

AGENDA  
AIR QUALITY ADVISORY COMMITTEE\*  
**TUESDAY January 27, 2015**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**
  - Michael Coulson, Chair, East-West Gateway Council of Governments
  - A. Minutes of October 28, 2014 Meeting
  
- II. EPA's Ozone National Ambient Air Quality Standard Proposed Rule**
  - Joe Winkelmann, Missouri Department of Natural Resources
  - U.S. Environmental Protection Agency Region 7
  
- III. Illinois Bureau of Air Program Overview**
  - David Bloomberg, Illinois Environmental Protection Agency
  
- IV. American Fuel Group Report**
  - St. Louis Regional Clean Cities Program
  
- V. Update Activities of the States**
  - Missouri Department of Natural Resources
  - Illinois Environmental Protection Agency
  
- VI. Other Business - Next Meeting Date March 24, 2015**
  
- 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.

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, October 28, 2014  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Jeremy Rogus - St. Louis County Health Department  
Joe Winkelmann - Missouri Department of Natural Resources  
Jack Fishman - St. Louis University  
Mike Henderson, Missouri Department of Transportation  
David Bloomberg - Illinois Environmental Protection Agency  
Susannah Fuchs - American Lung Association  
Brad McMahon - Federal Highway Administration, Missouri  
Tiffany Brase - Illinois Department of Transportation, District 8  
Ryan Tilley - St. Charles County

Others Present:

Jeff Rosenfeld - ICF International (telephone)  
Seth Hartley - ICF International (telephone)  
Lenora Fisher - Citizens for Modern Transit  
Amy Funk - Metro East Community Air Project  
Curtis Jones - Illinois Department of Transportation  
Kevin Jemison - Illinois Department of Transportation, District 8  
Emily Wilbur - Missouri Department of Natural Resources  
Patricia Maliro - Missouri Department of Natural Resources  
Stacy Allen - Missouri Department of Natural Resources  
Jason Welsh - St. Louis University  
Andy Knott - Sierra Club

Staff:

John Posey    Lubna Shoaib            Carol Lawrence

- I.        Call to Order  
          - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWG). Dr. Fishman, St. Louis University (SLU), and Mr. Winkelmann, Missouri Department of Natural Resources (MoDNR), had corrections to the September minutes. On page 3, the second sentence of the last paragraph should read: “In the late 19<sup>th</sup> century tropospheric ozone levels were **100** ppm.” On page 6, the second sentence of the first paragraph should be: “As far as CAA obligations, Unclassifiable and Unclassifiable/Attainment **do not** have different mandatory State Implementation Plan (SIP) requirements.” With these revisions, the minutes of the September 16, 2014 AQAC meeting were approved as circulated. Those attending the meeting introduced themselves.

- II. Alternative Fuels for Air Quality Implementation and Planning
  - Jeff Rosenfeld, ICF International
  - Seth Hartley, ICF International

Mr. Coulson, EWG, said that Mr. Rosenfeld and Mr. Hartley of ICF International will give an overview of this effort and their presentation will be available on the EWG website. Mr. Rosenfeld, ICF, said that the Alternative Fuels for Air Quality Implementation Planning project was prepared by ICF for The Mid-America Collaborative for Alternative Fuels. The Mid-America Collaborative is composed of the Kansas City Regional Clean Cities Coalition, Nebraska Clean Cities Coalition, St. Louis Regional Clean Cities program and the Iowa Clean Cities Coalition. This group received a grant from the U.S. Department of Energy (DOE) for an Alternative Fuel Implementation project.

Purpose of this project element was to provide The Mid-America Collaborative with information to incorporate alternative fuel vehicles into air quality and transportation planning. A quantitative tool was to be developed to estimate the air quality improvements/benefits from alternative fuel implementation. The focus of this study is on tailpipe emissions. Default emission factors representing the St. Louis region were developed for use with the Motor Vehicle Emissions Simulation (MOVES). Scenario analyses were then performed for the St. Louis region over time with various market segments of alternative fuels and alternative fuel vehicles. The methodology and tool developed by ICF can be used by other agencies and applied to other regions. ICF has prepared a final report describing the methodology, research and tool. The tool can be modified to develop regionally specific scenarios. The real goal of this project was to impact state implementation plan (SIP) planning with goal of increasing the local adoption of policies that prioritize alternative fuel development.

Alternative fuels included in the Air Quality Planning tool were: E85 ethanol; biodiesel blended with conventional diesel; compressed natural gas (CNG); liquefied natural gas (LNG); liquefied petroleum gas (LPG) or propane; and electric (full battery like the Nissan Leaf and plug-in hybrids like the Prius and the Chevy Volt). Biodiesel is used in diesel engines. Main applications of natural gas include medium and heavy duty vehicles, including buses, which displaces diesel consumption. The main applications of propane fuel is light duty trucks, medium duty trucks and heavy duty school buses.

Mr. Hartley, ICF, described the methodology used to develop the baseline emission factors for the Air Quality Planning tool. ICF used MOVES2010b inputs and factors that reference the St. Louis area to determine regional average, activity-weighted, baseline emission factors for use as defaults in the tool. The MOVES model estimates tailpipe and evaporative emissions covering a broad range of pollutants from cars, trucks, buses and motorcycles. Since this project began, a MOVES2014 update has been released by USEPA. For this effort, evaporative emissions were excluded due to a lack of information. To produce accurate, aggregate baseline emission factors in MOVES, local meteorological, fuels, activity (vehicle miles traveled or VMT) and vehicle fleet description data is needed. All of this data can be collected from Metropolitan Planning Organizations (MPOs), air quality agencies and other state agencies to create custom inputs for any region. The baseline emissions to be developed include a vehicle population mix of all regional vehicle types fueled by gasoline and/or diesel. In the tool, vehicles were aggregated to either light duty category or heavy duty category.

The Air Quality Planning tool was pre-populated with default emission factors and VMT representing the bi-state St. Louis area. This information was obtained from EWG, Illinois Environmental Protection Agency (Illinois EPA) and Missouri Department of Natural Resources (MoDNR). ICF made slight modifications to some of the inputs to make them consistent across the two states. To determine baseline emissions and VMT for gasoline and diesel ICF then performed county-level MOVES runs for Missouri and three county MOVES runs for Illinois covering 2010, 2020, 2030 and 2040. The pollutants of interest were: oxides of nitrogen (NO<sub>x</sub>); fine particulate (PM<sub>2.5</sub>); coarse particulate (PM<sub>10</sub>); and volatile organic compounds (VOC).

Mr. Rosenfeld, ICF, then discussed the development of the emission reduction factors used in the tool, scenario analysis results and described how to use the Air Quality Planning tool. Emission reduction factors are factors applied to the baseline gasoline and diesel emission factors to estimate the emission reduction potential for each alternative fuel. The MOVES2010b model did not address emissions for high ethanol blends, electric vehicles or propane and has CNG estimates only for transit buses. Alternative fuel emission reduction factors (other than biodiesel) had to be developed outside of the MOVES model. ICF utilized research papers, data from the California Air Research Board and data from the EV Project to do this. More information on the development of the emission reduction factor for each alternative fuel can be found in the final report. These emission reduction factors were compared to both gasoline and diesel baseline fuels for each vehicle class, since the tool allows for alternative fuel vehicles to displace gas and/or diesel vehicles. The Air Quality Planning Tool and emission reduction factors can be updated as new research and data becomes available.

ICF developed and ran scenarios for alternative fuel penetration (percentage of vehicles using this particular fuel) to illustrate the potential air quality benefits of alternative fuels over time. The scenarios used input from the Metropolitan Energy Center in Kansas City and key St. Louis metropolitan stakeholders. Vehicle types and alternative fuels included: transit buses (biodiesel, CNG, propane); school buses (biodiesel, CNG, propane); refuse trucks (CNG); light duty autos and trucks (electric, CNG, E85); heavy duty trucks (CNG/LNG); and medium duty trucks (propane). Emission reductions for NO<sub>x</sub>, PM<sub>2.5</sub> and VOC (hydrocarbons) were estimated by vehicle and alternative fuel type. For light duty vehicles, electric vehicles, with little or no tailpipe emissions, have the highest potential for emission reduction among these pollutants. CNG light duty vehicles have a lower penetration rate (fewer vehicles) and lower NO<sub>x</sub> emission reduction potential but these vehicles can significantly help VOC emission reduction. E85 vehicles show an increase in VOC emissions. On a per vehicle basis, all alternative fuel heavy duty trucks show significant emission reduction potential compared to diesel trucks. CNG fueled refuse trucks have huge economic market viability with the lower fuel prices. Even though propane heavy duty trucks have a lower penetration rate of 15 percent, there is high VOC emission reduction potential. On a per vehicle basis, the propane sector shows significant emission reduction potential. As a result of improvements to particulate matter control technologies and changes to baseline diesel fuel, school and transit buses will be significantly cleaner operating by 2030 and therefore a lower potential for emission reductions.

Mr. Rosenfeld, ICF, then described how to use the Excel spreadsheet Air Quality Planning tool. In step one, an alternative fuel is selected from a drop-down menu. If electric vehicle is selected, then in step two the user has to identify the percentage share of the following vehicle types: battery electric vehicle; plug-in hybrid 10 (vehicle has 10 mile range on battery alone; and plug-in hybrid

40 (40 miles). In steps three and four, the user enters the conventional fuel (by vehicle type) being displaced and the alternative fuel penetration by analysis year. At the bottom of spreadsheet is a table showing the pollutant emission reduction estimates by analysis year. As penetration percentages are changed, emission reduction estimates are shown in real time.

In conclusion, the purpose of this project was to assemble information and develop a tool to provide concrete, quantifiable air quality emission value benefits for alternative fuels. The information and tool will help prioritize policies concerning incorporating alternative fuel vehicles into air quality and transportation planning processes. ICF developed a methodology and spreadsheet tool, populated with default data for the St. Louis region, to be included in the transportation planning process. However, the tool can be edited for any region. The aim is to have full distribution of the tool on-line between the members of the Mid America Collaborative and any of the Clean Cities Programs.

Mr. Coulson, EWG, asked if the U.S. Environmental Protection Agency (USEPA) had reviewed this tool and given its blessing. Mr. Rosenfeld, ICF, said that USEPA has reviewed the tool but the Mid America Collaborative was not looking for a specific recommendation for use of this tool. It is to be a general use tool for planning purposes. Mr. Coulson, EWG, observed that this tool could be useful in evaluating Congestion Mitigation Air Quality (CMAQ) projects involving alternative fuels/fleets. He asked if there had been any feedback from other MPOs or Regional Planning Commissions. Mr. Rosenfeld, ICF, said that they had not received feedback on that type of application.

Mr. Knott, Sierra Club, asked if the different years of data provided by Illinois EPA and MoDNR have an impact on the study. Mr. Hartley, ICF, said that it had no impact and that the inputs for MOVES were based on those used in the Conformity findings. Also, projections were updated to make sure that Illinois and Missouri inputs were consistent in future years.

### III. 2014 Ozone Season and Trends

- Michael Coulson, East-West Gateway Council of Governments

Ozone is formed when hydrocarbons and oxide of nitrogen emissions from cars and industry mix with oxygen in the lower atmosphere in the presence of strong sunlight, low wind speed and temperature of 85° or higher. In the Ozone Data Sharing Project, EWG acts as a repository of ozone data collected from April 1 through October 31 from ten monitors in the St. Louis ozone non-attainment area. There are four monitors in Illinois and six in Missouri. EWG performs a preliminary quality assurance screening, enters data into a computerized spreadsheet and prepares monthly and weekly reports for partner agencies (Illinois EPA, MoDNR and USEPA Region 7).

The 2008 ozone standard is 75 parts per billion (ppb). An exceedance of the standard occurs when an eight-hour average of values is calculated to be greater than 75 ppb on any given day. A violation of the standard occurs when a three-year average of the annual fourth highest eight-hour average (out of 214 days) is calculated to be greater than 75 ppb. Each monitor has to pass this test for the area to be considered in attainment of this standard. The 2014 ozone season was good with just four exceedances on two days. On August 4 there were three exceedances at the West Alton, Alton and Wood River monitors. This was the latest date for the first exceedance day since 1999. The fourth exceedance was on September 28 at the Arnold West monitor. The weather plays an important role

in ozone production and this year there was a lot of rain. In the St. Louis area, on average there are 36 days with temperatures 90°F or higher and of this, two days 100°F or higher. This season had 34 days of 90° F or higher. To put the 2014 exceedances into context, annual exceedances of the 2008 eight-hour ozone standard for 1999-2014 were reviewed. Even with the high exceedance summers, when a five-year running average of these exceedances is examined, area is still making good progress in terms of lowering overall ozone levels in the St. Louis area.

Another indicator that EWG monitors is mobile source emissions estimates developed using the MOVES model as part of the Conformity Determination process. Currently, there are 1.6 - 1.7 million vehicles in the region. Over time, it is anticipated that pollutant levels will be reduced, helping to improve ozone levels. Regional VMT is another indicator. VMT levels peaked in 2004 at 72 million miles and since then the VMT growth curve has flattened or decreased. It is projected that as we go forward, the flattening of VMT levels will continue which will in turn ozone levels.

In 2012 the St. Louis area was classified as a marginal non-attainment area for the 2008 ozone standard. Since the implementation of the Clean Air Act Amendments (CAA) in 1990, historically the St. Louis area has been classified as a moderate ozone non-attainment area. Marginal is a major leap forward. Many of the groups around the table today, especially Illinois EPA and MoDNR, are responsible for achieving this milestone. It is anticipated that the St. Louis area will attain the 2008 ozone standard by the end of 2015. Data from 2013-2015 will be used to prepare the three-year average of the annual fourth highest eight-hour average (out of 214 days). Even if the summer of 2015 is above average, should be able to make the 2008 eight-hour ozone standard.

In December 2014, USEPA is to propose a revised eight-hour ozone standard. It is anticipated that the standard will be set between 60 - 70 ppb. After that there it usually takes three years for the revised standard to be rolled out and fully implemented. So the area will be in attainment in 2015 and probably classified as non-attainment some time in 2017-2018.

Additional information on air quality in the St. Louis area can be found online at the AQ Resource Center section of the EWG website at [www.ewgateway.org/environment/aq/aq.htm](http://www.ewgateway.org/environment/aq/aq.htm). USEPA's Air Quality Indicator (AQI) calculator is used to convert ozone information into AQI values and then a monthly AQI Calendar is prepared. It is a good way to visualize the ozone season.

Mr. Winkelmann, MoDNR, pointed out that one reason projected vehicle emissions will flatten out is of the new Corporate Average Fuel Economy (CAFE) vehicle standards. As older vehicles are replaced with newer, cleaner cars, tailpipe emissions are reduced.

#### IV. Greenhouse Gas Inventory Project - John Posey, Ph.D., East-West Gateway Council of Governments

This summer the Federal Highway Administration (FHWA) issued a solicitation to metropolitan planning organizations, like EWG, and state department of transportations for proposals to obtain grant funds to do greenhouse gas inventories. EWG submitted an application in the category of agencies new to performing greenhouse gas inventories. EWG uses the MOVES model to develop emission estimates for volatile organic compounds, oxides of nitrogen and PM<sub>2.5</sub>. MOVES has a greenhouse gas module to estimate carbon dioxide emissions. However, EWG has not had the staff time to work on it.

EWG was successful in their application. During the one-year grant EWG will be working with Dr. Fishman of SLU and doctoral student Jason Welch. Mr. Welch will be working with Ms. Shoab of EWG. The first task is to look at MOVES inputs and define model assumptions in order to make them more accurate. The second task will be to do post-processing of the MOVES model output. The aim is to develop baseline greenhouse gas emissions at a regional scale and then a sub-regional scale. The FHWA is also interested in corridor-level emission estimates. The study team will investigate if it is possible to develop greenhouse gas emissions reports at the municipal level. EWG is grateful for the opportunity to conduct this research and for SLU to collaborate with us.

Dr. Fishman, SLU, said that he is interested in this project from a scientific perspective. In his career with NASA and at SLU, has been looking at air pollution using satellite information which has a low resolution. In 2018, a satellite is to be launched which will be able to measure carbon dioxide emissions down to a five kilometer square. The database developed as part of this project can be used to validate information from the new satellite.

Mr. Coulson, EWG, remarked that occasionally there are rumblings from FHWA and USEPA about including carbon dioxide analysis in Conformity Determination. He asked the FHWA MO representative if that was on the horizon. Mr. McMahon, FHWA MO, said that he could not speak to that. Mr. Winkelmann, MoDNR, said that FHWA documents about greenhouse gas emission inventory mention transportation-related pollutants. However, the CAA identifies specific criteria pollutants. A number of steps would have to occur before greenhouse gases would be identified as a criteria pollutant in a federal rule and then become part of Conformity Determination by regulation.

#### V. American Fuel Group Report

Mr. Herdler of St. Louis Regional Clean Cities Program (SLCC) is in Kansas City coordinating an alternative fuel training session for code enforcement personnel and first responders. This training is also part of The Mid-America Collaborative for Alternative Fuels' Alternative Fuel Implementation project.

#### VI. Update Activities of the States

- David Bloomberg, Illinois Environmental Protection Agency
- Joe Winkelmann, Missouri Department of Natural Resources

Mr. Bloomberg, Illinois EPA, said that USEPA has released more information on the changes to occur to start-up, shut-down and malfunction exemptions. These changes will affect rules in both Missouri and Illinois. This is part of a law suit settlement and subsequent negotiations. USEPA is now at the point where they can identify what needs to be changed in a wide variety of rules.

Illinois EPA is focusing on sulfur dioxide (SO<sub>2</sub>). Currently, the Peoria-Pekin and Lemont (Chicago area) areas are the only SO<sub>2</sub> nonattainment areas in the state. Illinois EPA is preparing for the next round of SO<sub>2</sub> nonattainment area designations which will probably involve modeling some areas in the Metro East.

Mr. Coulson, EWG, asked if the refinery in Wood River has elected to do modeling. Ms. Funk, Metro East Community Air Project (MECAP), pointed out there is one SO<sub>2</sub> monitor near the

refinery. Mr. Bloomberg, Illinois EPA, said that having one monitor does not exempt a facility from doing modeling. Almost every facility will be subject to modeling to determine if it is in attainment of the standard or not. There is one facility located east of the Metro East which is currently in talks with Illinois EPA about monitoring. The biggest issues with monitoring are that companies will have to pay for the monitoring themselves and a facility may need two or three monitors. In addition, even if the monitors show attainment after three years, the facility may not be able to remove the monitors (depending on the USEPA final rule). A monitor will have to get to 50 percent to 80 percent of the design value before the monitor can be pulled. Companies will be looking at their long-term expenditures. There needs to be three years worth of monitoring data (2017-2019) before a designation recommendation can be submitted to USEPA. Nonattainment area designation using monitoring data occurs three years later than designations using modeling data. Illinois EPA is aware of companies currently doing their own modeling and output evaluation. No one has announced if they will be monitoring. Almost all facilities will be modeled by Illinois EPA and some will be done sooner because of the Sierra Club lawsuit against USEPA.

Ms. Funk, MECAP, asked when companies have to decide about monitoring or modeling. Mr. Bloomberg, Illinois EPA, said that states are to submit designation recommendations (based on modeling) to USEPA by January 2017, so companies would have to inform Illinois EPA before then. Illinois will be doing all the modeling. For companies doing monitoring, the designation process would be completed in 2020. Ms. Wilbur, MoDNR, added that for non-attainment areas designated using modeling, State Implementation Plans (SIPs) would be due in 2019.

Mr. Coulson, EWG, asked about the status of PM<sub>2.5</sub> monitoring. Mr. Bloomberg, Illinois EPA, said that since July have been receiving good data. Staff is evaluating bids for new continuous monitoring equipment which will eliminate some of need for lab analysis. Mr. Coulson, EWG, asked if there will be any more monitors in the Metro East. Mr. Bloomberg, Illinois EPA said that not in this area but they continue to locate a near-roadway monitor site in the Chicago area.

Ms. Wilbur, MoDNR, said that in the last year the SIP Unit of the Air Quality Planning section of the Air Pollution Control Program had taken on the responsibility of doing mobile source emissions inventory and modeling. Stacy Allen has been brought on board as the mobile source emissions staffer. Ms. Allen has expertise in modeling and meteorology.

Mr. Winkelmann, MoDNR, announced that the Missouri Air Conservation Commission (MACC) will meet on October 30 in Macon, MO. There will be a public hearing on a proposed amendment to 10 CSR 10-6.110 (the fee rule), proposing to increase the emission fee to \$48 a ton from \$40. The plan is for the MACC to adopt this rule at their November 21 meeting in Jefferson City. That way the legislature would have their entire 2015 session to review the rule before it becomes effective in January 2016. The rule would be applicable to emissions accrued during 2015.

A preliminary revision to the state Opacity rule (10 CSR 10-6.220) is out for a 60-day public comment period and can be found in the Rules in Development section of the MoDNR website ([www.dnr.mo.gov/env/apcp/rulesdev.htm](http://www.dnr.mo.gov/env/apcp/rulesdev.htm)). There are revisions to start-up, shut-down and malfunction exemption provisions and minor modifications.

## VII. Other Business

Ms. Funk, MECAP, reported that between 114 - 119 people attended the third Metro East Air Quality Forum earlier this month. Ms. Fuchs of the American Lung Association presented Care About Clean Air award to six Metro East communities, organizations and businesses. The keynote presentations focused on climate change from a public health perspective and indoor air quality.

The next meeting of the AQAC was scheduled for Tuesday, January 27, 2015. There being no other business, the meeting of the Air Quality Advisory Committee was adjourned.

AGENDA  
AIR QUALITY ADVISORY COMMITTEE\*  
**TUESDAY October 28, 2014**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**
  - Michael Coulson, Chair, East-West Gateway Council of Governments
  - A. Minutes of September 16, 2014 Meeting
  
- II. Alternative Fuels for Air Quality Implementation and Planning**
  - ICF International
  
- III. Greenhouse Gas Inventory Project**
  - John Posey, Ph.D., East-West Gateway Council of Governments
  
- IV. 2014 Ozone Season**
  - Michael Coulson, East-West Gateway Council of Governments
  
- V. American Fuel Group Report**
  - St. Louis Regional Clean Cities Program
  
- VI. Update Activities of the States**
  - Illinois Environmental Protection Agency
  - Missouri Department of Natural Resources
  
- VII. Other Business - Next Meeting Date January 27, 2015**
  
- VIII. 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.

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, September 16, 2014  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Michael Zlatic - St. Louis County Health Department  
Joe Winkelmann - Missouri Department of Natural Resources  
Jack Fishman - St. Louis University  
Mike Henderson, Missouri Department of Transportation  
Betsy Tracy - Federal Highway Administration IL  
David Bloomberg - Illinois Environmental Protection Agency  
Chris Schmidt - Illinois Department of Transportation  
Susannah Fuchs - American Lung Association (telephone)

Others Present:

Emily Andrews - USGBC-Missouri Gateway Chapter  
Lenora Fisher - Citizens for Modern Transit  
Joe Gray - Illinois Department of Transportation, District 8  
Amy Funk - Metro East Community Air Project  
Kevin Herdler - St. Louis Regional Clean Cities Program  
Curtis Jones - Illinois Department of Transportation  
David Shanks - Boeing  
Kevin Jemison - Illinois Department of Transportation, District 8  
Rafael Gonzalez - Madison County Transit/RideFinders (telephone)  
Amy Bhesania - U.S. Environmental Protection Agency Region 7 (telephone)

Staff:

Jim Wild                      Mary Grace Lewandowski      John Posey      David Wilson  
Carol Lawrence              Gary Pondrom

- I.      Call to Order  
        - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWG). The minutes of the July 29, 2014 AQAC meeting were approved as circulated. Mr. Coulson, EWG, introduced the new director of the Community Planning Department, Mary Grace Lewandowski. She was a Manager in EWG's Corridor and Long Range Transportation Planning section and previously worked on Transportation Improvement Program (TIP) and Conformity Determination at the Metropolitan Planning Organization in Birmingham Alabama.

## II. St. Louis Green Building Council Activities and Programs - Emily Andrews, USGBC- Missouri Gateway Chapter

The vision of the U.S. Green Building Council (USGBC)-Missouri Gateway Chapter is to create and restore buildings and communities that will regenerate and sustain the health and vitality of a community. Many people think of the Green Building Council (GBC) as a trade association but this group exists to serve a mission and not necessarily our members. This mission is to initiate, develop and accelerate implementation of green building concepts, technologies and principles that promote environmentally responsible, prosperous and healthy places to live and work. The Missouri Gateway Chapter has over 500 members.

One strategic activity of the Missouri Gateway Chapter is Green Building Leaders of the Future. Last year the Chapter launched the Green School Quest in which volunteer “Green” mentors were paired up with K-12 schools to implement low or no cost sustainability projects. During the 2013-2014 school year, 24 schools submitted projects and approximately 2,000 students, parents, teachers and community members were involved. Projects ranged from water and energy use audits to installation of rain barrels to initiating an anti-idling campaign. In the Green Shadow Program, a college student is paired with a professional in the field for one day. The Chapter also works with official USGBC student groups at Maryville University, Lewis and Clark Community College, Southeast Missouri State University and University of Missouri. The Chapter is working with students at Drury College, Southwestern Illinois College, Washington University and Missouri University of Science and Technology. The Chapter also offers Leadership in Energy and Environmental Design (LEED) rating system exam preparation courses and assistance to individuals to maintain their LEED credentials.

The Missouri Gateway Chapter is involved in a number of community projects and outreach and advocacy efforts. In the Regional Environmental Internship program, interns are provided to municipalities to do greenhouse gas inventories and prepare climate action plans. For six months, 30 volunteers from the Chapter teamed up with Forest Park Forever to evaluate operation and maintenance activities at the Forest Park Visitor’s Center and to implement LEED practices. In 2012 the Missouri Gateway Chapter and the St. Louis Regional Chamber launched a High Performance Building Initiative to increase the “greening” of existing buildings. Out of the High Performance Building Initiative came the 25% by 20 Energy Benchmarking campaign. The 25% by 20 title comes from a goal in the City of St. Louis’ sustainability plan to reduce energy use by 25 percent by 2020. There are a number of mandatory energy benchmarking campaigns underway in cities like New York, Chicago, Minneapolis and Philadelphia where buildings over 50,000 square feet are required to regularly benchmark their energy use. The Missouri Gateway Chapter also works with advocacy groups, non-profits, congregations and local governments. The Chapter partnered with the Missouri chapter of Interfaith Power and Light to provide energy audits to local congregations.

Some of the actions covered by the LEED rating system are building design and construction (school, homes, retail, government), operation and maintenance of existing buildings, interiors and neighborhood development. This summer LEED Version 4 (v4) was passed by the USGBC membership and is now available to be used. LEED v4 raises the bar and has much stricter energy performance requirements and a stronger focus on climate change and human health. The aim is to build better buildings for all people.

Mr. Winkelmann, Missouri Department of Natural Resources (MoDNR), said that the Lewis and Clark State Office Building in Jefferson City, MoDNR Headquarters, is the only LEED platinum certified state office building in the U.S. Mr. Henderson, Missouri Department of Transportation (MoDOT), asked if there were additional costs for a project to be LEED certified. Ms. Andrews, USGBC-Missouri Gateway Chapter, said that it depends upon how a project is budgeted. There can be up-front costs. Need to continue to educate building professionals, building owners and contractors that there will be more savings in operation and maintenance and not in capital costs.

Mr. Coulson, EWG, asked if St. Louis is considered a leader in green building. Ms. Andrews, USGBC-Missouri Gateway Chapter, said that at one time, area was in the top ten for buildings but since land for development is available and water is available there is not as much incentive to build green. Green building still occurs and there are a lot of contracting and design firms which are local and national leaders.

Ms. Funk, Metro East Community Air Project, said that she has heard that some school districts are receptive to LEED but are reluctant to participate in something like the Green Schools Quest because it may highlight problems they cannot afford to fix. Ms. Andrews, USGBC-Missouri Gateway Chapter, said that the Quest is a voluntary program.

### III. St. Louis Climate Group

- Jack Fishman, Ph.D., St. Louis University

- John Posey, Ph.D., East-West Gateway Council of Governments

Mr. Coulson, EWG, announced that today is International Preservation of the Ozone Layer Day.

Mr. Fishman, St. Louis University (SLU), said that in 2012 Trudy Busch Valentine wrote a guest commentary in the St. Louis Post-Dispatch about how she would like to see St. Louis take a leadership role in the environmental movement. For the last couple of years a local group called the Climate Reality - St. Louis have been meeting. They are trying to educate the public on climate change. On August 24 the group held a panel discussion on creating the political will for climate leadership in St. Louis. Approximately 100 people were in attendance. The group is now investigating the possibility of the St. Louis region hosting a meeting of international stature focused on climate change. Objectives and action items were identified.

Based on readings from the Mauna Loa Observatory, since 1960 average monthly level of atmospheric carbon dioxide (CO<sub>2</sub>) have increased from 310 parts per million (ppm) to 400 ppm. In April 2014, the monthly average went over 400 ppm for the first time. Emissions of other greenhouse gases (methane, carbon monoxide, nitrous oxide) are following the same curve. They have similar patterns. A growing number of scientists now say we are living in a new geological epoch, the Anthropocene. A brief animated film “Welcome to the New Anthropocene” describing this epoch was shown. This epoch is dominated by human activity. Pressure on the planet has created unprecedented destabilization but humanity’s creativity, energy and industry offer hope.

Tropospheric ozone, another trace greenhouse gas, is the focus of Dr. Fishman’s research to highlight the Anthropocene. In the late 19<sup>th</sup> century tropospheric ozone levels were 10 ppm. In the last 150 years, concentration levels have tripled and the trend is continuing. Ozone reacts with other chemicals in the leaves of plants to form tissue-destroying oxidants which can cause a variety of

problems. Many common plants (including agricultural crops) present symptoms of ozone damage at today's background concentrations (40 parts per billion or ppb). As a way to visually demonstrate impact on certain types of vegetation because of global increases in trace gases, SLU has coordinated the installation of ozone gardens in the St. Louis area. The first ozone garden was established in Forest Park in 2012. There are now ozone gardens at Grant's Farm in St. Louis County and on the campus of Southwestern Illinois College. A report on the Ozone Garden concept was accepted for publication in the August 2014 issue of the Bulletin of the American Meteorology Society. Ozone gardens are a way to understand the concept of what is happening to the planet.

From the August meeting, have begun to investigate the possibility of St. Louis leading an international meeting focusing on the Anthropocene. One approach would be to have a technical conference working through the National Academy of Science and modeled after the December 2014 Crutzen Conference on "The Anthropocene". Another approach would be a technical/societal workshop using guidelines from the Pontifical Academy Society Conference held in Rome in May 2014. The theme of this workshop was "Sustainable Humanity, Sustainable Nature, Our Responsibility". Dr. Fishman has begun a conversation with the Climate Advisor to Pope Francis to see if there is interest in setting up a conference looking at climate change and its effect on humanity. Perhaps such a conference could be hosted by SLU in 2018 (SLU's bicentennial).

Dr. Posey, EWG, said that he prepared the Climate Change in St. Louis: Impacts and Adaptation Options article for the International Journal Climate Change: Impacts and Responses 5 (2). In it, different climate models, different down-scaling techniques (from national level to regional) for different greenhouse gas emissions scenarios were examined. Looked at how St. Louis area emissions are projected to change by 2040-2070 compared to 1970-2000 emissions.

To set the historical context, mean annual temperatures by decade from 1875 to the present were reviewed. There is a slight positive trend and this trend has accelerated sharply in the last 30 years. The last 25 years are the warmest consecutive 25 years on record for St. Louis area. In addition, observed an increase in the number of extreme heat days (95° or more). Before 1980 the average number of extreme heat days was 13.6 but since 1980 the average number has increased to 16.1. There is a noticeable upward trend in annual precipitation from 1938 to 2013. Pre 1980, the mean annual precipitation was less than 38 inches. Since 1980, it is a little over 40 inches a year. The six wettest years on record have occurred since 1980. Cautious about attribution, but there appears to be some evidence that St. Louis is getting warmer and wetter.

In this paper, looked at projections from different models, down-scaling techniques and emission scenarios. The following models and associated data sets were reviewed: NARCCAP A2 (Business as Usual) scenario; USGS A2 (Business as Usual) scenario; and USGS B1 (optimistic will be lower emission rate) scenario. NARCCAP uses down-scaling uses regional climate models to down-scale projections from the national model to the local scale. The USGS approach uses statistical down-scaling. On average NARCCAP A2 and USGS A2 show temperatures rising by mid-century 2.5°. And under B1 increase projected to be around 1°. There is more variability in precipitation estimates. Most model runs showed a continued increase in annual precipitation by mid-century. General consensus was that precipitation was expected to increase in the winter and spring (contribute to rising risk of riverine flooding). The greatest uncertainty was in the summer months. Climatologists have indicated that summer precipitation in the St. Louis area is the hardest to predict.

The National Oceanic and Atmospheric Administration (NOAA) in a 2013 report prepared maps showing projected temperature and precipitation changes in the Midwest based on these model ensembles. Summers in St. Louis are projected to be warmer. The entire Midwest is projected to have more precipitation in the winter and spring. For St. Louis region can anticipate that there would be an impact on stormwater management, particularly with an increase in flooding frequency and severity.

Dr. Posey is currently working on a paper which will be published in St. Louis Currents in 2015. In this paper, examining Metropolitan St. Louis Sewer District (MSD) sewer overflow information on those days with more than one inch of precipitation. How the St. Louis area is responding to these changes is also being reviewed. Normally, the response to climate change has been either mitigation (working on the greenhouse gas side) or adaptation (anticipating changing conditions and adapting to them). Dr. Posey is proposing that there be a third category, restoration. Restoration speaks to the importance of trying to undo some of the damage that we have done. Actions can range from floodplain preservation being done by Ducks Unlimited in the Missouri-Mississippi confluence to some Missouri Department of Conservation micro-grants for redevelopment of prairie on small parcels to green infrastructure. A number of good things are occurring but need to do more of them.

EWG and SLU submitted a grant proposal to the Federal Highway Administration (FHWA) for a project which would help develop our capacity/ability to do greenhouse gas inventories and model transportation-related emissions. FHWA still has a few questions but is positive about the proposal.

Mr. Schmidt, Illinois Department of Transportation (IDOT), announced that at the IDOT Fall Planning Conference on October 9-10 in Bloomington Dr. Posey will be on a panel discussing how local communities can better adapt to climate change.

- IV. EPA's Response to States' Designation Recommendations for 2012 Annual PM<sub>2.5</sub> Standard (120-Day Letter)
- David Bloomberg, Illinois Environmental Protection Agency
  - Joe Winkelmann, Missouri Department of Natural Resources

In August, U.S. Environmental Protection Agency (USEPA) sent each state a letter describing what areas USEPA plans to designate as Attainment, Non-Attainment or Unclassifiable for the 2012 annual fine particulate (PM<sub>2.5</sub>) National Ambient Air Quality Standard (NAAQS). The states then have 120 days to prepare a response for USEPA if they are in disagreement with USEPA's recommendations. USEPA recommended that the majority of Missouri be classified as Unclassifiable/Attainment and the St. Louis area be classified as Unclassifiable. USEPA recommended that all of Illinois be classified as Unclassifiable.

The recommendations for the Missouri portion of the St. Louis area and Illinois is the result of a laboratory audit conducted by USEPA. Illinois EPA has a contract with the Cook County environmental lab to perform analysis of statewide PM<sub>2.5</sub> filter samples. In USEPA's audit of the Cook County lab, it was determined that for 2011-2013 data, 61 percent of the samples analyzed did not meet criteria for proper analysis (correct humidity, correct temperature, sample holding time before being weighed) or the Cook County lab was not keeping the proper records to show they were meeting these analysis standards. Because of this it was not possible for USEPA to validate Illinois'

2011-2013 PM<sub>2.5</sub> monitoring data and make designations for the 2012 PM<sub>2.5</sub> standard. It is as if the state had no PM<sub>2.5</sub> monitoring data. Two counties in northwest Indiana and the St. Louis area counties in Missouri have been linked to Illinois. USEPA is going to designate all of Illinois and the “linked” Indiana and Missouri counties as Unclassifiable. Permitting and other implications are still being reviewed and discussed with USEPA Region 5.

Missouri had tried to make case that all counties in Missouri were in attainment because none of their monitors showed non-attainment and Missouri was not contributing to violations in Illinois. USEPA determined that Missouri and Illinois areas are linked and as they do not know what the Illinois monitors would have shown, St. Louis area Missouri counties are considered to be Unclassifiable as well. Normally, if all monitors in an area are in attainment or if the area does not have any monitors and USEPA has no reason to believe there is non-attainment, then such areas are classified by USEPA as Unclassifiable/Attainment. With Unclassifiable, a state can start collecting validated data. After three full calendar years worth of data is collected, USEPA can, if they wish to, make determination that an area is in attainment or non-attainment. If USEPA had designated all of Missouri Unclassifiable/Attainment as recommended and later on there was new data suggesting non-attainment, USEPA would have to follow a more complicated process to show that an area has gone from one designation to another. Recently the Sierra Club asked USEPA to do this in a number of areas based on ozone data from the 2012 summer and USEPA declined.

Illinois EPA, USEPA Region 5 and Cook County have been working on this issue for the past several months and are moving forward. As of mid-July the Cook County lab is providing valid data. For designation purposes, probably will have to use 2015-2017 data which will not be certified as valid until 2018. Right now, the states are working under the 2012 annual PM<sub>2.5</sub> NAAQS. Under the Clean Air Act Amendments (CAA) of 1990, NAAQS are reviewed every five years. It is possible that there could be a new PM<sub>2.5</sub> standard before Illinois even has valid data or there may not be a designation for the 2012 standard. The Metro East only has one monitor, Granite City, showing violation. US Steel-Granite City Works is installing a control device now. In addition, background levels of PM<sub>2.5</sub> are expected to go down across the country. Even when the 2012 PM<sub>2.5</sub> standard was finalized, USEPA said that with the exception of a few places in California, they did not expect any states to have to make new rules. Because of existing federal rules and other expected federal rules, background levels are going down.

Mr. Coulson, EWG, asked if USEPA oversees monitoring. Mr. Bloomberg, Illinois EPA, said that USEPA approves the monitoring network and does a laboratory audit once every three years. Other states had similar lab problems and had areas identified as unclassifiable.

Mr. Winkelmann, MoDNR, said that USEPA has indicated that the Unclassifiable/Attainment designation is typically given to areas likely attaining the NAAQS and likely not contributing to a violation of the standard in another area. Unclassifiable indicates that USEPA does not know whether an area is attainment or is contributing to a nearby violation. The Missouri side is attaining the 2012 annual PM<sub>2.5</sub> standard based on clean data. MoDNR strongly argued that Missouri was not contributing to violations in Illinois and now that can not be determined. In the USEPA Missouri technical support document, it was stated that if not for these monitor irregularities they would have designated St. Louis area as Non-Attainment because USEPA felt there was contribution from Missouri. As far as CAA obligations, Unclassifiable and Unclassifiable/Attainment have different mandatory State Implementation Plan (SIP) requirements. USEPA always has discretion to do

another round of designations under any NAAQS but often do not use that discretion. USEPA stresses that it may revisit/re-evaluate classifications after three years of valid data. A final decision on the USEPA designations is expected to be made in December 2014. It is unclear what, if any, additional information Missouri can provide without valid data from the Illinois side.

Mr. Bloomberg, Illinois EPA, observed that for all intent and purpose, Unclassifiable/Attainment is the same as Attainment. Mr. Winkelmann, MoDNR, said that in the USEPA Illinois Technical Support Document, the possible extent of the non-attainment area and splitting the area was discussed. However, any decision on the size of the non-attainment area will have to wait until there is valid data and if there is a re-evaluation. Mr. Bloomberg, Illinois EPA, said that Illinois had planned to submit a letter recommending a change in the size of the non-attainment area, but that did not happen. He added that a redesignation to attainment request/Maintenance SIP for the 1997 annual PM<sub>2.5</sub> standard has not been submitted to USEPA due to ongoing modeling issues and enforceability issues. It is unclear when these items would be submitted.

Mr. Henderson, MoDOT, asked what is the cause of decreasing background level of PM<sub>2.5</sub>. Mr. Bloomberg, Illinois EPA, said that PM<sub>2.5</sub> is a mix of solid particles and gases formed from chemical reactions in the atmosphere. Federal regulations in place and in the future reducing sulfur dioxide (SO<sub>2</sub>) and oxides of nitrogen will bring the background level of PM<sub>2.5</sub> down. The impact on Illinois monitors of any controls (for SO<sub>2</sub>) made on the Missouri side would also help. This is another reason that no one saw a problem with the monitor values. It is the opinion of Mr. Bloomberg that the monitored values were close to reality. If the data can not be validated, then it does not matter.

V. American Fuel Group Report  
- St. Louis Regional Clean Cities Program

Mr. Herdler, St. Louis Regional Clean Cities program (SLCC), said that SLCC and Kansas, Iowa, Nebraska and Missouri received a grant from the U.S. Department of Energy (DOE) for an Alternative Fuel Implementation project. A consultant developed a methodology using MOVES model to evaluate the air quality impact/emission reduction of alternative fuel vehicles. The purpose is to see results of integrating alternative fuels into the vehicle mix and see what the outcomes could be. A pilot project was conducted using St. Louis base year information. The consultant also prepared a webinar and has presented it twice. Planning to hold the third webinar at the October AQAC meeting. As part of this project, Mr. Herdler developed training materials for code enforcement personnel and first responders about alternative fuels. A conference on this activity is planned for the end of October in Kansas City.

SLCC has received a Clean Diesel grant from MoDNR to do another tugboat engine replacement and to replace six school buses in the Jefferson R-VII and the DeSoto school districts. SLCC is working on a grant proposal for emergency vehicles and alternative fuels in which Kirkwood would serve as a pilot project. The 20<sup>th</sup> anniversary of SLCC is in November and a celebration is planned.

VI. Update Activities of the States

- Joe Winkelmann, Missouri Department of Natural Resources
- David Bloomberg, Illinois Environmental Protection Agency

Mr. Winkelmann, MoDNR, said that the Missouri Air Conservation Commission (MAC) will meet on September 25 in Kansas City. He gave an update on the Air Pollution Control Program fee process. There was agreement from stakeholders to increase emission fee from \$40 a ton to \$48 a ton. At a September 2 MACC meeting, the MACC gave approval for the APCP to move forward with preparing rule-making. That way the MACC can adopt it in December 2014. Rule-making has to be completed by the end of 2014 so that the legislature has a full session (in 2015) to review the rule before it can become effective in January 2016. No consensus was reached on increasing the fees for permit processing and asbestos registration. Process of stakeholder discussions on the asbestos fees and permit processing fees will have to be reconvened. The Stage II Vapor Recovery Rule was adopted by the MACC at their August 28 meeting and should be published in the October 1 Missouri Register, making it final.

Mr. Bloomberg, Illinois EPA, said that the Monitoring Section is now part of the Planning Section. The 2015 annual monitoring plan is now out on public notice and is available on the Illinois EPA website. The statewide ozone precursor inventory was on public notice and has been submitted to USEPA Region 5. Marginal ozone non-attainment areas are required to submit such an inventory.

VII. Other Business

Ms. Funk, MECAP, announced that the fourth Metro East Air Quality Forum will be on October 17 at the Caseyville Community Center.

Mr. Zlatic, St. Louis County, announced that on September 17 representatives from energy groups will be speaking at the St. Louis Regional Chamber. It is a follow-up to the presentation by USEPA Regional Administrator Region 7 on the proposed Clean Power rule.

Mr. Wilson, EWG, announced that on September 18 EWG, in conjunction with the Missouri History Museum and STL250, is hosting a discussion on transportation issues in the future at the History Museum. Flyers were distributed for: EWG's Outstanding Local Government Achievement Awards (OLGAs); and a course on the fundamentals of planning and zoning co-sponsored by EWG, the St. Louis Chapter of the American Planning Association and the University of Missouri St. Louis.

The next meeting of the AQAC was scheduled for October 28, 2014. There being no other business, the meeting of the Air Quality Advisory Committee was adjourned.

AGENDA  
AIR QUALITY ADVISORY COMMITTEE\*  
**TUESDAY September 16, 2014**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**
  - Michael Coulson, Chair, East-West Gateway Council of Governments
  - A. Minutes of July, 2014 Meeting
  
- II. St. Louis Green Building Council Programs**
  - Emily Andrews, St. Louis Green Building Council
  
- III. St. Louis Climate Group**
  - Jack Fishman, Ph.D., St. Louis University
  - John Posey, Ph.D., East-West Gateway Council of Governments
  
- IV. EPA's Response to States' Designation Recommendations for 2012 Annual PM2.5 Standard (120-Day Letter)**
  - Joe Winkelmann, Missouri Department of Natural Resources
  
- V. American Fuel Group Report**
  - 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 Date October 28, 2014**
  
- VIII. 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.

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, July 29, 2014  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Michael Zlatic - St. Louis County Health Department  
Joe Gray - Illinois Department of Transportation, District 8  
Wendy Vit - Missouri Department of Natural Resources  
Jack Fishman - St. Louis University  
Mike Henderson, Missouri Department of Transportation  
Susannah Fuchs - American Lung Association  
Betsy Tracy - Federal Highway Administration IL

Others Present:

Don Kotur - Missouri Department of Natural Resources  
Amy Funk - Metro East Community Air Project  
Patricia Maliro - Missouri Department of Natural Resources  
Joe Winkelmann - Missouri Department of Natural Resources  
Aaron Beswick - Intern, City of St. Louis Department of Health  
Mark Leath - Missouri Department of Natural Resources  
Curtis Jones - Illinois Department of Transportation  
David Shanks - Boeing  
Kevin Jemison - Illinois Department of Transportation, District 8

Staff:

Mary Grace Lewandowski    Aaron Young    Carol Lawrence    Gary Pondrom

- I.     Call to Order  
      - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWG). The minutes of the April 29, 2014 AQAC meeting were approved as circulated. Mr. Herdler, St. Louis Regional Clean Cities Program was unable to attend the meeting today. Mr. Coulson, EWG, announced that our friend and colleague Ken Hagg passed away earlier this summer. His air quality expertise was valuable to the St. Louis region. There was a moment of silence in his memory.

- II.    Ecological Approach to Infrastructure Development Initiative  
      - Mary Grace Lewandowski, East-West Gateway Council of Governments

This initiative began in 2008 as EWG was beginning to work on the Regional Transportation Plan (RTP) 2040. The aim is to develop an integrated ecosystem-based planning approach within the long-range transportation planning process. This is a way to try to balance conservation goals/objectives in the region with transportation planning. At the national level, trying to identify impacts and build more wisely and avoid delays in the environmental review process. Looking for

a smarter way to build and avoid impacts. Also, if there is an impact to focus mitigation resources on areas with the greatest restoration potential.

This process has engaged a number of federal, state and local transportation and natural resource agencies and local, regional and national environmental organizations/groups. Data sources were identified, tools were developed and collaboration was facilitated among these agencies and organizations. The goals of the Initiative were to: develop ecological geo-spatial tools; integrate these tools into the long-range transportation planning and develop a regional ecological framework; and to integrate “State of the Art” geospatial tools into resource and regulatory agencies activities and make the data tools easily available for use. Geospatial tools include: the development of ecological significant natural resource GIS data layers; mapping Conservation Opportunity Areas; and floodplain and wetland mapping. In the most recent update to the RTP, these tools were incorporated into the planning process. A regional ecological framework was created and identifying areas of ecological significance were identified. The impact of the RTP on these areas was determined. Now at the stage of trying to integrate these tools into resource and regulatory agencies planning activities.

At the beginning of this initiative, there were 16 categories of vegetation and land cover used in GIS mapping and now there are 65 land cover classifications. Patches of regional ecological significance area were grouped and then ranked regionally based on ecological significance. Also have a more refined project level ecological significance. Each individual patch was ranked for ecological significance and used in the project evaluation process in the RTP. Missouri and Illinois conservation strategies were also mapped. Ideally these tools would be used to identify locations either for expansion or connection. LIDAR (light detection and ranging remote sensing) data was used to map wetlands. Identify areas of wetlands of importance and should try to preserve. Target areas of higher restoration potential. The ecological initiative tool is now posted on the Missouri Spatial Data Information Service (MSDIS) website hosted by the University of Missouri, Columbia at <http://msdis.missouri.edu>.

The Strategic Highway Research Program 2 (SHRP2) C40B studies transportation-related subjects and is operated out of the National Academy of Sciences by the Transportation Research Board (TRB). EWG’s Ecological Initiative was part of the was involved in the proof-of-concept of SHRP2 C40B Geospatial Resources for Ecology and Transportation. EWG’s geospatial tool was used with national environmental data sets. The aim is to get ecological data sets out to planners earlier in the planning process. Idea is that a planner of any GIS skill level could go to Federal Highway Administration web site and download national level environmental data sets. EWG component was to look at our current data and refined land use classifications. This data better reflects conditions on the ground and opportunities for green infrastructure. Hope to have these data tools more incorporated into planning work by regional, state and federal agencies. There is interest/emphasis at the federal level in looking at possible impacts, early in the transportation planning process. Want to look early instead of waiting until the NEPA phase or when project is under design.

Further work with this data tool will occur on the Missouri Department of Transportation (MODOT) I-70 Corridor Planning and Environmental Linkages Study. MoDOT is interested in applying the refined vegetation/land cover data sets to this corridor study which extends from Wentzville to the end of the reversible lanes in the City of St. Louis. EWG is also looking to do wetland mapping along the Meramec River and Upper Silver Creek in Madison County. The goal is to identify more

areas of restoration potential. This information could be used in wetland and watershed planning, mitigation banking, updating Conservation Opportunity Areas map. Areas of possible connectivity between COAs will be researched and then identify regional mitigation and restoration priorities. The Initiative can help inform the discussion/debate on where are mitigation sites with greatest potential.

Mr. Kotur, Missouri Department of Natural Resources (MoDNR) asked why does metropolitan area, like St. Louis and St. Charles Counties, have less ecological significant patches. Ms. Lewandowski, EWG, these are areas where more urbanization has occurred. In areas with less urbanization/development there are more intact natural communities so they reflect higher on scale. Ms. Funk, Metro East Community Project (MECAP), asked if urban areas are ranked lower in the evaluation, could this impact significance on other areas. Ms. Lewandowski, EWG, said that want the data set to have more reflective land cover data. Know there are more opportunities than what the data is showing.

### III OneSTL Update

- Aaron Young, East-West Gateway Council of Governments

The OneSTL Plan for sustainable development was adopted in December 2013. Grant funding has ended. The OneSTL partners now are involved in a number of activities to implement the strategies delineated in the Plan. EWG staff have been making presentations on OneSTL as requested and refining the OneSTL website. The Partners are working on reformulating committee structure to help implement the strategies identified in OneSTL.

OneSTL is meeting with the Department of Housing and Urban Development (HUD) Federal Sustainability Partnership. HUD has invited all of the federal agencies in the region to meet quarterly and discuss how they can approach things more efficiently at the federal level. Eight agencies are involved in this partnership. OneSTL will be working with the local HUD office and will start meeting with this partnership to look at how their resources can be used to help accomplish some of the strategies identified in the OneSTL Plan. Interested state agencies and OneSTL Network partners will also be brought into the conversation. Agencies interested in participating in the Network can go to the OneSTL web page and sign up.

The St. Louis Metropolitan Research Exchange is a loose-knit group of researchers from the region's universities who meet and discuss what kind of research they should do. OneSTL is collaborating with the Research Exchange to guide research efforts in order to help people practice sustainability in the region. A workshop/conference is planned for January 2015. Also working with the City of St. Louis Civil Rights Enforcement Agency on a Fair Housing Conference scheduled for September 5, 2014.

Mr. Young is serving on the planning committees for two conferences. The St. Louis Association of Community Organizations (SLACO) Neighborhood Conference is November 1 at Harris Stowe State University. The Missouri state-wide American Planning Association (APA) conference to be held October 15-17 in St. Louis. The conference theme is building sustainable communities.

To refine the classification of natural resources found in the City of St. Louis, the City's Sustainability Coordinator has initiated a natural resource inventory. EWG is assisting in the

establishment of a database. It will take time to populate the database with information and update the GIS data layers.

OneSTL is working with the Institute for Sustainable Communities. This group has an agreement with HUD to assist areas that received grants for regional sustainability plans. They provide information-sharing and suggestions and help areas to brainstorm on alternatives to move forward and implement strategies in their plans.

Mr. Coulson, EWG, asked if any follow-up was planned for the Community Planning Areas (CPAs). Mr. Young, EWG, said that a final round of meetings had been planned for the 11 CPAs but the schedule did not allow for this to occur. It would be good to bring plan back to these groups and let them know that it is the result of their input.

#### IV Update on Proposed U.S. Environmental Protection Agency Carbon Rule

- Wendy Vit, Missouri Department of Natural Resources
- Mark Leath, Missouri Department of Natural Resources

Ms. Vit, Missouri Department of Natural Resources (MoDNR), said that the Planning Section of the Air Pollution Control Program (APCP) is responsible for pulling together the carbon pollutant plan for the State of Missouri. The U.S. Environmental Protection Agency (USEPA) released their proposed carbon rule on June 18 and is accepting comments until October 16, 2014. The proposed rule is a complex proposal and it is possible that the rule could change. Missouri is actively working with USEPA Region 7 to figure out what this proposal could mean for the state. The State of Missouri has not made any decision and has not taken a position on this proposed rule. This presentation is for information purposes only.

Mr. Leath is serving as the technical lead on this project. He said that on June 18 USEPA published in the Federal Register a proposed rule to control carbon dioxide (CO<sub>2</sub>) emissions from existing electrical generating units (EGUs) at power plants in the U.S. This is part of the President's Climate Action Plan. USEPA was directed to develop CO<sub>2</sub> emission standards, regulations or guidelines, as appropriate, for the following: new power plants (proposed January 2014); modified and reconstructed power plants (proposed June 2014); and existing power plants.

Authorization for USEPA to issue the proposed existing power plant rule comes from Clean Air Act (CAA) Section 111d, Best System of Emission Reduction. USEPA considered the following CAA factors: costs; size of reductions; technology; and feasibility. The rule will establish guidelines for the states to meet new source performance standards and the states will have to develop plans to implement rule and meet the guidelines.

For affected EGUs in each state, the proposed rule sets an interim (2020 - 2029 phase-in period) and final goal (starting in 2030 on) to reduce CO<sub>2</sub> emissions. It will be a rate-based performance level (pounds of CO<sub>2</sub> per megawatt hour [lb CO<sub>2</sub>/MW-h]). USEPA is not prescribing measures for states to implement to meet goals. The state plan has to demonstrate that the strategies contained in its plan can meet the rate-based performance level. The state goals were developed based on a consistent national formula (Four Building Blocks). To calculate each state's goal, these blocks were applied to that state's specific 2012 electricity generation portfolio. The Four Building Blocks are: measures to make coal-fueled plants more efficient; increased use of high efficiency, natural gas

combined cycle (NGCC) plants (re-dispatch from coal, etc. to lower CO<sub>2</sub> emissions, more efficient natural gas); build more renewable energy low/zero emitting power generating facilities; and demand-side energy efficiency programs. To calculate the proposed interim and final goals for each state, the total CO<sub>2</sub> emissions from power plants is divided by the electricity generation in the state. This includes: covered fossil sources; existing and new renewable energy sources; new nuclear and 5.8 percent of existing nuclear generation; and energy efficient accounted for as zero-emitting megawatt hours. The process USEPA used to calculate the proposed goals for Missouri was described. For the 2020-2029 interim period, Missouri has to meet the statewide average rate goal of 1,621 CO<sub>2</sub>/MW-h. Starting in 2030 the final goal for the state of Missouri is 1,544 CO<sub>2</sub>/MW-h. This would be a 27 percent reduction in emissions. The 2012 performance level was estimated to be 1,963 CO<sub>2</sub>/MW-h.

If the Building Blocks are applied as projected by 2030, USEPA estimates that there would be an increase in sources using natural gas, nuclear power, renewable sources to generate electricity and energy efficiency and a decline in the use of coal as fuel for EGUs. USEPA is not proscribing how the states should reach their goals. The states have flexibility in how they reach the final 2030 goal and can use any or all of the Four Building Blocks. In addition, there are other alternative measures that can be considered such as co-fired natural gas at coal EGUs. Either a rate-based or mass-based (meeting a statewide budget cap in tons of CO<sub>2</sub>) form of the goal can be chosen by a state. This option is still under analysis by MoDNR. States can use averaging or trading with both rate- or mass-based approaches. Existing state energy efficiency and renewable energy programs can be recognized. Both the rate-based and mass-based approaches have different considerations. Under the rate-based approach, growth is not limited as long as the goal is met. In addition, measures that reduce EGU emissions can be credited but this requires evaluation, measurement and verification (EMV) which can be administratively complex to perform. Credits/allowances are based on generation each year. EGU compliance has to be determined on an annual basis. With the mass-based approach, growth can be accounted for in the State Implementation Plan (SIP) but the forecast must be accurate. This approach would be administratively straightforward as EMV is not required. As credits/allowances an base on a statewide cap, it is easier for EGU operators to plan for future. EGU compliance would be determined using a three-year average.

Ms. Vit, MoDNR, said that a new state rule will be the regulatory, enforceable component of the Section 111d SIP. It will include all the enforceable, binding requirements on the affected entities. The non-regulatory, non-binding SIP elements demonstrate that it meets USEPA's guidelines and approvability criteria. USEPA intends to promulgate a final rule in June 2015 with SIPs due in June 2016. From proposal to adoption, Missouri rule-making typically takes 18 months or more. MoDNR will need to do some work up-front prior to USEPA finalizing this rule. The proposed rule has some deadline extension opportunities which MoDNR could use. Large part of this effort is focused on energy efficiency and renewable energy programs which are outside of MoDNR's typical purview. MoDNR is working closely with the State Energy Office of the Department of Economic Development and the Missouri Public Service Commission. For more information on this rule should go to <https://dnr.mo.gov/env/apcp/airadvisory/apcpstakeholder.htm>.

Ms. Funk, Metro East Community Project (MECAP), asked if the state will be evaluating co-benefits with criteria pollutants. Ms. Vit, MoDNR, said that the states are not required to do but the proposed rule does present information on this. Perhaps over time could look at this but there is a lot of work to do to meet the plan deadline.

Ms. Lewandowski, EWG, asked how would progress in energy efficiency be tracked. Mr. Leath, MoDNR, said that the process was still under evaluation. EGUs that are regulated through the Public Service Commission already perform EMV to determine amount of energy savings. USEPA seems to be calling for that level of rigor.

Mr. Coulson, EWG, distributed copies of the USEPA press release and a Post-Dispatch article on the July stakeholders meeting. He said that USEPA is holding two-day public hearings this week in Washington, D.C., Atlanta, Pittsburgh and Denver. Mr. Leath, MoDNR, added that each hearing day will last 12 hours and each speaker will have five minutes.

V Update Activities of the States  
- Joe Winkelmann, Missouri Department of Natural Resources

The Illinois Environmental Protection Agency was unable to attend the meeting today.

Mr. Winkelmann, MoDNR, congratulated Ms. Vit and Mr. Leath on their understanding of the contents of the proposed Carbon rule. He pointed out that this proposal had been published on June 18. He introduced Patricia Maliro who is the Air Quality Monitoring Unit Chief. In June, due to quorum issues, the July 31 meeting of the Missouri Air Conservation Commission (MACC) was cancelled and re-scheduled for July 21 in order to adopt two rules. Other agenda items were postponed until the August 28 meeting in Jefferson City. In August, there will be a presentation on the lead compliance plan for a secondary lead smelter in northwest Missouri. In addition, the St. Louis area marginal non-attainment area plan for the 2008 eight-hour ozone standard and the Regional Haze Plan five year update are to be adopted.

At the end of 2013 the Doe Run Company ceased operating the primary lead smelter at their Herculaneum facility in Jefferson County. Operations have been downsized to casting and refining operations. In April 2013 MACC approved a SIP demonstrating attainment. USEPA has published the proposed approval of this SIP in the Federal Register. There are no longer any primary lead smelters in the U.S., only 12 secondary smelters recycling car batteries (two in Missouri). Ore mined in the U.S. is transported to other countries for processing.

Ms. Vit, MoDNR, said that another issue facing the APCP is funding. A primary source of funding is emission tonnage fees. If APCP continues to do its job and emissions decrease, then fees go down. It is projected that the APCP could be insolvent by 2016. Since 2008, emission fees have been capped at \$40 per ton in state statute. Permit processing fee and asbestos registration fees are also set by state statute and have not changed since 1972. In the 2014 session, the Missouri legislature passed SB642 which was signed into law by the Governor. It gives the APCP the opportunity to follow a specified process to adjust fees for permitting work and asbestos as well as emissions. Rule-making has to be completed by the end of 2014 so that the legislature has a full session (in 2015) to review the rule before it can become effective. MoDNR held three stakeholder meetings to discuss the over-arching plan for raising these fees and getting agreement from agriculture and industry. From these meetings a proposal was developed that permit processing and asbestos registration fees be increased. This proposal was presented to the MACC at their July 21 meeting. It is anticipated that at the August meeting the MACC will approve the APCP moving forward to start rule-making.

Ms. Funk, MECAP, asked what would happen if APCP had to dissolve. Ms. Vit, MoDNR, said that Missouri has a delegation agreement with USEPA and has to maintain a core level of activities, like permitting. USEPA could take over these actions. The stakeholders do not want that to happen as they have a good working relationship with MoDNR staff. Mr. Winkelmann, MoDNR, pointed out that when Mr. Walker of REGFORM spoke to the AQAC last year, it appeared that industry was in favor of fee increases in order to keep the level of service they receive from Missouri.

Mr. Coulson, EWG, asked if there has been any movement on appointing people to serve on MACC. Ms. Vit, MoDNR, said that she was not aware of any action to fill empty positions.

## VII Other Business

Mr. Coulson, EWG, pointed out that so far there have been no exceedances of the 2008 eight-hour ozone standard. According to EWG records, this is longest that there has not been an exceedance.

Mr. Henderson, MoDOT, talked about the constitutional amendment for a 0.75 percent sales tax for transportation purposes on the August 5 primary ballot. He said it was the view of the opposition that a sales tax is not the way to fund transportation. In his opinion, this sales tax looks to be the best way in Missouri. The 2014 legislation allowed this sales tax proposal to go to a vote of the people. This approach has been mulled over for a number of years. Attached to the proposed constitutional amendment is a list of 800 projects to be funded across the state over the next ten years. He pointed out that gas tax monies can only be used on road and bridge projects.

Ms. Funk, MECAP, announced that the fourth Metro East Air Quality Forum will be on October 17 at the Caseyville Community Center. Keynote speakers will talk on public health impact of climate change and indoor environmental health assessments for high risk asthma pediatric patients. She also announced that the Illinois Department of Public Health received an asthma grant from the Centers for Disease Control for a environmental health assessment pilot project in St. Clair County. MECAP will assist in this effort.

Mr. Fishman, St. Louis University, announced that on Sunday August 24 there will be a meeting of the Climate Reality Group-St. Louis at the Schafly Bottleworks in Maplewood. At this meeting there will be a brainstorming session on how can St. Louis take a leadership role in informing the public on this issue.

There will be no AQAC meeting in August. The next meeting will be on Tuesday, September 16. It is earlier in the month due to a scheduling conflict. There being no other business the meeting of the Air Quality Advisory Committee was adjourned.

AGENDA  
AIR QUALITY ADVISORY COMMITTEE\*  
**TUESDAY July 29, 2014**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**
  - Michael Coulson, Chair, East-West Gateway Council of Governments
  - A. Minutes of June 24, 2014 Meeting
  
- II. Ecological Approach to Infrastructure Development Initiative**
  - Mary Grace Lewandowski, East-West Gateway Council of Governments
  
- III. OneSTL Update**
  - Aaron Young, East-West Gateway Council of Governments
  
- IV. Update on Proposed U.S. Environmental Protection Agency Carbon Rule**
  - Wendy Vit, Missouri Department of Natural Resources
  - Mark Leath, Missouri Department of Natural Resources
  
- V. American Fuel Group Report**
  - 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 Date September 16, 2014**
  
- VIII. 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.

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, June 24, 2014  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Michael Zlatic - St. Louis County Health Department  
Joe Gray - Illinois Department of Transportation, District 8  
Joe Winkelmann - Missouri Department of Natural Resources  
Jack Fishman - St. Louis University  
Mike Henderson, Missouri Department of Transportation  
Heather Navarro - Missouri Coalition for the Environment  
Susannah Fuchs - American Lung Association  
David Bloomberg - Illinois Environmental Protection Agency (telephone)  
Christopher Schmidt - Illinois Department of Transportation (telephone)

Others Present:

Aaron Beswick - Intern, City of St. Louis Department of Health  
Curtis Jones - Illinois Department of Transportation  
Sara Chappell - Illinois Department of Transportation  
David Shanks - Boeing  
Andy Knott - Sierra Club  
Joseph Wilkins - St. Louis University  
Kevin Jemison - Illinois Department of Transportation, District 8  
Kevin Herdler - St. Louis Regional Clean Cities Program  
Rafael Gonzalez - Madison County Transit/RideFinders (telephone)  
Lenora Fisher - Citizens for Modern Transit (telephone)  
Scott Leopold - Illinois Environmental Protection Agency (telephone)  
Jeff Sprague - Illinois Environmental Protection Agency (telephone)

Staff:

David Wilson                      Peter Koppel                      Carol Lawrence                      Gary Pondrom

- I.        Call to Order  
          - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWG). The minutes of the April 29, 2014 AQAC meeting were approved as circulated. Participants introduced themselves.

- II.       Update on Missouri Proposed Sales Tax  
          - Peter Koppel, East-West Gateway Council of Governments

During the 2013 Missouri legislative session there was a proposal to place a measure to have a one cent sales tax for transportation improvements on the November 2014 ballot. This proposal was filibustered in the Senate and did not move forward. During 2013 the Missouri Department of

Transportation (MoDOT) published a number of documents outlining their future financial situation with growing needs and shrinking revenue. In the Fall of 2013 a group of contractors, engineers and concerned citizens formed Missourians for Safe Transportation and New Jobs and began to explore the collection of signatures on a petition to put a sales tax proposal on the November 2014 ballot. It was to be a one cent sales tax which would be renewable every ten years. Of the funds collected, five percent would go to counties, five percent to cities and the remainder would go to the Missouri Highways and Transportation Commissions/MoDOT. The only guidance given for project selection was that an emphasis be placed on safety. Projects beyond roads and bridges would be eligible, including but not limited to aviation, mass transit, transportation for the elderly and handicapped, railroads, ports and bicycle and pedestrian improvements. This mode inclusiveness was considered to be the biggest selling point because gas tax monies can only be used for transportation projects.

In February 2014, the Missourians for Safe Transportation and New Jobs stopped gathering signatures due to legal challenges. The Missouri Senate and House prepared bills. The ballot language was identical but now it would be a 0.75 percent sales tax and Metropolitan Planning Organizations (MPO) /Regional Planning Commissions were to assist in development and prioritization of the project list. This list is to be attached to the ballot measure so that citizens would know what they are voting for. A bill was passed. When the Governor signed the bill, he placed on the August 5, 2014 primary ballot instead of the November 2014 ballot. This action has compressed the schedule.

If the sales tax passes, it is estimated to generate \$5.4 billion statewide over the next ten years. Over this time, cities would receive \$270 million, counties \$270 millions and MoDOT would receive \$4.8 billion. MoDOT has already announced that \$500 million would be dedicated to I-70 between Kansas City and St. Louis areas. Over ten years, the St. Louis area is estimated to receive \$1.5 billion.

As the MPO, EWG was tasked with identifying candidate projects from various modes of transportation and assisting in prioritizing them. Staff examined MoDOT's long range transportation plan, the regional bike/pedestrian plan, Metro's long range plan, EWG's RTP update work and EWG's freight study. EWG worked with its transportation partners on performance measures and scoring criteria. EWG hosted a series of stakeholder meetings at which the first cut of projects and evaluation criteria were presented. Potential projects then were evaluated and scored in-house. The project list was presented to the stakeholder groups a second time to obtain feedback and buy-in for the process. The results of EWG's work was provided to each county and they were asked to identify their priorities. MoDOT is to receive this information shortly and made a final recommendation to the Highways and Transportation Commission in early July.

There are other ways to fund transportation projects. Gas tax funds are only available for transportation projects. To change that, the Missouri Constitution would have to be amended. Missouri does allow tolls to be placed on existing facilities. Another option would be a vehicle miles traveled (VMT) fee where distance driven is tracked and individual would pay according to how much they use transportation system. But there are privacy concerns with a VMT fee and it is difficult to implement. Observed that there is very little appetite for any of these options.

Mr. Knott, Sierra Club, asked how transit projects fared. Mr. Koppel, EWG, said that in the City

of St. Louis, transit did quite well. Mr. Henderson, MoDOT, said that statewide there were a number of OATS public transportation projects. He added that the project list can be found on the MoDOT Moving Forward section of their web site and that with a sales tax other modes of transportation could be funded.

Mr. Koppel, EWG, announced that as part of our long range transportation planning effort, EWG and the Missouri History Museum are hosting a speaker series/regional conversation about the past, present and future of transportation in the St. Louis region.

### III. Effect of Distant Meteorology/Event on Local Air Quality Measurements during August 2013

- Jack Fishman, Ph.D., St. Louis University
- Joseph Wilkins, St. Louis University

Dr. Fishman, St. Louis University (SLU), said that the National Aeronautics and Space Administration (NASA) had planned to conduct in 2013 Studies of Emission and Atmospheric Composition, Clouds and Climate Coupling by Regional Surveys (SEAC4Rs) project in southeast Asia. Because of anticipated political problems with various southeast Asian governments, it was decided to move this project. SEAC4Rs took place in the U.S. last year and used both satellite and aircraft to collect information. NASA was interested in how chemicals and cloud formation interact with climate. Another NASA program focused on air quality already had a 2013 mission planned for the Texas region. To support both these projects, the SouthEast American Consortium for Intensive Ozonesonde Network (SEACIONS) was set up. St. Louis University and six other sites launched ozonesondes (weather balloon with equipment package) to provide a synoptic 3-D picture of what the atmosphere looked like on mission days. St. Louis was the northermost site. A lot of good science has come out of this effort. Mr. Wilkins assisted with the University's efforts.

Mr. Wilkins, SLU, said that SEACIONS was a strategic approach to determine how pollutants from different sources can travel in the troposphere across the country and affect air quality in the St. Louis region and beyond. A total of 31 ozonesondes were launched from each of the seven different locations in the southeast U.S. during August and September. Objective was to identify how ozone was affecting different meteorological parameters. The launches were designed to supplement/verify information gathered from satellite overpasses and aircraft flights. Before each launch date, there was a three to five day preparation period where the equipment and the parachute were tested and then the equipment was placed in a styrofoam container (with a return label) attached to the weather balloon. Launch day weather and estimated ozonesonde trajectory would be reviewed. On each launch day, the nine foot diameter weather balloon would be filled with helium. Ozone readings from the equipment would be validated against information from the nearby Forest Park ozone garden. The ozonesonde launch would then take place. As result of extensive outreach, 23 of the 31 instrument packets were recovered and returned to SLU.

Research conducted by Dr. Fishman indicates that in the past 32 years background ozone concentration has risen eight to ten parts per billion (ppb). Also, plants begin to show symptoms at ozone levels of 40 ppb or greater.

With ozonesondes, question was: can we capture what is being transported across the U.S. For Case August 30, 2013, two ozone plumes were observed in the St. Louis area. None of the smoke was

from the St. Louis area or the central U.S. Additional analysis was performed to determine source and what processes were the cause of these plumes. Satellite imagery from NASA's hazard mapping system smoke and fire product and other instruments indicated that potential sources of ozone included pollution from wildfires in California and Idaho and previous pollution from agricultural fires in Kansas and Mississippi/Louisiana. Forest fire(s) in California burned from the middle of August to the end of October. There were also forest fires in Idaho. The Hysplit transportation model was used to determine the origin of the two plumes aloft. Fire were estimated to originate in the far west and central plains. Another source of ozone could be and subsidence of stratospheric air due to a blocking high pressure system in the Four Corners area. Wanted to see if similar readings occurred at other ozonesonde launch sites. Data from Huntsville, AL and Idabel OK sites also contained similar plumes.

Meteorological systems can bring air up and also down (subsidence) from stratosphere. Temperature and other parameters like relative humidity can be plotted to determine where air masses are moving. If there is a folding of the troposphere, allowing stratospheric air to move in. Found that there were four to five days where stratospheric air did come into the troposphere and mix.

In conclusion, between August 8, 2013 and September 23, 2013, 31 ozonesondes were launched to support NASA's SEACIONS/SEAC4RS missions. Before each balloon launch, ozonesonde measurements were verified with ozone readings from the Forest Park ozone garden. Air quality features effecting the St. Louis area could also been seen at other cities, depending on the wind patterns. Preliminary analysis of data shows that enhance ozone levels over the St. Louis area at the end of August 2013 can be traced back to stratospheric air intrusions (into the troposphere) from the Great Plains, cross country transport of smoke from wildfires out west and local biomass burning from prescribed/agricultural fires to the west and south of the area.

#### IV. St. Louis Regional Clean Air Partnership Activities - Susannah Fuchs, American Lung Association

For the 2014 ozone season, the St. Louis Regional Clean Air Partnership (SLRCAP) is doing more media outreach with their media partner, KMOV. Have added social media (tweets, Facebook alerts) to each day's air quality forecast. SLRCAP is working to increase outreach on "No Idle" zones to schools and trying to expand effort into places like grocery store parking lots. Continue to try to identify different approaches can use with municipalities and schools. Some changes have been made to the SLRCAP website. Issues/actions that American Lung Association (ALA) wants USEPA to do, ALA will push through social media. Ms. Fuchs, ALA, said that she is going to attend meeting with ALA staffers from ten states to the north and east of Missouri. Group works a lot with alternative fuels like ethanol. Look for new, innovative ways to do things related to reducing air pollution and improve public health in metropolitan areas. In the next week or so the ALA Plains/Gulf region is dissolving and Missouri ALA will be joining with these ten upper Midwest states.

Ms. Fuchs, ALA, asked for input on a personal air quality pet peeve. There have been a number of events (even green events) that normally she would attend to do public education on behalf of SLRCAP/ALA but she has not due to food trucks either idling and/or using portable generators. Mr. Tilley, St. Charles County, said that in St. Charles County, food trucks are regulated through

his division. The focus is on food safety but idling/generators could be a topic of discussion. He added that usually prior to an event with food trucks there is a vendor meeting which could be a opportunity for discussion. Try to get voluntary action. Mr. Herdler, St. Louis Regional Clean Cities Program (SLRCCP), suggested organizing a food truck event to show them alternative fuel options and costs and benefits. He added that bucket trucks and police cars now have power packs which can run for several hours. Mr. Herdler and Ms Fuchs agreed to coordinate.

V. American Fuel Group Report  
- Kevin Herdler, St. Louis Region Clean Cities Program

The St. Louis Regional Clean Cities program (SLCC) along with Kansas, Iowa and Nebraska received a grant from the U.S. Department of Energy (DOE) for an Alternative Fuel Implementation project. The group is currently reviewing proposals for a green fuel program. At the end of July there will be a two-day workshop in Kansas City on local, state and national safety codes for alternative fuels projects. Consultant has completed a report on methodology to use MOVES to evaluate the air quality impact/emission reduction of alternative fuel vehicles. Once the report is approved, the consultant will conduct a webinar.

In May the MotorWeek television show filmed two segments here. The first was about AT&T putting their 8,000<sup>th</sup> CNG vehicle on the road. The second segment was on the biodiesel program at the Rockwood Summit High School.

The Propane/Natural Gas Fuel Conversion Solution business recently opened in St. Louis. The Waste Management compressed natural gas (CNG) refueling station on Hall Street in the City of St. Louis began operating this month. Waste Management is switching all their vehicles to natural gas as have of a number of waste haulers. At the airport, some of the privately-owned companies with shuttle buses are switching their fleets to natural gas. MoDOT is going to let the Parkway School District keep green railings (alternative fuel indicator) on their new CNG school buses.

Ms. Fuchs, ALA, suggested that SLRCAR and SLRCC work together to do a media pitch focused on companies with airport-related shuttle service that use CNG to encourage people to use these companies.

VI. Update Activities of the States  
- David Bloomberg, Illinois Environmental Protection Agency  
- Joe Winkelmann, Missouri Department of Natural Resources

Illinois Environmental Protection Agency (Illinois EPA) is reviewing USEPA's recently proposed CAA Section 111D greenhouse gas rule for power plants and identifying potential actions. The proposal was published in the Federal Register last week. Mr. Winkelmann, MoDNR, said that the comment period ends in October. Mr. Bloomberg, Illinois EPA, said that he has heard that USEPA anticipates 1 - 2 million comments. Due to short timeframe, most states are starting to move ahead. Mr. Coulson, EWG, asked if with the proposed carbon rule a process has been set up for outreach. Mr. Bloomberg, Illinois EPA, said that Illinois is establishing a process. He added that in addition to environmental agency this rule will involve a number of state agencies. There will be multiple agencies doing multiple things, including outreach, hopefully culminating in a state plan. Legislation will need to be passed. Anticipate there will be legal challenges to rule. State is

proceeding with assumption that Plan will be due in June 2017.

Illinois has submitted its final lead rule to USEPA Region 5 and an update to a previous State Implementation Plan (SIP) submittal. Mayco Industries in Granite City has been issued a construction permit to install controls so they can comply with the lead rule. USEPA approval is anticipated.

Illinois EPA continues to work on sulfur dioxide (SO<sub>2</sub>) rules/plans for the Phase 1 non-attainment areas in the state, none of which are in the Metro East. Future SO<sub>2</sub> non-attainment designation rounds may affect the Metro East.

Mr. Winkelmann, MoDNR, announced that the Missouri Air Conservation Commission (MACC) is not meeting in June. The July 30 meeting in Jefferson City has been cancelled due to a lack of a quorum. There will be a meeting on July 21 in Jefferson City to adopt the revision to 10 CSR10-5.220, Control of Petroleum Liquid Storage and Transfer rule, removing requirement for Stage II vapor recovery controls at gas dispensing stations in the St. Louis ozone non-attainment area and the 10 CSR 10-6.040 Reference Methods rule. The Marginal Plan for the Missouri portion of the St. Louis non-attainment area and Regional Haze Plan five year progress report will be approved at the August MACC meeting.

On June 26 in Jefferson City there will be a stakeholders (community, regulated industries, others) meeting on the SO<sub>2</sub> national ambient air quality standard. MoDNR will take comments on how the state will be addressing this standard. A new SO<sub>2</sub> standard rule amendment, 10 CSR 10-6.261, is expected to be posted later this year.

Earlier this month USEPA proposed a Clean Power Plan rule under section 111D of the Clean Air Act to reduce CO<sub>2</sub> emissions from existing power plants. Missouri is reviewing the proposal and may submit comments. There will be a stakeholders meeting on July 14 in Jefferson City. USEPA Region 7 will present an overview of the proposed rule and MoDNR staff will discuss the rule-making process.

The final stakeholders meeting on the Air Pollution Control Program fee structure was held June 16. The group recommended that the focus be on increasing fees for permit processing and asbestos registration and to have a two year time frame instead of ten years. No change to emission tonnage fee was recommended. MoDNR has to have a draft fee rule prepared by the end of 2014 so the Missouri legislature can consider it during their 2015 session. Anticipate that there will continue to be stakeholder meetings on this topic.

## VII. Other Business

The next AQAC meeting was scheduled for July 29, 2014. There being no other business the meeting of the Air Quality Advisory Committee was adjourned.

AGENDA  
AIR QUALITY ADVISORY COMMITTEE\*  
**TUESDAY June 24, 2014**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**
  - Michael Coulson, Chair, East-West Gateway Council of Governments
  - A. Minutes of May 27, 2014 Meeting
  
- II. Update on Missouri Proposed Transportation Sales Tax**
  - Peter Koeppel, East-West Gateway Council of Governments
  
- III. Effect of Distant Meteorology/Event on Local Air Quality Measurements during August 2013**
  - Jack Fishman, Ph.D., St. Louis University
  - Joseph Wilkins, St. Louis University
  
- IV. St. Louis Regional Clean Air Partnership Activities**
  - Susannah Fuchs, American Lung Association
  
- V. American Fuel Group Report**
  - St. Louis Regional Clean Cities Program
  
- VI. Update Activities of the States**
  - Illinois Environmental Protection Agency
  - Missouri Department of Natural Resources
  
- VII. Other Business - Next Meeting Date July 29, 2014**
  
- VIII. 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.

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, May 27, 2014  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Michael Zlatic - St. Louis County Health Department  
David Bloomberg - Illinois Environmental Protection Agency  
Joe Gray - Illinois Department of Transportation, District 8  
Christopher Schmidt - Illinois Department of Transportation  
Joe Winkelmann - Missouri Department of Natural Resources  
Jack Fishman - St. Louis University  
Jeanine Arrighi - City of St. Louis Department of Health  
Betsy Tracy - Federal Highway Administration, Illinois Division (telephone)

Others Present:

Aaron Beswick - Intern, City of St. Louis Department of Health  
John Hickey - Sierra Club  
Amy Funk - Metro East Community Air Project  
Rebecca Gernes - Washington University  
Curtis Jones - Illinois Department of Transportation  
Sara Chappell - Illinois Department of Transportation  
Lenora Fisher - Citizens for Modern Transit  
David Shanks - Boeing  
Andy Knott - Sierra Club (telephone)  
Rafael Gonzalez - Madison County Transit/RideFinders (telephone)  
Amy Bhesania - U.S. Environmental Protection Agency Region 7 (telephone)

Staff:

David Wilson                      John Posey                      Carol Lawrence                      Gary Pondrom

- I.        Call to Order  
          - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWG). The minutes of the April 29, 2014 AQAC meeting were approved and posted on EWG website. Mr. Coulson reported that Ms. Fuchs, American Lung Association, and Mr. Herdler, St. Louis Regional Clean Cities Program, were unable to attend and their presentations will be rescheduled.

- II.       National Climate Assessment: Climate Change Impacts in the United States  
          - John Posey, Ph.D., East-West Gateway Council of Governments

The Global Change Research Act of 1990 requires the President to submit every four years an assessment of how climate change is affecting key sectors in the country. Work on the third National Climate Assessment began in 2011. It was released earlier this year. The process was overseen by

a 60 person federal advisory committee whose members were appointed by the Secretary of the Department of Commerce. Their term of the committee ends 90 days after the National Climate Assessment is released. Dr. Posey was one of 44 voting members and there were 16 ex-officio representatives from federal departments. The effort was staffed by the U.S. Global Change Research Program coordinated out of the White House and received major support from the National Climate Data Center. The federal advisory committee defined a National Climate Assessment outline of 30 chapters analyzing climate change impacts on a variety of different sectors (agriculture, transportation, etc.) and ten geographic regions. Each chapter had eight authors and some of the authors solicited additional contributors. Dr. Posey worked on the transportation chapter and assisted in the preparation of a report on Climate Change in the Midwest. In all there were 300 authors involved. The Global Change Research Program assembled teams of researchers to put together technical inputs on the sectors and regions. There was an extensive public involvement process with listening sessions held around the country and requests for information and technical reports. The federal advisory committee tried to create a process which would allow for sustained assessment so that information could be assembled and reports produced on an interim basis. That way the next federal advisory committee will have a research starting point.

One top line message from the Assessment is that human-induced climate change has moved firmly into the present, not just a problem for the future anymore. The first chapter of the Assessment presents the science and explains how we know what we know and association between carbon dioxide (CO<sub>2</sub>) and global temperature. For example, the 1980s was the warmest decade on record. However, every year in the 1990s was warmer than the 1980s average temperature. In the 2001-2012 period every year was warmer than the 1990s average temperature. Change is really here in the present.

Another top line message is that Americans are already feeling the effects of increases in some types of extreme weather and sea level rise. A series of maps and graphs were developed to illustrate this point. The average temperature change in the U.S. was compared between periods 1901-1960 and 1991-2012. For St. Louis, found that on average the average temperature has risen ½ to 1° F. In the north and west, temperature increases were more exaggerated. Precipitation patterns in the U.S. are also changing. St. Louis is wetter than it used to be. What might be of concern is that areas upstream of St. Louis are quite a bit wetter and could contribute to increase downstream flooding risk. For St. Louis, there is projected to be an increase in episodes of very heavy precipitation (one inch or more) which suggests increase risk of flash flooding.

Impacts are projected to increase. About ten years ago, different greenhouse gas emissions scenarios were modeled in a report prepared by IPCC. In pre-industrial times, the concentration of CO<sub>2</sub> was 280 parts per million (ppm). The A2 scenario, assuming continued increase in greenhouse gas emissions, projects that by the end of century CO<sub>2</sub> concentration would be 850 ppm. The B1 scenario is more optimistic with much more aggressive reductions and projected that CO<sub>2</sub> concentration would be 550-600 ppm. These emission scenarios have been used around the world to model climate impact estimates. In 2013, the concentration was 400 ppm and for all of April 2014 the concentration was over the 400 ppm threshold. We are pretty much locked into increased temperature change and can expect additional warming. After the update began, the study team had access to model using updated emissions information from Representative Concentration Pathway (RCP) scenarios analysis. There are similar findings which indicate warming temperatures are likely to occur no matter what scenario is considered. Global climate model output can be downscaled to

regional level. For example, can project precipitation change by season for the U.S. Under A2, precipitation north of St. Louis region is projected to increase during winter and spring. For summer, direction in change is less robust among the different models.

Another top line message is that impacts are already widespread. Many parts of the country are seeing increase in severity of flooding. Water supply stress, particularly in the west and southwest, is increasing. On balance, some crop yields are down due to higher temperatures. But some crops are doing better because of the longer growing season and because CO<sub>2</sub> is good for some crops but overall it is still a net negative. Locations of certain fish species habitats in the Atlantic Ocean are shifting northward.

An additional top line message is that there are many actions we can take to reduce future climate change and its impacts, reduce our vulnerability to its impacts and prepare for the impacts we cannot avoid. The Assessment contains chapters on mitigation and on adaptation. Mitigation actions reduce emissions of greenhouse gases including alternative energy sources like solar panels as well as preserving carbon sinks by planting more trees and preserving the rainforest. The assessment points out that “Carbon monoxide is removed from the atmosphere by natural processes at a rate that is roughly half of the current rate of emissions from human activities. Therefore, mitigation efforts that only stabilize global emissions will on reduce atmospheric concentration of CO<sub>2</sub> only limit their rate of increase.” We are locked into climate change regardless, so we’re going to have to figure out how to reduce future emissions and adapt to new conditions. Examples of adaptation include elevating structures in coastal areas, designing for increased stormwater flow and low impact development approaches like green roofs.

A key message from the human health chapter is that there are wide-ranging health impacts associated with climate change. Climate change threatens human health and well-being in many ways, including impacts from increased extreme weather events, wildfire, decreased air quality, threats to mental health, and illnesses transmitted by food, water and disease carriers such as mosquitos and ticks. Some of these health impacts are already underway in the U.S. For example, climate change with warmer summer temperatures is projected to worsen asthma. Pollen season will lengthen.

The full 1,400 page report, highlights and a 20 page overview are available online at the National Climate Assessment website at [www.globalchange.gov](http://www.globalchange.gov). Report contains links to data and sources used.

In the St. Louis region it is getting somewhat warmer and wetter. Projections call for that to continue. If there are wetter winters and springs, suggests increase in flooding risk on major rivers. More heavy precipitation events suggest more flash flooding events and ponding. Hard to get data on flash flood events. Looked at MoDOT’s 2013 road conditions twitter feed and found there were 28 separate occasions where roads were covered due to heavy rains. For St. Louis region, levees are important. They are being updated now because of current conditions but are also important for the future. Want to highlight importance of green infrastructure to keep precipitation where it falls instead of running off to a stream or storm sewer system. Instead of predict and plan model need to move to mind set of looking at a wide range of robust options. Actions that will pay off regardless where future conditions fall. Green infrastructure will start paying off now and will continue into the future. Twenty years ago or so there was a lot of distance between the mitigation

and adaptation camps. We have reached point now that everyone has realized both approaches are necessary. Locked into changing conditions regardless what do, some adaptation is essential.

Mr. Hickey, Sierra Club, said that this past session the Missouri House voted 135 to 18 for stopping proposed USEPA greenhouse gas rule for power plants. Has any strategy been prepared to get this information to the Missouri House. Mr. Posey, EWG, said that the National Climate Assessment is being delivered to every member of Congress and the Obama administration has identified a number of outreach methods. President Obama wants to use the findings as basis for future decision-making at the federal level.

Mr. Coulson, EWG, asked if there are there natural bio-feedback systems or just man-made ones. Mr. Posey, EWG, replied that conserving and preserving rainforests and old growth forests is important as they are a significant carbon sink as are oceans. Oceans and forests remove CO<sub>2</sub> but not fast enough. Mr. Wilson, EWG, said that a program like Forest Re-Leaf is an example of an action an area could take. It is a non-profit which has set a goal to increase tree cover and canopy in the City of St. Louis and St. Louis County which in turn reduce the heat island effect and improve carbon uptake. Mr. Posey, EWG, agreed and said that this is an example of co-benefits. He added that the transportation chapter contains a discussion on street trees.

- III. Place, Pollution and Asthma: Environmental and Social Predictors of Asthma Hospitalization in the St. Louis Area
- Amy Funk, Metro East Community Air Project
  - Rebecca Gernes, Washington University

Ms. Funk, Metro East Community Air Project (MECAP), distributed copies of the MECAP 2013 Annual Report. She announced that the fourth annual Metro East Air Quality and Health Forum is scheduled for October 17, 2014. One keynote speaker will be Elena Grossman of University of Illinois Chicago who will speak on the BRACE-IL Project. It is a CDC funded project to establish framework for cities and state in developing climate action/adaption plan with specific focus on public health entities such as county health departments. The other keynote speaker will be Dr. Kramer who will talk on indoor environmental health assessments for high risk asthma pediatric patients and potential health outcomes.

Ms. Funk said that Ms. Gernes is a recent graduate of Washington University with dual degrees in public health and social work. She recently was selected for a fellowship with USEPA. Ms. Gernes was one of eight selected to participate in USEPA's national Toxic Release Inventory (TRI) University Challenge. Ms. Gernes examined various environmental and socio-economic predictors and hospital asthma admission rates in the St. Louis region. Ms. Funk, MECAP, said that it took a lot of effort to get asthma hospital admission rates. When Illinois Department of Public Health analyzes hospital data, just look at Illinois hospitals, IDPH does not look at Missouri (St. Louis) hospital admissions for Illinois (Metro East) residents. Regional data could be used in applications to demonstrate need for funding various research programs.

Ms. Gernes, Washington University, said that there is a high asthma risk in St. Louis. Asthma is a complex disease with environmental and socio-economic components which differ across the region. The purpose of this project was to identify potential patterns in regional asthma hospitalization and toxic releases from stationary sources for the eight-county St. Louis region (MO-IL). Data was

broken down by ZIP code. Potential areas of high risk based on environmental and social indicators would be delineated.

To the extent possible, TRI data from USEPA would be integrated with locally relevant, publicly available data. TRI is a national database containing information on toxic chemical releases by industries (stationary or point sources). For this study, 2010 TRI data was used and only chemicals with respiratory health effects were examined. To build a contextual picture of the point sources in the study area and to identify trends, 2010 TRI data was compared to data from the 2005 National Air Toxics Assessment (NATA) and compared to 2005 TRI information. Socio-economic data came from American Community Survey of the U.S. Census Bureau. Asthma hospitalization data by ZIP code was obtained from IDPH and the Missouri Department of Health and Senior Services. Spatial cluster analysis was performed using ARC-GIS. Statistical analysis of significance was also conducted.

Analysis showed that there is a higher rate of hospitalization for asthma in the urban core of the region (City of St. Louis, north St. Louis County, southwest Madison County and northwest St. Clair County). The St. Louis regional mean was 11 admissions per 1,000 people but in the urban core the admission rate was three to four times greater (statistically significant). The highest asthma rates were found in north St. Louis and in St. Clair County. Statistical analysis was performed comparing admission rates in the cluster and regionally to socio-economic indicators, proximity to air releases and proximity to interstates. The strongest predictors of asthma hospitalization was percent African American (49 percent in urban cluster) by ZIP code and percent under the federal poverty level. Majority of the facilities with the highest releases reported to TRI are located in Missouri and there are four facilities in Illinois. ZIP codes inside the cluster are closer on average to TRI facilities and highways, but these facilities have lower average TRI air releases. This is a useful finding because even though the urban cluster is close to a lot of TRI facilities, the heaviest polluters are located outside of the urban core. Close proximity to roadway had an impact but it was not one of the primary indicators like race and poverty.

The 2005 NATA report contains estimates by region of the contribution to cancer risk and respiratory health risk from air toxics from point, area and mobile sources as well as secondary sources/formation. Secondary formation refers to process by which hazardous air pollutants are transformed in the air into other chemicals. Mobile sources include on-road vehicles, planes, trains and off-road vehicles including agricultural equipment. According to NATA in St. Louis region mobile sources were estimated to make up 49 percent of the estimated respiratory risk and secondary sources 48 percent while point sources contribute only two percent. TRI represents one sliver of information about air pollution. When 2005 and 2010 TRI data was compared, found that since 2005 total air chemical releases in St. Louis region decreased by 42 percent. Mr. Bloomberg, Illinois Environmental Protection Agency (Illinois EPA), observed that mobile sources create ozone through chemical reaction and the overlap between emissions from mobile and secondary formation could be huge.

Mr. Hickey, Sierra Club, asked if sulfur dioxide (SO<sub>2</sub>) is a major driver for respiratory illnesses, precipitating out PM<sub>2.5</sub>. Ms. Funk, MECAP, pointed out that Ms. Gernes' s research project did not address criteria pollutants. USEPA's TRI University Challenge focused on TRI as a resource tool. Air toxics are not monitored unless a special study is in place. TRI contains information on emissions and not data from monitors.

Mr. Hickey, Sierra Club, asked if it would be fair to say that the criteria pollutants might be bigger drivers of asthma than chemicals measured through TRI. Mr. Winkelmann, Missouri Department of Natural Resources (MoDNR), said that from a historical perspective, asthma rates have gone up over the years as ambient ozone levels have gone down. Continuing research is needed on a variety of public health issues relating to asthma. This study shows that proximity to facility is a driving factor more than the amount of air toxics released which is what would be expected. Criteria pollutants have a regional impact and not localized. Burden of regulating criteria pollutants is at the state level. If monitor goes over standard, the state has to prepare a plan. Lead is the only criteria pollutant which is also a hazardous air pollutant. Lead no longer a regional pollutant since it was removed from gasoline. Now it is more typified as a pollutant associated with stationary sources regulated by the state. Ms. Funk, MECAP, noted that USEPA has begun to focus a lot more on indoor air pollution as people spend 90 percent of their time indoors. Indoor environment, poverty and housing stock condition have impacts as related to people with respiratory disease.

Ms. Gernes, Washington University, said observations to be drawn from her study include, education and prevention efforts should be focused on areas with high social risks for asthma. Additional research on mobile sources and secondary source formation is needed. TRI data should continue to be used but in proper context. TRI has a new requirement that facilities have to report their pollution prevention efforts, changing from a release to a managed waste. We could consider publicizing this information.

Mr. Wilson, EWG, asked if it would be possible to get records of doctor office visits as people with means may seek treatment before going to emergency room/hospitalization. Ms. Gernes, Washington University, said that hospital admissions are the only thing measured consistently.

#### IV. Update Activities of the States

- Joe Winkelmann, Missouri Department of Natural Resources
- David Bloomberg, Illinois Environmental Protection Agency

This session the Missouri legislature passed a bill allowing the Air Pollution Control Program (APCP) of MoDNR to set up a process to increase fees for permitting work and asbestos. Rule-making has to be completed by the end of 2014 because the bill requires that the legislature have a full session (in 2015) to review the rule before it can become effective. MoDNR has held a series of stakeholder meetings to discuss the over-arching plan for raising these fees and getting agreement from agriculture and industry. The last meeting is scheduled for June 16.

The Missouri Air Conservation Commission (MACC) will meet on May 29 at the MoDNR St. Louis Regional Office in south St. Louis County. There will be public hearings on: revision to 10 CSR10-5.220, Control of Petroleum Liquid Storage and Transfer, removing requirement for Stage II vapor recovery controls at gas dispensing stations in the St. Louis ozone non-attainment area; Regional Haze Plan five year progress report; on proposal for the Marginal Plan for the Missouri portion of the St. Louis non-attainment area for the 2008 ozone standard; 10 CSR 10-6.040, Reference Methods, amending it to update the incorporation by reference date to include the latest Federal Register notices concerning ambient air monitoring methods (stack testing and chemical sampling methods for air processes). The Marginal Plan establishes a baseline emissions inventory which can be used if future modeling efforts are needed. The next meeting will be July 30 in

Jefferson City. The items up for public hearing this month may be up for adoption by the MACC.

Mr. Coulson, EWG, asked if the 2014 fee process would solve the funding problem. Mr. Winkelmann, MoDNR, said that analysis and discussion are still underway on what the increase will be. The emission fee going from \$40 to \$70 a ton covers the APCP for ten years. When add to proposed fee increases for permit work and asbestos (a lot of work being done by APCP), could be adequate.

Mr. Bloomberg, Illinois EPA, reported that the Sierra Club sued USEPA over the SO<sub>2</sub> designation process. Sierra Club's position was that USEPA had no right to do designations in phases. To resolve this suit, USEPA has prepared a proposal with four phases of designations with an early phase focusing on power plants of a certain size. This proposal has been submitted to the Court and released for comment. The proposal with comments received will be submitted to the Court. The Court will decide if USEPA can go ahead with this proposal. In Illinois, there could be 12 areas where will have to look at modeling or monitoring. Appears that about half would be hit with the proposed approach and Illinois EPA would have to look at them starting in 2015.

Mr. Winkelmann, MoDNR, said that the draft federal Data Reporting Requirement rule is still out for comment. Mr. Bloomberg, Illinois EPA, added that USEPA has identified three options. With USEPA's preferred option, would first look in areas like St. Louis and Chicago at any sources with 1,000 tons per year of SO<sub>2</sub> emissions. Outside such areas, would look at sources with 2,000 tons per year of SO<sub>2</sub> emissions. He observed that USEPA Headquarters is intensely focused on single source non-attainment areas and that they do not seem to grasp the idea that there could be multiple sources contributing to a particular non-attainment area. Will either have to do modeling or install monitors. The monitors that are in place now generally are not properly placed to determine attainment/non-attainment of these specific sources. It will be up to the sources to decide if they want to pay for monitors. Prior to release of proposed Data Reporting Requirement rule, it appeared that a facility could have monitors to collect data for three years. USEPA says monitors will stay in place until certain lower level is reached. A company may not be as eager to invest in monitoring if they do not know when that investment will end. Many of these companies are already having consultants do modeling and are probably conducting a cost/benefit analysis. Mr. Zlatic, St. Louis County, asked if source uses the monitoring approach, would that extend designation time frame and is it possible a company would use this approach to gain extra time. Mr. Bloomberg, Illinois EPA, said that designation recommendations using modeling data are due 2017 and recommendations using monitoring are due in 2020.

## VII. Other Business

The next meeting of the AQAC was scheduled for June 24, 2014. There being no other business, the meeting of the Air Quality Advisory Committee was adjourned.

AGENDA  
AIR QUALITY ADVISORY COMMITTEE\*  
**TUESDAY May 27, 2014**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**
  - Michael Coulson, Chair, East-West Gateway Council of Governments
  - A. Minutes of April 29, 2014 Meeting
  
- II. National Climate Assessment: Climate Change Impacts in the United States**
  - John Posey, Ph.D., East-West Gateway Council of Governments
  
- III. Place, Pollution and Asthma: Environmental and Social Predictors of Asthma Hospitalization in the St. Louis Area**
  - Amy Funk, Metro East Community Air Project
  - Rebecca Gernes, Washington University
  
- IV. St. Louis Regional Clean Air Partnership Activities**
  - Susannah Fuchs, American Lung Association
  
- V. American Fuel Group Report**
  - 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 Date June 24, 2014**
  
- VIII. 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.

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, April 29, 2014  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Mike Henderson - Missouri Department of Transportation  
Michael Zlatic - St. Louis County Health Department  
David Bloomberg - Illinois Environmental Protection Agency  
Joe Gray - Illinois Department of Transportation, District 8  
Christopher Schmidt - Illinois Department of Transportation  
Joe Winkelmann - Missouri Department of Natural Resources  
Jack Fishman - St. Louis University  
Jeanine Arrighi - City of St. Louis Department of Health  
Betsy Tracy - Federal Highway Administration, Illinois Division

Others Present:

Stephen Hall - Missouri Department of Natural Resources  
Kevin Herdler - St. Louis Regional Clean Cities  
Andy Knott - Sierra Club  
Amy Funk - Metro East Community Air Project  
Rafael Gonzalez - Madison County Transit/RideFinders  
Rebecca Gernes - Washington University  
Curtis Jones - Illinois Department of Transportation  
Sara Chappell - Illinois Department of Transportation

Staff:

Lubna Shoab                      Carol Lawrence

- I.        Call to Order  
          - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWG). There is a spelling correction to the March minutes in that the name of the Waste Management landfill near Granite City is Milam not Milan. With this revision, the minutes of the March 25, 2014 AQAC meeting were approved and posted on EWG website.

- II.        East-West Gateway Travel Demand Modeling and On-Board Transit Survey  
          - Lubna Shoab, East-West Gateway Council of Governments

Modeling is a mathematical representation of a system or a concept. It can be used to forecast weather or travel times and vehicle miles traveled (VMT). Travel Demand Modeling (TDM) is a mathematical representation of how, where, when and why people travel. TDM can be performed at the micro scale (intersection) to a macro level (regional) with links or corridor studies in-between.

Information flows back and forth between these different levels or scales.

The TDM can be thought of as a multi-dimensional tool consisting of: land use and demographic information (which creates the demand for travel); travel demand measures and policy measures part of long range transportation plan which influence travel; and highway and public transit network showing what options people have to make trips. The TDM is used to test out different combinations of scenarios and see what the impact on travel (speeds or travel time) is. With scenario evaluation can study the effects of various combinations of actions and data and come up with “best” solution. TDM output is used in the decision-making process for developing the long range transportation plan.

Input to and output of the TDM is used in the MOTO Vehicle Emissions Simulation (MOVES) model to forecast emissions. MOVES is the USEPA approved mobile source emissions model for use in the regional emissions analysis portion of transportation air quality conformity determinations. Conformity is performed to make sure that transportation investments in the future do not negatively impact air quality. Important inputs for MOVES include: vehicle age distribution; vehicle population; VMT; road type distribution (which roads carry how much traffic); and average speed distribution of the vehicle population. MOVES can be run in either the Inventory Mode or the Emissions Rate Mode. In the Inventory Mode, TDM input and assumptions and traffic projections are input into MOVES. MOVES generates total emissions estimates for the model domain. The disadvantage is that MOVES has to be run every time the TDM is modified. In the Emissions Rate Mode, the MOVES model is run using the best possible inputs and assumptions to generate an emissions rate look-up table stratified by pollutant by speed bins, vehicle type, roadway facility type, time of day, month and year. These emission rates are then applied to the VMT projections from the TDM with the same stratification order. With the Emissions Rate Mode, MOVES needs to be run once and the emission rates are set. If there are changes to the transportation network (VMT, speed distribution, road type) , then only the TDM model needs to be run, cutting down on computer run time. The majority of metropolitan planning organizations are using this approach.

Mr. Coulson, EWG, asked what the computer run time was for one analysis year. Ms. Shoaib, EWG, said that if there are no problems, it will take around 20 hours for the TDM and now, with dedicated servers, about six hours for MOVES. Before, a MOVES run would require 12 - 15 hours.

Mr. Coulson, EWG, asked about VMT growth rate. Ms. Shoaib, EWG, said that historically VMT had been increasing but since 2006-2007 it has leveled off and then dipped. There are so many moving parts, it is hard to say what happened. The economy, attitude changes/perceptions and technological changes all have an impact on trip making.

Mr. Winkelmann, MoDNR, said that the Air Pollution Control Program (APCP) in their SIP planning can not take credit for economic-related downturn in VMT. So often there is disparate VMT estimate the State uses for SIPs and Management Plans. When there is an economic downturn, people may have to travel further for work. Have observed an urban sprawl snap back with people wanting to live closer to where they work. The number of two income households as well as the percentage of two car households has peaked. All of these items contribute to stagnate VMT. Over last several years, best estimate for VMT growth rate is 0.7 to one percent. For planning purposes APCP has been assuming a conservative 1.5 percent. He added that in good

economic times people buy new cars which have improved emission controls, so emissions by VMT decreases. In bad times, there is slower vehicle turnover, so older vehicles remain in use, impacting emissions.

Ms. Shoaib, EWG, said that the TDM consists of four steps: trip generation (decision to travel); trip distribution (destination for travel); mode choice (how person will travel by car, bus, rail or walk); and assignment of travel (route to be taken based on time and distance). In the St. Louis region, the transit share is around three percent. Transit here consists of light rail, express buses and local buses. Transit services are provided by Metro (bus and light rail) for Missouri and St. Clair County in Illinois and by the Madison County Transit District (MCT). Options for transit service expansion continue to be evaluated.

From March - May 2013 a consultant conducted an on-board transit survey for EWG. The purpose was to gather data from a statistically valid sample of transit riders in the eight-county St. Louis region on how people use transit to travel. The results will be used to update the mode split forecast abilities of the TDM and to enhance regional transportation planning efforts.. The goal of the survey was to obtain completed surveys from ten percent of the transit boardings in the region in each of four time periods.

Survey results will help to better understand current transit patterns. When EWG applies for funds from the Federal Transit Administration (FTA) , model input and output are reviewed by FTA. EWG worked with FTA on the language for the Request for Proposals for consultant services and the survey form. EWG also sought input from the local transit providers and the St. Clair County Transit District.

The survey was conducted using iPads. Survey participants could use Google Earth to identify there locations and would be able to enter socio-economic information privately. Survey responses were sent directly to the consultant and those conducting the surveys on the trains or buses did not have access to this information. The iPad response rate was 80 percent. Set survey targets based on ridership estimates from Metro and MCT. Individual survey targets were also set based on morning peak, mid-day, afternoon peak and night time periods. The TDM uses these time periods. An on to off survey and the iPad (or paper form) survey were conducted. For the on to off survey, 20 percent of riders on a particular bus or train were given a card with a bar code when they got on and were to return the card when they got off. The full survey form was used for the other riders. Survey results are assumed to represent to the full 100 percent of transit riders and the on to off survey responses were expanded to represent the full 100 percent of individuals using a particular bus stop or train station. During the survey period there were 161,000 total bus boardings. Of this number, there were 69,680 on to off surveys and 18,130 full surveys were conducted. Survey data is still being analyzed.

### III. Near-Roadway NO2 Air Monitoring Results Update - Stephen Hall, Missouri Department of Natural Resources

Mr. Coulson distributed copies of an article from the St. Louis Post-Dispatch about funding for MoDNR's APCP. There appears to be good news and bad news. Progress is being made in reducing overall air pollution emissions but that is going to impact the air program in a negative way with reduction in fees taken in. Mr. Hall MoDNR, observed that there was some confusion and mis-

statements in the article. MoDNR is involved in an effort with stakeholders (sources paying emissions fees) to work out an equitable fee structure in order to continue the operations of the APCP. As sources put on controls, emission trends for SO<sub>2</sub> and NO<sub>x</sub> decline and fees tied to emissions also decrease. Mr. Winkelmann, MoDNR, added that the APCP is self-funded with funds from General Revenue, permit fees and cost for staff to review permits.

The U.S. Environmental Protection Agency (USEPA) Region 7 funded the initial set-up cost of the near-roadway monitoring effort. MoDNR covers the operating costs. In February 2010 USEPA issued the final rule revising the nitrogen dioxide (NO<sub>2</sub>) standard. The rule requires near-road (within 50 meters) monitoring to measure expected peak concentrations starting in January 2013. Based on population and traffic counts the St. Louis Core-Based Statistical Area (CBSA) is to have two sites and one in the Kansas City CBSA. The first St. Louis site and the Kansas City site were to begin operation in January 2014 and the second St. Louis site in January 2015. As a result of USEPA Region 7 funding, the first St. Louis monitor site went online in January 2013 and the Kansas City site began operation in July 2013. USEPA also promulgated near-roadway monitoring requirements for the carbon monoxide (CO) standard and the fine particulate (PM<sub>2.5</sub>) standard. Missouri has co-located CO and PM<sub>2.5</sub> monitors at these sites in St. Louis and Kansas City.

To measure expected peak concentrations, near-roadway monitoring stations are to be within 50 meters (164 feet) of a targeted road segment which has high traffic counts. Site is to represent air quality in an area of 3 to 100 square meters. In the St. Louis area, using information from Missouri Department of Transportation (MoDOT), MoDNR identified high traffic count segments along I-270, I-70 west of I-270 interchange, and I-64/US 40 east of I-170. The site has to be downwind of the road segment. The first monitoring site is located in the maintenance area of the City of St. Louis Parks Department at Forest Park and is 25 meters north of I-64. Winds are primarily from the northwest and the southeast. For the second site, MoDNR is negotiating with several property owners.

St. Louis monitoring output for January 2013 - March 2014 for NO<sub>2</sub>, CO and black carbon concentrations shows significant morning peaks during the work week. There are no significant evening peak concentrations. However, NO<sub>2</sub> and CO concentrations do not show strong potential to violate their respective standards. In addition, black carbon contributes, on average, less than one microgram per cubic meter (ug/m<sup>3</sup>) to PM<sub>2.5</sub> levels.

At the Kansas City I-70 site, NO<sub>2</sub> and CO concentrations (June 28, 2013 - February 2014) and black carbon concentrations (September 2013 - February 2014) show significant morning peaks on weekdays and evening peaks on both weekdays and weekends. The evening peak concentrations are, on average, higher than the morning peaks. NO<sub>2</sub> and CO concentrations do not show strong potential to violate their respective standards. In addition, black carbon contributes, on average, less than one microgram per cubic meter (ug/m<sup>3</sup>) to PM<sub>2.5</sub> levels. MoDNR is looking at different hypotheses for the higher afternoon and weekend peaks. It could be the make-up of the weekday diesel truck fleet or that I-70 is more of a corridor for interstate traffic than I-64 in St. Louis.

#### IV. Metro East Community Air Project Report

- Amy Funk, Metro East Community Air Project

The Metro East Community Air Project (MECAP) is operated under a special grant from the University of Illinois. MECAP is focused on outreach and education, monitoring and research. For the last three years MECAP has hosted a Metro East Air Quality and Health Forum. Planning is underway for the fourth Forum for October 17, 2014. Speakers will discuss public health issues and responses that might come out of climate change and indoor air quality issues as relates to indoor health assessments and asthma. Part of the program will highlight sustainable activities occurring in the Metro East.

MECAP, County Health Departments and the American Lung Association sponsored bookmark contests for students in Madison County and St. Clair County. Students are to highlight things people can do to improve air quality. MECAP is finishing up a joint research project with USEPA Region 5 comparing different volatile organic compounds (VOC) monitoring technologies.

MECAP partnered with Rebecca Gernes of Washington University on USEPA's Toxic Release Inventory (TRI) University Challenge. She was one of eight college students selected to participate. Her project used GIS to examine socio-economic variables, asthma hospital emissions and stationary sources emission inventories in the St. Louis region. Maps were developed of asthma admissions by zip codes with stationary sources and major interstates. This information will be of use to the Southwestern Illinois Asthma Coalition and the Madison County Health Department's air quality committee. Later this year Ms. Gernes will attend USEPA's TRI Conference in Washington, D.C.

V. American Fuel Group Report  
- St. Louis Regional Clean Cities Program

Mr. Herdler, St. Louis Regional Clean Cities Program (SLRCC), announced that on May 2 there will be a ribbon cutting ceremony for a new Waste Management compressed natural gas (CNG) refueling station on Hall Street in the City of St. Louis. Later on this station will be open to the public.

Work on the development of a methodology using MOVES to evaluate the air quality impact/emission reduction of alternative fuel vehicles under different scenarios is wrapping up. Mr. Herdler thanked Ms. Shoaib and Mr. Coulson of EWG and Mr. Leath of MoDNR for their assistance and input into this project.

At the end of May the MotorWeek television show will be here to film two segments. One will be about AT&T and their 8,000<sup>th</sup> CNG vehicle put on the road. Another segment will focus on the renewable fuel classrooms and labs at the Rockwood Summit High School in the Rockwood School District. The school district received a \$100,000 grant from Monsanto for this effort.

Earlier this month, SLRCC participated in the dedication of 30 new CNGs school buses at the Parkway School District. The new buses are yellow and have green rails so first responders ( and the public) know they use alternative fuel. However, MoDOT has a rule that bus rails have to be black. Parkway is fighting to retain the green railings.

An event to celebrate the 20<sup>th</sup> anniversary of the establishment of the SLRCC will be held on November 18, 2014 at the Ameren Headquarters in the City of St. Louis.

According to research performed by Ameren, there are 2,500 electric vehicles registered in the St. Louis (MO-IL) region. Mr. Coulson, EWG, asked about charging stations. Mr. Herdler, SLRCC, said that most of the local Nissan dealerships each have five DC fast charging stations. Ms. Funk, MECAP, asked about maps of CNG or electric charging stations. Mr. Herdler, SLRCC, said that a good source of information would be the Alternative Fuel Data Center at [www.afdc.gov](http://www.afdc.gov).

VI. Update Activities of the States

- David Bloomberg, Illinois Environmental Protection Agency
- Joe Winkelmann, Missouri Department of Natural Resources

This week is Air Quality Awareness Week in Illinois. Illinois EPA announced that the Air Quality Flag program has expanded from schools in Chicago area to interested businesses. In this program a color-coded flag (based on the Air Quality Index forecast) is placed on the flagpole of a participating school or business. Illinois EPA in Springfield was the first business to join.

The U.S. Supreme Court has upheld USEPA's Cross State Air Pollution Rule (CSAPR) by a vote of 6 to 2. At this time the meaning of this decision is unclear. But there will be a lot of work to do in Illinois and Missouri may be brought into CSAPR. Under CSAPR, if a state is designated a significant contributor (one percent or 0.8 parts per billion) to non-attainment for ozone in another area, the contributor state will have to reduce emissions.

The state lead rule has been finalized. Mayco Industries in Granite City has been issued a construction permit to install controls so they can comply with the lead rule. Mayco adding another fabric filter structure. They are moving some of their equipment that previously was not in a total enclosure into a baghouse. Mayco has added hooding to sorting areas and have increased general housekeeping. Illinois EPA has filed for parallel processing and plans to submit an updated SIP to USEPA Region 5 in the next few months. Ms. Funk, MECAP, said that at the March meeting on Mayco's permit, Brad Frost of Illinois EPA remarked that with the general housekeeping/operations improvements already made by Mayco, the lead monitor in Granite City has shown a decrease in lead emissions over the last six months.

USEPA has released proposed guidance for monitoring for the Phase 2 sulfur dioxide (SO<sub>2</sub>) designation process. It also release the final guidance on how the states are to implement Phase 1 SO<sub>2</sub> State Implementation Plans (SIPs). Ms. Funk, MECAP asked if under SO<sub>2</sub> Phase 2, Illinois EPA would do modeling for the Metro East and Granite City. Mr. Bloomberg, Illinois EPA, said that his agency will be sending letters to SO<sub>2</sub> sources about options. If company does not respond or says it does not care, then Illinois EPA will model. If company indicates it is interested in having monitors, Illinois EPA will work with them on the number needed and locations and the company will have to pay for them. Some companies may want to do that. Monitoring has to continue until USEPA finds monitor is at 50 to 80 percent of the standard. A company may be more hesitant to agree to pay for monitoring if they know it could be for an extended period of time. If company thinks model output will show them causing a non-attainment area, it may be beneficial for the company to pay for monitors and see what the actual monitoring data shows. Best situation for a company is if three years of monitor data shows attainment and model would not.

Last month, Ms. Andria of American Bottom Conservancy (ABC) had talked about a notification on a construction permit for Mississippi Lime in Randolph County and a May public meeting. Illinois EPA and Mississippi Lime had been working to address the issues the USEPA's Environmental Appeals Board had raised at the time the permit was remanded back to Illinois EPA in 2011. The March 2013 notice was pulled so that Federal Land Managers could review the permit. They had no problems with it so another hearing has been scheduled for June 2.

On April 24 the Missouri Air Conservation Commission (MACC) met in Jefferson City. There was a public hearing for a minor amendment to the odor rule to align definitions with the stand-alone definition rule. The MACC adopted the Maintenance Plan and Redesignation Request for the Missouri portion of the St. Louis area under the 1997 ozone standard. At the March public hearing Mr Knott of the Sierra Club commented on the public health concern regarding ozone in the St. Louis area and whether working on a Maintenance Plan and redesignation request for the 1997 ozone standard was a good use of resources. In Mr. Winkelmann's opinion it was a good use of resources. This standard could be revoked if USEPA releases the implementation guidance for the 2008 standard. After the April MACC meeting the AQ Advisory Forum stakeholder group met to discuss adjusting emissions fees. This meeting was described in the Post-Dispatch article. MoDNR is planning to hold additional stakeholder meetings on May 19 and June 16.

The next MACC meeting will be on May 29 at the MoDNR St. Louis Regional Office in south St. Louis County. At this meeting there will be a public hearing on the five year review of the Regional Haze Plan and on the Marginal Plan submittal for the Missouri portion of the St. Louis non-attainment area for the 2008 ozone standard. The Marginal Plan was posted for public notice last week. Public hearings also will be held on the following: revision to 10 CSR10-5.220, Control of Petroleum Liquid Storage and Transfer, removing requirement for Stage II vapor recovery controls at gas dispensing stations in the St. Louis ozone non-attainment area; and 10 CSR 10-6.040, Reference Methods, amending it to update the incorporation by reference date to include the latest Federal Register notices for ambient air monitoring methods.

There are several Missouri rules in development. The St. Louis and Kansas City aerospace manufacturing rules are being amended to add an exemption from cleaning operations/housekeeping requirements for those facilities already regulated under the hazardous waste rule. MoDNR is working on the annual update to the New Source Performance Standards rule for hazardous air pollutants to align it with the most recent federal standards. Missouri's large internal combustion engine rule is being amended to clarify the 25 ton applicability exemption requirement and to add flexibility to compliance method. The opacity rule, 10 CSR 10-6.220 is being amended to remove statement on Director's discretion which does not match federal regulations and to an exemption for those power plants already complying with federal air toxic rule. The SO<sub>2</sub> rule, 10 CSR 10-6.260, is being amended to incorporate new sulfur standard requirements and controls. This is being done in conjunction with the SO<sub>2</sub> SIP under development now. Finally, the Industrial Surface Coating rule is being amended to remove coating of rubber parts from regulation.

In March USEPA's Science Advisory Committee confirmed their recommendation for the ozone standard to be set between 60 - 70 ppb. The schedule now is for USEPA to release a proposed revised ozone standard in January 2015 with a final rule in November of that year. USEPA has proposed a SO<sub>2</sub> data reporting rule for future rounds of non-attainment designations which will

determine which SO<sub>2</sub> sources the State will need to evaluate with modeling and/or monitoring approach. USEPA has also issued guidance for one-hour SO<sub>2</sub> standard SIP submissions.

Mr. Zlatic, St. Louis County asked if Missouri's SO<sub>2</sub> monitoring approach will be similar to what Illinois is proposing. Mr. Hall, MoDNR, said that Missouri is still evaluating its options and there are a number of logistical pieces that the State has to evaluate. It may be that facilities are aware that modeling attainment is going to be difficult and if modeling is used, Missouri will submit designation recommendations in December 2017. But if the State works with a facility on a monitoring program, data for 2017-2019 will be used to determine non-attainment designation in 2020. There is a \$75,000 - \$100,000 initial set-up cost per location and \$17,000 - \$25,000 annual operation and maintenance cost. Missouri does not have the funds to do this on its own. In the past Missouri has had agreements for facilities to operate monitors with MoDNR oversight.

Mr. Fishman, St. Louis University, asked if anyone had been appointed to the MACC. Mr. Winkelmann, MoDNR, said that he was unaware of any appointments.

## VII. Other Business

Mr. Schmidt, Illinois Department of Transportation (IDOT), announced that Illinois has prepared a statewide bicycle transportation plan (<http://ilinoisbikeplan.com>) and that information is available on the Illinois Transportation Enhancement program at the following web address: <http://www3.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=12121> .

The next meeting of the AQAC was scheduled for May 27, 2014. There being no other business, the meeting of the Air Quality Advisory Committee was adjourned.

AGENDA  
AIR QUALITY ADVISORY COMMITTEE\*  
**TUESDAY March 25, 2014**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**
  - Michael Coulson, Chair, East-West Gateway Council of Governments
  - A. Minutes of January 28, 2014 Meeting
  
- II. CMT Transit Oriented Development (TOD) Efforts**
  - Kim Cella, Citizens for Modern Transit
  
- III. TravelGreen Program**
  - Meredith Klekotka, Trailnet
  
- IV. Update on Lake Michigan Air Directors Consortium (LADCO) Activities**
  - Rob Kaleel, Lake Michigan Air Directors Consortium
  
- V. American Fuel Group Report**
  - 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 Date April 29, 2014**
  
- VIII. 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.

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, January 28, 2014  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Joe Winkelmann - Missouri Department of Natural Resources  
Mike Henderson - Missouri Department of Transportation  
Jeremy Rogus - St. Louis County Health Department  
David Bloomberg - Illinois Environmental Protection Agency  
Brad McMahan - Federal Highway Administration, MO  
Joe Gray - Illinois Department of Transportation, District 8  
Christopher Schmidt - Illinois Department of Transportation  
Susannah Fuchs - American Lung Association (telephone)

Others Present:

Lachala Kemp - U.S. Environmental Protection Agency Region 7 (telephone)  
Bob Randolph - Missouri Department of Natural Resources  
Kevin Herdler - St. Louis Regional Clean Cities  
Meredith Klekota - Trailnet  
Angie Hoecker - Missouri Department of Transportation  
Andy Knott - Sierra Club  
John Hickey - Sierra Club  
Joe Right - RideFinders  
Joe Wilson - Citizen

Staff:

David Wilson                      Carol Lawrence                      Johnnie Smith

- I.        Call to Order  
          - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWG). The minutes of the October 29, 2013 AQAC meeting were approved as circulated. Mr. Coulson announced that Mr. Kaleel was not able to attend the meeting and has been rescheduled for the March 25 AQAC meeting.

- II.        OneSTL Next Steps  
          - David Wilson, East-West Gateway Council of Governments

In 2010, EWG received funding from the U.S. Department of Housing and Urban Development (HUD) through the Partnership for Liveable Communities program to prepare a regional plan for sustainable development. The Partnership is made up of HUD, U.S. Environmental Protection

Agency (USEPA) and U.S. Department of Transportation (DOT). There were also ten local partners involved. The regional plan, now called OneSTL, took two and one half years to complete. By the time plan goals, objectives and strategies identified, more than 50 organizations and agencies had input into the plan. The EWG Board of Directors approved OneSTL in December 2013.

A OneSTL implementation steering committee will be put together over the next few months. It is to be a broad-based, representative committee that can help in planning programs, identifying projects and helping the partners to move forward with implementation over the next few years. Have begun to schedule speaking opportunities with organizations and local governments to introduce the plan and invite them to get involved. Joining the OneSTL Network is one way. The Network allows anybody (Public agency/organization, business, community group or a resident) interested in sustainability to have access to information. Hope to create a dynamic interchange in which people will use the OneSTL website's comment form to share information on what is going on in their community and learn of data and activities. OneSTL has been asked to co-sponsor or help organize several workshops and conferences this year.

OneSTL is not solely dependent on EWG for implementation. The notion is that no one agency can make this region sustainable and no one local government can. The only way regional plan can be implemented is with many people getting involved, identifying their issues and working on them. Many agencies have a piece of plan and as long as each does their piece, region will move forward. Hope to see the number involved grow.

EWG staff have been refining the OneSTL website ([www.OneSTL.org](http://www.OneSTL.org)). OneSTL is designed to be a web-based plan. Website is to serve as a consolidated clearinghouse for information. On the website can access each section of the OneSTL document or download the entire document as a pdf. The plan has been structured around nine themes for the future of the St. Louis region. These themes grew out of an extensive community engagement effort to learn the public's and local governments' attitudes and concerns. The themes include: collaborative; prosperous; distinctive; inclusive; green; prepared; connected; efficient; and educated. Each theme has several goals associated with it and each goal has at least one objective. For each objective, several strategies were identified and implementing agencies were delineated. Also on-line is a sustainable solutions toolkit containing information on 100 different sustainability-related topics. The About Us section contains information on the OneSTL partners and associated links. As organizations joins the OneSTL Network information about them will be added.

A key element of OneSTL is how to measure movement toward sustainability at a regional scale. EWG's Research Department has investigated what indicators can be tracked using existing sources of information. Each theme have six to ten metrics. EWG Research Department will be responsible for tracking and preparing regional snapshots to see if the region is moving in the right direction or not or there is no change. Metrics are to be part of the website and can change over time. The theory is that if we track and report on these metrics, that is going to call attention to these issues and raise level of awareness. Awareness will spur more action toward improved practices.

The Resources section on the website contains over 75 reports, research documents and studies

prepared by the partners over the last three years. For example, St. Louis County developed draft ordinances and codes and prepared a code assessment how-to manual. A consultant hired by Metro, EWG and Great Rivers Greenway evaluated the general economic development potential for all MetroLink stations and performed an in-depth Transit Oriented Development analysis for a representative sample of stations which can serve as a framework for future planning.

III. St. Louis Area Ozone SIP Update: 1997 NAAQS Maintenance Plan and 2008 NAAQS Implementation Rule  
- Joe Winkelmann, Missouri Department of Natural Resources

The Missouri Department of Natural Resources (MoDNR) is moving forward with their Maintenance Plan and redesignation request for the 1997 eight-hour ozone National Ambient Air Quality Standard (NAAQS) for Missouri portion of St. Louis area. There has been clean monitoring data since the 2007-2009 time period. With an attainment designation for the 1997 standard, Missouri can focus its efforts on 2008 standard. In November 2011 Missouri submitted a Maintenance Plan and Redesignation Request to USEPA for the 1997 ozone national ambient air quality standard. USEPA did not find the motor vehicle emissions budgets adequate for conformity and did not approve the Plan due to litigation surrounding federal interstate transport regulations (Clean Air Interstate Rule or CAIR) that were relied on in the Plan. The Washington, D.C. U.S. District Court found that until a replacement rule comes out, CAIR shall remain in place. Based on November 2012 USEPA guidance, Maintenance Plans which rely on CAIR can be approved.

MoDNR is revising the Maintenance Plan for the 1997 standard so that 2025 is the end year (ten years after expected 2015 approval by USEPA). In February, the Maintenance Plan and redesignation request are to be posted on the MoDNR website. The Missouri Air Conservation Commission (MACC) will hold a public hearing in March and is to adopt them both in April. Later this year USEPA should approve the Maintenance Plan and designate the Missouri counties in attainment. These actions should occur before the implementation rule for 2008 standard is finalized in August 2014.

In June 2013 USEPA's proposed implementation rule for the 2008 ozone standard was published. This rule would revoke the 1997 standard for all purposes and delineates how the states are implement this standard. It includes proposed anti-backsliding obligations and transition guidance for moving to the 2008 standard. All anti-backsliding obligations under the Clean Air Act are met if an area is redesignated to attainment of the 1997 standard prior to the standard's revocation. The final rule is expected to be published in August 2014.

In USEPA's July 2012 2008 standard area classification rule, the St. Louis area (MO-IL) was classified as a Marginal non-attainment area. Marginal areas have fewer implementation plan requirements as they are closest to attainment. A Marginal State Implementation Plan (SIP) is to have: comprehensive base year emissions inventory; non-attainment New Source Review (NSR) permitting program; emission reporting requirement for major sources; and transportation conformity determination. Missouri prepares an emissions inventory every three years and is working with USEPA on a 2008 inventory. The state has an on-going NSR construction permit program as well

as an emission reporting program for large sources. Transportation Air Quality Conformity is coordinated by EWG. The 2008 eight-hour ozone Marginal SIP will be posted on the MoDNR website for public comment on April 28, 2014. On May 29 the MACC will hold a public hearing on this SIP and adopt it at their July 2014 meeting.

In the July 2012, USEPA revoked the 1997 standard for Conformity Determination purposes only. Non-attainment areas were given one year to conduct Conformity Determination using the 2008 standard. EWG addressed this requirement in their January 2013 Conformity Determination. Since USEPA revoked the 1997 standard for conformity purposes, the revision to the Maintenance Plan for the 1997 standard does not have to establish budgets.

To aid EWG's future Conformity Determination efforts, MoDNR voluntarily developed an Early Progress Plan for the 2008 standard which contained 2015 motor vehicle emission budgets. In March 2013 the MACC adopted the Early Progress Plan. It was then submitted to USEPA. In a letter to MoDNR dated October 28, 2013, USEPA found the budgets adequate for use in future Conformity Determinations.

Mr. Henderson, MoDOT, asked if there was any indication when USEPA will take action to revise or maintain the 2008 ozone standard. Ms. Kemp, USEPA Region 7, said that in February USEPA is to release for external review a second draft Risk/Exposure Assessment for Ozone and a second draft Policy Assessment. USEPA will then meet with the Clean Air Science Advisory Committee (CASAC) at the end of March. It is possible that there could be a decision late this year.

IV. 2010 One-Hour Sulfur Dioxide National Ambient Air Quality Standard Designation and State Implementation Plan Requirements  
- Bob Randolph, Missouri Department of Natural Resources

Sulfur dioxide (SO<sub>2</sub>) is produced during the combustion of sulfur-containing fossil fuels such as coal and fuel oil during metal smelting and industrial processes. Sources include industrial boilers, power plants and mobile sources. SO<sub>2</sub> is more of a localized phenomena with highest concentrations generally near large combustion sources. With the lowering of sulfur levels in gasoline and diesel, mobile sources make up a smaller portion of SO<sub>2</sub> emissions.

The SO<sub>2</sub> standard was established in the 1970s and USEPA has reviewed it over the years. In June 2010, USEPA revised the SO<sub>2</sub> standard to be a one-hour standard of 75 parts per billion (ppb). MoDNR's first task was to develop boundary recommendations based on 2007-2009 data from the monitor network in place at the time the standard was finalized. Missouri recommended that portions of Jackson County, Jefferson County and Greene County be designated as non-attainment.

Mr. Hickey, Sierra Club, asked if the biggest emitter of SO<sub>2</sub> in the greater St. Louis area was the Ameren Labadie power plant (Franklin County). Mr. Randolph, MoDNR, responded yes. Mr. Hickey Sierra Club, then asked if there were any SO<sub>2</sub> monitors located in St. Charles, Franklin or St. Louis Counties. Mr. Randolph, MoDNR, said no and that he will talk about this later.

Mr. Randolph, MoDNR, said that the current monitoring network nationwide was not designed to address the one-hour SO<sub>2</sub> standard. Many large SO<sub>2</sub> sources in the U.S. are not in first round non-attainment areas. USEPA recognizes there are deficiencies in the existing monitoring networks. The Monitoring Group in the Air Pollution Control Program is reviewing the SO<sub>2</sub> network and evaluating future monitoring sites. Based on 2007-2009 monitoring data, in August 2013 USEPA designated a portion of Jackson County (Kansas City area); and portion of Jefferson County (Herculaneum and Festus townships and Missouri portion of Valmeyer and Selma townships) as non-attainment. Attainment Demonstration SIPs are due to USEPA in April 2015. The deadline to attain the standard is October 4, 2018.

There are five required elements for a non-attainment area SIP. A Reasonable Further Progress document is to be prepared. MoDNR is working on an accurate emission inventory of all current SO<sub>2</sub> sources within and impacting the non-attainment area. In the Attainment Demonstration, MoDNR staff will conduct computer modeling and work with facilities located within a 10 kilometer (km) buffer (immediate surrounding area) of the violating monitor and those within a 50 km buffer. All sources of SO<sub>2</sub> near the non-attainment area were included in an initial evaluation to determine which sources/facilities to explicitly include the computer model. Modeling must be performed using potential or allowable (permanent and enforceable) emission rates. Actual emissions from a facility's Emissions Inventory Questionnaire (EIQ) can only be used as a screening tool. The modeling can include facility negotiated limits/conditions necessary for it to be in compliance. Any limit identified has to be shown to be necessary to comply with the standard and part of a permanent and enforceable action. MoDNR is working with those largest sources/facilities inside the 50 km buffer, including Ameren Labadie, to verify potential limits and identify what actions are occurring or what plans already made to lower SO<sub>2</sub>. Begun dialogue on what control options facilities are going to do to reduce impact for future rounds and develop recommendations. Our task is to determine their impact on any receptor within the Jefferson County non-attainment area. At the end of 2013 the Doe Run Company closed their primary lead smelter in Herculaneum. A model assumption was that there will be no smelting operations and that the remaining units at this facility will use natural gas, minimizing SO<sub>2</sub> emissions.

Options for controls include incorporating limits into the Missouri SO<sub>2</sub> SIP. MoDNR is working on an amendment to the state sulfur rule as many requirements focused on motor fuels and outdated codes. The State could issue construction and/ operating permits with emissions limit/condition. Controls can include combination of control equipment, fuel controls, emission rate limits or limits on allowable emissions. If state rule does not work, state could enter into a Consent Judgement/Decree with the source to establish an emission limit/conditions. Another option to reduce impact, would be to identify limits through a modeled attainment demonstration.

In February 2013 USEPA released a "Next Steps" paper describing their strategy for future rounds non-attainment area designations. Emission thresholds will be lower in urban areas and higher in rural areas. The states will have flexibility to rely upon monitoring or modeling data, as appropriate. This allow states to work with affected facilities and citizens in order to develop monitor or model approach. Incentives and time for facilities to reduce emissions early and avoid non-attainment designations in future rounds.

USEPA is taking the approach that in future rounds of non-attainment designations, the states will be looking at all of those larger SO<sub>2</sub> sources. MoDNR will begin a dialogue with the larger sources, like Ameren Labadie, to gear them up for future round analysis and to consider emission reduction alternatives. Options under future rounds is for MoDNR to work with individual facilities to develop individual monitor networks to determine where peak concentrations would be in facility or to go with a modeling approach. If a facility wants to establish local monitor network, has to be approved by MoDNR and USEPA. For facilities that are going to use the modeling approach, Missouri would submit designation recommendation during 2017 and submittal deadline addressing facilities using monitoring data would be during 2015-2016. USEPA is to make designations for modeled areas in December 2017 and for monitored areas in December 2020.

Mr. Hickey, Sierra Club, asked if SO<sub>2</sub> sources within the buffer zone have been modeled and if sources are shown to be above standard, does that trigger any action. Mr. Randolph, MoDNR, replied that sources in the buffer area have been modeled. Information collected could be used in the future designation round(s). The task now is to determine the impact of sources on first round non-attainment area. MoDNR is working with facilities to get better assessment of what their peak levels are. Anticipate any facility within the 50 km buffer would have a strong potential for some type of emission control strategy. Just because a facility is not within the non-attainment area, does not mean they will not have to do something for the first round. MoDNR will work with facilities. Hopefully, that will be enough to bring that area/facility into attainment for future rounds.

V. American Fuel Group Report  
- Kevin Herdler, St. Louis Regional Clean Cities Program

The St. Louis Regional Clean Cities program (SLCC) along with Kansas, Iowa, Nebraska and Missouri received a grant from the U.S. Department of Energy (DOE) for an Alternative Fuel Implementation project. ICF International has been selected to develop a methodology using MOVES to evaluate the air quality impact/emission reduction of alternative fuel vehicles under different scenarios. There are limited alternative fuel inputs for the MOVES model. The consultant has been asked to develop emission reduction factors for the following American fuels: liquefied natural gas (LNG); compressed natural gas (CNG); electric vehicle and electric plug-in; propane; biodiesel at 20 and 50 percent; and ethanol (E-85). Since these fuels are not in MOVES now, consultant is trying to develop a way so USEPA can substitute them. Consultant is working with USEPA Region 7, Illinois EPA and MoDNR. The beta version of the methodology should be available in the next couple of weeks. Beta version will be reviewed by EWG and other stakeholders. Once review is finished, a webinar on the methodology and how to use it will be put together. Methodology is designed so that any city, county, council of governments or state can plug

in their own numbers. Mr. Herdler is also developing and conducting training for code enforcement personnel and first responders about these fuels.

Landscape firms are beginning to utilize propane-fueled mowers. These mowers are cleaner than conventionally fueled mowers (which do not have emission controls) and have a longer maintenance life. In addition, companies have less gasoline fuel loss. Ms. Fuchs, American Lung Association

(ALA), asked about the propane shortage. Mr. Herdler, SLCC, said that it was an extreme situation, particularly in the Midwest. Previously propane cost \$1.69 a gallon for home heating and now it is \$4.00 a gallon. At a meeting with Amerigas, Mr. Herdler learned that Amerigas is using railcars to bring in propane from Alaska and elsewhere. Hopefully when the cold snap breaks, companies will be able to replenish their supplies and prices will go down. Public CNG stations are at Lambert Airport and in Pontoon Beach. Allied Waste, Progressive and Waste Management are all using propane-powered trash trucks. The Parkway school district has a fleet of CNG buses and is working on a fueling station.

SLCC is working with the Village of Marissa in St. Clair County on a landfill gas recovery project. Waste Management has given the landfill gas to Marissa. Plan to install equipment to capture the gas and send it to the Ameren pipeline. Also liquid carbon dioxide (CO<sub>2</sub>) will be collected and sold to another company. It is estimated that the landfill will be in operation until 2060 and gas will be available for 30 years after that. Waste Management has announced that it plans to install similar equipment at its Milan landfill. Aim to provide fuel for their trash trucks in Chicago and St. Louis. SLCC is working with the Coast Guard and several businesses to convert at least three St. Louis-based harbor boats to CNG or LNG.

In 2014 SLCC will be 20 years old. SLCC is planning a celebration for this summer. A round of applause was given for this milestone achievement.

#### VI. Update Activities of the States

- David Bloomberg, Illinois Environmental Protection Agency
- Joe Winkelmann, Missouri Department of Natural Resources

The Illinois Pollution Control Board (IPCB) held its first hearing on the lead rule for Granite City and Chicago. There was enough agreement from all parties that the IPCB canceled future hearings. The rule is expected to proceed to adoption. Illinois EPA has already submitted it to USEPA Region 5 for parallel processing. Mayco Industries in Granite City has applied for a construction permit to make the changes necessary for it to comply with this lead rule.

Petcoke is a by-product of the petroleum refining process and is stored in the Chicago area and the Metro East. It is a solid material similar to coal and can be a fuel source for power plants. In Chicago, 70-80 foot high petcoke storage piles are located near residential areas. After a windstorm last year blew material onto residences, the City of Chicago has proposed a petcoke management rule. The Illinois EPA proposed an emergency rule to the IPCB which the Board did not accept. Illinois EPA is examining alternatives to address concerns. This could be a multi-state issue.

For the two Illinois SO<sub>2</sub> non-attainment areas, Illinois EPA is talking with culpable sources and seeking either permit limits or regulations. Illinois looking ahead to the outcome of the litigation over the Cross State Air Pollution Rule (CSAPR) now before the U.S. Supreme Court. In the meantime, USEPA is moving forward with a possible transport rule (if ruled against). There have been many discussions on how to model and address that concern. The Ozone Transport Commission (composed of northeast and Mid-Atlantic states) wants a number of Midwest states, including

Illinois, to join the Commission. Illinois has declined and now the Commission is forcibly trying to add these states.

At the January 30 MACC meeting, three rules are up for public hearing. One is an amendment to 10 CSR 10-6.200 Hospital, Medical, Infectious Waste Incinerator rule removing start-up, shutdown and malfunction exemptions from any emission limits. The second is to rescind the outdated 10 CSR 10-5.240 Additional Air Quality Control Measures May be Required When Sources are Clustered in a Small Land Area. It was passed before the federal Clean Air Act was enacted. The last item up for public hearing is to amend 10 CSR 10-6.010 National Ambient Air Quality Standards to incorporate federal standards into the state rules so state rules are consistent.

MoDNR is in the process of preparing an amendment to 10 CSR 1-5.220 to remove Stage II Vapor Recovery systems from this rule. The draft rule amendment has been posted on the Rules in Progress section of the Air Pollution Control Program web page.

## VII. Other Business

Mr. Hickey, Missouri Sierra Club, observed that the MACC is a seven member body whose members are nominated by the Governor and approved by the Senate. Currently, the MACC only has four members. One MACC member is from Crystal City but the remainder do not reside in non-attainment areas. Sierra Club thinks that it would be good if at least two of the empty seats were filled by people from the St. Louis area (42 percent of the breathers in the state). Need to look for people who care about clean air and would be effective advocates. Mr. Coulson, EWG, said that Dr. Fishman from St. Louis University has submitted his name. Mr. Winkelmann, MoDNR, added that the MACC has been discussed at AQAC and at other meetings. Information on the MACC can be found at RSMo 643.040. He encouraged everyone to consider possible nominees.

Ms. Klekota, Trailnet, asked if at a future meeting, someone would talk about the connections between air quality and public health and could someone talk on the impact of transportation on PM<sub>2.5</sub>. Mr. Coulson, EWG, said that it is good to keep health involved when discussing air quality, and not just bureaucratic structure. Mr. Bloomberg, Illinois EPA, added that Ms. Funk of Metro East Community Air Project (MECAP) has hosted air quality and public health forums for the last several years. Mr. Winkelmann, MoDNR, said that the preamble section of the National Ambient Air Quality Standard contains a discussion on the health effects/impacts of specific pollutants

The next meeting of the AQAC will be on March 25, 2014. There being no other business, the meeting of the Air Quality Advisory Committee was adjourned.

AGENDA  
AIR QUALITY ADVISORY COMMITTEE\*  
**TUESDAY January 28, 2014**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**
  - Michael Coulson, Chair, East-West Gateway Council of Governments
  - A. Minutes of October 29, 2013 Meeting
  
- II. OneSTL Next Steps**
  - David Wilson, East-West Gateway Council of Governments
  
- III. Update on Lake Michigan Air Directors Consortium (LADCO) Activities**
  - Rob Kaleel, Lake Michigan Air Directors Consortium
  
- IV. Revised Maintenance Plan and Redesignation Request for 1997 Eight-Hour Ozone Standard**
  - Joe Winkelmann, Missouri Department of Natural Resources
  
- V. 2010 One-Hour Sulfur Dioxide National Ambient Air Quality Standard Designation and State Implementation Plan Requirements**
  - Bob Randolph, Missouri Department of Natural Resources
  
- VI. American Fuel Group Report**
  - St. Louis Regional Clean Cities Program
  
- VII. Update Activities of the States**
  - Illinois Environmental Protection Agency
  - Missouri Department of Natural Resources
  
- VIII. Other Business**
  
- IX. 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.

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, October 29, 2013  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Joe Winkelmann - Missouri Department of Natural Resources  
Mike Henderson - Missouri Department of Transportation  
Mike Zlatic - St. Louis County Health Department  
Betsy Tracy - Federal Highway Administration, IL  
David Bloomberg - Illinois Environmental Protection Agency  
Jack Fishman - St. Louis University  
Brad McMahon - Federal Highway Administration, MO  
Joe Gray - Illinois Department of Transportation, District 8  
Ryan Tilley - St. Charles County Health Department

Others Present:

Ken Anderson - AMEREN  
Mike Rogers - Illinois Environmental Protection Agency  
Amy Funk - Metro East Community Air Project  
Sara Chappau - Illinois Department of Transportation, District 8  
Pamela Brooks - Illinois Environmental Protection Agency  
Amy Bhesania - U.S. Environmental Protection Agency Region 7 (telephone)  
Lachala Kemp - U.S. Environmental Protection Agency Region 7 (telephone)  
Mark Leath - Missouri Department of Natural Resources (telephone)

Staff:

David Wilson                      Carol Lawrence

- I.        Call to Order  
          - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWGCOG). The minutes of the September 24, 2013 AQAC meeting were approved as circulated.

- II.        St. Louis University Ozonesonde Launch Project: A Program in Support of NASA's SEACIONS and SEAC<sup>4</sup>RS Field Campaigns  
          - Jack Fishman, Ph.D., St. Louis University

This summer NASA conducted a Studies of Emission and Atmospheric Composition, Clouds and Climate Coupling by Regional Surveys (SEAC<sup>4</sup>RS) project in the central U.S. Information from daily flights of NASA aircraft equipped with sophisticated data collection equipment will be

coordinated with data obtained from passes of six NASA satellites to achieve this mission's science objectives. Data from the aircrafts' equipment will be used to validate satellite measurements and to develop a synoptic picture of what was going on in the atmosphere.

Coordinated with the SEAC<sup>4</sup>Rs project was the NASA Deriving Information on Surface Conditions from Column and Vertically Resolved Observations Relevant to Air Quality (DISCOVER-AQ) project. This project was focused on air quality in and around Houston. NASA aircraft with data collection equipment and satellites were also used. The objective of the project was to improve the interpretation of satellite observations to diagnose near-surface conditions relating to air quality.

To support both these projects, the Souther American Consortium for Intensive Ozonesonde Network Study (SEACIONS) program was set up in order to develop a synoptic 3-D picture of what the atmosphere looked like and ozone levels on flight days. An ozonesonde is a weather balloon equipped with a three to four pound instrument package to measure temperature, humidity, air pressure and ozone levels in the atmosphere plus a radio transponder. Information is transmitted in real time during the balloon's ascent and descent. St. Louis University (SLU) was one of seven sites in the central and southern U.S. involved in this effort. A helium-filled balloon could travel up to 100,000 to 120,000 feet before bursting. The aim is to understand what the satellite sees in coordination with what is observed at the surface and improve understanding of ozone pollution. Between August 8 and September 23, SLU students successfully launched every balloon/instrument packages as scheduled. A total of 31 ozonesondes were launched with just three failures due to technical issues with the instruments. Sixteen packages were found and the equipment can be reused. Data from these measurements will become part of these SEACIONS/SEAC<sup>4</sup>RS science study. Findings should be available in Spring 2014. The St. Louis portion of this effort was featured on two local television stations and this story was carried nationally on National Public Radio and internationally through the Voice of America.

As an example of data collected, preliminary calculations of data from the August 30 ozonesonde indicate there was an ozone plume (135 ppb) at approximately 30,000 feet. Modeling suggested that the origin of the plume could have been from fires in Yellowstone National Park and California. An ozone plume found lower in the atmosphere appears to have a different origin. Further analysis and interpretation of the data collected is needed.

### III. Illinois Air Quality Planning Activities and Air Quality Issues of Interest - David Bloomberg, Illinois Environmental Protection Agency

Mr. Bloomberg is the Manager of the Air Quality Planning Section in the Bureau of Air at the Illinois Environmental Protection Agency (Illinois EPA). The Regulatory Unit (Jackie Sims, Manager) researches and writes rules and tracks U.S. Environmental Protection Agency (USEPA) activities. The Modeling Unit (Jeff Sprague, Manager) is responsible for modeling activities and is involved in State Implementation Plan (SIP) development and non-attainment area boundary determinations. The

Inventory Unit (David “Buzz” Asselmeier, Manager) prepares annual Emissions Reports, conducts emissions inventories and assembles information used by other units and sections.

Both the Chicago area (six counties) and the Metro East (three counties) are non-attainment for the 2008 eight-hour ozone standard. The Metro East and Baldwin Township are non-attainment for the 1997 annual fine particulate matter (PM<sub>2.5</sub>) standard. Based on 2007-2012 monitoring data and USEPA approval of revision to the Illinois PM<sub>2.5</sub> SIP, the Chicago area (six counties plus three township) has been redesignated to attainment of the 1997 PM<sub>2.5</sub> standard. The redesignation was published in the October 2, 2013 Federal Register.

Three townships around Pekin and three townships around Lemont in northeast Illinois have been designated as non-attainment for the sulfur dioxide (SO<sub>2</sub>) standard. For both non-attainment areas Illinois EPA has identified about 18 sources in or near these areas which contribute to the problem not just a single source. Illinois EPA performed extensive modeling to identify all “culpable” sources of non-attainment within or outside of the two non-attainment areas. Discussions have begun with these sources. Originally USEPA had proposed that a state perform modeling state-wide to delineate SO<sub>2</sub> non-attainment areas. After the states expressed their concerns, USEPA decided to go with a phased approach. In Phase 1 non-attainment areas are based on monitored data and in Phase 2 non-attainment areas will be determined by either monitoring and/or modeling. USEPA has released draft guidance informing the states that modeling is the default but monitoring can be an option. This guidance is still to be finalized. It is the position of Illinois EPA that if companies want to have SO<sub>2</sub> monitors, the companies will be paying for them. Illinois can not afford them. USEPA is being sued for the phased approach to designation. USEPA is to make designations for modeled areas in December 2017 and for monitored areas in December 2020. Attainment dates will be five years after designations. Illinois EPA will propose a statewide rule for sulfur content in fuel oil. Rules covering specific sources/units impacting the non-attainment areas will also be proposed.

The lead non-attainment area in the Chicago area consists of a few blocks around one specific facility. When the Granite City lead non-attainment area (two townships) was established, there was uncertainty about what sources were responsible. It has since been determined that Mayco Industries is causing the violation there. Illinois EPA will soon be proposing lead rules applying to these specific non-attainment areas and requiring emissions controls on the two specific sources. These proposed rules are at the Governor’s office for approval and then will be submitted to the Illinois Pollution Control Board (IPCB).

On October 23 Illinois EPA held an outreach meeting in Chicago on recommended 2012 annual PM<sub>2.5</sub> standard non-attainment area designations. There is a meeting in Collinsville this afternoon. Recommendations are due at USEPA in December 2013. Illinois is going to have prepare a rule on startup, shutdown and malfunction provisions at facilities. The Illinois rule will address startup and shutdown provisions only. USEPA has not finalized their requirements for this type of rule.

USEPA is holding a listening session in each USEPA region to obtain feedback on greenhouse gas requirements for power plants. The Cross State Air Pollution Rule (CSAPR) is to be heard at the U.S. Supreme Court in December. Whether CSAPR or some other form of transport rule, USEPA

will have to do something. Anticipate that a future transport rule will only impact larger sources. In Illinois many large sources have already been controlled or have committed to being controlled under the Multi-Pollutant/Combined Pollutant standards regulated under the state mercury rule.

IV. Recommended Annual PM<sub>2.5</sub> Non-Attainment Area Designations in Illinois  
- Pamela Brooks, Illinois Environmental Protection Agency

Madison, Monroe and St. Clair Counties and Baldwin Township are in non-attainment of the 1997 annual PM<sub>2.5</sub> standard (15 micrograms per cubic meter or ug/m<sup>3</sup>). Earlier this month, the Chicago area was designated as being in attainment for this standard.

On December 14, 2012, USEPA strengthened the annual PM<sub>2.5</sub> standard to 12 ug/m<sup>3</sup>. The states are to submit their boundary recommendations (non-attainment, attainment/unclassified) to USEPA by December 13, 2013. USEPA will review the states' recommendations and no later than 120 days before its final decision, USEPA is to notify states whether they agree or disagree with those recommendations. States then can respond and provide additional information. Final designations are to be made by USEPA by December 12, 2014. SIPs will be due in 2016 with attainment in 2021 or 2025 depending whether an area is classified as moderate or serious.

Boundary Designation Guidance for the states was released by USEPA in April 2013. Areas with monitored violations must be classified as non-attainment. The non-attainment area should contain the area around the violating monitor and any adjacent counties that have the potential to contribute to the violations. There is no presumptive boundary for a non-attainment area. The size of a non-attainment area should be evaluated and determined on a case by case basis.

Cook, Madison and St. Clair Counties each contain one monitor in violation of the 2012 standard. When look at monitor readings over time, PM<sub>2.5</sub> levels have come down a lot, so progress is being made. Regionally, Missouri is attaining the 2012 standard and Illinois is not. Ms. Funk, Metro East Community Air Project (MECAP), asked about counties in another state which are adjacent to a violating monitor. Ms. Brooks, Illinois EPA, said that Illinois can discuss an adjacent state but can not make any specific recommendations. Mr. Bloomberg, Illinois EPA, added that USEPA Regions 5 and 7 will probably take this into consideration and USEPA makes the final decision.

The Boundary Designation Guidance sets out five factors to be considered by the states. They include: 2010-2012/2013 air quality data; emissions data and emissions-related data; meteorology; geography/topography; and jurisdictional boundaries. As part of the analysis, need to identify nearby areas and sources that contribute to PM<sub>2.5</sub> violations. PM<sub>2.5</sub> emissions can come from a variety of sources and can be emitted directly or formed through chemical reaction in the atmosphere. There are a number of potential sources in the Metro East including power plants and Granite City Works of US Steel. In the Illinois nine county study area, Madison County sources contribute 35 percent of total emissions and the power plant in Baldwin Township in Randolph County contributes 24 percent of total emissions. Emission related data to be considered includes population, population density and degree of urbanization, vehicle miles traveled (VMT) and commuting patterns. Missouri counties contain 67 percent of the population in the St. Louis MSA. In the Illinois nine county study

area, St. Clair, Madison and Macoupin Counties contain over 75 percent of the total population. These figures are used to estimate the amount of population-related PM<sub>2.5</sub> emissions in the area. Annual travel statistics from Illinois Department of Transportation (IDOT) are examined to determine the vehicle emissions by county. Madison and St. Clair Counties have the highest annual VMT and Baldwin Township the lowest.

Wind speed and direction will influence what source emissions are coming into a monitor. Finding that on high emission days at the Granite City monitor, the predominant wind direction is from the southwest, south and some southeast (general direction of Granite City Works). For the East St. Louis monitor on high days the wind comes from a variety of directions. USEPA provides HYSPLIT modeled air mass trajectory end point destination information. For the monitor in Granite City, on low emission days air masses come from the north and on high concentration days, air masses are from the south (more sources which can contribute).

After examining monitor data and the five boundary designation factors, Illinois developed boundary recommendations. For Chicago, the following counties/townships are going to be proposed as non-attainment: Cook; DuPage; Kane; Lake; McHenry; Will; Oswego township in Kendall; and Aux Sable and Goose Lake townships in Grundy. For the Metro East, Illinois is going to propose the same non-attainment boundaries as for the 1997 standard non-attainment area (Madison, Monroe and St. Clair Counties and Baldwin township in Randolph County). All other counties should be designated as attainment/unclassifiable. Public meeting on these recommendations is this afternoon at the IDOT office in Collinsville. Comments will be accepted until November 12, 2013.

Ms. Funk, MECAP, asked how the contribution of regional transportation construction projects is assessed as there has been a lot of construction in the East St. Louis area in the last few years. Ms. Brooks Illinois EPA, replied that the emissions inventory has on and off road (construction vehicles, etc.) categories and inventory is examined to see what portion of sources these emissions are coming from. Do not look at specific construction projects.

Mr. Coulson, EWG, asked if Granite City Works of US Steel will have a management program in place in the next two years or so. Mr. Bloomberg, Illinois EPA, said that Granite City Works has already started construction on a new baghouse. Mr. Coulson, EWG, observed that with this action and the shut down of the Doe Run facility the area will be going in a good direction. Ms. Bhesania, USEPA Region 7, asked if the Granite City controls were part of a USEPA/state consent decree or judgement. Mr. Bloomberg, Illinois EPA, said that there was a Memorandum of Agreement (MOA) between Granite City Works US Steel and Illinois EPA but there have been changes over time including the time frame. There is nothing in the MOA that USEPA would consider enforceable. Granite City Works of US Steel has a construction permit for the new baghouse. This permit gives them permission to construct but does not mandate construction. Once the baghouse is constructed and/or operating under a permit, that will be considered federally enforceable conditions.

Mr. Tilley, St. Charles County, asked if a non-attainment area remains in non-attainment until there is good data. Mr. Bloomberg, Illinois EPA, said that an area stays in non-attainment until there is clean data and a plan with enforceable control measures which show that the area can stay in

attainment.

V. American Fuel Group Report - Postponed  
- St. Louis Regional Clean Cities Program

VI. 2013 Ozone Season Report  
- Michael Coulson, East-West Gateway Council of Governments

In the Ozone Data Sharing Project, EWG acts as a repository of ozone data collected from April 1 through October 31 from ten monitors in the St. Louis region. EWG performs a preliminary quality assurance screening, enters data into a computerized spreadsheet and prepares monthly and weekly reports for partner agencies.

The 2008 ozone standard is 75 parts per billion (ppb). An exceedance of the standard occurs when an eight-hour average of values is calculated to be greater than 75 ppb on any given day. A violation of the standard occurs when a three-year average of the annual fourth highest eight-hour average (out of 214 days) is calculated to be greater than 75 ppb. All ten monitors have to pass this test for the area to be considered in attainment of this standard. For the 2013 ozone season, there were 15 exceedances of the 2008 eight hour ozone standard over seven days. In comparison, the 2012 season had 40 ozone days with 170 exceedances. The temperatures of the 2013 summer were average, with a cool period, but there was a heat wave in late August and early September.

To put these numbers into context, annual exceedances of the 2008 eight-hour ozone standard for 1999-2013 were reviewed. Over this period, there were five years with over 170 exceedances. When the five-year running average of these exceedances is examined, continue to see ozone levels decrease. Over time different mobile and industrial control strategies have been implemented and area is continuing to make progress in terms of reducing overall ozone levels.

In 2012 the St. Louis area was classified as a marginal non-attainment area for the 2008 ozone standard. Marginal non-attainment areas have to attain this standard by December 2015. USEPA implementation guidance is still to be finalized identifying what kind of control strategies would be required. Ms. Kemp, USEPA Region 7, said that the comment period for the proposed implementation guidance rule ended in September and USEPA is in the process of reviewing and responding to the over 50 comments received. It is anticipated that USEPA will release the final rule in March 2014. Mr. Bloomberg, Illinois EPA, said that the Chicago area was also marginal.

Mr. Winkelmann, MoDNR, said that Missouri had provided comments to USEPA on the unique situation of the St. Louis area and requested some specificity for the region (two states, eight counties, two USEPA regions). Missouri asked for guidance on controls they can do as are running out of things to do at the federal level and commented on the redesignation substitute option for areas with overlapping standards. USEPA has indicated that they will consider the unique situation of the St. Louis area.

As part of the Conformity Determination process, vehicle emission levels and vehicle miles traveled

(VMT) have been modeled over time. Over the next ten years it is anticipated that pollutant levels will be reduced. Regional VMT levels peaked in 2004 at 72 million miles. Since then there has been a small decrease. It is projected that over time the flattening of VMT will continue. Trends like these will help the area to attain the 2008 ozone standard. Additional information on air quality in the St. Louis area can be found online at the AQ Resource Center section of the EWG website at [www.ewgateway.org/environment/aq/aq.htm](http://www.ewgateway.org/environment/aq/aq.htm).

Mr. Coulson, EWG added that much progress has been made since the 1930s when streetlights in the City of St. Louis were on during the day because of the air pollution. Mr. Winkelmann, MoDNR, pointed out that St. Louis was one of the first cities in the U.S. to ban the use of soft coal for residential furnaces. Tucker Boulevard was named for Mayor Raymond Tucker who served as Air Pollution Commissioner during the administration of Mayor Bernard F. Dickmann. Prior to that he was a Civil Engineering professor at Washington University concentrating on air pollution control. Mr. Coulson, EWG, added that in 1934 Mayor Dickmann appointed Raymond Tucker as Smoke Commissioner. Mr. Tucker led the effort to pass a Smoke Ordinance for the City of St. Louis.

Mr. Winkelmann, MoDNR, said that as the ozone season ends, it appears that the fourth highest eight-hour average for the West Alton monitor was 71 ppb which puts this monitor back into attainment of the 1997 eight-hour ozone standard (85 ppb) and the region. It has been a challenge for Missouri to receive approval of their maintenance plan for the 1997 ozone standard due to litigation surrounding the federal transport rule (Cross State Air Pollution Rule or CSAPR). As long as the earlier Clean Air Interstate Rule remains in place, the state can rely on it and can move forward with a maintenance plan for the 1997 eight-hour ozone standard.

Mr. Bloomberg, Illinois EPA, added that when there was a violation in 2012 at the West Alton monitor, USEPA required Illinois to conduct a study to determine the cause of the violation and what could be done since Illinois had an approved maintenance plan for the 1997 standard. The study concluded that the violation was the result of extraordinary weather conditions and there are controls coming which would help in the future to reduce emissions. Does not appear there is anything else Illinois has to do. A similar study had to be performed for the Chicago area.

Mr. McMahon, Federal Highway Administration Missouri (FHWA MO), asked if St. Louis area could reach attainment by 2015. Mr. Coulson, EWG, said it was possible with two more years of good monitoring data. Mr. Bloomberg, Illinois EPA, said that pollutant levels are lower but that pollutant standards can be revised. USEPA and the Clean Air Science Advisory Committee are continually evaluating what the effect of pollutant levels is on human health. If doing so, it is not uncommon for USEPA to reduce the standard. It is anticipated that the ozone standard could be set around 65 ppb. Mr. Coulson, EWG, said that after a standard is set, there are usually lawsuits by either industry or environmentalists or both and that can delay implementation.

Mr. Winkelmann, MoDNR, said that a maintenance plan for the 2008 standard containing contingency measures if a violation were to occur and redesignation request would have to be prepared. The process will be delineated in the USEPA implementation rule. As soon as implementation rule is finalized by USEPA, Missouri can move forward with a maintenance plan.

VII. Update Activities of the States  
- Joe Winkelmann, Missouri Department of Natural Resources

MoDNR has received a letter from USEPA Region 7 indicating that the motor vehicle emissions budgets from the Early Progress Plan for the Missouri portion of the St. Louis (NO-IL) marginal non-attainment area for the 2008 eight-hour ozone standard are adequate for use in future Conformity Determinations. This notice will be published in the Federal Register shortly. The budgets will be effective 15 days after publication.

The October 30 Missouri Air Conservation Commission (MACC) has been canceled due to a lack of a quorum of MACC members. It has been rescheduled for Thursday, November 21 at 9 a.m. in Jefferson City. At this meeting there will be a public hearing on the proposed PM2.5 boundary recommendations. MoDNR is statutorily required to hold a public hearing and receive comments before the Governor can submit a recommendation letter to USEPA Region 7 by the December deadline. The weight of evidence analysis and monitoring data shows that all Missouri counties are in attainment of the 2012 annual PM2.5 standard. The recommendation will be for all Missouri counties to be designated as attainment/unclassifiable. At this meeting, the MACC is to adopt on the Commercial/Industrial Solid Waste Incinerator rule and plan. This state rule incorporates by reference the federal requirements for commercial/industrial solid waste incinerator units. The MACC is to adopt the update of Missouri's general definitions rule.

VIII. Other Business

Ms. Funk, MECAP, said that earlier this month the third Metro East Air Quality Forum was held at the Caseyville Township Center. Approximately 105 people with public health and environmental interests attended. There were presentations on indoor air pollution, the 2013 ozone season, transportation and sustainability activities. The keynote speaker was Dr. Kincaid of St. Louis University who talked on asthma as a public health issue.

The next meeting of the AQAC will be on January 28, 2014. There being no other business, the meeting of the Air Quality Advisory Committee was adjourned.

AGENDA  
AIR QUALITY ADVISORY COMMITTEE\*  
**TUESDAY March 25, 2014**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**
  - Michael Coulson, Chair, East-West Gateway Council of Governments
  - A. Minutes of January 28, 2014 Meeting
  
- II. CMT Transit Oriented Development (TOD) Efforts**
  - Kim Cella, Citizens for Modern Transit
  
- III. TravelGreen Program**
  - Meredith Klekotka, Trailnet
  
- IV. Update on Lake Michigan Air Directors Consortium (LADCO) Activities**
  - Rob Kaleel, Lake Michigan Air Directors Consortium
  
- V. American Fuel Group Report**
  - 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 Date April 29, 2014**
  
- VIII. 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.

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, January 28, 2014  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Joe Winkelmann - Missouri Department of Natural Resources  
Mike Henderson - Missouri Department of Transportation  
Jeremy Rogus - St. Louis County Health Department  
David Bloomberg - Illinois Environmental Protection Agency  
Brad McMahon - Federal Highway Administration, MO  
Joe Gray - Illinois Department of Transportation, District 8  
Christopher Schmidt - Illinois Department of Transportation  
Susannah Fuchs - American Lung Association (telephone)

Others Present:

Lachala Kemp - U.S. Environmental Protection Agency Region 7 (telephone)  
Bob Randolph - Missouri Department of Natural Resources  
Kevin Herdler - St. Louis Regional Clean Cities  
Meredith Klekota - Trailnet  
Angie Hoecker - Missouri Department of Transportation  
Andy Knott - Sierra Club  
John Hickey - Sierra Club  
Joe Right - RideFinders  
Joe Wilson - Citizen

Staff:

David Wilson                      Carol Lawrence                      Johnnie Smith

- I.        Call to Order  
          - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWG). The minutes of the October 29, 2013 AQAC meeting were approved as circulated. Mr. Coulson announced that Mr. Kaleel was not able to attend the meeting and has been rescheduled for the March 25 AQAC meeting.

- II.        OneSTL Next Steps  
          - David Wilson, East-West Gateway Council of Governments

In 2010, EWG received funding from the U.S. Department of Housing and Urban Development (HUD) through the Partnership for Liveable Communities program to prepare a regional plan for sustainable development. The Partnership is made up of HUD, U.S. Environmental Protection

Agency (USEPA) and U.S. Department of Transportation (DOT). There were also ten local partners involved. The regional plan, now called OneSTL, took two and one half years to complete. By the time plan goals, objectives and strategies identified, more than 50 organizations and agencies had input into the plan. The EWG Board of Directors approved OneSTL in December 2013.

A OneSTL implementation steering committee will be put together over the next few months. It is to be a broad-based, representative committee that can help in planning programs, identifying projects and helping the partners to move forward with implementation over the next few years. Have begun to schedule speaking opportunities with organizations and local governments to introduce the plan and invite them to get involved. Joining the OneSTL Network is one way. The Network allows anybody (Public agency/organization, business, community group or a resident) interested in sustainability to have access to information. Hope to create a dynamic interchange in which people will use the OneSTL website's comment form to share information on what is going on in their community and learn of data and activities. OneSTL has been asked to co-sponsor or help organize several workshops and conferences this year.

OneSTL is not solely dependent on EWG for implementation. The notion is that no one agency can make this region sustainable and no one local government can. The only way regional plan can be implemented is with many people getting involved, identifying their issues and working on them. Many agencies have a piece of plan and as long as each does their piece, region will move forward. Hope to see the number involved grow.

EWG staff have been refining the OneSTL website ([www.OneSTL.org](http://www.OneSTL.org)). OneSTL is designed to be a web-based plan. Website is to serve as a consolidated clearinghouse for information. On the website can access each section of the OneSTL document or download the entire document as a pdf. The plan has been structured around nine themes for the future of the St. Louis region. These themes grew out of an extensive community engagement effort to learn the public's and local governments' attitudes and concerns. The themes include: collaborative; prosperous; distinctive; inclusive; green; prepared; connected; efficient; and educated. Each theme has several goals associated with it and each goal has at least one objective. For each objective, several strategies were identified and implementing agencies were delineated. Also on-line is a sustainable solutions toolkit containing information on 100 different sustainability-related topics. The About Us section contains information on the OneSTL partners and associated links. As organizations joins the OneSTL Network information about them will be added.

A key element of OneSTL is how to measure movement toward sustainability at a regional scale. EWG's Research Department has investigated what indicators can be tracked using existing sources of information. Each theme have six to ten metrics. EWG Research Department will be responsible for tracking and preparing regional snapshots to see if the region is moving in the right direction or not or there is no change. Metrics are to be part of the website and can change over time. The theory is that if we track and report on these metrics, that is going to call attention to these issues and raise level of awareness. Awareness will spur more action toward improved practices.

The Resources section on the website contains over 75 reports, research documents and studies

prepared by the partners over the last three years. For example, St. Louis County developed draft ordinances and codes and prepared a code assessment how-to manual. A consultant hired by Metro, EWG and Great Rivers Greenway evaluated the general economic development potential for all MetroLink stations and performed an in-depth Transit Oriented Development analysis for a representative sample of stations which can serve as a framework for future planning.

III. St. Louis Area Ozone SIP Update: 1997 NAAQS Maintenance Plan and 2008 NAAQS Implementation Rule  
- Joe Winkelmann, Missouri Department of Natural Resources

The Missouri Department of Natural Resources (MoDNR) is moving forward with their Maintenance Plan and redesignation request for the 1997 eight-hour ozone National Ambient Air Quality Standard (NAAQS) for Missouri portion of St. Louis area. There has been clean monitoring data since the 2007-2009 time period. With an attainment designation for the 1997 standard, Missouri can focus its efforts on 2008 standard. In November 2011 Missouri submitted a Maintenance Plan and Redesignation Request to USEPA for the 1997 ozone national ambient air quality standard. USEPA did not find the motor vehicle emissions budgets adequate for conformity and did not approve the Plan due to litigation surrounding federal interstate transport regulations (Clean Air Interstate Rule or CAIR) that were relied on in the Plan. The Washington, D.C. U.S. District Court found that until a replacement rule comes out, CAIR shall remain in place. Based on November 2012 USEPA guidance, Maintenance Plans which rely on CAIR can be approved.

MoDNR is revising the Maintenance Plan for the 1997 standard so that 2025 is the end year (ten years after expected 2015 approval by USEPA). In February, the Maintenance Plan and redesignation request are to be posted on the MoDNR website. The Missouri Air Conservation Commission (MACC) will hold a public hearing in March and is to adopt them both in April. Later this year USEPA should approve the Maintenance Plan and designate the Missouri counties in attainment. These actions should occur before the implementation rule for 2008 standard is finalized in August 2014.

In June 2013 USEPA's proposed implementation rule for the 2008 ozone standard was published. This rule would revoke the 1997 standard for all purposes and delineates how the states are implement this standard. It includes proposed anti-backsliding obligations and transition guidance for moving to the 2008 standard. All anti-backsliding obligations under the Clean Air Act are met if an area is redesignated to attainment of the 1997 standard prior to the standard's revocation. The final rule is expected to be published in August 2014.

In USEPA's July 2012 2008 standard area classification rule, the St. Louis area (MO-IL) was classified as a Marginal non-attainment area. Marginal areas have fewer implementation plan requirements as they are closest to attainment. A Marginal State Implementation Plan (SIP) is to have: comprehensive base year emissions inventory; non-attainment New Source Review (NSR) permitting program; emission reporting requirement for major sources; and transportation conformity determination. Missouri prepares an emissions inventory every three years and is working with USEPA on a 2008 inventory. The state has an on-going NSR construction permit program as well

as an emission reporting program for large sources. Transportation Air Quality Conformity is coordinated by EWG. The 2008 eight-hour ozone Marginal SIP will be posted on the MoDNR website for public comment on April 28, 2014. On May 29 the MACC will hold a public hearing on this SIP and adopt it at their July 2014 meeting.

In the July 2012, USEPA revoked the 1997 standard for Conformity Determination purposes only. Non-attainment areas were given one year to conduct Conformity Determination using the 2008 standard. EWG addressed this requirement in their January 2013 Conformity Determination. Since USEPA revoked the 1997 standard for conformity purposes, the revision to the Maintenance Plan for the 1997 standard does not have to establish budgets.

To aid EWG's future Conformity Determination efforts, MoDNR voluntarily developed an Early Progress Plan for the 2008 standard which contained 2015 motor vehicle emission budgets. In March 2013 the MACC adopted the Early Progress Plan. It was then submitted to USEPA. In a letter to MoDNR dated October 28, 2013, USEPA found the budgets adequate for use in future Conformity Determinations.

Mr. Henderson, MoDOT, asked if there was any indication when USEPA will take action to revise or maintain the 2008 ozone standard. Ms. Kemp, USEPA Region 7, said that in February USEPA is to release for external review a second draft Risk/Exposure Assessment for Ozone and a second draft Policy Assessment. USEPA will then meet with the Clean Air Science Advisory Committee (CASAC) at the end of March. It is possible that there could be a decision late this year.

IV. 2010 One-Hour Sulfur Dioxide National Ambient Air Quality Standard Designation and State Implementation Plan Requirements  
- Bob Randolph, Missouri Department of Natural Resources

Sulfur dioxide (SO<sub>2</sub>) is produced during the combustion of sulfur-containing fossil fuels such as coal and fuel oil during metal smelting and industrial processes. Sources include industrial boilers, power plants and mobile sources. SO<sub>2</sub> is more of a localized phenomena with highest concentrations generally near large combustion sources. With the lowering of sulfur levels in gasoline and diesel, mobile sources make up a smaller portion of SO<sub>2</sub> emissions.

The SO<sub>2</sub> standard was established in the 1970s and USEPA has reviewed it over the years. In June 2010, USEPA revised the SO<sub>2</sub> standard to be a one-hour standard of 75 parts per billion (ppb). MoDNR's first task was to develop boundary recommendations based on 2007-2009 data from the monitor network in place at the time the standard was finalized. Missouri recommended that portions of Jackson County, Jefferson County and Greene County be designated as non-attainment.

Mr. Hickey, Sierra Club, asked if the biggest emitter of SO<sub>2</sub> in the greater St. Louis area was the Ameren Labadie power plant (Franklin County). Mr. Randolph, MoDNR, responded yes. Mr. Hickey Sierra Club, then asked if there were any SO<sub>2</sub> monitors located in St. Charles, Franklin or St. Louis Counties. Mr. Randolph, MoDNR, said no and that he will talk about this later.

Mr. Randolph, MoDNR, said that the current monitoring network nationwide was not designed to address the one-hour SO<sub>2</sub> standard. Many large SO<sub>2</sub> sources in the U.S. are not in first round non-attainment areas. USEPA recognizes there are deficiencies in the existing monitoring networks. The Monitoring Group in the Air Pollution Control Program is reviewing the SO<sub>2</sub> network and evaluating future monitoring sites. Based on 2007-2009 monitoring data, in August 2013 USEPA designated a portion of Jackson County (Kansas City area); and portion of Jefferson County (Herculaneum and Festus townships and Missouri portion of Valmeyer and Selma townships) as non-attainment. Attainment Demonstration SIPs are due to USEPA in April 2015. The deadline to attain the standard is October 4, 2018.

There are five required elements for a non-attainment area SIP. A Reasonable Further Progress document is to be prepared. MoDNR is working on an accurate emission inventory of all current SO<sub>2</sub> sources within and impacting the non-attainment area. In the Attainment Demonstration, MoDNR staff will conduct computer modeling and work with facilities located within a 10 kilometer (km) buffer (immediate surrounding area) of the violating monitor and those within a 50 km buffer. All sources of SO<sub>2</sub> near the non-attainment area were included in an initial evaluation to determine which sources/facilities to explicitly include the computer model. Modeling must be performed using potential or allowable (permanent and enforceable) emission rates. Actual emissions from a facility's Emissions Inventory Questionnaire (EIQ) can only be used as a screening tool. The modeling can include facility negotiated limits/conditions necessary for it to be in compliance. Any limit identified has to be shown to be necessary to comply with the standard and part of a permanent and enforceable action. MoDNR is working with those largest sources/facilities inside the 50 km buffer, including Ameren Labadie, to verify potential limits and identify what actions are occurring or what plans already made to lower SO<sub>2</sub>. Begun dialogue on what control options facilities are going to do to reduce impact for future rounds and develop recommendations. Our task is to determine their impact on any receptor within the Jefferson County non-attainment area. At the end of 2013 the Doe Run Company closed their primary lead smelter in Herculaneum. A model assumption was that there will be no smelting operations and that the remaining units at this facility will use natural gas, minimizing SO<sub>2</sub> emissions.

Options for controls include incorporating limits into the Missouri SO<sub>2</sub> SIP. MoDNR is working on an amendment to the state sulfur rule as many requirements focused on motor fuels and outdated codes. The State could issue construction and/ operating permits with emissions limit/condition. Controls can include combination of control equipment, fuel controls, emission rate limits or limits on allowable emissions. If state rule does not work, state could enter into a Consent Judgement/Decree with the source to establish an emission limit/conditions. Another option to reduce impact, would be to identify limits through a modeled attainment demonstration.

In February 2013 USEPA released a "Next Steps" paper describing their strategy for future rounds non-attainment area designations. Emission thresholds will be lower in urban areas and higher in rural areas. The states will have flexibility to rely upon monitoring or modeling data, as appropriate. This allow states to work with affected facilities and citizens in order to develop monitor or model approach. Incentives and time for facilities to reduce emissions early and avoid non-attainment designations in future rounds.

USEPA is taking the approach that in future rounds of non-attainment designations, the states will be looking at all of those larger SO<sub>2</sub> sources. MoDNR will begin a dialogue with the larger sources, like Ameren Labadie, to gear them up for future round analysis and to consider emission reduction alternatives. Options under future rounds is for MoDNR to work with individual facilities to develop individual monitor networks to determine where peak concentrations would be in facility or to go with a modeling approach. If a facility wants to establish local monitor network, has to be approved by MoDNR and USEPA. For facilities that are going to use the modeling approach, Missouri would submit designation recommendation during 2017 and submittal deadline addressing facilities using monitoring data would be during 2015-2016. USEPA is to make designations for modeled areas in December 2017 and for monitored areas in December 2020.

Mr. Hickey, Sierra Club, asked if SO<sub>2</sub> sources within the buffer zone have been modeled and if sources are shown to be above standard, does that trigger any action. Mr. Randolph, MoDNR, replied that sources in the buffer area have been modeled. Information collected could be used in the future designation round(s). The task now is to determine the impact of sources on first round non-attainment area. MoDNR is working with facilities to get better assessment of what their peak levels are. Anticipate any facility within the 50 km buffer would have a strong potential for some type of emission control strategy. Just because a facility is not within the non-attainment area, does not mean they will not have to do something for the first round. MoDNR will work with facilities. Hopefully, that will be enough to bring that area/facility into attainment for future rounds.

V. American Fuel Group Report  
- Kevin Herdler, St. Louis Regional Clean Cities Program

The St. Louis Regional Clean Cities program (SLCC) along with Kansas, Iowa, Nebraska and Missouri received a grant from the U.S. Department of Energy (DOE) for an Alternative Fuel Implementation project. ICF International has been selected to develop a methodology using MOVES to evaluate the air quality impact/emission reduction of alternative fuel vehicles under different scenarios. There are limited alternative fuel inputs for the MOVES model. The consultant has been asked to develop emission reduction factors for the following American fuels: liquefied natural gas (LNG); compressed natural gas (CNG); electric vehicle and electric plug-in; propane; biodiesel at 20 and 50 percent; and ethanol (E-85). Since these fuels are not in MOVES now, consultant is trying to develop a way so USEPA can substitute them. Consultant is working with USEPA Region 7, Illinois EPA and MoDNR. The beta version of the methodology should be available in the next couple of weeks. Beta version will be reviewed by EWG and other stakeholders. Once review is finished, a webinar on the methodology and how to use it will be put together. Methodology is designed so that any city, county, council of governments or state can plug

in their own numbers. Mr. Herdler is also developing and conducting training for code enforcement personnel and first responders about these fuels.

Landscape firms are beginning to utilize propane-fueled mowers. These mowers are cleaner than conventionally fueled mowers (which do not have emission controls) and have a longer maintenance life. In addition, companies have less gasoline fuel loss. Ms. Fuchs, American Lung Association

(ALA), asked about the propane shortage. Mr. Herdler, SLCC, said that it was an extreme situation, particularly in the Midwest. Previously propane cost \$1.69 a gallon for home heating and now it is \$4.00 a gallon. At a meeting with Amerigas, Mr. Herdler learned that Amerigas is using railcars to bring in propane from Alaska and elsewhere. Hopefully when the cold snap breaks, companies will be able to replenish their supplies and prices will go down. Public CNG stations are at Lambert Airport and in Pontoon Beach. Allied Waste, Progressive and Waste Management are all using propane-powered trash trucks. The Parkway school district has a fleet of CNG buses and is working on a fueling station.

SLCC is working with the Village of Marissa in St. Clair County on a landfill gas recovery project. Waste Management has given the landfill gas to Marissa. Plan to install equipment to capture the gas and send it to the Ameren pipeline. Also liquid carbon dioxide (CO<sub>2</sub>) will be collected and sold to another company. It is estimated that the landfill will be in operation until 2060 and gas will be available for 30 years after that. Waste Management has announced that it plans to install similar equipment at its Milan landfill. Aim to provide fuel for their trash trucks in Chicago and St. Louis. SLCC is working with the Coast Guard and several businesses to convert at least three St. Louis-based harbor boats to CNG or LNG.

In 2014 SLCC will be 20 years old. SLCC is planning a celebration for this summer. A round of applause was given for this milestone achievement.

#### VI. Update Activities of the States

- David Bloomberg, Illinois Environmental Protection Agency
- Joe Winkelmann, Missouri Department of Natural Resources

The Illinois Pollution Control Board (IPCB) held its first hearing on the lead rule for Granite City and Chicago. There was enough agreement from all parties that the IPCB canceled future hearings. The rule is expected to proceed to adoption. Illinois EPA has already submitted it to USEPA Region 5 for parallel processing. Mayco Industries in Granite City has received a construction permit to make the changes necessary for it to comply with this lead rule.

Petcoke is a by-product of the petroleum refining process and is stored in the Chicago area and the Metro East. It is a solid material similar to coal and can be a fuel source for power plants. In Chicago, 70-80 foot high petcoke storage piles are located near residential areas. After a windstorm last year blew material onto residences, the City of Chicago has proposed a petcoke management rule. The Illinois EPA proposed an emergency rule to the IPCB which the Board did not accept. Illinois EPA is examining alternatives to address concerns. This could be a multi-state issue.

For the two Illinois SO<sub>2</sub> non-attainment areas, Illinois EPA is talking with culpable sources and seeking either permit limits or regulations. Illinois looking ahead to the outcome of the litigation over the Cross State Air Pollution Rule (CSAPR) now before the U.S. Supreme Court. In the meantime, USEPA is moving forward with a possible transport rule (if ruled against). There have been many discussions on how to model and address that concern. The Ozone Transport Commission (composed of northeast and Mid-Atlantic states) wants a number of Midwest states, including

Illinois, to join the Commission. Illinois has declined and now the Commission is forcibly trying to add these states.

At the January 30 MACC meeting, three rules are up for public hearing. One is an amendment to 10 CSR 10-6.200 Hospital, Medical, Infectious Waste Incinerator rule removing start-up, shutdown and malfunction exemptions from any emission limits. The second is to rescind the outdated 10 CSR 10-5.240 Additional Air Quality Control Measures May be Required When Sources are Clustered in a Small Land Area. It was passed before the federal Clean Air Act was enacted. The last item up for public hearing is to amend 10 CSR 10-6.010 National Ambient Air Quality Standards to incorporate federal standards into the state rules so state rules are consistent.

MoDNR is in the process of preparing an amendment to 10 CSR 1-5.220 to remove Stage II Vapor Recovery systems from this rule. The draft rule amendment has been posted on the Rules in Progress section of the Air Pollution Control Program web page.

## VII. Other Business

Mr. Hickey, Missouri Sierra Club, observed that the MACC is a seven member body whose members are nominated by the Governor and approved by the Senate. Currently, the MACC only has four members. One MACC member is from Crystal City but the remainder do not reside in non-attainment areas. Sierra Club thinks that it would be good if at least two of the empty seats were filled by people from the St. Louis area (42 percent of the breathers in the state). Need to look for people who care about clean air and would be effective advocates. Mr. Coulson, EWG, said that Dr. Fishman from St. Louis University has submitted his name. Mr. Winkelmann, MoDNR, added that the MACC has been discussed at AQAC and at other meetings. Information on the MACC can be found at RSMo 643.040. He encouraged everyone to consider possible nominees.

Ms. Klekota, Trailnet, asked if at a future meeting, someone would talk about the connections between air quality and public health and could someone talk on the impact of transportation on PM<sub>2.5</sub>. Mr. Coulson, EWG, said that it is good to keep health involved when discussing air quality, and not just bureaucratic structure. Mr. Bloomberg, Illinois EPA, added that Ms. Funk of Metro East Community Air Project (MECAP) has hosted air quality and public health forums for the last several years. Mr. Winkelmann, MoDNR, said that the preamble section of the National Ambient Air Quality Standard contains a discussion on the health effects/impacts of specific pollutants

The next meeting of the AQAC will be on March 25, 2014. There being no other business, the meeting of the Air Quality Advisory Committee was adjourned.



**EAST-WEST GATEWAY**  
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

**AGENDA**  
**AIR QUALITY ADVISORY COMMITTEE\***  
**TUESDAY April 29, 2014**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**  
-Michael Coulson, Chair, East-West Gateway Council of Governments  
A. Minutes of March 25, 2014 Meeting
- II. East-West Gateway Travel Demand Modeling and Transit Survey**  
- Lubna Shoaib, East-West Gateway Council of Governments
- III. Update to the Near-Roadway Nitrogen Dioxide Air Quality Monitoring Project**  
- Stephen Hall, Missouri Department of Natural Resources
- IV. Metro East Community Air Project Activities**  
- Amy Funk, Metro East Community Air Project
- V. American Fuel Group Report**  
- St. Louis Regional Clean Cities Program
- VI. Update Activities of the States**  
- Illinois Environmental Protection Agency  
- Missouri Department of Natural Resources
- VII. Other Business - Next Meeting Date May 27, 2014**
- VIII. Adjournment**

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Mayor, City of St. Louis

Vice Chair  
Mark A. Kern  
Chairman, St. Clair County Board

2nd Vice Chair  
Charlie A. Dooley  
County Executive  
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Executive Committee  
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Franklin County

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Jefferson County

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Lewis Reed  
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Thomas P. Schneider  
St. Louis County Municipal League

John White  
St. Charles County

*Regional Citizens*  
Richard Kellett  
John A. Laker  
Brandon Perry  
James A. Pulley  
Dave Stoecklin

*Non-voting Members*  
Charles Ingersoll  
Illinois Department of  
Transportation

Eddie Koch  
Illinois Department of Commerce  
and Economic Opportunity

John Nations  
Metro

Doug Nelson  
Missouri Office of Administration

Dave Nichols  
Missouri Department of  
Transportation

Executive Director  
Ed Hillhouse  
Assistant Executive Director  
James M. Wild

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

Gateway Tower  
One Memorial Drive, Suite 1600  
St. Louis, MO 63102-2451

314-421-4220  
618-274-2750  
Fax 314-231-6120

webmaster@ewgateway.org  
www.ewgateway.org

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, March 25, 2014  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Mike Henderson - Missouri Department of Transportation  
Jeremy Rogus - St. Louis County Health Department  
David Bloomberg - Illinois Environmental Protection Agency  
Joe Gray - Illinois Department of Transportation, District 8  
Christopher Schmidt - Illinois Department of Transportation  
Jack Fishman - St. Louis University  
Mike Right - AAA- Auto Club of Missouri  
Mark Leath - Missouri Department of Natural Resources (telephone)

Others Present:

Kim Cella - Citizens for Modern Transit  
Rob Kaleel - Lake Michigan Air Directors Consortium  
Kevin Herdler - St. Louis Regional Clean Cities  
Meredith Klekota - Trailnet  
Andy Knott - Sierra Club  
Amy Funk - Metro East Community Air Project  
Kathy Andria - American Bottom Conservancy  
David Shanks - Boeing  
Amy Bhesania - U.S. Environmental Protection Agency Region 7 (telephone)

Staff:

David Wilson                      Carol Lawrence

- I.        Call to Order  
          - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWG). Mr. Bloomberg, Illinois Environmental Protection Agency (Illinois EPA) requested that the last sentence of paragraph four on page seven be revised to read as follows: Mayco Industries in Granite City has applied for a construction permit to make the changes necessary for it to comply with this lead rule. With this revision, the minutes of the January 28, 2014 AQAC meeting were approved.

- II.        CMT Transit Oriented Development (TOD) Efforts  
          - Kim Cella, Citizens for Modern Transit

Mr. Wilson, EWG, introduced Ms. Cella, Executive Director of Citizens for Modern Transit (CMT). CMT was a core partner in the OneSTL, Regional Plan for Sustainable Development, effort. EWG worked with CMT and Metro on Transit Oriented Development (TOD) plan for station areas.

Ms. Cella, CMT, said that CMT has appreciated the opportunity to work with all the OneSTL consortium partners. She gave an overview of the TOD work CMT has undertaken and is continuing to do. The St. Louis region has an award winning transit system in Metro. In 2013, there was record ridership on MetroLink (light rail) and MetroBus. According to Metro, 97 percent of the jobs in the City of St. Louis and St. Louis County are accessible by transit, whether MetroLink, bus or Call-a-Ride. Described work have been doing focused on the 37 MetroLink stations to entice developers to move some development forward and potential new station alignments.

TOD is a type of community development that includes a mixture of uses and mixture of incomes integrated into a walkable neighborhood and located within a half mile of quality public transit stop. For St. Louis region, looking develop around MetroLink stations. For every dollar invested in transit, there is a significant return for the region through improved connectivity, sustainability, public health, independence, economic viability and vitality. One or both ends of a transit trip involves some type of physical activity either walking or bicycling.

CMT has prepared a number of products for OneSTL. TOD overlay codes/form based codes were developed as tools to link transit to development around stations in local communities/municipalities. In February 2014 the City of Pagedale adopted overlay code for the area around the Rock Road MetroLink station. A draft overlay code was prepared for the City of St. Louis for the area around the Grand station. A best practices TOD guide for local governments was developed with emphasis on a slow growth area, like the St. Louis region. CMT and Metro worked with a consultant to put together real estate spec sheets for the area around each of the 37 MetroLink stations. This information can be used to promote development opportunities and facilitate greater awareness. CMT also established a National Lecture series to highlight TOD trends in other cities.

Examples of new TOD in St. Louis include the \$250 million mixed use MX Exchange development atop the Convention Center MetroLink station in downtown St. Louis and with bus access. Downtown there are more than \$530 million investments in redevelopment which is adjacent to or just blocks away from transit. The Central West End is experiencing similar in-fill development.

As part of OneSTL effort, CMT sponsored Urban Land Institute (ULI) Technical Assistance Panels at the UMSL South, Grand and Belleville IL stations and the possible future Cortex station. CMT has received an additional \$75,000 grant to create form-based overlay zoning. The University of Missouri St. Louis (UMSL) is serving as master developer for a Chapter 353 Redevelopment Corporation for the area around the USML South station. A request for proposal for development around the Belleville station is ready to be released.

Near conclusion is a feasibility study for a possible MetroLink station between Sarah and Boyle in the Cortex development in midtown St. Louis. CMT secured the grant and local match was raised from public/private stakeholders including Metro, BJC Healthcare Systems, Washington University, Cortex and Great Rivers Greenway. On March 27, CMT will present the findings of the Cortex feasibility study at the 4240 Building on Duncan Avenue. It then will be submitted to the Federal Transit Administration (FTA). After that, Metro and the other stakeholders will have to prepare a capital/operating plan and identify funding sources.

CMT and St. Louis Regional Clean Partnership (SLRCAP) plus other partners are involved in a number of events to promote the link between transit alternatives, clean air and accessibility. In May there will be a Metro Market event at the Shrewsbury Station. Purpose is to help people envision possibilities around MetroLink stations over and above a park and ride lot. On June 7 CMT is hosting a Wabash Visioning Session with stakeholders to look at the redevelopment potential for the old Wabash Railroad Station near the Delmar MetroLink Station. CMT continues to work with employers in St. Louis to encourage and incentivize transit use by their employees. In June CMT is introducing the Try & Ride program. The goal is to introduce new riders to the transit system. CMT will provide personalized routes from home to work and back, complimentary tickets for one month and a journal to track experiences. CMT will contact the new riders on a regular basis for two months. Research shows that if a person tries transit for a longer period of time, then they are more likely to learn how to use transit and stick with it.

Mr. Wilson, EWG, said that the real estate spec sheets were available on the OneSTL website ([www.onestl.org](http://www.onestl.org)). If consider OneSTL a 30 year plan, then there is tremendous opportunity for region to take advantage of this TOD resource. Ms. Cella, CMT, said that at the National Lecture series, developers were saying that they did not know what potential for development around stations was and what Metro could do in terms of leases and air rights, etc.

Ms. Klekotka, Trailnet, asked what are the TOD performance measures in OneSTL. Mr. Wilson, EWG, said that the EWG Research department has committed to tracking regional metrics and this information is available on the OneSTL website. The metrics are a way to help the conversation move forward. Ms. Cella, CMT, added that CMT maintains a development database which tracks development around light rail stations ([www.cmt-stl.org](http://www.cmt-stl.org)). So far, have tracked more than \$16 billion in development around the stations and light rail has a part.

Ms. Funk, Metro East Community Air Project (MECAP), asked how much messaging there is on the websites concerning associated health benefits of TOD. Ms. Cella, CMT, said that CMT has health information on their website. CMT's Ten Toes Express program is aimed at connecting older adults with MetroLink and MetroBus and health benefits of associated walking is a program element.

Mr. Fishman, St. Louis University, asked how actual MetroLink ridership compared to estimates. Ms. Cella, CMT, said that from day one ridership has exceeded estimates. Ms. Andria, American Bottom Conservancy (ABC), asked how ridership is measured and if turnstiles will be installed to stop riding without tickets. Mr. Coulson, EWG, and Ms. Cella, CMT, said that on-board surveys are conducted, actual counts and bus farebox results are used. Metro is installing smart card technology which will track the number of rides instead of passengers.

### III. TravelGreen Program - Meredith Klekotka, Trailnet

Trailnet is a member-based organization of over 2,000 members. Its mission is to lead in fostering healthy, active and vibrant communities where walking, cycling and use of public transit are a way of life. Trailnet works to achieve this mission through policies, planning and programs at the bi-state level. It is a gold level, nationally recognized bike-friendly business. Trailnet's bicycling event program reaches 15,000 bicyclist a year. National household travel and transportation surveys

indicate that there is potential for shifting travel choices and for investment in alternative forms of transportation. Need to make sure that trip chain options include using transit and that employers and cities take alternatives forms into consideration when planning for their travel demand.

In the TravelGreen Program, Trailnet is working with businesses, universities and communities to promote car free commuting. Trailnet received funding for this program through the federal Congestion Mitigation Air Quality (CMAQ) program. TravelGreen is focused on individual behaviors and encouragement. The objective is to learn how and why to make biking part of a person's life. A key component of the TravelGreen Program is the Shift Your Commute trip tracking software found at [www.shiftyourcommute.com](http://www.shiftyourcommute.com). An individual can log on and enter information on their bus, light rail, bicycling or walking trips and find out the calories burned and carbon emissions saved. This information is reported to the Federal Highway Administration (FHWA) and other organizations to help drive infrastructure and support for this kind of investment.

The 2011-2014 Shift Your Commute trip summary shows that 26,000 car-free trips have been registered on this website. By going multi-modal with bicycling and transit can expand the distance commuted. Trailnet offers several bicycle education programs including Bicycle Smart classes showing people how to ride in traffic. Trailnet is working with businesses which want to be designated by the League of American Bicyclists as "Bicycle Friendly". Trailnet will assist businesses in reducing social and environmental barriers. Trailnet is hosting a workshop on the economics of bicycling.

Ms. Funk, MECAP, asked from a policy perspective, what were the top barriers to bicycle friendly areas and commuting. Ms. Cella, CMT, said that access to a MetroLink a station or a bus stop may not be the best for pedestrians, wheelchair users or bicyclists. Ms. Funk, MECAP, asked if Trailnet and CMT worked together to address barriers and is this part of OneSTL. Mr. Wilson, EWG, said that OneSTL sets the framework for collaboration between different organizations across the region working on different things but it does not require collaboration. These actions can help to start building healthier communities but there is a long way to go. Ms. Klekotka, Trailnet, added that infrastructure is important in terms of access and slowing down traffic speeds. Ms. Cella, CMT, said that another significant barrier is an individual's perception of transit in St. Louis (Missouri and Illinois) particularly MetroBus. The purpose of Try and Ride is to change that perception through providing specific transit route information and offering the Guaranteed Ride Home program. Ms. Andria, ABC, observed that even though everything about bike riding is healthy, in lot of areas may be riding behind polluting vehicles or on trails going through industrial areas. Ms. Klekotka, Trailnet, said that it is a balance between exposure and activity.

Mr. Knott, Sierra Club, asked for what activities Trailnet will use their U.S. Environmental Protection Agency (USEPA) Environmental Justice grant. Ms. Klekotka, Trailnet, said that Trailnet will be working on neighborhood greenways and doing pre-planning and community building to develop low stress routes to encourage people to get out on their bicycles.

#### IV. Update on Lake Michigan Air Directors Consortium (LADCO) Activities - Rob Kaleel, Lake Michigan Air Directors Consortium

The Lake Michigan Air Directors Consortium (LADCO) is one of five regional air planning agencies LADCO represents Ohio, Indiana, Illinois, Michigan, Wisconsin and Minnesota. When LADCO

was established in 1989, its goal was to develop the first photochemical grid airshed model in the Midwest which could be used in modeling for ozone, fine particle (PM2.5) and regional haze. Currently, LADCO has been working on the development of a 2011 base year photochemical modeling platform. LADCO is running the same weather models as the National Weather Service. The model is being run on a six minute time series for the entire year. The model domain is the continental U.S. plus Mexico and Canada. Point, area, mobile, non-road and biogenics emissions inventory data is also needed.

For the 2008 eight-hour ozone standard, USEPA finalized non-attainment designations in July 2012. Almost all areas in the Midwest were categorized as Marginal. Marginal areas are supposed to attain the standard within three years of designation, or by 2015. For a Marginal area the State Implementation Plan (SIP) consists of an emissions inventory.

When the states were assembling their recommendations for ozone non-attainment areas, 2008-2010 monitoring data was used. The summers of 2008 and 2009 were cooler and there was economic uncertainty. As soon as recommendations were made to USEPA, for first time in this period of meteorologic records had three consecutive years of above average temperatures. At the same the economy was better resulting in an increase in emissions. During the summer of 2012 almost every monitor in the Midwest was getting lots of exceedances. The states have made a lot of efforts through the years to reduce emissions but sometime those emission reductions are not enough to prevent exceedances when have extreme meteorology. The 2013 summer had cooler temperatures and a little more precipitation in the Midwest and ozone values came down. States are hoping that there will be good data in 2014 and 2015 so that by 2015, all they need to do is submit an emissions inventory. Opinion that there is a good chance that some or all of the monitors will not attain the 2008 standard by 2015. Unsure what USEPA is going to do as far as bumping up Marginal non-attainment areas to Moderate. Meanwhile, USEPA will have a proposal out for a tighter ozone standard.

Mr. Bloomberg, Illinois Environmental Protection Agency (Illinois EPA), reported that Illinois has been talking with USEPA Region 5 about this. According to USEPA, since the attainment date falls in the middle of the 2015 summer, the states are to use 2012-2014 data to show attainment of 2008 ozone standard. If an area is not in attainment and 2014 data is good, a state can ask USEPA for a one year extension of the attainment date. If during 2015 the area reaches attainment, no bump up will occur. If area does not quite make attainment but 2014 and 2015 data is good, state can get another one year extension. It is a convoluted process.

Mr. Kaleel, LADCO, observed that there could be a regulatory mess when USEPA transitions from the 2008 standard currently being implemented to a tighter ozone standard. . It appears that USEPA will propose standard in January 2015. States will have until January 2016 to develop boundary recommendations. USEPA will have one year after that to finalize non-attainment boundaries. States will then have three years (2020) to submit SIPs. Do not know how USEPA will marshal state resources to deal with both standards at the same time.

In 2013, 11 Northeast states and the District of Columbia invited nine Midwest and Southeast states to join their Ozone Transport Region (OTR) also known as the Ozone Transport Commission (OTC). The Midwest and Southeast states (Michigan to Tennessee and Illinois to North Carolina) declined

the invitation. In December 2013 the Governors of nine Northeast states officially petitioned USEPA to force the Midwest and Southeast states to join the OTR. Inclusion in the OTR would require programs in addition to what the states are doing including OTC consultation and regulatory process. LADCO assisted in the preparation of a letter from these states to USEPA requesting that the Administrator reject this petition.

Mr. Coulson, EWG, asked if the findings of the Ozone Transport Group (OTAG) showed that impact of ozone transport occurs within 500 miles. Mr. Kaleel, LADCO, said that there is still some downwind impact and LADCO is currently working on state-specific source apportionment modeling to determine contribution. USEPA is looking at that in context of modeling they are conducting for next Cross State Air Pollution Rule (CSAPR) to estimate effect of transport. Current CSAPR is before the U.S. Supreme Court. Mr. Bloomberg, Illinois EPA, pointed out that in CSAPR significant impact (contribution) of a state to another is defined at one percent (or 0.75 of a 75 parts per billion standard). That is how Northeast states can look at Midwest states and tell them to control everything.

In December 2012 USEPA revised the annual PM<sub>2.5</sub> standard. The states made their designation recommendations to USEPA in December 2013. USEPA is to act on them by the end of 2014 with the designations becoming effective in 2015. SIPs will be due in 2016 and attainment in 2020. At the time the states were developing their boundary recommendations a majority of the monitors in the Midwest were exceeding the level of the standard, including two in the Metro East. When 2013 data is included in the analysis, many of the monitors which were violating the standard in 2012 are not now. When USEPA makes the final designations, they will be using 2011-2013 data so there could be changes.

LADCO is working with their states on individual state Regional Haze Plan 5-Year Progress Report. LADCO is looking at visibility progress at Class 1 national parks and wilderness areas in the Midwest. The Regional Haze Plan goal is to try to achieve progress on the 20 percent worst visibility days at these Class 1 areas such that by 2064 visibility would be at or better than natural conditions and the key best visibility days do not get any worse. It appears that visibility is improving and is on target to meet goal. LADCO is also evaluating at trends in emissions. It appears that improvements in visibility are commensurate with reduction in emissions (sulfur dioxide and oxides of nitrogen) from coal-fired electric generating units (EGUs).

LADCO is involved in the Eastern Regional Technical Advisory Committee (ERTAC) EGU Group. The Group is composed of states, regional planning organizations and industry and first convened in 2009. The Group was not satisfied with USEPA's use of the Integrated Planning Model (IPM) to project EGU emissions and specific actions concerning the EGUs in their particular states for CSAPR. IPM is a proprietary model from ICF International which costs \$50,000 to run and uses modeled economics assumptions alone to project EGU shut downs and other actions. The ERTAC model project goal was to build a low cost and transparent model alternative to the IPM. The starting point for the ERTAC model is continuous emissions monitoring data for sulfur dioxide (SO<sub>2</sub>) and nitrogen oxide (NO<sub>x</sub>) for source and region which the facilities report to USEPA. Data has been processed for the 2011 base year. The states will provide information for future years based on what the facilities are telling them about new units, shut downs and other changes. The U.S. Energy Information Administration (EIA) report on the Annual Energy Outlook is the source for

base regional growth rate information. EIA prepares information on power generation by different sources for 22 regional market areas. Peak information is collected from the North America Electric Reliability Corporation. Want to make sure that in the model demand matches electricity generation. For 2011-2018 model output estimates there will be a reduction in SO<sub>2</sub> emissions in all of the LADCO states and Missouri. Some reduction will come from shut downs due to regulatory requirements, lower cost of natural gas and lower demand for electricity generation. Anticipate further reductions in SO<sub>2</sub> and NO<sub>x</sub> which will be good for the environment and visibility moving forward. Goal is to show reductions in the air quality models that the states will be using to develop ozone, PM<sub>2.5</sub> and regional haze plans.

Ms. Andria, ABC, asked about the level of confidence have for monitoring data when monitors can be shut down for a period of time as has occurred in Illinois. Mr. Kaleel, LADCO, said that this data is fully quality assured and validated by the states and USEPA before LADCO uses it. The goal of the states is to put the monitors in right places and USEPA mandates what the right places are. It can be a challenge to get an agreement with a property owner. Every state adjusts their network based on regulatory priorities and changes in funding.

Ms. Andria, ABC, asked if the EIA assessment about coal use in the Midwest is a political decision. Mr. Kaleel, LADCO, said that EIA is looking at the capacity of the fleet of EGUs and the regulatory environment and tracks fuel costs to project electrical demand. Ms. Funk, MECAP, said that EIA also does a national analysis. Mr. Bloomberg, Illinois EPA, observed that in Illinois the switch from coal to natural gas is occurring in the manufacturing sector.

Mr. Knott, Sierra Club, asked if actual emissions data or allowables will be used in ERTAC model. Mr. Kaleel, LADCO, said that with ERTAC model trying to get away from the economic approach. For example, IPM decided that the coal-fired power plants in the Mississippi were too old and uneconomical and that the state would shut them down. Mississippi and others have sued USEPA. Mr. Bloomberg, Illinois EPA, said that power companies usually plan for facility shut downs far in advance and have to receive approval from the Federal Energy Regulatory Commission (FERC) which takes several years. So for a model to assume immediate shut downs with no consideration of impact or where electricity will come from is extreme.

Mr. Leath, MoDOT, asked if USEPA was going to allow the states to use the ERTAC model in their SIP planning and was training available. Mr. Kaleel, LADCO, said that it was his understanding that the USEPA is going to use the IPM model for the next transport rule. USEPA is going to consider what LADCO is doing with ERTAC model. LADCO is reviewing projections from IPM and ERTAC and is sharing the results with USEPA. LADCO will be in the position to make good, sound technical arguments. LADCO is open to providing training. ERTAC is free to use and can be run on a personal computer.

Mr. Fishman, St. Louis University, observed that background levels of ozone are increasing nationally and asked if USEPA would take this into account. Mr. Kaleel, LADCO, said that USEPA has included an analysis of background ozone levels in their ozone standard science assessment document. In his opinion, it was mostly done to explain background concentrations away in the context of showing a tighter ozone standard still being achievable.

V. American Fuel Group Report  
- St. Louis Regional Clean Cities Program

Mr. Herdler, St. Louis Regional Clean Cities Program (SLRCC), said that planning is underway to celebrate their 20<sup>th</sup> anniversary. In 2012, with the use of alternative fuels more than 10.7 million gasoline/diesel gallons were displaced. This is the equivalent of 108,000 tons of greenhouse gas emissions. Since September 2013 seven new public CNG fueling stations have opened with two in Illinois. There is also a liquified natural gas (LNG) station in Illinois. Many fleet operators are interested in CNG. In April, Illinois EPA and Chicago Clean Cities are hosting a NGB fleet and fueling stations workshop in Effingham IL.

Waste Management is working on a project to recover gas from their Milan landfill near Granite City, convert it to natural gas and send it to a pipeline. The natural gas will offset fuel used by the Waste Management trucks in the Chicago and St. Louis areas. Anticipate that this project will begin in January 2015. The Marissa recovery project is expected to begin in January-February 2015.

VI. Update Activities of the States  
Mark Leath, Missouri Department of Natural Resources  
David Bloomberg, Illinois Environmental Protection Agency

The Missouri Air Conservation Commission (MACC) meets in Springfield on March 27. There will be a public hearing on the proposed Redesignation Request and Maintenance Plan for the Missouri portion of the St. Louis 1997 eight-hour ozone standard non-attainment area. MoDNR is revising the Maintenance Plan so that 2025 is the end year which will be ten years after expected approval by USEPA in 2015. Up for adoption by the MACC is the Redesignation Request and Maintenance Plan for the Missouri portion of the St. Louis 1997 annual Fine Particulate Matter (PM<sub>2.5</sub>) Nonattainment Area. The 1997 standard was attained in 2009 and a Maintenance Plan was developed. At the time, USEPA was not able to act on it. The PM<sub>2.5</sub> Maintenance Plan has been updated and the last year of the Maintenance Plan was moved out to 2025.

The April 1 Missouri Register will contain a proposed rule to remove Stage II vapor recovery devices at gas pumps since USEPA's determination of widespread use of onboard refueling vapor recovery controls in newer vehicles. The MACC is going to hold a public hearing on this proposed rule (10 CSR 10-5.220 Control of Petroleum Liquid Storage, Loading and Transfer) at their May 29 meeting in St. Louis.

Since Illinois submitted their boundary recommendations for 2012 PM<sub>2.5</sub> standard to USEPA, monitoring data shows improvements. Illinois EPA will be submitting a letter to USEPA with revisions. Illinois EPA will now recommend that Chicago area be classified as attainment. The Metro East is more complicated because the East St. Louis PM<sub>2.5</sub> monitor is now in attainment but the Granite City monitor is not. Preliminary discussion are underway with USEPA Region 5. Options for changes to the Metro East boundary recommendations are still being evaluated. Missouri has recommended that all of its counties be classified as attainment.

On the evening of March 26, Illinois EPA will have a public outreach meeting in Granite City on the construction permit for Mayco Industries. This permit will allow the company to take actions so it can

comply with the state lead rule. There was an outreach meeting several months ago about the state lead rule. The lead rule still has to be finalized by the Illinois Pollution Control Board (IPCB). If anyone has comments, to bring them up at the meeting.

Illinois EPA is working on a "Permit by Rule" rule which will allow construction at major sources of smaller boilers without the facility having to go through the construction permit process. Sources can get a construction permit through the rule itself. The rule has a narrow definition and Illinois EPA plans to evaluate how it works. April is the target for submittal to IPCB.

Illinois EPA continues to move forward in development of SO<sub>2</sub> rules for the Phase 1 Lemont (Chicago area) and Pekin (near Peoria) non-attainment areas in the state. It is possible that with Phase 2 there could other SO<sub>2</sub> non-attainment areas in the state.

Ms. Andria, ABC, asked about the SO<sub>2</sub> monitor situation around the refinery in Wood River because in 2011 Illinois EPA had proposed that this area be a SO<sub>2</sub> non-attainment area. Mr. Kaleel, LADCO, said that when he was at Illinois EPA monitor data did show non-attainment at the time of public outreach. When it became time to designate area, monitoring data was showing attainment and has been ever since. Mr. Bloomberg, Illinois EPA, said that Phase 2 designations will use either modeling output or monitoring data. If a company or a group of companies located near each other want to go with monitoring, they will have to pay for the monitors themselves and follow the siting requirements of the state. Modeling requirements are to be set out in USEPA's data rule (still to be released). Ms. Andria, ABC, said that citizens can still smell and see things that look like there is a problem around that monitor. She asked what can citizens do other than call USEPA and say don't believe monitor is making attainment. Mr. Bloomberg, Illinois EPA, said that there are a number of questions to answer about whether smell is continuous or intermittent and are there releases. If the monitors are showing attainment and are properly sited, it is a good question. Don't know if ever had that issue come up with someone wanting non-attainment when monitors are showing attainment. Ms. Andria, ABC, said that two construction permits were just granted here which she believed had significant contributions of SO<sub>2</sub>. Mr. Bloomberg, Illinois EPA, said that he was not familiar with those permits but pointed out that when construction permits are prepared, if there is going to be an increase in emissions, Illinois EPA has to model to make sure that proposed action is not going to violate standards. There may have been offsets or new controls planned for those specific permits.

## VII. Other Business

Ms. Andria, ABC, said that several years ago, Illinois EPA issued a construction permit to the Mississippi Lime Company for two limestone processing rotary kilns in Prairie du Rocher, Randolph County IL. The ABC appealed this permit. In 2011 the permit was remanded back to Illinois EPA and it appeared that the project had gone away. This month the Belleville newspaper had a notice about a comment period for a Mississippi Lime construction permit and a public hearing scheduled for on May 6 in Prairie du Rocher. Additional information is available on the Illinois EPA website.

The next meeting of the AQAC was scheduled for April 29, 2014. There being no other business, the meeting of the Air Quality Advisory Committee was adjourned.

AGENDA  
AIR QUALITY ADVISORY COMMITTEE\*  
**TUESDAY March 25, 2014**  
10:00 a.m. - 12:00 noon  
East-West Gateway Board Room

- I. Call to Order**
  - Michael Coulson, Chair, East-West Gateway Council of Governments
  - A. Minutes of January 28, 2014 Meeting
  
- II. CMT Transit Oriented Development (TOD) Efforts**
  - Kim Cella, Citizens for Modern Transit
  
- III. TravelGreen Program**
  - Meredith Klekotka, Trailnet
  
- IV. Update on Lake Michigan Air Directors Consortium (LADCO) Activities**
  - Rob Kaleel, Lake Michigan Air Directors Consortium
  
- V. American Fuel Group Report**
  - 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 Date April 29, 2014**
  
- VIII. 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.

MINUTES  
AIR QUALITY ADVISORY COMMITTEE  
Tuesday, January 28, 2014  
East-West Gateway Board Room

Members Present:

Michael Coulson, Chair, East-West Gateway Council of Governments  
Joe Winkelmann - Missouri Department of Natural Resources  
Mike Henderson - Missouri Department of Transportation  
Jeremy Rogus - St. Louis County Health Department  
David Bloomberg - Illinois Environmental Protection Agency  
Brad McMahon - Federal Highway Administration, MO  
Joe Gray - Illinois Department of Transportation, District 8  
Christopher Schmidt - Illinois Department of Transportation  
Susannah Fuchs - American Lung Association (telephone)

Others Present:

Lachala Kemp - U.S. Environmental Protection Agency Region 7 (telephone)  
Bob Randolph - Missouri Department of Natural Resources  
Kevin Herdler - St. Louis Regional Clean Cities  
Meredith Klekota - Trailnet  
Angie Hoecker - Missouri Department of Transportation  
Andy Knott - Sierra Club  
John Hickey - Sierra Club  
Joe Right - RideFinders  
Joe Wilson - Citizen

Staff:

David Wilson                      Carol Lawrence                      Johnnie Smith

- I.        Call to Order  
          - Michael Coulson, Chair, East-West Gateway Council of Governments

The meeting of the Air Quality Advisory Committee (AQAC) was called to order by Chair Michael Coulson, East-West Gateway Council of Governments (EWG). The minutes of the October 29, 2013 AQAC meeting were approved as circulated. Mr. Coulson announced that Mr. Kaleel was not able to attend the meeting and has been rescheduled for the March 25 AQAC meeting.

- II.       OneSTL Next Steps  
          - David Wilson, East-West Gateway Council of Governments

In 2010, EWG received funding from the U.S. Department of Housing and Urban Development (HUD) through the Partnership for Liveable Communities program to prepare a regional plan for sustainable development. The Partnership is made up of HUD, U.S. Environmental Protection

Agency (USEPA) and U.S. Department of Transportation (DOT). There were also ten local partners involved. The regional plan, now called OneSTL, took two and one half years to complete. By the time plan goals, objectives and strategies identified, more than 50 organizations and agencies had input into the plan. The EWG Board of Directors approved OneSTL in December 2013.

A OneSTL implementation steering committee will be put together over the next few months. It is to be a broad-based, representative committee that can help in planning programs, identifying projects and helping the partners to move forward with implementation over the next few years. Have begun to schedule speaking opportunities with organizations and local governments to introduce the plan and invite them to get involved. Joining the OneSTL Network is one way. The Network allows anybody (Public agency/organization, business, community group or a resident) interested in sustainability to have access to information. Hope to create a dynamic interchange in which people will use the OneSTL website's comment form to share information on what is going on in their community and learn of data and activities. OneSTL has been asked to co-sponsor or help organize several workshops and conferences this year.

OneSTL is not solely dependent on EWG for implementation. The notion is that no one agency can make this region sustainable and no one local government can. The only way regional plan can be implemented is with many people getting involved, identifying their issues and working on them. Many agencies have a piece of plan and as long as each does their piece, region will move forward. Hope to see the number involved grow.

EWG staff have been refining the OneSTL website ([www.OneSTL.org](http://www.OneSTL.org)). OneSTL is designed to be a web-based plan. Website is to serve as a consolidated clearinghouse for information. On the website can access each section of the OneSTL document or download the entire document as a pdf. The plan has been structured around nine themes for the future of the St. Louis region. These themes grew out of an extensive community engagement effort to learn the public's and local governments' attitudes and concerns. The themes include: collaborative; prosperous; distinctive; inclusive; green; prepared; connected; efficient; and educated. Each theme has several goals associated with it and each goal has at least one objective. For each objective, several strategies were identified and implementing agencies were delineated. Also on-line is a sustainable solutions toolkit containing information on 100 different sustainability-related topics. The About Us section contains information on the OneSTL partners and associated links. As organizations joins the OneSTL Network information about them will be added.

A key element of OneSTL is how to measure movement toward sustainability at a regional scale. EWG's Research Department has investigated what indicators can be tracked using existing sources of information. Each theme have six to ten metrics. EWG Research Department will be responsible for tracking and preparing regional snapshots to see if the region is moving in the right direction or not or there is no change. Metrics are to be part of the website and can change over time. The theory is that if we track and report on these metrics, that is going to call attention to these issues and raise level of awareness. Awareness will spur more action toward improved practices.

The Resources section on the website contains over 75 reports, research documents and studies

prepared by the partners over the last three years. For example, St. Louis County developed draft ordinances and codes and prepared a code assessment how-to manual. A consultant hired by Metro, EWG and Great Rivers Greenway evaluated the general economic development potential for all MetroLink stations and performed an in-depth Transit Oriented Development analysis for a representative sample of stations which can serve as a framework for future planning.

III. St. Louis Area Ozone SIP Update: 1997 NAAQS Maintenance Plan and 2008 NAAQS Implementation Rule  
- Joe Winkelmann, Missouri Department of Natural Resources

The Missouri Department of Natural Resources (MoDNR) is moving forward with their Maintenance Plan and redesignation request for the 1997 eight-hour ozone National Ambient Air Quality Standard (NAAQS) for Missouri portion of St. Louis area. There has been clean monitoring data since the 2007-2009 time period. With an attainment designation for the 1997 standard, Missouri can focus its efforts on 2008 standard. In November 2011 Missouri submitted a Maintenance Plan and Redesignation Request to USEPA for the 1997 ozone national ambient air quality standard. USEPA did not find the motor vehicle emissions budgets adequate for conformity and did not approve the Plan due to litigation surrounding federal interstate transport regulations (Clean Air Interstate Rule or CAIR) that were relied on in the Plan. The Washington, D.C. U.S. District Court found that until a replacement rule comes out, CAIR shall remain in place. Based on November 2012 USEPA guidance, Maintenance Plans which rely on CAIR can be approved.

MoDNR is revising the Maintenance Plan for the 1997 standard so that 2025 is the end year (ten years after expected 2015 approval by USEPA). In February, the Maintenance Plan and redesignation request are to be posted on the MoDNR website. The Missouri Air Conservation Commission (MACC) will hold a public hearing in March and is to adopt them both in April. Later this year USEPA should approve the Maintenance Plan and designate the Missouri counties in attainment. These actions should occur before the implementation rule for 2008 standard is finalized in August 2014.

In June 2013 USEPA's proposed implementation rule for the 2008 ozone standard was published. This rule would revoke the 1997 standard for all purposes and delineates how the states are implement this standard. It includes proposed anti-backsliding obligations and transition guidance for moving to the 2008 standard. All anti-backsliding obligations under the Clean Air Act are met if an area is redesignated to attainment of the 1997 standard prior to the standard's revocation. The final rule is expected to be published in August 2014.

In USEPA's July 2012 2008 standard area classification rule, the St. Louis area (MO-IL) was classified as a Marginal non-attainment area. Marginal areas have fewer implementation plan requirements as they are closest to attainment. A Marginal State Implementation Plan (SIP) is to have: comprehensive base year emissions inventory; non-attainment New Source Review (NSR) permitting program; emission reporting requirement for major sources; and transportation conformity determination. Missouri prepares an emissions inventory every three years and is working with USEPA on a 2008 inventory. The state has an on-going NSR construction permit program as well

as an emission reporting program for large sources. Transportation Air Quality Conformity is coordinated by EWG. The 2008 eight-hour ozone Marginal SIP will be posted on the MoDNR website for public comment on April 28, 2014. On May 29 the MACC will hold a public hearing on this SIP and adopt it at their July 2014 meeting.

In the July 2012, USEPA revoked the 1997 standard for Conformity Determination purposes only. Non-attainment areas were given one year to conduct Conformity Determination using the 2008 standard. EWG addressed this requirement in their January 2013 Conformity Determination. Since USEPA revoked the 1997 standard for conformity purposes, the revision to the Maintenance Plan for the 1997 standard does not have to establish budgets.

To aid EWG's future Conformity Determination efforts, MoDNR voluntarily developed an Early Progress Plan for the 2008 standard which contained 2015 motor vehicle emission budgets. In March 2013 the MACC adopted the Early Progress Plan. It was then submitted to USEPA. In a letter to MoDNR dated October 28, 2013, USEPA found the budgets adequate for use in future Conformity Determinations.

Mr. Henderson, MoDOT, asked if there was any indication when USEPA will take action to revise or maintain the 2008 ozone standard. Ms. Kemp, USEPA Region 7, said that in February USEPA is to release for external review a second draft Risk/Exposure Assessment for Ozone and a second draft Policy Assessment. USEPA will then meet with the Clean Air Science Advisory Committee (CASAC) at the end of March. It is possible that there could be a decision late this year.

IV. 2010 One-Hour Sulfur Dioxide National Ambient Air Quality Standard Designation and State Implementation Plan Requirements  
- Bob Randolph, Missouri Department of Natural Resources

Sulfur dioxide (SO<sub>2</sub>) is produced during the combustion of sulfur-containing fossil fuels such as coal and fuel oil during metal smelting and industrial processes. Sources include industrial boilers, power plants and mobile sources. SO<sub>2</sub> is more of a localized phenomena with highest concentrations generally near large combustion sources. With the lowering of sulfur levels in gasoline and diesel, mobile sources make up a smaller portion of SO<sub>2</sub> emissions.

The SO<sub>2</sub> standard was established in the 1970s and USEPA has reviewed it over the years. In June 2010, USEPA revised the SO<sub>2</sub> standard to be a one-hour standard of 75 parts per billion (ppb). MoDNR's first task was to develop boundary recommendations based on 2007-2009 data from the monitor network in place at the time the standard was finalized. Missouri recommended that portions of Jackson County, Jefferson County and Greene County be designated as non-attainment.

Mr. Hickey, Sierra Club, asked if the biggest emitter of SO<sub>2</sub> in the greater St. Louis area was the Ameren Labadie power plant (Franklin County). Mr. Randolph, MoDNR, responded yes. Mr. Hickey Sierra Club, then asked if there were any SO<sub>2</sub> monitors located in St. Charles, Franklin or St. Louis Counties. Mr. Randolph, MoDNR, said no and that he will talk about this later.

Mr. Randolph, MoDNR, said that the current monitoring network nationwide was not designed to address the one-hour SO<sub>2</sub> standard. Many large SO<sub>2</sub> sources in the U.S. are not in first round non-attainment areas. USEPA recognizes there are deficiencies in the existing monitoring networks. The Monitoring Group in the Air Pollution Control Program is reviewing the SO<sub>2</sub> network and evaluating future monitoring sites. Based on 2007-2009 monitoring data, in August 2013 USEPA designated a portion of Jackson County (Kansas City area); and portion of Jefferson County (Herculaneum and Festus townships and Missouri portion of Valmeyer and Selma townships) as non-attainment. Attainment Demonstration SIPs are due to USEPA in April 2015. The deadline to attain the standard is October 4, 2018.

There are five required elements for a non-attainment area SIP. A Reasonable Further Progress document is to be prepared. MoDNR is working on an accurate emission inventory of all current SO<sub>2</sub> sources within and impacting the non-attainment area. In the Attainment Demonstration, MoDNR staff will conduct computer modeling and work with facilities located within a 10 kilometer (km) buffer (immediate surrounding area) of the violating monitor and those within a 50 km buffer. All sources of SO<sub>2</sub> near the non-attainment area were included in an initial evaluation to determine which sources/facilities to explicitly include the computer model. Modeling must be performed using potential or allowable (permanent and enforceable) emission rates. Actual emissions from a facility's Emissions Inventory Questionnaire (EIQ) can only be used as a screening tool. The modeling can include facility negotiated limits/conditions necessary for it to be in compliance. Any limit identified has to be shown to be necessary to comply with the standard and part of a permanent and enforceable action. MoDNR is working with those largest sources/facilities inside the 50 km buffer, including Ameren Labadie, to verify potential limits and identify what actions are occurring or what plans already made to lower SO<sub>2</sub>. Begun dialogue on what control options facilities are going to do to reduce impact for future rounds and develop recommendations. Our task is to determine their impact on any receptor within the Jefferson County non-attainment area. At the end of 2013 the Doe Run Company closed their primary lead smelter in Herculaneum. A model assumption was that there will be no smelting operations and that the remaining units at this facility will use natural gas, minimizing SO<sub>2</sub> emissions.

Options for controls include incorporating limits into the Missouri SO<sub>2</sub> SIP. MoDNR is working on an amendment to the state sulfur rule as many requirements focused on motor fuels and outdated codes. The State could issue construction and/ operating permits with emissions limit/condition. Controls can include combination of control equipment, fuel controls, emission rate limits or limits on allowable emissions. If state rule does not work, state could enter into a Consent Judgement/Decree with the source to establish an emission limit/conditions. Another option to reduce impact, would be to identify limits through a modeled attainment demonstration.

In February 2013 USEPA released a "Next Steps" paper describing their strategy for future rounds non-attainment area designations. Emission thresholds will be lower in urban areas and higher in rural areas. The states will have flexibility to rely upon monitoring or modeling data, as appropriate. This allow states to work with affected facilities and citizens in order to develop monitor or model approach. Incentives and time for facilities to reduce emissions early and avoid non-attainment designations in future rounds.

USEPA is taking the approach that in future rounds of non-attainment designations, the states will be looking at all of those larger SO<sub>2</sub> sources. MoDNR will begin a dialogue with the larger sources, like Ameren Labadie, to gear them up for future round analysis and to consider emission reduction alternatives. Options under future rounds is for MoDNR to work with individual facilities to develop individual monitor networks to determine where peak concentrations would be in facility or to go with a modeling approach. If a facility wants to establish local monitor network, has to be approved by MoDNR and USEPA. For facilities that are going to use the modeling approach, Missouri would submit designation recommendation during 2017 and submittal deadline addressing facilities using monitoring data would be during 2015-2016. USEPA is to make designations for modeled areas in December 2017 and for monitored areas in December 2020.

Mr. Hickey, Sierra Club, asked if SO<sub>2</sub> sources within the buffer zone have been modeled and if sources are shown to be above standard, does that trigger any action. Mr. Randolph, MoDNR, replied that sources in the buffer area have been modeled. Information collected could be used in the future designation round(s). The task now is to determine the impact of sources on first round non-attainment area. MoDNR is working with facilities to get better assessment of what their peak levels are. Anticipate any facility within the 50 km buffer would have a strong potential for some type of emission control strategy. Just because a facility is not within the non-attainment area, does not mean they will not have to do something for the first round. MoDNR will work with facilities. Hopefully, that will be enough to bring that area/facility into attainment for future rounds.

V. American Fuel Group Report  
- Kevin Herdler, St. Louis Regional Clean Cities Program

The St. Louis Regional Clean Cities program (SLCC) along with Kansas, Iowa, Nebraska and Missouri received a grant from the U.S. Department of Energy (DOE) for an Alternative Fuel Implementation project. ICF International has been selected to develop a methodology using MOVES to evaluate the air quality impact/emission reduction of alternative fuel vehicles under different scenarios. There are limited alternative fuel inputs for the MOVES model. The consultant has been asked to develop emission reduction factors for the following American fuels: liquefied natural gas (LNG); compressed natural gas (CNG); electric vehicle and electric plug-in; propane; biodiesel at 20 and 50 percent; and ethanol (E-85). Since these fuels are not in MOVES now, consultant is trying to develop a way so USEPA can substitute them. Consultant is working with USEPA Region 7, Illinois EPA and MoDNR. The beta version of the methodology should be available in the next couple of weeks. Beta version will be reviewed by EWG and other stakeholders. Once review is finished, a webinar on the methodology and how to use it will be put together. Methodology is designed so that any city, county, council of governments or state can plug

in their own numbers. Mr. Herdler is also developing and conducting training for code enforcement personnel and first responders about these fuels.

Landscape firms are beginning to utilize propane-fueled mowers. These mowers are cleaner than conventionally fueled mowers (which do not have emission controls) and have a longer maintenance life. In addition, companies have less gasoline fuel loss. Ms. Fuchs, American Lung Association

(ALA), asked about the propane shortage. Mr. Herdler, SLCC, said that it was an extreme situation, particularly in the Midwest. Previously propane cost \$1.69 a gallon for home heating and now it is \$4.00 a gallon. At a meeting with Amerigas, Mr. Herdler learned that Amerigas is using railcars to bring in propane from Alaska and elsewhere. Hopefully when the cold snap breaks, companies will be able to replenish their supplies and prices will go down. Public CNG stations are at Lambert Airport and in Pontoon Beach. Allied Waste, Progressive and Waste Management are all using propane-powered trash trucks. The Parkway school district has a fleet of CNG buses and is working on a fueling station.

SLCC is working with the Village of Marissa in St. Clair County on a landfill gas recovery project. Waste Management has given the landfill gas to Marissa. Plan to install equipment to capture the gas and send it to the Ameren pipeline. Also liquid carbon dioxide (CO<sub>2</sub>) will be collected and sold to another company. It is estimated that the landfill will be in operation until 2060 and gas will be available for 30 years after that. Waste Management has announced that it plans to install similar equipment at its Milan landfill. Aim to provide fuel for their trash trucks in Chicago and St. Louis. SLCC is working with the Coast Guard and several businesses to convert at least three St. Louis-based harbor boats to CNG or LNG.

In 2014 SLCC will be 20 years old. SLCC is planning a celebration for this summer. A round of applause was given for this milestone achievement.

#### VI. Update Activities of the States

- David Bloomberg, Illinois Environmental Protection Agency
- Joe Winkelmann, Missouri Department of Natural Resources

The Illinois Pollution Control Board (IPCB) held its first hearing on the lead rule for Granite City and Chicago. There was enough agreement from all parties that the IPCB canceled future hearings. The rule is expected to proceed to adoption. Illinois EPA has already submitted it to USEPA Region 5 for parallel processing. Mayco Industries in Granite City has received a construction permit to make the changes necessary for it to comply with this lead rule.

Petcoke is a by-product of the petroleum refining process and is stored in the Chicago area and the Metro East. It is a solid material similar to coal and can be a fuel source for power plants. In Chicago, 70-80 foot high petcoke storage piles are located near residential areas. After a windstorm last year blew material onto residences, the City of Chicago has proposed a petcoke management rule. The Illinois EPA proposed an emergency rule to the IPCB which the Board did not accept. Illinois EPA is examining alternatives to address concerns. This could be a multi-state issue.

For the two Illinois SO<sub>2</sub> non-attainment areas, Illinois EPA is talking with culpable sources and seeking either permit limits or regulations. Illinois looking ahead to the outcome of the litigation over the Cross State Air Pollution Rule (CSAPR) now before the U.S. Supreme Court. In the meantime, USEPA is moving forward with a possible transport rule (if ruled against). There have been many discussions on how to model and address that concern. The Ozone Transport Commission (composed of northeast and Mid-Atlantic states) wants a number of Midwest states, including

Illinois, to join the Commission. Illinois has declined and now the Commission is forcibly trying to add these states.

At the January 30 MACC meeting, three rules are up for public hearing. One is an amendment to 10 CSR 10-6.200 Hospital, Medical, Infectious Waste Incinerator rule removing start-up, shutdown and malfunction exemptions from any emission limits. The second is to rescind the outdated 10 CSR 10-5.240 Additional Air Quality Control Measures May be Required When Sources are Clustered in a Small Land Area. It was passed before the federal Clean Air Act was enacted. The last item up for public hearing is to amend 10 CSR 10-6.010 National Ambient Air Quality Standards to incorporate federal standards into the state rules so state rules are consistent.

MoDNR is in the process of preparing an amendment to 10 CSR 1-5.220 to remove Stage II Vapor Recovery systems from this rule. The draft rule amendment has been posted on the Rules in Progress section of the Air Pollution Control Program web page.

## VII. Other Business

Mr. Hickey, Missouri Sierra Club, observed that the MACC is a seven member body whose members are nominated by the Governor and approved by the Senate. Currently, the MACC only has four members. One MACC member is from Crystal City but the remainder do not reside in non-attainment areas. Sierra Club thinks that it would be good if at least two of the empty seats were filled by people from the St. Louis area (42 percent of the breathers in the state). Need to look for people who care about clean air and would be effective advocates. Mr. Coulson, EWG, said that Dr. Fishman from St. Louis University has submitted his name. Mr. Winkelmann, MoDNR, added that the MACC has been discussed at AQAC and at other meetings. Information on the MACC can be found at RSMo 643.040. He encouraged everyone to consider possible nominees.

Ms. Klekota, Trailnet, asked if at a future meeting, someone would talk about the connections between air quality and public health and could someone talk on the impact of transportation on PM<sub>2.5</sub>. Mr. Coulson, EWG, said that it is good to keep health involved when discussing air quality, and not just bureaucratic structure. Mr. Bloomberg, Illinois EPA, added that Ms. Funk of Metro East Community Air Project (MECAP) has hosted air quality and public health forums for the last several years. Mr. Winkelmann, MoDNR, said that the preamble section of the National Ambient Air Quality Standard contains a discussion on the health effects/impacts of specific pollutants

The next meeting of the AQAC will be on March 25, 2014. There being no other business, the meeting of the Air Quality Advisory Committee was adjourned.