

Air Quality Town Meeting: Particles and Climate Change: Integrated Strategies

November 1, 2007, 5 pm – 7 pm
COG 3rd Floor Board Room

Summary

Welcome, Introductions

Jill Engel-Cox, Chair, Air Quality Public Advisory Committee (AQPAC) welcomed everyone, reviewed the Town Meeting agenda, and invited those in attendance to introduce themselves. She invited people to apply for positions on the Air Quality Public Advisory Committee. She introduced Joan Rohlf, COG's Chief of Air Quality Planning, to give an overview of particle pollution and greenhouse gas emissions in the Washington metro area.

I. Overview of Regional Air Quality Planning

The Clean Air Act gives EPA the authority to set federal health standards for ambient six ambient pollutants, NO_x, SO₂, CO, lead, ozone and particulate matter. A recent Supreme court decision (4/2/07) gave EPA the authority to regulate motor vehicle greenhouse gas emissions. The court said that CO₂ and other greenhouse gases fit the legal definition of "air pollutant" under the Clean Air Act.

Fine particle pollution and Greenhouse Gases (CO₂e) have in common that they affect human health and the environment; are caused by the same activities, and are both reduced by some measures having "co-benefits."

The Washington region does not meet the National Ambient Air Quality Standards for ozone or fine particles. The region is preparing a plan to reduce annual levels of fine particles by 2009. Analysis of fine particle emissions from Washington speciation monitors demonstrates that sulfates (58%), carbon (28%) and nitrates (7%) are the dominant PM_{2.5} constituents. The primary sources are coal combustion (46%), motor vehicles (28%), road construction (9%), burning and other minor sources. The plan to reduce fine particle pollution includes measures that reduce CO₂ emissions also. These measures include telecommuting, tree canopy programs, wind energy purchases, building energy efficiency, light emitting diode traffic signals, and renewable portfolio standards.

Climate change is defined as the variability in climate due to an increase in heat trapping gases. The increase in CO₂, a major heat-trapping gas, is due largely to combustion of fossil fuels. Climate change affects sea levels, weather patterns and ecosystems. Weather stations show a gradual increase in the earth's surface temperature of about 1 degree Fahrenheit in the twentieth century. In the District, the actual increase since 1948 is 0.63 degrees F, or 0.11 degrees F per decade. The Intergovernmental Panel on Climate Change (IPCC) stated in its February 2, 2007 report, "Most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas emissions. In the Washington region over 70% of the CO₂ emissions are caused by transportation combustion and electricity use. The region's population, employment and annual vehicle miles traveled (VMT) is expected to grow in the future. This growth will cause CO₂ emissions in the region to increase by 35% by 2030. Measures that reduce CO₂ emissions are the Maryland Healthy Air Act and other measures such as wind energy purchases that reduce dependence on coal, gas and oil by promoting energy efficiency and alternative energy use. Several jurisdictions in the region have adopted greenhouse gas emission reduction goals, such as Cool Counties (Arlington, Fairfax, Montgomery Counties), to reduce emissions to 80% below current levels by 2050. COG's Regional Climate Change Initiative includes setting regional targets and goals by April

2008. MWAQC is preparing a regional plan to reduce particle pollution. Public hearings will be held on the plan in late January 2008 and MWAQC will approve the plan in March.

II. Panel Discussion: What can the Washington region do to clean the air?

A. Climate Change: Health Concerns

Brenda Afzal, University of MD School of Nursing, Environmental Health Education Center

Air pollution has a collaborative effect with climate change. Climate change will worsen air pollution and air pollution adds greenhouse gases to the atmosphere, making climate change worse. Once these gases are produced, they stay in the atmosphere for a long time. The effects of climate change include more frequent and larger floods as increasing temperatures intensify the climate's hydrologic cycle and melt snowpacks more rapidly. Flooding can affect water quality as large volumes of water can transport contaminants into water bodies and also overload storm and wastewater systems. Higher temperatures, particularly in the summer, earlier snowmelt, and potential decreases in summer precipitation could increase the risk of drought. Sea level rise may also affect freshwater quality by increasing the salinity of coastal rivers and bays and causing saltwater intrusion, movement of saline water into fresh ground water resources in coastal regions. There is concern that as temperatures rise we can expect to see a rise in vector-transmitted diseases such as malaria, West Nile Virus, and Dengue Fever. Insects that transmit these diseases will mature faster, lay more eggs and bite more frequently. As temperatures increase insects will migrate geographically to areas where they previous had not been able to thrive.

Another change could be the flu season. Influenza is a year-round event in the tropics. If the tropical air mass around the Earth's equator expands, as new areas lose their seasons they may also begin to see influenza year-round. Patients, families and communities are impacted by this issue. Nurses understand the public health impacts of climate change. We should be concerned with prevention. I and many colleagues went to serve those affected by the Katrina disaster. No matter how prepared we think we are, we cannot prepare completely for extreme weather events.

B. Particles and Health Concerns:

Dr. Bailus Walker, Howard University College of Medicine

Dr. Walker talked about a number of studies showing the link between particle pollution and asthma in children, particularly in urban areas. Recently there are studies linking particle pollution and cardiovascular disease. There are studies in Los Angeles showing that fetal growth is influenced by maternal exposure to particle pollution. He urged regional planning and action to reduce sources of particle pollution in the Washington region.

C. Effects on Environment from Particles and Climate Change

Elizabeth Martin-Perera, National Resource Defense Council

Ms. Martin-Perera discussed the causes of climate change and the importance of adopting a climate change policy. The climate change policy would rely on use of energy efficient resources. She said that traditional supply solutions take years to come to market and are expensive. Energy efficiency is the fastest, cheapest and cleanest source. It can produce savings in both near-term and longer term. The Natural Resource Defense Council supports building better cars, switching to renewable energy and biofuels, boosting energy efficiency, and scrubbing carbon from fossil fuels. Several bills have been introduced in Congress to set national greenhouse gas reduction goals and to encourage carbon emissions trading.

D. Student Perspective on Climate Change and Actions We Can Take
Varun Bansal, Chairman, Global Warming/Energy Committee, Thomas Jefferson High School for Science and Technology, Alexandria, VA.

Climate change and its consequences are now largely accepted facts across the world. Consequences of climate change don't affect current leaders as much as they affect the next generation. Change begins at the lowest levels, with the citizens. Citizens need to take personal measures such as installing compact fluorescent lightbulbs (CFLs), energy efficient appliances, and tree planting drives. Planning for climate change now is less costly than cleaning up its consequences in the future.

At Thomas Jefferson High School Science & Technology (TJHSST), we have been involved in a number of environmental initiatives, starting with the Cool County Initiative in the spring to urge Fairfax County to sign the agreement to reduce greenhouse gases. We have a Solar Panel Initiative. By the end of the 2007-2008 school year we how to have solar panels installed at the school. We have raised \$20,000 for solar panels in partnership with Standard Solar, Inc. There is increased awareness of environmental issues. In 2007 a conference of Science and Technology high schools was held at TJHSST. One hundred students attended and the theme was the environment. We support green schools because studies show there are benefits in reduced asthma, fewer colds, better test scores, improved teacher and student attitudes. Green schools have lower operating and maintenance costs. The financial benefits are \$70 per square foot. Finally, we urge local governments to encourage residents to recycle more, purchase low emissions vehicles, and to purchase renewable energy.

III. Audience Participation

MWAQC Chair Nancy Floreen and MWAQC Vice Chair David Snyder joined the panelists. Jill Engel-Cox moderated the audience participation portion of the meeting.

Bill Orleans, citizen, Greenbelt, MD

Varun, How many schools in Fairfax County have environmental clubs? Could COG initiate a conference for high school clubs? Greenbelt has deferred adopting the Mayor's Protocol. No decision has been made. Last year the city purchased a new vehicle that wasn't LEV. When Air Quality (MWAQC) members meet, do they ever discuss what's being done?

Responses

Varun: Not every high school has an environmental committee. It's not official. A conference of COG on environment for high schools is a good idea.

Liz Martin: There's a youth committee at the University of Maryland that has a conference.

Hon. Nancy Floreen: Small local governments have a hard time rationalizing the cost of some measures. Small local governments have limited resources. Collectively we at MWAQC tro to take actions to benefit everyone.

Hon. Dave Snyder: COG can't force any members to do anything. MWAQC is having a positive effect. There's a list of what members are doing and it does influence small governments. MWAQC has a supplemental list to show how we're doing better than federal standards.

Sara Lescher: The Sierra Club Action Committee is trying to persuade Prince George's County to join Cool Counties. For Liz Martin, there's a problem with cap and trade. Micro climates and problems can be very local geographically. What is NRDC's defense of cap and trade?

Response:

Liz Martin: There are hot spots of PM2.5. We need EPA to set strong standards. Many pollutants have hot spots which cap and trade can't address.

Brian Holmes, MD Highway Contractors Association:

Regarding the coordination of transportation and land use, we haven't been successful in Maryland in implementing Smart Growth. Should zoning be a state function?

Response:

Hon. Dave Snyder: Virginia and Maryland are different. We must do a better job of linking the environment to planning. We're in competition for tax revenue. You wouldn't want the State of Virginia in charge of zoning. The leading problems in the region for greenhouse gases comes from transportation. Federal measures will help, such as federal fuel efficiency standards, smart growth, and public transportation. State of Virginia puts limits on local governments. We need to look at the long term economic impact of environmental issues. More needs to be done.

Hon. Nancy Floreen: Virginia has very different land rules. Predictability of decision-making is important. State legislatures may not respect local needs. We need to elect officials who will respect local needs and act responsibly. For transportation, we're not good at finding solutions. As a region we can't even agree on funding Metro. I'm not sure there are any better solutions. Hands-on local government is desirable.

Ann Brown: It's silly to widen the Beltway. We need to piggyback on railroads, reduce long distance trucks which are dangerous, increase public transportation. Every bus stop needs a shelter.

Response:

Hon. Dave Snyder: Bus shelters are an issue. This region should focus more on light rail.

There's a project in DC. We plan to raise this again at the NOVA Transportation Commission.

Hon. Nancy Floreen: One of our challenges as a region is we haven't decided if we're a city or a region.

George Gurley: River Terrace Community has a problem with fine particles from Pepco. The area around River Terrace is affected but no one has done anything. Now the Mayor is involved. Why hasn't Congresswoman Norton been concerned about River Terrace? She's sponsoring a bill in Congress to clean up the Capitol Hill Power Plant.

Response:

Hon. Dave Snyder: We will ask COG staff to put this on the agenda for discussion.

Dr. Bailus Walker: There are multiple causes of environmental illnesses. It's hard to prove. My advice is that hard and fast proof is difficult.

Hon. Nancy Floreen: MWAQC heard and we asked the Dept. of Environment in DC to deal with it.

Rodney Livingston: (to Varun) Have you gone to Friends School (green school)?

Varun: We haven't seen it as a club.

Rodney Livingston: to Brenda Afzal: What people have been displaced? To Bailus Walker and Brenda: Do you know William Gray, Colorado State University?

Response:

Brenda Afzal: Smith Island, MD is in danger of being displaced. We're all Smith Islanders. The cause is CO2.

Liz Martin: Per capital consumption growth is the problem. Where population is the same, energy use is growing.

Rodney Livingston: to David Snyder, States have a right to prohibit vehicle sales. Consumption is the problem. No one addresses this.

Hon. David Snyder: States ability to regulate tailpipe emissions is limited. We're trying to work within the legal requirements. CAFÉ standards would make a huge difference.

Julie Crenshaw Van Fleet: Dr. Walker, What has been the change in the last 10 years regarding asthma, respiratory rates, and demographics in children and adults.

Dr. Bailus Walker: There has been an increase in human exposure to new materials. There's a whole range of compounds that can trigger asthmatic responses. There is better reporting of asthma that leads to higher numbers. DC has one of the highest incidences of asthma. Reducing pollution has the effect of reducing asthma.

Brenda Afzal: Asthma isn't a reportable disease. We look at hospital admission rates.

Liz Martin: Use of energy efficient resources will help. We need clean energy, need to build better cars, switch to renewable energy and biofuels, and scrub carbon from fossil fuels. There is legislation on Capitol Hill that would do these things.

IV. Wrap-Up: Jill Engel-Cox

Dr. Engel-Cox thanked the panelists and the audience for their participation. The presentations will be posted on the COG web site. She asked the panelists if they would be willing to stay a few minutes longer to talk to individuals in the audience.

EVALUATIONS

Feedback forms were distributed to attendees and four forms were returned to staff. Two of the forms were positive about the meeting. Both positive responses said they like the speakers and the topics. One person suggested green buildings, future technological advances, alternative transportation, and bike lanes as future topics. One respondent did not comment on the meeting but provided information about how she learned about the meeting (AQPAC). The fourth respondent "failed" the speakers and was disappointed in the turnout.

AQ Town Meeting Attendance, 11/1/07

NAME	AFFIL	CONTACT
Achuko, Olivia	DC Dept of Environment UMD School of	
Afzal, Brenda	Nursing	Panelist
Bansal, Rajeev		
Bansal, Swati		
Bansal, Varun	TJHSST	
Beall, Cecily	DDOE	
Brown, Ann	AQPAC	
Butler, Bill	Mirant	
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Curley, George E.	Urban Protectors	
Dharale, Dawn	Fairfax Co. Planning	
Engel-Cox, Jill	AQPAC	
Floreen, Nancy	MWAQC	
Holmes, Brian	MD Hwy Contractors	
Leimann, Ernie	NOTICE	
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Martin-Perera, Elizabeth	NRDC	
Orleans, Bill	PGACT	
Owolabi, Bob	Fairfax Co. DOT	
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Van Fleet, Julie C.	AQPAC	
Vick, Justin	Pepco Holding Howard U. School of	
Walker, Dr. Bailus	Medicine	
Wright, James	Afro News	