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BEFORE THE
COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

July 30, 2002

Thank you, Mr. Chairman and Members of the Committee, for the invitation to appear here today to discuss the Congestion Mitigation and Air Quality Improvement (CMAQ) program and the transportation conformity program in the context of reauthorization of the Transportation Equity Act for the 21st Century (TEA-21). There has been considerable progress in achieving better air quality for Americans since the passage of the Clean Air Act Amendments in 1990. In addition, building on the fundamental structure of ISTEA, TEA-21 further emphasized the importance of transportation in fulfilling environmental goals, as well as significantly contributing to the social and economic well-being of our nation.

Achieving and maintaining healthy air quality remains an important national priority. EPA sees the reauthorization of TEA-21 as an opportunity to employ all tools available to improve air quality, including transportation, in ways that could help cities across the country make progress toward attainment under both the pre-1997 and the new health-based standards for ozone and fine particulate matter.

Air quality monitoring data show that in the period from 1991 to 2000, concentrations of all six criteria pollutants have declined, including the four criteria pollutants that are most affected by the

transportation sector: carbon monoxide, nitrogen dioxide, ozone (smog), and particulate matter (soot). For example, air quality concentrations of carbon monoxide declined 41 percent and concentrations of coarse particulate matter declined five percent.

These air pollution data are good news, and are attributable to the transportation and air quality programs currently in place. However, there are approximately 35 million Americans living in 46 counties that are not achieving the old one-hour ozone ambient air quality standard, and 8.3 million people living in 10 counties that are not achieving the old standard for coarse particulate matter. Furthermore, when we begin to implement the new, more health-protective standards for ozone and particulate matter and designate the areas that are not attaining the standards, the number of people living in areas with air quality considered unhealthy will dramatically increase. Although EPA has not formally identified areas that fail to meet these standards, it appears that more than 80 million people live in 233 counties not meeting the new 8-hour ozone standard, and 75 million people live in 144 counties not meeting the new fine particulate matter standard.

The Criteria pollutant emissions from transportation sources have a significant impact on the health of Americans. Particulate matter is linked to aggravation of pre-existing respiratory ailments, reductions in lung capacity, and a significant number of premature deaths. Ozone can impair lung function, cause chest pain and coughing, and worsen respiratory diseases and asthma. Carbon monoxide can aggravate angina (heart pain).

Even though emissions have been dramatically reduced, on-road mobile sources continue to be a major portion of some of our pollution problems. In 1999, motor vehicles accounted for 51 percent of the total carbon monoxide emissions, 29 percent of the ozone precursor of volatile organic compounds

(VOCs), 34 percent of the ozone precursor nitrogen oxides (NOx), and 10 percent of the traditionally inventoried direct emissions of particulate matter nationwide. On a regional scale, motor vehicles can be an even larger portion of an area's inventory. For example, in 1999, on-road vehicles accounted for 48 percent of NOx in Atlanta, Georgia. According state air quality plans for these areas, on-road vehicles account for 63 percent of the area's total NOx in Springfield, Massachusetts; 56 percent of the area's total NOx in the Los Angeles region in California; and 80 percent of the area's total carbon monoxide and 53 percent of the area's total coarse particulate matter in Las Vegas, Nevada. Although emissions reductions from stationary sources are important in many areas throughout the country, these data demonstrate the continuing need to reduce air pollution from motor vehicles . As a nation, our techniques for reducing motor vehicle emissions have to encompass both technology improvements to vehicles and fuels, as well as programs that encourage other, less polluting, transportation choices.

Technology has provided significant air quality benefits in the past and will continue to do so into the future. Emissions from today's new cars have been reduced by more than 95 percent relative to new cars 30 years ago. EPA's new Tier 2 vehicle standards program is designed to reduce the emissions of new passenger cars and light trucks even further. The rule combines these requirements with requirements for much lower levels of sulfur in gasoline. By 2020, NOx produced by vehicles will be approximately 70 percent lower as compared to what the levels of NOx would have been without the Tier 2 program in place.

EPA's new clean diesel program for large trucks and buses is another technology-based program. It will achieve emissions reductions based on the use of high-efficiency exhaust emissions control devices coupled with changes in diesel fuel sulfur levels. This program will result in particulate

matter and NOx emissions levels that are 90 and 95 percent below the current standards for heavy duty engine emissions in effect today.

A third example of emissions reducing technologies is EPA's Voluntary Diesel Retrofit Program, which is designed to help owners of trucks, buses, and off-road equipment install innovative and cost-effective emission control technology on their diesel engines. These technologies can result in significant reductions of particulate matter and volatile organic compounds (which are a precursor to ozone).

But technology cannot do it alone. Although emissions per vehicle have declined dramatically, the number of miles Americans are driving continues to increase. In 1970, Americans traveled just over one trillion vehicle miles per year; in 2000 it was almost 2.8 trillion. Growth in vehicle miles traveled (VMT) has far outpaced population growth. From 1970 to 1999, population grew 33 percent, but VMT grew 143 percent. These trends are continuing. A conservative national estimate of VMT growth is approximately two percent per year. However, in many cities, particularly in the southern and western states, VMT is growing much faster than this average. For example, in the early 1990s, Charlotte's VMT grew about 4.9 percent per year, Denver's VMT grew 4.5 percent per year, and Salt Lake City's VMT grew by 4.3 percent per year. Las Vegas projects that its VMT will increase more than 4 percent per year through the year 2020. The integration of transportation planning and air quality planning is the means to preserve and continue the progress we have made in ensuring that Americans breathe healthy air.

The growth in vehicle traffic also leads to congestion. Traffic congestion can not be relieved only by adding more road capacity – either building more roads or widening the existing ones. Recent studies have estimated a wide range of VMT growth that is attributed to increases in roadway capacity. .

In areas with poor air quality, decisions about how to reduce congestion and improve mobility in a way that will not worsen air pollution must be addressed proactively.

Programs that are based on providing travel choices are also important in achieving better air quality. For example, the Commuter Choice Leadership Initiative is a new and successful non-regulatory approach to achieving emission reductions. Built around the tax-free commuter benefits in TEA-21 and modeled after the Energy Star partnership programs, the Commuter Choice Leadership Initiative is an EPA and DOT voluntary partnership with business to reduce traffic and traffic-related emissions. In just one year, 300 companies from 25 states have signed voluntary agreements to offer 500,000 employees commuter benefits meeting a national standard of excellence. EPA projects that if half of U.S. employees worked for employers that offered commuter benefits at the national standard of excellence promoted by the Commuter Choice Leadership Initiative, air pollution and traffic would be cut by the equivalent of taking 15 million cars off the road every year.

The Congestion Mitigation and Air Quality Improvement Program

The CMAQ program, initially begun under ISTEA, provides funding for transportation projects to improve air quality and reduce congestion. The CMAQ program is a valuable transportation funding tool for air quality improvement because the pool of potential projects is largely restricted to areas with poor air quality, (non-attainment areas), or those that had poor air quality in the past (maintenance areas). Unlike many other federal-aid transportation programs, it is not limited to traditional highway uses, and can fund Travel Demand Management (TDM) programs such as park and ride lots, car and van pool programs and public education. CMAQ also funds unique Transportation Control Measures (TCMs) and other measures such as alternative fuel vehicles and facilities, diesel engine retrofit programs

through public/private partnerships, and certain costs for vehicle Inspection and Maintenance programs. If TCMs are included in a state's air quality plan, those projects are given funding priority.

An EPA analysis of the benefits of TCMs, such as those funded by the CMAQ program, documents the range of emission reductions from 22 different shared ride, bicycle and pedestrian, traffic flow, transit and demand management programs. While the projects individually produce relatively small emission reductions, cumulatively these projects can add up to larger reductions over the life of an air quality plan. CMAQ projects can be important for helping a state to meet air quality planning and conformity requirements. The benefits of the CMAQ program, and particularly projects that reduce VMT or manage system capacity, extend beyond emissions reductions. Other benefits include roadway congestion relief, energy conservation, greenhouse gas emission reductions, as well as economic development and community livability. By requiring the project to be implemented in nonattainment areas, more local government and public involvement in transportation investment decisions has been encouraged.

EPA and DOT have documented CMAQ's numerous benefits in reports, brochures and fact sheets available to transportation and air quality planners. From EPA's perspective, there is little doubt that the program is beneficial for air quality and is an important program for nonattainment areas that want to address transportation emissions. As directed by Congress, a National Academy of Science study undertaken by the Transportation Research Board, draws similar conclusions. The findings of "Special Report 264. The Congestion Mitigation and Air Quality Improvement Program: Assessing 10 Years of Experience" were generally favorable, but the report did make recommendations to Congress on how to improve the program. In particular, the report emphasized the need to focus CMAQ

expenditures on projects that improve air quality.

While EPA generally agrees with the NAS recommendations, there are two additional important issues to which I will direct the Committee's attention. These considerations fall into two main categories – apportionment and project eligibility.

According to some stakeholders an important apportionment issue is that the amount of available CMAQ funds may decrease when air quality improves and they are redesignated to attainment status. Although originally intended for use in non-attainment areas, CMAQ funds now continue to be available to areas that have been redesignated to attainment status and have an approved maintenance plan. However, an area's redesignation to maintenance could also result in a reduction in CMAQ funding which has been used to reach attainment. Many TDM strategies are long term initiatives that must maintain small but steady levels of funding over a longer term than capital investment types of projects.

For example, Illinois estimates their apportionment of CMAQ funds would decrease by approximately $32 million dollars if the Chicago area were redesignated from severe nonattainment for ozone to attainment. It is not clear that Chicago would have adequate funding for its continuing needs after such a loss. Illinois included many of the CMAQ funded projects in its State Implementation Plan as transportation control measures. These projects now total 5-6 tons per day or over 1500 tons per year of reductions in VOCs. Consideration should be given to an apportionment formula that recognizes the need for an adequate source of funding for air quality beneficial transportation projects after a nonattainment area redesignates to maintenance.

As EPA begins implementation of the new 8-hour ozone standard, several changes regarding

nonattainment areas are anticipated. A change in the classification of nonattainment areas, or the number of areas, will likely change the amount of CMAQ funds apportioned to each State and available to nonattainment areas. Given the current statutory language in TEA-21, nonattainment areas designated under the 8-hour ozone standard would be eligible for CMAQ funding, but the funds apportioned to the States would not account for the new areas and would not be available to help reduce transportation emissions. The issue needs to be addressed in the apportionment formula.

Strategies to reduce the very small but hazardous particulates known as PM-2.5 will increase in importance. Generally, both diesel and gasoline powered vehicles emit fine particulate matter as well as NOx and VOCs that lead to its formation. Both near and long-term emission reduction programs need to be planned. The focus of most TCM strategies has been the reduction of VOCs and NOx, and the effectiveness of TCMs for reducing PM-2.5 is less understood. However, there is optimism that some travel demand strategies, new technologies and cleaner fuels can produce reductions in concentrations of PM-2.5. The CMAQ program offers the opportunity for regions to explore innovative strategies to address this pollutant. Consideration should be given to amending the apportionment formula to target some of the CMAQ funds to this emerging air quality issue.

CMAQ funding can be useful to all nonattainment areas and maintenance areas, classified in accordance with the 1990 Clean Air Act amendments. All ozone, carbon monoxide and particulate matter nonattainment areas should be considered for inclusion in an apportionment formula that directs CMAQ funds to nonattainment areas based on the greatest air quality need. EPA is working with DOT to assess how the apportionment formula could be adjusted to fund projects equitably in all these areas.

TEA-21's flexible guidelines allow DOT to issue project eligibility guidance that cuts across

traditional modal boundaries and makes the funds available for highway, transit and non-traditional program areas. The overarching criteria for eligibility are that the transporation project be implemented in an area designated nonattainment or maintenance for ozone, carbon monoxide, or particulate matter, and that the project reduce emissions. An examination of CMAQ program spending reveals that two project categories, traffic flow and transit, account for over 75% of the obligated funds.

These traditional transportation projects have historically been funded under transportation funding programs other than CMAQ. EPA and DOT need to continue our collaborative work with areas to encourage that projects selected for CMAQ funding will be tailored to the area's particular air quality needs.

Operating expenses for new CMAQ projects are currently limited to three years of eligibility. As the CMAQ program has grown and evolved, there has been more interest in extending the eligibility period or eliminating the restriction altogether. Local transit agencies have long expressed concern over the shortage of funding to sustain existing transit services. These agencies argue that as long as the project is producing emission reductions, it should be eligible for CMAQ funds. State DOT's have expressed interest in expanded use of CMAQ funds for operating ITS to facilitate traffic monitoring, management and control. However, the operating expense restriction was included in the program for the express purpose of stimulating innovation and to avoid obligating all the available funds to existing programs. The benefit of testing new ideas, especially in light of the changing air quality context under the 8-hr ozone and fine particulate standards, needs to be weighed against the benefit of maintaining the operating costs of ongoing projects for which other transportation funds are designated.

Transportation Conformity

Transportation conformity was established by Congress in the Clean Air Act Amendments of 1990 and was designed to help ensure that an area's transportation activities are consistent with its air quality goals. EPA is responsible for writing the conformity regulations and the Department of Transportation (DOT) must concur with all conformity rules, as DOT is our federal partner in the implementation of the program. EPA first published the conformity rule in November of 1993. We subsequently streamlined and clarified the rule in August 1997, based on extensive discussions with state and local air pollution officials, transportation planners, and other stakeholders, as well as the experience of both DOT and EPA in the field. In March of 1999, however, a decision from the D.C. Circuit Court of Appeals changed several aspects of the 1997 conformity rule. In response to that decision, we have proposed, and will soon finalize, a modification improving flexibility consistent with the court decision. We also plan to incorporate EPA and DOT's existing guidance implementing the court decision into the conformity regulations.

The transportation conformity program requires that the impact of new transportation activities on air quality is evaluated on a regular basis. Areas that have air quality worse than the national standards (nonattainment areas) or that have violated the standards in the past (maintenance areas), are required to examine the long-term air quality impacts of their transportation system to ensure that such systems are compatible with clean air goals. In the simplest terms, conformity serves as an "accounting check" to assure that a nonattainment or maintenance area's future transportation network conforms to thearea's air pollution reduction plan.

The benefit of conformity accounting is that it requires state and local governments, and the public, to consider the air quality impacts of the planned transportation system as a whole and over the

long term -- before transportation plans are adopted and projects are built. Billions of dollars every year are spent on developing and maintaining our transportation system. Conformity helps ensure that these dollars are not spent in a manner that would worsen air quality, as that outcome would only necessitate spending additional money to reverse the air quality impact. Certainly it makes sense to examine future impacts of what are essentially permanent decisions.

Prior to the 1990 Clean Air Act, transportation planners and air quality planners often did not consult with one another or even use consistent information regarding future estimates of growth. As a result of this disconnect, the 1990 Clean Air Act Amendments explicitly linked the air quality planning and transportation planning processes in a manner that had not previously existed. Above all, transportation conformity has compelled the two planning agencies to work together through the interagency consultation process to find creative and workable solutions to air quality issues. Most everyone agrees, that consultation is an important benefit of conformity. A 1999 Harvard study on the conformity program that was jointly funded by DOT and EPA confirmed this benefit.

Consultation is meaningful because air quality and transportation planners have a common goal: transportation activities that conform with the state's air quality goals. A state's air quality plan (a state implementation plan, or SIP) establishes emissions ceilings, or budgets, for the various types of sources that contribute to air pollution problems. Conformity makes state and local agencies accountable for keeping the total motor vehicle emissions from an area's current and future transportation activities within these air quality plan budgets.

Communities have choices about how to address their transportation and air quality needs. When a transportation plan's emissions are greater than the allowable budgets in the air quality plan,

areas can decide whether to revise the transportation plan or revise the air quality plan. For example, some areas have added transit programs to reduce the emissions of their transportation plan, while others have gone back to the state air quality plan to see if other sources of pollution could be further controlled to allow the transportation sector's emissions budget to grow. An area can choose to build transportation projects that increase emissions, as long as the net effect of the total system is consistent with the state air quality plan. Most areas have been able to continue adding to their transportation network and still stay within their clean air budgets.

At the heart of the conformity accounting process are computer models of an area's transportation system that estimate the emissions that are produced. In many areas, modeling begins with the area's own travel demand model that calculates the number of vehicle miles traveled on the area's transportation network, and at what speeds vehicles are traveling. This information is then used in EPA's MOBILE model to determine how much pollution will result from the on-road transportation sector.

Some of the conformity stakeholders have said that the uncertainty in both the transportation and air quality emissions modelsshould be taken into account in the conformity process. I would like to address this comment. Although there is no way to know exactly how emissions will change as a result of changes to the transportation system and travel patterns, models help planners make reasonable estimates. All the models used in this effort are surrogates of reality, and like all predictions, some degree of uncertainty will always be inherent. Because sound transportation and emissions modeling is essential to support planning, the challenge lies in developing models that use current and accurate dataand can consistently represent how changes in travel activity and vehicle operational dynamics affect

emissions. EPA and DOT work together continuously to upgrade our models to meet this challenge.

While modeling will always have inherent uncertainty, the appropriate response to this fact is not to abandon modeling, but to continue to improve it. The 1999 Harvard study, "Linking Transportation and Air Quality Planning: Implementation of the Transportation Conformity Regulation in 15 Nonattainment Areas," funded jointly by DOT and EPA, found that conformity has encouraged improvement in modeling and the necessary data collection. The better the information going into the modeling, the more reliable the results. Transportation and air quality modeling has improved in the few years that conformity has been in place. For example, Charlotte, NC, is collecting new data about travel patterns of households in the area. New York, New Jersey, and Connecticut also have recently partnered to collect new household travel data. Portland, OR, is working on a new method of modeling their transportation system that relies on simulating actual vehicle trips.

Furthermore, EPA's MOBILE model was updated this year. The current version of the model, MOBILE6, incorporates our recent knowledge about how cars and trucks function, as well as the effects of new air quality programs that will be in effect in the future, such as Tier 2 vehicle standards. These improvements in data collection as well as in the models themselves yield progressively better results both in states' air quality plans and in conformity determinations.

The new air quality standards for ozone and particulate matter may necessitate changes in the conformity program. EPA plans to propose rules and guidance for implementing the 8-hour ozone standard by the end of the year, and we anticipate that it will then take us about eight to ten months to respond to comments and finalize the rules and guidance. For the fine particulate matter standard, we plan to propose implementation rules and guidance in spring of 2003 and finalize them in 2004. EPA

intends to designate areas as attainment, nonattainment, or unclassifiable with respect to the 8-hour ozone standard in late 2004. EPA expects to designate areas with respect to fine particles starting in 2004.

Areas designated under the new standards will have to prepare a conforming transportation plan after a one-year grace period that was recently added to the Clean Air Act. A few issues related to the new standards will have to be resolved for implementing conformity. For example, some areas that will be designated as nonattainment for the 8-hour standard are currently nonattainment with respect to the 1-hour standard. EPA intends to address the process and basis for determining the 1-hour standard no longer applies in an area in its implementation rules and guidance, considering input from stakeholders and the public. This will occur prior to designating areas so that the conformity requirements as well as impacts of such a change on CMAQ apportionments will be clear well before areas are subject to them. EPA and DOT, as well as stakeholders across the U.S., have a wealth of experience in implementing conformity. Newly designated areas will benefit from our collective experience, and EPA and DOT will provide timely guidance to these areas before and as they implement the program under the new standards.

We understand that there are two aspects of the conformity process that some transportation planning stakeholders would like to change via the TEA-21 reauthorization process. The first is how often conformity is required. The Clean Air Act requires that conformity be determined when a transportation plan or transportation improvement program (TIP) is adopted, and no less frequently than every three years. In addition, EPA's conformity rule requires conformity within 18 months of certain "SIP triggers." If an area cannot meet a conformity deadline, then only certain types of activities can

proceed (e.g., projects necessary to improve safety).

An added requirement to determine conformity is derived from the transportation requirements. The Clean Air Act requires transportation plans and TIPs to conform before they are adopted. Transportation plans must be updated every three years, but TIPs must be updated every two years. Adopting a new TIP every two years means that conformity determinations must be done at least this often.

According to some transportation planners, conformity is required too often, leaving them with little time to focus on planning. Some air quality planners, however, are concerned that changing the minimum frequency of conformity would delay the use of new information in modeling. Model inputs that affect total emissions, such as population growth, and the percentage of sport utility vehicles, trucks, and minivans in an area's vehicle fleet, have been rapidly changing in the last decade. Some air quality planners think that a frequency of every three years is important for introducing new information into the conformity process, so that trends can be seen early before their impact is great and to leave time to accommodate new information in the process. Additionally, some air quality planners also appreciate the benefits of updating their SIP and emission inventories to reflect latest planning assumptions or other new information in a timely manner.

EPA intends to eliminate some of the 18-month "SIP triggers" in the conformity rule in an upcoming rulemaking. Though further discussion must occur on the issue of how often conformity must be done, amending the rule would simplify the process and address some of the concern.

The second aspect of conformity that some transportation planners would like to see changed is the timeframe over which conformity must be demonstrated. Currently, the conformity process

examines the amount of pollution that is projected to occur over the entire life – 20 years – of a transportation plan. Therefore, in conformity, emissions from the last year (in most cases, the 20th year) are examined and compared to the motor vehicle emissions budgets in an area's air quality plan. However, air quality plans cover a period of ten years or less.

Transportation planners suggest it is unfair to determine conformity for the 20 year life of the plan when the air quality plan is at best, only half as long. They explain that since the air quality plan ends before the transportation plan, the burden of growth that occurs in the years that make up the remainder of the transportation plan solely rests with the transportation sector.

On the other hand, air quality planners are concerned that if transportation plans are 20 years, but conformity is done for a shorter period, the responsibility for mitigating transportation pollution in the future will rest on their shoulders alone. That is, if transportation projects are approved and built today without regard to their long-term impacts on air quality, the transportation planners will be dictating the size of the budget in future years to the air quality planners. Air quality planners feel they would be left to figure out how to accommodate a predetermined budget within the overall air quality reductions from transportation as well as from other sources that will be necessary to attain or maintain the air quality standards in years to come.

Several air quality planners and environmental groups also point to the time scale of land use decisions a as reason for retaining the 20 year conformity analysis. They indicate that land use decisions take many years to have an effect on air quality, and only when examining air quality 20 years into the future can the effects of different plans for land use be seen. They point to areas across the country that have examined long term implications of land use, including Portland, Oregon; Charlotte, North

Carolina; Sacramento, California; and Denver, Colorado. For example, as a result of conformity, Charlotte, North Carolina, realized that their air quality would be jeopardized in the future. During the period of time where they could not meet conformity, Charlotte focused on developing a coordinated land use and transit plan, and Charlotte's citizens voted for a sales tax to help fund the new transit system. Charlotte realized that in order to stay a competitive city for business, it needs to remain an attractive place for people to want to work and live. Another example where the impact of land use decisions have been recognized is Atlanta, GA. Atlanta has made decisions about land use and investing in transit that will have long term benefits for the area.

In conclusion, EPA is committed to partnering with DOT to continue our progress in meeting both transportation and air quality goals as the nation's transportation system is developed. CMAQ, conformity, and our programs for new vehicle standards and fuels are all important tools in achieving clean air. Thank you again for this opportunity to testify today and discuss our programs with you. I would be happy to respond to any questions that you may have.