTY

AIR QUALITY



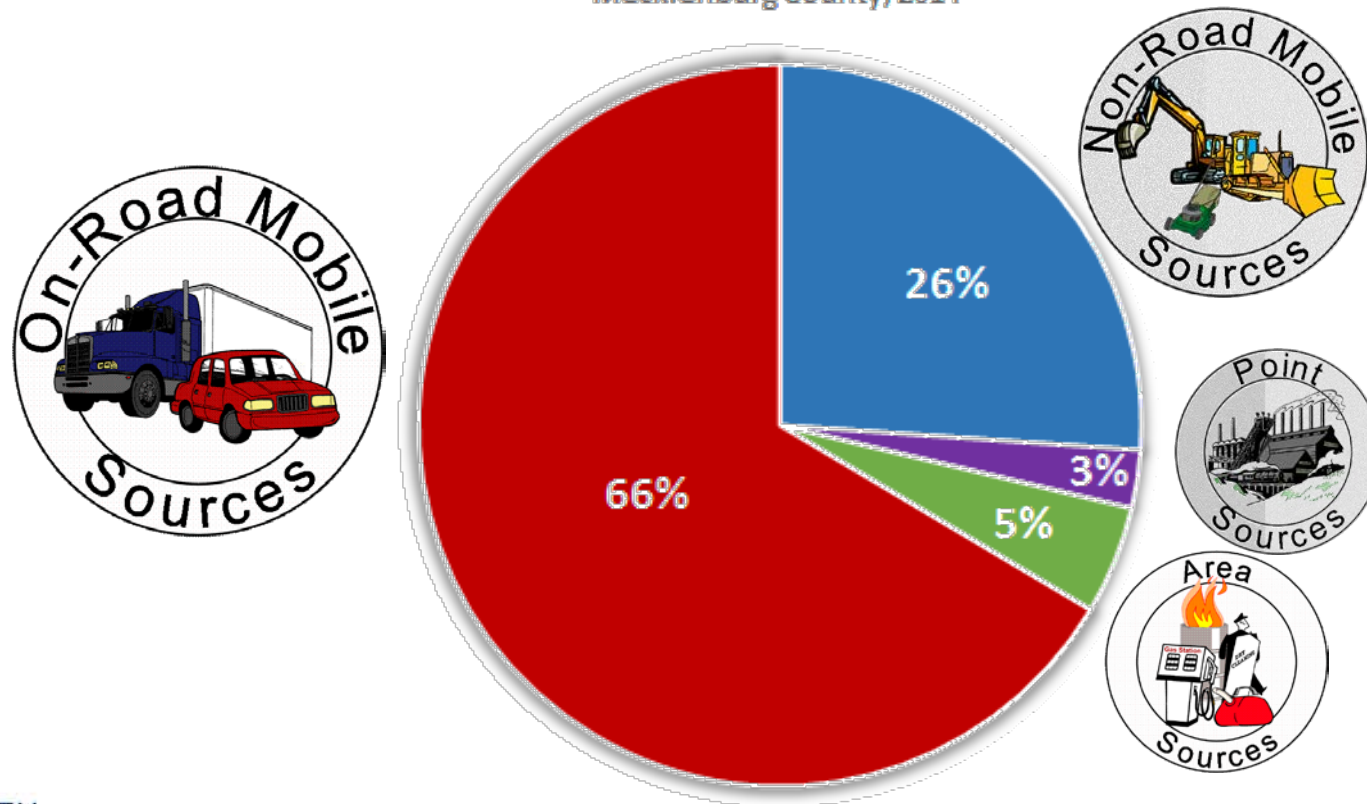
MECKLENBURG COUNTY

AIR QUALITY



Mobile Sources Are The #1 Source of NOx Locally

Sources of Ozone-forming
Nitrogen Oxides (NOx)
Mecklenburg County, 2014

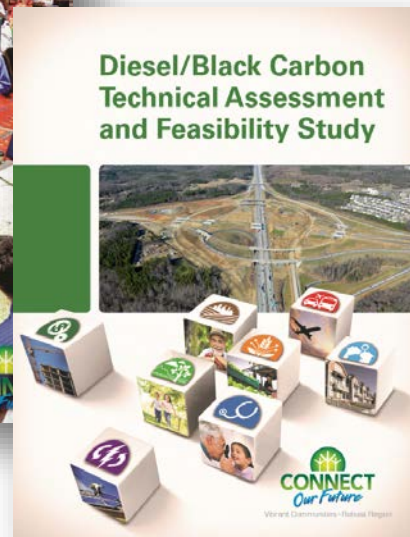


January-April 2018

Review Past Feedback

Public Input

Create Path Forward





LIVABLE MECK

YOUR VOICE. YOUR VISION.

Guiding Principles	 WELCOMING	 INNOVATIVE	 CONNECTED	 INCLUSIVE	 PREPARED	 HEALTHY	 RESILIENT
Descriptors	Character, Entertainment, Opportunity, Safe Neighborhoods	Jobs, Entrepreneurship, Commerce	Engaged Residents, Transportation Choices	Community Participation	A Skilled Workforce, Quality Education	Physical Activity, Healthy Foods, Clean Environment	Future Well-being, Collaboration
Strategies	<ul style="list-style-type: none"> • Build safe neighborhoods • Increase access to community-based arts, science, and history education • Continue to be an inviting destination for residents, visitors and businesses • Celebrate and integrate history, culture and diversity 	<ul style="list-style-type: none"> • Make it easier for new businesses to succeed and increase use of existing businesses to flourish • Increase global economic competitiveness • Promote the redevelopment, reuse, and rehabilitation of declining and vacant properties • Leverage technology 	<ul style="list-style-type: none"> • Expand capacity and increase use of sidewalks, bikeways, greenways/paved trails, bus routes, and rail • Build stronger connections across diverse population groups 	<ul style="list-style-type: none"> • Balance available housing options • Coordinate the work of organizations addressing the needs of at-risk residents • Expand the availability of affordable recreation and cultural services programs 	<ul style="list-style-type: none"> • Expand and enhance learning across all age groups • Enhance partnerships between workforce development initiatives and employers 	<ul style="list-style-type: none"> • Create a culture of health and wellness • Protect and restore the natural environment while allowing for growth and innovation • Coordinate open space, greenways/paved trails, and parks planning with neighborhood accessibility 	<ul style="list-style-type: none"> • Manage zoning and development to revitalize community character and the natural environment while allowing for growth and innovation • Manage resources wisely • Develop community and neighborhood leaders for the future



Review of Air Quality in Mecklenburg County

Prepared and submitted by:
The Mecklenburg County Air Quality Commission, an Advisory Board to the Mecklenburg Board of County Commissioners.

	Date: 7/28/14
Keith Long, Chair	
	Date: 7/28/14
Peter McGrath, Vice Chair	
	Date: 7/28/14
Laura Billewicz	
	Date: 7/28/14
June Blotnick	
	Date: 7/28/14
Karen Khelodine	
	Date: 7/28/14
Terry Johnson	
	Date: 7/28/14
Gordon Miller	
	Date: 7/28/14
Fern Patterson	
	Date: 7/28/14
James (Jamie) Watts	

MECKLENBURG COUNTY

AIR QUALITY

15 Ways to Create Breathing Room

Airport Shuttle Electrification

Cash for Clunkers

Community Solar

Complete Streets Policies

Eco-driving Training

Energy Audits

Gas Cap and Tire Pressure Checks

Greenway Expansion Advocacy

Ground-support Equipment
Electrification

Property Assessed Clean Energy

School Bus Electrification

Taxi Electrification

Transit Expansion Advocacy

Zoning Advocacy:

Eliminate Parking Minimum
EV Charging Infrastructure

May 2018 – April 2019

Review Past Feedback

Public Input

Create Path Forward

The cards contain the following information:

- BREATHING ROOM**
The Idea: Airport Shuttle Electrification
 - Replace diesel and gas shuttle buses with electric shuttles at regional airports like Charlotte-Douglas International Airport.
 - Electric shuttles will have zero tailpipe emissions.

The Action:

 - Identify and secure to defray the cost of new electric shuttles and charging infrastructure.
 - Work with local airports to create a shuttle replacement schedule that prioritizes the highest emissions shuttle(s) for replacement first.

The Pollution Source: On-road Vehicles

The NOx Benefit: 0.46 lbs/day or 167 lbs/year per bus.

The Cost-effectiveness: \$418.06/lb NOx¹

The Other Benefits:

 - VOC – Low
 - PM – Low
 - GHG – Medium
 - Overall emissions will decrease as power grid emissions fall due to renewables or improved technology.

¹ Assuming \$700,000 per bus.
- BREATHING ROOM**
For Clunkers
 - Replacing smoking vehicles or replacing their older car¹ with a new car.
 - Old cars are replaced.
 - Low-income residents.

Clunkers program.

Program to help low-income residents repair their smoking vehicles.

Benefits:

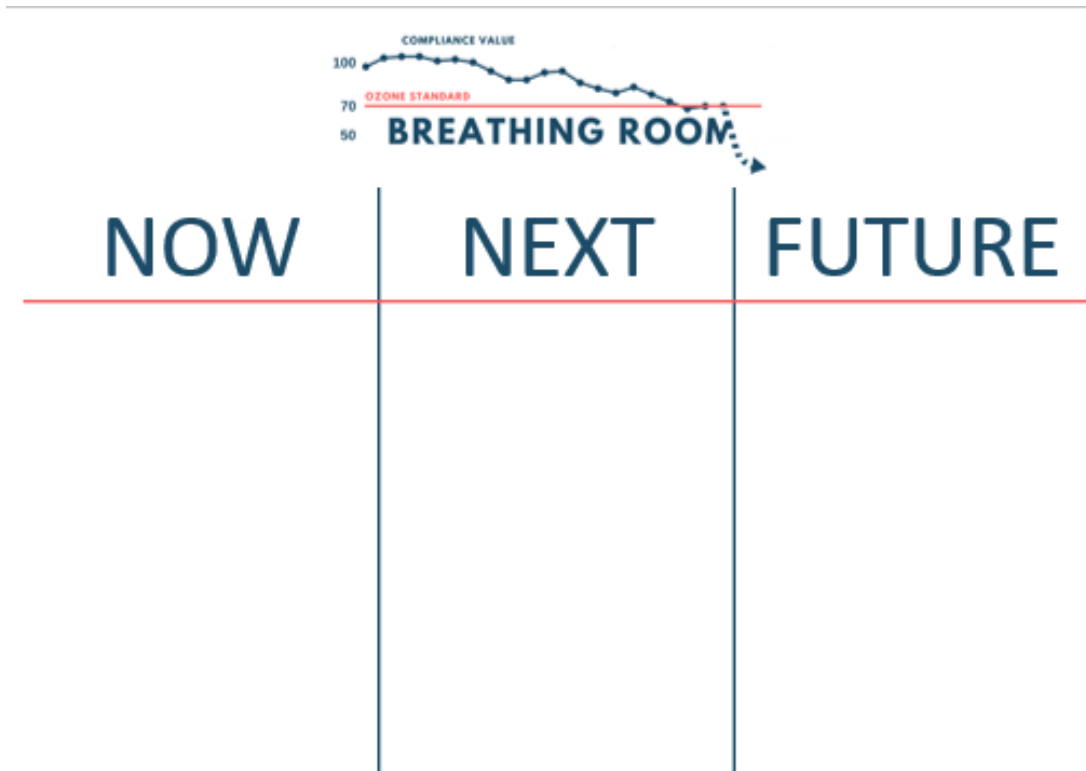
 - Up to 123 lbs/yr per 100 vehicles repaired
 - Up to 1,485 lbs/yr per 100 smoking vehicles repaired
 - Up to 16 lbs of NOx for replacing 100 vehicles
 - Up to 16 lbs of NOx for replacing 100 smoking vehicles
- BREATHING ROOM**
and Tire Pressure Checks
 - Teach to engage drivers and teach them about air quality.
 - Recommend inflating tires to vehicle recommended fuel economy.
 - Light also reduces emissions and increases fuel economy.

Check gas caps and tire pressure.

Teach to engage drivers and teach them about air pollution.

Benefits:

 - Primarily about education and outreach tool.
 - Low cost, minimal capital costs.
 - Gas cap replaced.



MECKLENBURG COUNTY

AIR QUALITY

May 2018 – April 2019

Review Past Feedback

Public Input

Create Path Forward



MECKLENBURG COUNTY

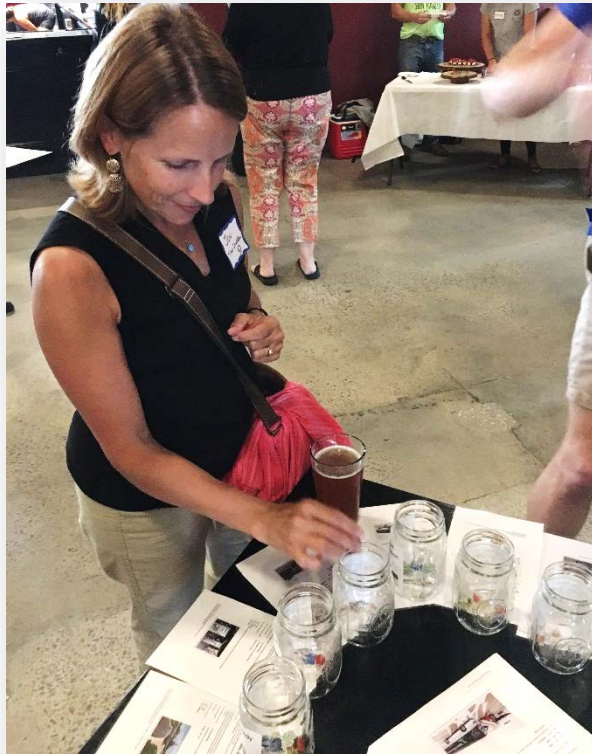
AIR QUALITY

May 2018 – April 2019

Review Past Feedback

Public Input

Create Path Forward



MECKLENBURG COUNTY

AIR QUALITY

May 2018 – April 2019

Review Past Feedback

Public Input

Create Path Forward



MECKLENBURG COUNTY

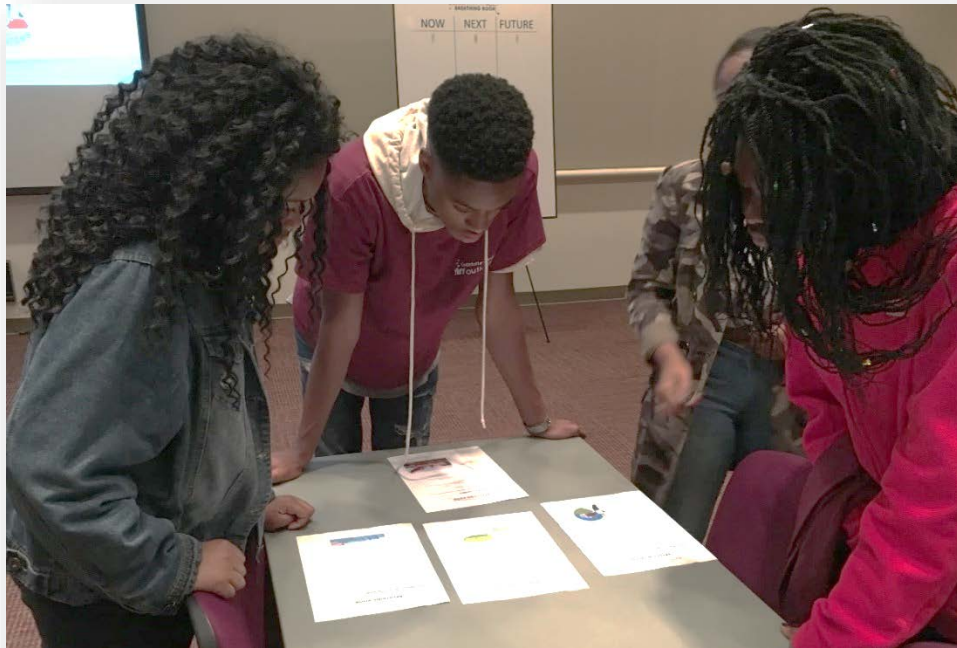
AIR QUALITY

May 2018 – April 2019

Review Past Feedback

Public Input

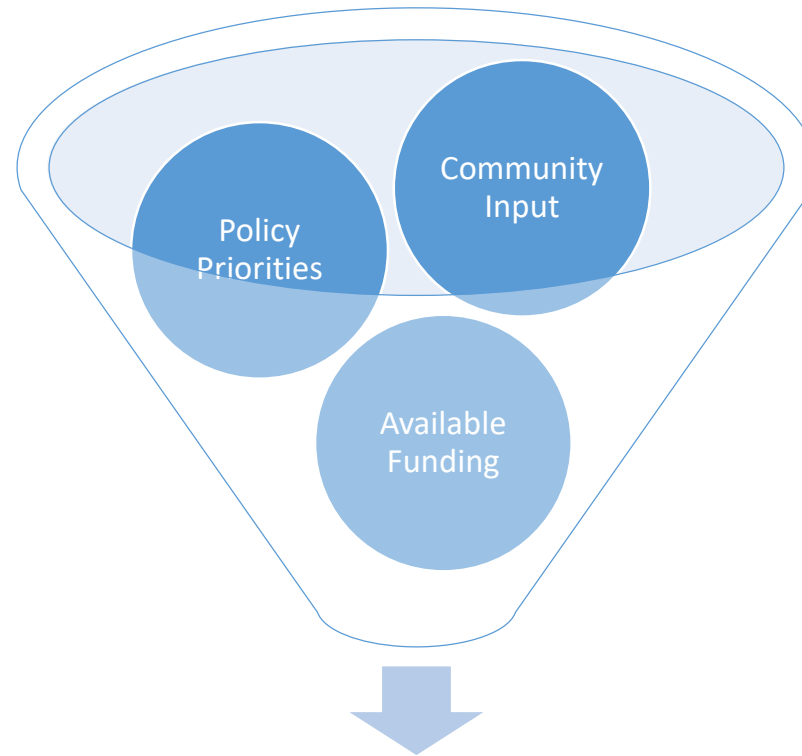
Create Path Forward



MECKLENBURG COUNTY

AIR QUALITY

April – June 2019



Path Forward




MECKLENBURG COUNTY

AIR QUALITY

Existing Programs That Will Continue

- Industrial source permitting and compliance assistance
- GRADE (Grants to Replace Aging Diesel Engines)
- Air Awareness education and outreach services
- Smoking vehicle program
- Idle reduction resources

The Path Forward

NOW (FY20-FY21)	NEXT (FY22)	Future (FY23+)
Transit Expansion Advocacy (1)	Complete Streets (2)	Energy Audit Program (8)
School Bus Electrification (3) 	Community Solar (4)	Zoning: EV Charging Infrastructure (13)
Greenway Expansion Advocacy (5)	PACE (7)	
Airport Shuttle Electrification (6) 		
Ground-support Equipment Electrification (10) 		



= Funding Opportunity Announced

On Hold (may be added as time and resources allow): Cash for Clunkers; Eco-driving Training; Zoning: Eliminate Parking Minimum; Gas Cap and Tire Pressure Check Outreach; Taxi Electrification.

Air Quality Commission Recommendation

On July 22, 2019, the Air Quality Commission voted unanimously to:

“Recommend that the Mecklenburg County Board of Commissioners approve the Breathing Room Path Forward.”

Requested Action

Recommend that the full Mecklenburg County Board of Commissioners approve the Breathing Room Path Forward on the September 17 consent agenda.

Next Steps

1. Develop implementation plans for “Now” strategies – Ongoing
2. BOCC Consent Agenda – September 17, 2019
3. Submit annual progress report to EPA – September 26, 2019

Questions? Comments? Feedback?

Megan.Green@MecklenburgCountyNC.gov

AirQuality.MeckNC.gov/BreathingRoom

704-336-5430

MECKLENBURG COUNTY

AIR QUALITY