### JOINT TECHNICAL ADVISORY COMMITTEE (TAC) AND AIR QUALITY SUBCOMMITTEE (AQS) MEETING August 16, 2018

A meeting of the Joint Technical Advisory Committee (TAC) and Air Quality Subcommittee (AQS) was held on Thursday, August 16, 2018, at WILMAPCO, 850 Library Avenue, Suite 100, Newark, DE 19711.

**1. CALL TO ORDER:** Mr. Dahlstrom, TAC Chairperson, brought the TAC and AQS meeting to order at 10:00 a.m.

### 2. TAC Members present:

Ian Beam, Maryland Department of Transportation Alex Brun, MDE (via conference call) Stacey Dahlstrom, New Castle County Department of Land Use David Dahlstrom, Maryland Department of Planning Anthony DiGiacomo, Cecil County Land Use and Development Services Brian Mitchell, City of Wilmington Department of Public Works Jeanne Minner, Town of Elkton Jolyon Shelton, DNREC Joshua Thomas, Delaware Department of Transportation

### TAC Ex-Officio Members present:

None

### TAC Members absent:

City of Newark City of Wilmington Department of Planning and Development Delaware Division of Small Business, Development, and Tourism Delaware Transit Corporation Delaware River and Bay Authority Delaware State Planning Coordination Maryland Transit Administration

### TAC Ex-Officio Members absent:

Amtrak Diamond State Port Corporation U.S. Environmental Protection Agency U.S. Federal Highway Administration U.S. Federal Transit Administration

### **AQS Members Present**

Nathan Attard, DelDOT Kevin Black, FHWA (via conference call) Mike Du Ross, DelDOT (via conference call) Jolyon Shelton, DNREC Colleen Turner, MDOT (via conference call)

### **Guests and Invitees:**

David Schlie, MDOT State Highway Administration Bill Dunn, Civic League for New Castle County

### Staff:

Dan Blevins, Principal Planner Janet Butler, Administrative Assistant Jacob Guise, Intern Dave Gula, Principal Planner Sharen Elcock, Executive Assistant Randi Novakoff, Outreach Manager Bill Swiatek, Principal Planner Jacob Thompson, Transportation Planner Tigist Zegeye, Executive Director

Minutes prepared by: Janet Butler

### 3. MINUTES

The following corrections were made to the July 19, 2018 TAC Minutes: On page 5, in the 7<sup>th</sup> paragraph, the word "identify" was changed to "include"; Mr. Tyson was changed to Mr. Byrne on pages 3 and 5; and Mr. Joylon was changed to Mr. Shelton on page 4.

**ACTION:** On motion by Mr. DiGiacomo and seconded by Mr. Mitchell, the TAC approved the July 19, 2018 minutes with corrections.

Motion passed.

(8-16-18 - 01)

### 4. SUBCOMMITTEE UPDATES:

### a. Nonmotorized Transportation Working Group (NMTWG)

Ms. Zegeye said the NMTWG met on August 7, 2018. Presentation/discussion items included an update of the project to fill a gap in the greater Newark Regional trails network by a representative from the Delaware State Parks, and an overview of the Delaware Bicycle Council grant program and review of the 2018 applications. They also reviewed the draft amendments to the TIP including an update on the TAP, and bicycle and pedestrian projects. In addition, there was a discussion of the draft changes to the non-motorized transportation objectives, actions, and performance measures of the 2050 Regional Transportation Plan (RTP), and an update on the status of the New Castle County Bicycle Plan.

### 5. PUBLIC COMMENT PERIOD:

None.

### ACTION ITEMS:

### 6. To Recommend amending the FY 2019 Unified Planning Work Program (UPWP) with carry-over funds

Ms. Zegeye said the total carryover amount is \$352,500.24, which matches the consultant funds remaining in the June 2018 WILMAPCO financial report distributed to TAC. On page 2 of the TAC packet, WILMAPCO's proposal is that the first nine projects would be carried over to the FY 2019 UPWP. Typographical errors are that the year should say 2019, not 2018, and the balance remaining should say 6/30/18 not 6/30/17, which will be corrected.

The next six projects have been completed. Of those, the first four projects were completed and were under budget, and the last two projects including Cecil County Travel Time for \$18,000, would be put back in the general funds. This is because regional traffic counts were done for New Castle and Cecil Counties and those funds are already available. In addition, the left over funding for \$48,000 from the Churchman's Crossing project would be put back into the general funds because there is leftover funding and WILMAPCO would like to finish the project using these unspent funds.

At the bottom of page 2, funds are listed that indicate what is left over after the fiscal year is closed out. The total amount to be carried over is \$732,850.50, minus the prior year's tasks, which were not completed by June 30, 2018, which equals \$269,738.48. The final amount is \$463,112.02, which would be programmed for future tasks.

**ACTION:** On motion by Mr. Thomas and seconded by Ms. Dahlstrom, the TAC recommended amendment of the FY 2019 UPWP with carry over funds including corrections.

### Motion passed

### (8-16-18 - 02)

### 7. To Recommend Amendment of the FY 2019-2022 TIP, including use of CMAQ, STP, TAP, and Transit 5310 and Urbanized Area funds for FY 2019

Mr. Swiatek said the FY 2019-2022 TIP update is relatively unchanged. The full TIP is included in the packet. One public comment is regarding the status of James Street Bridge over the Christiana River project, which has been pushed back to 2020. Another question was about the Newport Rail Station project, which is being updated with ridership projections.

ACTION: On motion by Mr. Mitchell and seconded by Ms. Dahlstrom, the TAC recommended amending the FY 2019-2022 TIP, including use of CMAQ, STP, TAP, and Transit 5310 and Urbanized Area funds for FY 2019.

### PRESENTATION/DISCUSSION ITEMS:

### 8. Delaware CMAQ Target Setting

Mr. Swiatek distributed Performance Management 3 and DelDOT's CMAQ Emissions Calculations, May 2018 spreadsheet (Attachment A).

Mr. Mike DuRoss, DelDOT, said a summary of the CMAQ Target Setting Process is found on page 15 of the handout. A list was developed for the FY2017-2021 period, which generated a five-year potential program of CMAQ supported projects. Then, DelDOT determined which projects could be estimated in a quantitative method, such as in a spreadsheet, or a qualitative method. Most were determined to be "quantitative" and were put into the spreadsheet. Then, they reviewed the emissions calculator, toolkit.

The spreadsheet process is a basic format to develop CMAQ estimates for emissions reductions. It uses estimates of dwelling units and population within a quarter of a mile of the project, mode-shift assumptions, and total project length. Assumed emission rates from the MOVES model are applied in the spreadsheet. For FY2018-FY2021, emissions from the four years were averaged. This average was then multiplied by two for the two-year target and multiplied by four for the four-year target.

DelDOT is revising the spreadsheet for the baseline performance monitoring report that is due October 1, 2018. DelDOT is also including the dwelling units and mode shifts and adding the emissions for PM2.5, which had not been provided on May 20, 2018.

DelDOT will establish permanent counters; or get temporary counters to get good data on the bike/pedestrian usage to improve and refine the spreadsheet method. In addition, DelDOT is about to hand off much of the monitoring process and annual generation of CMAQ emissions reduction estimates to consultants in a few months.

Mr. Swiatek said on the spreadsheet, the Christiana Bridge project was reassigned from CMAQ to STP; therefore, when you recalculate you can take that project off the spreadsheet. Mr. DuRoss agreed that some projects have shifted since May 20, 2018.

Ms. Turner, MDOT, asked if the targets are in kilograms per day. Mr. DuRoss replied they are just grams per day; however, we can change that.

Mr. Dahlstrom commented regarding Ride Share that there are no numbers associated with it, but there are totals in the right column. Mr. DuRoss replied there was a separate spreadsheet for Ride Share. It is a recurring project and we assume 1,000 trips per year, it has an average trip length, and there is a corresponding emissions rate for speed and distances. This has been a fixed rate for a long time.

Mr. Swiatek asked when WILMAPCO could expect finalized emissions data. Mr. DuRoss replied by the next Air Quality Subcommittee (AQS) meeting in September prior to the due date of the October 1, 2018 baseline report.

### 9. WILMAPCO's CMAQ Performance Plans

Mr. Swiatek distributed WILMAPCO's Baseline CMAQ Performance Plan and CMAQ Scoring for Cecil County **(Attachment B)**. Mr. Swiatek said by October 1, 2018, we must come up with a performance plan, and he referred to the following schedule:

- August 16, 2018: Presentation to TAC/AQS
- August 30, 2018: Special AQS review of Cecil County emissions targets
- September 13, 2018: AQS to recommend endorsement
- September 20, 2010: TAC to recommend endorsement
- September 28, 2018: Submit CMAQ Performance Plan to DelDOT/MDOT
- October 1, 2018: Submit CMAQ Performance Plan
- November 8, 2018: Council to adopt Performance Targets
- November 16, 2018: MPO Performance Targets are due

Mr. Swiatek also discussed specific pages of the Performance Plan: Rough Draft, dated August 13, 2018. He said there are three measures on page 6 for Peak Hour Excessive Delay. The Hours of Regional Delay Per Capita include the baseline of 6.8 hours in 2017 that increases to 17.2 targets in 2021. The Percent Non-SOV Travel: baseline is 27.9 %, the 2-year target is 28%; and the 4-year target is 28.1%.

Ms. Turner commented that regarding On-Road Mobile Source Emissions Targets on page 8: "MDOT's targets are based on previously-funded CMAQ projects (several roundabouts) that did not properly pass through our transportation planning process," MDOT could not support language that says we did not work properly through the process.

Mr. Swiatek explained that WILMAPCO does have a disagreement with MDOT regarding how to set the CMAQ targets in Cecil County. The issue is that the projects in Cecil County did not pass through WILMAPCO's process because they were not in the WILMAPCO TIP. In addition, more cost-effective projects could be funded via CMAQ and produce the same or better emissions results. Ms. Zegeye agreed.

Ms. Zegeye noted that the roundabout projects were not popular in Cecil County, and reiterated that they were not included in the WILMAPCO TIP. In addition, WILMAPCO staff believes that based on FHWA's cost benefits emission calculations, bike/ped projects have better emission benefits than roundabouts. Ms. Zegeye added our proposal is to use the priority letters that Cecil County and municipalities have submitted and use those projects to develop CMAQ targets. Mr. Swiatek said he would work with MDOT on the document language; the text was simply there to explain why WILMAPCO was creating its own targets.

Mr. Swiatek continued on page 9 in the New Castle County section. WILMAPCO will take what DeIDOT has proposed as targets and adopt them. On page 10, the planned CMAQ projects will help to achieve the targets. In addition, page 11 provides the project descriptions to be developed in Cecil County. Both pages 10 and 11 are awaiting further details.

All the Cecil County bicycle and pedestrian projects that WILMAPCO staff proposes to use to develop a target for Cecil County came from the Priority Letters from Cecil County, North East, and Perryville.

Mr. Beam said to put MD, for state routes, instead of SR. Mr. Swiatek said he would correct that.

Mr. DiGiacomo commented that Cecil County does not have an adversarial relationship with MDOT but said that the roundabouts in question were not necessarily the top priority for the County government. He invited MDOT to the Cecil County Technical Meeting at 10:00 a.m., on September 6, 2018, and the Cecil County Tour on September 25, 2018.

### 10. WILMAPCO 2018 Interregional Report

Mr. Thompson said the 2018 Interregional Report includes demographic changes and travel characteristics, which covers a 28-county study area in four states. The study area includes MPOs and counties within 60 miles of the WILMAPCO region. The report was last updated in 2012 and the 2018 update is in progress.

Data sources include the US Census Bureau, FHWA, State Data Access websites; MPOs; County Planning departments; and Transit providers. The population will grow from 11.1 to 12.4 million. In the 2012 report, Philadelphia was the only county expected to decline (3%). Philadelphia would grow by 8% by 2040. Both Cape May and Salem Counties, in New Jersey would lose population.

However, employment would grow from 5.9 to 6.5 million. There will be 600,000 more jobs, which is a 10% increase. Lancaster County will be the largest contributor, adding 80,000 jobs. More than 70% of jobs will be in Maryland and Pennsylvania. In addition, New Castle, Delaware, Carrol, Maryland and Salem, New Jersey counties would lose jobs.

The average road segment carries more than 31,000 vehicles per day. The I-95 Corridor has more than 120,000 daily vehicles. The heaviest traffic volume that moves north to south is between Baltimore and Philadelphia. The population increases will drive increases in traffic.

From 2012 to 2045, there would be a 53% increase in traffic throughout the study area. The WILMAPCO region would see an 81% increase, and I-95 corridor would see a 51% increase.

From 2010 to 2016, the average commute time increased from 3.2 minutes to 28.7 minutes. More than half of the counties exceeded the regional average. The longest commutes are Philadelphia (33 minutes); Queen Anne's, Maryland (35 minutes); and Caroll, Maryland (21 minutes).

Regarding the driving mode share, the highest percentages of workers who drive alone include York County, Pennsylvania (86%) and Carroll County, Maryland (85%). The lowest percentages of workers who drive alone include Philadelphia (51%) and Baltimore City (59%). However, between 2010 and 2016 the overall percentage remained steady at 78%.

I-95 in the Mid-Atlantic is the most heavily traveled truck route in the US. In 2012, I-95 carried nearly 14,000 daily trucks (average by segment). Trucks comprise 8% of total traffic. Truck traffic is expected to grow by 55% by 2045, with growth occurring on roadways throughout the study area. I-95 truck traffic will grow by 50% reaching nearly 20,700 daily trucks. Long-distance truck traffic will increase from 24% to 27.5%.

Congestion is measured by volume to capacity ratio. Level of Service (LOS) is measured as A through F. By 2045, congestion is expected to significantly impede traffic flows, especially in the DVRPC and BMC regions. Roadways at and above capacity (E-F) are expected to increase by 65% from 2012.

Marine highways are alternatives to ground transportation. In 2010, USDOT identified 18 marine corridors, 8 projects, and 6 initiatives. From 2016-2018 additional funding enabled growth of the program, which now supports 21 projects. There are nine projects in or near the study area.

Transit scores are based on the ability to support transit investments. Factors include population density, employment density, and zero-car households. Since 2005, scores grew along Delaware Route 1 in Middletown, Smyrna, and Dover. Inter-county transit routes in the WILMAPCO region include DART Routes 301 and 302, Cecil Transit Routes 4 and 5, and the SEPTA Wilmington/Newark Line.

The inter-regional TIP projects extend or have impacts beyond WILMAPCO's borders. Completed projects include highway expansions and interchanges, freight rail feasibility studies, and passenger rail studies for commuter rail extension. Projects in progress are the highway and rail improvements.

Recommendations of the WILMAPCO 2018 Interregional Report include expanding inter-county transit services, continuing inter-agency coordination, supporting dense, walkable, land uses, and limiting outward growth. Next steps in the report are to update the data and analyses, update inter-regional activities, include analysis of key regional corridors, include potential new measures such as climate change impacts and new technologies, and produce a draft report by late September 2018.

Mr. DiGiacomo asked about the location of the long-range truck/short-range miles. Mr. Thompson replied that it goes outside the study areas from the Freight Analysis Framework. Mr. Dahlstrom asked if the 12% population increase and the 53% traffic increase are in the WILMAPCO region. Mr. Thompson replied 53% is in the study area, and 81% is the WILMAPCO increase.

### 11. AQ Conformity Update

Mr. Swiatek said on page 16 of the handout entitled Projects Modeled in summer 2018 (2050 RTP/FY20 TIP), there is a list of projects to be included in the 2018 Model. Members of staff were on a conference call with MDOT regarding the I-95 Interchange and Belvedere Road project to discuss getting it into the model with the draft model 2030 year.

The Project Schedule for the Conformity Analysis is on page 15. He added we are looking for the results of the Conformity Analysis by October 2018, which will be reviewed at the October 11, 2018 AQS meeting. The air quality document will be refined by AQS in December. Then it will go out for public comment along with the WILMAPCO 2050 RTP in January 2019 and be ready for the WILMAPCO Council approval at the March 2019 meeting.

Mr. Dunn asked why the air quality and congestion issues on the Stanton/Kirkwood Highway area at the Route 7/Route 4 split are being discussed. Mr. Swiatek said he would look at the TIP to see if that project is there, he believes there is a project funded at that intersection. He added that only the projects that are capacity-adding projects that are considered regionally significant are modeled for the conformity analysis. There are other projects that include congestion relief elements that are not on this list. Mr. Swiatek explained that this is not a ranked list; these projects are defined by descriptions that are already in the TIP and the RTP.

Mr. Dahlstrom asked if projects #12 and #23 indicate widening; however, others say they are widening from four to six lanes. Mr. Swiatek said he would investigate the project description and see if he can add that language. Mr. Dahlstrom also asked if the "Our Town" public meeting was a process. Mr. Swiatek said Our Town is usually a one-time event. The next WILMAPCO "Our Town" event will be held on February 7, 2019.

### 12. 2050 Regional Transportation Plan (RTP) Update

Mr. Blevins distributed the Draft 2050 RTP Transportation Investment Areas, July Version (Attachment C). He said the maps show the investment areas. The areas in blue are the centers, which are "urban." The definitions are on the last page of the handout. Ms. Dahlstrom asked if they are not all "municipal" areas, but, also "suburban" areas. Mr. Blevins said will be able to change the wording and make things clearer. Ms. Zegeye said all of the 2050 RTP meetings are being set up with the Council members and not just with New Castle County.

Mr. Blevins added we cleaned up the boundaries around the investment areas. The City of Wilmington now stands as an "Urban Center", with other municipalities designated as "Centers." In Cecil County, some rural areas include villages that were added. The TIAs are the basis for where the various types of transportation investments should be made within the region. They draw the relationship between land use and transportation and provide input in the TIP project prioritization process criteria. In addition, tweaks were made to the TIAs based on newer data.

He provided the following draft 2050 TIA definitions for the investment areas:

- Center Municipal areas with the highest concentrations of population and/or employment with well-established land uses, and development patterns and opportunities for significant re-development.
- Core Non-municipal areas, which contain densely, settled population and employment patterns.
- Community areas with well-established land uses and development patterns and where growth and development pressures are expected to be moderate.

- Developing Areas where land uses and development patterns are not yet set and where they continue to emerge.
- Rural Areas where limited growth and development exist or are expected, where transportation facilities and services are considered adequate to meet needs and where natural resources are to be preserved.
- Village (Cecil) Areas that protect the character of the County's historic villages by separating them from surrounding rural or developed areas, which may feature a cluster of structures that include historic buildings, architectural elements, community focal points, and historic employment centers and commercial uses.

### **INFORMATION ITEMS:**

### 13. Staff Report

Ms. Zegeye reported on the following plans and events:

- Staff has been participating in the Wilmington Comprehensive Plan meetings.
- The Elkton Pedestrian Plan was endorsed by the Elkton Mayor and Commissioners.
- Staff exhibited at the Southbridge Weekend Health Fair on July 21, 2018.
- The Route 202 Master Plan public meeting was held at Talleyville Fire Hall on July 25, 2018, which had 200 attendees, and a visioning workshop is planned for the fall.
- Staff exhibited at the 55+ Healthy Lifestyles Expo on August 9, 2018 at Elkton High School.
- The Route 9 Corridor Master Plan Steering Committee will meet on August 21, 2018.
- Staff continues to support the development of the Newark Sustainability Plan. Their next Steering Committee meeting is set for August 22, 2018.
- The joint WILMAPCO and DelDOT public workshop will be held on September 5, 2018 from 4-7 p.m. at the Newark Free Library.
- The Cecil County Pre-Tour meeting will be held on September 6, 2018, and the Cecil County Public Tour meeting will be held on September 25, 2018.
- Staff will exhibit at Newark Community Day on September 16, 2018.
- Staff is working on the Environmental Justice (EJ) and Transportation Justice (TJ) Report updates. TAC members who wish to serve on the committee please contact Mr. Swiatek.
- Staff will conduct New Castle County Bike Plan public outreach with municipalities and civic associations during the fall 2018.
- The Newark Area Transit Study Management Committee met on August 7, 2018. The consultant team and WILMAPCO surveyed transit riders and drivers for DART, Unicity, Cecil County Transit and the University transit systems. Online survey is available for business/organizations and Newark residents.
- Staff held the 12<sup>th</sup> Street Connector Alignment Public Meeting and 7<sup>th</sup> Street Peninsula Public Workshop.
- Whitman, Requardt, and Associates was selected as consultants for the Southern New Castle County Master Plan. A kick-off meeting will be scheduled soon.

### **OTHER BUSINESS:**

None.

### **ADJOURNMENT:**

The meeting adjourned at 11:35 a.m.

### Attachments (3)

### **PERFORMANCE MANAGEMENT 3**

### "On-Road Mobile Source Emission Reductions, CMAQ PM 3 Measure"; Delaware DOT and Delaware MPO Coordination

Subpart H referred to "Emission Reductions Measures" requiring 2-Year and 4-Year for each applicable criteria pollutant and precursor. This was a separate, distinct PM 3 measure compared with the "regional measures" contained in Subpart G (the PHED and Non-SOV Travel Measures previously described).

The technical process used to develop the emission reductions corresponding to the CMAQ-funded projects in Delaware was as follows:

- 1) A spreadsheet was developed by DelDOT Finance Division staff describing CMAQ expenditures, project titles, project descriptions, and funding amounts for State FY 2017, FY 2018, FY 2019, FY 2020, and FY 2021.
- 2) For "out years" in the above spreadsheet (FY 2019 FY 2021) a list of currently planned projects for the ""Bike/Pedestrian" category was developed by DelDOT Division of Planning, Local Systems staff. This was used to supplement the Finance spreadsheet so that project locations, project lengths, and potential usage estimates could be developed.
- 3) An assessment was made to determine if "qualitative" or "quantitative" methods could be used to estimate emission reductions, and amounts, according to grams per day, kilograms per day, or tons per year.
- 4) For those projects that were assessed as able to utilize "quantitative" methods, a further assessment was made to use:
  - A) staff spreadsheet tools or
  - B) the FHWA "CMAQ Emissions Calculator Toolkits".
- 5) Emissions estimates were then developed to support development of targets, based on likely or potential reductions.

### **PERFORMANCE MANAGEMENT 3**

### Considerations:

In developing the emissions reductions estimates, it was obvious that the allocation of CMAQ funds according to currently programmed projects could change (may likely change) as updates occur in the future. This might happen due to updating completion dates of currently underway projects, evolving priorities or recognition of updated prioritization factors and criteria (resulting in some projects currently programmed for CMAQ funds in "out years" potentially receiving more or less total CMAQ funds, adjustments to project horizon years and completion dates, and other element within the project planning, design, and construction processes.

The Total Emission Reduction for the current list of CMAQ-funded projects in Delaware (able to be assessed through quantitative methods) are as follows:

- The 2-Year Total Emissions reductions of NOx are 7353.40 grams per day. The 2-Year Total Emissions reductions of VOC are 10521.40 grams per day.
- 2) The 4-Year Total Emissions reductions for NOx are 16086.83 grams per day. The 4-Year Total Emissions reductions for VOC are 26229.83 grams per day. Note that the 4-Year Emissions reductions include the estimated amounts for the previous 2-Year targets as well.

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## WILMAPCO's Baseline CMAQ Performance Plan Timeline

# DRAFT

Special AUS full review of Cecil Co. emissions targets	1.1		
AQS recommends endorsement	13		
AC recommends endorsement	20		
Submit CMAQ Performance Plan to DelDOT/MDOT	28		
CMAQ Performance Plan Due		-	
Council adoption of performance targets; endorsement of CMAQ Performance Plan			8
MPO Performance Targets Due			16

1



### PERFORMANCE PLAN CONGESTION MITIGATION AND AIR QUALITY (CMAQ)

Wilmington Area Planning Council (WILMAPCO) Philadelphia, PA—NJ—DE—MD

### ROUGH DRAFT – August 13, 2018# #

#



### Introduction

Both the Moving Ahead for Progress in the 21st Century (MAP-21) and the Fixing America's Surface Transportation (FAST) Acts called for a more performance-based approach to transportation planning. Under this federal legislation, States, Metropolitan Planning Organizations (MPOs), and public transportation providers must link investment priorities to certain performance-based measures and targets. These measures and targets lie in the following areas:

- o Highway safety and assets
- o System performance
- o Transit safety and transit asset management

As the MPO for the Wilmington, Delaware region (which includes New Castle County, Delaware and Cecil County, Maryland) the Wilmington Area Planning Council (WILMAPCO) has a long history of incorporating performance measurement into the planning process. The Regional Progress Report, produced every two years, tracks the performance of and informs the update to policy in the Regional Transportation Plan, our long-range Plan. Looking beyond surface trends, the Progress Report uses deep indicators that assess why certain policy actions are on course while others may not be. With mature, performance-based planning already in place, WILMAPCO is in a strong position to incorporate new federally-required performance measures and targets.

This report specifically addresses federal requirements to incorporate performance measurement into Congestion Mitigation and Air Quality (CMAQ) planning and programming. It establishes baseline conditions/performance and two and four-year targets for both traffic congestion and on-road mobile source emission measures. The table on the following page identifies specific measures and data used. Going further, it then provides a description of future projects which may be funded by CMAQ monies and notes how they will help to achieve the identified targets.



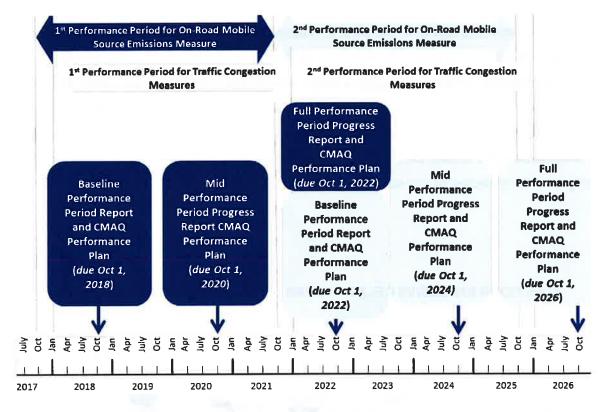
### DATA PRESENTED IN THIS REPORT

CMAQ Program	Performance Measure	Data
Traffic Congestion	Peak Hour Excessive Delay	Annual hours of peak hour excessive delay per capita
Traffic Congestion	Mode Share	Percent of non-Single Occupancy Vehicle work trips
Mobile Source Emissions	CMAQ funded project emissions	NOx VOC and PM2.5 reductions from CMAO projects

As part of federal rulemaking, both the Delaware and Maryland Departments of Transportation (DelDOT and MDOT) had to establish performance measures and targets ahead of MPOs. MPOs have the choice to either adopt the state measures and targets or come up with their own. With our strong coordination between WILMAPCO and both DelDOT and MDOT, along with other regional partners, WILMAPCO has chosen to adopt all but one of the previously-submitted state targets. The exception is MDOT's 2 and 4year targets for CMAQ emissions reductions. In this case, WILMAPCO presents its own targets.

This plan will be the first in a series of CMAQ Performance Plans WILMAPCO will submit through the next decade. The graphic on the following page, from the Federal Highway Administration, details the performance plans and progress reports and their deadlines.

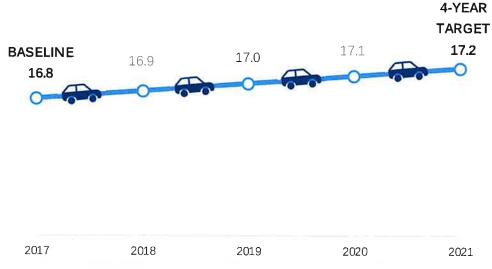
### PERFORMANCE PERIODS FOR CMAQ MEASURES AND REPORTING TIMELINE



Source: "Congestion Mitigation and Air quality Improvement Program: A Guidebook for Preparing Performance Plans for Metropolitan Planning Organizations." FHWA.

### **Peak Hour Excessive Delay**

The graph below displays both baseline conditions and a 4-year target for Peak Hour Excessive Delay (PHED) in the WILMAPCO region (both New Castle County, and Cecil County Maryland). PHED is the extra amount of time spent in congested traffic. A joint PHED baseline and target for the Philadelphia metropolitan region were set through a multiagency coordination process that occurred among relevant state DOTs and MPOs in Pennsylvania, New Jersey, Delaware, and Maryland. As shown in the graph, peak-hour congestion is expected to worsen on regional highways over the near term.

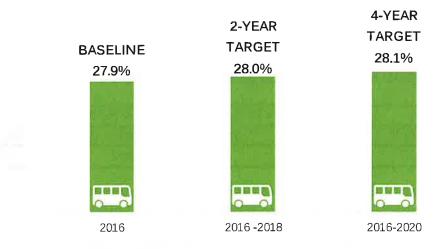


PEAK HOUR EXCESSIVE DELAY: HOURS OF REGIONAL DELAY PER CAPITA

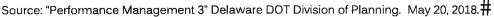
Source: "Performance Management 3." Delaware DOT Division of Planning. May 20, 2018.

### Percent Non-SOV Travel

The graph below displays both baseline conditions and 2 and 4-year targets for the percentage of non-Single Occupancy Vehicle (non-SOV) trips in the WILMAPCO region. These data, from the American Community Survey, are based how people report commuting to work. Non-SOV trips include: carpooling, public transit, walking, and bicycling. Joint non-SOV baseline and targets for the Philadelphia metropolitan region were set through a multiagency coordination process that occurred among relevant state DOTs and MPOs in Pennsylvania, New Jersey, Delaware, and Maryland. As shown in the graph, we expect non-SOV travel to slightly increase through 2020 data.



### PERCENT OF REGIONAL NON-SOV TRAVEL



#	2
#	
#	

### **On-Road Mobile Source Emissions**

The figures below display both baseline conditions and 2 and 4-year targets for on-road mobile source emissions stemming from CMAQ projects. Data here are broken up between Cecil County and New Castle County and are presented for NOx, VOCs, and PM2.5.

In Cecil County we adopt MDOT's baseline measure but elect to set our own 2 and 4-year emissions targets. The baseline figure is based on summed emissions reductions from Cecil County's CMAQ projects from 2014 through 2017 placed in the FHWA CMAQ Public Access System database. MDOT's targets are based on previously-funded CMAQ projects (several roundabouts) that did not properly pass through our transportation planning process. While eligible, FHWA has found that roundabouts are one of the least cost-beneficial uses of CMAQ funding. Therefore, WILMAPCO proposes targets based on more cost-beneficial projects, which are a priority for Cecil County. [Describe methodology for developing targets here.]

### CMAQ ON-ROAD MOBILE SOURCE EMISSIONS IN CECIL COUNTY, MD

BASE	ELINE (kg	g∕day)	2-YE	AR TARGE	TS (kg/day)	4-YE	AR TARGE	TS (kg/day)
VOC	NOx	PM2.5	VOC	NOx	PM2.5	VOC	NOx	PM2.5
0.12	0.30	0.13			to be d	leveloped		

Source: MDOT's "CMAQ On-Road Mobile source Emissions" presentation to the WILMAPCO Air Quality Subcommittee. <u>http://www.wilmapco.org/Aq/files/2018/other/WILMAPCO\_CMAQBriefing\_041018.pdf</u>



In New Castle County, we adopt the emissions baselines and targets set by DelDOT for Delaware. These are presented in the table below. [Describe methodology for developing targets here.]

### CMAQ ON-ROAD MOBILE SOURCE EMISSIONS IN NEW CASTLE COUNTY, DE

BASE	ELINE (kg	ı/day)	2-YE	AR TAR	GETS (kg/day)	4-YE	AR TAR	GETS (kg/day)
VOC	NOx	PM2.5	VOC	NOx	PM2.5	VOC	NOx	PM2.5
to b	e develo	ped	10.52	7.35	to be developed	26.23	16.09	to be developed

Source: "Performance Management 3" Delaware DOT Division of Planning. May 20, 2018.



### **Planned CMAQ Projects**

The table on the following page lists projects that may be funded by CMAQ over the next several years. Included are the project's expected emission benefits, and benefits to reducing PHED and increasing non-SOV travel. The projects in Cecil County are unfunded projects that are priorities for local government. The projects in New Castle County, meanwhile, were identified by WILMAPCO as CMAQ-eligible and tabbed by DeIDOT for future CMAQ spending. In a coordinated process, we submit a ranked list of CMAQ-eligible projects in the Transportation Improvement Program to DeIDOT each year. In turn, DeIDOT works through that list to assign future CMAQ spending.

These projects reflect WILMAPCO's current priorities for CMAQ spending. These priorities may shift, and other projects may be funded via CMAQ monies in the future. Reasons for this may include (but are not limited to): changes to a project's scope, evolving priorities for spending CMAQ monies based on a better understanding of benefits, and evolving state DOT priorities or needs.

WILMAPCO will report on the status of these planned CMAQ funded projects, as well as the progress of meeting the targets presented in this plan in October 2020.



### PLANNED CMAQ PROJECT DESCRIPTIONS

			Cecil County, N				
			NOx	VOC			
		YEAR(S) OF	REDUCTION	REDUCTION	PM2.5 REDUCTION	PHED	NON-SOV
PROJECT	DESCRIPTION	CMAQ FUNDING	(kg/day)	(kg/day)	(kg/day)	BENEFIT	BENEFIT
			to be develope	d			
			0				
		///	ew Castle Count	VOC			
			NOx REDUCTION	REDUCTION	PM2.5 REDUCTION	PHED	NON-SO
DDO IF CT	DESCRIPTION	YEAR(S) OF CMAQ FUNDING	(kg/day)	(kg/day)	(kg/day)	BENEFIT	BENEFIT
PROJECT	Signal timing	CIVIAQ FUNDING	(kg/uay)	(kg/uay)	(ky/uay)	DEINEFII	BEINEFII
	and traffic and						
	weather						
	monitoring						
Transportation	enhancement					Yes -	
Management	s; mobile app	2019 – 2022				traffic flow	No
Improvements	and radio	2013 2022				improvem	
Improvementa	development;					ents	
	dynamic						
	messaging						
	signs.						
	Construction						Yes -
Bicycle and	of new					Yes -	improved
Pedestrian	sidewalks,	2019 – 2022				fewer	pedestria
Improvements	trails, and			to be develop	ed	vehicle	and bicycl
in provo nonito	pathways			,		trips	network
	Multimodal						
	improvement						
	of an arterial					Yes -	Yes -
	roadway.					potentially	improved
Elkton Road, MD Line	Bicycle and	2019 – 2021				fewer	pedestria
to Casho Mill Road	pedestrian					vehicle	and bicyc
	elements are					trips	network
	CMAQ-						
	eligible.						
Rideshare	Support for					Yes -	
Program/Trip	carpooling	2019 – 2022				fewer	No
Mitigation	program.	LUIJ LULL				vehicle	
mugauon	piogram.					trips	

### Draft - 8.13.18

## CMAQ SCORING - CECIL COUNTY

Qualitative Index\*

Total	10 10	2																
re vinit Cost U	1	1	1	1		at q	00	8u)	65)L		ha	100	iwe	••	ON	i î		
Ped Priority Sca								9	9	e	9	2	m	5	8	9	ъ	
Highest Rankling Project Type Ped Priority Score VMT Cost Uje Tabe	5. Park and ride	6. Transit expansion	6. Transit expansion	6. Transit expansion	6. Transit expansion	6. Transit expansion	6. Transit expansion	7. Bike/ped	7. Bike/ped	7. Bike/ped	7. Bike/ped	7. Bike/ped	7, Bike/ped	7. Bike/ped	7. Bike/ped	7. Bike/ped	7. Bike/ped	10. Interaction improvements
Curret Total FY19-22 THP Estimate \$ x1000		2																
Notes		If sail use is projected to give											andy billy/ped elements	andy biles/ped elements	ands hile/ped elements	andy luke/ped elements	andy bike/ped elements	No New York, No.
Source	2018 Cecil Co. Priority Letter	411.61, V3	2018 Perryville Priority Letter	2018 Cecil Co. Priority Letter	2018 Cecil Co. Priority Letter	2018 Cecil Co. Priority Letter	2017 North East Priority Letter	2017 North East Priority Letter	2017 North East Priority Letter	2017 North East Priority Letter	2017 North East Priority Letter	2018 Perryville Priprity Letter	2018 Cecil Co. Priority Letter	2018 Cecil Co. Priority Letter	2018 Cecil Co. Priority Letter	2018 Cecil Co. Priority Letter	2018 Cecil Co. Priority Letter	2018 Carll Co. Priorito Letter
Project	Mid-county multimodal transportation hub in North East	Susquenhanna River Rail Bridge (TIP)	Increase MARC service to Perryville	fored-route bus service b/t Newark and Aberdeen	Extend MARC service to Newark	Add MARC service in Elkton	Add MARC service in North East	SR 7: North East Isles Dr. to Catherine St interim bike/ped enhancements	SR 7: North East Isles Dr. to Catherine St full bike/ped enhancements	US 40: Sycamore Dr. to SR 272 stdewalk	SR 7: East Cacil Ave. to Mechanics Valley Rd sidewalk	58 222: Clayton St. to St. Mark's Church Rd sidewalk	SR 272: US 40 to 1-95 bike lanes and sidewalks	SR 222: US 40 to 5R 275 - bike/ped improvements	US 40 at SR 213 bike/bed improvements	US 40 at SR 222 bike/ped improvements	US 40 at SR 272 bike/ped improvements	115.40 interestion immonuments (non-canacity adding algments only)
Ronk	-	2	2	2	2	~	~	-	-	-	-	-	m	m	-	m	8	
9	-	2	0		s		-		5	9	17	17	1	N	15	16	11	-

OKAQ Project Prioritization Process - Methodology 1. Rank project by type, lead on FHVA cast effectiveness data (NOx and VOCs). Priority by type is: 1. lole reduction, 2. Heavy vahicle engine replacements (elseal), 3. incident management, 4. Extreme temperature cool start tech, 5. Faria and ride, 6. Transit service expandion, 7. Bloycle and pedestrian, 8. Transit amenity Improvements, 9. Employee transit tech. Fariat tech, 5. Faria and ride, 5. Transit ensuite, 1.8. Car sharing, 1.2. Intermedial fregitir, 1.4. Bloycle and pedestrian, 8. Transit amenity Improvements, 9. Employee transit tech. Fariat tech, 5. Faria and ride, 5. Transit and and a start explored and tech and ride fregitir, 1.4. Bloycle and pedestrian, 8. Transit amenity Improvements, 1.1. Car sharing, 1.2. Ridesharing, 1.3. Intermedial fregitir, 1.4. Bloycle and pedestrian, 1.5. Ridesharing, 1.3. Intermedial fregitir, 1.4. Bloycle and pedestrian, 1.5. Ridesharing, 1.3. Intermedian fregitir, 1.4. Bloycle and transit for start and 1.7. Elso and transit for start and 1.7. Elso and 1.4. Improvements, 1.1. Car sharing, 1.3. Intermedial fregitir, 1.4. Bloycle and 1.4.

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Within project types, sort by quantifative emission banefits for desei projects and qualifative banefits for others. Quantifative banefits can be determined from EPA calculators. An index determining the qualifative banefit follows.

•<u>Oualtertive Index</u> Reduce Wurth - møjdglab (0); moderate (3); significant (5) Cost - 32 million (0); 5500,000 - 52 million (3); 45600,000 (6 Life expectancy - 65 years (0); 5-10 years (3); 310 years (5)

Ped Priority Score Projects technical score in the WILMAPCO Top Pedestrian Priority Segment ansiyels (http://www.willmapco.org/ped-priority(). Data updated in 2018.

A adjustment factor for ADT       0.00         Annualization factor       0.00         Annualization factor       0.00         concesse in transit trips resulting from new bike/ped connections       0.00         ADT to Hourly Volume Conversion       0.00         Jolume Density Function/BPR Curve Alpha       0.00         SCENARIO YEAR OUTPUIS       0.00         Conserved Yay Auto Trips Reduced (walk)       0.00         Annual One-Way Auto Trips Reduced - Total       0.99.14         Daily One-Way Auto Trips Reduced - Total       0.99.14         Daily One-Way Auto Trips Reduced - Total       0.00         Orgested Travel Time on parallel arterial       0.01         Congested Travel Time before improvements on parallel arterial       0.02         Congested Speed (mph) after Improvements on parallel arterial       0.02         Congested Speed (mph) after Improvements on parallel arterial       0.02         Congested Speed (mph) after Pinoprovements on parallel arterial       0.02         Light Duty Emission Factor PM N0x(g/mi)       0.02         Light Duty Emission Factor PM N0x(g/mi)       0.02<	Bike + Ped + Transit	
Deta TypeUser-Ordered ValuesSignado Varr2027Vanual average daily traffic (AOT) on the parallel arterial2,891Jacky of parallel arterial (mb)2,00angth of bils/ped project (mile)3,50Signado VarrYVarreal parallel arterial (mb)YVarreal parallel arterial (mb)YVarreal parallel arterial (mb)YVarreal parallel arterial (mb)YVarreal parallel arterial (mb)YVarreage length of one-way ploce this (miles)YDoes this project have a ploce train trips (miles)YDoes project provide access to transit (Y/N)?YVarreage length of one-way transit trips (miles)YAverage length of one-way transit trips (miles)YDoes project provide access to transit (Y/N)?YConstruction10000YYAverage length of one-way transit trips (miles)YAverage length of one-way transit (Y/N)?YConstruction10000Does project provide access to transit (Y/N)?YConstruction10000Construction10000A) adjustment factor for ADT00000Anualization factor100000Construction100000Construction100000A) adjustment factor for ADT100000Anualization factor1000000A) adjustment factor for ADT1000000000000000000000000000000000000	CALCULATION INPUTS	The second s
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apacity of paniles artesia (vph)     2.00       angut of blac/ed project (mls)     2.00       angut of blac/ed project (mls)     35       strated Speed on pariles artesia (mph)     35       transer of destinations within 1,27 mile of project     7       Whith 2 miles of a university or college (V/N)?     V       Avarage length of one-way block trips (mlls)     5.0       Does this project have a block trips (mlls)     5.0       Does this project have a pedestrian component?     Y       Avarage length of one-way pedestrian trips (mlls)     5.2       Does project provide access to trackit (V/N)?     Y       Avarage length of one-way project transit corridor or at fixed-guideway station is ped/bike access to fixed project transit trips (mlls)     5.2       Existing daily transit beardings in project transit corridor or at fixed-guideway station is ped/bike access to fixed fixed project constants     Valuer       CONSTANTS     Look Up Table Values and Other constants     Valuer       Col activity conter cordit near project activity conter cordit near project access to fixed on they blic/ped connections     12       Col activity conter cordit near project activity (MR)?     20       Col activity conter cordit near project activity (MR)?     20       Col activity conter cordit near project activity (MR)?     20       Col activity conter cordit near project activity (MR)?     20       Col activity conter cordity nea	Scenario Year	2017
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() C Ratio Extre improvements on parallel arterial       0.5         Congested Travel Time after improvements on parallel arterial (mins)       4.1         Congested Travel Time after improvements on parallel arterial (mins)       4.1         Congested Travel Time after improvements on parallel arterial (mins)       4.1         Congested Speed (mph) before improvements on parallel arterial       28         Congested Speed (mph) before improvements on parallel arterial       28         Congested Speed (mph) before improvements on parallel arterial       28         Light Duty Emission Factor CO2(g/ml)       383:         Light Duty Emission Factor PM (g/ml)       0.0         Light Duty Emission Factor CO2(g/ml)       0.0         Light Duty Emission Factor PM (g/ml)       0.0         Light Duty Emissions CO2(g)       1,515,838         Light Duty Emissions PM (g)       1,525,348         Light Duty Emissions CO2(g)       625,067         Light Duty Emissions CO2(g)       <		a second de la dela de la dela dela dela dela d
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By Duty Emissions VOC (g)         625,067           Emissions - Improved         1,483,338,614           Jight Duty Emissions PM NOX(g)         1,398,253           Jight Duty Emissions PM NOX(g)         64,5174           Jight Duty Emissions NOX (g)         1,420,9744	Emission Factors - Improved Jght Duty Emission Factor CO2(g/mi) Jght Duty Emission Factor PM Nox(g/mi) Jght Duty Emission Factor PM (g/mi) Jght Duty Emission Factor NOx (g/mi) Jght Duty Emission Factor VOC (g/mi) Emissions - Existing Jght Duty Emissions CO2(g)	0 0 1,610,906,947 1,515,838
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Light Duty Emissions CO2(g)         1,483,338,614           Light Duty Emissions PM NOx(g)         1,398,253           Light Duty Emissions PM (g)         64,517           Light Duty Emissions NOx (g)         1,420,974	Emission Factors - Improved Light Duty Emission Factor CO2(g/mi) Light Duty Emission Factor PM NOx(g/mi) Light Duty Emission Factor PM (g/mi) Light Duty Emission Factor VOC (g/mi) Light Duty Emissions Factor VOC (g/mi) Emissions - Existing Light Duty Emissions PM NOx(g) Light Duty Emissions PM (g) Light Duty Emissions NOx (g)	0. 0. 1,610,906,947 1,515,838. 70,625 1,552,348.
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Light Duty Emissions NOx (g)	Emission Factors - Improved Light Duty Emission Factor CO2(g/mi) Light Duty Emission Factor PM NOx(g/mi) Light Duty Emission Factor NOx (g/mi) Light Duty Emission Factor VOC (g/mi) Emissions - Existing Light Duty Emissions PM NOx(g) Light Duty Emissions PM (g) Light Duty Emissions VOC (g)	0. 0. 1,610.906;947 1,515,838 70;625 1,552,348. 625,067 1,483,338,614
Light Daty Linkson's row (B)	Emission Factors - Improved Light Duty Emission Factor CO2(g/mi) Light Duty Emission Factor PM NOX(g/mi) Light Duty Emission Factor NOX (g/mi) Light Duty Emission Factor NOX (g/mi) Light Duty Emissions Factor VOC (g/mi) Emissions - Existing Light Duty Emissions CO2(g) Light Duty Emissions PM NOX(g) Light Duty Emissions NOX (g) Light Duty Emissions NOX (g) Light Duty Emissions VOC (g) Emissions - Improved Light Duty Emissions CO2(g)	0. 1,610,906,947 1,515,838. 70,625 1,552,348. 625,067. 1,483,338,614. 1,398,253.
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RESULTS	and the second
DELAY/VMT IMPACT	
Reduction in Annual Vehicle Hours of Delay	9,167
Annual Auto VMT Reduced	287,385
OTAL REDUCTION	
Total Annual Reductions in GHG emissions (g CO2 /year)	127,568,33
Total Annual Reductions in PM NOx Emissions (g/year)	117,584
Total Annual Reductions in PM Emissions (g/year)	6,10
Total Annual Reductions in NOx Emissions (g/year)	131,37
Total Annual Reductions in VOC Emissions (g/year)	51,210
Total Daily Reductions in GHG emissions (short tons/day)	0.562
Total Daily Reductions in PM NOx Emissions (short tons/day)	0.00052
Total Daily Reductions in PM Emissions (short tons/day)	0.00003
Total Daily Reductions in NOx Emissions (short tons/day)	0.00058
Total Daily Reductions in VOC Emissions (short tons/day)	0.00023

8/13/2018

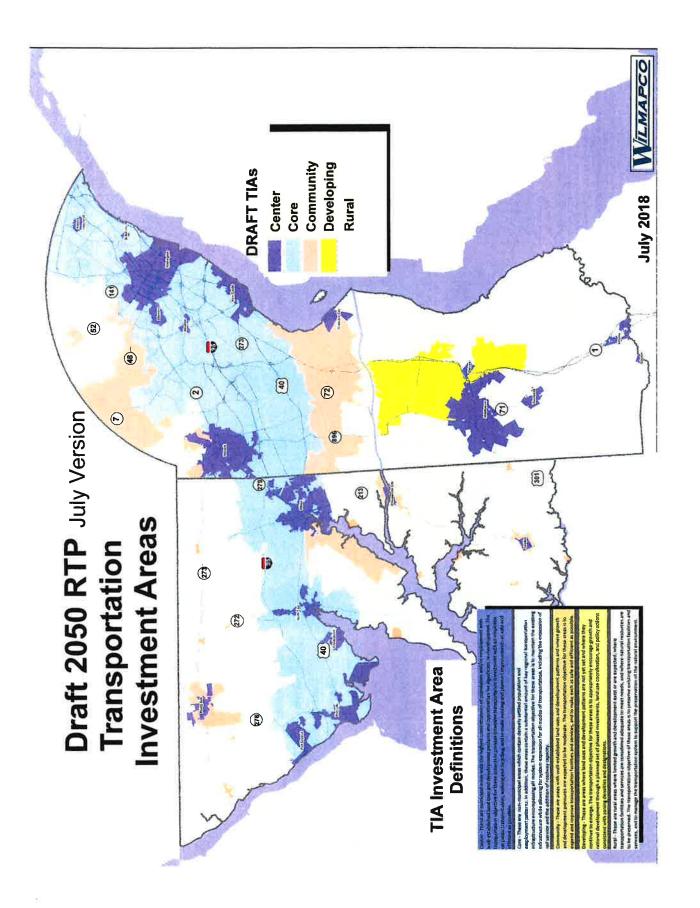
VILMAPCO's 2050 Regional Transportation Plan and FY 2020 Transportation Improvement Program Air Quality Timeline

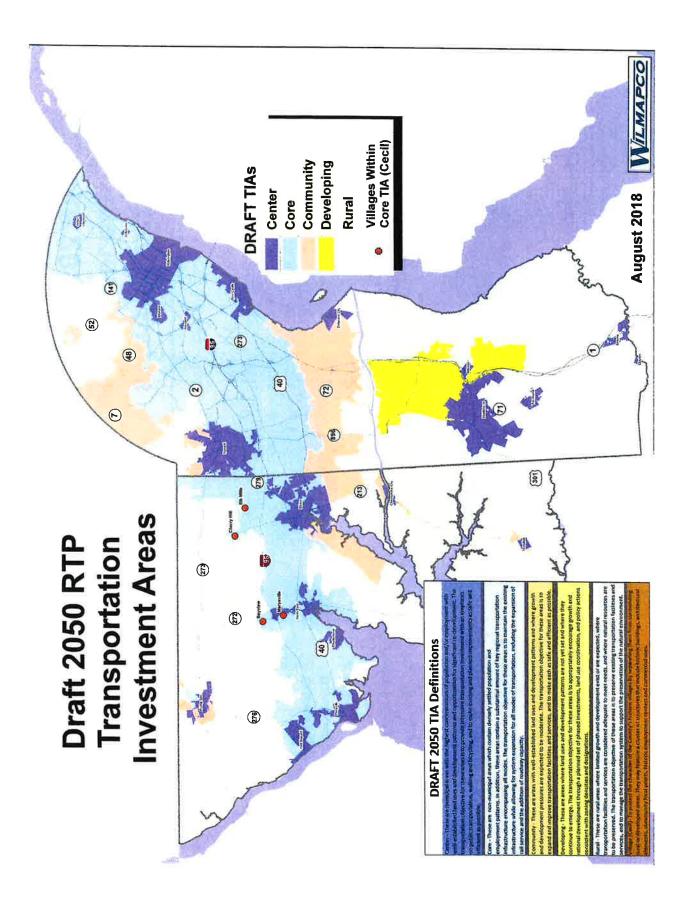
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	2		41					
KUN CONTORNINY ADDRIVES		August 16 - October 10	BC 10					
Conformity results due for review			11					
с 33				13				
he AQS and released for comment					20			
Official RTP public comment period						Janu	January 14 - March 6	rch 6
							2	
AQS recommends adoption							14	
		-					21	
Council adoption								14

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Row	Project	County	List	2016 Model Year	2016 Model Year DRAFT 2018 Model Year	Notes
-	MD 213: Frenchtown Road to US 40 (two to four lane divided highway)	Cecil	Aspiration	2040	2050	
10	1-95: Susauchanna River to DE Line (add a lane in each direction, plus bridge expansion)	Cecil	Constrained	2040	2040	
m	MD 272: US 40 to Luns Rd. (two to four lane divided highway)	Cecil	Constrained	2040	2050	
4	I-95/SR 222 Interchange (two to four Janes on the SR 222 bridge)	Cecil	Constrained	2040	2040	
s	MD 222: US 40 to MD 276 (multilane reconstruction)	Cecil	Constrained	2040	2040	
	NEW TO MODEL					
9	I-95/Belvidere Road Interchange (new expressway interchange)	Cecil	Aspiration		2030	
1	US 301: MD State Line to SR 1 (new four lane expressway)	NCC	Constrained	2020	2020	2019 last year of C spend
••	Christina River Bridge (new bridge)	NCC	Constrained	2020	2030	2020 last year of C spend
6		NCC	Constrained	2030	2030	
10	Road A / SR 7 Improvements (new lane in each direction)	NCC	Constrained	2030	2030	
Ξ	SR 299, SR 1 to Catherine Street (widening)	NCC	Constrained	2030	2030	
12	Elkton Rond, Maryland State Line to Casho Mill Road (widening)	NCC	Constrained	2030	2030	
13	SR 141/1-95 Interchange (expansion)	NCC	Constrained	2030	2030	
14	US 301; Spur (new two lane road)	NCC	Constrained	2030	2030	
15	US 40/SR 896 (grade separated intersection)	NCC	Constrained	2030	2030	
16	SR 896/I-95 Interchange (expansion)	NCC	Constrained	2030	2030	
17	SR 896/Bethel Church Road Interchange (expansion)	NCC	Constrained	2030	2030	
18	US 40 Widening: Salem Church Road to Walther Road	NCC	Constrained	2030	2030	
19	SR 1: Tybouts Corner to SR 273 (four to six lanes)	NCC	Constrained	2030	2030	VB Anteliary Lane completent fits.
20	SR 4 (Christina Parkway): SR 2 to SR 896 (widening entire length 2 to 4 lanes)	NCC	Constrained	2030	2030	
21	Tyler McConnell Bridge, SR141: Montchanin Road to Alapocas Road (bridge expansion)	NCC	Constrained	2040	2040	
22	I-295 Northbound: SR 141 to US 13 (add third lane)	NCC	Constrained	2040	2040	
23	SR 1: Tybouts Corner to Roth Bridge (widening)	NCC	Constrained	2030	2050	
	NEW TO MODEL					
24	Boyds Corner Road: Cedar Lane Road to US 13 (two to four lanes)	NCC	Constrained		2030	
25	Center Boulevard extended to Churchmans Road	NCC	Constrained	•	2030	
26	Eagle Run Road: SR 273 to SR 7 (complete road for thru unffic)	NCC	Constrained		2030	
27	Eagle Run Road to Continental Drive Connector	NCC	Constrained	•	2040	
38	US 40/SR 7 Grade Separated Intersection	NCC	Constrained	•	2040	
29	SR 896-11S 40 to 1.05 (widening to six lanes)	JUN	Constrained		1050	

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### **DRAFT 2050 TIA Definitions**

Center - These are municipal areas with the highest concentrations of population and/or employment with well-established land uses and development patterns and opportunities for significant re-development. The transportation objective for these areas is to provide intensive transportation investment with an emphasis on public transportation, walking and bicycling, and to make existing and planned improvements as safe and efficient as possible.

Core - These are non-municipal areas which contain densely settled population and employment patterns. In addition, these areas contain a substantial amount of key regional transportation infrastructure encompassing all modes. The transportation objective for these areas is to maintain the existing infrastructure while allowing for system expansion for all modes of transportation, including the expansion of rail service and the addition of roadway capacity.

Community - These are areas with well-established land uses and development patterns and where growth and development pressures are expected to be moderate. The transportation objective for these areas is to expand and improve transportation facilities and services, and to make each as safe and efficient as possible.

Developing - These are areas where land uses and development patterns are not yet set and where they continue to emerge. The transportation objective for these areas is to appropriately encourage growth and rational development through a planned set of phased investments, land use coordination, and policy actions consistent with zoning densities and designations.

Rural - These are rural areas where limited growth and development exist or are expected, where transportation facilities and services are considered adequate to meet needs, and where natural resources are to be preserved. The transportation objective of these areas is to preserve existing transportation facilities and services, and to manage the transportation system to support the preservation of the natural environment.

Village (Lecil)- To protect the character of the County's historic villages by separating them from surrounding rural or developed areas. They may feature a cluster of structures that include historic buildings, architectural elements, community focal points, historic employment centers and commercial uses.