
**CHAPTER 5 CONGESTION MITIGATION AND AIR QUALITY (CMAQ)
IMPROVEMENT PROGRAM****CONTENTS**

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CHAPTER 5 CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM

5.1 INTRODUCTION

The Congestion Mitigation and Air Quality (CMAQ) Improvement Program was established by the 1991 Federal Intermodal Surface Transportation Efficiency Act (ISTEA) and was re-authorized with the passage of Transportation Equity Act for the 21st Century (TEA-21). Funds are directed to transportation projects and programs which contribute to the attainment or maintenance of National Ambient Air Quality Standards (NAAQS) in non-attainment or air quality maintenance areas for ozone, carbon monoxide, or particulate matter under provisions in the Clean Air Act (Title 42, United States Code).

5.2 ELIGIBILITY CRITERIA

Project and program eligibility have evolved through a series of federal guidelines that were developed and issued following the passage of ISTEA. With the passage of TEA-21, the Federal Highway Administration (FHWA) has provided new guidance under their document titled “TEA-21 CMAQ Program Guidance,” dated April 1999.

A wide and diverse variety of projects and programs are eligible for CMAQ funding. However, the Clean Air Act requires FHWA and Federal Transit Administration (FTA) to ensure timely implementation of Transportation Control Measures (TCMs) in applicable State Implementation Plans (SIPs). TCMs are included in the SIP to contribute to the attainment and maintenance of the NAAQS. Therefore, the highest priority for funding under the CMAQ program is the implementation of such control measures.

As indicated in Exhibit 5-A, “TEA-21 CMAQ Program Guidance,” of this chapter, a general eligibility criteria for CMAQ funding is that projects have expected reductions in carbon monoxide, ozone precursor, or PM-10 emissions. In order to properly assess the emissions, the TEA-21 CMAQ Program Guidance suggests that proposals for CMAQ funding include a precise description of the project, including the project’s size and scope, and a timetable.

For questions concerning eligibility or air quality analysis requirements, see Exhibit 5-A, “TEA-21 CMAQ Program Guidance,” of this chapter. Specific program categories are listed below along with the page number reference in this exhibit.

- Transportation Activities in an approved State Implementation Plan or Maintenance Plan - Page 10
- Transportation Control Measures (TCMs) - Page 10
- Extreme Low-Temperature Cold Start Programs – Page 11
- Public-Private Partnerships – Page 11
- Alternative Fuels – Page 13
- Traffic Flow Improvements – Page 13
- Transit Projects – Page 15
- Bicycle and Pedestrian Facilities and Programs – Page 15
- Travel Demand Management – Page 16
- Outreach and Rideshare Activities – Page 16

- Telecommuting – Page 18
- Fare/Fee Subsidy Programs – Page 18
- Intermodal Freight – Page 18
- Planning and Project Development Activities – Page 18
- Inspection/Maintenance (I/M) Eligibility – Page 19
- Magnetic Levitation Transportation Technology Deployment Programs – Page 20
- Experimental Pilot Projects – Page 20

5.3 FUNDING

Nationwide, over a billion dollars per year is available for the CMAQ program. The funds are distributed by formula which weighs each specific air basin's relative level of air quality severity and population compared to the nationwide total. California receives approximately \$380 million per year in funds over the life of TEA-21.

Within California, by statute (Streets and Highway Code, Sections 182.6 and 182.7), funds are apportioned using the same federal formula to MPOs in non-attainment areas. Further apportionment is made by the MPOs to the County Transportation Commissions.

A potential source of non-federal match funds is presented in Chapter 23, "Local Agency STIP Projects," of this manual.

5.4 PROJECT SELECTION

Agencies receiving CMAQ apportionments (i.e., MPOs, RTPAs, and County Transportation Commissions), in cooperation with Caltrans, congestion management agencies, cities, counties, and transit operators, develop a program of projects for entry into the Federal Transportation Improvement Program (FTIP). Each MPO provides the rules for application for project listing in their local jurisdictions. The FTIPs must be updated at least every two years. The updates must be submitted to the state no later than August 1st of each even numbered year. Each regional FTIP is subsequently incorporated into the federal statewide TIP which also includes the projects for areas of the state not covered by the MPOs.

5.5 PROJECT IMPLEMENTATION

Upon selection for funding through the FTIP process, projects become federally eligible for reimbursement through the FHWA authorization and obligation process. Expenses incurred prior to authorization are not eligible for reimbursement. (See Chapter 3, "Project Authorization," in the *Local Assistance Procedures Manual*.)

Under TEA-21, the federal share for most California CMAQ projects is 88.53 percent. Certain Interstate projects are eligible for 90 percent funding, and safety related projects may be eligible for 100 percent funding.

5.6 FEDERAL TRANSIT ADMINISTRATION (FTA) TRANSFERS

Under ISTEA and TEA-21, funds allocated or apportioned for use for highway projects can be transferred to the FTA for use on transit projects (Title 23 USC, Section 134). The funds transferred are primarily used to acquire buses, vans, and light rail trains, as well as for operations in the first three years of a transit system's operations. See Chapter 4,

“Surface Transportation Program (STP),” of this manual for more information on the FTA transfer process.

5.7 REPORTING

The state is required to prepare an annual report for FHWA and FTA describing CMAQ obligations in the prior federal fiscal year. The report focuses upon the types of work being performed and the quantified assessment of the air quality improvements expected for each project. Prepared by Caltrans Transportation Programming, the report summarizes project descriptions and emissions calculations that were submitted as part of the eligibility determination.

5.8 “USE IT OR LOSE IT” PROVISIONS OF ASSEMBLY BILL 1012

Assembly Bill 1012 (AB 1012) was enacted in October 1999 with a goal of improving the delivery of transportation projects. The legislation states that regional agency CMAQ and Regional Surface Transportation Program funds that are not obligated within the first three years of federal eligibility are subject to reprogramming by the California Transportation Commission (CTC) in the fourth year. See Chapter 4, “Surface Transportation Program (STP),” of this manual for more information on the “Use It or Lose It” provisions of AB 1012.

5.9 REFERENCES

- Title 23, United States Code, Chapter 1, Sections 104, 133, 134, 135, 149
- Title 42, United States Code
- California Constitution, Article XIX
- Streets and Highways Code: Sections 182.6 (f) and 182.7
- The CMAQ Program Guidance for TEA-21 (April 1999)

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**The Congestion Mitigation and Air Quality
Improvement (CMAQ) Program**

Under the

Transportation Equity Act for the 21st Century (TEA-21)

PROGRAM GUIDANCE

April 1999

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I. INTRODUCTION

The CMAQ program was reauthorized in the recently enacted TEA-21¹. The primary purpose of the CMAQ program remains the same: to fund transportation projects and programs in nonattainment and maintenance areas which reduce transportation-related emissions. Over \$8.1 billion dollars is authorized over the 6-year program (1998-2003), with annual authorization amounts increasing each year during this period.

This guidance provides complete information on the CMAQ program including:

- < Authorization levels and apportionment factors under TEA-21;
- < Flexibility and transferability provisions available to States;
- < Geographic area eligibility for CMAQ funds;
- < Project eligibility information;
- < Project selection processes; and
- < Program oversight and reporting responsibilities.

This guidance replaces all earlier CMAQ guidance documents. Attachments 1-3 provide updated statutory language relating to the CMAQ program. Attachment 4 shows how the CMAQ flexibility and transferability provisions work. Information on the current annual apportionment to each State and copies of this guidance are available from the FHWA Web Site at: www.fhwa.dot.gov.

II. PROGRAM PURPOSE

The purpose of the CMAQ program is to fund transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards (NAAQS) for ozone and carbon monoxide (CO). The TEA-21 also allows CMAQ funding to be expended in particulate matter (PM) nonattainment and maintenance areas.

Congress did not intend CMAQ funding to be the only source of funds to reduce congestion and improve air quality. Other funds under the Surface Transportation Program (STP) or the Federal Transit Administration (FTA) capital assistance programs, for example, may be used for this purpose as well. Furthermore, the greatest air quality benefit will accrue not solely from Federal funds, but from a partnership of Federal, State and local efforts.

¹TEA-21, Public Law 95-198, June 9, 1998.

III. PRIORITY FOR USE OF CMAQ FUNDS

Section 176(c) of the Clean Air Act² (CAA) requires that the Federal Highway Administration (FHWA) and FTA ensure timely implementation of Transportation Control Measures (TCMs) in applicable State Implementation Plans (SIPs), and consequently, the highest priority for funding under the CMAQ program is for the implementation of such measures. The SIPs and the control measures they contain are necessary to assist a State to attain and maintain the NAAQS. A basic criterion for making conformity determinations is the timely implementation of TCMs in the SIP, and conformity determinations are necessary before transportation plans, programs, or projects can be adopted and approved. If States fail to ensure timely implementation of TCMs included in SIPs, their conformity determinations and transportation initiatives will be in jeopardy. In addition, failing to implement TCMs in SIPs can also trigger the application by the Environmental Protection Agency (EPA) of the CAA highway sanctions³.

Once CMAQ projects and programs are identified, States need to insure that sufficient obligation authority is reserved to implement these projects and programs so that nonattainment areas make progress toward attainment of the NAAQS and that maintenance areas do not backslide into nonattainment. While the continuation of CMAQ funds into the maintenance period now makes it possible to look at longer term strategies, States and metropolitan planning organizations (MPOs) are still encouraged to consider and give priority to strategies that would help them meet their attainment deadlines and maintain the NAAQS into the future.

States and MPOs should make strategic use of the CMAQ funds allotted to them even if they will not be used for TCMs in their SIPs. For example, CMAQ funding should also be considered for use in implementing other CMAQ eligible transportation projects in SIPs such as inspection and maintenance (I/M) programs. These and other transportation projects may be essential to attainment of the NAAQS and therefore States and MPOs are urged to consider their funding, where eligible, under the CMAQ program.

The FHWA and FTA continue to recommend that States and MPOs develop their transportation/air quality programs using complementary measures that simultaneously provide alternatives to single-occupant vehicle (SOV) travel while reducing demand through pricing, parking management, regulatory or other means. Further, the FHWA and FTA urge States and MPOs to develop a full and open public process for the solicitation and selection of meritorious projects to be funded through the CMAQ program. The CMAQ provisions in title 23 of the United States Code, as amended by the TEA-21 legislation, are attached (see Attachment 1).

²42 U.S.C. §7506 Section 176(c)(2)(B)

³42 U.S.C. §7509 Section 179 (b)(1)

IV. AUTHORIZATION LEVELS UNDER TEA-21

Authorization Levels

Table 1 shows the TEA-21 CMAQ authorization levels by fiscal year. The CMAQ funds will be apportioned to States each year based upon the adopted apportionment factors as shown in Table 2.

TABLE 1
TEA-21 CMAQ AUTHORIZATION LEVELS

Fiscal Year Authorization	Amount Authorized
FY 1998	\$1,192,619,000
FY 1999	\$1,345,415,000
FY 2000	\$1,358,138,000
FY 2001	\$1,384,930,000
FY 2002	\$1,407,474,000
FY 2003	\$1,433,996,000

Minimum Guarantee

The TEA-21 includes a minimum guarantee that provides each State funding in an amount not less than 90.5 percent of the estimated annual Federal gasoline tax payments each State pays into the Highway Trust Fund (HTF). Due to the Minimum Guarantee, the annual authorizations listed in Table 1 are the minimum authorization levels and are likely to be increased depending on actual HTF receipts.

Transferability of CMAQ Funds

States may transfer CMAQ funds to other programs according to the following provision⁴. An amount not to exceed 50 percent of the State's annual apportionment may be transferred less the amount the State would have received if the CMAQ program was authorized at \$1,350,000,000 for that year. ***Any transfer of such funds must still be obligated in nonattainment and maintenance areas.*** This increment of transferable funds will differ from year-to-year and State-to-State depending on overall authorization levels. Each year FHWA will inform each State how much of their CMAQ funding is transferable, if any, and will track the transfer of CMAQ funds each year.

⁴23 U.S.C. Title 23 §110(c)

V. ANNUAL APPORTIONMENTS OF CMAQ FUNDS TO STATES

Apportionment Factors

The CMAQ funds are apportioned annually according to factors⁵, largely based on air quality need, which are calculated in the following manner (*see* Attachment 2). The population of each area in a State (based upon Census bureau data by county), that *at the time of apportionment is a nonattainment or maintenance area for ozone and/or CO and meets the classifications contained in the CAA*, is multiplied by the appropriate factor listed in Table 2. Two key changes are included in the apportionment factors under TEA-21. Areas that are *designated and classified* as submarginal and maintenance areas for ozone are now explicitly included in the apportionment formula, and there are new weighting factors for CO nonattainment areas.

TABLE 2
TEA-21 CMAQ APPORTIONMENT FACTORS

POLLUTANT	CLASSIFICATION AT THE TIME OF ANNUAL APPORTIONMENT	WEIGHTING FACTOR
Ozone (O ₃) or (CO)	Maintenance (these areas had to be previously eligible as nonattainment areas - See Section VI)	.8
Ozone	Submarginal	.8
	Marginal	1.0
	Moderate	1.1
	Serious	1.2
	Severe	1.3
	Extreme	1.4
CO	Nonattainment (for CO only)	1.0
Ozone and CO	Ozone nonattainment or maintenance and CO maintenance	1.1 x O ₃ factor
	Ozone nonattainment or maintenance and CO nonattainment	1.2 x O ₃ factor
All States - minimum apportionment	½ of 1 percent total annual apportionment of CMAQ funds	N/A

⁵23 U.S.C. §104(a)

Minimum Apportionments

Each State is guaranteed at least $\frac{1}{2}$ of 1 percent of each year's CMAQ authorized funding regardless of whether the State has any nonattainment or maintenance areas.

Use of Minimum Apportionments in States without nonattainment or maintenance areas

If a State does not have, and has never had, a nonattainment or maintenance area, the State may use its minimum apportionment for any projects in the State eligible under either the CMAQ or the STP. Such States are encouraged to give priority to the use of CMAQ program funds for projects that will relieve congestion or improve air quality in areas that are at risk of being designated as nonattainment.

Use of Minimum Apportionments in States with nonattainment or maintenance areas

Some of the States receiving minimum apportionments have nonattainment or maintenance areas. In States where the amount of CMAQ funds generated due to nonattainment or maintenance areas is less than the minimum apportionment levels, additional flexibility is granted under TEA-21. A State receiving the minimum apportionment must use that portion of funds related to nonattainment and maintenance status (the "air quality" portion), in those nonattainment or maintenance areas. The State may use the funds added above the formula amount to make up the minimum apportionment (the "flexible portion") for any CMAQ or STP eligible project in the State.

When the total annual CMAQ authorization exceeds \$1.35 billion, States may also use the transferability provisions as described in Section IV. After the apportionment process each year, the FHWA will advise the minimum apportionment States with nonattainment or maintenance areas of the amount that can be flexed and the amount that can be transferred, if any.

Apportionments and State Suballocation

Despite the statutory formula for determining the apportionment amount, the State can use its CMAQ funds in any ozone, CO or PM-10 nonattainment or maintenance area. A State is under no statutory obligation to suballocate CMAQ funds in the same way as they were apportioned. However, States are strongly encouraged to consult with affected MPOs to determine CMAQ priorities and allocate funds accordingly. Further, to facilitate planning and programming of funds, it is critical that States provide MPOs with timely and reasonable estimates of the amount of CMAQ funding they can expect each year.

Federal Share and State/Local Match Requirements

The Federal share for most eligible activities and projects is 80 percent or 90 percent if used on the interstate system. Under certain conditions (including sliding scale rates), the Federal share under title 23 of the United States Code can even be higher. Certain activities identified in

section 120(c) of title 23 (see Attachment 3), including traffic control signalization, commuter carpooling and vanpooling, and signalization projects to provide priority for transit vehicles may be funded at 100 percent Federal share if they meet the conditions of that section.

Those responsible for CMAQ project decisions have discretion with respect to the level of local match, if any, beyond the minimum Federal requirements. For example, decisionmakers may decide that a particular project requires a 50 percent local match contribution rather than the usual 20 percent required under Federal law.

VI. GEOGRAPHIC AREAS THAT ARE ELIGIBLE TO USE CMAQ FUNDS

Impact of the Revised NAAQS

The CMAQ eligibility provisions under TEA-21⁶ allow that any area designated as nonattainment after December 31, 1997, be eligible to spend CMAQ funding even though the area may not be classified according to the classifications identified in the Clean Air Act Amendments of 1990 (Sections 181(a), and 186(a)). ***Such areas, however, will not be included in the apportionment factors since they will not be given classifications.*** This provision ensures that any areas designated nonattainment as a result of the revised ozone and PM air quality standards, promulgated in 1997, will be eligible to receive CMAQ funding. Areas which are designated as nonattainment after December 31, 1997, and are subsequently redesignated to maintenance areas are also eligible to receive CMAQ funds.

The EPA's policies regarding the revocation of the PM-10 standard are still under development. Issues affecting the distribution of CMAQ funds and eligibility for affected areas will be addressed after EPA determines its policies with respect to revocation of the PM-10 standard.

Revocation of the 1-Hour Ozone Standard

As part of the transition to the 8-hour ozone standard, EPA is revoking the 1-hour standard in areas that demonstrate the requisite 3 years of "clean" monitoring data. Among areas where the 1-hour standard is revoked, those areas that have EPA-approved maintenance plans on the effective date of revocation will continue to have their maintenance plans in full force. As maintenance areas, they will continue to be eligible for CMAQ funds and will be included in the annual apportionment factors. The conformity requirements will also continue to apply in these areas.

Other areas for which the 1-hour ozone standard is revoked may not have EPA-approved maintenance plans. These areas are no longer designated nonattainment or maintenance relative to the 1-hour standard. As such, these areas will not be subject to the conformity requirements, and they will no longer be able to meet the basic statutory requirement for CMAQ eligibility unless they are designated nonattainment or maintenance for CO and/or PM. In order to provide

⁶23 U.S.C. §149(b)

continuity in the transportation/air quality planning process, FHWA/FTA will allow these areas to use CMAQ funds for air quality improvement projects that were included in the first 3 years of the transportation improvement program (TIP). In addition, these areas will be granted a 4-month period beginning with the date of release of this guidance or the effective date of revocation, whichever is later, to make any adjustments to their TIPs.

Classification Criteria

An area that was designated as a nonattainment area for ozone, CO or PM-10 under the CAA prior to December 31, 1997, is eligible for CMAQ funds provided that the area is also classified in accordance with Sections 181(a), 186(a), or 188(a) or (b) of the CAA. This means that ozone nonattainment areas must be **designated and classified** “marginal” through “extreme,” and CO and PM-10 nonattainment areas must be **designated and classified** either “moderate” or “serious” to be eligible for CMAQ funding. Submarginal ozone nonattainment areas are now included in the CMAQ apportionment formula and are eligible to receive CMAQ funds. Areas that were previously designated nonattainment and classified in accordance with this section, but are subsequently redesignated to maintenance areas are also eligible to receive CMAQ funds.

Areas which were designated nonattainment prior to December 31, 1997, but were not classified in accordance with the above are not eligible to receive CMAQ funds. These include but are not limited to areas that were formerly considered as ozone "transitional" and "incomplete data" areas and CO "not classified" areas.

Maintenance Areas

Maintenance areas that were designated nonattainment, but have since met the air quality standards are now explicitly eligible to receive CMAQ funding and are included in the apportionment factors. Such areas must have met the classification requirements of the 1990 CAA if they were designated nonattainment prior to December 31, 1997, (as discussed in Section V above) in order to be eligible and included in the apportionment factors.

In States which have ozone or CO maintenance areas and no nonattainment areas, CMAQ funds must be used in the maintenance areas. Previous guidance allowed such States flexibility to use their CMAQ funding for projects eligible under the STP if a State could demonstrate that it had sufficient funding to meet its air quality commitments within its maintenance areas. Such flexibility is no longer allowed since maintenance areas are now included in the apportionment formula and the eligibility provisions require that CMAQ funding be used in nonattainment and maintenance areas.

PM-10 Nonattainment and Maintenance Areas

Nonattainment and maintenance areas for PM-10 are also now explicitly eligible to receive CMAQ funding. States that have PM-10 nonattainment or maintenance areas only (i.e., no ozone or CO nonattainment or maintenance areas) are granted additional flexibility under TEA-21.

Since these areas are not included in the CMAQ apportionment calculation, the State may use its minimum apportionment for projects eligible under the STP or the CMAQ program anywhere in the State. However, such States are encouraged to use their CMAQ funds in the PM-10 nonattainment and maintenance areas. Examples of eligible projects and programs in a PM-10 nonattainment or maintenance area include paving dirt roads, diesel bus replacements, and purchase of more effective street-sweeping equipment.

VII. PROJECT ELIGIBILITY PROVISIONS

Projects Not Eligible for CMAQ Funding

As was the case under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), certain projects may not be funded under the CMAQ program under any circumstances. Activities which are legislatively prohibited, including scrappage programs and highway capacity expansion projects, may not be funded under the CMAQ program. Similarly, rehabilitation and maintenance activities, as noted below, show no potential to make further progress in achieving the air quality standards and may not be funded under the CMAQ program. Program funds may also not be used for projects which are outside of nonattainment or maintenance area boundaries except in cases where the project is located in close proximity to the nonattainment or maintenance area and the benefits will be realized primarily within the nonattainment or maintenance area boundaries. (Note: The use of CMAQ funds under the flexibility provisions discussed in Section V are an exception). Public-private partnerships involving the implementation of statutorily mandated measures (e.g., phase-in of alternatively fueled fleets) may not be funded with CMAQ funds. Finally, projects not meeting the specific eligibility requirements under titles 23 or 49 of the United States Code may also not be funded under this provision.

Highway and Transit Maintenance and Reconstruction Projects: Routine maintenance projects are not eligible for CMAQ funding. Routine maintenance and rehabilitation on existing facilities maintains the existing levels of highway and transit service, and therefore maintains existing ambient air quality levels. Thus, no progress is made toward achieving the NAAQS. Rehabilitation projects only serve to bring existing facilities back to acceptable levels of service. Other funding sources, like the STP and FTA's Section 5307 program, exist for reconstruction, rehabilitation and maintenance activities. Replacement-in-kind of track or other equipment, reconstruction of bridges, stations and other facilities, and repaving or repairing roads are also ineligible for CMAQ funding.

Construction of SOV Capacity: Construction projects which will add new capacity for SOV are not eligible under this program unless the project consists of a high-occupant vehicle (HOV) facility that is available to SOV *only* at off-peak travel times. For purposes of this program, construction of added capacity for SOV means the addition of general purpose through lanes to

an existing facility which are not HOV lanes, or construction of a highway at a new location. However, projects to plan, develop, assess, or construct new High Occupancy Toll lanes are an eligible CMAQ expense so long as they are part of the Value Pricing Program under TEA-21⁷.

Project Eligibility-General Conditions

All projects and programs eligible for CMAQ funds must come from a conforming transportation plan and TIP, and be consistent with the conformity provisions contained in section 176(C) of the CAA and the Transportation Conformity Rule⁸ Projects need to be included in TIPs or state-wide transportation improvement projects developed by MPOs or States respectively, under the metropolitan or statewide planning regulations⁹. Projects also need to complete the National Environmental Policy Act (NEPA) requirements and meet basic eligibility requirements for funding under titles 23 and 49 of the United States Code.

In cases where specific guidance is not provided, the following should guide CMAQ eligibility decisions.

Capital Investment: CMAQ funds should be used for establishment of new or expanded transportation projects and programs to help reduce emissions. In many cases this is likely to be capital investment in transportation infrastructure or establishment of a new demand management strategy or other program.

Operating Assistance: There are several general conditions which must be met in order for any type of operating assistance to be eligible under the CMAQ program.

- In extending the use of CMAQ funds to operating assistance, the intent is to help start up viable new transportation services which can demonstrate air quality benefits and eventually will be able to cover their costs to the maximum extent possible. Other established funding sources should supplement and ultimately supplant the use of CMAQ funds for operating assistance.
- Operating assistance includes all costs related to ongoing provision of new transportation services including, but not limited to, labor, administrative costs and maintenance.
- When using CMAQ funds for operating assistance, local share requirements still apply.
- Operating assistance is limited to new transit services and new or expanded transportation demand management strategies.

⁷23 U.S.C. §149(a)

⁸40 CFR Parts 51 and 93, as amended.

⁹23 CFR 450, 49 CFR Part 613.

- Operating assistance under the CMAQ program is limited to 3 years, except as noted elsewhere in this guidance.

Emission Reductions: Projects funded under the CMAQ program must be expected to result in tangible reductions in CO, ozone precursor emissions, or PM-10 pollution. This can be demonstrated by the assessment of anticipated emission reductions that is required under this guidance for most projects. The FHWA and FTA strongly encourage State and local governments to use CMAQ funds for their primary purpose which is to assist nonattainment and maintenance areas to reduce transportation-related emissions.

Public Good: CMAQ funded projects should be for the good of the general public. Public-private partnerships may be eligible, however, so long as a public good (i.e., reduced emissions) results from the project (see discussion of public-private partnerships below).

Eligible Activities and Projects

Eligibility information on activities and projects and program areas is provided below, together with any restrictions. All possible requests for CMAQ funding are not covered; this section provides particular cases where guidance can be given and rules of thumb applied to assist decisions regarding CMAQ eligibility.

1. **Transportation Activities in an Approved SIP or Maintenance Plan:** Transportation activities in approved SIPs and maintenance plans are likely to be eligible activities and, if so, must be given the highest priority for CMAQ funding. Their air quality benefits will generally have already been documented. If not, such documentation is necessary before CMAQ funding can be approved. Further, the transportation improvement must contribute to the specific emission reductions necessary to bring the area into attainment.
2. **TCMs:** The TCMs included in 42 U.S.C. §7408(f)(1) are the kinds of projects intended by the TEA-21 for CMAQ funding, and generally satisfy the eligibility criteria. As above, and consistent with the statute, air quality benefits for TCMs must be determined and documented before a project can be considered eligible. One CAA TCM, xvi - programs to encourage removal of pre-1980 vehicles is specifically excluded from the CMAQ program by the TEA-21 legislation. Eligible TCMs are listed below as they appear in 42 U.S.C. §7408 (f)(1).
 - (i) programs for improved public transit;
 - (ii) restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or HOV;
 - (iii) employer-based transportation management plans, including incentives;
 - (iv) trip-reduction ordinances;
 - (v) traffic flow improvement programs that achieve emission reductions;
 - (vi) fringe and transportation corridor parking facilities serving multiple-occupancy vehicle programs or transit service;

- (vii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use;
 - (viii) programs for the provision of all forms of high-occupancy, shared-ride services;
 - (ix) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;
 - (x) programs for secure bicycle storage facilities and other facilities, including bikeways for the safety and convenience of bicyclists, in both public and private areas;
 - (xi) programs to control extended idling of vehicles;
 - (xii) reducing emissions from extreme cold-start conditions (newly eligible);
 - (xiii) employer-sponsored programs to permit flexible work schedules;
 - (xiv) programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for SOV travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity;
 - (xv) programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For purposes of this clause, the Administrator shall also consult with the Secretary of the Interior; and
 - (xvi) programs to encourage remove of pre-1980 vehicles (EXCLUDED FROM ELIGIBILITY).
3. **Extreme Low-Temperature Cold Start Programs:** Projects intended to reduce emissions from extreme cold-start conditions are now eligible for CMAQ funding. This TCM is listed in 42 U.S.C. §7408 (f)(1) and was heretofore excluded from eligibility for CMAQ funding. Examples of such projects include:
- Retrofitting vehicles and fleets with water and oil heaters; and
 - Installing electrical outlets and equipment in publicly-owned garages or fleet storage facilities (see also section below on public-private partnerships for a possible expansion to privately-owned equipment and facilities).
4. **Public-Private Partnerships:** The TEA-21 provides greater access to CMAQ funds for projects which are cooperatively implemented under agreements between the public and private sectors and/or non-profit entities. The new statutory language leads to several important changes regarding the eligibility of joint public-private initiatives. Nevertheless, it remains the responsibility of the cooperating public agency to apply for CMAQ funds through the metropolitan planning process and to oversee and protect the investment of Federal funds in a public-private partnership.

The TEA-21 requires that a legal, written agreement be in place between the public agency and private or nonprofit entity before implementing a CMAQ-funded project. This provision supersedes the requirement under previous guidance that private entities have public agency sponsors before

participating in CMAQ-funded projects. These agreements should clearly specify the use to which CMAQ funding will be put; the roles and responsibilities of the participating agencies; cost-sharing arrangements for capital investments and/or operating expenses; and how the disposition of land, facilities and equipment will be effected should the original terms of the agreement be changed, such as insolvency or a change in the ownership of the private entity.

While the new statute provides greater latitude in funding projects initiated by private or non-profit entities, it also raises concerns about the use of public funds to benefit a specific private entity. Since the public benefit is air quality improvement, it is expected that future funding proposals involving private entities will demonstrate strong emission reduction benefits. Furthermore, this new flexibility requires that greater emphasis be placed on an open, participatory process leading up to the selection of projects for funding. Because of concerns about the equitable use of public funds, ***FHWA and FTA consider it essential that all interested parties have full and timely access to the process of selecting projects for CMAQ funding.*** This should involve open solicitation for project proposals; objective criteria developed for rating candidate projects; and announcement of selected projects.

The TEA-21 also contains some restrictions and special provisions on the use of CMAQ funds in public-private partnerships. Eligible costs under this section may not include costs to fund an obligation imposed on private sector or non-profit entities under the CAA or any other Federal law. For example, CMAQ funds may not be used to fund mandatory control measures such as Stage II Vapor Recovery requirements placed on fuel sellers. Energy Policy Act requirements which apply to private sector entities are not eligible for CMAQ funds. However, if the private or non-profit entity is clearly exceeding its obligations under Federal law, CMAQ funds may be used for that incremental portion of the project.

Decisions over which projects and programs to fund under CMAQ should continue to be made through a cooperative process involving the State departments of transportation, affected MPOs, transit agencies and State and local air quality agencies. All projects funded with CMAQ funds must be included in conforming transportation plans and TIPs in accordance with the metropolitan planning regulations (23 CFR 450.300), the transportation conformity requirements (40 CFR parts 51 and 93), and NEPA requirements.

Activities eligible to be considered as meeting the local match requirements under the public-private partnership provisions include:

- Ownership or operation of land, facilities or other physical assets;
- Carrying out construction or project management; and
- Other forms of participation approved by the U.S. DOT Secretary.

The TEA-21 also contained special provisions for alternative fuel projects that are part of a public-private partnership. For purchase of privately-owned vehicles or fleets using alternative fuels, activities eligible for CMAQ funding are limited to the Federal share of the incremental cost of an alternative fueled vehicle compared to a conventionally fueled vehicle. Further, if other Federal funds are used for vehicle purchase in addition to CMAQ funds, such Federal funds must be applied to the incremental cost before CMAQ funds are applied.

Cost sharing of total project expenses, both capital and operating, is a critical element of a successful public-private venture. This is even more important if the private entity is expected to realize profits as part of the joint venture. State and local officials are urged to consider a full range of cost-sharing options when developing a public-private partnership, including a larger State/local match than the usual 20 percent required under Federal law.

5. **Alternative Fuels:** The purchase of publicly-owned, alternative fuel vehicles is eligible for CMAQ funding (for information on eligible public-private sector alternative fuel projects see the discussion on public-private partnerships above).

Since all alternative fueled vehicles are not necessarily good for air quality, proposals for alternative fuel conversion should be coordinated with the State air agency and be aimed primarily at air quality improvement. As with all CMAQ proposals, it must be demonstrated that the proposed switch to alternative fuels is effective in reducing the specific pollutant(s) causing the air quality violation.

Fleet conversions no longer need to be specifically identified or included in the SIP or maintenance plan in order to be eligible for CMAQ funding. Consideration of such projects should be coordinated with air quality agencies prior to selection for funding under the CMAQ program. This coordination will ensure that such projects are consistent with SIP strategies to attain the NAAQS or in maintenance plans to ensure continued maintenance of the NAAQS.

The establishment of publicly-owned, on-site fueling facilities and other infrastructure needed to fuel alternative-fuel vehicles are also eligible expenses. If privately-owned fueling stations are in place and are reasonably accessible and convenient, then CMAQ funds may not be used to construct or operate publicly-owned fueling stations except under a public-private partnership. Such an activity would interfere with private enterprise, and needlessly use transportation/air quality funds for services duplicated in the area.

6. **Traffic Flow Improvements:** The metropolitan planning provisions of TEA-21 (23 U.S.C. §134(i)(3) and 49 U.S.C. §5305) require that the metropolitan planning process in all Transportation Management Areas (metropolitan areas of 200,000 or more in population) include a congestion management system.

Projects to develop, establish, and implement the congestion management system for both highway and transit facilities, whether under the provisions of 23 U.S.C. §134 or under a State's own procedures, remain eligible for CMAQ funds where it can be demonstrated that such use is likely to reduce transportation-related emissions.

In addition to traffic signal modernization, coordination, or synchronization projects designed to improve traffic flow within a corridor or throughout an area like a central business district, Intelligent Transportation Systems (ITS), traffic management and traveler information systems can be effective in reducing traffic congestion, enhancing transit bus performance and improving air quality. The following have the greatest potential for improving air quality:

- regional multi-modal traveler information systems;
- traffic signal control systems;
- freeway management systems;
- transit management systems;
- incident management programs;
- electronic fare payment systems; and
- electronic toll collection systems.

While interconnected traffic signal control systems and freeway management systems have been recognized for their air quality improvement benefits, other user services like electronic fare and toll collection systems can be useful in reducing or eliminating air quality "hot spots". Individually, these core infrastructure elements can reduce emissions and therefore qualify for CMAQ funding. However, when linked together in a system, their benefits are likely to be greater.

Agencies seeking to implement ITS projects must demonstrate consistency with the National ITS Architecture. This is address in separate guidance.

Operating expenses for traffic flow improvements are eligible for CMAQ funding where they can be shown to: 1) have air quality benefits, 2) the expenses are incurred from new or additional services, and 3) previous funding mechanisms, such as fares or fees for services, are not displaced.

Since CMAQ-funded projects should contribute to the attainment or maintenance of a NAAQS, it must be found that these operating costs are necessary for the overall system to contribute to attainment or maintenance of an ambient air quality standard. It is reasonable to assume that, after several years, a transportation service may no longer be considered to be an air quality improvement project, but that it has become a part of the existing transportation network. Hence, FHWA and FTA field offices are advised to use the consultation process with EPA to make a determination that operating assistance for traffic management systems, traveler information systems and other ITS projects or programs, beyond the initial 3-year period of eligibility, will assist in the attainment or maintenance of an air quality standard. (Also see operating assistance eligibility discussion earlier in this guidance.)

7. **Transit Projects:** Improved public transit is one of the TCMs identified in section 108(f)(1)(A) of the CAA. However, not all transit improvements are eligible under the CMAQ program. The general guideline for determining eligibility is whether an increase in transit ridership can reasonably be expected to result from the project. As with all CMAQ-funded projects, this must be supported by a quantified estimate of the emissions effects due to the project.

Facilities: New transit facilities are eligible if they are associated with new or enhanced mass transit service. If the project is rehabilitation, reconstruction, or maintenance of an existing facility, it is not eligible since there would be no change in emissions caused by the project. Other FTA grant programs can be used for upgrading existing facilities.

Vehicles: Acquisition of new transit vehicles (bus, rail, van) to expand the fleet are eligible. New vehicles acquired as replacements for existing fleet vehicles are also eligible; however, diesel-powered replacement vehicles will have minimal impact on attaining the ozone, PM, and CO standards. For these projects in particular, emissions effects must be documented so that they can be arrayed with other CMAQ proposals and allow informed decisions on the best use of available funds.

Operating Assistance: CMAQ funding can be used to support the start-up of new transit services. In order to be eligible, the service must be a discrete new addition to the system so that operating costs can be easily identified. Operating assistance is for a maximum of 3 years, after which other sources of funding must be used if the service is to be continued.

Fare subsidies: CMAQ funds may be used to subsidize regular transit fares, but only if the reduced or free fare is part of an overall program for preventing exceedances of a national air quality standard during periods of high pollutant levels. Examples include metropolitan areas that have implemented voluntary mobile source emission reduction programs which promote a range of measures individuals can take to reduce ozone-forming emissions. "Ozone-action" programs, designed to avoid exceedances when ozone concentrations are high, are bolstered by more permanent measures aimed at discouraging SOV driving. Refer to section VII.12 for additional discussion of fare/fee subsidies.

8. **Bicycle and Pedestrian Facilities and Programs:** Bicycle and pedestrian facilities and programs included as a TCM in section 108(f)(1)(A) of the CAA. Included as eligible projects are:
- construction of bicycle and pedestrian facilities;
 - non-construction projects related to safe bicycle use; and
 - establishment and funding of State bicycle/pedestrian coordinator positions, as established in the ISTEA, for promoting and facilitating the increased use of non-motorized modes of transportation. This includes public education, promotional, and safety programs for using such facilities.

9. **Travel Demand Management:** Travel demand management encompasses a diverse set of activities ranging from traditional carpool and vanpool programs to more innovative parking management and road pricing measures. Many of these measures are specifically referenced in the legislation creating the CMAQ program. Travel demand management projects meeting the basic eligibility requirements of the FHWA and FTA funding programs are eligible for CMAQ funding. Eligible activities include: market research and planning in support of travel demand management (TDM) implementation; traffic calming measures; capital expenses required to implement TDM measures; operating assistance to administer and manage TDM programs for up to 3 years; as well as marketing and public education efforts to support and bolster TDM measures.

Experience to date suggests that new transportation service has the greatest chance of success if offered along with complementary measures which discourage SOV use, such as parking restrictions or differential parking fees. Several provisions in TEA-21 require metropolitan areas to consider TDM measures in the planning process and this guidance seeks to encourage their development and implementation.

With respect to traffic calming measures, such projects should be examined on a case-by-case basis to assess eligibility. Not all traffic calming measures will lead to reduced emissions and States and MPOs should analyze these projects in the local context in which they would be implemented.

10. **Outreach and Rideshare Activities:** Outreach activities, such as public education on transportation and air quality, advertising of transportation alternatives to SOV travel, and technical assistance to employers or other outreach activities relating to promoting non-SOV travel options have been, and continue to be, eligible for CMAQ funds. Such outreach activities may be funded under the CMAQ program for an indefinite period.

Outreach activities differ fundamentally from the establishment of transportation services. They are communication services that are critical to successful implementation of transportation measures and may equally affect new and existing transit, shared ride, I/M, traffic management and control, bicycle and pedestrian, and other transportation services. As such, they are intended to continue reaching new audiences each time they are implemented, and restrictions on the length of time they may be funded seems contrary to one of the program's goals of effecting behavioral changes to reduce transportation emissions.

Marketing Programs: Marketing programs to increase use of transportation alternatives to SOV travel and public education campaigns involving the linkage between transportation and air quality are eligible operating expenses. Transit "stores" selling fare media and dispensing

route and schedule information which occupy leased space are also eligible. In addition, programs to promote the recently enacted Tax Code¹⁰ change related to commute benefits are eligible for CMAQ funding.

Carpooling and Vanpooling: Carpool and vanpool programs include computer matching of individuals seeking to carpool and employer outreach to establish rideshare programs and meet CAA requirements. These activities, even if they are part of an existing rideshare program, are eligible for CMAQ funding. New or expanded rideshare programs, such as new locations for matching services, upgrades for computer matching software, etc. are also eligible and may be funded for an indefinite period of time for both carpool and vanpool services.

The implementation of a vanpool operation entails purchasing or leasing vehicles and providing a transportation service. Therefore, proposals for vanpool activities such as these must be for new or expanded service to be eligible and are subject to the 3-year limitation on operating costs.

Under the CMAQ program, the purchase price of a publicly-owned vehicle for a vanpool service does not have to be paid back to the Federal Government. Requiring payback would place an additional constraint to wider implementation and usage of vanpool programs. Nonetheless, CMAQ funds should not be used to buy or lease vans that would be in direct competition with and impede private sector initiatives. Consistent with the statewide and metropolitan planning regulation¹¹, States and MPOs should consult with the private sector prior to using CMAQ funds to purchase vans, and if local private firms have definite plans to provide adequate vanpool service, CMAQ funds should not be used to supplant that service.

Transportation Management Associations: Transportation Management Associations (TMAs) are comprised of groups of individuals, firms or employers who organize to address the transportation issues in their immediate locale. The CMAQ funds may be used for the establishment of TMAs provided that the TMA performs a specified purpose in the project agreement that will be part of any air quality improvement strategy. The TMAs can play a useful role in brokering transportation services to private employers, and CMAQ funds may be used to contract with TMAs for this purpose. Eligible costs include coordinating and marketing rideshare programs, providing shuttle services, developing parking management programs, etc. Eligible expenses for reimbursement of associated TMA start-up costs are limited to 3 years.

¹⁰The Internal Revenue Code 26 U.S.C. §132(f) allows employers to exclude up to \$65 per month for transit and vanpool expenses and up to \$175 per month for qualified parking expenses from an employee's gross income. (For taxable years after December 31, 2001, the amount for transit and vanpooling increases to \$100 per month and is indexed for inflation (as is already the case for qualified parking expenses) beginning for taxable years after December 31, 2002.) As a result of TEA-21 amendments to the Code, employers may either provide these benefits free to employees as a tax-free benefit, in addition to existing compensation and benefits, or allow employees to use their own gross income before taxes to purchase these benefits through their employers, thus saving on taxes.

¹¹23 CFR 450.300.

11. **Telecommuting:** The DOT supports the establishment of telecommuting programs. Planning, technical and feasibility studies, training, coordination, marketing and promotion are eligible activities under CMAQ. Physical establishment or construction of telecommuting centers, computer and office equipment purchases and related activities are not eligible.
12. **Fare/Fee Subsidy Programs:** The CMAQ program allows funding for user fare or fee subsidies in order to encourage greater use of alternative travel modes (e.g., carpool, vanpool, transit, bicycling and walking). This policy has been established to encourage areas to take a more comprehensive approach--including both supply and demand measures--in reducing transportation emissions.

Transit Services: CMAQ funds can be used to subsidize transit fares only if the reduced fare is offered as a component of a comprehensive, targeted program to reduce SOV use during episodes of high pollutant concentrations. (Also see Transit Project eligibility section.)

Other Demand Management Strategies: CMAQ funds can be used to subsidize fares or fees for vanpools, shuttle services, flat-fare taxi programs and other demand management strategies. Examples of how the fare/fee subsidy might be used include: a program subsidizing empty seats during the formation of a new vanpool; reduced fares for shuttle services within a defined area, such as a flat-fare taxi program; or providing financial incentives for carpooling, bicycling, and walking in conjunction with a commuter choice or other program such as those described under Outreach and Rideshare Activities above.

Other components of fare/fee subsidy programs include public information and marketing of non-SOV alternatives, parking management measures, employer-based commuter choice programs, and better coordination of existing transportation services. Fare/fee subsidies under the CMAQ program are intended as short-term incentives. As with operating assistance, there is a maximum 3-year time limit.

13. **Intermodal Freight:** The CMAQ funds have been, and continue to be, used for improved intermodal freight facilities where air quality benefits can be shown. Capital improvements as well as operating assistance meeting the conditions of this guidance are eligible.
14. **Planning and Project Development Activities:** Project development activities that lead to construction of facilities or new services and programs with air quality benefits, such as preliminary engineering or project planning studies are eligible. This includes studies for the preparation of environmental or NEPA documents and related transportation/air quality project development activities. Project development studies directly related to a TCM are also eligible. In the event that air quality monitoring is necessary to determine the air quality impacts of a proposed project which is eligible for CMAQ funding, the costs of that monitoring are also eligible. As is the case with all CMAQ funded activities, all projects proposed for funding must be included in the MPO Plan and TIP and must meet the metropolitan planning requirements.

General planning activities, such as economic or demographic studies, that do not directly propose or support a transportation/air quality project or are too far removed from project development to ensure any emission reductions are not eligible for funding. Funding for preparation of NEPA or other environmental documents that are not related to a transportation project to improve air quality is also ineligible. Such activities should be funded with other appropriate title 23 or title 49 FTA funds.

Region- or area-wide air quality monitoring is not eligible because such projects do not themselves yield air quality improvements nor do they lead directly to projects that would yield air quality benefits. Air quality monitoring is normally a State air quality agency responsibility which is funded under section 105 of the CAA. If the MPO or State chooses, air quality monitoring could also be funded as a transportation planning activity and appropriate title 23 funds used.

- 15. Inspection/Maintenance (I/M) Eligibility:** Emission I/M programs and related activities show strong potential for improving air quality and are cost-effective uses of CMAQ funds. Recognizing this, construction of facilities and purchase of equipment for I/M stations are eligible for CMAQ funds. Projects necessary for the development of these I/M programs and one-time start-up activities, such as updating quality assurance software or developing a mechanic training curriculum, are also eligible activities. Operating expenses are eligible for CMAQ funding subject to the general conditions applying to all new transportation services. Specifically, the I/M program must constitute new or additional efforts; existing funding (including inspection fees) should not be displaced, and operating expenses are only eligible for 3 years.

Funds under the CMAQ program may be used for the establishment of I/M programs at publicly-owned I/M facilities. Publicly-owned I/M facilities may be constructed, equipment may be purchased, and the facility operated for up to 3 years with CMAQ funds, provided that the conditions covering operations described above are met.

The establishment of I/M programs at privately-owned stations, such as service stations that own the equipment and conduct emission test-and-repair services, can only be funded under the CMAQ program under the provisions covering "public-private partnerships" contained in this guidance. However, if the State relies on private stations, State or local administrative costs for the planning and promotion of the State's I/M program may be funded under the CMAQ program.

The establishment of "portable" I/M programs is also eligible under the CMAQ program, provided that they are public services, contribute to emission reductions and do not conflict with statutory I/M requirements or EPA implementing regulations. Like all CMAQ-funded projects, these programs must meet any relevant NEPA requirements and must be included in the area's plan and TIP before they can be funded.

- 16. Magnetic Levitation Transportation Technology Deployment Programs:** CMAQ funds may be used to fund a portion of the full project costs (including planning, engineering, and construction) pursuant to section 1218 -Magnetic Levitation Transportation Technology Deployment Program of TEA-21¹² and in accordance with the provisions of section 1218.
- 17. Experimental Pilot Projects:** States and local areas have long experimented with various types of transportation services--and different means of employing them--in an effort to better meet the travel needs of their constituents. These "experimental" projects may not meet the precise eligibility criteria for Federal and State funding programs, but they may show promise in meeting the intended public purpose of those programs in an innovative way. The FHWA and FTA have supported this approach in the past and funded some of these projects as demonstrations to determine their benefits and costs.

The CMAQ provisions of TEA-21 allow experimentation provided that the project or program can reasonably be defined as a "transportation" project and that emission reductions can reasonably be expected "through reductions in Vehicle Miles Traveled (VMT), fuel consumption or through other factors." This guidance encourages States and MPOs to creatively address their transportation/air quality problems and to experiment with new services, innovative financing arrangements, public-private partnerships and complementary approaches that constitute comprehensive strategies to reduce emissions through transportation programs. The CMAQ program can be used to support a well conceived project even if the proposal may not otherwise meet the eligibility criteria of this guidance. Proposals submitted for funding under this provision should show promise in reducing transportation emissions in nonattainment or maintenance areas and should have the concurrence of the MPO, State transportation agency and the FHWA/FTA. Such proposals must also be coordinated with EPA and State/local air quality agencies.

While the CMAQ provisions of TEA-21 were written broadly to encourage an innovative approach, the principles of sound program management must still be followed. Under this approach, there will likely be proposals for funding with which transportation agencies have little experience. As such, before-and-after studies are required to determine the actual project impacts on the transportation network (measured in VMT or trips reduced, or other appropriate measure) and on air quality (emissions reduced). An assessment of the project's benefits should be forwarded to FHWA or FTA documenting the immediate impacts as well as a projection of the project's long-term benefits.

All projects funded under this section should be explicitly identified in the annual report of CMAQ activities as required under section IX of this guidance. In future years, when before- and-after studies are complete, a summary of the actual project benefits should also be included in the annual report. The amount obligated for proposals made pursuant to this section should not exceed 25 percent of a State's yearly CMAQ apportionment.

¹²23 U.S.C. §322.

VIII. PROJECT SELECTION PROCESS-GENERAL CONDITIONS

Proposals for CMAQ funding should include a precise description of the project, providing information on the project's size, scope and timetable. Also, an assessment of the proposal's expected emission reductions in accordance with the provisions described below is required. States, MPOs, and transit agencies are encouraged to develop procedures for assessing the emission reduction benefits of CMAQ projects. States are also required to submit annual reports detailing the obligations made under the CMAQ program during the previous fiscal year.

Air Quality Analysis

1. **Quantitative Analyses:** Quantitative assessment of how the proposal is expected to reduce emissions is extremely important to assist areas in developing and funding the most effective projects in nonattainment and maintenance areas. They also provide an objective basis for comparing the costs and benefits of competing proposals for CMAQ funding. Since States are required to submit annual reports (see discussion below), analysis of air quality benefits for individual project proposals will assist in their preparation. It is particularly important to assess and quantify the benefits of projects that increase or improve basic transportation services. This includes assessing emission reductions of transit, traffic flow improvements, ITS projects and programs, ridesharing, bicycle and pedestrian improvements. In addition, analyses are expected for conversions to alternative fuels and for I/M programs.

Decisions regarding the level and type of air quality analysis needed, as well as the credibility of its results, are left to FTA and FHWA field staff, in consultation with EPA. Across the country, State and local transportation/air quality agencies have different approaches, analytical capabilities and technical expertise with respect to such analysis. At the national level, it is not feasible to specify a single method of analysis applicable in all cases.

While no single method is specified, every effort must be taken to ensure that determinations of air quality benefits are credible and based on a reproducible and logical analytical procedure that will yield quantitative results of emission reductions. Of course, if an air quality analysis has been done for other reasons, it may also be used for this purpose.

2. **Qualitative Assessment:** Although quantitative analysis of air quality impacts is required whenever possible, some improvements may not lend themselves to rigorous quantitative analysis because of the project's characteristics or because practical experience is lacking to adequately analyze the project. In these cases, a qualitative assessment based on a reasoned and logical examination of how the project or program will decrease emissions and contribute to attainment or maintenance of a NAAQS is appropriate and acceptable.

Public education, marketing and other outreach efforts fall into this category. The primary benefit of these activities is enhanced communication and outreach that is expected to influence travel behavior, and thus, air quality. Yet tracing the benefits to air quality through the intervening steps requires a multi-disciplinary approach that incorporates market research analysis, base case documentation, surveying, and other analytical techniques which may not be readily available to many transportation agencies. As such, these projects which can

include advertising alternatives to SOV travel, employer outreach, public education campaigns, and communications or outreach to the public during "ozone alerts," or similar programs do not require a quantitative analysis of air quality benefits.

3. **Analyzing Groups of Projects:** In many situations, it may be more appropriate to examine the impacts of more comprehensive strategies to improve air quality by grouping TCMs. A strategy to reduce reliance on single-occupant vehicles in a travel corridor, for example, could include transit improvements coupled with demand management. The benefits of such a strategy should be evaluated together rather than as separate projects. Transit improvements, ridesharing programs or other TCMs affecting an entire region may be best analyzed in this fashion.

IX. PROGRAM OVERSIGHT RESPONSIBILITY

Annual Reports

To assist in meeting statutory obligations, States are required to prepare annual reports for FHWA, FTA, and the general public that specify how CMAQ funds have been spent and the expected air quality benefits. Annual reporting enhances accountability and the annual report enables FHWA and FTA to be responsive to the Congress on the utilization of CMAQ funds and their impact.

This report should be provided by the first day of February following the end of the previous Federal fiscal year (September 30) and cover all CMAQ obligations for that fiscal year. The report should include:

1. A list of projects funded under CMAQ, best categorized by one of the following eight project types:
 - public-private partnerships;
 - experimental pilot projects;
 - transit: facilities, vehicles and equipment, operating assistance for new transit service, etc;
 - shared-ride: vanpool and carpool programs and parking for shared-ride services, etc;
 - traffic flow improvements: traffic management and control services, signalization projects, ITS projects, intersection improvements, and construction or dedication of HOV lanes, etc;
 - demand management: trip reduction programs, transportation management plans, flexible work schedule programs, vehicle restriction programs, etc.;
 - pedestrian/bicycle: bikeways, storage facilities, promotional activities, etc; and

- I/M and other TCMs (not covered by the above categories).

For reporting purposes, project developmental activities, as well as public education, marketing and other outreach efforts that are eligible under the CMAQ program should be reported in the same category as the project or program they support.

2. The amount of CMAQ funds obligated for each project (or project category where groups of projects are analyzed together) for the year, disaggregated by the categories of projects listed above; and
3. A tabulation of the estimated emissions benefits for each project (or group of projects) for the year summed from project-level analyses and expressed as reductions of ozone precursors (volatile organic compounds and nitrogen oxides), CO, or PM-10. These reductions should be expressed as kilograms per day removed from the atmosphere.

Note that the annual report should now specifically include and identify any projects funded under the Experimental Pilot Projects provision of this guidance as well as the newly eligible public-private partnerships (see section VII). Summaries of before-and-after studies should be included as they become available.

Federal Agency Responsibilities and Coordination

The FTA and FHWA field offices should establish a consultation and coordination process with their respective EPA regional offices for early review of CMAQ funding proposals. Review by EPA is critical to assist the determination of whether the CMAQ-proposed projects will have air quality benefits and to help assure that effective projects and programs are approved for CMAQ funding. Proposals for funding should be forwarded to EPA as soon as possible to ensure timely review. Where Memorandum of Understanding (MOU) are in place to facilitate Federal agency review, such MOUs should be updated as needed.

Either the local FTA or FHWA office will be responsible for project administration. In cases where the project is clearly related to transit, FTA will determine the project's eligibility and administer the project. Similarly, traffic flow improvements that improve air quality through operational improvements of the road system are administered by FHWA. For projects that include both traffic flow and transit elements, such as park-and-ride lots and intermodal projects, the administering agency will be decided on a case-by-case basis. Following initial review by the administering agency and consultation with EPA, the administering agency makes the final determination on whether the project or program is likely to contribute to attainment of a NAAQS and is eligible for CMAQ funding. The consultation process should provide for timely review and handling of CMAQ funding proposals.

State and MPO Responsibilities

Decisions over which projects and programs to fund under CMAQ should be made through the appropriate metropolitan and/or statewide planning process which would include the involvement of State and local air quality agencies. This process serves to develop a pool of potential CMAQ

projects to be considered for funding in a State's nonattainment and maintenance areas. States, MPOs and transit agencies, in consultation with air quality agencies, are encouraged to cooperatively develop criteria for selection of CMAQ projects. The programming of CMAQ projects should be consistent with the appropriate metropolitan plan.

Projects to be funded with CMAQ funds must be included in the plans and TIPs that are developed by the MPOs in cooperation with the State and transit operators. Under the metropolitan planning regulations¹³, TIPs must contain a priority list of projects to be carried out in the 3-year period following adoption. As a minimum, projects must be identified by year and proposed funding source. For projects targeting CMAQ funds, priority in the TIP should be based on the projects' estimated air quality benefits.

Since the TIPs must be consistent with available funding, it is important that the State advise the MPOs of the estimated amount of CMAQ funds in a timely manner. Once CMAQ projects are included in a TIP (approved by the MPO and the Governor), and included in a FHWA/FTA- approved statewide TIP, those projects in the first year may be implemented. Projects in the second or third year of the TIP could be advanced for implementation using the specified project selection procedures in the planning regulation.

It is the State's responsibility to manage its obligation authority made pursuant to title 23 to ensure that CMAQ (and other Federal-aid) funds are obligated in a timely fashion and do not lapse. Other provisions affecting the overall Federal-aid program, such as advance construction authority, apply to the CMAQ program as well.

Close coordination is needed between the State and MPO to assure that CMAQ funds are used appropriately and to maximize their effectiveness in meeting the CAA requirements. States and MPOs must fulfill this responsibility so that nonattainment and maintenance areas are able to make good-faith efforts to attain and maintain the NAAQS by the prescribed deadlines. State DOTs and MPOs should consult with State and local air quality agencies to develop an appropriate project list of CMAQ programming priorities which will have the greatest impact on air quality.

¹³23 CFR 450.300.

Attachment 1 (*TEA-21 Changes in Italics*)**TITLE 23 UNITED STATES CODE
HIGHWAYS
CHAPTER 1 - FEDERAL AID HIGHWAYS****Sec. 149. Congestion mitigation and air quality improvement program**

(a) Establishment.-The Secretary shall establish *and implement* a congestion mitigation and air quality improvement program in accordance with this section.

(b) Eligible Projects.-Except as provided in subsection (c), a State may obligate funds apportioned to it under section 104(b)(2) for the congestion mitigation and air quality improvement program only for a transportation project or program if the project or program is for an area in the State *that is or was designated as a nonattainment area for ozone, carbon monoxide, or particulate matter under section 107(d) of the Clean Air Act (42 U.S.C. 7407(d)) and classified pursuant to section 181(a), 186(a), 188(a), or 188(b) of the Clean Air Act (42 U.S.C. 7511 (a), 7512(a), 7513(a), or 7513(b)) or is or was designated as a nonattainment area under such section 107(d) after December 31, 1997, and -*

(1)(A) if the Secretary, after consultation with the Administrator of the Environmental Protection Agency, determines on the basis of information published by the Environmental Protection Agency pursuant to section 108(f)(1)(A) of the Clean Air Act (other than *clause* (xvi) of such section), that the project or program is likely to contribute to-

- (i) the attainment of a national ambient air quality standard; or
- (ii) the maintenance of a national ambient air quality standard in *a maintenance area*;

(B) in any case in which such information is not available, if the Secretary, after such consultation, determines that the project or program is part of a program, method, or strategy described in such section;

(2) if the project or program is included in a State implementation plan that has been approved pursuant to the Clean Air Act and the project will have air quality benefits;

(3) the Secretary, after consultation with the Administrator of the Environmental Protection Agency, determines that the project or program is likely to contribute to the attainment of a national ambient air quality standard, whether through reductions in vehicle miles traveled, fuel consumption, or through other factors; *or*

(4) to establish or operate a traffic monitoring, management, and control facility or program if the Secretary, after consultation with the Administrator of the Environmental Protection Agency, determines that the facility or program is likely to contribute to the attainment of a national ambient air quality *standard*; *or*

(5) if the program or project improves traffic flow, including projects to improve signalization, construct high occupancy vehicle lanes, improve intersections, and implement intelligent transportation system strategies and such other projects that are eligible for assistance under this section on the day before the date of enactment of this paragraph.

No funds may be provided under this section for a project which will result in the construction of new capacity available to single-occupant vehicles unless the project consists of a high-occupancy vehicle facility available to single-occupant vehicles only at other than peak travel times. In areas of a State which are nonattainment for ozone or carbon monoxide, or both, and for PM-10 resulting from transportation activities, the State may obligate such funds for any project or program under paragraph (1) or (2) without regard to any limitation of the Department of Transportation relating to the type of ambient air quality standard such project or program addresses.

(c) States Receiving Minimum Apportionment

(1) States without a nonattainment area. If a State does not have, and never has had, a nonattainment area designated under the Clean Air Act (42 U.S.C. 7401 et seq.), the State may use funds apportioned to the State under section 104(b)(2) for any project eligible under the surface transportation program under section 133.

(2) States with a nonattainment area. If a State has a nonattainment area or maintenance area and received funds under 104(b)(2)(D) above the amount of funds that the State would have received based on its nonattainment and maintenance area population under subparagraphs (B) and (C) of section 104(b)(2), the State may use that portion of the funds not based on its nonattainment and maintenance area population under subparagraphs (B) and (C) of section 104(b)(2) for any project in the State eligible under section 133.

(d) Applicability of Planning Requirements.-Programming and expenditure of funds for projects under this section shall be consistent with the requirements of sections 134 and 135 of this title.

(e) Partnerships with nongovernmental entities.

(1) In general. Notwithstanding any other provision of this title and in accordance with this subsection, a metropolitan planning organization, State transportation department, or other project sponsor may enter into an agreement with any public, private, or nonprofit entity to cooperatively implement any project carried out under this section.

(2) Forms of participation by entities. Participation by an entity under paragraph (1) may consist of-

(A) ownership or operation of any land, facility, vehicle, or other physical asset associated with the project;

(B) cost sharing of any project expense;

(C) carrying out of administration, construction management, project management, project operation, or any other management or operational duty associated with the project; and

(D) any other form of participation approved by the Secretary.

(3) *Allocation to entities.* A State may allocate funds apportioned under section 104(b)(2) to an entity described in paragraph (1).

(4) *Alternate fuel projects.* In the case of a project that will provide for the use of alternative fuels by privately owned vehicles or vehicle fleets, activities eligible for funding under this subsection--

(A) *may include the costs of vehicle refueling infrastructure, including infrastructure that would support the development, production, and use of emerging technologies that reduce emissions of air pollutants from motor vehicles, and other capital investments associated with the project;*

(B) *shall include only the incremental cost of an alternative fueled vehicle, as compared to a conventionally fueled vehicle, that would otherwise be borne by a private party; and*

(C) *shall apply other governmental financing purchase contributions in the calculation of the net incremental cost.*

(5) *Prohibition on Federal participation with respect to required activities.* A Federal participation payment under this subsection may not be made to an entity or fund an obligation imposed under the Clean Air Act (42 U.S. C. 7401 et seq.) or any other Federal law.

PL 105-178 (TEA-21) also provides for the following:

Determination by the Secretary. For the purposes of section 149(c) of title 23, United States Code, the Secretary shall determine in accordance with the procedures specified in section 149(b) of such title whether water-phased hydro-carbon fuel emulsion technologies that consist of a hydrocarbon base and water in an amount not less than 20 percent by volume that reduce emissions of hydrocarbon, particulate matter, carbon monoxide, or nitrogen oxide from motor vehicles.

Study of CMAQ Program

(1) *In general.--The Secretary and the Administrator of the Environmental Protection Agency shall enter into arrangements with the National Academy of Sciences to complete, by not later than January 1, 2001, a study of the congestion mitigation and air quality improvement program under section 149 of title 23, United States Code. The study shall, at a minimum--*

(A) *evaluate the air quality impacts of emissions from motor vehicles;*

(B) *evaluate the negative effects of traffic congestion, including the economic effects of time lost due to congestion;*

(C) *determine the amount of funds obligated under the program and make a comprehensive analysis of the types of projects funded under the program;*

(D) *evaluate the emissions reductions attributable to projects of various types that have been funded under the program;*

(E) *assess the effectiveness, including the quantitative and non-quantitative benefits, of projects funded under the program and include, in the assessment, an estimate of the cost per ton of pollution reduction;*

- (F) assess the cost effectiveness of projects funded under the program with respect to congestion mitigation;*
- (G) compare--*
 - (i) the costs of achieving the air pollutant emissions reductions achieved under the program;*
to
 - (ii) the costs that would be incurred if similar reductions are achieved by other measures, including pollution controls on stationary sources;*
- (H) include recommendations on improvements, including other types of projects, that will increase the overall effectiveness of the program;*
- (I) include recommendations on expanding the scope of the program to address traffic-related pollutants that, as of the date of the study, are not addressed by the program. (2) Report.--Not later than January 1, 2000, the National Academy of Sciences shall transmit to the Secretary, the Committee on Transportation and Infrastructure and the Committee on Commerce of the House of Representatives, and the Committee on Environment and Public Works of the Senate a report on the results of the study with recommendations for modifications to the congestion mitigation and air quality improvement program in light of the results of the study.*
- (3) Funding.--Before making the apportionment of funds under section 104(b)(2) of title 23, United States Code, for each of fiscal years 1999 and 2000, the Secretary shall deduct from the amount to be apportioned under such section for such fiscal year, and make available, \$500,000 for such fiscal year to carry out this subsection.*

Attachment 2

Section 104 Apportionment*(2) Congestion mitigation and air quality improvement program.--*

(A) In general.--For the congestion mitigation and air quality improvement program, in the ratio that--

(i) the total of all weighted nonattainment and maintenance area populations in each State; bears to

(ii) the total of all weighted nonattainment and maintenance area populations in all States.

(B) Calculation of weighted nonattainment and maintenance area population.--Subject to subparagraph (C), for the purpose of subparagraph (A), the weighted nonattainment and maintenance area population shall be calculated by multiplying the population of each area in a State that was a nonattainment area or maintenance area as described in section 149(b) for ozone or carbon monoxide by a factor of--

(i) 0.8 if--

(I) at the time of the apportionment, the area is a maintenance area; or

(II) at the time of the apportionment, the area is classified as a submarginal ozone nonattainment area under the Clean Air Act (42 U.S.C. 7401 et seq.);

(ii) 1.0 if, at the time of the apportionment, the area is classified as a marginal ozone nonattainment area under subpart 2 of part D of title I of the Clean Air Act (42 U.S.C. 7511 et seq.);

(iii) 1.1 if, at the time of the apportionment, the area is classified as a moderate ozone nonattainment area under such subpart;

(iv) 1.2 if, at the time of the apportionment, the area is classified as a serious ozone nonattainment area under such subpart;

(v) 1.3 if, at the time of the apportionment, the area is classified as a severe ozone nonattainment area under such subpart;

(vi) 1.4 if, at the time of the apportionment, the area is classified as an extreme ozone nonattainment area under such subpart;

(vii) 1.0 if, at the time of the apportionment, the area is not a nonattainment or maintenance area as described in section 149(b) for ozone, but is classified under subpart 3 of part D of title I of such Act (42 U.S.C. 7512 et seq.) as a nonattainment area described in section 149(b) for carbon monoxide.

(C) Additional adjustment for carbon monoxide areas.--

(i) Carbon monoxide nonattainment areas.--If, in addition to being classified as a nonattainment or maintenance area for ozone, the area was also classified under subpart 3 of part D of title I of such Act (42 U.S.C. 7512 et seq.) as a nonattainment area described in section 149(b) for carbon monoxide, the weighted nonattainment or maintenance area population of the area, as determined under clauses (i) through (vi) of subparagraph (B), shall be further multiplied by a factor of 1.2.

(ii) Carbon monoxide maintenance areas.--If, in addition to being classified as a nonattainment or maintenance area for ozone, the area was at one time also classified under subpart 3 of part D of title I of such Act (42 U.S.C. 7512 et seq.) as a nonattainment area described in section 149(b) for carbon monoxide but has been redesignated as a maintenance area, the weighted nonattainment or maintenance area population of the area, as determined under clauses (i) through (vi) of subparagraph (B), shall be further multiplied by a factor of 1.1.

(D) Minimum apportionment.--Notwithstanding any other provision of this paragraph, each State shall receive a minimum of $\frac{1}{2}$ of 1 percent of the funds apportioned under this paragraph.

(E) Determinations of population.--In determining population figures for the purposes of this paragraph, the Secretary shall use the latest available annual estimates prepared by the Secretary of Commerce.

Attachment 3

UNITED STATES CODE
TITLE 23

Sec. 120. Federal Share Payable

(c) INCREASED FEDERAL SHARE FOR CERTAIN SAFETY PROJECTS. The Federal share payable on account of any project for traffic control signalization, pavement marking, commuter carpooling and vanpooling, or installation of traffic signs, traffic lights, guardrails, impact attenuators, concrete barrier end treatment, breakaway utility poles, or priority control systems for emergency vehicles *or transit vehicles* at signalized intersections may amount to 100 percent of the cost of construction of such projects; except that not more than 10 percent of all sums apportioned for all the Federal-aid systems for any fiscal year in accordance with section 104 of this title shall be used under this section.

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