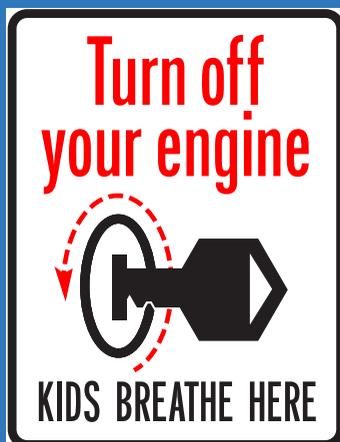


Charlotte's Clean Air Corridor Celebrates Earth Day

Neighborhood leaders in Charlotte's Northwest Corridor will celebrate Earth Day this year by sponsoring activities designed to raise awareness about air pollution and health. Residents in the Corridor are disproportionately impacted by air pollution due to the number of major highways surrounding the area.

On Saturday, April 21, volunteers will gather to form air quality monitoring teams which will spread out in four areas of the Corridor and track levels of invisible particle pollution using AirBeam portable sensors. Seniors and students will work together identifying sources of air pollution as they walk down busy streets and through their neighborhoods.

After these "mobile monitoring" sessions, the teams will reconvene for a "mapping" session where members can track online where they walked, sources of air pollution along their route, and the level of particle pollution they were exposed to. Information will be provided on ways to protect their health and steps they can take to reduce air pollution and truly make their part of the city a Clean Air Corridor such as limiting vehicle idling.



For the third year in a row, Clean Air Carolina is proud to bring *PARTICLE FALLS* to North Carolina. This installation by environmental artist, Andrea Polli, bridges art and science and raises awareness of the air we are breathing.

The *PARTICLE FALLS* animation is generated by translating real-time particulate matter data from the surrounding air using specialized computer software designed by the artist Andrea Polli. The particulate sensing is done using a scientific instrument that takes in air samples and gathers data about the concentration of particle pollution. A computer program transforms the particulate data into visual bursts of bright color over a background of falling blue light. The more dots of color, the more particles there are in the air.

Since our first showing in uptown Charlotte in 2016, we have made air visible to thousands of North Carolinians. In 2017, we displayed *PARTICLE FALLS* in downtown Raleigh, showing citizens and policymakers how the air we breathe is affected by our actions. This year, we bring *PARTICLE FALLS* to the heart of

Winston-Salem with the support of great partners in the Triad region and the state.

Winston-Salem was ranked as the 142nd most polluted city in 2016 and traditionally ranks above the national average of U.S. cities for average annual particle pollution. We have improved in the past few years due to a strong regulatory environment. However, fine particle pollution – at any level – is linked to a long list of serious health problems including asthma, heart and lung disease, cancer, adverse birth outcomes and even premature death. Exposure in Downtown Winston-Salem can be especially dangerous as the continued growth and rows of tall buildings create an urban canyon trapping air pollution right where we breathe.

PARTICLE FALLS will be projected onto the western wall of the UNC School of the Arts Stevens Center and can be seen from many locations in downtown Winston-Salem. For best viewing, visit the corner of West 4th Street and Spruce Street every evening from February 22 to March 24. The event is free and open to the public.

CAC Welcomes New Board Members



DeAndrea Salvador
Executive Director
Renewable Energy
Transition Initiative
(RETI)



Donald Addu
Southeast Director
Citizen's Climate Lobby



Donnetta Collier
Project Manager
Self Help Credit Union

Clean Air Carolina Staff

June Blotnick, MEd
Executive Director

Terry Lansdell
Public Policy Manager

Gerald Babao
Director of Operations

Kelly Picarsic
Membership Manager

Daniela Villarreal
*Communications
Manager*

Rachel McIntosh-
Kastrinsky, MSPH
*Medical Advocates for
Healthy Air Manager*

Calvin Cupini
Citizen Science Manager

Mary Stauble, MEd
*Clear the Air for Kids
Manager*

Clean Air Carolina
PO Box 5311
Charlotte, NC 28299
(704) 307-9528
www.CleanAirCarolina.org

Sunny Forecast for Clean Energy

Clean, renewable solar energy is powering more and more homes and businesses in North Carolina. One of the companies helping to make that happen is Renewable Energy Design Group. In 2015, Solarize Charlotte used the North Carolina-based company as their preferred installer.

Clean Air Carolina is happy to announce our new partnership with Jeff Redwine and his team at Renewable Energy Design which will provide members of our organization a special discount on their solar installation. Now is the time to go solar as prices continue to drop.

There is a 30% federal tax credit and the possibility of a solar rebate from Duke Energy, however, we expect that money to go quickly. Be part of the solution to fight climate change and clean the air!

For more information on this special program and how to become a member, visit our website at www.cleanaircarolina.org/SolarCAC.



**RENEWABLE
ENERGY
DESIGN GROUP**



TEXT TO GIVE CLEAN AIR

TEXT ANY DOLLAR AMOUNT TO 704-508-9588

Environmental Film and Art Series

Clean Air Carolina is hosting a three-month Environmental Film & Art series to raise awareness about the health impacts of dirty air and a changing climate. A showing of the documentary "Burned", about how the biomass industry is destroying our Southern forests, was held at the Unitarian Church of Charlotte in January; a second showing is planned this Spring. "The Age of Consequences", a film about the military's security concerns caused by climate change, will be screened in Fayetteville on March 21 with remarks from special guests Rep. John Szoka and Dave Heins, Fort Bragg Director of Public Works.

The Film & Art series will culminate in downtown Winston-Salem for

a 4-week display of the outdoor animated art installation, "Particle Falls" beginning February 22.

To learn more about Clean Air Carolina's Environmental Film & Art Series and how to RSVP, please visit our website at: www.cleanaircarolina.org/events.

The Age of Consequences
March 21, 2018; 6:30 – 8:30 pm
Revolutionary Coworking
100 Hay Street, 5th floor
Fayetteville, NC

Particle Falls
February 22 - March 24; Dusk to Dawn
Stevens Center
405 4th Street NW
Winston-Salem, NC

Idle-Free Schools Campaign Clears the Air for Kids

Clean Air Carolina's Clear the Air for Kids Program is providing signage and other resources to public schools in Mecklenburg, Gaston, Union, Cabarrus, Lincoln and Rowan Counties to discourage unnecessary idling from cars and buses on school grounds. Signs will be placed near school bus lots and along the drop-off/pick-up line. Over 800 signs are being provided to 391 schools.

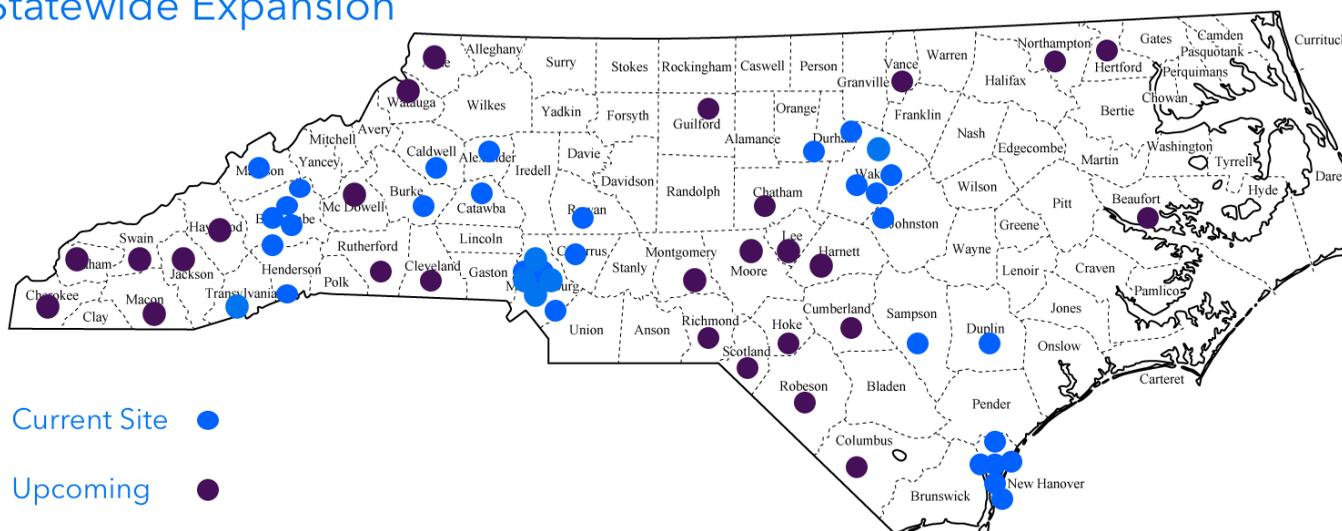
Unnecessary idling is a chronic community problem that impacts public health. Most people don't realize their vehicles are a source of air pollution. When buses and cars are all idling at the same time on school campuses they create a plume of pollution that is hard to escape. Children have a faster breathing rate than adults, so their lungs are exposed to much more pollution. Breathing dirty air can cause decreased lung capacity and contribute to asthma. Research has shown that reducing air pollution leads to improved lung function in children ages 11-15, a critical period in lung development.

To learn more about Clear the Air for Kids, contact Mary Stauble at mary@cleanaircarolina.org.

AirKeepers Network Expands Across the State

Clean Air Carolina's AirKeepers Program continues to grow. Check out where we are and where we're going! Learn more at www.cleanaircarolina.org/airkeepers.

Statewide Expansion



Report Highlights Alternatives to Costly 540 Toll Road

As transportation emissions now top the list of greenhouse gas emissions in the United States, Clean Air Carolina and its partners continue to fight costly highways that do little to reduce congestion. Southern Environmental Law Center's recently released report by expert transportation engineer Walter Kulash, ACCESS2040, details a comprehensive suite of transportation upgrades that would provide a less expensive, less damaging alternative to the proposed \$2.2 billion extension of the 540 toll road in southern Wake County.

"Unlike the outdated toll road proposal, ACCESS2040 acknowledges our changing transportation and community preferences," said June Blotnick, Executive Director of Clean Air Carolina. "In the very near future, we will be looking to autonomous vehicles and ride-sharing to help meet our transportation needs. And we are already seeing a shift to downtown urban living and an emphasis

on strong public transit systems. Giant highway loops represent an outdated model contributing to increased air pollution and should be consigned to the past."

The alternative solution relies on upgrading existing roads and innovative transportation improvements to reduce congestion throughout the Complete 540 project area. It would cost almost \$2 billion less than NC Department of Transportation's proposed toll road extension of 540 at just \$293.7 million. And unlike the 540 extension, the alternative would be open to all- not just those who can afford to pay an expensive toll for each use, which is why supporters are calling it ACCESS2040. 2040 is the year used by transportation planners in developing the region's transportation plan for the coming decades.

For additional information, contact Terry Lansdell at terry@cleanaircarolina.org.

Recent AQ Research

- ◇ Bowe, Benjamin. et al. 2017. **Particulate Matter Air Pollution and the Risk of Incident CKD and Progression to ESRD.** *Journal of American Society of Nephrology.* Bowe et al. found a significant association between fine particulate matter (PM_{2.5}, particulate matter with a diameter of less than 2.5 microns) exposure and kidney disease when reviewing at Environmental Protection Agency and the Department of Veterans Affairs databases.
- ◇ Forouzanfar, Mohammad. et al. 2016. **Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990–2015: a systematic analysis for the Global Burden of Disease Study.** *Lancet.* This comparative analysis found that air, water and soil pollution accounted for 9 million premature deaths in 2015. This is more than three times the number of people killed by AIDS, tuberculosis and malaria combined.
- ◇ Di, Qian. et al. 2017. **Association of Short-term Exposure to Air Pollution With Mortality in Older Adults.** *JAMA.* Short-term exposure to fine particulate matter (PM_{2.5}) and ozone below the current national standard is associated with increased premature death in older adults. The study found that an increase of just 1 µg/m³ in daily PM_{2.5} over the course of one summer in the U.S. would lead to 550 extra deaths per year and 7,150 extra deaths over the course of the 13-year study period. An increase of just 1 ppb in daily ozone over the summer could lead to 250 extra deaths per year or 3,250 extra deaths over 13 years.



Celebrating Clean Construction

MAHA board members Lawrence W. Raymond, M.D. and Stephen Keener, M.D. recently celebrated a major clean air victory with leaders of Novant Health and Atrium Health (formerly Carolinas HealthCare System). Raymond and Keener proposed the use of newer construction equipment and anti-idling practices at a meeting in Charlotte several years ago to reduce toxic diesel emissions at construction sites. The two healthcare systems worked together in 2017 to develop a facilities standard which requires the use of low-emission equipment and discourages unnecessary idling. These measures will help protect

the health of patients, hospital visitors, staff, construction workers, and neighbors. The commitment to prioritize clean construction practices by Novant Health and Atrium Health serves as a model for other health-based construction projects in North Carolina and the Southeast. According to the EPA, every dollar spent on reducing diesel pollution results in \$13 in public health benefits.

Contact MAHA Manager Rachel McIntosh-Kastrinsky to learn how your hospital can join the Partnership. Rachel can be reached at rachel@cleanaircarolina.org.

Dr. Raymond recently had a letter to the editor published in the *New England Journal of Medicine* discussing the recent Di et al. study that showed levels below the National Ambient Air Quality Standard, fine particulate matter (PM_{2.5}) can have lethal effects. Raymond noted that one of the most dangerous sources of PM_{2.5} comes from diesel engines, even when they are idling. He concluded that North Carolina should join the other 35 states that have enacted mandatory idling limits to improve air quality.

Campbell University Health Sciences Students Learn about Air Quality

Physical Therapy Professor Rebecca Crouch invited MAHA manager Rachel McIntosh-Kastrinsky to teach about air quality, health and advocacy during a Campbell University Interprofessional Education (IPE) Day training for health sciences students. IPE trainings teach students to “practice collaboratively and provide safe, cost effective and efficient patient-centered care.” During the two-hour training on February 6, public health, pharmacy practice, medicine, clinical research and pharmaceutical sciences students learned about the health impacts of air pollution and climate change through hands on activities, videos and a presentation.