

2015 - 2019 MDOT CMAQ Call for Projects
Instructions for Completing Emission Calculation Forms

CMAQ is now administered as a regular federal aid program, not a grant program. Funds are allocated to eligible non-attainment or maintenance areas based on the population of the area as a percentage of the total population of all eligible areas.

When submitting projects for eligibility determination, agencies must rank the projects in order of priority and must stay constrained to the available allocation. Agencies should consider what amount to use on the project and the match requirement. Projects that may require more CMAQ funding than what's available may require match dollars above the normal 20%. However, this will ensure the delivery of the project.

All materials are due to the MDOT CMAQ program coordinator by 5:00 p.m. February 11, 2014. All agencies must follow the appropriate planning process in order to ensure projects are listed in the STIP and corresponding MPO TIP. They must be listed prior to request for obligation of funds.

Use the [CMAQ Project Template](#) to list all projects for review. The CMAQ Required Application form is no longer accepted.

INSTRUCTIONS

The old MS-Excel emissions worksheets have been converted to MDOT fillable adobe forms. These are the only emissions calculation documents that will be accepted in this Call for Projects. Complete the appropriate emissions form(s) for each project. Save each form to your computer, renaming with the name of the project. If multiple forms are needed, please enumerate them. If you have any problems accessing or completing a form, please contact Edward Fowler, CMAQ program coordinator, at 517-241-0171.

- a. Complete the required fields. **See Table 1 below for assistance with selecting the appropriate form.** When entering the emissions factors, use the Updated Michigan Emissions Factors (Provided by SEMCOG-to be used Statewide). The emissions factors are available on the website. Use the "Light-Duty Vehicles Only" table for new or expanded transit services and non- motorized facilities. Use the "For All Vehicles" table for all other projects except diesel retrofits. Use the emissions factors fitting the estimated life of your project. For example, if you have determined that a signal retiming project's benefits will last 5 years, use the emissions factors under the 5-year project life column.
- b. For diesel retrofits and bus replacements, agencies are encouraged to use emissions reductions calculated by the Environmental Protection Agency's Diesel Quantifier, available [here](#). Because of the difficulties experienced in the past by some agencies, this tool should be used for all diesel vehicle replacements. Using this program will allow the applicant to provide more precise information for review purposes. Instructions for how to use the Quantifier are available [here](#).

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Table 1. Guide to Selecting the Appropriate Emissions Form(s) for Your Project

Project Type	Emissions Form	Form #
Dedicated turn lanes	One intersection approach only: <i>form 2609</i>	2609
Dedicated turn lanes	Adjacent approaches of intersection: <i>form 2610</i>	2610
Dedicated turn lanes	Opposite approaches of intersection: <i>form 2611</i>	2611
Dedicated turn lanes	All 4 approaches of intersection: Two <i>form 2611s</i> , sum benefits with <i>form 2608</i> , and send all forms with your Project List.	2611
Roundabouts	Option 1: Two <i>form 2611s</i> and sum benefits with <i>form 2608</i> (i.e., three forms total). Assume that right-turn lanes are being installed on all 4 approaches and that stop control has been removed from all approaches.	2611
Roundabouts	Option 2: Use form 2622 and assume that lights are continuously green on each of the four approaches.	2622
Park and Ride Lots	<i>Form 2613.</i>	2613
Rideshare: Standard	<i>Form 2614.</i>	2614
Rideshare: Enhanced	<i>Form 2615.</i>	2615
Traffic Operations Centers Operations	<i>Form 2616</i>	2616
Signal Interconnects	One corridor only: <i>form 2617</i>	2617
Signal Interconnects	Multiple Corridors: One form 2617 for each corridor. Then, sum benefits from all form 2617s in <i>form 2608</i> . Submit all of the sheets with your project.	2617
Signal Optimization or Actuation, not part of an interconnect project	One form 2617 that summarizes the benefits expected from the entire project.	2617
Bus Purchase or Replacements	Option 1: <i>form 2608</i> . Go to the EPA Diesel Quantifier Web site	2608
Bus Purchase or Replacements	Option 2: <i>form 2618</i>	2618
Operation of New Public Transit Services	<i>Form 2620.</i>	2620
Operation of New Public Transit Services	If more than one route is being requested, complete a <i>form 2620</i> for each route, sum the emission benefits in form 2608, and send all of the sheets with your application.	2620
Non-Motorized Pathway	<i>Form 2621.</i>	2621
Diesel Retrofits	<i>Form 2608.</i> Go to the EPA Diesel Quantifier Web site	2608

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When it is not possible to accurately quantify the emissions benefit, a qualitative assessment may be submitted. In these cases, a qualitative assessment based on a reasoned and logical determination that the project or program will decrease emissions and contributes to attainment or maintenance of a NAAQS is acceptable.

Note on Bus Replacements and Diesel Retrofits:

For bus replacement and diesel retrofit projects, you may need to get emissions factors from the EPA's **Diesel Emissions Quantifier** at <http://www.epa.gov/cleandiesel/quantifier/>.

Follow the directions for the type and age of vehicles, and print out and save the Emissions Results page.

For projects with buses or utility vehicles purchased in different years (for example, four 2001 buses and two 2003 buses), a Quantifier analysis must be prepared for each purchase year (in this example, a 2001 Quantifier analysis and a 2003 Quantifier analysis) and the total emissions benefits added together on Form 2608.

Under "Summary Emissions Results," take the kilograms reduced per day (kg/day) data and transfer them to Line 3 of Form 2608, "Emissions in KG/day (sum of all applicable forms)." Note that HC (hydrocarbons) on the Quantifier's Emissions Results page is identical to VOC (volatile organic compounds) on the CMAQ Project List and emissions forms.

Choose either a 340-day year or 240-day year to most accurately reflect the number of days the vehicles will operate annually, on average. The bottom-line cost on Line 8, "Cost per Kg over the design life (L2/L5)," is transferred to the Project List, as are the daily emissions reductions in kilograms from the Quantifier Summary Emissions Results.

Be sure to send copies (PDF format is acceptable) of all EPA Diesel Emissions Quantifier Emissions Results pages with your application.