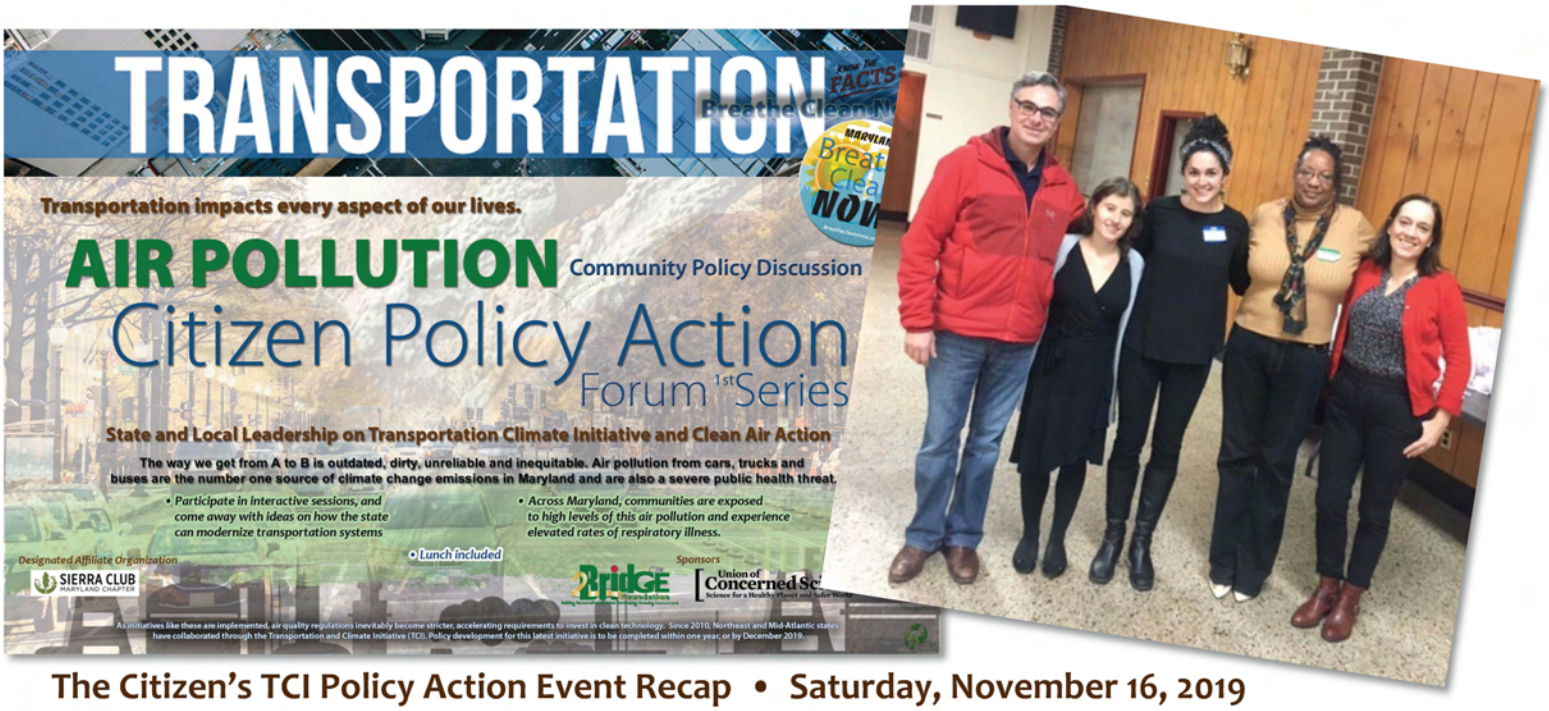

The Citizen's TCI Policy Action Event Recap • Saturday, November 16, 2019

The 2BridgeCDX is an independent consultancy specializing in active citizenship that works across the region offering expertise in facilitation of community influence in policy with the community-based Brandywine TB Southern Region Neighborhood Coalition Executive Community Citizen's Board and the Union of Concerned Scientists hosted a community transportation and air pollution forum.

On behalf of everyone at the 2Bridge Community Development eXchange (CDX) we thank all who attended the Citizen's Policy Action Forum 1st Series in Brandywine Maryland. We hope attendees learned something new about our increasingly complex pollution and transportation sector and made some fruitful connections throughout the day.

The conference was made possible through the generous support of The Union of Concerned Scientist there community-based engagement, the hard work and advocacy of Paulina Muratore and Cecilia P. Moura, through our collaborative partnership through community participation to engage communities and the outstanding support organizations that included the National Maryland Sierra Club- Lindsey Mendelson along with the Maryland League of Conservation Voters0- Ramon Palencia-Calvo.

The Transportation and Climate Initiative (TCI) is a regional collaboration of 12 Northeast and Mid-Atlantic States and the District of Columbia that seeks to improve transportation develop the clean energy economy and reduce carbon emissions from the transportation sector. The participating states are: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia. These states are supported by the Georgetown Climate Center, who coordinates the regional collaboration.

- Tailpipe pollution is deadly. Every year, more people die prematurely from traffic pollution-related health impacts than traffic accidents.
- Low-income communities and communities of color are disproportionately exposed to traffic pollution and are overburdened with higher rates of asthma, cancer, and cardiovascular disease. A recent study found that people of color are exposed to 66% more tailpipe pollution than white communities in the Northeast and Mid-Atlantic region.

The Brandywine TB Southern Region Neighborhood Coalition (BTB Coalition) working with community in a 2BridgeCDX CeDap process that involves a Community Strengthening Network within our framework Dyce involvement and public participation activities.

We spent four hours talking about the science behind air pollution; transportation particulate matter in Maryland; the Transportation and Climate Initiative as one part of the solution; other clean, modern transportation solutions that street level residents would like to see or could envision in their communities.

An effective carbon-pricing program should deliver equitable results:

- Engage & be responsive to the needs of impacted communities throughout the policy design and implementation process.
- Set a strong cap/price that holds polluters accountable for the true cost of pollution.
- Dedicate funds targeted directly at overburdened and underserved communities to offset new cost burdens resulting from the carbon price AND to create net positive environmental and economic benefits for these communities.

- Ensure direct emissions reductions in communities hit first and worst by transportation emissions, including through complementary policies.

The breakout groups main themes that came across from the three collaborative breakout groups were:

1. ***Process***: communities need more education about things like TCI. State officials need to meet people where they are (webinars don't work). TCI in each state should have a community body/board that helps oversee the process and ensures transparency in investment decision-making. Overall their need to be more opportunities for public input that put community voices first. Consistent and regular information to community members.
2. ***Investments***: strong agreement on the need for more and better mass transit, options for walking (many areas don't even have sidewalks or crosswalks). Also, strong agreement around the idea of a "cash for clunkers 2.0" to get people out of super polluting cars and trucks. No more investing in highway expansion unless it's for priority bus lanes; Overall theme: prioritize communities/areas already burdened by pollution.
3. ***Complementary Policies:*** enhanced smart growth policies (no more sprawl); transit-oriented development with permanently affordable housing. Garage EV charging incentives – people could set up their garages as a charging point for others to use and make a little money from it; better broadband internet and options for working from home; elder care and transport services that truly address the mobility needs of elders in our community who are stuck in their houses.

Common ideas across all groups – highlighted.

Group/Table 1

- More dedicated and intentional public transport
  - Connectivity – rail to bus
  - Transit oriented development – hear about this but don't see it
- No more funds for roads – make more mass transit opportunities.
- Sidewalks & Crosswalks (better walkability)
- Connect with purple line; Rails we already have – use them more efficiently
- Be smarter about how we use the resources we already have
- Coalitions and connecting; stronger together
  - Lack of education in the community – need the education so people will want to participate
- Hyper local – safety of the roads we have
  - Better visibility
  - Sightlines
- Smart light systems to help manage traffic
- Paying folks to get 40-year-old dump trucks off the road
  - Cash for clunkers but designed better using other models that have worked well for other places
- Vehicles should ALL be efficient – state fleets; school buses; personal cars.
- More state incentives for hybrid & electric cars
- Not expanding the beltway for cars – make express lanes for buses only (bus rapid transit)
- Mono rail around beltway
- Finish off western parkway and invest in smart growth
- More education – meet people where they're at (webinars don't work)
  - Public libraries
  - Reaching out to the faith community
  - Stakeholder meetings
- Annual meetings and dissemination of information
- Central information that the community can use to share data
- Existing structures don't work

Group/Table 2:

- Program ambition – want to make sure this program has real emissions reductions
- Put forward more mass transit
- Cash for clunkers program to electrify fleets
- Prioritize areas overburdened and make sure these investments are for clean solutions only
- Address VMT
- Public engagement: important to do it through town halls, websites, electronically, two-way information – not just communities listening. More ways to provide feedback
- Meet people where they are – get elected officials involved
- People have relationships with public officials but nothing about TCI – how to bring these two things together
- How to measure progress – transparency in the whole process
- Benchmarks – progress reports – metrics (public)
- Investments – no more fossil fuel development; no highway expansion;
- Complementary policies – internet access; tele-commuting; affordable housing next public transportation hubs
- TCI body with officials, community members, and others to increase accountability in the whole process

Group/Table 3:

- Key: public engagement and getting people excited
  - Groundswell to get people to care about what Is going on
- Work with Google to build a smart city? This is all sprawl homes –
- Redevelop and retool existing spaces
- cleaning up polluted areas that are here
- MTA centers with bus lanes
- Possibility for light rail
- Smart growth – complementary
  - Built out existing communities and bring new in

- We have never picked a well paying industry to set up here
- Effective communication to engage and inform the community
  - Come up with things that deal with action
  - In NH there was a bill passed where they actually set up garages to make money off charging
- Make it easier for people to participate in the planning process locally – people don't have time to click through lots of web pages to figure out what is going on.
- Need more chances for public input
- Just emails don't work
- Educating the community about the planning process
  - Community development corporation should form
  - Plans available for your community
  - People need to know about that and hear what they can do
  - Consistent community engagement
- Building areas with sidewalks – we have townhomes and even fire trucks can't get in
- More community oriented
- Public transportation to the aquatics center – sidewalks there too
- Working with transportation networks
- County could work with fed or state to set people up in their homes if they are stuck there – getting to local store; doctor appt;
- Emergency response and testing
- Have a first aid kit in your home – shortage of EMTs
  - Monitor all of this and check

In Conclusion

Facilitating increased efforts to involve the public by giving citizens, industry, environmental groups, an99d academics a much greater opportunity to play key roles in environmental decision-making.

First and foremost Public participation activities need to represent the full spectrum of actions and processes that 2BridgeCDX uses to involve the public in the work of an Agency. Public participation activities and processes allow the public to participate in Agency actions and hold the Agency accountable for its decisions.

Trust between the public is a crucial component of any community involvement or public participation initiative in order to ensure an effective working relationship. However, trust between Agencies and stakeholders can take time to develop. Historically, some communities and organizations have had adverse relationships with government agencies that carry into the present. In other instances, statutory or regulatory limitations may lead to a break down of trust between communities and agencies.

Transportation Policy Objectives and Actions

Transportation & Climate Initiative in Maryland is one initiative, but we need more (just in discussion phase - cap & invest program - needs more public involvement).

In response to these issues, social equity and environmental justice related transportation policy objectives, and actions:

Policy Objectives

1. Provide equitable and accessible transportation services for all residents, regardless of income, age, or ability.
2. Ensure that the benefits and potential burdens of transportation projects have equitability.

Actions

1. Ensure that transit is accessible, available, and within the financial reach of as many residents as possible.
2. Design new transportation projects in such a way that they do not result in disproportionate health-related and environmental impacts on any community.
3. Ensure that the development review process addresses the transit planning needs both within and adjacent to proposed developments.
4. Develop and implement programs that improve transportation options for seniors and persons with disabilities.
5. Develop Transportation Project Evaluation Criteria based on the preliminary criteria themes in the TCI in order to prioritize transportation funding and transit service in areas.

Without proper planning, and participation transportation systems can be disruptive to communities. The construction of roads, freeways, and rail-transit systems has placed health burdens on many lower income and minority communities. At times, transportation systems have physically divided communities, resulting in long-lasting social and economic costs. Additionally, transportation planning must be done in a way that provides for accessibility to low income and minority communities, seniors, and persons with disabilities. Transportation planning must be done with a wide variety of communities in order to promote regional equitability.

Transportation & Climate Initiative: https://www.transportationandclimate.org

If you have any feedback for us regarding events – or are interested in hosting one of your own in collaboration with 2BridgeCDX – please contact the facilitator of this even at btbcoalition@gmail.com.

Inequitable Exposure to Air Pollution from Vehicles in Maryland

blog.ucsusa.org/cecilia-moura/air-pollution-from-vehicles-maryland

Maria Cecilia Pinto de Moura

November 15, 2019

Most people know that cars, trucks, and buses from our highways and city streets are a significant source of harmful air pollution. While this pollution impacts all communities in the state to some degree, Marylanders who face the greatest exposure to transportation pollution are those who live near highways, along major freight corridors, and in urban areas.

Not just that, but the disproportionate distribution of air pollution and its associated health impacts are exacerbated because Maryland has the nation's second worst air pollution from cars, trucks and buses, after New York State. California follows, with an average that is practically the same as Maryland's.

To help understand exactly which communities bear the greatest burden and breathe the highest concentrations of this dangerous air pollution, we used a model to estimate the amount of fine particulate matter air pollution (known as $PM_{2.5}$) produced by on-road

vehicles that burn gasoline and diesel. The findings, which are not likely not to be a surprise to many residents, are quite troubling – they show that people of color are disproportionately exposed to vehicular $PM_{2.5}$.

What is $PM_{2.5}$ and why is it so important?

The science is clear: no level of particulate matter is safe to breathe, says the American Lung Association. Although $PM_{2.5}$ is not the only air pollutant that adversely affects health, it is estimated to be responsible for approximately 95 percent of the global public health impacts from air pollution. Exposure to this dangerous pollutant is the largest environmental risk factor in the US, responsible for 63 percent of deaths from environmental causes.

$PM_{2.5}$ include particles smaller than 2.5 millionths of a meter in diameter – at least 20 times smaller than the diameter of fine human hair— so they can penetrate deeply into the lungs. The ultrafine particles – smaller than 0.1 millionths of a meter – are particularly dangerous, as some can enter into the bloodstream.

Chronic exposure to $PM_{2.5}$ causes increased death rates attributed to cardiovascular diseases, including heart attacks and strokes, and has been linked to other adverse impacts such as lung cancer, reproductive and developmental harm and even diabetes and dementia. Chronic exposure to $PM_{2.5}$ in children has also been linked to slowed lung-function growth and the development of asthma.

$PM_{2.5}$ is formed in many ways. A significant source of $PM_{2.5}$ is fuel combustion. The combustion engines of cars burn gasoline and diesel. Power plants burn natural gas and other fuels to produce electricity. Burning wood for cooking and in fireplaces, as well as wildfires, are examples of biofuel combustion. Not only does burning fossil fuels and biofuels produce $PM_{2.5}$ directly, but the combustion reaction also emits gases such as nitrogen oxides, sulfur dioxide and volatile organic compounds that go on to form additional $PM_{2.5}$ through complex chemical reactions in the atmosphere.

Greater pollution for people of color

The results are clear: $PM_{2.5}$ pollution burden from cars, trucks, and buses is inequitably distributed among racial and ethnic groups in the state. People of color experience an undeniable "pollution disadvantage."

We estimated exposure to $PM_{2.5}$ pollution using a recently developed model from the University of Washington, and data from the EPA's National Emissions Inventory and the US Census Bureau. This model allows us to calculate how vehicle tailpipe and refueling emissions ultimately lead to ground-level pollution exposure, so we can understand how exposure to $PM_{2.5}$ varies among groups and locations.

The health impacts caused by $PM_{2.5}$ depend not only on the concentration of pollution, but also on the number of people exposed. A high level of exposure in a densely populated area will have a great public health impact compared to that same exposure in a less densely populated area. Therefore, in order to compare exposure in different areas and groups, our estimates are "population-weighted" $PM_{2.5}$ concentrations.

Looking at the state as a whole, African Americans are exposed to 12 percent higher $PM_{2.5}$ concentrations from on-road transportation than the average $PM_{2.5}$ exposure for all Marylanders. Latinos experience concentrations 11 percent higher than the average resident (Figure 1). At the same time, white residents have an average exposure that is *8 percent lower* than the average for the state.

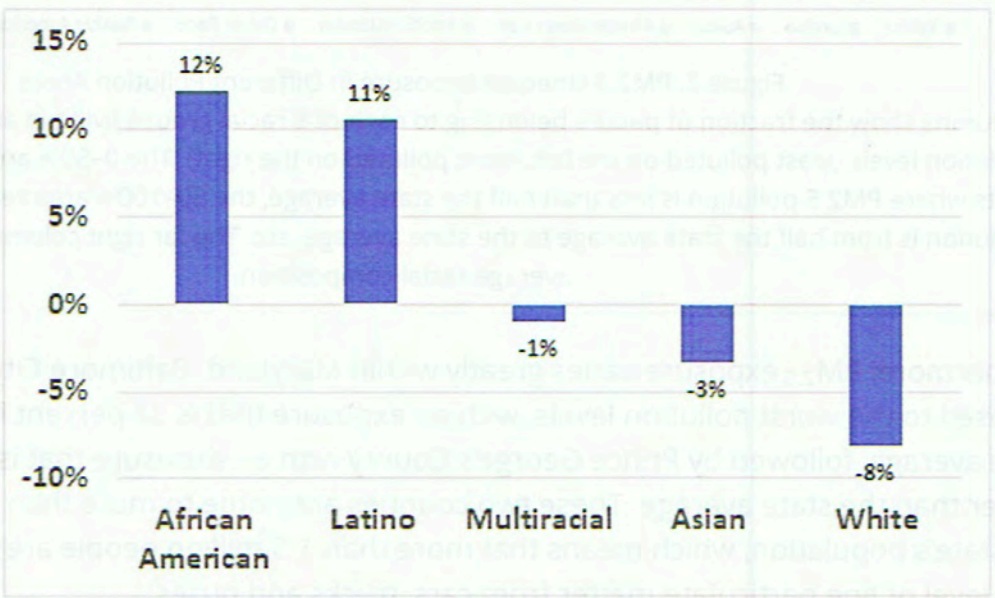

Figure 1. Disproportionately High PM2.5 Exposure for African Americans and Latino residents in Maryland

We can look at this data differently by examining the demographics of the cleanest and the most polluted areas. In an equitable world, one might expect that every area with the same pollution level would have an approximately equal representation of all racial groups. In other words, the burden would be shared equally. But this is not the case.

In the cleanest areas of Maryland, in census tracts with average annual $PM_{2.5}$ concentrations less than half the state average, white residents make up 76 percent of the population, while making up only 52 percent of the state's total population. In contrast, the most polluted census tracts have a higher proportion of people of color. Almost 15 percent of people in the highest burden areas – where concentrations are more than 1.5 times the state average – are Latinos, compared with a state population that is just 9 percent Latino (Figure 2). People of color are over-represented in the more polluted areas, and under-represented in the less polluted areas.

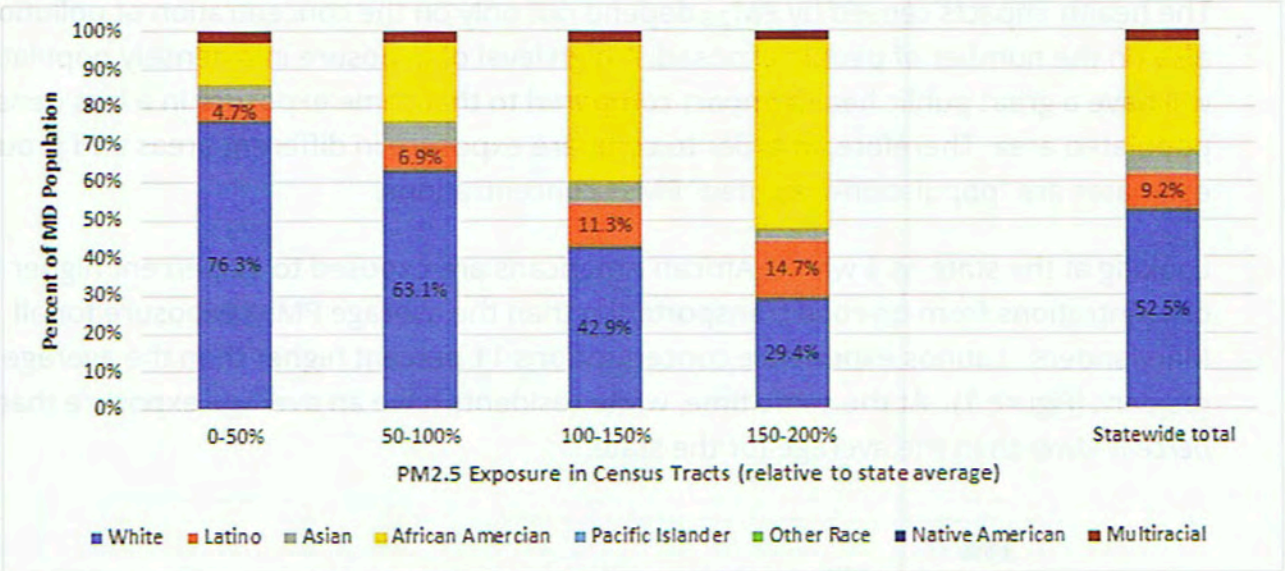

Figure 2. PM2.5 Unequal Exposure in Different Pollution Areas
Columns show the fraction of people belonging to each of 8 racial groups living in areas with different pollution levels (least polluted on the left, most polluted on the right). The 0–50% area refers to census tracts where PM2.5 pollution is less than half the state average, the 50–100% area refers to tracts where pollution is from half the state average to the state average, etc. The far right column shows the state's average racial composition.

Furthermore, $PM_{2.5}$ exposure varies greatly within Maryland. Baltimore City (the county) is exposed to the worst pollution levels, with an exposure that is 37 percent higher than the state average, followed by Prince George's County with an exposure that is 23 percent higher than the state average. These two counties are home to more than one quarter of the state's population, which means that more than 1.5 million people are affected by this high level of fine particulate matter from cars, trucks and buses.

For the sake of comparison with pollution levels in California, which has some of the highest levels of vehicular $PM_{2.5}$ in the nation, the average pollution levels in the county of Baltimore City are only 15 percent lower than the levels in Los Angeles County and are 5 percent higher than San Bernardino County's levels. The average exposure level in Los Angeles County is double the nation's average, and in the county of Baltimore City the average exposure isn't far from that, at 1.8 times the nation's average.

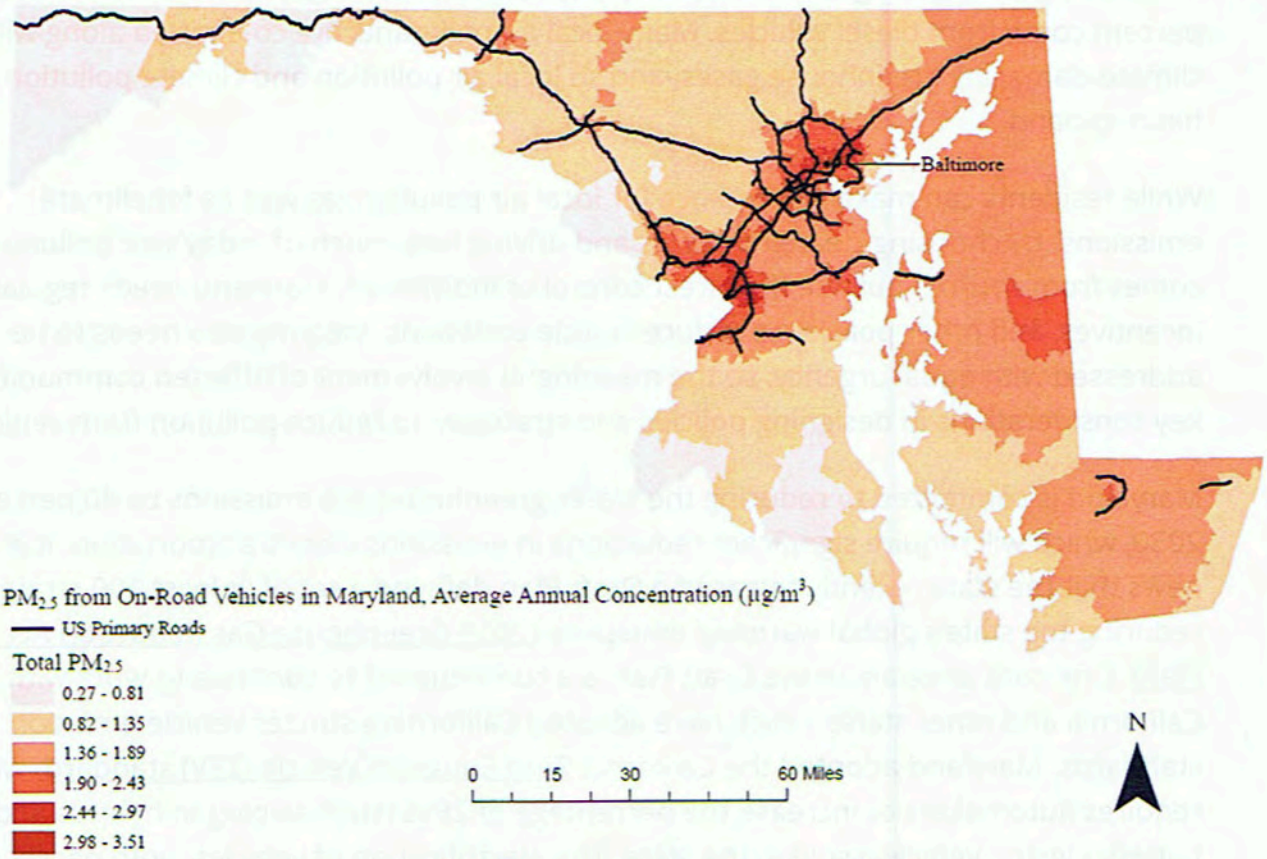

Figure 3. PM2.5 Exposure Varies Greatly in Maryland

The analysis also shows that less affluent households have a higher exposure to air pollution than more affluent households, although this disparity is not as pronounced among income brackets as it is among racial and ethnic groups.

Our analysis shows that the share of low-income households is disproportionately larger in more polluted areas, where pollution is more than 1.5 times the state average. Statewide, just 11 percent of households earn up to $20,000 per year, but a larger share of these households – 19 percent – are located in these more polluted areas. A similar trend is seen for households in the next income bracket, $20,000 to $60,000, as the number of households in this bracket also increases along with the pollution levels.

As expected, the trend is reversed for households in the highest income brackets, over $100,000 per year. For the state as a whole, 60 percent of households are in these highest income brackets, but just 46 percent of these households are in the most polluted areas.

What is to be done?

The state's economy is growing, Marylanders continue to buy cars and drive more, and there are more and more freight trucks on our highways. Together, cars, trucks and buses are responsible for the vast majority of our climate transportation emissions – 70 percent of

the state's greenhouse gases from transportation come from gasoline vehicles and 19 percent come from diesel vehicles. Many local air pollutants are co-emitted along with climate-damaging greenhouse gases, and so local air pollution and climate pollution grow hand-in-hand.

While residents can make a difference for local air pollution (as well as for climate emissions) by choosing cleaner vehicles and driving less, much of today's air pollution comes from sources outside the direct control of individuals. Maryland needs regulations, incentives, and other policies to reduce vehicle emissions. Inequity also needs to be addressed with equal urgency, so the meaningful involvement of affected communities are key considerations in designing policies and strategies to reduce pollution from vehicles.

Maryland is committed to reducing the states greenhouse gas emissions by 40 percent by 2030, which will require significant reductions in emissions from transportation. It is good news that the state recently released a Draft Plan defining a set of at least 100 strategies for reducing the state's global warming emissions (2019 Greenhouse Gas Reduction Act Draft Plan). One core program in the Draft Plan is a commitment to continue to work with California and other states which have adopted California's stricter vehicle emission standards. Maryland adopted the California Zero Emission Vehicle (ZEV) standard, which requires automakers to increase the percentage of ZEVs (such as plug-in hybrids and battery electric vehicles) sold in the state. The electrification of vehicles, both passenger and freight, can greatly reduce emissions. Battery-electric vehicles have no tailpipe emissions and they eliminate emissions associated with gasoline refueling.

At the end of last year, Maryland joined eight other states and the District of Columbia in a regional effort to develop a regional market program to address transportation emissions. Known as the Transportation and Climate Initiative (TCI), this program will provide much-needed funding to implement clean transportation strategies, and it is also one of the avenues towards reducing pollution exposure inequity. But in order to adequately address the disproportionate impact of pollution, the state should seek input specifically from overburdened communities.

Inequity in air pollution reflects decades of local, state, regional, and national decisions about transportation, housing, and land use. Decisions concerning where to construct highways, where to invest in public transportation, and where to build housing have all contributed to a transportation system that concentrates emissions in communities of color. With the inclusion of affected communities in the decision-making processes of the programs listed in the Draft Plan, Maryland is being handed an opportunity to address the consequences of decades of decisions.

Other specific actions included in the Draft Plan are important to reduce air pollution and its inequitable distribution. Some of these are:

- A transition to cleaner and more efficient public transportation fleets, as well as the expansion of public transportation.
- A pilot program of electric school buses has been approved. It needs to focus on serving communities exposed to the highest levels of gasoline and diesel emissions.
- Expansion of electric vehicle rebate programs to provide financing assistance and larger rebates to low- and moderate-income residents, as well as excise tax credits for the purchase of plug-in vehicles.
- Utility investments in electric vehicle charging infrastructure, with a priority on serving communities exposed to the highest levels of gasoline and diesel emissions.
- Time-of-use rates which allow utility customers to charge during off-peak hours at a reduced energy rate.

Air pollution from on-road transportation such as diesel and gasoline vehicles places significant, inequitable and unacceptable health burdens on Maryland residents. We have the tools and the technologies to transform our transportation system away from diesel and gasoline and toward clean, modern, and equitable solutions. However, state leadership is critical, especially at a time when the federal government is rolling back federal fuel economy and greenhouse gas emissions standards for passenger cars and light trucks.

Maryland needs to continue the effort to reduce air pollution from vehicles, placing a high priority on actions that reduce the inequitably distributed burden of air pollution in the state. This air quality analysis provides important quantitative evidence of the need for and importance of such programs, and it can help inform and shape future actions to reduce on-road transportation pollution exposure and inequities in the state.

Public Domain

Posted in: Vehicles Tags: clean vehicles, maryland, PM2.5, vehicles