AGENDA
AIR QUALITY ADVISORY COMMITTEE*
TUESDAY March 24, 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 January 27, 2015 Meeting

II. **Connected 2045: Long Range Transportation Plan for the St. Louis Region**
- Peter Koeppel, East-West Gateway Council of Governments
- Shay Schindler, East-West Gateway Council of Governments

III. **Ozone Trends in St. Louis: Dirty Air is Getting Cleaner but Clean Air is Getting Dirtier**
- Jason Welsh, St. Louis University

IV. **Clean Communities: A Metro East Green Guide**
- 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**

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 27, 2015
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
Kathrina Donegan - St. Louis County Health Department
David Bloomberg - Illinois Environmental Protection Agency (telephone)
Brad McMahon - Federal Highway Administration, MO
Joe Gray - Illinois Department of Transportation, District 8
Christopher Schmidt - Illinois Department of Transportation
Jack Fishman - St. Louis University

Others Present:
Lachala Kemp - U.S. Environmental Protection Agency Region 7 (telephone)
Kevin Herdler - St. Louis Regional Clean Cities
Stacy Allen - Missouri Department of Natural Resources
Heather Hamilton - U.S. Environmental Protection Agency Region 7
David Shanks - Boeing
Jerry Downs - Missouri Department of Natural Resources
Patricia Maliro - Missouri Department of Natural Resources
Jason Welsh - St. Louis University
Lenora Fisher - Citizens for Modern Transit
Curtis Jones - Illinois Department of Transportation
Kim Cella - Citizens for Modern Transit
Rafael Gonzalez - Madison County Transit/RideFinders (telephone)

Staff:
Mary Grace Lewandowski David Wilson 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). The minutes of the October 28, 2014AQAC meeting were approved as circulated.

II. EPA's Ozone National Ambient Air Quality Standard Proposed Rule
- Lachala Kemp, U.S. Environmental Protection Agency Region 7
- Joe Winkelmann, Missouri Department of Natural Resources

On November 25, 2014, the U.S. Environmental Protection Agency (EPA) proposed to strengthen the National Ambient Air Quality Standard (NAAQS) for ground-level ozone, primary and secondary. This proposal reflects strong scientific evidence regarding the harmful effects of ozone

on human health and the environment. More than 1,000 new scientific studies were reviewed.

In 2008, the eight-hour ozone standard was revised to 75 parts per billion (ppb). The Clean Air Scientific Advisory Committee (CASAC), independent advisors to EPA, had recommended that the standard be set between 60-70 ppb. In 2009 the EPA Administrator began the process to reconsider the 2008 standard. In 2011 the President asked EPA to not make a recommendation because it would shortly be time for EPA to start their review of the ozone standard as required by the Clean Air Act (CAA). All NAAQS are be reviewed every five years.

EPA is proposing to strengthen the level of both the primary (health-based) and secondary (welfare or trees, plants, ecosystems) ozone standards to a level in the range of 65 to 70 ppb. A rigorous review of the latest science and advice from CASAC informed this proposal. EPA is also proposing to update the Air Quality Index (AQI) for ozone so its breakpoints match the proposed primary and secondary standard and to make certain updates to monitoring and permitting requirements. EPA is also soliciting comments on proposed changes to monitoring requirements to smooth the transition to any revised standards. One proposal is for the ozone monitoring season to run from March (not April) through October, starting in 2017. EPA is also looking for comments on their proposed changes to clean air permitting and other efforts.

Ozone is formed when hydrocarbons (or volatile organic compounds or VOC), oxide of nitrogen (NO_x), carbon monoxide and methane emissions react with oxygen in the lower atmosphere in the presence of strong sunlight and temperature of 85° F or higher. Emissions from industry, electrical utilities, motor vehicle exhaust, gasoline vapors and chemical solvents are the major man-made sources of NO_x and VOC. Science has shown that ground level ozone inflames and damages the airways and aggravates lung disease, including asthma, emphysema and bronchitis. It affects the elderly, children and anyone with lung diseases.

The CAA outlines a two step process to set and then meet the NAAQSs. First, the standard is set. EPA conducts an extensive scientific review to determine whether a new standard is necessary to protect public health and welfare. For the primary ozone standard, EPA is proposing a standard between 65 - 70 ppb. The averaging time and form of the standard would remain the same. EPA is taking comments on a number of proposals related to the primary standard. CASAC and EPA staff experts recommended the standard be set in a range of 60 - 70 ppb. The EPA Administrator did not include a standard of 60 ppb because of increasing uncertainty in the scientific evidence that a standard set lower than 65 ppb will result in additional health benefits. The primary standard could be set at any number between 65 and 70 ppb. The secondary ozone standard is to protect public welfare. EPA is proposing to define a target level of protection in terms of a cumulative, seasonal metric (W126) index value within the range of 13 to 17 parts per million-hours (3 year average). EPA is proposing to set the secondary ozone standard within the range of 65 to 70 ppb, providing protection equivalent to the above W126 index value. EPA is requesting comments on several options relating to the secondary standard. proposal.

According to EPA existing and proposed federal rules will help to reduce ozone pollution. There are rules reduce ozone precursors. A co-benefit of rules reducing toxic emissions and carbon pollution, will be reduction in VOC and NO_x levels. These rules will help most areas of the country meet a revised primary and secondary ozone standard by 2025. Some of these federal rules include: Mercury and Air Toxics Standards (MATS) , Regional Haze Best Available Retrofit Technology

Emissions Standards; and Emissions Standards for Industrial, Commercial and Industrial Boilers.

To estimate unofficial ozone design values (statistic describing air quality status of an area) for Iowa, Kansas, Missouri and Nebraska, EPA Region 7 used 2012-2014 data. This preliminary analysis indicates that the design value for the St. Louis area would be 78 ppb, above the proposed 65-70 ppb range. It should be pointed out that 2012-2014 data will not be used to determine attainment or non-attainment of the revised ozone standard.

Second, the revised standard will be implemented. Implementing these standards is a federal, state and tribal partnership also including local areas. EPA will continue to work to assist states and tribes and streamline implementation. Once a new standard is set or a standard is revised, EPA will then designates areas as meeting (attain) or not meeting (non-attainment) the standard, based on recommendations from the states. States with non-attainment areas will develop State Implementation Plans (SIPs) showing how they will meet the primary standard, based on federal measures and any additional state or local measures. EPA is under court order to finalize the ozone NAAQS by October 1, 2015. The states and tribes then have until October 2016 to submit their attainment and non-attainment recommendations to EPA. EPA is to make a final designation by October 2017. EPA will use ozone data from 2014-2016 to make these designations. By October 2018, the states are to submit their respective Infrastructure SIP. Attainment Plan is due within 30-40 months after designation (October 2020 - October 2021). The schedule to attain the revised ozone standard depends on the classification of a non-attainment area. The CAA requires states to meet secondary ozone standard as expeditiously as possible but does not delineate a specific timeline.

The proposed revised to the eight-hour ozone standard was published in the Federal Register on December 17, 2014. The comment period ends March 17, 2015. Public hearings are scheduled for Arlington TX and Washington, D.C. on January 29 and Sacramento CA on February 2. The final rule is to be signed by the EPA Administrator by October 1, 2015.

In July 2012, the eight county (MO-IL) St. Louis area was classified as a marginal non-attainment area for the 2008 ozone standard. In June 2012 EPA designated the Illinois counties as in attainment of the 1997 ozone standard. Missouri has submitted a redesignation request for the Missouri counties to be in attainment of the 1997 ozone standard. EPA has proposed to approve this request and this approval will be published in the Federal Register some time in February.

III Missouri Overview of EPA Proposed Revision to Ozone Standard
- Joe Winkelmann

On November 25, 2014, EPA proposed to strengthen the ozone NAAQS based on 1,000 new studies about ozone's effect on public health and welfare. The proposal was published in the Federal Register on December 17, 2014. The comment period runs until March 17, 2015.

The proposed range for the revised primary ozone standard is 65 - 70 ppb with the form and averaging time period the same. EPA is asking for comments on keeping the standard at 75 ppb or having it be set lower than 65 ppb. EPA is proposing to set the secondary standard the same as the primary standard and to use a seasonal metric index. EPA is also proposing to update the AQI and certain monitoring and permitting requirements.

EPA is under a court order to set a final ozone standard by October 2015. The states will then have one year to submit attainment and non-attainment boundary recommendations to EPA. Recommendations will be based on 2014-2016 monitoring data. EPA will review the recommendations and release their proposed designations. The states will then have 120 days to review and respond to EPA, if needed. By October 2017 EPA will finalize the non-attainment designations. Depending on the non-attainment classification, SIPs will be due 2020 - 2021 and deadline for attaining the revised standard will be between 2020 and 2037.

Using 2012-2014 monitor data, MoDNR has been doing a preliminary examination of the potential impacts of different levels (60, 65 or 70 ppb) of the ozone standard. It should be pointed out that the 2014 data has not been quality assured. At 65 ppb, it appears that all urban areas in Missouri would be in non-attainment. With a standard at 65 to 70 ppb, it is likely that other areas in the state would have to do transportation air quality conformity determinations. This conformity has to take place within one year after the non-attainment designation is made (during 2018). It will be a challenge for those regional planning commissions which have not done conformity before to carry one out. Will have to see what the 2015 and 2016 ozone seasons bring. If the area can attain the current standard (75ppb), it is reasonable to assume that the St. Louis area could be classified as marginal.

Mr. Shanks, Boeing, asked when the extended ozone monitor season would begin. Mr. Winkelmann, MoDNR, said that it would start in January 2017 as it takes time to revise the monitoring network. He added that the Monitoring Unit Chief (Ms. Maliro), Monitoring Unit staff, (Mr. Downs), and Planning Section chief (Ms. Allen), were here today.

IV Illinois Bureau of Air Program Overview
- David Bloomberg, Illinois Environmental Protection Agency

Under the 2008 eight-hour ozone standard, both the Chicago area and the Metro-East St. Louis area are marginal non-attainment areas. Neither area has met the attainment deadline using 2012-2014 monitor data. Court decision does not allow the use of 2015 data. For the St. Louis area, Missouri and Illinois can apply for a one-year extension of the deadline. Chicago area can not and may face a bump-up to moderate (with additional requirements) because one monitor on the Illinois border had an eight-hour average of 76 ppb (one ppb higher than the standard). If the 2015 data brings the Chicago area into attainment, Illinois may be able to request redesignation to attainment at almost the same time as a bump-up. Illinois Environmental Protection Agency (Illinois EPA) has submitted the precursory inventory to EPA, as required. The Chicago and Metro-East St. Louis areas previously were redesignated as in attainment of the 1997 eight-hour ozone standard.

As discussed earlier, EPA has proposed a range of possible new ozone standards. The revised standard will be finalized by October 1, 2015. Mr. Bloomberg examined 2011-2013 data to identify those counties which might potentially be non-attainment under different standards. With 70 ppb standard, Metro East and Chicago areas might be in non-attainment along with a number of counties in central U.S. However, if add in 2014 data, most of the central Illinois counties drop out (Peoria, Champaign, Macoupin, Sangamon, Macon) but McLean County would remain non-attainment by one ppb. If the standard is 65 ppb, there would be additional counties. But with 2014 data, Sangamon County would be in attainment. At 60 ppb, with use of 2011-2013 data (2012 a terrible ozone year) almost every county with a monitor would be violating the standard. Ozone monitored

values in surrounding states may cause additional areas in Illinois to be considered non-attainment even if monitors in these areas do not exceed the new standard. Possible areas include Rock Island County and parts of Southern Illinois.

EPA set a new fine particle ($PM_{2.5}$) standard in 2012. In December 2013 Illinois EPA submitted non-attainment boundary recommendations to EPA. The recommendations were for the "classic" Chicago non-attainment area and the Metro-East non-attainment area. However, EPA categorized the entire state of Illinois as "Unclassifiable". EPA had issues with the quality of Illinois $PM_{2.5}$ data. $PM_{2.5}$ in Illinois is currently measured via filter-based monitors and all data is analyzed by the Cook County laboratory. A EPA audit of 2011-2013 found that 61 percent of samples analyzed did not meet criteria for proper analysis so all data is considered invalid. Invalid data can not be used for attainment classifications. "Unclassifiable" is used by EPA when it cannot be determined, based on available information, whether or not an area is meeting the standard or is contributing to a nearby violation. Besides all of Illinois, two areas linked to Illinois including five Missouri counties and two Indiana counties were designated as "Unclassifiable". EPA can later classify the area as attainment or nonattainment with three full calendar years of data. Illinois EPA and EPA continue to discuss the implication of the "Unclassifiable" classification on permitting and other activities. As the Chicago area was redesignated to attainment of the 1997 $PM_{2.5}$ standard in October 2013, "Unclassifiable" does not add any requirements that would be attached to a non-attainment designation. The Metro-East St. Louis area has a clean data finding under the 1997 standard, but Illinois EPA has not sought redesignation to attainment due to modeling issues. Thus, the Metro-East is still considered non-attainment and as such will continue to be subject to requirements appropriate to nonattainment areas. Illinois EPA, EPA and Cook County have been working together to resolve the Cook County lab problems and guard against them reoccurring. Recent EPA and contractor audits of the lab had no negative findings. EPA has determined that Illinois $PM_{2.5}$ data is valid as of mid July 2014.

Currently in Illinois there are two non-attainment areas for the 2008 sulfur dioxide (SO_2) standard, Peoria/Pekin and Lemont (near Chicago). Illinois EPA has performed extensive modeling to identify all "culpable" sources of non-attainment in these areas and has had discussions with them. Illinois EPA is going to propose a statewide rule on the sulfur content of fuel oil and to move forward with rules covering specific sources that impact the non-attainment areas.

All other areas in the state are undesignated under the SO_2 standard. In 2015 it will be decided whether monitoring or modeling will be used to determine which new areas are non-attainment. Modeling is the default. In January 2016, modeling protocols will be provided and monitoring areas identified. New monitoring sites are to be operational in January 2017. At this time Illinois is to submit modeling analysis and boundary recommendations to EPA. EPA will make the designation decision in December 2017 for modeled areas. A federal court case settlement may cause some power plants, including one in the Metro East to be modeled on an accelerated schedule. For monitored areas, recommendations are to be submitted in January 2020 and EPA designation in December 2020. Right now there appears that modeling will be done for 12 areas around the state. One area in southeastern Illinois may go with monitoring. However, monitors will be funded by the sources (facilities) and based on the proposed federal Data Requirements Rule, monitors may need to stay in place longer than three years. It is a financial decision for these sources.

Sources can work with Illinois EPA to potentially avoid non-attainment designations by establishing

enforceable emission limitations to show modeled attainment prior to the SO_2 designations in 2017. It appears that EPA will allow these limits to be deemed enforceable by permit, SIP, consent decree or other action. Sources can take into consideration emission reductions that will be implemented due to MATS and other rules.

The federal Cross State Air Pollution Rule (CSAPR) addresses ozone and $PM_{2.5}$ transport and targets coal-fired electric generating units (EGUs) or power plants. It affects all sources because sufficient emission reductions are needed to reach attainment. If not from CSAPR then EPA needs to consider new rules impacting other sources of NO_x and SO_2. On April 29, 2014, the U.S. Supreme Court overturned the Appeals Court ruling that had vacated CSAPR. EPA is aware of the challenges with CSAPR due to changing circumstances since it was first promulgated. However, EPA has said that CSAPR is in effect as of January 1, 2015. On January 22, 2015, EPA issued a memo to help states address SIP requirements. Illinois EPA is reviewing this memo. In preparing for the return of CSAPR and other transport efforts, various states and organizations have been researching different models and modeling scenarios. The Lake Michigan Air Directors Consortium (LADCO) has been leading the effort to improve forecasting power plant growth and control with the Eastern Regional Technical Advisory Committee (ERTAC) model. This model is "open source" and states can provide information on what they know is happening. EPA used the Integrated Planning Model (IPM) to project EGU emissions and specific state actions concerning the EGUs. IPM is a "black box" proprietary model which uses economic and power system information to determine what states would do to comply with CSAPR. LADCO is also performing state-specific source apportionment modeling to determine what sources are most impacting non-attainment in the Northeast and Wisconsin, whether local or transport-related. Various states and EPA are investigating EGUs that are not fully operating controls at certain times. Looking at the data, there are one or two facilities in Illinois which are not fully operating their controls. The remainder in the state are in compliance. Most of facilities are mandated by law to do this. This is not true in all states.

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

Two more compressed natural gas (CNG) refueling stations are going to open in the St. Louis area. Gain Energy is installing both stations. One CNG station will be located at 2nd and Miller in the City of St. Louis and is expected to open in June-July 2015. This station will be used by Anheuser-Busch. Anheuser-Busch expects to displace three million gallons of diesel fuel each year. The second CNG refueling station will be in the Edwardsville IL area. These CNG-only stations will be open to the public and not have any attendants.

One February 25-26 Clean Cities will be hosting a technician training class on CNG vehicles. On February 24, a company that works with Nissan will be at Ranken to talk about installing DC fast chargers around the area for electric vehicles.

Mr. Coulson, EWG, distributed copies of a St. Louis Post-Dispatch article about electric vehicles may not be as clean as think whether source of electricity to charge vehicles is coal-fired or natural gas. Mr. Herdler, Clean Cities, said that St. Louis primary uses coal to generate electricity but electric vehicles are 38 percent cleaner at the tailpipe. In addition, most charging stations have solar panels for back-up purposes.

Clean Cities continues to work with the biodiesel class at Summit High School in the Rockwood School District. Class is focused on making biodiesel fuel. Clean Cities is reaching out to USEPA and MoDNR to see if a brownfield location can be identified where plants could be grown to be used in biodiesel production and to help clean up the soil.

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

Mr. Winkelmann, MoDNR, announced that the federal CSAPR had been reinstated by the U.S. Supreme Court. The rule is in the form of a Federal Implementation Plan (FIP) but the states can reallocate their NO_x emissions allowance identified in CSAPR through a SIP revision. Missouri has two SIP revisions (for Higginsville and Chillicothe) on public comment to reallocate NO_x allowances for the 2016 annual ozone season budgets. NO_x is an interstate contributor to ozone formation and a precursor to $PM_{2.5}$ development. There will be a public hearing on these revisions at the January 29 Missouri Air Conservation Commission (MACC) meeting. The comment period ends February 5. To expedite the allowance change for 2016, USEPA allows for an abbreviated SIP. For 2017 and beyond, actual rules are needed. That rule-making (for 10 CSR 10.6.372, 6.374 and 6.376) will be placed on an early 60-day public comment period some time in February. These rules setting NO_x allowances will coincide with the CSAPR SIP and can be implemented toward the 2017 timeframe.

On January 22 EPA came out with guidance based on the 2018 modeling platform for the 2008 eight-hour ozone NAAQS. 2011 is the base year for the national emissions inventory and 2018 is the attainment year for moderate non-attainment areas. Based on modeling and the guidance, it appears that Missouri contributes at least one percent of emissions to non-attainment and maintenance areas in Texas, Michigan, Wisconsin, Illinois and New Jersey. MoDNR is still evaluating model output and guidance document. Ms. Allen, MoDNR, added that some days upwind NO_x is blown south to Texas and some days NO_x from Texas is blown north. Mr. Winkelmann, MoDNR, said that some areas in Texas contribute to St. Louis area.

MoDNR has in place the new emissions fee permit structure. Emission permits were raised from $40 ton to $48. This fee will go into effect in 2016 for 2015 emissions. On January 29,MoDNR begins another round of stakeholder meetings focused on operation/construction and asbestos compliance fees. Any fee changes that come out of this round of meetings would not go into effect until January 2017. This schedule is set out in state statute.

MoDNR is changing a sulphur dioxide (SO_2) rule, 10 CSR10-6.261, associated with the ongoing Attainment Demonstration SIPs for the Jackson and Jefferson Counties SO_2 non-attainment areas. This rule-making is out for public comment until February 11. MoDNR is moving forward with additional SO_2 monitoring.

Mr. Bloomberg, Illinois EPA, that newly sworn in Governor Rauner had reappointed Lisa Bonnet as Director of Illinois EPA.

VII. Other Business

Dr. Fishman, St. Louis University (SLU), said that SLU is working with EWG working with EWG on a project to develop the area's capacity/ability to do greenhouse gas inventories and model transportation-related emissions. Mr. Welsh, SLU doctoral candidate, is learning about the MOVES model. Software issues are being examined. Mr. Coulson, EWG, asked if they would like to give an update at the March meeting. Dr. Fishman, SLU, said that Mr. Welsh could discuss their research on long term ozone trends.

Ms. Fisher, Citizens for Modern Transit (CMT), announced that on February 13 CMT is hosting a Transit Crush Event at different MetroLink stations for people who love transit, use transit and want more. CMT will thank the transit users and present information on their programs. On March 12, CMT is sponsoring an event focusing on transportation infrastructure like public transit and community development in urbanized areas. The Ten Toes Express program will start in April. This year CMT is partnering with AARP to start a new group that will be walking on Saturday. A fund raiser is planned for July to celebrate the 30th anniversary of CMT. More information will be forthcoming.

Mr. Gonzalez, Madison County Transit/RideFinders, announced that RideFinders has just started Share the Ride - Share the Resolution initiative. This initiative is designed to encourage commuters throughout the St. Louis region to pledge to give ridesharing a try. This is a way to generate interest and encourage participation in upcoming events. For more information go to www.sharetheridestl.com .

The next meeting of the AQAC was scheduled for March 24, 2015. There being no other business, the meeting of the Air Quality Advisory Committee was adjourned.