



## Congestion Mitigation and Air Quality (CMAQ) Project Ranking Process

**APPROVED BY THE MPO:** November 19, 2008\*

**AMENDED BY THE MPO:** May 18, 2011\*

*\*The ranking process was approved when the CRTPO was the Mecklenburg-Union Metropolitan Planning Organization (MUMPO). MUMPO references are retained where appropriate.*

**BACKGROUND:** The MUMPO assigned a CMAQ subcommittee in July 2008 with the task of developing criteria to recommend projects to the Board based on a comprehensive and technically-oriented project ranking process. Since the total value of proposed projects often significantly exceeds available funds, so an objective evaluation of proposals is necessary to determine the best use of CMAQ funds.

The following project ranking criteria process is the result of research and discussions by air quality and transportation professionals from the region. The committee considered specific quantitative criteria for each of the categories, although this did not always prove to be feasible. The overarching goal was to create a thorough assessment that did not place undue burdens upon the applicant. When a quantitative measure of the absolute effectiveness of the project was not possible or reasonable, criteria based on a yes/no answer was created.

The scoring list below contains work discussed over the course of four subcommittee meetings in July and August of 2008. The TCC unanimously recommended this process to the MUMPO at their September 4, 2008 meeting.

**FINAL PRODUCT:** A process that allows a wide variety of eligible projects to be evaluated for funding, without creating undue burdens on applicants.

### PROJECT RANKING CRITERIA

**1. Pollutant Reduction (25 points possible):** This is the most important consideration for a project. How many kilograms of the four main pollutants: Oxides of Nitrogen (NO<sub>x</sub>), Particulate Matter 2.5 microns in diameter (PM 2.5), Volatile Organic Compounds (VOC), and Carbon Monoxide (CO), will the project reduce over the lifetime of the project? NO<sub>x</sub>, due to its role in Ozone formation, is the most important pollutant in the region, with PM the second most important. VOCs and CO are currently not found in high enough concentrations to significantly affect air quality, so emission reductions are not considered as a part of the pollutant reduction in this process. The applicant is responsible for all emissions calculations, with review by a project ranking committee.

Pollutant reductions are calculated by taking the calculated yearly NOx reductions and 25 percent of the PM 2.5 reductions, and then summing the two numbers. This yearly number is then multiplied by the number of years in the project lifetime. The result is the lifetime pollutant reduction.

EXAMPLE: A project will annually reduce NOx by 1,000 kilograms per year and PM2.5 by 1,000 kilograms per year. The applicant would take all of the NOx benefits and 250 kilograms (25 percent) of the PM2.5 reductions, and sum them. The net pollutant reduction would then be 1,250 kilograms.

The generalized project lifetimes are as follows:

- a. Bus Purchase- see Federal Transit Administration schedule for lifetime
- b. Transit Operations Improvements- length of program funding
- c. Park and Ride Lots- 20 years
- d. Intersection Improvements- 10 years
- e. Signal Improvements- 5 years
- f. HOV/ HOT Lanes- 20 years
- g. Telecommuting Center- 10 years
- h. Advocacy and Education- length of program funding
- i. TMO and TMAs- length of program funding
- j. Sidewalks, Bike Lanes, and Greenways- 20 years
- k. ITS Capital Improvements- 10 years
- l. ITS Operations Improvements- 3 years
- m. Truck Stop Electrification- 10 years
- n. Retrofit Technology- 5 years
- o. Other Project- see CRTPO staff

The lifetime pollutant reduction point breakdown is as follows:

- a. 100,000 or more kilograms removed = 25 points
- b. 75,000-99,999 kilograms removed= 20 points
- c. 50,000-74,999 kilograms removed= 15 points
- d. 10,000-49,999 kilograms removed= 10 points
- e. Less than 10,000 kilograms removed= 5 points

**2. Project Cost Effectiveness (20 points possible):** What is the CMAQ cost per kilogram of pollutant removed over the life of the project, with kilograms removed defined by the weighting process from Criteria #1? Projects that fall in the more-cost effective categories will receive additional points. The category breakdowns are as follows:

- a. \$24.99 or less per kilogram removed= 20 points
- b. \$25.00-\$49.99 per kilogram removed=15 points
- c. \$50.00-\$99.99 per kilogram removed= 10 points
- d. \$100.00-\$199.99 per kilogram removed= 5 points
- e. \$200.00 or more per kilogram removed= 0 points

**3. Transportation Impact (15 points possible):** The proposed project will improve the transportation system. Examples: Will it improve freight movement or non-single occupant vehicle (SOV) travel? Will the project address an **identified** non-vehicular safety issue? If it reduced vehicular congestion, just how much congestion does it eliminate in terms of hours of delay per day?

- a. Promotes multi-modal options, including freight movement (Yes= 5 points, no= 0 points)
- b. Improves vehicular, pedestrian, or bicyclist safety; explain why (Yes= 2 points, no= 0 points)
- c. Reduces congestion (0 points for non-traffic project, 2 points for projects that do reduce congestion, but did not perform calculation). The following scores are for those applicants who performed a before and after analysis of congestion:
  - 1) Less than 10 seconds of delay per vehicle reduced= 4 points
  - 2) 10-20 seconds of delay per vehicle reduced= 6 points
  - 3) Greater than 20 seconds per vehicle reduced= 8 points

**4. Policy and Information Sharing (5 points possible):** Does the project intend to educate the public or community decision makers on how to improve air quality? Does the applicant attempt to make institutional change in organizations to reduce pollution? (Yes= 5 points, no= 0 points)

- a. Distributes best practices to public and decision makers
- b. Involves institutional changes to agency regarding air quality and transportation

**5. Applicant Financial Commitment (5 points possible):** Does the applicant have a significant financial stake in the project? Are they contributing a significant amount of their own resources towards the total project cost? If so, then they will receive more points than those who may only contribute the minimum amount necessary. The ranges of percent match of total project cost, and corresponding points, are as follows:

- a. 0-20%=0 points
- b. 21-49%= 2 points
- c. 50% or more= 5 points

**6. Project Readiness (10 points possible):** Does the project require environmental review? Has the applicant implemented projects in the past that are of similar complexity? Has the applicant implemented previous CMAQ projects, or projects similar in complexity?

- a. Environmental considerations
  - 1) Environmental study not prepared= 0 points
  - 2) Environmental document already received, categorical exclusion, or no environmental review required= 5 points
- b. Sponsor's ability to implement: does the applicant have a proven record implementing projects of similar type or difficulty?
  - 1) Yes= 5 points
  - 2) no= 0 points

**7. Project Maintenance and Management (10 points possible):** Has the applicant anticipated the ongoing maintenance and management obligations of the project? Does the applicant have a plan, and capability, for maintenance and supervision of completed project?

- a. Plan and resources in place= 10 points
- b. No committed or identified plan and resources= 0 points

**8. Concurrency with Existing Plans (10 points possible):** Has the proposed project been identified through a previous planning effort? Does the project help address an issue identified in one of the following types of plans?

- a. Identified in current adopted plan (10 points)

- Transportation (LRTP, TP, CTP, Bicycle Plan, Pedestrian Plan, or other locally adopted transportation plan or list for community)
  - Land Use or Comprehensive Plan
  - Recreation Plan
  - Economic Development Plan
- b. Not identified in current adopted plan (0 points)