



## **Tier II Consultation Meeting**

### **REVISED Agenda**

**February 9, 2012—11:00 a.m.**

**Lake County Conference Room**

**CMAP Offices**

**1.0 Call to Order and Introductions** 11:00 a.m.

**2.0 Agenda Changes and Announcements**

**3.0 Approval of Minutes – November 4, 2011**

ACTION REQUESTED: Approval

**4.0 SIP Update**

The Illinois EPA submitted the Chicago 8-Hour Ozone Maintenance Plan and Annual PM<sub>2.5</sub> Maintenance Plan to the U.S. Environmental Protection Agency on September 18, 2011. US EPA will advise the team on the status of the submission.

ACTION REQUESTED: Information

**5.0 Designations under the 2008 Ozone NAAQS**

US EPA will provide an update on the timeline and process for designations under the 2008 ozone NAAQS. On January 31, 2012 the US EPA issued the attached “120-day letters” now recommending that the Chicago area (as well as parts of Indiana and Wisconsin) be designated as nonattainment areas for the 2008 8-hour ozone standard.

ACTION REQUESTED: Information

**6.0 TIP Conformity Amendment**

**6.1 Public Comment Period**

The semi-annual conformity amendment is scheduled to be considered by the CMAP Board and MPO Policy Committee in March, 2012. The amendment was released for public comment at the Transportation Committee meeting on January 20, 2012. To date, no comments have been received.

**6.2 Network Corrections**

Five projects (TIP IDs: 09-00-0031, 10-09-0146, 12-06-0009, 09-10-0005 and 12-06-0099) were found to have been previously added to the TIP without being included in the travel demand model network. Those projects have been included in this model run. Additionally, one project (TIP ID 12-06-0099) has only phase 1 engineering programmed

in the TIP, but had been included in the network. That project has been removed from the network.

### **6.3 Model Updates**

The travel demand model incorporates fares and tolls in its structure. The model runs for this conformity include the Tollway increases that went into effect January 1, 2012. The Metra fare increases that went into effect on February 1, 2012 will be included in future model runs.

ACTION REQUESTED: Information and Discussion

## **7.0 Conformity for Construction on Red and Purple Lines**

CTA is preparing environmental documents for its construction projects on the Red and Purple Lines. Their consultants wish to verify the conformity analysis, if any, required in conjunction with the actual project construction.

ACTION REQUESTED: Discussion

## **8.0 CREATE Passenger Rail Projects**

### **8.1 Projects of Air Quality Concern**

IDOT is seeking discussion on the use of the MOVES model and the attached methodology and input parameters for determining if CREATE Passenger Rail projects are Projects of Air Quality Concern in PM<sub>2.5</sub> and PM<sub>10</sub> Nonattainment and Maintenance Areas.

ACTION REQUESTED: Discussion and concurrence on the use of the MOVES model.

### **8.2 Emission Factors**

IDOT is seeking discussion on the use of emission factors from the NONROAD model for General Conformity related to the attached NONROAD2008 FAQ regarding 2005 versus 2008 model results.

ACTION REQUESTED: Discussion and concurrence on the use of emission factors found in the NONROAD2005 model.

## **9.0 CREATE Argo Connections/Clearing Main Lines Project (B9/EW1)**

IDOT will present an overview of the NO<sub>x</sub> analysis for the project summarized in the attached general conformity analysis and emissions projections data.

ACTION REQUESTED: Concurrence with the results of the NO<sub>x</sub> analysis.

## **10.0 Transportation Conformity Particulate Matter Hot-Spot Air Quality Modeling**

IDOT will provide an update on the current status of the project.

ACTION REQUESTED: Information

## **11.0 Major Capital Project Updates**

A brief update on the status of Major Capital Projects is available on the Transportation Committee minutes page. The direct link to the report is [http://www.cmap.illinois.gov/c/document\\_library/get\\_file?uuid=da6e04ae-9af4-4373-87fa-108328e186e2&groupId=20583](http://www.cmap.illinois.gov/c/document_library/get_file?uuid=da6e04ae-9af4-4373-87fa-108328e186e2&groupId=20583)

ACTION REQUESTED: Information

**12.0 TIP Amendment Between Transportation Committee Meetings**

Updates to three JARC/New Freedom projects were not submitted in time to be considered at the January 20<sup>th</sup> Transportation Committee meeting. The projects are TIP IDs 08-10-0001, 10-09-0016 and 17-09-0003. These projects received 2012 funds in the fall; the funds need to be reflected in the TIP in order to process the FTA grant. Delaying approval of adding the funds to the TIP until the March 2<sup>nd</sup> Transportation Committee meeting may result in a service interruption. These projects are exempt; conformity is not required.

ACTION REQUESTED: Consideration of approving the addition of funds to the TIP.

**13.0 Other Business**

**14.0 Public Comment**

This is an opportunity for comments from members of the audience. The amount of time available to speak will be at the chair's discretion. It should be noted that the exact time for the public comment period will immediately follow the last item on the agenda.

**15.0 Next Meeting**

**16.0 Adjournment**

**Tier II Consultation Team Members:**

	CMAP		FHWA		FTA		IDOT
	IEPA		RTA		USEPA		



## Tier II Consultation Meeting

DRAFT Minutes

November 4, 2011

Offices of the Chicago Metropolitan Agency for Planning (CMAF)  
Lake County Conference Room

### Participants:

Reggie Arkell	FTA
Patricia Berry	CMAF
Claire Bozic	CMAF
Kama Dobbs	CMAF
Bruce Carmitchel	IDOT – Office of Planning & Programming – via phone
John Donovan	FHWA
Matt Fuller	FHWA – via phone
Don Kopec	CMAF
Amy Lee	RTA
Michael Leslie	USEPA – via phone
Jane Lin	UIC
Ross Patronsky	CMAF
Mike Rogers	IEPA
Susan Stitt	IDOT – Office of Planning & Programming
Suriay Vallamsundar	UIC
Kermit Wies	CMAF
Walt Zyzniewski	IDOT – via phone

- 1.0 **Call to Order and Introductions** 10:30 a.m.  
All participants introduced themselves.
- 2.0 **Agenda Changes and Announcements**  
None.
- 3.0 **Approval of Minutes – September 8, 2011**  
The minutes of September 8, 2011 were approved with one clarification.
- 4.0 **Transportation Conformity Particulate Matter Hot-Spot Air Quality Modeling**  
Jane Lin reviewed the memo provided with the agenda and requested input on the procedure to be used for determination of urban populations for the AERMOD dispersion

model. The team suggested that USEPA, IEPA, FHWA, IDOT and UIC schedule a conference call on November 9 to discuss the technical details.

## **5.0 SIP Update**

Mr. Rogers reported that the Illinois EPA submitted the Chicago 8-Hour Ozone Maintenance Plan and Annual PM<sub>2.5</sub> Maintenance Plan to the U.S. Environmental Protection Agency on September 18, 2011. The budgets in these SIPs were developed with MOVES. Mr. Leslie reported that the US EPA plans to issue a notice of approval of the SIPs in early 2012, which will include approval of budgets. A finding of adequacy will be issued prior to approval.

## **6.0 TIP Conformity Amendment**

The team discussed the timing of the SIP approval relative to CMAP's next conformity analysis and agreed that the conformity analysis should use MOVES. Mr. Patrosky stated that CMAP plans to use local input values if the travel demand model can supply the data. Other inputs will be consistent with the values used by IEPA. He also noted that vehicle registration data has been requested from the Secretary of State, to see if source type population (number of vehicles) can be inferred, but it is unknown at this time if the data will be useable for local fleet inputs in MOVES. If not, the method suggested in the MOVES Technical Guidance will be used.

## **7.0 Implications of Designations under the 2008 Ozone NAAQS**

Mr. Leslie reported that US EPA will be issuing attainment designations in 2012 under the 2008 ozone NAAQS and that Chicago will be in attainment based on the currently certified 2008 – 2010 air quality data. The team discussed the possible implications of the finding on the region's allocation of CMAQ funding. Mr. Donovan noted that under the current extension of SAFETEA-LU, apportionments remain tied to the last year of SAFETEA-LU. He also noted that current reauthorization proposals include significant changes to the funding programs. Mr. Leslie explained that in order for the US EPA to consider 2009 – 2011 data, which show the region to be in nonattainment, the state would need to certify that data. Mr. Rogers noted that there are other interested parties that may not support the use of this data. Mr. Leslie explained that a "120 day letter" detailing US EPA's intent for designations is likely to be issued in December. While not a formal call for comments, it is possible for changes to be made as a result of comments received during this time period. The team also noted that it will take time to revise regulations following any designation. Furthermore, the ozone standard will be updated in 2013, and Chicago might be found to be in non-attainment under the updated standard before regulatory changes take full effect.

## **8.0 Major Capital Project Updates**

Ms. Bozic provided a brief update on the status of Major Capital Projects. It was noted that the description of the CREATE Passenger Corridor has been corrected in the TIP to include the Heritage Corridor. Following the meeting, Ms. Bozic verified that the

Heritage Corridor CREATE project terminates at Summit. Mr. Arkell noted that CTA received an FTA grant for the Wilson Street station rehabilitation.

**9.0 Activity-Based Model Development at CMAP**

Mr. Wies provided an overview of the activity-based model currently under development, and its use in travel demand forecasts for conformity. He said that the activity-based model will not be replacing the existing travel demand model for conformity purposes anytime soon. Ms. Stitt noted that IDOT will be starting development of the state-wide rail plan and will be in touch with CMAP staff for model data.

**10.0 Other Business**

None.

**11.0 Public Comment**

None.

**12.0 Next Meeting**

The next meeting is on call.

**13.0 Adjournment**

The meeting adjourned at 11:30 a.m.

**Tier II Consultation Team Members:**

	CMAP		FHWA		FTA		IDOT
	IEPA		RTA		USEPA		



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

JAN 3 1 2012

The Honorable Pat Quinn  
Governor of Illinois  
207 State House  
Springfield, Illinois 62706

REPLY TO THE ATTENTION OF:

Dear Governor Quinn:

Thank you for the December 7, 2011 letter submitted by Laurel L. Kroack, Chief of the Bureau of Air at the Illinois Environmental Protection Agency, certifying the State's 2011 ozone air quality data. This letter is to notify you of revisions to U.S. Environmental Protection Agency's preliminary response to Illinois' air quality designation recommendations for the 2008 ozone National Ambient Air Quality Standard (NAAQS), as specified in our December 9, 2011 letter.

In the December 9, 2011 letter, EPA agreed with Illinois' March 9, 2009 recommendations on the boundary and nonattainment ozone designation for the St. Louis-St. Charles-Farmington, Missouri-Illinois area. EPA also stated our intention to designate all other areas in Illinois as unclassifiable/attainment for the 2008 ozone NAAQS.

EPA policy is to consider 2011 data in the designations if states certify the data by February 29, 2012. On December 7, 2011, Illinois sent a letter to EPA submitting the state's 2011 certified air quality data for consideration in the ozone designation process. However, given the timing of the submittal, EPA was unable to consider Illinois' 2011 data in our December 9, 2011 letter. The 2011 ozone data indicate a monitored violation of the 2008 ozone NAAQS in Lake County, Illinois which is part of the Combined Statistical Area (CSA) that includes Chicago.

EPA has now had sufficient time to consider the certified 2011 data, along with Illinois' March 9, 2009 ozone designation recommendations. Consequently, because of monitored air quality that demonstrates a violation of the national health standard for ozone, EPA intends to designate the Chicago-Naperville, Illinois-Indiana-Wisconsin area as nonattainment, with boundaries that include: the counties and partial counties recommended by Illinois in its 2009 recommendations; Lake, Porter, and Jasper Counties in Indiana; and Kenosha County in Wisconsin. The enclosed Technical Support Document (TSD) is an addendum to the TSD enclosed with the December 9, 2011 letter, and provides a detailed analysis to support our intended designation for the counties in this area.

This is a unique situation because the CSA is a multistate area where only one of the states, Illinois, has submitted certified 2011 ozone data, which is not due until May 1, 2012. *See* 40 C.F.R. § 58.15.

During the 120-day process, EPA will continue to work with state officials regarding the appropriate designations and boundaries for the areas in Illinois. States will have time to review

these letters and provide EPA with information to support any further changes to EPA's response.

Should you have any questions, please do not hesitate to contact me at 312-886-3000, or Cheryl L. Newton, Director, Air and Radiation Division, at 312-353-6730.

Sincerely,



Susan Hedman  
Regional Administrator

Enclosure (1)

cc: John J. Kim, Interim Director, and Laurel Kroack, Chief  
Illinois Environmental Protection Agency



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

JAN 3 1 2012

The Honorable Mitchell E. Daniels Jr.  
Governor of Indiana  
100 North Senate Avenue  
Indianapolis, Indiana 46204

REPLY TO THE ATTENTION OF:

Dear Governor Daniels:

This letter is to notify you of revisions to the U.S. Environmental Protection Agency's preliminary response to Indiana's air quality designation recommendations for the 2008 ozone National Ambient Air Quality Standard (NAAQS), as specified in our December 9, 2011 letter.

In the December 9, 2011 letter, EPA stated our intention to modify Indiana's recommended designation for the Cincinnati-Middletown-Wilmington, Ohio-Kentucky-Indiana area by designating the area nonattainment. EPA also stated our intention to designate all other areas in Indiana as unclassifiable/attainment for the 2008 ozone NAAQS.

EPA policy is to consider 2011 data in the designations if states certify the data by February 29, 2012. On December 7, 2011, Illinois sent a letter to EPA submitting the state's 2011 certified air quality data for consideration in the ozone designation process. However, given the timing of the submittal, EPA was unable to consider Illinois' 2011 data in our December 9, 2011 letter. The 2011 ozone data indicate a monitored violation of the 2008 ozone NAAQS in Lake County, Illinois which is part of the Combined Statistical Area (CSA) that includes Chicago and Jasper County, Indiana.

EPA has now had sufficient time to review the certified 2011 data and is revising our preliminary response to address these data. Consequently, because of monitored air quality that demonstrates a violation of the national health standard for ozone, EPA intends to designate the Chicago-Naperville, Illinois-Indiana-Wisconsin area as nonattainment, with boundaries that include: Lake, Porter, and Jasper Counties in Indiana; Kenosha County in Wisconsin; and several counties in Illinois. EPA is evaluating Jasper County as part of the nonattainment area because it is now part of the CSA. The enclosed Technical Support Document (TSD) is an addendum to the TSD enclosed with the December 9, 2011 letter, and provides a detailed analysis to support our intended designation for the counties in this area.

This is a unique situation because the CSA is a multistate area where only one of the states, Illinois, has submitted certified 2011 ozone data, which is not due until May 1, 2012. See 40 CFR § 58.15. While our current intent is to include Jasper County as a whole, we understand that it is a new addition to the historical nonattainment area and would be open to additional information from Indiana regarding the inclusion of Jasper County and appropriate nonattainment boundaries in the county.

During the 120-day process, EPA will continue to work with state officials regarding the appropriate designations and boundaries for the areas in Indiana. States will have time to review these letters and provide EPA with information to support any further changes to EPA's response.

Should you have any questions, please do not hesitate to contact me at 312-886-3000, or Cheryl L. Newton, Director, Air and Radiation Division, at 312-353-6730.

Sincerely,



Susan Hedman  
Regional Administrator

Enclosure (1)

cc: Thomas W. Easterly, Commissioner and Keith Baugues, Assistant Commissioner  
Indiana Department of Environmental Management



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

JAN 3 1 2012

REPLY TO THE ATTENTION OF:

The Honorable Scott Walker  
Governor of Wisconsin  
115 East Capitol  
Madison, Wisconsin 53702

Dear Governor Walker:

This letter is to notify you of revisions to the U.S. Environmental Protection Agency's preliminary response to Wisconsin's air quality designation recommendations for the 2008 ozone National Ambient Air Quality Standard (NAAQS), as specified in our December 9, 2011 letter.

In the December 9, 2011 letter, EPA stated our intention to modify Wisconsin's recommended designation for the Sheboygan, Wisconsin area by designating the area nonattainment. EPA also stated our intention to designate all other areas in Wisconsin as unclassifiable/attainment for the 2008 ozone NAAQS.

EPA policy is to consider 2011 data in the designations if states certify the data by February 29, 2012. On December 7, 2011, Illinois sent a letter to EPA submitting the state's 2011 certified air quality data for consideration in the ozone designation process. However, given the timing of the submittal, EPA was unable to consider Illinois' 2011 data in our December 9, 2011 letter. The 2011 ozone data indicate a monitored violation of the 2008 ozone NAAQS in Lake County, Illinois which is part of the Combined Statistical Area (CSA) that includes Chicago and Kenosha County, Wisconsin.

EPA has now had sufficient time to review the certified 2011 data and is amending our preliminary response to address these data. Consequently, because of monitored air quality that demonstrates a violation of the national health standard for ozone, EPA intends to designate the Chicago-Naperville, Illinois-Indiana-Wisconsin area as nonattainment, with boundaries that include: Kenosha County in Wisconsin; Lake, Porter, and Jasper Counties in Indiana; and several counties in Illinois. The enclosed Technical Support Document (TSD) is an addendum to the TSD enclosed with the December 9, 2011 letter, and provides a detailed analysis to support our intended designation for the counties in this area.

This is a unique situation because the CSA is a multistate area where only one of the states, Illinois, has submitted certified 2011 ozone data, which is not due until May 1, 2012. *See* 40 C.F.R. § 58.15. While our current intent is to include Kenosha County as part of the designated Chicago nonattainment area, we recognize that this has not been the case in the past. Nonetheless, historical data indicate a strong link between air quality levels at the violating monitor in Lake County and a monitor in Kenosha County. Please note that, during the 120-day process, we are open to discussing alternative approaches for Kenosha County; and, if the state has additional information such as certified 2011 data from Kenosha County, we will consider it.

During the 120-day process, EPA will continue to work with state officials regarding the appropriate designations and boundaries for the areas in Wisconsin. States will have time to review these letters and provide EPA with information to support any further changes to EPA's response.

Should you have any questions, please do not hesitate to contact me at 312-886-3000, or Cheryl L. Newton, Director, Air and Radiation Division, at 312-353-6730.

Sincerely,



Susan Hedman  
Regional Administrator

Enclosure (1)

cc: Cathy Stepp, Secretary, and Bart Sponseller, Director of the Bureau of Air Management  
Wisconsin Department of Natural Resources

## Ross Patronsky

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**From:** Ross Patronsky  
**Sent:** Thursday, December 29, 2011 11:10 AM  
**To:** 'Rinnan, Mark'  
**Cc:** 'Rogers, Michael D.'  
**Subject:** RE: CTA Red & Purple Construction Impacts

Mr. Rinnan:

Sorry for the delay in responding to your question, but it took a while to get something back from our federal partners. Ultimately, I received the following excerpts from the conformity section of the Code of Federal Regulations:

93.117 Criteria and procedures: Compliance with PM10 and PM2.5 control measures.

The FHWA/FTA project must comply with any PM10 and PM2.5 control measures in the applicable implementation plan. This criterion is satisfied if the project-level conformity determination contains a written commitment from the project sponsor to include in the final plans, specifications, and estimates for the project those control measures (for the purpose of limiting PM10 and PM2.5 emissions from the construction activities and/or normal use and operation associated with the project) that are contained in the applicable implementation plan. **I am unaware of any control measures in the state implementation plan for Illinois that apply here. However, Illinois EPA is the agency responsible for the SIP; I have copied Mike Rogers of IEPA on this email in case there is something that applies.**

93.122(f)

(f) PM 2.5 from construction-related fugitive dust. (1) For PM2.5 areas in which the implementation plan does not identify construction-related fugitive PM2.5 as a significant contributor to the nonattainment problem, the fugitive PM2.5 emissions associated with highway and transit project construction are not required to be considered in the regional emissions analysis. **As far as I know fugitive dust from construction is not identified as a significant contributor to nonattainment, but Mr. Rogers should be able to tell you for sure.**

93.123(c)(5)

(5) CO, PM10, and PM2.5 hot-spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established "Guideline" methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site. **This one's pretty self-explanatory.**

To help interpret this, I've added the notes in red. I assume there is some FTA person who is providing federal oversight on this project. That person should be able to help if you need further information on this issue. That said, let me know if I can be of further help.

Ross Patronsky  
Senior Planner  
Chicago Metropolitan Agency for Planning  
233 S Wacker Dr, Suite 800  
Chicago, IL 60606  
312-386-8796  
[rpatronsky@cmapp.illinois.gov](mailto:rpatronsky@cmapp.illinois.gov)

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**From:** Rinnan, Mark [mailto:Mark.Rinnan@jacobs.com]  
**Sent:** Tuesday, November 22, 2011 4:36 PM

**To:** Ross Patronsky  
**Subject:** CTA Red & Purple Construction Impacts

Good Afternoon Ross,

Thanks for offering to make inquiries as to thresholds of significance caused by construction related activities. I understand CMAP (as the MPO for Chicago) models air quality conformance for the region but generally is not involved in assessing the temporary impacts cause by construction activities. We are preparing a technical memorandum that addresses those impacts. We are looking for local, state, or federal thresholds of significance for construction related impacts such as noise and vibration, air quality, and water resource impacts. These thresholds will be used to identify potential adverse impacts.

You mentioned these thresholds might be been included in the EIS for the reconstruction of the Dan Ryan Expressway and that the FHWA (or others) may have that information. Please provide contact information for those individuals if available.

Thanks for your assistance in this matter.

**Mark D. Rinnan, AICP**  
Project Manager

**JACOBS**

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## METHODOLOGY FOR DETERMINING IF CREATE PASSENGER RAIL PROJECTS ARE “PROJECTS OF AIR QUALITY CONCERN” IN PM<sub>2.5</sub> AND PM<sub>10</sub> NONATTAINMENT AND MAINTENANCE AREAS”

The March 10, 2006 Particulate Matter Hot-Spot Analysis rule (71 FR 12491), provided examples of what would be considered “projects of air quality concern” in Particulate Matter (PM<sub>2.5</sub> and PM<sub>10</sub>) Nonattainment and Maintenance Areas. One example of a highway project showed an increase of 10,000 trucks per day. While this increase in diesel trucks was not described as a threshold, it could be used as the foundation of determining if a project is one of air quality concern. The 10,000 diesel trucks per day data point could be utilized for establishing a train volume data point to assist in determining if a CREATE Passenger Rail Project (which is subject to Transportation Conformity) is a “project of air quality concern.” FHWA and IDOT are proposing the following process be used to help make this determination:

### TRUCK/TRAIN ANALYSIS

1. Determine if the project is located within the PM<sub>2.5</sub> Nonattainment Area only or if it is also located in the Lyons Township or the Lake Calumet PM<sub>10</sub> Maintenance Areas.
2. IEPA will provide total PM emissions (grams/mile) for 10,000 trucks for 2010, 2015 and 2025 design years based on PM<sub>2.5</sub> and PM<sub>10</sub> average emission factors for the two worse-case Heavy Duty Diesel Vehicle classes (HDDV 8a and HDDV 8b) obtained from the MOBILE 6.2 model used with the specific NE Illinois inputs.
3. Using #2 above, multiply total emissions for 10,000 trucks (grams/mile) by 1 mi to calculate the total emissions for 10,000 trucks in grams/day. (Note: this is a constant for a given design year.)
4. Obtain the PM emission factor for the fleet average (all locomotives) in grams/gallon (for the design year). Source: USEPA Publication *Emission Factors for Locomotive*, EPA420-F-97-051, December 1997, unless more recently developed information is available.
5. Determine the number of passenger rail locomotives associated with the design year no-build case and with the proposed design year build case. Subtract the no-build number from the build number to obtain the increase in passenger rail locomotive traffic associated with the project. (Note: this will vary from one project to another.)
6. Obtain fuel consumption rate of the passenger rail locomotives (miles/gallon). (Note: this will be provided by the RRs and is a constant.)
7. Using #3, #4, and #5 above, multiply delta number of trains (TRN/day) by inverted train fuel consumption rate (gallons/mile), the train emission factor (grams/gallon) and 1 mile to calculate the total emissions of the increase in train traffic (grams/day). (Note: this will vary from one project to another.)
8. Compare total emissions of the increase in train traffic, #6 above, to total emissions of 10,000 trucks calculated in #2 above. If emissions from the increase in train traffic closely approaches or exceeds that of 10,000 trucks, it is an indication that the project is of air quality concern.

Since the total truck emissions for 10,000 trucks is a constant, and since the train fuel consumption rate and emission factor will be constants, we can multiply the total truck emissions for 10,000 trucks by the train fuel consumption rate and then divide by the

train emissions factor to determine how many trains would be needed to be equivalent to 10,000 trucks. Once we have calculated this number, we would then compare the increase in train traffic number to this number. If the implementation of a CREATE passenger rail project approaches or exceeds this number, it is an indication the project is of air quality concern.

Since passenger rail projects are transit projects, it was determined that the CREATE passenger rail projects should also be looked at as transit type projects when applying the PM Hot-Spot rules. Because FTA is more familiar with transit type projects, FHWA sought and utilized their advice when developing this process of applying the PM Hot-Spot rules and determining if CREATE passenger rail projects should be considered “projects of air quality concern.”

In § 93.123(b)(1) of the PM Hot-Spot regulations, transit projects that are considered “projects of air quality concern” are described as:

- (iii) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location
- (iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location

In addition, the March 10, 2006 PM Hot-Spot rules provide transit type examples of “projects of air quality concern” such as “An existing bus or intermodal terminal that has a **large vehicle fleet** where the number of diesel buses increases by 50% or more, as measured by bus arrivals.” The final rule also give the example of what **would not** be considered a project of air quality concern as: “A 50% increase in daily arrivals at a **small terminal (e.g., a facility with 10 buses in the peak hour).**”

No “new” bus or rail terminals and transfer points are currently proposed under the CREATE program. As such, this analysis will focus on “expanded” bus and rail terminals and transfer points. Also, while the CREATE program does not involve any projects which will physically “expand” any existing bus or rail terminals and transfer points, it is possible that a CREATE project may cause an increased use of a facility, that is, implementation of a CREATE project may cause an existing rail terminal(s) to service additional passenger rail lines which they currently do not service. Although the PM Hot-Spot rules do not specifically mention this situation, based on advice from FTA, this does not preclude us from investigating the effects of this increase in train arrivals on the facility. FTA has indicated that, for transit projects in general, these types of projects would rarely increase use of a facility to a level that would approach or exceed the 50% increase indicated by the PM Hot-Spot rules. With this in mind, the following analysis was developed to assist in determining if a CREATE passenger rail project is one of air quality concern:

## **TRAIN ARRIVAL ANALYSIS**

- 1) Determine if each terminal (station) along the involved line has a “**large vehicle fleet**” or is a “**small terminal (e.g., a facility with 10 buses in the peak hour).**” If

it is determined that all terminals (stations) along the involved line are small terminals, the project is not one of air quality concern. This determination will be included in the NEPA document for the project. If it is determined that one or more terminals (stations) along the involved line has a large vehicle fleet, proceed to #2.

- 2) Calculate the percent increase in daily passenger train arrivals at each terminal (station) that has a large vehicle fleet (percent difference between design year train arrivals and existing train arrivals at the facility). If this closely approaches or exceeds 50% for any terminal evaluated, it is an indication that the project is one of air quality concern.

The above analyses would be completed for each CREATE Passenger Rail Project to determine if it is a “project of air quality concern.”

Documentation:

If it is determined that the CREATE Passenger Rail Project is not a “project of air quality concern”, the following will be included in the NEPA document:

“This project does not meet the definition of a project of air quality concern as defined in 40 CFR 93.123(b)(1). Due to {state reason(s)}, it has been determined that the project will not cause or contribute to any new localized PM<sub>2.5</sub> or PM<sub>10</sub> violations or increase the frequency or severity of any PM<sub>2.5</sub> or PM<sub>10</sub> violations. EPA has determined that such projects meet the Clean Air Act’s requirements without any further Hot-Spot analysis.”

If a CREATE Passenger Rail Project is determined to be a project of air quality concern, a qualitative Hot-Spot analysis will be required to be completed for the project.

# PARTICULATE MATTER EMISSION FACTORS USING MOVES REGIONAL SCALE OF ANALYSIS

*Prepared by,  
Suriya Vallamsundar and Jane Lin  
University of Illinois at Chicago  
Date: 01/15/12*

Table 1 shows the RunSpec generic parameters used for MOVES regional scale analysis

**TABLE 1 MOVES RunSpec Parameters**

<b>Data Item</b>	<b>Description</b>
Geographic location	Cook County, IL
Scenario Year	2029
Time Period	Two months representing summer and winter seasons
Pollutant	PM2.5
Emission Process	Running exhaust, crankcase running exhaust, break wear and tire wear
Vehicle- Fuel Combination	Diesel powered all MOVES vehicle types
Road Types	Both restricted and unrestricted road types
Scale of analysis	County
Time aggregation level which refers to level of pre-aggregation done to inputs	Based on regional conformity requirements, time aggregation level is set to hour.

Table 2 shows the local specific input data used for MOVES regional scale analysis.

**TABLE 2 MOVES Local Specific Input Parameters**

<b>Data item</b>	<b>Description</b>	<b>Source</b>
Vehicle Type VMT	Annual vehicle miles traveled by HPMS vehicle class for the year and geographic area being modeled	In this case, vehicle type VMT for Cook County was obtained from the travel statistics from Highway Performance Monitoring System (HPMS) for calendar year 2009. VMT distribution for calendar year 2029 was obtained using the growth factors from 2009 to 2029. The same percentage was applied to all vehicle types as individual growth factors by vehicle types were not available.
Source Type Population	The number of vehicles in the geographic area being modeled for each vehicle type such as passenger cars, passenger trucks etc	EPA converters to convert data from MOBILE format into MOVES compatible format were utilized for generating source type population based on vehicle type VMT.

Average Speed Distribution	The average speed data specific to vehicle type and road type and time of day/ type of data for geographic area being modeled	VMT distribution by speed bin for Freeways and Arterials by hour for the Chicago area for year 2007 was obtained from IL EPA for PM Hot-Spot Transportation Conformity Project. The same data was utilized for calendar year 2029 assuming there will a little significant change in future fractions. Due to lack of data, same speed-VMT fractions are used for urban and rural types. EPA converters were utilized to convert this data in MOBILE format into MOVES compatible format.
Road Type Distribution	The fraction of VMT by road type for the geographic area being modeled	EPA converters were utilized for generating road type distribution based on vehicle type VMT.
Source Type Age Distribution	Vehicle age distribution	Registration distribution for the Chicago area for year 2008 was obtained from IL EPA for PM Hot-Spot project. The same data was utilized for calendar year 2029 assuming there will a little significant change in future fractions. EPA converters were utilized to convert this data in MOBILE format into MOVES compatible format.

Meteorology	Temperature and humidity	Hourly temperature and relative humidity values were obtained from IL EPA in AERMET format and was extracted to be used for MOVES.
Fuel Supply	Fuel supply parameters and associated market share for each fuel	MOVES default fuel data was used with changes made to Reid Vapor Pressure, Sulfur content based on local data. Local data for Cook county was obtained from IL EPA.
I/M Program	Inspection-maintenance program parameters	MOVES default data.

Table 3 describes the files attached

**TABLE 3 List of files attached**

<b>Input File Name</b>	<b>Description</b>
Consolidated_inputs.xls	This file has all inputs used for MOVES regional scale.
Cook_CountyPM_Jan_detailedoutput.xls	MOVES output by road type, vehicle type and emission process.
Cook_CountyPM_July_detailedoutput.xls	MOVES output by road type, vehicle type and emission process.
Cook_CountyPM_Jan_consolidatedoutput.xls	MOVES output by road type, vehicle type.
Cook_CountyPM_July_consolidatedoutput.xls	MOVES output by road type, vehicle type.

### **What are the differences in emission inventory results between NONROAD2005 and NONROAD2008?**

Since the main difference between NONROAD2008 and NONROAD2005 is the accounting for new exhaust and evaporative emission controls, the newer version predicts substantially less HC and CO, and somewhat less NO<sub>x</sub> and PM emissions than NONROAD2005 with use of comparable scenario inputs. The comparison depends greatly on pollutant, equipment type, year evaluated, and fuel choice (how much ethanol is in the gasoline). For a detailed comparison of nationwide inventories differences, see "EPA NONROAD Model Updates of 2008" April 2009 International Emission Inventory Conference presentation of changes from NONROAD2005, available on the NONROAD model web site: <http://www.epa.gov/otaq/nonrdmdl.htm>.

### **Does NONROAD2008 reflect all of EPA's final nonroad engine emission standards to date?**

Yes. The model now accounts for the provisions of the Small SI and SI Recreational Marine final rule (Federal Register Vol 73, No. 196, page 59034, October 8, 2008), as well as the diesel recreational marine standards in the Loco/Marine final rule, (Federal Register Vol 73, No. 88, page 25098, May 6, 2008).

### **Can the option files used for previous versions of the model be used for NONROAD2008?**

If you wish to properly model the effects of ethanol gasoline blends on permeation emissions, then you must create new Option files that include the two new lines that specify ethanol blend market share and volume percent ethanol in the blend. If you open an older option file in the GUI, you will get a warning that there is a problem with the ethanol blend inputs; you can take care of this by entering appropriate values in the Scenario: Options form. If you are only modeling exhaust emissions, or just diesel fueled equipment, or there is no ethanol in your gasoline, then Option files created with NONROAD2005 can be used with NONROAD2008. Option files from model versions earlier than NONROAD2005 are not compatible with NONROAD2005 or NONROAD2008.

### **Have the technical reports and User's Guide for NONROAD2008 been updated?**

For this limited release of NONROAD2008 the Users Guide and technical reports have not yet been updated. Details of the changes and the basis of those changes from NONROAD2005 can be found in the technical documentation for (a) the 2008 Small SI and SI Recreational Marine FRM (RIA and docket memos) and (b) the 2008 Loco/Marine FRM. The User's Guide and technical reports were updated for NONROAD2005. These documents can be downloaded from the NONROAD model web site: <http://www.epa.gov/otaq/nonrdmdl.htm>.

**CREATE Project B9/EW1 Extension - General Conformity Analysis for Design Year**

<b>Design Year Analysis</b>				
	<b>Tons/YR</b>			
	<b>HC</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Operations Emissions 2029 No Build</b>	3.1023	82.7283	1.6804	1.5460
<b>Operations Emissions 2029 Build</b>	7.2890	194.3738	3.9482	3.6324
<b>Delta Emissions due to build</b>	4.1867	111.6455	2.2678	2.0864
<b>Threshold</b>	100	100	100	100
<b>Does Design YR Delta Exceed Threshold?</b>	No	Yes	No	No

**CREATE AIR EMISSION PROJECTIONS**

CREATE Project ID: **CREATE Program NOx Emission Projections**  
Date of RTC Output: **December 23, 2011**

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Year	NOx (tons per year)
2009 Existing Condition	6896.2
2029 Build Alternative	4277.0
2029 No-Build	3821.4

## **New Projects or Extensions**

### **I-294/I-57 Interchange**

#### **Central Lake County Corridor (IL 53 North and IL 120)**

The Blue Ribbon Committee met in December and continues to consider a number of project design concepts. CMAP is providing technical assistance, both in committee support and transportation demand modeling. A design charette was held for the committee in early January, with data regarding a number of arterial/expressway alternatives provided by CMAP.

#### **Elgin O'Hare Expressway Improvements (including Western O'Hare Bypass)**

A Federal Register Notice was issued to add the Illinois State Toll Highway Authority (ISTHA) as a joint lead agency because ISTHA will be the primary agency responsible for implementing the project.

The Finance Committee met on December 1<sup>st</sup>, and discussed Elk Grove Village's proposal to replace the north leg of the bypass with improvements on existing arterials. This would require a different source of funding, since the Illinois Tollway cannot fund arterial improvements. This is also a different project than what was considered by the Tollway for inclusion in the capital program. If this proposal were to move forward, the revised Elgin O'Hare/Western Bypass project concept would have to be considered by the ISTHA board again.

The project consultant has compiled a list of in-kind contribution and cost reduction options. One of the largest potential areas for in kind contribution is the donation of right-of-way by municipalities and the county, but a broad spectrum of additional categories have been compiled, including municipal and private services and materials in the categories of aesthetics, environmental, roadway, utilities and transit.

### **CTA South Red Line Extension**

#### **West Loop Transportation Center / Union Station Master Plan**

A website for the project was established [www.unionstationmp.org](http://www.unionstationmp.org).

The first public meeting for the Union Station Master Plan process was held on December 15<sup>th</sup>. Presentation materials from the public meeting are posted on the project website.

## **Expressway Additions and Improvements**

### **I-190 Access Improvements**

#### **I-80 Add Lanes (US 30 to US 45)**

This project is essentially completed, with some minor punch list work to be completed in the spring. Work on the noise barriers will continue through calendar year 2012.

#### **I-88 Add Lanes**

#### **I-94 Add Lanes North**

This project is essentially complete.

## **Managed Lanes and Multimodal Corridors**

### **I-55 Managed Lanes**

### **I-90 Managed Lanes**

### **I-290 Multimodal Corridor**

The Illinois Department of Transportation released an Alternatives Identification and Evaluation Draft Interim Report in November 2011. This document, which will continue to be updated as the planning process advances, describes the alternatives development and evaluation process and the initial range of alternatives being considered.

## **Transit Improvements**

### **CTA North Red and Purple Line Improvements**

### **Metra UP West Improvements**

### **Metra Rock Island Improvements**

### **Metra SouthWest Service Improvements**

### **Metra UP North Improvements**

### **Metra UP Northwest Improvements and Extension**

### **Regional Transit Signal Priority**

## **Fiscally Constrained Projects Other**

### **CREATE**

The \$19.5 million railroad modernization project along the Indiana Harbor Belt between 123<sup>rd</sup> Street and the Cal-Sag Channel (B12) was completed in November. The project added a third main line of rail track and updated signals on the IHB along with a new rail bridge over 127<sup>th</sup> Street. The \$19.5 million project was funded using 80% federal funds, and 20% railroad funds. So far, 12 CREATE projects have been completed.

### **Regional Transit Signal Priority**

### **Illiana Expressway**

The second round of public meetings was held in Matteson IL and Crown Point IN on December 13<sup>th</sup>.

The draft Purpose and Need document was published December 1<sup>st</sup> and comments were due by January 4<sup>th</sup>.

The public was also invited to submit alternatives using a blank map they can download from the project website and draw on. Alternatives were due by January 4<sup>th</sup>.

**South Suburban Airport**

**Fiscally Unconstrained Active Projects**

**DuPage "J" Line**

Pace is working with CMAP to identify the most promising corridor for further study.

**South Lakefront Corridor**

**Central Area Transitway**

**I-80 Add/Managed Lanes (Grundy County Line to US 30)**

**IL 394**

**Metra Heritage Corridor**

**Metra SouthEast Service Corridor**

**Metra STAR Line Corridor**

The Star Line Alternatives Analysis final public meeting is scheduled.

**Metra BNSF Extension**

**Prairie Parkway**

FHWA has given approval for IDOT to move ahead with the associated add-lanes project on IL 47.