



**EAST-WEST GATEWAY
Council of Governments**

Creating Solutions Across Jurisdictional Boundaries

**AGENDA
AIR QUALITY ADVISORY COMMITTEE*
TUESDAY, June 28, 2022
10:00 – 11:30 a.m.
Virtual – GoToMeeting**

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- I. Call to Order**
- Carol Lawrence, Chair, East-West Gateway Council of Governments
A. Minutes of May 24, 2022 Meeting
- II. St. Louis Regional Clean Air Partnership Activities**
- Susannah Fuchs, American Lung Association
- III. EV Charging Infrastructure Plan for Illinois Under Development**
- Christopher Schmidt, Illinois Department of Transportation
- IV. Bipartisan Infrastructure Law (BIL) Update**
- Paul Hubberman, East-West Gateway Council of Governments
- V. American Fuels Report**
- Kevin Herdler, St. Louis Regional Clean Cities Program
- VI. Update Activities of the States**
- Missouri Department of Natural Resources
- Illinois Environmental Protection Agency
- VII. Other Business**
Next meeting will be on August 30, 2022
- VII. Adjournment**

* Please note that this meeting will serve as a part of the Inter-Agency Consultation Process as detailed in the Missouri Transportation Conformity SIP.

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MINUTES
AIR QUALITY ADVISORY COMMITTEE
Tuesday, May 24, 2022
10:00 am – 11:30 am
VIRTUAL AND IN PERSON MEETING

Members Present:

Carol Lawrence, Chair – East-West Gateway Council of Governments
Mike Henderson – Missouri Department of Transportation
Amanda Schomaker – Madison County Transit/ RideFinders
David Bloomberg – Illinois EPA
Mike Foley – Citizens for Modern Transit
Kevin Jemison – Illinois Department of Transportation
Susannah Fuchs – American Lung Association
Jack Fishman – St. Louis University
Aaron Cadman – St. Louis County APCP
Francisco Cortalezzi – Missouri Department of Natural Resources

Others Present:

Rory Davis – Illinois Environmental Protection Agency
Dustin Ingram – U.S. Environmental Protection Agency Region 7
Roger Walker – RegForm
Stacy Allen - Ameren
Jed Wolkins – U.S. Environmental Protection Agency Region 7
Emily Fortier
Beth Gutzler – Metropolitan Congregations United
Tyler Cargill – Washington University

Staff:

Mary Grace Lewandowski, Aaron Young, Jennifer Vuitel, Lee Harris, Maureen McCarthy, James Fister

1. Call to Order

- Carol Lawrence, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Carol Lawrence, East-West Gateway Council of Governments (EWG). The minutes of the March 29, 2022 AQAC meeting were approved as circulated.

2. Metropolitan Congregations United Community Air Project

- Beth Gutzler, Metropolitan Congregations United
- Tyler Cargill, Washington University

Metropolitan Congregations United (MCU) received a grant from the Missouri Foundation for Health to do a community based air quality monitoring program focusing on particulate matter (PM) pollution on the Missouri side of the metropolitan region. When the grant was being planned, a partnership was formed between multiple groups including the Washington University Environmental Studies Department, The Nature Conservancy, the Sierra Club, Washington University Turner Lab, and others. Much of the interest in obtaining a grant came out of the 2019 Environmental Racism Report from Washington University. However it was determined that there needed to be more community involvement to build on its findings. The goals for community based air quality monitoring were to fill the air quality data gap present in north and south St. Louis and to promote Environmental Justice (EJ) in order to achieve health equity by addressing air quality. The Environmental Racism Report outlines air quality as one of the leading urban environmental challenges. To connect with the community through MCU there have been public meetings and canvassing to share the air quality monitoring efforts.

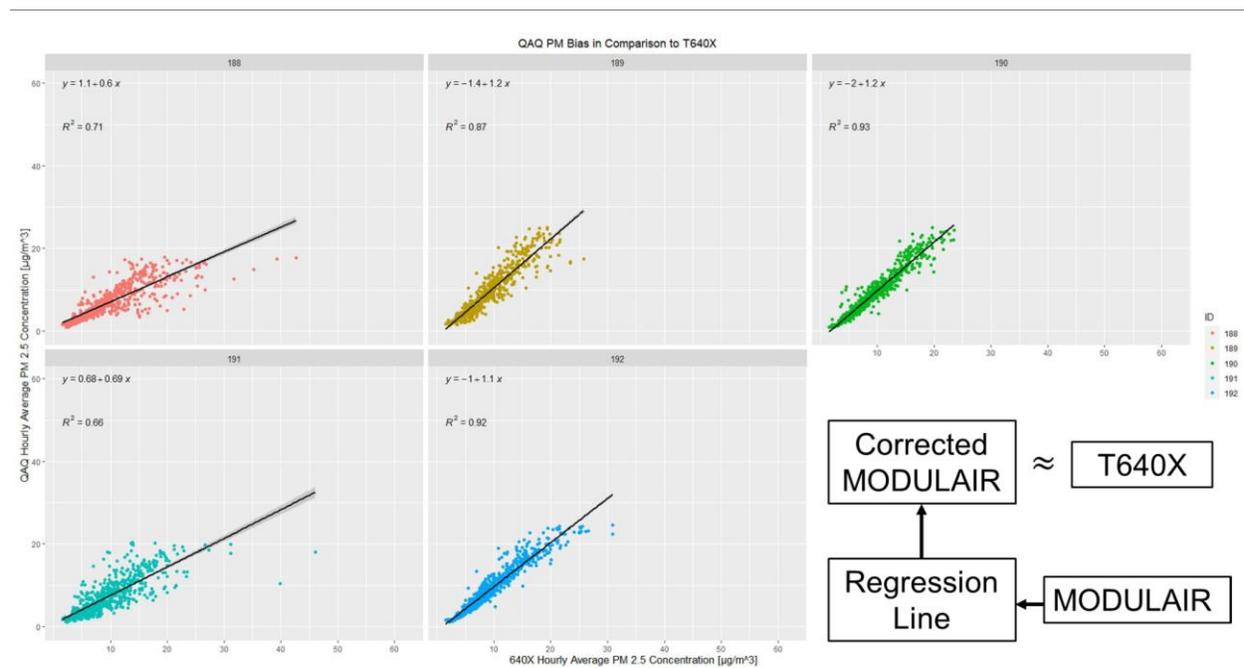
The monthly Interfaith Taskforce Meetings began in February 2022. Monitors have been installed on rooftops of 15 churches and a website where the public can access monitor information is under development. This summer MCU will be hosting an Air Quality Bridge Rally that highlights the fact there are no borders when it comes to air quality concerns. The rally this year will be focused more on how air quality is related to public health. Between August 2022 and December 2023 MCU-based organizing will continue around air permit reform as well as community canvassing. Air quality monitoring will end at the beginning of 2023. The congregations will decide on permanent monitoring demands and round two of actions. The current grant funding will end in November 2023.

The website will be similar to the Purple Air Monitoring web page and should have more detailed information. The site will have a Google Doc and an area where the public can report their experiences. People can say if they see smoke, if there is a bad smell in the air, or if they are not breathing well. It will be a platform to gather actual impacts on the people. That information will be archived and be more accessible than what has been observed in other communities that use cheaper monitor platforms.

This project is utilizing MODULAIR-PM sensors that cost about \$1,000, which is relatively low cost. Reference grade sensors which are used by the state on the other hand can cost tens of thousands of dollars. The MODULAIR-PM sensors have a particle counter and measure the mass concentration of PM in the air. These sensors report real time data on the order of minutes and upload the data to the Cloud. There will be

15 sensors in total but at the moment there are 14 sensors up and running. The goal is to see how PM concentrations vary spatially and temporally in the St. Louis region. Being able to locate the sensors at congregations will allow us to see if there is a hyper local spatial variation within certain neighborhood areas in north and south St. Louis.

One thing we want to be able to do is make sure that the data from the sensors is accurate. Just because the sensors are low cost does not mean they are low quality, it just means they can be a little bit off from the reference sensor measurements. Before putting the sensors out into the communities they are calibrated to see how they perform in comparison to the reference monitors. For example, there is a co-location site at the Blair St. monitor site in the City of St. Louis where a MCU sensor can be placed next to a Missouri Department of Natural Resources (MoDNR) PM monitor. The data from the MCU sensor is compared to the MoDNR data in order to see how the data trends. It was found that the data are trending together but are not measuring the exact same concentrations. This is called a bias that the device is not measuring exactly what is expected. In order to correct for this data is taken from each of the sensors at the same time of day and is compared through graphing. The low-cost sensor data is put on the Y axis and the reference sensor data is on the X axis. We want to have everything on a 1 to 1 line so we put a linear relationship between the concentrations. An equation is used to graph the low cost sensor values and ideally the ending value from that equation is as close to 1 as possible. The more the values representing the low-cost sensor data fall below 1, the comparison between the two sets of data gets further away. The graphs and equations used to make them can be seen below.



Some sensors do really well and a few seem to be less accurate. We think that is due to the placement of the sensors at the co-location site. Sometimes the sensors may be

blocked by the wind and that could affect the reading. There will have to be some adjustments to consider wind during the calibration period in order to get the outputs to be reflective of what the reference sensors are recording. We can then enter the measurements from the low-cost sensors into an equation that will provide a corrected measurement that approximates what should be seen from the sensors at their various locations.

For more information about this program you can contact Beth Gutzler at beth@mcustl.com, Tyler Cargill at c.tyler@wustl.edu, or Rebecca Weaver at Rebecca.weaver@tnc.org.

3. Connected 2050 Long Range Transportation Plan Update on Community Engagement Activities

- James Fister, East-West Gateway Council of Governments

The Long Range Transportation Plan is federally required and is to be updated every four years. The plan covers a twenty year time horizon. *Connected2045* was the most recent plan and was updated in 2019. Connected 2050 will be developed by EWG staff and a consultant team. One of the main goals of this update is to re-examine and refine the Plan's ten guiding principles which have been in place since 2009. The principles overseeing long range planning and infrastructure investment priorities are: preserve and maintain the existing system; support public transportation; support neighborhoods and communities throughout the region; foster a vibrant downtown; provide more transportation choices; promote safety and security; support a diverse economy with a reliable system; support quality job development; strengthen intermodal connections; and protect air quality and environmental assets. EWG is also going to look at other long range plans from around the region and incorporate them into Connected 2050. Staff is also going to research what other Metropolitan Planning Organizations are doing and look at some of their best practices.

The Long Range Plan will contain a detailed state of the transportation system report. An equity investment analysis is being conducted which looks at when, where, and how much money has been spent around our region and how those investments are impacting different populations. The equity analysis will be a data driven analysis of past transportation investments. It will use a replicable methodology which can be used for future analyses. The analysis will be done in collaboration with the State Departments of Transportation and transit agencies.

Community engagement efforts will include a targeted strategy for engaging the region's citizens, stakeholders, and Board of Directors. There will be multiple engagement interactions with the Board of Directors during the course of the project as well as a wide range of outreach tools. One such tool is the community survey which is open to the public now and can be found on the East-West Gateway website. This survey is

meant to help reach people who are interacting with the transportation system but maybe left behind in a traditional public engagement process.

The draft plan will be published in March 2023 and will be open for public comment. The final plan will be adopted by the EWG Board of Directors in June 2023.

4. Report on the World Health Organization 2021 Air Quality Guidelines and 2022 Ambient Air Quality Database

- East-West Gateway Council of Governments

The World Health Organization (WHO) is a United Nations agency focused on international public health. WHO connects nations, partners, and people worldwide to promote health, keep the world safe, and serve the vulnerable. It leads and champions global efforts to achieve better health for all. Roles within WHO include advocacy and provision of technical assistance, setting international health standards, and serving as a forum for discussion of health issues.

In 2021 WHO updated their Air Quality Guidelines (AQG) which are quantitative health-based air quality management recommendations. Countries can use them as a tool to assess their ground level air pollution and impact on its people as well as identify management strategies. These guidelines were first developed in 1987 and were last updated in 2005. The update process has included several key steps: the development of scope and key research questions; a systematic review of relevant peer-reviewed research papers; the formulation of updated AQGs to indicate the lowest level of exposure for which there is evidence of adverse health effects and create interim target levels; and the formation of other supporting documents. In Table 1 below are the WHO 2021 AQG recommendations for pollutant levels in micrograms per cubic meter as compared to the 2005 AQGs.

Table 1

Pollutant	Averaging Time	2005	2021
PM _{2.5}	Annual	10	5
	24-hour	25	15
PM ₁₀	Annual	20	15
	24-hour	50	45
Ozone	Peak season	-	60
	8-hour	100	100
NO ₂	Annual	40	10
	24-hour	-	25
SO ₂	24-hour	20	40
CO	24-hour	-	4 milligrams/ cubic meter (mg/ m ³)

The WHO Ambient Air Quality Database, which contains ground level air pollution from around the world, was just released. It was started in 2011 and has been updated several times. The database contains annual mean concentrations for PM_{2.5}, PM₁₀, and NO₂ from 6,743 population centers in 117 countries. Population centers range from individual cities to metropolitan areas. The database has limitations including different monitor coverage, different measurement methods, and differences in data collection by the responsible agencies.

Table 2 below shows the total population centers with information in the database. The majority are from Europe and the Western Pacific while twelve percent are from the Americas. There are 295 population centers within the United States that are represented in the database, including the St. Louis region. About ten percent of the population centers are meeting the 2021 AQG for PM. Also reported is how the population centers that make up a region are reaching the interim targets as a way to track their progress.

Table 2

WHO Region	Population Centers	Countries with Data
Africa	59	12
Americas	781	22
South-EastAsia	398	9
European	3,654	48
Eastern Mediterranean	158	14
Western Pacific	1,693	12
Total	6,743	117
High Income Level	4,226	51
Low & Middle Income Level	2,517	66
Total	6,743	117

The WHO has an interactive air quality standards map on their website which can be found at <https://whoairquality.shinyapps.io/AirQualityStandards/>

5. Update on Activities of the States

- David Bloomberg, Illinois Environmental Protection Agency

Congratulations were given to David Bloomberg who is retiring at the end of this month.

The Illinois Monitoring Network Plan should be posted in the first week of June. The maintenance plan and redesignation request for the Metro East portion of the 2015 ozone nonattainment area continues to be worked on. The Chicago area 2008 redesignation request was approved by EPA last week and that will assist in moving

forward with the redesignation of the Metro East. The Aerospace Coding Rule for the Metro East area is now with U.S. EPA. Additional information was provided to EPA. The Alton SO₂ nonattainment area State Implementation Plan is currently being handled by U.S. EPA Region 5.

- **Francisco Cortalezzi, Missouri Department of Natural Resources**

In respect to the VW Trust Funds, the Air Pollution Control Program (APCP) anticipates opening an application period for 10 additional electric vehicle charging infrastructure sites in the next few months, potentially as early as July. The project application must include two DC fast chargers that are publicly accessible and have minimal downtime.

APCP is also working on the State Clean Diesel (DERA) work plan and is on track to open the regular application period. Missouri's allocation is \$900,000 for this period, and this is a cost share program.

The next Missouri Air Conservation Commission (MACC) meeting will be on May 26, 2022 at 9:00 AM in Jefferson City. There are no items up for public hearing.

EPA's proposed St. Louis ozone classification bump-up was published in the Federal Register on April 13, 2022. Action on the redesignation request and maintenance plan is anticipated to occur before this bump-up from marginal to moderate becomes final.

Comments have been submitted to EPA concerning their February 2022 Good Neighbor SIP disapproval. MoDNR is currently working on submitting comments.

At the April 28, 2022 MACC meeting there was a public hearing for the second Regional Haze Plan (2018 – 2028). MoDNR has received numerous comments from the EPA, federal land managers, the public, and environmental groups. MoDNR is working on responding to those comments. In July the Missouri regional haze plan will be up for adoption by the MACC.

The Air Program will be posting the annual 2022 Monitoring Network Plan Update today or tomorrow. Comments will be accepted for the next 30 days.

6. Other Business

The next OneSTL Sustainability Lab will be on Tuesday, May 31 at 2:30 PM and will be held in person at T-Rex in downtown St. Louis for the first time since 2020. There will be a panel discussion about geospatial technology projects taking place within the Geospatial Innovation Hub at T-Rex.

The OneSTL Energy and Emissions Working Group is close to releasing their regional greenhouse gas inventory. Once it is available, the working group will present on it at a future Air Quality Advisory Committee meeting.

EPA Region 7 has proposed their approval of ending the Inspection and Maintenance program in Franklin County in the May 19, 2022 Federal Register and it is now out for a 30 day public comment period. EPA Region 7 received the redesignation request and maintenance plan for the 2015 ozone standard from Missouri on April 8, 2022.

7. Adjournment

The next meeting will be on June 28th, 2022. There being no other business, the meeting was adjourned.