Metropolitan Washington Council of Governments

BOARD OF DIRECTORS

October 14, 2015
12:00 - 2:00 P.M.
Walter A. Scheiber Board Room

AGENDA

12:00 P.M. **1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE**
William Euille, COG Board Chairman

12:05 P.M. **2. ANNOUNCEMENTS**
William Euille, COG Board Chairman

A. November Board Meeting – Thursday, November 12

B. COG Annual Meeting – Wednesday, December 9

12:10 P.M. **3. EXECUTIVE DIRECTOR'S REPORT**
Chuck Bean, COG Executive Director

12:15 P.M. **4. AMENDMENTS TO THE AGENDA**
William Euille, COG Board Chairman

12:20 P.M. **5. APPROVAL OF THE MINUTES FROM SEPTEMBER 9, 2015**
William Euille, COG Board Chairman

12:25 P.M. **6. ADOPTION OF CONSENT AGENDA ITEMS**
William Euille, COG Board Chairman

A. Resolution R53-2015 – Resolution authorizing COG to modify a contract with the Montgomery County Department of Environmental Protection to provide Anacostia River watershed trash TMDL monitoring support services

B. Resolution R54-2015 – Resolution authorizing COG to enter into contracts for cloud enabled backup solution

C. Resolution R55-2015 – Resolution approving the Round 8.4 Cooperative Forecasts

D. Resolution R56-2015 – Resolution authorizing COG to enter into a contract with MZ Strategies, LLC to prepare a strategic assessment report of the metropolitan Washington region's economic competitiveness

E. Resolution R57-2015 – Resolution adopting the COG 2016 Nominating Committee

F. Resolution R58-2015 – Resolution adopting the COG 2016 Legislative Committee

12:30 P.M. **7. PRESENTATION OF THE 2015 CLIMATE AND ENERGY LEADERSHIP AWARDS**
Roger Berliner, COG Climate, Energy, and Environment Policy Committee Chairman

Berliner will present the 2015 Climate and Energy Leadership Awards. Started in 2014, the purpose of this awards program is to recognize and encourage public agencies, non-governmental organizations and stakeholders in their efforts to achieve local and regional climate and energy goals in the Climate, Energy and Environment Policy Committee's Climate and Energy Action Plan.

Recommended Action: Receive briefing.

12:45 P.M. **8. U.S. REPRESENTATIVE BARBARA COMSTOCK**
Barbara Comstock, U.S. Representative

Comstock is a United States Representative for Virginia's 10th District. The district has attracted many leading internet, high-tech, health, and defense companies and is home to thousands of federal employees and other highly skilled professionals and entrepreneurs. The Congresswoman will share her goals and priorities for the region in the coming year.

Recommended Action: Receive briefing.

1:15 P.M. **9. UPDATE ON THE MULTI-SECTOR GREEN HOUSE GAS WORKING GROUP**
Stuart Freudberg, COG Deputy Executive Director
Robert Griffiths, COG Planning and Programming Director, Department of Transportation Planning

The Metropolitan Washington Air Quality Committee, the Climate, Energy and Environment Policy Committee, and the National Capital Region Transportation Planning Board asked the Council of Governments to convene a multi-sector, multi-disciplinary professional workgroup to examine viable and implementable local, regional, and state actions needed to reduce the region's greenhouse gases. The workgroup has been asked to quantify direct and co-benefits, costs, and potential implementation timeframes for the actions and consider exploration of greenhouse gas reduction goals, measures or targets for the Energy, Transportation, Land Use and Built Environment sectors. The Board will hear a presentation from Freudberg and Griffiths providing an update on this project and anticipated next steps.

Recommended Action: Receive briefing.

1:50 P.M. **10. OTHER BUSINESS**

2:00 P.M. **11. ADJOURN**

The next meeting is scheduled for Thursday, November 12, 2015.

Reasonable accommodations are provided upon request, including alternative formats of meeting materials.
Click here for information: www.mwcog.org/accommodations or call (202) 962-3300 or (202) 962-3213 (TDD)

AGENDA ITEM #2

ANNOUNCEMENTS

AGENDA ITEM #3

EXECUTIVE DIRECTOR'S REPORT

Metropolitan Washington
Council of Governments

EXECUTIVE DIRECTOR'S REPORT

October 2015

Policy Boards & Committees

NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD (TPB)
The TPB was briefed on the draft 2015 Amendment to the Constrained Long-Range Transportation Plan (CLRP), which includes a variety of updates, such as adding express lanes and bus service on I-66 inside and outside of the Beltway. After a 30-day public comment period, which began on September 10, the TPB will be asked to approve the amendment at its October 21 meeting.

METROPOLITAN WASHINGTON AIR QUALITY COMMITTEE (MWAQC)
Draft data released at the MWAQC meeting showed continued air quality improvement and indicated that the region will now meet federal standards for ground-level ozone. The region recorded just five days in 2015 when the region's air quality exceeded healthy levels for ground-level ozone. In 1998, there were 67 such days. None of this year's exceedance days reached Code Red unhealthy levels for a third straight summer.

CHESAPEAKE BAY AND WATER RESOURCES POLICY COMMITTEE (CBPC)
The CBPC toured Alexandria Renew Enterprise's state-of-the art education center, soccer field, and Nutrient Management Facility storage tanks. This tour provided examples for several of the committee's ongoing focus areas, including water infrastructure, water-energy sustainability efforts, and workforce development.

HUMAN SERVICES AND PUBLIC SAFETY POLICY COMMITTEE (HSPSPC)
Members of COG's Police Chiefs Committee gave a presentation on the President's Task Force on 21st Century Policing Report to HSPSPC. The group also received a briefing on body worn camera usage across the region, and the status of several state and local policies related to these cameras.

NATIONAL CAPITAL REGION EMERGENCY PREPAREDNESS COUNCIL (EPC)
EPC members participated in a discussion on the NCR Homeland Security Strategic Plan's revised vision and mission statements, annotated outline of new goals and objectives, and proposed timeline. The target for completing the revision of the document is early 2016.

Heart of COG:

JOSE LEMUS AND HOW APPLYING CUTTING EDGE TECHNOLOGY CAN RESULT IN BIG COST SAVINGS

Jose Lemus recently oversaw a project to migrate COG to Microsoft Office 365, which allows email to be hosted over the Internet. This switch will translate to more than $180,000 of savings over the next five years.

CLICK HERE TO READ THE STORY.

ECONOMIC COMPETITIVENESS
COG Executive Director Chuck Bean met with Maryland Deputy Commerce Secretary Benjamin Wu in Baltimore to discuss opportunities for collaboration among leaders from Maryland, Virginia, and the District of Columbia. The meeting built on conversations with Wu at COG's annual retreat.

TRANSPORTATION FUNDING
Bean and COG Transportation Planning Director Kanti Srikanth spoke at the Maryland General Assembly Joint Committee on Federal Relations about transportation funding and the role of metropolitan planning organizations (MPOs) like the TPB.

LOCAL GOVERNMENT, NONPROFIT PARTNERSHIP
Bean moderated a panel at the 15th Annual Public Private Conference, which was co-hosted by the District of Columbia Mayor's Office of Partnerships and Grant Services and the Center for Nonprofit Advancement. The panel focused on ways for nonprofits to strengthen their partnership with local governments and identify public sector funding for their projects.

CHESAPEAKE BAY PROGRAM
COG Regional Water Quality Management Chief Tanya Spano was appointed for one year as an At-Large Member of the Chesapeake Bay Program's (CBP) Water Quality Goal Implementation Team (WQGIT). This appointment recognizes COG's long-standing involvement and commitment to the Bay Program, and provides a more direct voice for members in the recommendations sent to the CBP's Management Board.

CAR FREE DAY
On September 22, COG's Commuter Connections program sponsored Car Free Day, an annual event that challenges everyone who drives a car to try greener, more efficient transportation options.

AIR QUALITY EDUCATION
COG's Clean Air Partners program was awarded the Communicators Award for the "Why You Should Give a Darn about Air Quality" infographic. The Communicators Award is an international program that recognizes marketing and communications work and is judged by the Academy of Interactive & Visual Arts.

CLEAN TECHNOLOGY
COG, the DC Sustainable Energy Utility, the Maryland Clean Energy Center, the Northern Virginia Regional Commission, and the Mid Atlantic Sustainability Network of the U.S. EPA hosted local leaders and national experts for a conference examining the state of the region's clean technology economy—one that is focused on reducing waste, improving efficiency, and powered by renewable energy.

Outreach Highlight:

COG, BMC FINALIZE AGREEMENT TO ADVANCE COOPERATIVE PURCHASING

Chuck Bean and Baltimore Metropolitan Council (BMC) Executive Director Michael Kelly signed an MOU that the two organizations will share a staff person focused on saving their members money through cooperative purchasing between their two regions.

Calendar

TRANSPORTATION PLANNING BOARD - October 21

REGION FORWARD COALITION - October 23

MULTI-SECTOR WORKING GROUP - October 27

CLIMATE, ENERGY, AND ENVIRONMENT POLICY COMMITTEE - October 28

COG ANNUAL MEETING - December 9

CLICK HERE FOR MORE ABOUT THESE AND OTHER COG MEETINGS & EVENTS

Media Highlights

REGION'S AIR QUALITY SHOWS IMPROVEMENT

Metropolitan Washington Air Quality Committee Chairman David Snyder was quoted by WTOP about improvements in the region's air quality. There were just five days in 2015 when the region's air quality exceeded healthy levels for ground-level ozone.
CLICK HERE FOR THE STORY

TPB RELEASES DRAFT AMENDMENT TO LONG RANGE TRANSPORTATION PLAN

At the September TPB meeting, board members received a briefing on the draft 2015 Amendment to the Constrained Long-Range Transportation Plan. TPB members and staff were quoted by WTOP about the proposed plan. CLICK HERE FOR THE STORY

THE LEGACY OF THE 2024 OLYMPIC BID

The COG Board of Directors was briefed by Jordan Goldstein and Bob Sweeney, leaders of the region's bid for the Summer Olympic Games in 2024. They spoke about the lessons and legacy of the proposal. The discussion was covered by the Washington Business Journal.
CLICK HERE FOR THE ARTICLE

Media Highlight:

GSA ADMINISTRATOR BRIEFS COG BOARD

GSA Administrator Denise Turner Roth briefed the COG Board of Directors about ways that the agency can leverage its presence to spur economic development in metropolitan Washington.

CLICK HERE FOR A RECAP BY THE WASHINGTON BUSINESS JOURNAL.

To view online with active links, click here.

Metropolitan Washington Council of Governments

CAPITAL REGION CONNECTIONS

News about the Council of Governments and our Members

September 17, 2015

Connect With Us

Featured Event

The Avance Center at George Washington University is partnering with COG and the Regional Primary Care Coalition to host the Regional Latino Health Disparities Conference: Breaking Down Structural Barriers to Latino Health Equity. The event will be held October 7. Register today.

Calendar

Car Free Day
September 22

Clean Tech Leadership Forum
October 5

More Events/Meetings

ICYMI on Twitter

The Council of Governments and our members and partners are active participants on social media. Here's a sampling of some tweets--in case you missed it--to show the wide array of topics covered on Twitter.

Federal Laboratory Consortium @federallabs

Shoutout to @FLCMidAtlantic & @RegionForward on your recent partnership! Looking forward 2 the #techtransfer activity you'll bring to the region!

GSA Administrator Speaks to COG Board

The COG Board of Directors welcomed GSA Administrator Denise Turner Roth to its September meeting. Roth discussed ways the agency's functions, including real estate, acquisition, and technology services affect metropolitan Washington. Roth and the board also discussed opportunities for the GSA and COG to work together in supporting local communities and the health of the region's economy. Read more in this article by the *Washington Business Journal*.

Officials Review Updates to Region's Long-Range Transportation Plan

At its September meeting, the National Capital Region Transportation Planning Board (TPB) focused on the 2015 amendment to the Constrained Long-Range Transportation Plan (CLRP), which includes the addition of express lanes and bus service on I-66 inside and outside the Capital Beltway. Officials also reviewed a Performance Analysis of the plan's impact on future travel, the environment, and access to jobs. The plan amendment and accompanying Air Quality Conformity Analysis have been released for public comment through October 10. Read more and submit a comment.

Emergency Preparedness Council Urges Action During National Preparedness Month

September is National Preparedness Month. To help spread the word, National Capital Region Emergency Preparedness Council Chairman Frank Principi of Prince William County recorded a short video at COG urging the region's residents to prepare themselves, their families, and their businesses for potential emergency situations. Watch the video.

Officials Discuss Legacy of Olympic Bid

Public and private sector leaders developed a vision for hosting the 2024 Olympics in metropolitan Washington that would focus on and enhance regional assets like walkable communities, an expansive transit system, and natural resources like the Potomac and Anacostia rivers and Chesapeake Bay. In a presentation before the COG Board of Directors,

Fairfax County
@fairfaxcounty

Have a plan if your family is not together when disaster strikes? Create a plan at readynova.org #natlprep

About COG
The Council of Governments is an independent, nonprofit association where area leaders address regional issues affecting the District of Columbia, suburban Maryland and Northern Virginia. COG's membership is comprised of 300 elected officials from 22 local governments, the Maryland and Virginia state legislatures, and U.S. Congress

organizers of the 2024 bid discussed its legacy and outlined opportunities for future cooperation. Read more on the Region Forward blog.

Heart of COG: Wenjing Pu

Wenjing Pu was among the first to use "big data" for transportation research purposes, and he brought this expertise with him when he joined COG as a transportation planner in 2009. Today, as a transportation engineer, he develops the *Congestion Management Process Technical Report* and the quarterly *National Capital Region Congestion Report*. An important part of his role is "telling the story" of these findings – he recently joined planner Ben Hampton for an interview with *The Washington Post* on seasonal travel patterns. Read more about this month's Heart of COG.

COG Receives Federal Funding to "Push the Frontiers of Climate Action"

Last December, White House officials named COG and its member governments as one of 16 national Climate Action Champions, recognizing local and regional efforts to reduce greenhouse gas emissions and enhance climate resilience. This week, the U.S. Department of Energy announced that metropolitan Washington and nine other Champions would collectively receive $800,000 in technical assistance to advance climate projects. In this region, funding would support research to advance microgrid development and improve infrastructure resilience. Read more.

Report Highlights Maryland's Solar Energy Progress

Montgomery County's Paperless Airplane newsletter recently featured a new report from Environment Maryland that shows per capita solar power capacity grew 50 percent in Maryland last year, making Maryland 12th in the nation for total solar power capacity per person. The newsletter noted that Montgomery County's solar permits tripled from fiscal year 2014 to 2015. Read more.

Metro Steers Toward Sustainable Transportation

Metro, in partnership with Complete Coach Works (CCW), and COG, hosted a demonstration on August 24 of a Zero Emission Propulsion System (ZEPS) all-electric bus at WMATA's Carmen Turner Facility in Landover, Maryland (*pictured above*). Local, state, and federal representatives from across the region attended the demonstration to enhance their understanding of this technology. Read more on the Region Forward blog.

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Metropolitan Washington Council of Governments

MEMORANDUM

TO: COG Board of Directors

FROM: Richard Roisman, COG Transportation Planner

SUBJECT: Status Report on Federal Aviation Administration Reauthorization and Regional Airport Policy

DATE: October 5, 2015

Included in the Board's packet this month is a September 21, 2015 letter from Congressman Gerald Connolly (D, VA-11th) with an update on Federal Aviation Administration (FAA) reauthorization. Included as an attachment to the Congressman's September 21 letter is a May 5, 2015 letter from the Northern Virginia Congressional delegation and Congresswoman Eleanor Holmes Norton (D, District of Columbia) to the chairs and ranking members of the House and Senate committees who have oversight responsibility for the FAA. Both letters underscore the delegation and Congressman Connolly's opposition to further changes in the slot and perimeter rules in place at Ronald Reagan Washington National Airport (DCA). Congressman Connolly's letter also discusses modernizing the Passenger Facility Charge (PFC) program that funds airport improvements.

Congressman Connolly's position on the DCA slot and perimeter rules and interest in PFC modernization are consistent with the COG Board's positions on these issues expressed in unanimously adopted resolutions R37-2015 and R38-2015 and transmitted in Chairman Euille's letter on behalf of the Board to the regional Congressional delegation and local elected officials in early July. It is a positive outcome that the Board has received this response from Rep. Connolly, in addition to the action the delegation has already taken by raising the issues on slot and perimeter rules in previous correspondence with the Congressional committee chairs and ranking members.

Congressman Connolly's prediction in his letter of a short-term extension for FAA funding has come to pass: FAA authorization would have expired on September 30, but that evening President Obama signed into law the Airport and Airway Extension Act of 2015 (H. R. 3614), which is a "clean" extension of FAA funding until March 31, 2016. This funding extension does not make any changes to the slot and perimeter rules at DCA nor to the PFC program. Negotiations on Capitol Hill for a long-term FAA reauthorization bill continue, but there is no further new information on the prospects for nor intent of a long-term bill from either side of Congress at this time.

GERALD E. CONNOLLY
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Congress of the United States
House of Representatives
Washington, DC 20515-4611

COMMITTEE ON
OVERSIGHT AND GOVERNMENT REFORM
SUBCOMMITTEES:
RANKING MEMBER, GOVERNMENT OPERATIONS
INFORMATION TECHNOLOGY

COMMITTEE ON FOREIGN AFFAIRS
SUBCOMMITTEES:
MIDDLE EAST AND NORTH AFRICA
ASIA AND THE PACIFIC

September 21, 2015

The Honorable William D. Euille
Chairman
Metropolitan Washington Council of Governments
777 North Capitol Street NE, Suite 300
Washington, D.C. 2002

Dear Honorable Euille,

I write to share with you an update on the upcoming Federal Aviation Administration (FAA) reauthorization. I appreciate your commitment to preserving the vitality of Washington National and Dulles International airports, which are vital components of our transportation network and serve as economic engines for the National Capital Region.

With Congress having just a few legislative days to advance this critical legislation before the current authorization expires Sept. 30, it appears a short-term extension will be necessary. Please know that I share your serious concerns with any efforts to further tinker with the "high density" (or slot) and "perimeter" rules established by Congress for National Airport. Earlier this year, I joined with my colleagues in the regional Congressional delegation in sending a letter to the Chairs and Ranking Members of the House and Senate transportation committees to express our strong opposition to any additional changes in the forthcoming reauthorization (see attached May 5 letter).

When Congress transferred the federal airports to the Metropolitan Washington Airports Authority (MWAA) in 1987, it created a framework to manage their growth and to balance travel demand across the region. Dulles was designated as the long-haul, international gateway, and National was to be a more short-haul, regional airport given its air- and ground-space limitations. Unfortunately, Congress has deliberately disrupted that balance over the course of the last three reauthorization bills by allowing 20 round trip flights outside the perimeter restriction at National to serve the parochial interests of Members of Congress representing western states.

Had there been any economic analysis performed, my colleagues would understand the damage they're inflicting on our regional economy. Changes in the perimeter rule, coupled with aviation industry mergers, have diverted passenger traffic from Dulles to National. The total volume of annual passengers at Dulles has dropped by 19% over the past decade to roughly 21 million. Meanwhile, passenger traffic at National, coming off three years of record growth, is about to overtake Dulles, despite National having capacity for just 15 million passengers. Further, the federal government itself has made significant investments in Dulles that cannot be ignored, particularly with the construction of the Silver Line, and the return on those investments is undermined by any further changes to the slot and perimeter rules at National.

With respect to other provisions in the reauthorization bill, I appreciate your interest in modernizing the Passenger Facility Charge to better reflect current infrastructure and finance needs. As you know, the rate has

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been frozen since 2000 and has lost half its purchasing power. We must ensure our nation's airports are able to make necessary improvements to maintain safety and to provide for the efficient movement of passengers and commerce.

As Congress continues to debate this important legislation, you can count on me to strongly advocate on our region's behalf. Thank you again for contacting me to share your valuable insight and analysis.

Sincerely,

Gerald E. Connolly
Member of Congress
11th District, Virginia

GC/DB

Congress of the United States
Washington, DC 20515

May 5, 2015

The Honorable John Thune
Chairman
Committee on Commerce, Science and Transportation
United States Senate
Washington, D.C. 20510

The Honorable Bill Nelson
Ranking Member
Committee on Commerce, Science and Transportation
United States Senate
Washington, D.C. 20510

The Honorable Bill Shuster
Chairman
Committee on Transportation and Infrastructure
United States House of Representatives
Washington, D.C. 20515

The Honorable Peter A. DeFazio
Ranking Member
Committee on Transportation and Infrastructure
United States House of Representatives
Washington, D.C. 20515

Dear Chairmen and Ranking Members:

As the 2015 Federal Aviation Administration (FAA) reauthorization bill comes before the Congress, we would like to make clear our strong opposition to any attempts aimed at changing the current High Density (slot) and perimeter rules at Ronald Reagan Washington National Airport.

Reagan National and Washington Dulles International Airports are the federal government's only commercial airports. When Congress passed the Metropolitan Washington Airports Authority Compact legislation in 1986 that created the Airports Authority, it charged that entity with the duty of operating and managing the airports as a single system with the two airports having complementary roles. Acknowledging the physical limitations of Reagan National, Congress mandated the High Density Rule (or "Slot" rule) and "Perimeter" rule. Dulles International was planned as the growth airport for the region's aviation needs. For over two decades, passenger activity at Dulles International grew while the slot rule at Reagan National kept flight activity relatively stable, consistent with the constrained facilities at Reagan National. In accordance with its Congressional mandate, the Airports Authority made major capital investments at Dulles International from 1989 to 2011 to accommodate this growth as well as anticipated future growth in air travel. Both Reagan and Dulles Airports flourished under the billions of dollars that the Airports Authority and the federal government invested in the airports and are now financing the extension of Metrorail to Dulles Airport and beyond.

The Authority's work also helped achieve a balance with Thurgood Marshall Baltimore Washington International (BWI) so that the broader interests of the Maryland/DC/Virginia

region are well served. The result has been three world class airports with coordinated access to the nation and the world that has yielded dramatic investment in the region's economy by the private sector. The multi-billion dollar economy of the metropolitan Washington region is driven in part by its aviation system, as evidenced by the relocation of major corporate headquarters such as SAIC, Hilton Hotels and Volkswagen to locations near our area airports. We must acknowledge that changes to the flight rules at Reagan National can have profound impacts both on operations at Dulles International and BWI, and on the economies of our home states and the region.

However, in the last three FAA reauthorization bills, Congress has made changes to these rules that have disrupted the balance in this two-airport system. After three consecutive years of record growth, Reagan National is forecasted to overtake Dulles International in terms of passenger enplanements in 2015. Changes in flight activity resulting from legislative loosening of the slot and perimeter rules, combined with airline mergers and commercial transactions, have led to significant congestion and stress on Reagan National's facilities. As a consequence, airline growth at Dulles International has declined as carriers have shifted flights from Dulles International to Reagan National. Since 2000, domestic passengers at Reagan National have grown by 31%, while Dulles has declined 9%. Since 2012, domestic passengers at Reagan National have grown by 5.5%, while Dulles declined by 7.2%. That decline in domestic traffic at Dulles International is, in part, directly attributable to changes made by Congress to the operational rules at Reagan National. Any further loosening of the existing slot and perimeter rules will exacerbate the imbalance between the region's important airport assets.

Changes to existing law should not be made unilaterally by Congress, but rather through the mutual agreement of all parties concerned. History has shown that increasing slots to beyond-perimeter destinations outside this process results in poor business decisions, anti-competitive behavior and unfair giveaways to one airline over another. Just as you would not want out-of-state Members dictating operations at your home state airports, we will strongly oppose efforts to make changes at airports that serve our communities and constituents.

Thank you for your leadership in the critical area of aviation policy. We look forward to working with you to pass an FAA Reauthorization bill this year that leaves intact the current rules governing operations at Reagan National Airport.

Sincerely,

Mark R. Warner
United States Senator

Tim Kaine
United States Senator

Gerald E. Connolly
Member of Congress

Eleanor Holmes Norton
Member of Congress

Donald S. Beyer Jr.
Member of Congress

Barbara Comstock
Member of Congress

AGENDA ITEM #4

AMENDMENTS TO THE AGENDA

AGENDA ITEM #5

APPROVAL OF THE MINUTES FROM SEPTEMBER 9, 2015

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
777 North Capitol Street, NE
Washington, D.C. 20002

MINUTES
Board of Directors Meeting
September 9, 2015

BOARD MEMBERS AND ALTERNATES PRESENT AND NOT PRESENT: See attached chart for attendance

STAFF:
Chuck Bean, Executive Director
Sharon Pandak, General Counsel
Monica Beyrouti, Member Services Associate/Clerk to the Board

GUESTS:
Denise Turner-Roth, Administrator, General Services Administration

1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE
Chairman Euille called the meeting to order at 12:20PM and led those present in the Pledge of Allegiance.

2. ANNOUNCEMENTS
A. Latino Health Forum – October 7

3. EXECUTIVE DIRECTOR'S REPORT
The Executive Director briefed the board on upcoming regional outreach including a meeting with the Baltimore Metropolitan Council. Mr. Bean discussed the upcoming Papal visit and reviewed transportation accommodations and preparations in the region. COG is working with WMATA on a Metro Communications Study. Mr. Bean highlighted the Farm to Table movement and the region's plan to create a position for a Food System Value Change Coordinator at COG. Mr. Bean shared a few media and news highlights over the past month including items on infrastructure and transportation. Mr. Bean recognized Wenjing Pu as this month's Heart of COG and for his planning work on using "Big Data" to forecast travel patterns in the region.

4. AMENDMENTS TO AGENDA

5. APPROVAL OF MINUTES
The minutes of the July 8, 2015 Board Meeting were approved.

6. ADOPTION OF CONSENT AGENDA ITEMS

A. RESOLUTION RATIFYING EXECUTIVE COMMITTEE DECISION AUTHORIZING COG TO ENTER INTO A CONTRACT WITH FAIRFAX COUNTY, PRINCE GEORGE'S COUNTY, AND THE DISTRICT OF COLUMBIA TO PROVIDE A FIRE LIAISON TO THE WMATA RAIL OPERATIONS AND COORDINATION CENTER (ROCC)
The Board ratified Resolution R46-2015 authorizing the Executive Committee decision for the Executive Director, or his designee, to receive and expend up to $250,000 to contract with Fairfax County, Prince George's County, and the District of Columbia to provide a Fire Liaison to the WMATA ROCC for 40 hours per week, primarily during morning and afternoon rush hours for one year. Funding for this effort will be provided by WMATA. **No COG matching funds are required.**

B. RESOLUTION AUTHORIZING COG TO ENTER INTO A CONTACTS FOR FIRST FLOOR INFRASTRUCTURE RENOVATIONS

The Board adopted Resolution R47-2015 authorizing the Executive Director, or his designee, to enter into contracts not to exceed $175,000 with building management and selected contractors for the completion of the first floor infrastructure renovations. COG owns and maintains five conference rooms that comprise the perimeter meeting space on the first floor. The building owns and maintains the central training center as well as all common areas. The ceiling grid, lighting systems, HVAC controls, and door security systems are original to the building in 1989 and are in need of replacement. The new systems will be more energy efficient and bring the conference rooms up to ADA compliance. COG and the building will enter into a joint procurement for the renovations as a way to reduce project risk, impact, and costs. Funding for this project is budgeted for in the FY2016 Facilities budget.

C. RESOLUTION AUTHORIZING COG TO RECEIVE AND EXPEND FUNDING FROM NCR DRINKING WATER SYSTEMS TO SUPPORT A REGIONAL DRINKING WATER SECURITY MONITORING SYSTEM TECHNICIAN

The Board adopted Resolution R48-2015 authorizing the Executive Director, or his designee, to submit a proposal and enter into contracts not to exceed $27,000 with the NCR water systems to support a regional drinking water security monitoring system technician, Isidro Carranza, iABS technician. **No COG matching funds are required.**

D. RESOLUTION AUTHORIZING COG TO ENTER INTO A MEMORANDUM OF UNDERSTANDING WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND RECEIVE FUNDS TO PROVIDE ANACOSTIA RIVER WATERSHED PARTNERSHIP -RELATED SUPPORT SERVICES

The Board adopted Resolution R49-2015, authorizing the Executive Director, or his designee, to execute a memorandum of understanding with the Maryland Department of the Environment (MDE) in an amount not to exceed $42,330 for Anacostia Partnership-related technical and administrative support services. The project duration is one year. **No COG matching funds are required.**

E. RESOLUTION AUTHORIZING COG TO PROCURE AND ENTER INTO A CONTRACT TO DEVELOP AND CONDUCT THE 2015 FULL SCALE EXERCISE FOR THE DISTRICT OF COLUMBIA

The Board adopted Resolution R50-2015 authorizing the Executive Director, or his designee, to receive and expend grant funds from the District of Columbia Homeland Security and Emergency Management Agency in an amount not to exceed $472,500. COG has been requested by the District of Columbia Homeland Security and Emergency Management Agency (HSEMA) to procure a contractor to support the development and conduct of a Full Scale Exercise (FSE) in accordance with the Homeland Security Exercise and Evaluation Program and applicable HSEMA plans, policies and procedures. Funding for this effort will be provided through a subgrant from the SAA for the National Capital Region. **No COG matching funds are required.**

F. RESOLUTION AUTHORIZING COG TO ENTER INTO A COOPERATIVE AGREEMENT WITH THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) TO SUPPORT A WASHINGTON REGIONAL AGRICULTURAL FOOD VALUE CHAIN COORDINATOR

The Board adopted Resolution R51-2015, authorizing the Executive Director, or his designee, to enter into a cooperative agreement with the USDA for the purposes of supporting a Regional Food Value Chain Coordinator position at COG with initial funding of $75,000. The initial project duration will be two years from the receipt of funding. No COG cash match is required.

ACTION: The Board adopted Resolutions R46-2015 and R51-2015.

7. RETREAT FOLLOW - UP
Mr. Bean reviewed the outcomes of the workshops and discussions of the 2015 COG Leadership Retreat and noted specific potential action items for the Board to discuss. An agreement to expand cooperative work with the Federal Laboratory Consortium for Technology Transfer was proposed to the board for consideration.

ACTION: The board adopted Resolution R52-2015.

8. PARTNERSHIP OPPORTUNITIES WITH GSA
GSA Administrator Turner Roth briefed the board on her role as Administrator for the U.S. General Services Administration (GSA) and provided insight into the goals and mission of her agency. Administrator Roth also discussed how the GSA and COG can work together throughout the metropolitan Washington region and her desire to continue strengthening our relationship in the future.

ACTION: Received briefing.

9. LEGACY OF THE OLYMPIC BID
Mr. Goldstein and Mr. Sweeney briefed the board on the history of the Olympic bid in metropolitan Washington and provided insight on the recent 2024 bid including the effects of hosting on a region's infrastructure, economy, environment, and community.

ACTION: Received briefing.

10. OTHER BUSINESS
There was no other business.

11. ADJOURNMENT – Upon motion duly made and seconded, the meeting was adjourned at 2:00PM.

September 2015 Attendance

Jurisdiction	Member	Y/N	Alternate	Y/N
District of Columbia				
Executive	Hon. Muriel Bowser		Brenda Donald Brian Kenner (Andrew Trueblood)	
	Mr. Rashad Young	Y	Kevin Donahue	
Council	Hon. Phil Mendelson	Y		
	Hon. Kenyan R. McDuffie			
Maryland				
Bowie	Hon. G. Frederick Robinson		Hon. Dennis Brady	Y
Charles County	Hon. Ken Robinson		Hon. Amanda Stewart Hon. Peter Murphy	
City of Frederick	Hon. Randy McClement			
Frederick County	Hon. Jan Gardner	Y	Mr. Roger Wilson	Y
College Park	Hon. Andrew Fellows	Y	Hon. Denise Mitchell	
Gaithersburg	Hon. Jud Ashman		Hon. Cathy Drzyzgula Hon. Neil Harris	
Greenbelt	Hon. Emmett Jordan	Y	Hon. Judith "J" Davis	
Montgomery County				
Executive	Hon. Isiah Leggett		Mr. Tim Firestine	
Council	***Hon. Roger Berliner***	Y		
	Hon. Nancy Navarro	Y		
Prince George's County				
Executive	Hon. Rushern Baker		Mr. Nicholas Majett	Y
Council	Hon. Karen Toles	Y-CC		
	Hon. Andrea Harrison			
Rockville	Hon. Bridget Newton		Emad Elshafei	
Takoma Park	Hon. Bruce Williams		Hon. Terry Seamens	
Maryland General Assembly	Hon. Brian Feldman			
Virginia				
Alexandria	***Hon. William Euille***	Y	Hon. Redella Pepper	
Arlington County	Hon. Walter Tejada	Y	Hon. Jay Fisette	
City of Fairfax	Hon. David Meyer		Hon. Jeffrey Greenfield	
Fairfax County	Hon. Sharon Bulova		Hon. Catherine Hudgins	
	Hon. Penelope A. Gross	Y	Hon. Patrick Herrity	
	Hon. John Foust	Y	Hon. Michael Frey	
Falls Church	Hon. David Tarter		Hon. David Snyder	Y
Loudoun County	Hon. Matt Letourneau	Y		
Loudoun County	Hon. Scott York		Hon. Shawn Williams	
Manassas	Hon. Jonathan Way	Y		
Manassas Park	Hon. Michael Carrera	Y	Hon. Suhas Naddoni	
Prince William County	Hon. Frank Principi	Y	Pete Candland	
	Hon. Jeanine Lawson	Y		
Virginia General Assembly	Hon. George Barker			

Total: 20

AGENDA ITEM #6

ADOPTION OF CONSENT AGENDA ITEMS

ADOPTION OF CONSENT AGENDA ITEMS

A. Resolution R53-2015 – Resolution authorizing COG to modify a contract with the Montgomery County Department of Environmental Protection to provide Anacostia River watershed trash TMDL monitoring support services

The Board will be asked to adopt Resolution R53-2015, authorizing the Executive Director, or his designee, to execute a contract modification, not to exceed $30,000, to provide technical trash TMDL monitoring-related assistance to Montgomery County in the Anacostia Watershed. This service includes performing seasonal tributary stream trash surveys and preparing a summary technical memorandum report. The project duration will be one (1) year from the receipt of funding. No COG matching funds are required.

Recommended Action: Adopt Resolution R53-2015.

B. Resolution R54-2015 – Resolution authorizing COG to enter into contracts for cloud enabled backup solution

The Board will be asked to adopt Resolution R54-2015, authorizing the Executive Director or his designee to enter into contracts not to exceed $500,000 with PCM and Barracuda Networks for the procurement and installation of their cloud enabled backup solution. COG maintains and operates an enterprise grade information technology network. Reliable data backups are an essential component to information technology operations. Backups protect COG from daily accidental file deletions, failed software upgrades, and larger disasters. COG's current backup environment was procured in 2008. The current environment is technically obsolete and does not meet COG's current or projected future backup needs. COG issued a Request for Proposals and ultimately selected the proposal submitted by PCM and Barracuda Networks. The cloud enabled backup will deliver faster and more reliable backups than tape backups. The proposal covers all costs related to backup and cloud storage for five years. The $500,000 requested for this contract is a 50% savings against a projected $1M it would take to upgrade and operate a tape backup solution for five years. The funds for this project are included in COG's approved IT Annual Operating Budget for FY2016. Additional funding for 50% of the annual depreciation expense will be provided by the Department of Transportation Planning beginning in FY2017.

Recommended Action: Adopt Resolution R54-2015.

C. Resolution R55-2015 – Resolution approving the Round 8.4 Cooperative Forecasts

The Board will be asked to approve Resolution R55-2015, adopting the Round 8.4 Cooperative Forecasts. In February, the Board was briefed on the draft Round 8.4 Cooperative Forecasts of population, households and employment to the year 2040 and approved their use as inputs by the National Capital Region Transportation Planning Board (TPB) staff in the Air Quality Conformity Analysis of the 2015 Financially Constrained Long-Range Plan (CLRP) Amendment and the FY2015 to 2020 Transportation Improvement Program (TIP). The TPB released the results of the Air Quality Conformity Analysis on September 16, and is scheduled to approve the results and adopt the CLRP and TIP at its October 21 meeting. Consistent with Board policy, the Forecasts are approved concurrently with the Air Quality Conformity results.

Recommended Action: Adopt Resolution R55-2015.

D. Resolution R56-2015 – Resolution authorizing COG to enter into a contract with MZ Strategies, LLC to prepare a strategic assessment report of the greater Washington region's economic competitiveness

The Board will be asked to adopt Resolution R56-2015 authorizing the Executive Director, or his designee, to enter into a contract with MZ Strategies, LLC in the amount of $25,000 to prepare a Strategic Assessment Report of the Greater Washington Region's Economic Competiveness. During calendar year 2015, the COG Board and the Region Forward Coalition have adopted a focus on Economic Competitiveness for policy makers, planners and business leaders to collectively address. During this time MZ Strategies, LLC (MZ Strategies) has supported COG staff and the Region Forward coalition in identifying themes, reports and speakers that can help educate regional leaders on the various elements of competitiveness. As an outgrowth of this collective work and in keeping with the Chairman's focus in 2015 on regional economic competitiveness, COG's Executive Director has identified the value in producing a "Strategic Assessment of the Greater Washington Region's Economic Competitiveness" report in early 2016. MZ Strategies, LLC will work with COG staff to produce this Strategic Assessment to present the region's performance across a set of key competitiveness indicators, and summarize key findings from work this year by COG and regional partners, with a planned dissemination in early 2016 through the COG Board. Funding is from existing FY2016 COG Work Program and Budget.

Recommended Action: Adopt Resolution R56-2015.

E. Resolution R57-2015 – Resolution adopting the COG 2016 Nominating Committee

The Board will be asked to adopt Resolution R57-2015, wherein the COG Board Chairman shall recommend members to serve on the 2016 Nominating Committee. The Committee will recommend: 1) a slate of corporate officers for action by the General Membership at its Annual Meeting on December 9, 2015; and 2) a slate of officers for the Board of Directors for action by the Board at its January 13, 2016 meeting.

Recommended Action: Adopt Resolution R57-2015.

F. Resolution R58-2015 – Resolution adopting the COG 2016 Legislative Committee

The Board will be asked to adopt Resolution R58-2015, authorizing the Board Chairman to appoint several COG members to serve on the 2016 Legislative Committee. The Committee will review staff and committee recommendations for COG's 2016 legislative and policy priorities, an important tool to showcase the region's priorities as officials prepare for their 2016 legislative sessions. The COG Board will take action on the recommendations at its January 2016 meeting. Upon adoption, the recommendations will then become part of COG's outreach activities and communication materials in early 2016.

Recommended Action: Adopt Resolution R58-2015.

Resolution R53-2015
October 14, 2015

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
777 North Capitol Street, N.E.
Washington, D.C. 20002-4239

RESOLUTION AUTHORIZING COG TO MODIFY A CONTRACT WITH THE MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION TO PROVIDE ANACOSTIA RIVER WATERSHED TRASH TMDL MONITORING SUPPORT SERVICES

WHEREAS, the Metropolitan Washington Council of Governments (Council) is both a nationally recognized watershed restoration expert and has provided coordination, management, and technical support for the Anacostia restoration effort since 1987; and

WHEREAS, the Council has a continuing interest in the restoration, management and protection of the Anacostia River and its tributaries; and

WHEREAS, the Anacostia watershed has been listed under section 303 (d) of the Clean Water Act as being impaired by high trash levels, and the state of Maryland has developed a trash total maximum daily load (TMDL) for its portion of the watershed; and

WHEREAS, since 1987, Montgomery County has been instrumental in the restoration of the Anacostia River and its tributaries, and is an active voting member of the Anacostia Watershed Steering Committee (AWSC) and Anacostia Watershed Management Committee (AWMC); and

WHEREAS, the Council has worked cooperatively with Montgomery County, the state of Maryland and Anacostia citizenry to successfully monitor and reduce trash levels in both the County and other parts of the Anacostia watershed; and

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS THAT;

The Executive Director, or his designee, is authorized to modify a contract to provide Anacostia trash TMDL monitoring services to Montgomery County. The services identified in the contract will not exceed the amount of $30,000 with funding provided by Montgomery County. No COG match is required.

Resolution R54-2015
October 14, 2015

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
777 North Capitol Street, NE
Washington, D.C. 20002-4290

RESOLUTION AUTHORIZING COG TO ENTER INTO CONTRACTS FOR CLOUD ENABLED BACKUP SOLUTION

WHEREAS, the Metropolitan Washington Council of Governments (COG) owns and operates an enterprise grade information technology environment; and

WHEREAS, reliable data backups are an essential component to information technology operations; and

WHEREAS, COG's current tape backup environment is both at the end of useful hardware life and also no longer meeting backup time and capacity requirements; and

WHEREAS, COG issued a Request for Proposals and a technical selection committee unanimously selected the proposal from PCM and Barracuda Networks; and

WHEREAS, cloud enabled backup will provide faster backup and recovery times and meet long term storage as required by COG's records retention policy; and

WHEREAS, COG performed a cost analysis and determined that the $500,000 solution from Barracuda Networks has a 50% less 5-year total cost of ownership compared to $1M for traditional tape backup; and

WHEREAS, funding for the solution will be provided by the IT Operation Budget for FY2016 and will be split 50% with the Department of Transportation Planning beginning in FY2017.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS THAT:

The Executive Director, or his designee, is authorized to enter into contracts not to exceed $500,000 with PCM and Barracuda Networks for the procurement and installation of their cloud enabled backup solution submitted in response to the Request for Proposals. The funds for this project are included in COG's approved IT Annual Operating Budget for FY2016. Additional funding for 50% of the annual depreciation expense will be provided by the Department of Transportation Planning beginning in FY2017.

Resolution R55-2015
October 14, 2015

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
777 North Capitol Street, N.E.
Washington, D.C. 20002

RESOLUTION ADOPTING THE ROUND 8.4 COOPERATIVE FORECASTS OF POPULATION, HOUSEHOLDS, AND EMPLOYMENT

WHEREAS, on September 10, 1975, the Board of Directors of the Metropolitan Washington Council of Governments (hereinafter called the Council) authorized the development of a Cooperative Forecasting Program as a component of the Metropolitan Growth Policy Program; and

WHEREAS, the purpose of this Program is to provide current forecasts of population, households, and employment growth and change for use in metropolitan planning programs, including the Water Resources, Transportation Planning, Air Quality, Energy Resources, Metropolitan Development and Housing Programs; and

WHEREAS, to further enhance coordination between regional land use and transportation planning, on February 12, 2003 the COG Board adopted Resolution R8-03, which recommends that final approval of each round of the Cooperative Forecasts should occur concurrently with the completion of the National Capital Region Transportation Planning Board's (TPB) Air Quality Conformity Analysis of the Transportation Improvement Program (TIP) and the Financially-Constrained Long Range Plan (CLRP);

WHEREAS, on February 11, 2015, the COG Board approved Resolution R15-2015 approving in draft the Round 8.4 Cooperative Forecasts for use by the TPB staff in the Air Quality Conformity Assessment of the 2015 Financially Constrained Long Range Plan (CLRP) and the FY 2015-2020 Transportation Improvement Program (TIP); and

WHEREAS, at its September 16 meeting, the TPB released the draft results of the Air Quality Conformity Analysis of the CLRP and TIP and is scheduled to adopt them at their meeting on October 21.

NOW, THEREFORE, BE IT RESOLVED BY THE COG BOARD OF DIRECTORS THAT:

1. The Board approves the Round 8.4 Forecasts attached as part of this Resolution.

2. The Board commends the Planning Directors Technical Advisory Committee and Cooperative Forecasting Subcommittee for their contributions to the effort to date and charges them with monitoring economic conditions and significant local land use plan changes.

Summary of Intermediate Employment Forecasts
Round 8.4 Cooperative Forecasts
(Thousands)

COG Board of Directors 10/13/15

(Changes Received in Italic) JURISDICTION	2010	2015	2020	2025	2030	2035	2040	2010 to 2040 Number	2010 to 2040 % Change
District of Columbia	783.5	815.0	861.8	905.8	944.1	973.0	1,001.8	**218.4**	**27.9%**
Arlington County	*222.3*	*219.1*	*228.9*	*243.6*	*265.7*	*280.7*	*301.3*	***79.0***	***35.5%***
City of Alexandria	*102.9*	*108.7*	*115.1*	*130.6*	*145.3*	*157.6*	*163.4*	***60.5***	***58.8%***
Central Jurisdictions	**1,108.7**	**1,142.8**	**1,205.8**	**1,280.0**	**1,355.1**	**1,411.3**	**1,466.5**	**357.8**	**32.3%**
Montgomery County	510.3	532.0	564.4	598.8	635.3	674.0	715.1	**204.8**	**40.1%**
City of Rockville (1)	73.7	76.3	80.2	85.6	94.0	100.0	105.7	**31.9**	**43.3%**
City of Gaithersburg (1)	49.1	52.8	55.3	59.4	64.3	69.3	74.5	**25.5**	**51.9%**
Prince George's County	342.6	357.0	377.9	403.1	427.5	457.3	497.7	**155.1**	**45.3%**
Fairfax County (2)	625.8	661.0	722.1	775.8	825.5	857.4	886.8	**261.0**	**41.7%**
City of Fairfax	20.4	20.8	21.9	22.8	23.7	24.6	25.6	**5.2**	**25.6%**
City of Falls Church	11.4	12.0	14.3	16.2	17.6	18.0	18.3	**6.9**	**60.5%**
Inner Suburbs	**1,510.4**	**1,582.8**	**1,700.5**	**1,816.7**	**1,929.5**	**2,031.3**	**2,143.4**	**633.0**	**41.9%**
Loudoun County	145.1	163.9	197.3	224.2	248.8	264.2	278.2	**133.1**	**91.8%**
Prince William County	*123.6*	*133.5*	*152.4*	*172.6*	*193.1*	*214.3*	*236.6*	***113.0***	***91.5%***
City of Manassas	23.6	24.0	26.2	27.7	29.2	30.7	32.2	**8.6**	**36.5%**
City of Manassas Park	4.5	4.6	4.7	4.8	4.9	5.0	5.1	**0.6**	**12.6%**
Charles County (3)	62.2	68.4	71.7	74.7	77.5	80.3	83.1	**20.9**	**33.6%**
Frederick County	98.7	102.0	106.2	109.8	114.6	116.3	125.6	**26.9**	**27.2%**
City of Frederick (4)	46.9	47.3	49.8	51.4	55.4	56.8	62.2	**15.3**	**32.7%**
Outer Suburbs	**457.7**	**496.4**	**558.5**	**613.8**	**668.1**	**710.9**	**760.8**	**303.1**	**66.2%**
Virginia Jurisdictions	**1,279.6**	**1,347.7**	**1,482.8**	**1,618.2**	**1,753.8**	**1,852.6**	**1,947.5**	**667.9**	**52.2%**
Maryland Jurisdictions	**1,013.8**	**1,059.4**	**1,120.2**	**1,186.5**	**1,254.8**	**1,327.9**	**1,421.4**	**407.7**	**40.2%**
COG PLANNING AREA	**3,076.8**	**3,222.0**	**3,464.8**	**3,710.5**	**3,952.7**	**4,153.4**	**4,370.8**	**1,293.9**	**42.1%**

(1) Included in Montgomery County total.

(2) Forecasts for all years include Fairfax County Government employees working at the Fairfax County Public Safety Center.

(3) Projections from 2010 to 2030 prepared by the Maryland Department of Planning, February 2009.

(4) Included in Frederick County total.

Summary of Intermediate Population Forecasts

Round 8.4 Cooperative Forecasts

(Thousands)

COG Board of Directors 10/13/15

(Changes Received in Italic) JURISDICTION	2010	2015	2020	2025	2030	2035	2040	2010 to 2040 Number	2010 to 2040 % Change
District of Columbia	601.8	660.5	715.5	764.3	808.7	852.4	883.6	**281.8**	**46.8%**
Arlington County	*207.6*	*222.2*	*232.7*	*247.4*	*259.8*	*271.2*	*283.0*	***75.4***	***36.3%***
City of Alexandria	*140.0*	*147.7*	*162.7*	*171.3*	*176.3*	*184.5*	*191.4*	***51.4***	***36.7%***
Central Jurisdictions	**949.4**	**1,030.4**	**1,110.8**	**1,182.9**	**1,244.7**	**1,308.2**	**1,358.0**	**408.6**	**43.0%**
Montgomery County	972.6	1,020.0	1,067.0	1,110.0	1,153.9	1,184.6	1,202.8	**230.2**	**23.7%**
City of Rockville (1)	61.2	64.0	68.4	71.9	75.6	79.3	82.7	**21.5**	**35.1%**
City of Gaithersburg (1)	59.9	66.7	70.2	73.4	77.4	81.2	85.0	**25.0**	**41.8%**
Prince George's County	863.4	881.4	899.9	926.9	950.0	973.1	995.5	**132.1**	**15.3%**
Fairfax County (2)	*1,081.5*	*1,120.9*	*1,158.7*	*1,213.7*	*1,267.5*	*1,315.7*	*1,361.0*	***279.6***	***25.8%***
City of Fairfax	22.7	24.7	26.0	26.4	26.9	27.4	27.9	**5.1**	**22.5%**
City of Falls Church	12.3	13.1	14.2	15.5	16.4	17.0	17.3	**5.0**	**40.3%**
Inner Suburbs	**2,952.6**	**3,060.1**	**3,165.8**	**3,292.5**	**3,414.7**	**3,517.9**	**3,604.5**	**651.9**	**22.1%**
Loudoun County	312.3	368.0	418.0	452.2	468.7	478.6	484.5	**172.2**	**55.1%**
Prince William County	*402.0*	*428.5*	*471.0*	*498.6*	*521.2*	*539.4*	*554.0*	***152.0***	***37.8%***
City of Manassas	37.8	39.1	41.6	43.1	44.6	46.1	47.5	**9.7**	**25.7%**
City of Manassas Park	14.3	14.3	15.9	15.9	15.9	15.9	15.9	**1.6**	**11.1%**
Charles County (3)	144.6	160.1	176.0	191.5	202.6	213.7	224.9	**80.3**	**55.5%**
Frederick County	233.4	241.6	258.8	278.7	297.7	314.3	330.0	**96.6**	**41.4%**
City of Frederick (4)	65.2	69.2	74.3	79.0	83.1	86.5	89.1	**23.9**	**36.6%**
Outer Suburbs	**1,144.4**	**1,251.5**	**1,381.3**	**1,479.9**	**1,550.5**	**1,607.9**	**1,656.8**	**512.4**	**44.8%**
Virginia Jurisdictions	**2,230.6**	**2,378.3**	**2,540.7**	**2,684.1**	**2,797.1**	**2,895.8**	**2,982.5**	**751.9**	**33.7%**
Maryland Jurisdictions	**2,214.0**	**2,303.1**	**2,401.7**	**2,507.0**	**2,604.2**	**2,685.7**	**2,753.1**	**539.1**	**24.3%**
COG PLANNING AREA	**5,046.4**	**5,342.0**	**5,657.9**	**5,955.4**	**6,210.0**	**6,433.9**	**6,619.2**	**1,572.8**	**31.2%**

(1) Included in Montgomery County total.

(2) COG staff produced the 2010 base year to be consistent with the Fairfax County's model for the 2011 - 2041 forecasting period.

(3) Projections from 2010 to 2030 prepared by the Maryland Department of Planning, Historical and Projected Total Population, December 2008.

(4) Included in Frederick County total.

Summary of Intermediate Population Forecasts

Round 8.4 Cooperative Forecasts

(Thousands)

COG Board of Directors 10/13/15

(Changes Received in Italic) JURISDICTION	2010	2015	2020	2025	2030	2035	2040	2010 to 2040 Number	2010 to 2040 % Change
District of Columbia	601.8	660.5	715.5	764.3	808.7	852.4	883.6	**281.8**	**46.8%**
Arlington County	*207.6*	*222.2*	*232.7*	*247.4*	*259.8*	*271.2*	*283.0*	***75.4***	***36.3%***
City of Alexandria	*140.0*	*147.7*	*162.7*	*171.3*	*176.3*	*184.5*	*191.4*	***51.4***	***36.7%***
Central Jurisdictions	**949.4**	**1,030.4**	**1,110.8**	**1,182.9**	**1,244.7**	**1,308.2**	**1,358.0**	**408.6**	**43.0%**
Montgomery County	972.6	1,020.0	1,067.0	1,110.0	1,153.9	1,184.6	1,202.8	**230.2**	**23.7%**
City of Rockville (1)	61.2	64.0	68.4	71.9	75.6	79.3	82.7	**21.5**	**35.1%**
City of Gaithersburg (1)	59.9	66.7	70.2	73.4	77.4	81.2	85.0	**25.0**	**41.8%**
Prince George's County	863.4	881.4	899.9	926.9	950.0	973.1	995.5	**132.1**	**15.3%**
Fairfax County (2)	*1,081.5*	*1,120.9*	*1,158.7*	*1,213.7*	*1,267.5*	*1,315.7*	*1,361.0*	***279.6***	***25.8%***
City of Fairfax	22.7	24.7	26.0	26.4	26.9	27.4	27.9	**5.1**	**22.5%**
City of Falls Church	12.3	13.1	14.2	15.5	16.4	17.0	17.3	**5.0**	**40.3%**
Inner Suburbs	**2,952.6**	**3,060.1**	**3,165.8**	**3,292.5**	**3,414.7**	**3,517.9**	**3,604.5**	**651.9**	**22.1%**
Loudoun County	312.3	368.0	418.0	452.2	468.7	478.6	484.5	**172.2**	**55.1%**
Prince William County	*402.0*	*428.5*	*471.0*	*498.6*	*521.2*	*539.4*	*554.0*	***152.0***	***37.8%***
City of Manassas	37.8	39.1	41.6	43.1	44.6	46.1	47.5	**9.7**	**25.7%**
City of Manassas Park	14.3	14.3	15.9	15.9	15.9	15.9	15.9	**1.6**	**11.1%**
Charles County (3)	144.6	160.1	176.0	191.5	202.6	213.7	224.9	**80.3**	**55.5%**
Frederick County	233.4	241.6	258.8	278.7	297.7	314.3	330.0	**96.6**	**41.4%**
City of Frederick (4)	65.2	69.2	74.3	79.0	83.1	86.5	89.1	**23.9**	**36.6%**
Outer Suburbs	**1,144.4**	**1,251.5**	**1,381.3**	**1,479.9**	**1,550.5**	**1,607.9**	**1,656.8**	**512.4**	**44.8%**
Virginia Jurisdictions	**2,230.6**	**2,378.3**	**2,540.7**	**2,684.1**	**2,797.1**	**2,895.8**	**2,982.5**	**751.9**	**33.7%**
Maryland Jurisdictions	**2,214.0**	**2,303.1**	**2,401.7**	**2,507.0**	**2,604.2**	**2,685.7**	**2,753.1**	**539.1**	**24.3%**
COG PLANNING AREA	**5,046.4**	**5,342.0**	**5,657.9**	**5,955.4**	**6,210.0**	**6,433.9**	**6,619.2**	**1,572.8**	**31.2%**

(1) Included in Montgomery County total.

(2) COG staff produced the 2010 base year to be consistent with the Fairfax County's model for the 2011 - 2041 forecasting period.

(3) Projections from 2010 to 2030 prepared by the Maryland Department of Planning, Historical and Projected Total Population, December 2008.

(4) Included in Frederick County total.

Summary of Change between Employment Forecasts Round 8.4 and Round 8.3 Cooperative Forecasts (Thousands)

JURISDICTION	2010	2015	2020	2025	2030	2035	2040
District of Columbia	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arlington County	-0.9	-28.3	-47.4	-48.5	-37.4	-25.2	-7.6
City of Alexandria	0.0	-1.5	-1.8	-0.6	-4.3	0.2	-4.2
Central Jurisdictions	**-0.9**	**-29.8**	**-49.1**	**-49.1**	**-41.6**	**-25.1**	**-11.8**
Montgomery County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Rockville	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Gaithersburg	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prince George's County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fairfax County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Fairfax	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Falls Church	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inner Suburbs	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Loudoun County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prince William County	8.2	-1.3	-2.9	-2.2	-2.8	-3.4	-4.2
City of Manassas	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Manassas Park	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Charles County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Frederick County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Frederick	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Outer Suburbs	**8.2**	**-1.3**	**-2.9**	**-2.2**	**-2.8**	**-3.4**	**-4.2**
Virginia Jurisdictions	**7.2**	**-31.1**	**-52.1**	**-51.3**	**-44.4**	**-28.5**	**-15.9**
Maryland Jurisdictions	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
COG Planning Area	**7.2**	**-31.1**	**-52.1**	**-51.3**	**-44.4**	**-28.5**	**-15.9**

22-Sep-15

Summary of Change between Population Forecasts
Round 8.4 and Round 8.3 Cooperative Forecasts
(Thousands)

JURISDICTION	2010	2015	2020	2025	2030	2035	2040
District of Columbia	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arlington County	*0.0*	*-0.7*	*-3.4*	*-1.3*	*1.0*	*4.8*	*6.9*
City of Alexandria	*0.1*	*-0.8*	*4.6*	*4.2*	*2.2*	*-0.3*	*-3.5*
Central Jurisdictions	**0.1**	**-1.5**	**1.1**	**2.9**	**3.2**	**4.6**	**3.4**
Montgomery County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Rockville	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Gaithersburg	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prince George's County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fairfax County	*-0.3*	*4.5*	*5.3*	*1.2*	*1.8*	*-1.8*	*-8.0*
City of Fairfax	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Falls Church	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inner Suburbs	**-0.3**	**4.5**	**5.3**	**1.2**	**1.8**	**-1.8**	**-8.0**
Loudoun County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prince William County	*0.0*	*-23.9*	*-23.5*	*-32.1*	*-41.5*	*-50.4*	*-58.5*
City of Manassas	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Manassas Park	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Charles County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Frederick County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Frederick	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Outer Suburbs	**0.0**	**-23.9**	**-23.5**	**-32.1**	**-41.5**	**-50.4**	**-58.5**
Virginia Jurisdictions	**-0.2**	**-20.9**	**-17.0**	**-28.0**	**-36.4**	**-47.7**	**-63.1**
Maryland Jurisdictions	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
COG Planning Area	**-0.2**	**-20.9**	**-17.0**	**-28.0**	**-36.4**	**-47.7**	**-63.1**

22-Sep-15

Summary of Change between Household Forecasts Round 8.4 and Round 8.3 Cooperative Forecasts (Thousands)

JURISDICTION	2010	2015	2020	2025	2030	2035	2040
District of Columbia	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arlington County	*0.0*	*-1.4*	*-2.8*	*-0.7*	*0.8*	*3.2*	*4.7*
City of Alexandria	*0.0*	*-1.1*	*0.4*	*1.3*	*1.1*	*-0.1*	*-1.7*
Central Jurisdictions	**0.0**	**-2.5**	**-2.4**	**0.6**	**2.0**	**3.1**	**3.0**
Montgomery County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Rockville	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Gaithersburg	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prince George's County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fairfax County	*1.5*	*5.4*	*6.6*	*6.2*	*7.4*	*6.8*	*5.0*
City of Fairfax	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Falls Church	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inner Suburbs	**1.5**	**5.4**	**6.6**	**6.2**	**7.4**	**6.8**	**5.0**
Loudoun County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prince William County	*0.0*	*-8.5*	*-8.0*	*-11.6*	*-15.2*	*-18.6*	*-21.7*
City of Manassas	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Manassas Park	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Charles County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Frederick County	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Frederick	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Outer Suburbs	**0.0**	**-8.5**	**-8.0**	**-11.6**	**-15.2**	**-18.6**	**-21.7**
Virginia Jurisdictions	**1.5**	**-5.5**	**-3.9**	**-4.9**	**-5.8**	**-8.8**	**-13.8**
Maryland Jurisdictions	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
COG Planning Area	**1.5**	**-5.5**	**-3.9**	**-4.9**	**-5.8**	**-8.8**	**-13.8**

22-Sep-15

Resolution R56-2015
October 14, 2015

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
777 NORTH CAPITOL STREET, NE
WASHINGTON, DC 20002-4239

RESOLUTION AUTHORIZING COG TO ENTER INTO A CONTRACT WITH MZ STRATEGIES, LLC TO PREPARE A STRATEGIC ASSESSMENT REPORT OF THE GREATER WASHINGTON REGION'S ECONOMIC COMPETITIVENESS

WHEREAS, the Metropolitan Washington Council of Governments (COG) is comprised of the 22 jurisdictions of the National Capital Region's local governments and their governing officials, plus area members of the Maryland and Virginia legislatures and the U.S. Senate and House of Representatives, and COG provides a focus for action on issues of regional concern; and

WHEREAS, in 2015 the COG Board of Directors and Region Forward coalition have adopted a focus on Economic Competitiveness for policy makers, planners and business leaders to collectively address; and

WHEREAS, during this time MZ Strategies, LLC (MZ Strategies) has supported COG staff and the Region Forward coalition in identifying themes, reports and speakers that can help educate regional leaders on the various elements of competitiveness; and

WHEREAS, as an outgrowth of this collective work and in keeping with the Chairman's focus in 2015 on regional economic competitiveness, COG's Executive Director has identified the value in producing a "Strategic Assessment of the Greater Washington Region's Economic Competitiveness" report in early 2016.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS THAT:

The Executive Director, or his designee, is authorized to enter into a contract not to exceed $25,000 with MZ Strategies, LLC to prepare a Strategic Assessment Report of the Greater Washington Region's Economic Competiveness. MZ Strategies, LLC will work with COG staff to produce this Strategic Assessment to present the region's performance across a set of key competitiveness indicators, and summarize key findings from work this year by COG and regional partners, with a planned dissemination in early 2016 through the COG Board. Funding is from existing FY2016 COG Work Program and Budget.

Resolution R57-2015
October 14, 2015

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
777 NORTH CAPITOL STREET, NE
WASHINGTON, DC 20002

RESOLUTION AUTHORIZING THE COG 2016 NOMINATING COMMITTEE APPOINTMENTS

WHEREAS, the bylaws of the Metropolitan Washington Council of Governments (COG) require the annual election of three officers to the Board of Directors and four corporate officers of the organization; and

WHEREAS, the election of these positions requires the convention of a Nominating Committee; and

WHEREAS, the Nominating Committee is comprised of seven (7) members, balanced geographically among the District of Columbia, the State of Maryland, and the Commonwealth of Virginia; and

WHEREAS, it is the responsibility of the COG Board Chairman to recommend members to serve on the Nominating Committee.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS THAT:

The Board of Directors hereby approves the following recommended persons to serve on the 2015 Nominating Committee:

William Euille, COG Board Chair
Phil Mendelson, District of Columbia
Rashad Young, District of Columbia
Nancy Navarro, Montgomery County
Emmett Jordan, City of Greenbelt
Scott York, Loudoun County
Jonathan Way, City of Manassas

Resolution R58-2015
October 14, 2015

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
777 NORTH CAPITOL STREET, NE
WASHINGTON, DC 20002

RESOLUTION AUTHORIZING THE COG 2016 LEGISLATIVE COMMITTEE APPOINTMENTS

WHEREAS, the COG Board of Directors annually reviews and adopts a policy platform which outlines the region's federal and state policy priorities; and

WHEREAS, these priority statements are drafted by staff and vetted through COG's various policy and technical committees; and

WHEREAS, in 2009, the COG Board created an ad hoc Legislative Committee to provide an additional layer of oversight and review prior to Board action; and

WHEREAS, to encourage greater alignment with COG's policy committees and boards the Legislative Committee will be composed of representatives from each policy committee and who currently serve on the Board; and

WHEREAS, it is the responsibility of the COG Board Chairman to recommend members to serve on the COG 2016 Legislative Committee.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS THAT:

Upon recommendation of the Board Chair, the Board of Directors hereby approves the following persons to serve on the COG 2016 Legislative Committee:

Kenyan McDuffie, District of Columbia (Chair) – Board of Directors Vice Chair
Phil Mendelson, District of Columbia – Past Board Chair
Jonathan Way, City of Manassas – Transportation Planning Board
David Snyder, City of Falls Church – Metropolitan Washington Air Quality Committee
Roger Berliner, Montgomery County – Climate, Energy and Environment Policy Committee
Karen Toles, Prince George's County – Human Services and Public Safety Committee
Penny Gross, Fairfax County – Chesapeake Bay and Water Resources Committee
Emmett Jordan, City of Greenbelt – Region Forward Committee
Bridget Newton, City of Rockville – Association Member (Maryland Municipal League)

AGENDA ITEM #7

PRESENTATION OF THE 2015 CLIMATE AND ENERGY LEADERSHIP AWARDS

CLIMATE and ENERGY LEADERSHIP AWARDS

RECOGNIZING INNOVATIVE SOLUTIONS TO KEY CLIMATE AND ENERGY ISSUES IN THE NATIONAL CAPITAL REGION.

METROPOLITAN WASHINGTON
Council of Governments

RECOGNIZE
Environmental Achievement

ENCOURAGE
Advancement of Regional Goals

FOSTER
Healthy Competition

LEARN
From Each Other

ACCEPTING APPLICATIONS FROM **APRIL 15 - JUNE 30, 2015**

PURPOSE

The Metropolitan Washington Council of Governments (COG) Board of Directors adopted the ambitious greenhouse gas (GHG) emission reduction goals of 20% by 2020 and 80% by 2050 (below 2005 levels). To meet these goals, COG realizes extraordinary effort is needed by visionary leaders in the public, private and non-profit sectors. The Awards Program was established to celebrate innovative achievements in GHG emission reduction and encourage others to take action. The Program also provides an opportunity to foster healthy competition as well as an opportunity to learn from each other.

RECOGNITION

Climate and Energy Leadership Award winners will be recognized in front of local, regional and national officials. COG will showcase winners to bring recognition to their successes and to serve as a role model for the National Capital Region. This type of public recognition can encourage continued and enhanced efforts of winning communities and organizations. Winners will also be recognized with a stunningly unique, environmentally-friendly award that is hand-crafted by a local artist.

ELIGIBILITY

Four applicants will be recognized with a Climate and Energy Leadership Award in the fall of 2015. One award will be provided to each of the following categories:

- **Small/Medium Community** (population under 100,000)
- **Large Community** (population over 100,000)
- **Non-Profit Organization**
- **Private Business**

Each applicant must be located in the National Capital Region. All local governments and school systems in the region are eligible to apply for the community award. COG member jurisdictions as well as non-member towns in the region are eligible.

HOW TO APPLY

Applications can be submitted online at www.mwcog.org/climateawards or emailed to Maia Davis at mdavis@mwcog.org no later than June 30, 2015. Applications must include a project summary file that is a maximum of three pages long and include organization and project information, an overview, and clear descriptions on how it meets the four judging criteria: **Results, Creativity, Model** and **Engagement**. *Please read the Procedures and Guidelines* online for full details on judging criteria, judging process, and application requirements prior to submitting an application.

WWW.MWCOG.ORG/CLIMATEAWARDS

Sponsored by:

Climate & Urban Systems Partnership
WASHINGTON, D.C.

METROPOLITAN WASHINGTON
Council of Governments

CLIMATE AND ENERGY LEADERSHIP AWARDS

WWW.MWCOG.ORG/CLIMATEAWARDS

JUDGING RUBRIC

SCORE	RESULTS (Weight 40%)	CREATIVITY (Weight 20%)	MODEL (Weight 20%)	ENGAGEMENT (Weight 20%)
5 = Excellent	The potential greenhouse gas (GHG) emission reductions have been achieved in a cost-effective manner. GHG emissions reductions and other measured outcomes have gone beyond expectations.	Overall the initiative is extremely innovative and unique. This presents a new practice/new way of thinking.	The initiative is easily transferable to another jurisdiction/ organization.	Partners, stakeholders, and/or the public were an integral part of the initiative's success and the applicant actively engaged them throughout. The public/intended audience has been extremely supportive and very positive throughout the process.
4 = Good	The initiative has achieved the potential GHG emission reductions and other measured outcomes in a cost-effective manner.	The initiative is innovative and interesting. It is beyond standard practice and creative.	The initiative is transferable to another jurisdiction/ organization.	Applicant actively engaged partners, stakeholders, and/or the public. The public/intended audience is generally supportive and positive about the outcome.
3 = Adequate	The initiative has had some success, but thus far has not fully achieved the potential GHG emission reductions and other measures outcomes in a cost-effective manner.	The initiative shows some creative thought and has unique aspects.	It is possible to replicate the initiative in another jurisdiction/organization; however, there are some unique conditions that may limit its replication.	Applicant somewhat engaged partners, stakeholders, and/or the public but there were missed opportunities to further engage them. The public/intended audience had mixed reaction/acceptance levels.
2 = Fair	The initiative shows some promise but has not yet delivered most of the potential GHG emission reductions and other measured outcomes in a cost-effective manner.	The initiative is straight-forward with some unique aspects.	The initiative would be somewhat difficult to replicate in another jurisdiction/organization.	Applicant responded to partner, stakeholders, and/or the public inquiries but did not actively engage them. The public/intended audience generally is not positive.
1 = Poor	The initiative has achieved very little or no GHG emission reductions and other measured outcomes in a cost-effective manner.	The initiative seems to be very standard practice with very little or no creativity.	The initiative would be extremely difficult to replicate in another jurisdiction/organization.	No partnerships were formed. Stakeholders were not engaged. The public was not a part of the process. It was not well received by the public/ intended audience.

AGENDA ITEM #8

U.S. REPRESENTATIVE BARBARA COMSTOCK

United States Representative

BARBARA COMSTOCK

Representing Virginia's 10th District

Barbara Comstock was elected in November of 2014, to represent Virginia's 10th Congressional District (Loudoun County, Clarke County, Frederick County, and parts of Fairfax County and Prince William County as well as the Cities of Winchester, Manassas Park, and Manassas City). Barbara currently serves on the Transportation & Infrastructure Committee, the Science, Space and Technology Committee, where she serves as Chairwoman of the Subcommittee on Research and Technology, and the House Administration Committee in the U.S. House of Representatives.

Barbara served in the Virginia House of Delegates from 2010 to 2015 and served as Chairwoman of the Science and Technology Committee. She also served on the Commerce and Labor Committee, and Transportation Committee. Barbara consistently received an "A" rating from the Virginia Chamber of Commerce and received their 2012 "Free Enterprise" award and 2014 "Competitiveness" award.
Barbara was appointed to serve on the Governor's Economic Development and Job Creation Commission and, was also appointed by Virginia's House of Delegates Speaker to serve on the Northern Virginia Transportation Commission. In the summer of 2010, Barbara was selected as one of 50 state legislators to participate in the "Emerging Political Leaders" program sponsored by the State Legislative Leaders Foundation and the Darden School of Business at the University of Virginia.

Congresswoman Comstock is a 30+ year resident of McLean, Virginia. She and her husband, Chip, a retired Fairfax County Schools Assistant Principal who continues to teach, have raised their three children in McLean. Dan is a 2005 graduate of the University of Virginia, Peter is a 2007 graduate of Virginia Tech, and Caity is a 2006 graduate of Langley High School, a 2010 graduate of Villanova University and a 2012 graduate of George Mason University for a master's degree. The Comstocks are also blessed with three grandchildren.

The Comstocks first came to McLean in the early 80s when Chip started his teaching career at Langley High School in McLean and Barbara attended Georgetown University Law Center. The Comstocks have been active in community sports, school, neighborhood, political and church activities for over 30 years. Chip also taught at McLean High School.

Barbara juggled law school while starting a family – having her two boys while in school – then added a daughter shortly after completing law school. Barbara returned to work serving in the federal government for over a dozen years. She served first as a senior aide in the 1990s to Virginia Congressman Frank R. Wolf who represented Virginia's 10th Congressional District for 34 years. As a senior aide to Congressman Wolf, she was immersed in issues important to Northern Virginia such as federal employee and health care issues, telework and business issues, appropriations for the district, and tax relief for Virginia families.

After working in Congressman Wolf's office, Barbara was recruited to serve on the House Government Reform and Oversight Committee, the largest House committee where she became Chief Counsel and led hearings and oversight of investigations into waste, fraud and abuse. Barbara also served as Director of the Office of Public Affairs for the U.S. Department of Justice from 2002 through 2003. Following the September 11th terrorist attacks, Barbara's responsibilities included leading communications efforts at the Department of Justice, the FBI and other department agencies and coordinating those efforts for the Attorney General and other senior officials as well as coordinating with other Departments such as Homeland Security, Defense and State. During her tenure as Director

of Public Affairs, she spearheaded communications for the Department's major challenges including War on Terror investigations, the Washington sniper case, major corporate fraud investigations and judicial confirmation hearings.

Barbara formed a small business as founding partner of Comstock Strategies. She was also a founding partner of Corallo Comstock, a public relations and government affairs firm.

Prior to establishing Corallo Comstock with her partner, Mark Corallo, Barbara was a senior partner and principal at Blank Rome, LLP and Blank Rome Government Relations, LLC.

In 2013, Barbara founded “The Young Women’s Leadership Program” for young women in high school and junior high. The program is designed to inspire the next generation of young women by bringing them together with women leaders in a variety of careers and professions throughout our region. Barbara is bringing this important program to Capitol Hill and expanding it.

The Comstocks are members of St. Luke's Catholic Church in McLean and previously were members of St. John's Catholic Church where their children attended elementary school.

Barbara graduated from Georgetown University Law Center and Middlebury College with a B.A. in Political Science.

AGENDA ITEM #9

UPDATE ON THE MULTI-SECTOR GREEN HOUSE GAS WORKING GROUP

Metropolitan Washington Council of Governments

MEMORANDUM

TO: COG Board of Directors

FROM: Robert Griffiths, COG Planning and Programming Director, Department of Transportation Planning

THROUGH: Stuart Freudberg, COG Deputy Executive Director

SUBJECT: Interim Findings from Greenhouse Gas Reduction Multi-Sector Working Group

DATE: October 7, 2015

SUMMARY

Interim Findings from a Multi-Sector Working Group (MWSG) convened by COG to examine viable, implementable local, regional, and state actions to reduce Greenhouse Gas (GHG) emissions in four sectors (Energy, the Built Environment, Land Use and Transportation) show that:

1. Current policies in the Energy, Built Environment, Land Use and Transportation sectors, if fully implemented, are projected to result in about one-third of the reduction needed to achieve COG's goal to reduce overall GHG emissions in the region to 80% below 2005 levels by 2050.
2. There is a potential to further reduce GHG emissions by an additional 29 to 40% towards the COG's goal if there is a commitment to pursue the strategies identified by the MSWG as either viable or stretch through local, regional and state actions.
3. To fully achieve COG's GHG reduction goal for 2050, additional strategies beyond those identified by the MSWG will be needed to further reduce the region's GHG emissions by another 27 to 39%. These additional strategies will likely require significant breakthrough improvements in existing technology and more substantial actions at federal, state, regional and local levels.

The Interim Findings from the MSWG documented in this memorandum were presented to the National Capital Region Transportation Planning Board (TPB) and to Metropolitan Washington Air Quality Committee (MWAQC) in September, 2015. The Interim Findings from the MSWG are now being presented to the Board to obtain additional regional policy level feedback on these findings and the viability of the identified GHG reduction strategies. We are requesting the Board's feedback before the MSWG begins an exploration, beginning this month, of the merits of and potential options for creating specific GHG reduction targets in each of the four sectors and the MSWG prepares its Draft Final Report in the November-December timeframe.

BACKGROUND

At a joint meeting in October, 2014, MWAQC and the COG Climate, Energy, & Environment Policy Committee (CEEPC) adopted a resolution jointly requesting that the relevant policy committees at COG affirm the region's GHG reduction goals set out in the adopted November 2008 Climate Change Report and that COG convene a professional greenhouse gas reduction multi-sector working group.

In December 2014, the TPB and MWAQC affirmed the greenhouse gas reduction goals adopted by COG and committed staff and resources to support a multi-sector, multi-disciplinary professional working group to be convened by COG to:

- Identify viable, implementable local, regional, and state actions to reduce GHG emissions in four sectors (Energy, the Built Environment, Land Use, and Transportation)
- Quantify the benefits, costs and implementation timeframes of these actions;
- Explore specific GHG emission reduction targets in each of the four sectors; and
- Jointly develop an action plan for the region

On January 30, 2015 an initial convening of the MSWG consisting of 79 professional staff from state, local and regional agencies was held. The purpose, organization, schedule and expected outcomes of this effort were discussed at this meeting.

MSWG IDENTIFICATION OF POTENTIAL GREENHOUSE REDUCTION STRATEGIES

At the initial MSWG meeting, Energy/Built Environment, Land Use, and Transportation Sector Subgroups were established. In February and March, 2015 these three Subgroups met to brainstorm potential GHG reduction strategies within each Sector Subgroup. In March, the Land Use and Transportation Sector Subgroups met jointly because of the strong inter-relationships between Land Use and Transportation GHG reduction strategies. In these Subgroup meetings an initial list of 75 potential strategy ideas were identified.

In early April, a consultant, ICF International, was brought on board to support the work of the MSWG. The consultant reviewed the initial list of strategy ideas developed by Energy/Built Environment, Land Use, and Transportation Sector Subgroups and consolidated the fundamental elements of these ideas into 38 individual GHG reduction strategies, 11 individual strategies for the Energy/Built Environment Sector, 6 individual strategies for the Land Use Sector, and 21 strategies for the Transportation Sector. The consultant prepared a technical memorandum providing detailed descriptions of each of strategies and an initial qualitative assessment of the GHG reduction potential, co-benefits, costs and implementation timeframes. The detailed descriptions and initial qualitative assessments of these 38 strategies can be found at http://www.mwcog.org/about/public/.

The Energy/Built Environment Land Use, and Transportation Sector Subgroups reviewed the strategy descriptions and initial qualitative assessments, suggested further refinements to the strategies, and provided comment on the strategies believed to be most promising and worthy of more detailed quantitative analysis.

Public input on all 38 GHG reduction strategies was also sought through the COG website from April 9th through April 22nd. The TPB Citizens Advisory Committee (CAC) was briefed on the initial set of identified strategies on April 9th and the Air and Climate Public Advisory Committee (ACPAC) was briefed on April 20th. Comments from 14 individuals and organizations were received.

Based on the review of the 38 individual strategies by the Sector Subgroups and the comments received from the public, the consultant prepared a refined list of 22 strategies of recommended for detailed quantitative analysis, 10 in the Energy/Built Environment Sector and 12 combined strategies in the Land Use and Transportation Sectors.

The refined list of recommended 22 strategies of recommended by the consultant for detailed quantitative can be found at http://www.mwcog.org/uploads/committee-documents/Yl1WWVxX20150501155959.pdf.

On May 8, 2015, the full MSWG agreed on the consultant's recommended refined list of 22 strategies with one major modification. This modification was to expand strategy EBE-10: (Educate and motivate public to take GHG reduction actions) to also include efforts to educate and motivate the public to take GHG reduction actions in the Land Use and Transportation Sectors.

ANALYSIS OF CURRENT POLICIES TO REDUCE GHG EMISSIONS

Following the May 8th MSWG meeting, the consultant analyzed currently implemented policies that have resulted in reduced GHG emissions in the region.

These policies include actions such as:

- Adopting more stringent building codes for energy efficiency;
- Supporting distributed solar system installations;
- Implementing energy efficiency improvements in government facilities and operations;
- Meeting the requirements to become EPA Green Power Partners;
- Implementing land use plans focusing more of the region's future growth in walkable, mixed use, transit oriented centers; and
- Making transportation investments to support land use plans and provide more multimodal travel options for traveling between these centers and within them.

National policies, such as increased CAFÉ standards for light-duty vehicles, renewable energy production tax credits, and others have also helped the region reduce its GHG emissions. A significant reduction in emissions is also attributable to decreases in the emissions rate from generation of electricity as electricity generators switched to fuel sources producing fewer GHG emissions and increased the efficiency of their generating plants.

Combined, these existing policies, sometimes called "on the books", will continue to make a significant contribution to reducing GHG emissions in the Washington metropolitan region through 2050. The consultant's analysis show these "on the books" policies, if continued to be implemented, are projected reduce 2050 GHG emissions by about one-third of the reduction needed to achieve COG's GHG reduction goal.

TECHNICAL ANALYSIS OF REFINED LIST OF 22 POTENTIAL GHG REDUCTION STRATEGIES

Also, following the May 8th MSWG meeting, the consultant performed a detailed technical analysis of the refined list of 22 strategies at "Viable" and "Stretch" levels. This analysis also included an assessment of strategy co-benefits such as reduced air and stormwater pollution, reduced congestion, and increased safety, economic vitality, local jobs and resiliency. The analysis further estimated range of costs (low, medium, high) and identified implementation actions for each strategy. Examples of implementation actions are deep building retrofits, implementing the Clean Power Plan, reduced transit fares and greater carbon sequestration through natural landscaping.

A viable level was one that was generally considered to be consistent with local actions proposed by at least some localities across the region and could be implementable by 2040. A stretch level was generally considered going beyond local plans and not to be implementable until after 2040. The results of the technical analysis was presented to the Energy/Built Environment Land Use, and Transportation Sector Subgroups in mid-July and to the full MSWG on July 31, 2015. The technical analysis results of the refined individual strategies (EBE-1 through EBE-9, TLU-1 through TLU-12) are included as an attachment to this memorandum.

The GHG reductions calculated for each of the refined 22 potential GHG reduction strategies are not additive because of the interactive effects of the individual strategies. For example, vehicle and fuel strategies that reduce GHG emissions per mile of travel reduce the GHG reduction potential of travel demand management strategies that shift vehicle travel to transit and other non-vehicle modes.

ANALYSIS OF FIVE KEY GROUPED STRATEGIES

Based on the consultant's analysis of the interactive effects of the refined 22 strategies, five key grouped strategies that took into account these interactive were analyzed at viable and stretch levels. The five strategies and their GHG reduction potential in relation to the COG goal is as follows:

1. Building Energy Efficiency – (15 to 18% GHG reduction toward 2050 Goal)

   Includes EBE-1, EBE-4, EBE-5

   Viable Level: 2% annual reduction in energy and water use in existing buildings; stringent energy code enforcement; WaterSense in all new buildings; 50% Net Zero energy in new buildings

   Stretch Level: 100% Net Zero energy in new buildings

2. Power Sector and Renewables - (10 to 14% GHG reduction toward 2050 Goal)

   Includes: EBE-2, EBE-6, EBE-7

   Viable Level: Meeting clean power plan and increased renewable portfolio standards

   Stretch Level: Additional carbon-free power supplies such as nuclear or off-shore wind

3. Land Use and Tree Canopy - (2 to 3% GHG reduction toward 2050 Goal)

   Includes TLU-1, TLU-2, EBE-3

   Viable Level: Future development in Activity Centers with premium transit, locations with premium transit, and Activity Centers with no premium transit; Reduce tree loss and natural cover from future development.

   Stretch Level: Shift future development across jurisdictional boundaries to balance job/housing ratios and maximize transit-oriented development opportunities; Reduce tree loss and natural cover from future development and increase region's tree canopy by 5%.

4. Vehicles and Fuels: - (2 to 4% GHG reduction toward 2050 Goal)

   Includes TLU-3. TLU-4, TLU-5, TLU-6

   Viable Level: 15% zero emissions vehicles (Electric Vehicles) in on-road light-duty fleet and public sector heavy-duty fleet (PSHD); Additional reduction in on-road fuel emissions by 10% by reducing carbon content of fuel

   Stretch Level: 25% EV in on-road LDV fleet and PSHD; additional reduction in on-road fuel emissions by 15% by reducing carbon content of fuel

5. Travel Demand Management - (<1 to 2% GHG reduction toward 2050 Goal)

   Includes TLU-9, TLU-10, TLU-11, TLU-12

   Viable Level: $50/month subsidy for 80% of employers; Increase average parking charge in 90% of Activity Centers from $2,50 to $8 a day; $5 cordon pricing charge for vehicles entering downtown DC; reduce transit fares by 20% regionally

   Stretch Level: $80/month subsidy for 100% of employers; Increase average parking charge in 100% of Activity Centers from $2.50 to $8 a day; $5 cordon pricing charge for vehicles

entering downtown DC; $0.10/mile VMT charge; reduce transit fares by 40% regionally

These five key grouped strategies, if pursued through local, regional and state actions, would have the potential to achieve 29 to 40% of the GHG reductions needed to achieve COG's 2050 goal.

ADDITIONAL STRATEGIES NEEDED FOR 2050 GOAL

Additional strategies beyond those identified by the MSWG will be needed to further reduce the region's GHG emissions by another 27 to 39% to fully achieve COG's GHG reduction goal for 2050. These additional strategies will likely require significant breakthrough improvements in existing technology and substantially more actions at federal, state, regional and local levels, and could include:

- More substantial local strategies such as increased financial support for efficiency, renewables, and transit
- Faster deployment of zero emission vehicles
- Technology improvements
- New fuel efficiency standards for medium and heavy-duty vehicles and engines
- New Natural Gas Pipeline Rule
- New energy efficiency standards for buildings, appliances and equipment
- Increased fuel taxes / carbon tax
- Reduction in commercial aviation GHG emissions
- Expanded use of biofuels
- Decarbonize power sector through actions such as carbon capture and storage, more nuclear power, improvements to solar, and offshore wind power
- Lifecycle GHG reductions from products

REVIEW OF MSWG INTERIM FINDINGS AND NEXT STEPS

The MSWG's analysis and interim findings have been presented to the TPB and MWAQC, to COG technical committees such as the TPB Technical Committee and Built Environment and Energy Advisory Committee, as well as some external groups such as the Northern Virginia Transportation Authority.

Initial feedback recognized the value of the analysis, the need to move forward quickly, and the difficulty involved in implementing some viable and stretch strategies. They noted the need for careful analysis of the regional impact of some strategies and whether those strategies with limited GHG emission reduction potential that require significant policy actions might be worth the effort at this time. They suggested prioritizing those actions with larger GHG emission reduction potential and a greater probability of implementation.

After review and feedback from the Board on the Interim Findings from the MSWG and the viability of the identified GHG reduction strategies from a regional/local policy perspective, the MSWG will meet later this month to explore whether there should be specific GHG reduction targets for Energy, the Built Environment, Land Use, and Transportation Sectors. Staff will also continue to review and analyze some of the details of the consultant's technical analysis and further assess the assumed levels of viability for the identified strategies as part of this exploration process.

Based on feedback received from the TPB, MWAQC, CEEPC, and the Board, a Draft Final MSWG Report will be prepared in November for review by the TPB, MWAQC and CEEPC in December.

In January 2016, the Draft Final MSWG Report will be presented to the Board. Staff will also report on the exploration of sector-specific GHG reduction targets. The Board will be asked to provide policy direction for the development of the Action Plan that would begin in February, 2016.

Attachment – Analysis of Refined Greenhouse Gas Reduction Strategies

EBE-1. Reduce energy and water consumption in existing buildings

This strategy is designed to reduce annual energy and water consumption in existing buildings through policies and programs that support high building performance.

Modeled Outcomes

2016-2050 (viable/stretch)

- Achieve a 2% annual (30% cumulative) reduction in building energy and water use by 2030

Implementation Actions

- Leverage energy utility ratepayer-funded programs and water utility partnerships
- Expand financing options for energy and water efficiency improvements.
- Extend enforcement of building energy code provisions
- Expand low-income housing retrofits and water saving programs
- Utilize mandatory benchmarking and voluntary challenge initiatives

Summary of GHG Reduction for EBE-1[1]

Year	Net GHG Reductions ($MMTCO2e^2$)
2020	2.73
2040	10.55
2050	10.55

Costs

Public sector implementation costs are expected to be low (under $50 million) to medium (up to $500 million with local incentives) in the short term and yield cost savings in the long term. Efficiency encompasses cost-effective measures that typically yield positive net present value over the study period. Numerous analyses typically show a range of efficiency measures costing less than available energy supply options.

Co-Benefits

- Reduction in criteria air pollutants
- Local job growth
- Improved occupant comfort and health

[1] ICFI utilized a customized sketch planning tool with MWCOG-provided regional electricity, natural gas and water consumption data, and Round 8.3 Cooperative Forecast data to estimate benefits from strategy.
[2] MMTCO2e=Million Metric Tons of Carbon Dioxide Equivalent. Non CO2 gases are converted based on potency.

EBE-2. Support existing building-level renewable energy development

This strategy is designed to increase the use of renewable energy in existing buildings through supporting and providing incentives for the distributed deployment of renewable energy sources including solar PV, wind and other technologies.

Modeled Outcomes

2016-2026 (viable)

- Continue growth in solar and renewables by 20% per year for 5 years, 5% per year thereafter

2016-2050 (stretch)

- Provide local incentives to further grow building-level renewable technologies by 2 to 5%
- Government cooperative solar purchase offsets 10% of government energy use
- Reduce commercial and industrial electricity usage by 5% through implementing additional solar and renewables

Implementation Actions

- Baseline Solar/Wind deployment across all sectors
- Support cooperative/aggregated renewable energy purchasing
- Provide incentives for building-level renewable technologies
- Broaden adoption of solar access ordinances and similar regulations to provide a more stable investment environment

Summary of GHG Reduction for EBE-2[3]

Year	GHG Reductions (MMTCO2e)
2020	1.15
2040	1.86
2050	2.78

Cost

Actions have low program and implementation costs (under $50 million) to medium (up to $500 million) depending on the planned incentive levels. Renewable energy generally reduces energy costs over the lifetime of the equipment.

[3] ICFI utilized a customized Excel sketch planning tool with PVWatts and data provided by MWCOG on energy usage, renewable energy deployment and Round 8.3 Cooperative Forecast to estimate benefits from strategy.

Co-benefits

- Reduction in criteria air pollutants
- Electric reliability
- Local job growth

EBE-3. Encourage Development in Activity Centers

This strategy depends on the implementation of strategy TLU-2 (Sustainable Development Patterns and Urban Design). These strategies jointly would reduce the growth in emissions from passenger vehicles and reduce building and infrastructure related emissions through directing more of the region's anticipated growth and redevelopment in compact, walkable, mixed use activity centers served by premium transit (Metrorail, Commuter rail, LRT and BRT).

Modeled Outcome

2020-2040 (viable)

- Future growth within each jurisdiction is shifted to, in order of priority: 1) Activity Centers with premium transit; 2) other locations with premium transit; or 3) other Activity Centers without premium transit

2020-2050 (stretch)

- Regional job-housing imbalances are addressed by shifting future growth across jurisdictional boundaries, and then concentrated as described as above

Implementation Actions

- Update comprehensive plans, zoning, and permitting guidelines to include energy and transportation efficiencies as a factor in public siting decisions
- Significant additional investments in transit capacity and service would be required.

Implementation Considerations

This is an aggressive strategy as about 60% of the region's projected future residential development and 75% of its projected commercial development is already forecast to occur in activity centers. Directing 100% of the region's future residential and commercial development to less auto-reliant locations currently planned to be served by premium transit services may be difficult given existing lifestyle preferences and market forces.

Summary of Greenhouse Gas Reductions for EBE-3

Summary Metric	2020	2040	2050
GHG Reductions - layered with EBE-4 (MMTCO2e)	0.01	0.16	0.19
GHG Reductions (MMTCO2e)	0.02	0.34	0.44
Electricity Reductions (MWh)	24,627	404,648	537,373
Natural Gas Reductions (MMBtu)	109,004	2,185,250	3,401,663

Cost

The direct costs are low and are generally within existing planning functions. For the public sector, tradeoffs between costs and savings are complex, but compact development should be cheaper to provide and sustain infrastructure. For the private sector, these strategies could mean potentially higher costs for building in infill and higher density areas, but counterbalanced by higher sales prices. Additionally, these

strategies should reduce transportation costs for households and improve access for employers and commercial establishments.

Co-Benefits

- Safety
- Congestion Reduction
- Reliability
- Air Quality
- Energy Savings
- Economic Vitality
- Accessibility
- Resiliency
- Reduced Stormwater Run-off
- Community Amenity

EBE-4. Improve new building energy and water efficiency performance

This strategy is designed to reduce energy and water consumption in new buildings through implementing stringent building code and energy performance standards, providing for new buildings to use Water Sense fixtures, and having all new buildings designed to be net-energy zero.

Modeled Outcomes

2016-2020 (viable)

- Phase-in stringent building code/energy performance standards by 2020

2016-2040 (viable)

- 100% of new buildings use WaterSense fixtures by 2030
- 50% of new buildings designed for net zero energy use by 2040

2016-2050 (stretch)

- 100% of new buildings designed for net zero energy use by 2050

Implementation Actions

- Updating of planning/zoning/building code policies and provisions
- Increasing building code compliance efforts, including-related utility programs

Summary of Electricity, Natural Gas, Water and GHG Reduction for EBE-4[4]

Year	Electricity Reductions (MWh)	Natural Gas Reductions (MMBtu)	Water Reductions (Gallons)	GHG Reductions (MMTCO2e)
2020	754,305	8,258,484	0	1.03
2040	3,290,694	44,607,606	196,932,718	4.18
2050	5,069,696	71,577,122	323,257,485	6.59

Cost

Public sector costs are estimated to be low (under $50 million) for this measure. Private sector costs may be higher to meet the code requirements, yet efficiency would realize substantial cost savings over building life cycles.

Co-benefits

- Reduction in criteria air pollutants
- Local job growth
- Improved occupant comfort

[4] ICFI utilized a customized sketch planning tool with MWCOG-provided regional electricity, natural gas and water consumption data, and Round 8.3 Cooperative Forecast data to estimate benefits from strategy.

EBE-5. Improve infrastructure efficiency and increase renewable energy use

This strategy is designed to reduce fossil fuel energy use through efficiency improvements and expanded renewable options in the COG region infrastructure institutions, including water and wastewater systems, the Washington Metropolitan Area Transit Authority (WMATA), and airports.

Modeled Outcomes

2016-2050 (viable/stretch)

- 1% annual reduction in fossil energy use (35% cumulative)

Implementation Actions

- Improve energy efficiency by reducing leaks in water and wastewater systems
- Fostering system efficiency process improvements
- Implementing outdoor lighting and end-use efficiency technologies
- Installing on-site renewable power systems at facility locations

Summary of Electricity, Natural Gas, and GHG Reduction for EBE-5[5]

Year	Electricity Reductions (MWh)	Natural Gas Reductions (MMBtu)	GHG Reductions (MMTCO2e)
2020	68,435	13,574	0.05
2040	398,109	155,840	0.23
2050	562,946	226,972	0.32

Costs

Public sector costs for building and infrastructure upgrades are expected to be low (under $50 million) and would yield positive net present value over time.

Co-benefits

- Reduction in criteria air pollutants
- Economic vitality, jobs, equity
- Resiliency

[5] ICFI utilized a customized sketch planning tool with MWCOG- and utility-provided data to estimate strategy benefits.

EBE-6. Targeted reductions in power sector emissions

This strategy would reduce total power sector emissions 30 percent on a mass basis through implementation of the Clean Power Plan by Virginia and Maryland. The stretch strategies would achieve an additional 20% renewable energy offsets in Maryland by 2040, and an additional 10% renewable energy offsets in the District of Columbia and Virginia as part of a preferred portfolio of stretch strategies.

Modeled Outcomes

2016-2030 (viable)

- Implement the Clean Power Plan in Maryland and Virginia

2030-2050 (stretch)

- Implement preferred portfolio of power sector actions

Implementation Actions

- Support state implementation of the Clean Power Plan

Summary of GHG Reductions for EBE-6[6]

Year	Total GHG Reductions (MMTCO2e)
2020	1.97
2040	8.05
2050	10.74

Cost

Costs could range from to medium ($50 to $500 million) to high (over $500 million) for the power sector but low for COG members depending on how measures are implemented. Clean energy measures may yield long term cost savings.

Co-Benefits

- Local job growth
- Reduction in criteria air pollutants

[6] ICFI utilized a customized sketch planning tool with PJM grid factors and EIA data to estimate benefits from strategy.

EBE-7. Reduce natural gas pipeline leaks

This strategy would reduce emissions from natural gas leaks in the COG region through natural gas utility company investments to reduce pipeline emissions. Regional action should support utility investments before regional utility commissions.

Modeled Outcomes

2016-2040 (viable/stretch)

- 20% reduction in total methane emissions by 2030

Implementation Actions

- Support pipe and infrastructure upgrades by the region's three natural gas utilities

Summary of GHG Reductions and Methane Emissions Reductions for EBE-7[7]

Year	Methane Reductions (MT)	GHG Reductions (MMTCO2e)
2020	601	0.02
2040	4,205	0.11
2050	4,205	0.11

Cost

Annual Cost is estimated as low (under $50 million). Reductions in gas distribution system emissions will reduce utility losses, which help offset upfront costs.

Co-Benefits

- Safety
- Local Job growth

[7] ICFI utilized a customized sketch planning tool with WGL and PHMSA data to estimate benefits from strategy.

EBE-8. Targeted reductions in municipal solid waste

This strategy is designed to reduce emissions from municipal solid waste by increasing reuse of wastes, recycling, green purchasing, landfill gas recovery, and waste to energy projects.

Modeled Outcomes

2016-2020 (viable)

- Increase reuse of construction and demolition waste to 15%
- Increase use of waste to energy projects

2016-2040 (stretch)

- Divert 100% of organic waste from landfills

2016-2050 (stretch)

- Increase total landfill diversion rate to 100%
- Increase reuse of construction and demolition waste to 100%
- Recover 50% of methane emissions at landfills from 2030-2050

Implementation Actions

- Implement green purchasing programs
- Implement pay as you throw programs and tipping fees

Summary of Life Cycle and Direct GHG Reduction for EBE-8[8],[9]

Year	Tons Landfilled	Direct GHG Reductions (MMTCO2e)
2020	839,723	0.08
2040	279,908	0.15
2050	0	0.27

Cost

Annual Cost is estimated as low (under $50 million) for the public sector, involving tipping fees and waste collection fees. Cost savings could result through energy production, materials reuse, and reduced waste management needs.

Co-Benefits

- Local job growth
- Reduction in criteria air pollutants
- Reductions in landfilling of waste

[8] Tools: MS Excel, EPA's LandGEM and WARM models, SMART BET calculator
[9] ICFI also modeled product life cycle GHG reductions for net zero waste in 2012: 4.8 MMTCO2e

EBE-9. Reduce emissions from non-road engines

This strategy is designed by increasing the market penetration of energy-efficient or lower emission back-up generators, construction, agriculture, lawn and garden, commercial and industrial equipment, recreational equipment and other non-road engine equipment. Additional idling reductions and electric alternatives would further reduce non-road engine emissions.

Modeled Outcomes

2016 to 2030 (viable/stretch)

- 2% annual (30% cumulative) reduction in non-road emissions by 2030

Implementation Actions

- Public programs to encourage the switch to lower-emitting equipment

Summary of GHG Reductions for EBE-9[10]

Year	Direct GHG Reductions (MMTCO2e)
2020	0.28
2040	0.85
2050	0.85

Cost

Annual Cost is estimated as low (under $50 million) to medium ($50 million to $500 million. More efficient equipment will reduce operating costs.

Co-Benefits

- Reduction in criteria air pollutants

[10] ICFI used a customized sketch planning tool to estimate benefits from strategy with MWCOG-provided non-road engine emissions inventory data.

TLU-1. Reduce Loss of Vegetation due to Sustainable Development Patterns and Programs to Increase Tree Canopy

Between 2012 and 2040, projected development expansion in the region is expected to consume 48,465 of the region's current 949,891 acres of forest, and 86,935 of 599,179 acres of undeveloped grassland. The carbon sequestration provided by the current forest and natural ground cover is estimated at 9.06 annual $MMTCO_2e$; current development projections would reduce total sequestration in 2040by 0.65 $MMTCO_2e$.

Modeled Outcome

2016-2050 (viable)
Under the TLU-2 alternative land use scenarios, nearly 20,000 fewer acres of land would be consumed.

2016-2050 (stretch)

- Implement proactive strategy to expand region's capacity to sequester CO_2 emissions by expanding the region's tree canopy by 5% by the year 2040.
- . This policy would result in 1.183 million acres of canopy and 9.37 $MMTCO_2e$ of annual sequestration.

Implementation Actions

- Public sector planting program
- Voluntary or required planting by development entities in exchange for project approvals
- Creation of silvicultural districts or similar local policies.

Summary of Greenhouse Gas Sequestration for TLU-1

Summary Metric	2020	2040	2050
GHG Sequestration – Avoided Less due to more compact development (MMTCO2e)	0.10	0.50	0.54
GHG Sequestration – Increase due to expanding tree canopy (MMTCO2e)	0.09	0.32	0.44
Total GHG Sequestration benefits (MMTCO2e)	0.19	0.82	0.98

Co-Benefits

- Air Quality
- Economic Vitality
- Resiliency
- Reduced storm water run-off
- Community Amenity
- Heat Island Effect Mitigation

Costs

Low to medium. Estimated to cost approximately $245 million for tree reforestation (56,350 acres). This investment would be made gradually over time, . Public sector costs include direct expenditures for tree planting and maintenance, and program costs for easements, incentives, education, or forest mitigation banking. Private developers would likely be required to plant trees or pay toward reforestation. Costs could be partially offset by timber harvesting in undeveloped parts of the region. In urban/suburban areas, cost savings would result from lower energy costs for nearby buildings, improved public health, and increased commerce in treed areas.

TLU-2. Sustainable Development Patterns and Urban Design

This strategy supports realization of the reductions in strategy EBE-3 (Encourage development in activity centers). These strategies jointly would reduce the growth in emissions from passenger vehicles by directing more of the region's anticipated growth and redevelopment to walkable, mixed use activity centers served by premium transit (Metrorail, Commuter rail, LRT and BRT), and also by lessening regional imbalances in population and employment toward a more balanced jobs/housing ratios.

Modeled Outcome

2020-2040 (viable)

- Future growth within each jurisdiction is shifted to, in order of priority: 1) Activity Centers with premium transit; 2) other locations with premium transit; or 3) other Activity Centers without premium transit

2020-2050 (stretch)

- Regional job-housing imbalances are addressed by shifting future growth across jurisdictional boundaries, and then concentrated as described as above

Implementation Considerations

This is an aggressive strategy as about 60% of the region's projected future residential development and 75% of its projected commercial development is already forecast to occur in activity centers. Directing 100% of the region's future residential and commercial development to less auto-reliant locations currently planned to be served by premium transit services may be difficult given existing lifestyle preferences and market forces.

Significant additional investments in transit capacity and service would be required to support this sustainable development pattern.

Summary of Greenhouse Gas Reductions for TLU-2

Summary Metric (MMTCO2e)	2020	2040	2050
GHG Reductions – TLU-2 strategy alone (MMTCO2e)	0.34	1.32	1.67

Cost

The direct costs are low and are generally within existing planning functions. For the public sector, tradeoffs between costs and savings are complex, but compact development should be cheaper to provide and sustain infrastructure. For the private sector, these strategies could mean potentially higher costs for building in infill and higher density areas, but counterbalanced by higher sales prices. Additionally, these strategies should reduce transportation costs for households and improve access for employers and commercial establishments

Co-Benefits

- Safety
- Congestion Reduction
- Reliability
- Air Quality
- Energy Savings
- Economic Vitality
- Accessibility
- Resiliency
- Reduced Stormwater Run-off
- Community Amenity

TLU-3. Improve Fuel Economy of Light-Duty Vehicle Fleet

This strategy is designed to incentivize more fuel-efficient light-duty vehicles in the private sector through programs that a) speed up the replacement rate of older, less fuel-efficient vehicles; b) incentivize the purchase of electric vehicles and charging equipment; c) implement disincentives for inefficient vehicle purchases, and; d) adopt new low emission vehicle standards.

Modeled Outcome

2016-2020 (viable)

- Increase light-duty zero emission vehicles to 2% of total vehicle population in region (beyond those anticipated with existing policies)

2020-2040 (viable)

- Increase light-duty zero emission vehicles to 15% of total vehicle population in region (beyond those anticipated with existing policies)

2040-2050 (stretch)

- Increase light-duty zero emission vehicles to 25% of total vehicle population in region (beyond those anticipated with existing policies)

Implementation Actions to Support/Promote Zero Emissions Vehicles

- Invest in a system of public-access vehicle recharging stations,
- Offer tax credits to businesses that install recharging stations,
- Offer benefits (HOV access, priority parking) to owners of electric vehicles, and offer tax credits for electric vehicle purchases, among others.

Implementation Actions to Incentivize More Fuel Efficient Passenger Vehicles

- Implement a "Cash for Clunkers" program to encourage replacement of older, less fuel efficient vehicles
- Offer incentives for consumer/private sector purchase of electric vehicles and charging equipment
- Offer incentives for purchases of fuel-efficient vehicles (fee-bates)
- Provide disincentives for purchases of fuel inefficient vehicles (gas guzzler tax/registration fees)
- Adoption of CA Low-Emission Vehicle (LEV) Phase II program

Summary of GHG Reduction for TLU-3[11]

Year	Net GHG Reductions ($MMTCO_2e$)[12]
2020	0.09
2040	0.50
2050	0.88

[11] ICFI customized sketch planning tool used to estimate benefits from strategy.

[12] Net GHG reduction accounts for increase in power sector emissions for electric vehicles; the net is highly dependent upon other power sector strategies which are not accounted for here as strategies were analyzed individually

Cost

Public sector costs are expected to be medium ($50 million to $500 million). Costs include infrastructure improvements for widespread plug-in electric vehicle use and costs for incentives and program implementation costs. Private sector cost savings from driving a plug-in electric vehicle can be up to $950/year due to reduced fuel costs.

Co-Benefits

Reduction in criteria air pollutants

TLU-4. Increase Alternative Fuels in Public Sector Fleets

This strategy is designed to increase the number of alternative fuel vehicles, including zero emission vehicles, in public sector fleets through programs that a) fund purchases of alternative fuel school buses and transit bus fleets; b) convert existing garages and share alternative fuel facilities for school bus fleets, and; c) increase the share of electric vehicles in light-duty public sector fleets (e.g., police cars, government vehicles, etc.).

Modeled Outcome

2016 – 2020 (viable)

- Add 200 zero emission buses to public transit fleet in the study region (replacements).

2020 – 2040 (viable)

- Increase zero emission vehicles in municipal light-duty fleets to 15% of total fleet population; require B5 in all municipal fleets and school buses; require 15% of public transit fleet to be ZEVs.

2040 – 2050 (stretch)

- Increase zero emission vehicles in municipal light-duty fleets to 25% of total fleet population; require B20 in all municipal fleets and school buses; require 25% of public transit fleets to be zero emission vehicles.

Summary of GHG Reduction for TLU-4[13]

Year	GHG Reductions (MMTCO2e)
2020	0.007
2040	0.050
2050	0.093

Cost

Costs are estimated to be low (under $50 million) considering incremental costs of vehicle replacements. Costs include incremental costs of purchasing alternative fuel vehicles and costs associated with fueling stations.

Co-Benefits

- Reduction in criteria air pollutants

[13] ICFI customized sketch planning tool used to estimate benefits from strategy.

TLU-5. Truck Stop Electrification

This strategy is designed to reduce idling by heavy-duty vehicles, specifically through the installation of truck-stop electrification (TSE) sites in the National Capital Region.

Modeled Outcome

2016-2020

- One TSE location with 20 bays/site in the region.

2020-2040

- Six (6) TSE locations with 20 bays/site in the region.

2040-2050 (stretch)

- Fourteen (14) TSE locations with 20 bays/site in the region. There are currently 14 truck stops located within the metropolitan Washington region so the long-term stretch scenario essentially assumes that all are fitted with TSE bays.

Implementation Actions

- Adoption of truck stop electrification bays.

Summary of GHG Reduction for TLU-5[14]

Year	GHG Reductions (MMTCO2e)
2020	< 0.001
2040	0.002
2050	0.006

Cost

Public sector costs are estimated to be low (<$50 million). Installation of TSEs would require public sector expenditures for the infrastructure, as well as on-going operating and maintenance (O&M) costs. Capital costs were estimated as $10,000 per space, and O&M costs per space were $100 for maintenance, $25 for insurance, and $1,314 for overhead labor, based on data for two truck stops in New York, as cited in the Moving Cooler study. These technologies results in cost savings to freight carriers due to reduced vehicle fuel consumption during extended idling. These costs savings can be calculated by multiplying an estimate of annual diesel fuel savings by average diesel fuel costs per gallon.

Co-Benefits

- Reduction in criteria air pollutants

[14] ICFI customized sketch planning tool and MOVES2014 data used to estimate benefits from strategy.

TLU-6. Low-Carbon Fuel Standard

This strategy is designed to implement market-based programs to reduce the carbon intensity of on-road fuels through the use of lower-carbon alternatives (e.g. natural gas, electricity, biofuels, and hydrogen). This will be accomplished through the adoption of Low Carbon Fuel Standard (LCFS) within the study region.

Modeled Outcome

2016-2020 (viable)

- No reductions (assume measure will not be implemented by this date).

2020-2040 (viable)

- Reduction in total on-road fuel emissions in region by 10%.

2040-2050 (stretch)

- Reduction in total on-road fuel emissions in region by 15%.

Implementation Actions

- Implement market-based program to reduce carbon intensity of on-road fuels through use of lower-carbon alternatives (e.g., natural gas, electricity, biofuels, and hydrogen)

Summary of GHG Reduction for TLU-6[15]

Year	GHG Reductions (MMTCO2e)
2020	0
2040	1.02
2050	1.29

Cost

As a regulatory measure, public sector costs for implementing a low carbon fuel standard are very low (< $50 million). Costs borne on the private sector and consumers are somewhat difficult to estimate given the variety of ways in which a low carbon fuel standard could affect.

Co-Benefits

- Reduction in criteria air pollutants

Economic vitality, jobs, equity

[15] ICFI customized sketch planning tool used to estimate benefits from strategy.

TLU-7. Enhancing System Operations

This strategy includes a wide array of strategies to improve the operational performance of freeways and arterial/collectors. It should be noted that many operational strategies are already in place or anticipated in BAU conditions, so this measure is associated with additional strategy deployments. This analysis did not explicitly examine highway bottleneck improvements, but these improvements might be part of the overall improvement in vehicle operating conditions considered in these scenarios.

Modeled Outcome

2016- 2020 (viable)

- 20% of drivers adopt eco-driving practices (based on public campaigns); region-wide operational improvements reduce vehicle operating emissions by additional 1.65% (based on best available regional simulation study).

2020-2040 (viable)

- 80% of drivers adopt eco-driving practices (based in part via connected vehicle/automated vehicle technologies); region-wide operational improvements reduce vehicle operating emissions by additional 1.65% (based on best available regional simulation study).

2040 -2050 (stretch)

- 100% of drivers utilize eco-driving practices (via connected vehicle/automated vehicle technologies); region-wide operational improvements reduce vehicle operating emissions by additional 1.65% (based on best available regional simulation study).

Implementation Actions

- Integrated corridor management on freeway and major arterial corridors
- Ramp metering
- Signal retiming
- Use of roundabouts
- Intersection efficiency improvements
- Roadway bottleneck improvement
- Increased adoption of eco-driving practices by drivers
- Use of connected and autonomous vehicles

Summary of GHG Reduction for TLU-7[16]

Year	GHG Reductions (MMTCO2e)
2020	0.34
2040	0.56
2050	0.85

[16] ICFI customized sketch planning tool and MOVES2014 data used to estimate benefits from strategy.

Cost

Operational strategies are generally low cost, although they can take a wide array of forms. Maryland Climate Action Plan estimated costs of $2.36 million from 2010-2020 associated with corridor/regional operational improvements; costs associated with outreach to promote eco-driving; and costs associated with installing, operating, and maintaining V21 infrastructure. Bottleneck relief projects can vary significantly based on the size and scope of the bottleneck improvement project and can range from low (under $50 million) to medium ($50 million to $500 million).

Co-Benefits

- Safety
- Reliability
- Congestion reduction
- Reduction in criteria air pollutants
- Economic vitality, jobs, equity
- Mobility
- Accessibility
- Weather resilient
- Enhanced road weather management and incident management
- Chesapeake Bay/ storm water

TLU-8. Reduce Speeding on Freeways

This strategy is designed to provide greater enforcements of speed limits on freeways in the metropolitan Washington, DC region. Vehicle fuel economy degrades considerably at speeds above 55 mph, so freeway speed reduction has been proposed as a viable GHG reduction strategy in national studies. According to the Department of Energy, going from 60 to 70 mph degrades vehicle fuel economy by 13.6%, and going from 50 to 70 mph degrades fuel economy by 24.5%. In metropolitan Washington, DC region, very few highways operate at posted speeds above 55 mph, largely outside of the urbanized area (e.g., a portion of I-95 in Maryland beyond the Capital Beltway, a portion of I-270 beyond Clarksburg), as well as the Express Lanes that operate along the Capital Beltway and I-95 in Virginia. Consequently, this strategy would be implemented through increased speed enforcement, which may include more speed patrols and/or electronic monitoring of freeway speeds.

Modeled Outcome

2016- 2050 (viable/stretch)

- One-third of freeway speeding eliminated by 2020
- All freeway speeding eliminated by 2040

Implementation Actions

Increased speed enforcement, which may include more speed patrols and/or electronic monitoring of freeway speeds.

Summary of GHG Reduction for TLU-8[17]

Year	GHG Reductions (MMTCO2e)
2020	0.005
2040	0.006
2050	0.006

Costs

Reducing speeding will require additional highway speed enforcement, whether through deployment of additional law enforcement staff or electronic monitoring. Costs could range from low (under $50 million) to medium ($50 to $500 million).

Co-Benefits

- Safety
- Reduction in some criteria air pollutants

[17] ICFI customized sketch planning tool and MOVES2014 data used to estimate benefits from strategy.

TLU-9. Travel Demand Management

This strategy encompasses a wide range of strategies designed to reduce vehicle travel by shifting motorists to higher-occupancy modes (carpools, vanpools), public transit, walking, and bicycling, as well as telecommuting.

Modeled Outcome

2016 to 2020 (viable)

- 50% of parking in activity centers is priced at an average of $8 per day
- Expand employer-based incentives to cover 40% of employees in the region receiving a subsidy of $50/month for transit, carpool, vanpool, etc.

2020 to 2040 (viable)

- 90% of parking in activity centers is priced at an average of $8 per day
- Expand employer-based incentives to cover 80% of employees in the region receiving a subsidy of $50/month for transit, carpool, vanpool, etc.

2040 to 2050 (stretch)

- 100% of parking in activity centers is priced at an average of $8 per day
- Expand employer-based incentives to cover 100% of employees in the region receiving a subsidy of $80/month for transit, carpool, vanpool, etc.

Implementation Actions

- Encourage employers to offer incentives to employees to switch to carpooling/vanpooling, non-motorized modes, and telecommuting.
- Incentives to employers to offer or ordinances to require employers to offer parking cash out / transit benefits
- Expansion of Park-and-ride facilities to meet anticipated increase in rideshare and transit demand
- Incentives or ordinances such as parking tax, parking impact fees, parking caps to reduce free parking in activity centers to realize the above assumptions.

Summary of Travel Impacts and GHG Reduction for TLU-9[18]

Year	Daily VMT Reduced	Percent Reduction in VMT from Regional Base	Percentage Increase In Transit Trips	GHG Reductions (MMTCO2e)
2020	1,709,504	0.9%	2.2%	0.13
2040	5,857,877	2.4%	7.0%	0.24
2050	12,631,603	5.3%	38.5%	0.54

[18] TRIMMS sketch planning model and MOVES2014 data used to estimate benefits from strategy.

Cost

Annual Cost is estimated as low. Only the cost of incentives to the public sector is taken into account. Increase transit service cost could be off-set by the parking tax. Loss of revenue from lower gas tax collection from VMT reduction is possible.

Co-Benefits

- Congestion reduction
- Reduction in criteria air pollutants
- Economic vitality, jobs, equity
- Mobility
- Accessibility
- Weather resilient
- Chesapeake Bay/storm water

Note The current employer outreach program in the region which promotes TDM program similar to the above on a voluntary basis through the "Employer Outreach" TERM estimates a daily VMT reduction of 1,327,000 or an annual reduction of 331,750,000 due to the program. This program has been in operation for over 12 years and the program aims to maintain the criteria pollutant goal set as part of transportation conformity.

TLU-10. Transit Enhancements

This strategy is designed to increase the share of transit trips through increased or improved services. For this analysis, the focus on transit enhancements that reduce transit travel times and reliability, as well as schedule improvements to reduce wait-times, rather than expansions to services. TIGER is implementing signal priority projects along high transit corridors and could be operational in a year.

Modeled Outcome

2016 to 2020 (viable)

- Reduce transit travel and wait times by 10%

2020 to 2040 (viable)

- Reduce transit travel and wait times by 15%

2040 to 2050 (stretch)

- Reduce transit travel and wait times by 20%

Implementation Actions

Strategies may include a) increased circulator buses; b) enhanced commuter bus services; c) real-time bus schedule information; d) transit signal priority improvements; e) bus rapid transit improvements; f) expanded Metrorail/commuter rail; g) bus stop improvements; h) schedule coordination between transit agencies; i) permitting buses on highway shoulders; j) transit access improvements; k) establishing dedicated bus lanes; and l) bus infrastructure commitments.

Summary of Travel Impacts and GHG Reduction for TLU-10[19]

Year	Daily VMT Reduced	Percent Reduction in VMT from Regional Base	Percentage Increase In Transit Trips	GHG Reductions (MMTCO2e)
2020	751,961	0.4%	2.2%	0.06
2040	1,380,300	0.6%	3.4%	0.06
2050	1,898,793	0.8%	4.7%	0.08

Cost

Annual Cost is estimated as high. Even though some enhancements can be low cost, bus rapid transit, transit signal priority, and corridor treatments can be high.

Co-Benefits

- Reliability
- Congestion reduction
- Reduction in criteria air pollutants
- Economic vitality, jobs, equity
- Mobility & accessibility
- Community amenity

[19] TRIMMS sketch planning model and MOVES2014 data used to estimate benefits from strategy

TLU-11. Transit Incentives / Fare Reductions

This strategy is designed to attract transit ridership and use through lower fares, such as a) reduced price monthly transit passes; b) free bus-rail transfers, and c) free off-peak bus service.

Modeled Outcome

2016 to 2020 (viable)

- Reduce transit fares regionally by 20%.

2020 to 2040 (viable)

- Reduce transit fares regionally by 25%

2040 to 2050 (stretch)

- Reduce transit fares regionally by 40% partially funded through pricing strategies

Implementation Actions

- Reduced price monthly transit passes
- Free bus-rail transfers
- Free or reduced price off-peak bus service

Summary of Travel Impacts and GHG Reduction[20]

Year	Daily VMT Reduced	Percent Reduction in VMT from Regional Base	Percentage Increase In Transit Trips	GHG Reductions (MMTCO2e)
2020	1,646,775	0.8%	4.6%	0.12
2040	2,502,666	1.0%	5.9%	0.10
2050	4,418,938	1.8%	10.8%	0.19

Cost Annual Cost is estimated as low. Only the cost of incentives to the public sector is taken into account. Increase transit service cost could be off-set by the parking tax. Loss of revenue from lower gas tax collection from VMT reduction is possible.

Co-Benefits

- Congestion reduction
- Reduction in criteria air pollutants
- Mobility
- Accessibility
- Chesapeake Bay/storm water

[20] TRIMMS sketch planning model and MOVES2014 data used to estimate benefits from strategy.

TLU-12. Road Pricing

This strategy is designed to implement road pricing measures and adding roadway pricing (i.e. cordon pricing) to enter major activity centers across the region such as a) electronic tolling of major bridges and connectors; b) conversion to full electronic tolling; and c) VMT-based vehicle fees, including Pay-As-You-Drive insurance

Modeled Outcome

2016 to 2020 (viable)

- Nothing new will be implemented as part of this strategy by 2020

2020 to 2040 (viable)

- Cordon pricing into downtown DC at $5/trip

2040 to 2050 (stretch)

- In addition to the cordon pricing, VMT charge of $0.10/mile on all roads.

Summary of Travel Impacts and GHG Reduction[21]

Year	Daily VMT Reduced	Percent Reduction in VMT from Regional Base	Percentage Increase In Transit Trips	GHG Reductions (MMTCO2e)
2020	None	None	none	None
2040	611,723	0.3%	8.6%	0.03
2050	18,559,839	7.8%	25.2%	0.79

Implementation Actions

- Conversion to full electronic tolling in the region
- Implementation of the District of Columbia's $ 5/vehicle cordon pricing for all vehicles
- Implementation of VMT charge of $ 0.10/mile on all roads

Public sector cost would be low after paying for transportation improvements using revenue generated from tolls and VMT fees. Private sector costs could be high.

Co-Benefits

- Safety
- Reliability
- Congestion Reduction
- Reduction in criteria air pollutants
- Chesapeake Bay/storm water

[21] TRIMMS sketch planning model and MOVES2014 data used to estimate benefits from strategy.

Interim Findings from the Multi-Sector Working Group

Greenhouse Gas Reduction Strategies in the Metropolitan Washington Region

Presentation to the MWCOG Board of Directors

October 14, 2015

Charge Given To Multi-Sector Working Group (MSWG)

TPB and MWAQC affirmed the region's greenhouse reduction goals and committed staff and resources to support a multi-sector, multi-disciplinary professional working group convened by COG to:

- **Identify viable, implementable local, regional, and state actions to reduce GHG emissions in four sectors (Energy, the Built Environment, Land Use, and Transportation)**
- **Quantify the benefits, costs and implementation timeframes of these actions;**
- Explore specific GHG emission reduction targets in each of the four sectors; and
- Jointly develop an action plan for the region

MSWG Organization and Oversight

Transportation Planning Board (TPB)

COG Board of Directors

Climate, Energy & Environment Policy Committee (CEEPC)

Metropolitan Washington Air Quality Committee (MWAQC)

Multi-Sector Working Group

(Local Jurisdiction, Regional & State Agency Staff)

Energy/Environment Subgroup – Energy & Built Environment Sectors

Planning Subgroup – Land Use Sector

Transportation Subgroup – Transportation Sector

COG/TPB Committee Input

Region Forward Coalition
Planning Directors
TPB Technical Subcommittee
Built Environment Energy Advisory Committee (BEEAC)
MWAQC – Technical Advisory Committee

Additional Input from

Subject Matter Experts
Citizen Advisory Committees
General Public

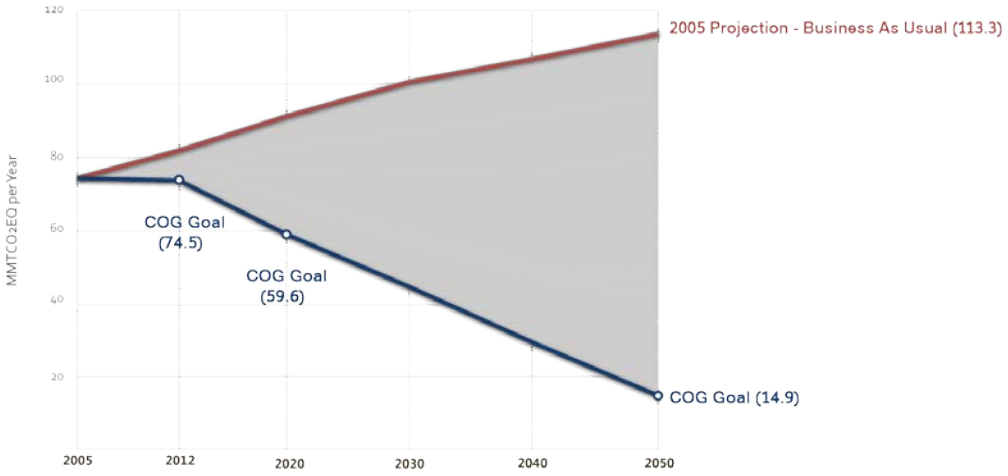
COG Staff Support

Consultant Support

Region's Voluntary GHG Reduction Goals

2005 - Baseline Emissions (74.5 MMT)

- **2012 – Reduce BAU emissions by 10%, to 2005 levels (74.5 MMT)**
- **2020 – Reduce emissions to 20% below 2005 levels (59.6 MMT)**
- **2050 – Reduce emissions to 80% below 2005 levels (14.9 MMT)**



Notes:
1. The goals were adopted by the COG Board in November 2008
2. MMT = Million Metric Tons of CO2 Equivalent (CO2e)

Current Policies are Making a Difference ≈ 1/3rd towards 2050 goal

Energy and Built Environment

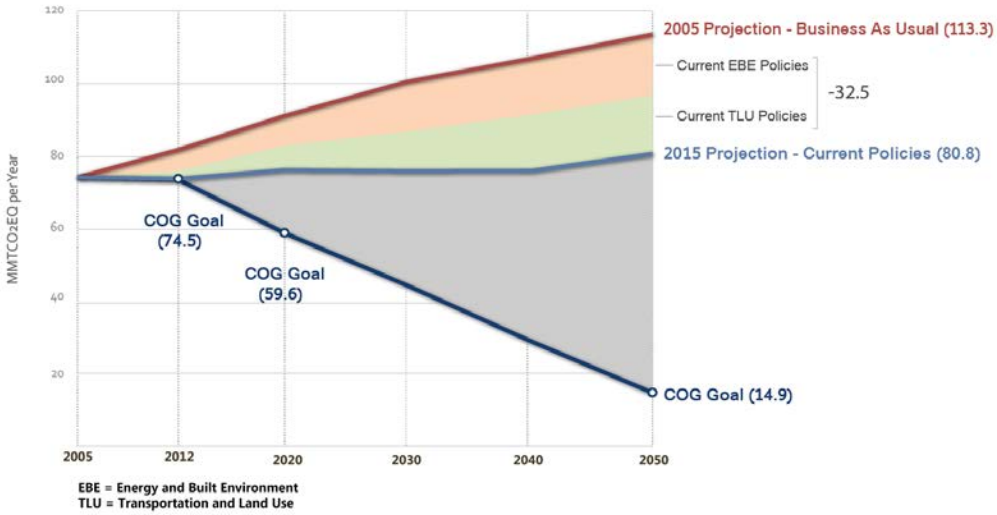
(16.1 MMT 14% towards 2050 goal)

- Improved electric generation
- Distributed solar
- Green Power Partners
- Renewable energy tax credits
- Renewable Portfolio Standards
- More stringent building codes
- Net-zero energy buildings
- Government energy efficiency
- Energy STAR and LEED

Land Use and Transportation

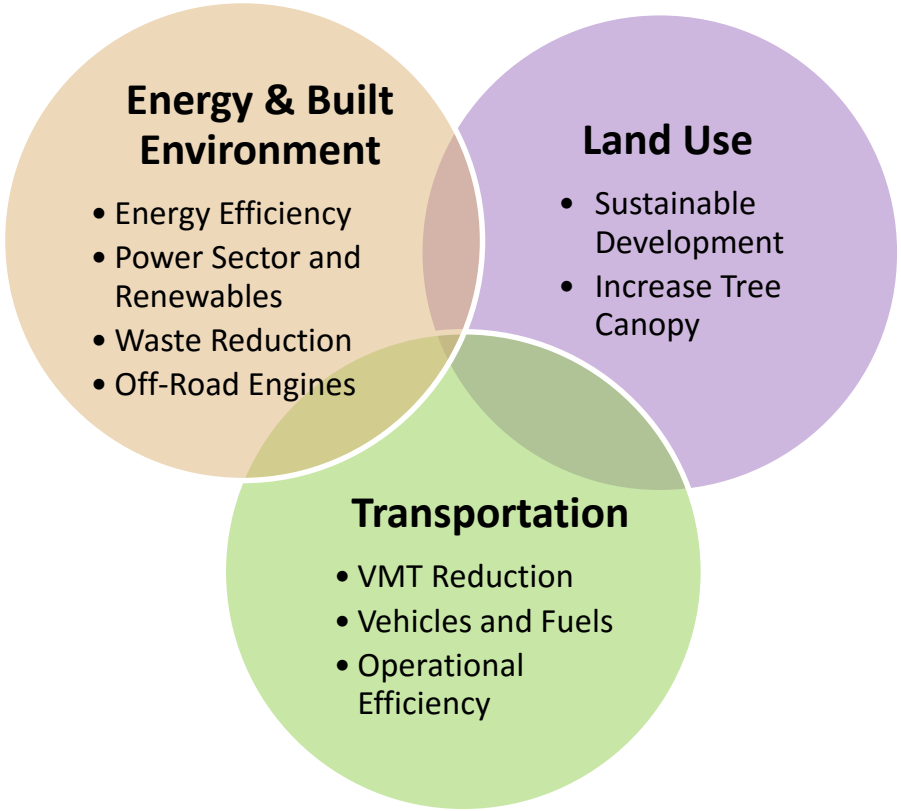
(16.4 MMT 15% towards 2050 goal)

- Future growth in transit oriented centers
- Transportation investments to support land use plans
- Provide more multimodal travel options
- Increased CAFÉ for light-duty vehicles
- Fuel efficiency standards for medium- and heavy-duty vehicles



Interim Findings From Multi-Sector Working Group, October 14, 2015

22 Strategies Analyzed



75 Initial Brainstorm Ideas

38 Individual Strategies

22 Refined Strategies for Technical Review

5 Key Grouped Strategies

MSWG Analysis Considerations

- Benefits: Greenhouse gas emissions
- Co-Benefits : Reduced air pollution, reduced stormwater pollution, reduced congestion, safety, economic vitality, local jobs, resiliency

- Cost:
  - Low (up to $50 million)
  - Medium ($51 to $500 million)
  - High (+ $500 million)

- Implementation Actions: Deep building retrofits, Implement the Clean Power Plan, Reduced price transit passes, Convert to full electronic tolling, Expand tree canopy

Viable and Stretch Levels of Grouped Strategies

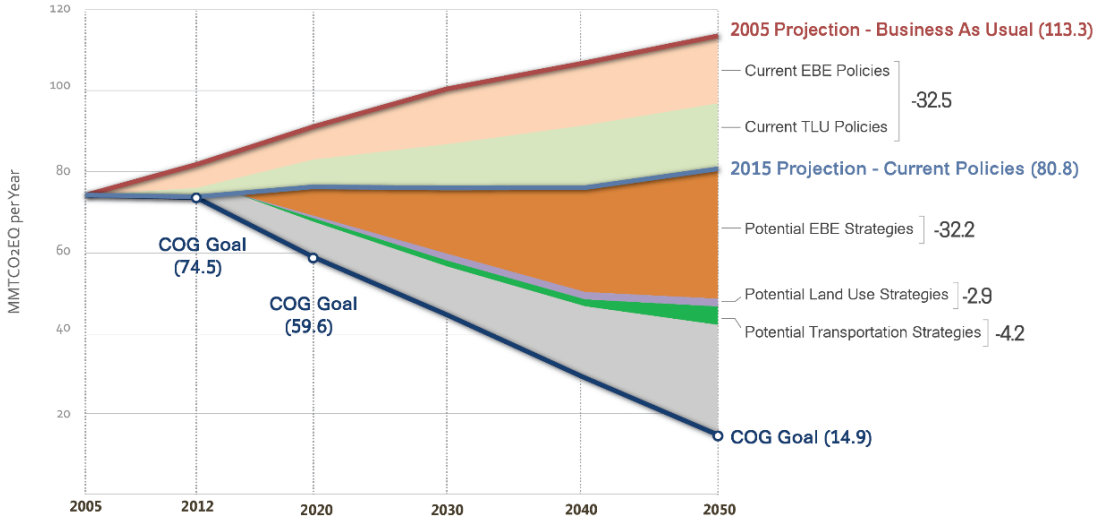
Grouped Strategy	Key Element	Viable	Stretch
Building Energy Efficiency	2% Annual Reduction in Existing Buildings	Yes	Yes
	New Buildings w/ Net Zero Energy	50%	100%
Power Sector and Renewables	Clean the Power Sector	Clean Power Plan	Add carbon-free nuclear, offshore wind
	Increase Renewables	Maximize market growth	Solar offsets: 40% in MD, 20% in VA, DC
Land Use and Tree Canopy	Maximize Transit Oriented Development (TOD)	Development Shifts within Jurisdictions	Development Shifts Across Jurisdictions
	Tree Canopy Carbon Sequestration	Reduced tree loss from development pattern	Expand Region's Tree Canopy by 5%
Vehicles and Fuels	More Zero-Emission Vehicles	15% More Light Duty, Transit	25% More Light Duty, Transit
	Reduce Carbon in Fuels	10%	15%
Travel Demand Management	Commuter Subsidy	$50/ mo. by 80% of Employers	$80/mo. by 100% of Employers
	Parking Charge	$8 average in 90% of Activity Centers	$8 average in 100% of Activity Centers
	Reduce Transit Fares	20% regionally	40% regionally
	Downtown DC Cordon Charge	$5/vehicle entering	$5/vehicle entering
	Vehicle Mile Travel Charge	None	$0.10/mile

Definition of Viable and Stretch are based upon an interim technical assessment of implementation feasibility

Interim Findings From Multi-Sector Working Group, October 14, 2015

Potential GHG Reductions at Viable and Stretch Levels

Grouped Strategy	Viable Percent Reduction 2050 Goal	Stretch Percent Reduction 2050 Goal
Building Energy Efficiency	15%	18%
Power Sector and Renewables	10%	14%
Land Use and Tree Canopy	2%	3%
Vehicles and Fuels	2%	4%
Travel Demand Management and Pricing	<1%	2%
Total	29%	40%



EBE = Energy and Built Environment
TLU = Transportation and Land Use

Land use strategies include carbon sequestration from tree canopy strategy

Potential strategies show reduction from stretch actions

Potential Additional Measures To Achieve 2050 COG Goal

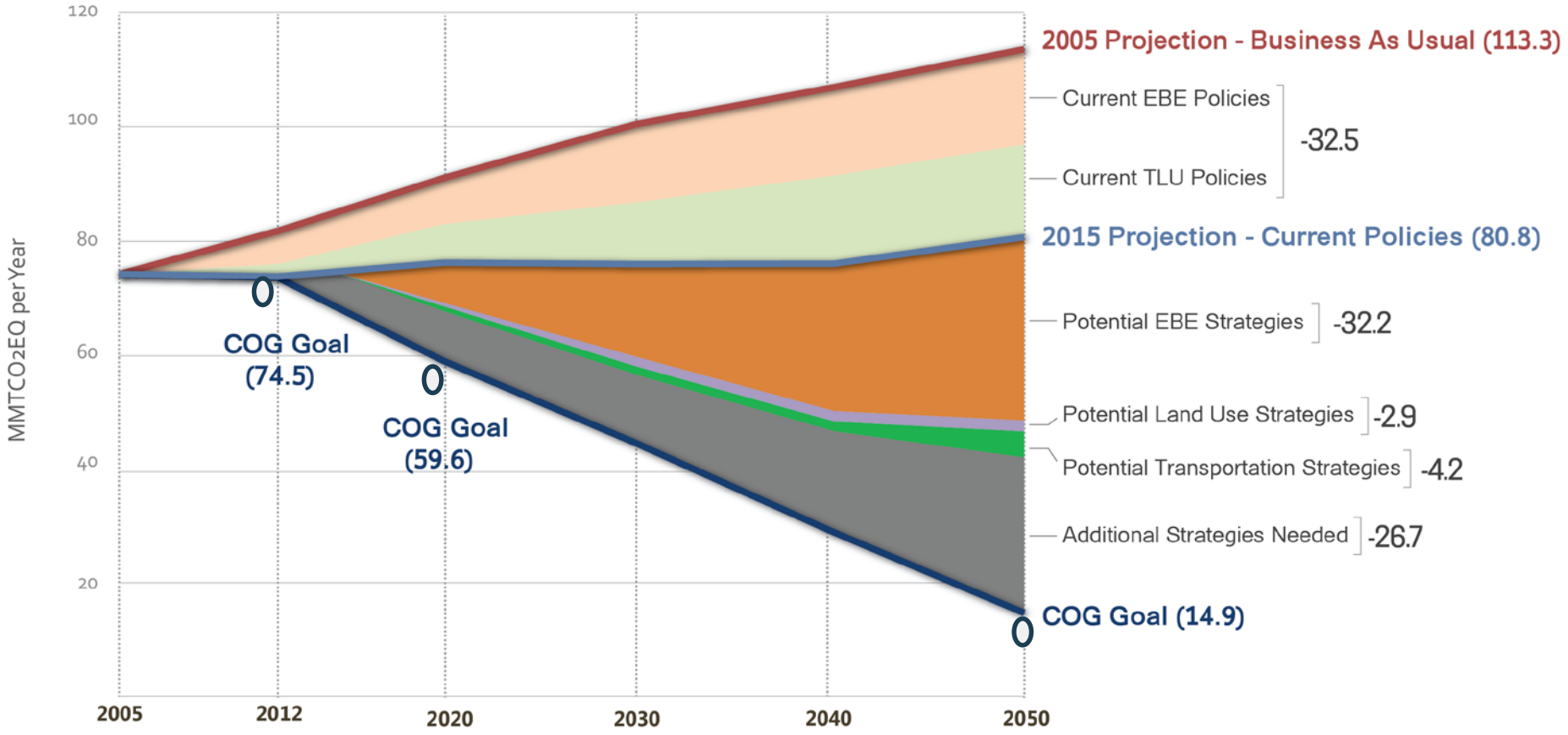
27 to 38 MMTCO$_2$e GHG emission reductions (27% to 39% from 2050 BAU projections) still needed to achieve COG's 2050 goal

Additional measures may include

- Expanded local strategies such as increased financial support for efficiency, renewables, and transit strategies
- Faster deployment of zero emission vehicles
- Technology improvements
- New fuel efficiency standards for medium and heavy-duty vehicles and engines
- New Natural Gas Pipeline Rule
- New energy efficiency standards for buildings, appliances and equipment
- Increased fuel taxes / carbon tax
- Reduction in commercial aviation GHG emissions
- Expanded use of biofuels
- Decarbonize power sector through carbon capture and storage; more nuclear power; improvements to solar; offshore wind power
- Lifecycle GHG reductions from products

Interim Findings From Multi-Sector Working Group, October 14, 2015

Moving Towards COG's GHG Reduction Goals



EBE = Energy and Built Environment
TLU = Transportation and Land Use

Land use strategies include carbon sequestration from tree canopy strategy

Potential strategies show reduction from stretch actions

Interim Findings From Multi-Sector Working Group, October 14, 2015

Key Interim Findings

- By 2050 current policies will slow the growth of GHG emissions to 10% above 2005 levels while accommodating a 48% increase in population
- The region has the potential to reduce emissions between 29 to 39 MMT (29% to 40%) by pursuing multiple strategies across sectors, but state and local action is required
- The region will need an additional 27 to 38 MMT (27% to 39%) of GHG reductions to achieve the 2050 COG goal
  - Achieving this goal will require additional measures – federal, state and local

Next Steps

September – October 2015

- Review of Interim MSWG findings by TPB, MWAQC, CEEPC and COG Board
- Exploration of potential goals and targets by sector

November – December 2015

- Draft Final MSWG Report including exploration of goals and targets prepared by consultant and reviewed by TPB, MWAQC, CEEPC

January 2016

- Final MSWG Report to COG Board
  - Request Board to:
    - Endorse strategies for inclusion in Action Plan
    - Consider options resulting from exploration of goals and targets and provide policy direction

February 2016

- Begin development of Action Plan

AGENDA ITEM #10

OTHER BUSINESS

AGENDA ITEM #11

ADJOURN