

MWAQC Technical Advisory Committee
Meeting Summary
November 14, 2023, 10 AM to 12:10 PM

Present:

Anna Marshall, Baltimore Metropolitan Council
Bill Eger, Arlington County
Catherine Salarano, Maryland Department of the Environment
Chris Voigt, Virginia Department of Transportation
Chris Hoagland, Maryland Department of the Environment
Danielle Sims, Virginia Department of Environmental Quality
Doris McLeod, Virginia Department of Environmental Quality
Emma Cross, District Department of Transportation
Felip Ip, City of Alexandria
Jim Ponticello, Virginia Department of Transportation
John Kinsman, Edison Electric Institute
Joseph Jakuta, District Department of Energy & Environment
Lisa Nissley, Maryland Department of the Environment
Malcolm Watson, Fairfax County Department of Transportation
Marcia Ways, Maryland Department of the Environment
Melissa Atwood, City of Alexandria
Richard Dooley, Arlington County
Roger Thunell, Maryland Department of the Environment
Sophia Cortazzo, Maryland Department of Transportation
Sonya Lewis-Cheatham, Virginia Department of Environmental Quality
Thatch Gerike, District Department of Energy & Environment
Tom Ballou, Virginia Department of Environmental Quality
Virginia Burke, Maryland Department of Transportation
Christina Fernandez, EPA R3
Cynthia Stahl, EPA R3
Mike Gordon, EPA R3
Deb Harris, ICF
Joel You, Enchanted Rock, Inc
Allan Schurr, Enchanted Rock, Inc
Taylor DeLaFosse, Enchanted Rock, Inc

Staff:

Sunil Kumar, COG/DEP
Aissa Boggs, COG/DEP
Dusan Vuksan, COG/DTP
Erin Morrow, COG/DTP
Jane Posey, COG/DTP
Jen Desimone, COG/DEP
Jinchul Park, COG/DTP
Kelsey Boatright, COG/DEP
Leah Boggs, COG/DEP
Mark Moran, COG/DTP
Robert Christopher, COG/DEP
Tim Masters, COGDEP
Wanda Owens, COG/DTP

1. Call to Order and Review of Meeting Summary

Tom Ballou called the meeting to order at 10 AM. The October 10th meeting summary was approved with a change. Minutes incorrectly showed Sophia Cortazzo affiliated with MDE so it was changed to MDOT.

2. Update: Environmental Justice Sub-Committee

Jen Desimone briefed members on the status of the EJ sub-committee. COG staff is currently working with members of the MWAQC Executive Committee on finalizing the details of the sub-committee. This will be discussed in MWAQC's December meeting.

3. EPA's EJ Efforts

EPA Region 3 staff (Cynthia Stahl) briefed members on EPA's efforts to integrate EJ in air quality planning. She gave a short demonstration of EPA Region 3 air quality division's pilot EJ analysis that the division has been working on for the last couple years. She showed an analytical hierarchy that was organized in a particular way to answer the question for region 3 where EPA wanted to know areas in the region which were both vulnerable as well as burdened by air pollution defined by different parameters. The hierarchy is organized in two different clusters represented by vulnerability and air pollution. vulnerability is further defined by a set of parameters. vulnerability ages are defined as ages that are vulnerable to exposure to air pollution such as, the very young and elderly. Consideration of how people can avoid, mitigate, or recover from multiple climate stressors were also included. Therefore, issues such as, extreme heat and flooding. Communities seem to be worried about legacy pollution such as, legacy ozone and PM 2.5. Legacy toxics historical data is very hard to get so right now this is just a placeholder. Consideration of how we characterize vulnerability and socioeconomics were also included. Therefore, we have here essentially a cost of living indicators that would represent populations that would be considered financially unstable and cost of living would include the cost of housing, healthcare, food, education, childcare, and public transit. Vulnerability also includes the consideration of health status and specifically health end points that are associated to exposure to air pollution or that also makes people more vulnerable to future exposure to air pollution. Those three conditions are Asthma, COPD, and heart disease. On air pollution burden side, there are five indicators representing urgent defined as local criteria pollutants, transported criteria pollutants, hazardous air pollutants and then indicator representing mobile emissions. This suite of air pollution burden indicators together defines air pollution burden. EPA R3 is performing this analysis at the smallest geographic resolution possible, which is currently a census block group. EPA R3 has a total of 21,612 census block groups, which it is analyzing for all indicators under these two conditions.

Vulnerability and air pollution clusters can be weighed differently. The method of weighting is not scientific or objective. Different stakeholders can look at the same problem differently. We can have an approach where data remains the same, but we can weight vulnerability and air pollution equally in the first group (50% each). In another approach, we can weight air pollution 100% and not consider vulnerability at all (0%) while a third approach can weight vulnerability 100% and not consider air pollution at all (0%).

I mapped the top 10,000 block groups on each of the two lists to see what that looks like on the R3 region map. Block groups colored in black appear in both the 100% vulnerability and the 100% pollution list in the top 10,000 block groups. These are probably the most vulnerable and polluted relative to all the other block groups in R3. There are a lot of block groups that are represented by the light blue color that appear on the top 10,000 100% vulnerability list but do not appear on the top 10,000 100% pollution list. Pink block groups appear on the 100% pollution list, but not on the 100% vulnerability list. It is clear that vulnerability and air pollution sometimes overlap, but sometimes do not. Therefore, we need to understand how we want to look at it and what we are trading off and do we understand those trade-offs.

The ranking of block groups depends on the weighting of vulnerability and air pollution and health and financial status.

Tom said that there are a lot of data, tools, and analyses being pursued these days by entities that sometimes seem contradictory. This poses issues for states. There is currently no EJ guidance from EPA. Doris asked how EPA R3 envisions this type of information being used. For example, if a facility wants to construct as a greenfield source, there would be an increase in emissions. How would this information be applicable to the permitting process for that facility. Cynthia said that you would need to construct an analysis with the appropriate data to be able to answer that question. Mark asked about any documentation for this analysis tool that would provide potential users with big picture information such as input, output, methodology etc. Cynthia provided a link to the documentation in the chat box. Doris asked if this type of information would be applicable in some way in attainment and maintenance plans where there are no emissions increases. Cynthia said that it could be done, but an analysis would have to be set up in a different way than the one that she just showed. John Kinsman asked Cynthia to clarify what legacy means. Also, how does census block air quality relate to where individual monitors are. In some cases, those monitors may be miles away and may not be representative of air quality in a census block. Cynthia acknowledged the difficulty with air quality spatial field. She used CMAQ spatial field as calibrated by the monitoring data, so it is a slightly smaller scale than the typical 12 kilometers CMAQ grid. She asked OAQPS whether it makes any sense to get this down to the block group level in the way that R3 has, and they thought that it was not an unreasonable way to do it. However, there are issues with taking large scale information and parsing it down to the smaller scale without further checks. Right now, this special deal is the best R3 can do, and they are looking for continuous improvement. The legacy in this case is the 2002 annual max ozone and PM2.5. Roger said that performing this analysis at the state level would give a different result so how to reconcile that. Cynthia said that this is a relative analysis and so it's relative to all the things that you decide to include. If one is trying to avoid or mitigate adverse impacts, then the larger the area included the more robust analysis it will be. However, if you are responsible for your single state, then it would be hard to justify including areas outside of your state. She said EPA R3 could have a discussion with MDE on this. Tom said that DC area being a three-jurisdiction area, analysis will be different, though results may not be very different. Cynthia agreed with Tom.

4. MDE's EJ Efforts

MDE Air Director Chris Hoagland talked about various efforts undertaken by MDE related to Environmental Justice. Specifically, he talked about MDE's EJ priority, climate change & climate justice, community partnerships, air monitoring grant, MDE screening tool & HB1200, and recent legislations. "Maryland's Climate Pathway" to achieve GHG goals is out for feedback now. The final plan is due in December.

MDE is building partnerships with overburdened and underserved communities that include:

- Community air quality monitoring
- Targeted enforcement & inspection initiatives
- Targeted pollution reduction programs
- Greater collaboration on permit processes

MDE & UMD are partnering with 3 communities under a Federal air monitoring grant:

- Cheverly (Prince George County)
- Curtis Bay (Baltimore)
- Turner's Station (Baltimore County)
- Community-determined air monitoring plans & equipment

MDE's screening tool (still in Beta) maps 24 demographic and environmental health indicators by census tract and is a required tool for permit applicants for public review permits under

HB1200.

He also talked about several recent legislations. Felipe asked if MDE looked into purple air sensors. Chris said MDE looked at those sensors in communities MDE collaborates with in Maryland. Several communities and counties are pursuing monitoring with them as they are very reliable for fine particles. MDE worked with the University of Maryland and the community representatives in Cheverly to put quite a few sensors throughout the neighborhood and produced a report on that with some interesting findings. These sensors could be used in areas with a high concentration of pollution sources and different types of pollutants as they could be employed in different places all at once in those areas. Tom asked how the gap between traditional and purple air pollution sensors could be abridged. Chris said that it takes more work to manage the purple air sensor data to make sense out of those data. Tom asked about the outreach and community engagement efforts.

5. Natural Gas Microgrids

Joel Yu (Enchanted Rock, Inc) talked about reducing air quality impacts of backup generation and peaking plants using non-polluting hydrogen and nuclear fueled microgrids. He also talked about safety, resiliency, health, and economic benefits of these grids. He discussed a few case studies.

6. Climate Pollution Reduction Grant (CPRG)

Deb Hariis discussed basic details of the CPRG program, which is intended to implement GHG reduction programs and projects. Applications will be evaluated for benefits to low-income and disadvantaged communities. EPA anticipates awarding 30 to 115 grants ranging between \$2 million and \$500 million. The initial deliverable is a Priority Climate Action Plan (PCAP), which should include a list of near-term, high-priority, implementation-ready GHG measures. Jeff King talked about various GHG reduction strategies that were identified in the Washington region and the overall program timeline.

7. Exceptional Events Exemption Request

State air agency staff of the District, Maryland, and Virginia briefed members on the status of their requests to EPA to grant exceptional exemption for high ozone and/or PM2.5 days in 2023. Joseph said that the district finished the first draft of the June 29th event and is planning to submit the document for June 1st and 2nd as well. The district already sent a letter of intent to EPA and worked with MDE on this effort. Roger said that the MDE finished working on four events recently and working on one more event for Baltimore.

8. State/Local Updates

Virginia- Tom said that Virginia just submitted the 2008 ozone maintenance plan update.
Maryland- Roger said that Maryland also submitted the plan update.
District – Joseph said that the District will be submitting the plan update on November 14th.

The meeting ended at 12:10 pm.