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GAO

Report to Congressional Requesters

April 2003

ENVIRONMENTAL PROTECTION

Federal Planning Requirements for Transportation and Air Quality Protection Could Potentially Be More Efficient and Better Linked

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GAO-03-581

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Highlights

Highlights of GAO-03-581, a report to Congressional Requesters

Why GAO Did This Study

To protect the public from harmful emissions, transportation planners in areas with poor air must show that their plans will not make it worse. Every time they update their transportation improvement program (TIP) and their 20-year plan—every 2 and 3 years respectively—federal laws and regulations require that they ensure the emissions from their plans will not exceed the mobile source emissions budget. This is known as "demonstrating conformity." Areas that fail to do so generally cannot spend federal funds on new projects until they resolve the problem. The Committee asked GAO to determine (1) how many areas have failed, why, and what corrective actions they took, and (2) what issues transportation planners had with the conformity process and what solutions are possible.

What GAO Recommends

To help improve the conformity process, GAO recommends that the relevant federal agencies (1) consider extending the 3-year time frame between required transportation plan updates and asking the Congress to amend the Clean Air Act to change the conformity rules to match, and (2) assess the advantages and disadvantages of statutorily requiring that the emissions budgets in air quality plans be regularly updated with new travel data and emissions models. DOT and EPA generally agreed with these recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-03-581.

To view the full report, including the scope and methodology, click on the link above. For more information, contact John Stephenson at (202) 512-3841.

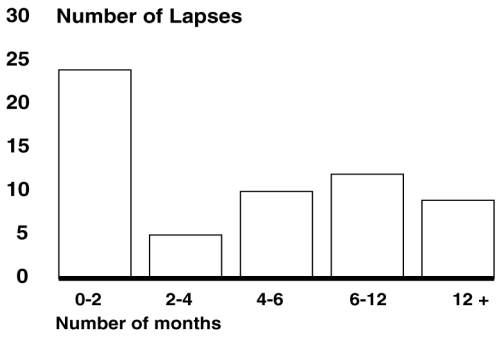
What GAO Found

Since 1997, 56 of the 159 transportation planning areas with air quality problems failed to demonstrate conformity by a required deadline at least once, according to federal agency data, but only five areas had to change their transportation plans as a result. About half of the areas failed because of resource, administrative, or technical problems, such as a lack of time and staff, and resolved the problem in 6 months or less. About one-third of the 253 transportation planners responding to our survey said they anticipate having trouble demonstrating conformity in the future, especially in meeting the more stringent limits on two pollutants resulting from vehicle emissions—ozone and fine particulate matter.

A majority of transportation planners who had trouble demonstrating conformity or failed to do so by a deadline said that the required frequency of demonstrations robs them of time and resources to solve other issues, such as growing congestion. The planners support extending the current 3-year time frame between required updates of the 20-year plan, which could also result in less frequent conformity demonstrations. Under this change, areas would still demonstrate conformity of their TIP every 2 years, and could still update and demonstrate conformity on their long-term plans more frequently than required, such as to add new projects or shift funds. These factors could help to ensure that the change would not have a significant impact on the conformity process' role to protect air quality.

Transportation planners also noted the difference between their frequent plan updates, which must use the latest emissions model and data (such as the types of vehicles on the road and the number of miles they travel), and air quality plans, with their associated emissions budgets, which are not required to be updated with the current model or data. The transportation planners said this creates conflicts and can result in ineffective changes to an area's transportation plans. Any proposal to require that air quality plans be regularly updated, however, needs to weigh the benefits against the fact that such updates are difficult and costly.

Length of Conformity Lapses, 1997-2002



Source: GAO analysis of DOT and EPA data.

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United States General Accounting Office
Washington, DC 20548

April 28, 2003

The Honorable James M. Jeffords
Ranking Minority Member,
Committee on Environment and Public Works
United States Senate

The Honorable Joseph I. Lieberman
United States Senate

As the nation has grown, so has its dependence on cars as its primary mode of transportation. Over the past 30 years, the volume of miles traveled on the nation's roadways in these vehicles has increased four times faster than the total population. Although they contribute to the increased mobility of the population, these vehicles also burn fuel that emits harmful pollutants into the air, thereby posing risks to public health and the environment. Clean Air Act provisions, as well as technological advances with cleaner vehicles and fuels, have helped to significantly curb these emissions over this same time period. But because of continued growth and increased travel, states and localities must continue to monitor and control these emissions to achieve or preserve clean air.

In an effort to protect public health from such emissions, the Environmental Protection Agency (EPA) has set ambient air quality standards, or limits, on the amount of certain harmful pollutants, such as ozone, carbon monoxide, and particulate matter, which can be present in the air. The Clean Air Act requires the states to develop air quality protection plans to implement, maintain, and enforce these standards. These plans define the amount of these pollutants that four main sources can emit—surface transportation, such as cars, trucks, and buses (on-road mobile sources); other vehicles, such as construction equipment, train engines, and airplanes (non-road mobile sources); industry, such as factories and power plants (point sources); and business, such as dry cleaners or bakeries (area sources). For the on-road mobile source sector, this limit on emissions is known as a "motor vehicle emissions budget."

Transportation planners in areas where emissions exceed the standards or did so in the past are required by the Clean Air Act to consider these budgets when developing their two primary documents outlining their future transportation network. The first is a long-range plan that specifies a 20-year vision for a metropolitan area's transportation system; the

second is a short-range transportation improvement program (TIP) that specifies the priority projects to be implemented in the next 3 years in more detail. These transportation planners are required to update their plans at least once every 3 years, and their TIPs at least once every 2 years. Each time they conduct these updates, federal laws and regulations require the planners to demonstrate that the estimated emissions from the planned transportation system, including projects in the plan or TIP, will not exceed the emissions budgets in the state air quality plans. This is known as "demonstrating conformity."[1] The planners must submit their demonstrations to the Department of Transportation (DOT), which is responsible for ensuring it conforms to the air quality plan, in coordination with EPA. If DOT determines that an area has not passed its conformity demonstration by specified deadlines, the area enters into what is known as a "lapse." During a lapse, an area generally can only spend federal transportation funds on certain projects, such as safety, mass transit, and air quality projects, until it resolves the problem and can demonstrate conformity.

The ease or difficulty with which transportation planners complete the conformity process, especially in light of upcoming changes to air quality standards, has prompted interest in reviewing this process. EPA will soon implement two new and more stringent standards, or limits, on ozone and fine particulate matter—two substances prevalent in or created by vehicle emissions—that will subject some areas of the country to the conformity process for the first time. In addition, as some of the nation's developed areas balance the pressures of a growing population, urban sprawl, and congested roadways, areas already having to demonstrate conformity may find compliance an even greater challenge.

As the Congress reauthorizes the nation's major surface transportation law, it is interested in knowing how well the conformity process is working and what effect, if any, it is having on an area's transportation plan, projects, and federal funding. A number of transportation stakeholders have studied various pieces of the conformity process and have offered reauthorization proposals to make changes to it. You asked us to focus on three such proposals that, among other things, would streamline the transportation planning process and in turn affect the

[1] DOT conformity program managers noted that a number of additional factors, other than updating transportation plans and TIPs, such as the approval of a new or revised motor vehicle emissions budget or certain other changes to air quality plans, can also trigger a required conformity demonstration.

required steps in the conformity process. Two of the proposals would extend the time between required updates of the plan and TIP, thereby extending the time between the associated conformity demonstrations, respectively, and the third would combine these two plans into a single planning document, subject to a single conformity demonstration.

More specifically, you asked us to determine (1) how many areas of the country have had their conformity status lapse at least once since 1997 (the earliest date for which data are available), why, and what corrective actions were taken, and (2) what issues planners have encountered during the conformity process and the extent to which each of the proposed changes to the transportation planning process will address these issues.

In responding to the first objective, we reviewed the reliability of all available data from EPA and DOT on areas that have experienced a conformity lapse. EPA began collecting these data on a regular basis in 1997 and DOT in 1999. In responding to the second objective, we conducted a Web-based survey of all 341 local transportation planning organizations nationwide, commonly known as Metropolitan Planning Organizations, and all air quality planning agencies in the 50 states plus the District of Columbia and Puerto Rico. We obtained responses from 253 transportation planning organizations (74 percent) and 45 state air quality agencies (86 percent). See appendixes I, II, and III for more details on our scope and methodology and for the results of each survey. We conducted our review from August 2002 through April 2003 in accordance with generally accepted government auditing standards.

Results in Brief

Over the past 6 years, 56 of the 159 transportation planning areas with air quality problems (35 percent) have experienced at least one conformity lapse, although few had to change their transportation plans to resolve the lapse. Areas lapsed in 26 cases because transportation planners lacked the time and resources to complete the conformity process by the required deadlines, or because they experienced administrative or technical problems. Areas lapsed in 18 cases because they had difficulty designing a transportation plan that would control future emissions enough to meet their budget, but in 6 of these cases, the difficulty was with the requirements of the conformity process itself and not with the amount of emissions that would be generated by the projects in their plan. In the remaining cases, areas lapsed for a variety of other reasons, such as not having an EPA-approved state air quality plan with an emissions budget in time for the conformity demonstration. While some took longer, about 65 percent of all lapses took 6 months or less to correct. Most areas

addressed their lapse by correcting administrative or technical issues, or taking the needed time to catch up with their workload and complete the conformity process. Another 11 areas recalculated the emissions budget to resolve the lapse, and only 5 areas needed to revise their transportation plans. About one-third of the 253 transportation planners nationwide responding to our survey anticipate having difficulty demonstrating conformity in the future, however, especially under the new air quality standards for ozone and particulate matter. For example, EPA estimates that about 50 areas of the country that will not meet the revised standards will have to demonstrate conformity for the first time. EPA and DOT have taken some preliminary steps to help prepare these new areas, but some are concerned, for example, about having the resources and staff with the necessary technical skills to complete the conformity process.

About two-thirds of the 118 transportation planners responding to our survey who currently demonstrate conformity reported that the frequency with which they must do so limits the time and funds available to address other important transportation challenges, such as alleviating congestion and ensuring highway safety. All three of the proposed changes to the transportation planning process that stakeholders have offered could result in less frequent conformity demonstrations, addressing the planners' concerns. Nearly three-quarters of the transportation planners favored extending the frequency between updates of the long-range plan and most preferred at least once every 5 years, rather than once every 3 years as currently required for areas with air quality problems. If the requirement to demonstrate conformity of the plan were also revised accordingly, this could result in less frequent demonstrations. Forty-five percent of the planners favored extending the frequency between updates of the TIP, and 30 percent favored combining the plan and TIP into a single document.[2] Seventeen state air quality planners responding to our survey also supported the most favored proposal to extend updates of the plan. But when asked if the proposal could jeopardize their ability to meet air quality standards, 16 air quality planners said they thought that it could. However, in responding to this question, the air quality planners were not asked to take into account the fact that the transportation planners would still be demonstrating conformity of their TIPs every 2 years. As EPA program managers also noted, any time transportation planners add a project to their TIP that was not in the plan, they would have to

[2] Thirty-one percent of survey respondents neither favored nor opposed, or are unsure at this time, about combining the plan and TIP.

demonstrate conformity on both the TIP and plan. Furthermore, transportation planners could, as needed, update their long-range plan and associated conformity demonstration more frequently than required. In fact, a number of transportation planners reported that they have done this in order to add new projects, shift funds among projects, or make other changes. All of these factors would help to ensure that adopting the proposal to extend the frequency of updates to the long-term plan would not have a significant impact on the conformity process and its role in air quality protection. Because there are advantages to be gained from freeing up transportation planners' time and resources and ways to mitigate potential disadvantages, we are recommending that DOT, in coordination with EPA, consider (1) revising its regulations to extend the current 3-year time frame between required updates of the long-range transportation plan, and (2) submitting a legislative proposal to revise the conformity provisions of the Clean Air Act so that they similarly extend the time frame between required conformity demonstrations for the plan.

Transportation planners responding to our survey who experienced a lapse or difficulty demonstrating conformity identified a second issue that none of the three proposals in our study addresses, one that stems from a difference between requiring updated transportation plans and TIPs but not air quality plans and emissions budgets. Currently, transportation planners must update their plans and TIPs and demonstrate conformity on a regular basis. In doing so, they must use such factors as the most current data on the size of the area's population and the number and types of vehicles in use. The planners must also input this data into the most current version of the model that estimates future emissions from their planned transportation projects. State air quality planners, on the other hand, are not required to periodically update their plans and vehicle emissions budgets to reflect the more current data and model.[3] As a result, if the more current factors or model indicate a larger than expected increase in future emissions, the transportation planners must further revise the projects they include in their plans and TIPs until they can offset all of the additional increase and stay within the vehicle emissions budget. Such revisions could cause some areas to delay projects, such as building a new road, while other areas may not have that option and instead have

[3] In certain areas, state air agencies must conduct an inventory of emissions every 3 years, but are not required to update their plans based on these data, even if the inventory shows an increase in emissions. Some of these areas must use the data to demonstrate to EPA that they are making the necessary progress in achieving air quality standards, and if not, they may have to revise their plans accordingly.

to rely on adding a number of projects to the plans and TIPs intended to reduce emissions. If states periodically updated their air quality plans to incorporate the most current data and model, they could reassess whether these types of transportation changes were best for an area, or whether they have achieved enough, or more cost-effective, reductions from other sources so that they could revise the vehicle emissions budgets and provide transportation planners some flexibility. Twelve of 45 air quality planners responding to our survey reported that they updated air quality plans and increased the emissions budget or built a safety margin into it, allowing transportation planners to be able to demonstrate conformity. In addition, 13 others reported that they would consider updating their plans. Conducting these updates, as with conducting transportation plan updates, can be challenging, time-consuming, and costly, however, according to 32 of the air quality planners and EPA program managers. For example, the air quality planners would have to solicit agreement on allowable emissions levels from all sources, stakeholders, and the public, and running the required photochemical model could take as long as 3 years in larger metropolitan areas with many sources of air pollution. Recognizing that updating air quality plans could be costly for some areas, we recommend that EPA, in coordination with DOT, more comprehensively assess the potential disadvantages of such updates and the likely extent that anticipated benefits would be achieved by establishing a Clean Air Act requirement to regularly update state air quality plans with the most current data and models.

We provided DOT and EPA with a draft of this report for their review and comment. Both agencies provided technical comments that we incorporated into the report as appropriate. DOT generally agreed with our conclusions and recommendations and said that the report was timely and highlighted issues that needed to be addressed. EPA generally agreed with our conclusions and recommendations for changes to the transportation planning process and the associated requirements to demonstrate conformity, but wanted to consult with the states before agreeing with our recommendation that the agency comprehensively assess the advantages and disadvantages of establishing a requirement to periodically update state air quality plans.

Background

The Clean Air Act requires EPA to establish air quality standards to protect public health and the environment. These standards—known as the

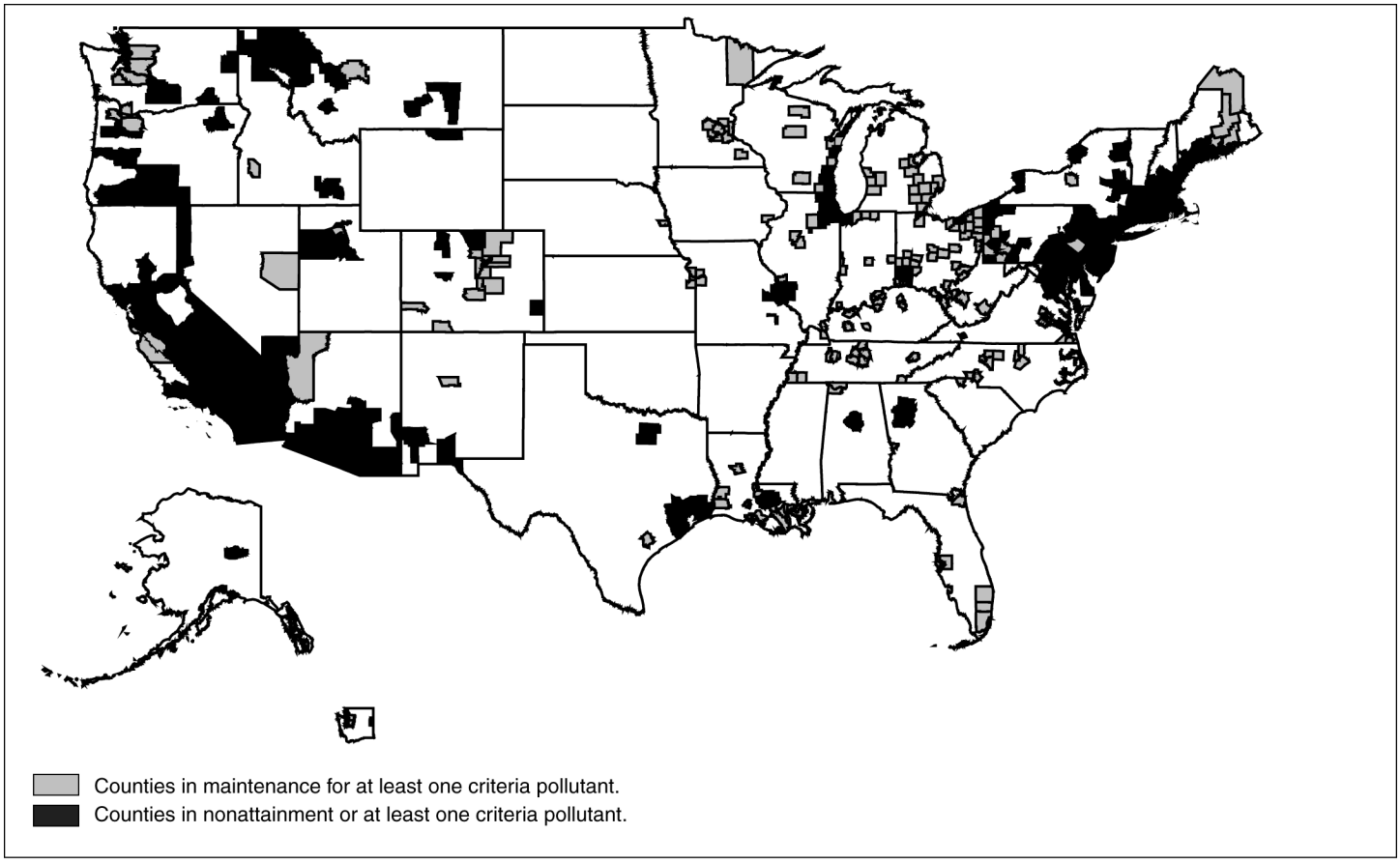
"national ambient air quality standards"—establish health and environmentally-based limits on the amount of six criteria pollutants that are allowed in the air.[4] States must develop state implementation plans (SIP) for implementing, maintaining, and enforcing the standards.[5] When the level of any of these pollutants exceeds the standard in an area of the country, EPA may designate that area as being in nonattainment of the standard. Once the standard is attained, EPA redesignates the area as being in attainment, but the state must submit revisions to its state air quality plan demonstrating how it will maintain this level of air quality for 20 more years.[6] The following map illustrates the counties of the nation currently in nonattainment or maintenance for at least one of the six criteria pollutants.

[4] The six criteria pollutants are ozone, particulate matter, carbon monoxide, lead, nitrogen dioxide, and sulfur dioxide.

[5] In some cases, localities within a state may also develop air quality plans.

[6] According to DOT conformity program managers, states are to submit these maintenance plans in two 10-year increments, in part because it is difficult to make projections 20 years into the future with some certainty.

Figure 1: Counties in Nonattainment or Maintenance Status for at least One Criteria Pollutant



Source: GAO analysis of EPA data.

Note: If a county was designated both nonattainment and maintenance for different pollutants, they will appear on this map as being in nonattainment.

The Clean Air Act requires states to develop the SIP. To begin, state air quality planners must estimate the emissions from mobile, point, and area sources. The air quality planners are then required to establish emissions goals for each of these sources and design cost-effective and feasible strategies that will result in progress towards attaining, or maintaining, the air quality standards. For on-road mobile sources, the emissions goal is known as a motor vehicle emissions budget. The total amount of emissions that can come from on-road mobile sources, such as cars, motorcycles, and trucks, as well as transit vehicles that include buses, cannot exceed this budget. EPA is responsible for approving the state's initial air quality plan and any subsequent revisions to it. Although states

are not required to regularly update their plans for attaining or maintaining the standards, they are required to update them at certain times, such as when EPA revises an air quality standard or the area's designation changes.

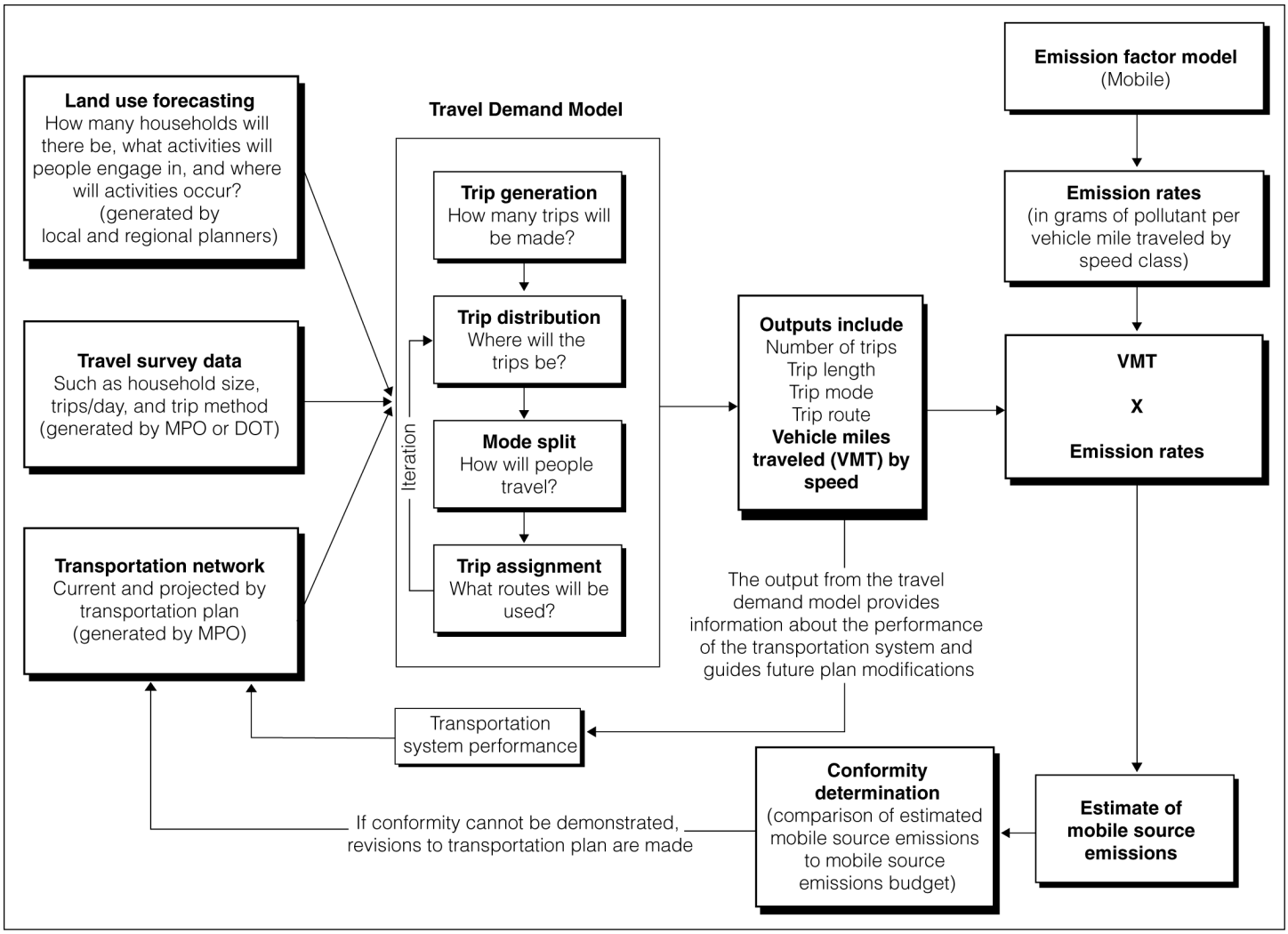
Transportation planners also play a key role in making sure areas meet their emissions budget. Local planning agencies are responsible for carrying out the transportation planning process in a metropolitan or urbanized area.[7] As part of this process, these agencies are to develop transportation plans and transportation improvement programs (TIP). A transportation plan specifies a long-range, 20-year vision for a metropolitan area's transportation system. DOT regulations require that for nonattainment and maintenance areas, their plans be updated at least once every 3 years and attainment areas at least once every 5 years. In contrast, the TIP is a short-range, more detailed document that specifies the priority projects to be implemented in the next 3 years. Federal transportation laws specify that all areas must update the TIP at least once every 2 years. In developing the plan and TIP, the transportation planners must consult with state and federal transportation and environmental agencies, as well as the public. The purpose of this consultative requirement is to ensure that all agencies meet regularly and share information on changes to the area's future network that will preserve air quality.

Transportation planners rely on three types of information, among other things, in developing their transportation plan and TIP: (1) the future size of an area's population and where the people will live and work, (2) how these people will travel, and (3) what kind of transportation network is and will be in place to meet travel needs. The planners predict future travel most often by inputting this information into a model that forecasts future travel demand, such as how many cars will be on a particular road at a certain time. The planners determine the mix of transportation projects they will propose in the plan and TIP to meet this demand. Planners in nonattainment or maintenance areas for ozone, carbon monoxide, particulate matter, or nitrogen dioxide must meet additional requirements. While all planners must estimate future travel needs, planners in nonattainment and maintenance areas must more precisely

[7] The Federal-Aid Highway Act of 1973 authorized the use of federal funding for local planning agencies—known as metropolitan planning organizations—in areas with populations of 50,000 or more to carry out planning at the metropolitan level. There are currently 341 metropolitan planning organizations in the United States and Puerto Rico.

calculate the number of vehicle miles people will travel under the plan and TIP, and, among other things, input this information into another model that estimates the emissions their transportation plans will generate. Figure 2 outlines this travel forecasting process.

Figure 2: Process for Forecasting Future Travel Demand



Source: GAO.

Note: In some cases, if conformity cannot be demonstrated, air quality plans and emissions budgets, rather than transportation plans, may be revised accordingly.

Under the Clean Air Act, transportation planners in nonattainment or maintenance areas must demonstrate that the estimated emissions generated through this process will not exceed the area's emissions budget, a process known as "demonstrating conformity." Planners must make this comparison at least once every 3 years, if they update either the plan or TIP, or if states make certain changes to air quality plans. The transportation planners must submit the results of this demonstration to DOT, which reviews them, determines whether the area complies with the requirements, and makes an independent conformity determination, in consultation with EPA. If either the plan or TIP does not conform to the emissions budget by a specified deadline, or if the plan or TIP expires before a new one is adopted, the area enters into what is known as a "conformity lapse." In this case, the transportation planners can only spend federal transportation funds on certain projects, such as safety, mass transit, and air quality projects, until it resolves the problem and can demonstrate conformity.

In 2004, EPA plans on designating nonattainment areas under two new, more stringent air quality standards for ozone and fine particulate matter in order to be more protective of public health. The current ozone standard limits the concentration of ozone allowed in the air over a 1-hour period of time. The revised standard is more stringent and is averaged over an 8-hour period. EPA revised the standard because it is now known that chronic exposure to the pollutant is a health concern. The new fine particulate matter standard is also more stringent and covers smaller size particles found in vehicle emissions, among other sources, which can be more deeply inhaled, making them more likely to contribute to health problems. Areas that EPA designates as not meeting either standard will be subject to the conformity process 1 year after the effective date of this designation.

The Congress has taken an interest in reviewing these requirements as it attempts to reauthorize the nation's surface transportation programs. To help the Congress in its efforts, we first reported on the conformity process and other transportation-related air quality programs and issues in an October 2001 report, and in a statement for a congressional hearing

conducted in July 2002.[8] A number of other stakeholders, such as research organizations, industry associations, and environmental organizations, have also issued reports or proposed changes related to transportation planning and conformity as part of the TEA-21 reauthorization debate. For example, Resources for the Future recently released a report examining how conformity is affected by the transportation and air quality planning processes.[9] In addition, Harvard University's Taubman Center for State and Local Government issued a report discussing challenges that areas will face in implementing the new standards, including requirements to demonstrate conformity.[10] Furthermore, industry groups, including the Association of Metropolitan Planning Organizations; the State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials; the American Association of State Highway and Transportation Officials; and Environmental Defense have also developed positions on transportation planning, conformity, or both.

We were asked to review three proposals that could directly impact the conformity requirements outlined in the Clean Air Act: (1) extending the time between required updates of the long-range transportation plan, (2) extending the time between required updates of the TIP, and (3) combining these two documents into one. All three proposals would result in extended time frames between conformity demonstrations. While we recognize that other changes have been proposed that would impact the conformity requirements, we did not include them in our review because other organizations are either studying them or have recently issued reports that discuss them. For example, transportation planners have raised concerns about having to use the latest version of the model to estimate future emissions, the MOBILE6 model, and the impacts the model will have on their estimates. DOT and EPA have a number of modeling

[8] U.S. General Accounting Office, *Environmental Protection: Federal Incentives Could Help Promote Land Use That Protects Air and Water Quality*, GAO-02-12 (Washington, D.C.: Oct. 31, 2001; and *Environmental Protection: The Federal Government Could Help Communities Better Plan for Transportation That Protects Air Quality*, GAO-02-988T (Washington, D.C.: July 30, 2002).

[9] Winston Harrington, Arnold Howitt, Alan J. Krupnick, Jonathan Makler, Peter Nelson, and Sarah J. Siwek, "Exhausting Options: Assessing SIP-Conformity Interactions," RFF Report, January 2003.

[10] Jonathan Makler and Arnold M. Howitt, "Regulating Transportation in New Nonattainment Areas Under the Eight-Hour Ozone Standard," Taubman Center for State and Local Government, Presented at the 82nd Annual Meeting of the Transportation Research Board, Washington, D.C., January 12-16, 2003.

initiatives underway, such as training, to help address these concerns. In addition, some planners have raised concerns because they have to estimate emissions and demonstrate conformity over the entire 20-year horizon of the long-range transportation plan, while air quality planners typically only have to project emissions and set a budget for the period until their attainment date, which is a shorter period of time. The Resources for the Future study referred to above assessed the impact of these differing requirements and ways to address problems they presented.

Few Areas Have Needed to Change Transportation Plans to Resolve a Conformity Lapse, but More May Need to Do So in the Future to Meet New Standards

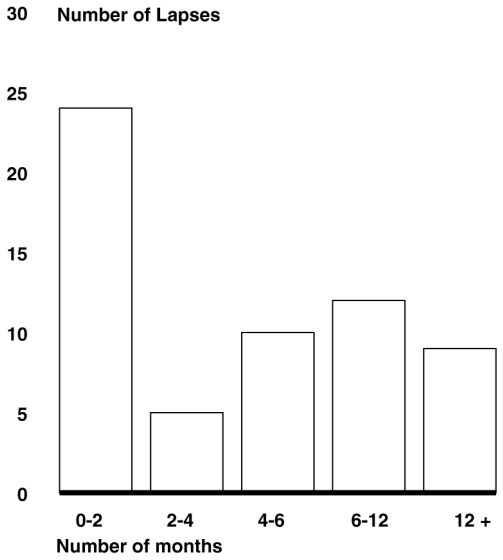
Few areas that experienced a conformity lapse since 1997 had to revise or change their transportation plans in order to resolve the problem. Instead, in order to end the lapse, most of these areas needed to resolve administrative and technical problems or take additional time to complete the conformity process. However, more than one-third of the transportation planners responding to our survey reported that they expected their areas to have difficulty demonstrating conformity in the future. For example, a number of areas will be subject to EPA's new, more stringent air quality standards for ozone and fine particulate matter and will have to demonstrate conformity for the first time, posing challenges for some areas.

One-Third of Areas Had Conformity Lapses but Most Were 6 Months or Less

Over the past 6 years, 56 (35 percent) of the 159 transportation planning areas with air quality problems had at least 1 conformity lapse, according to EPA and DOT data.[11] Thirty-nine (65 percent) of these lapses lasted 6 months or less. Figure 3 shows the length of conformity lapses from 1997 through 2002.

[11] Since 1997, 56 areas experienced a total of 60 conformity lapses. Four areas had more than one conformity lapse during this period.

Figure 3: Length of Conformity Lapses, 1997-2002



Source: GAO analysis of DOT and EPA data.

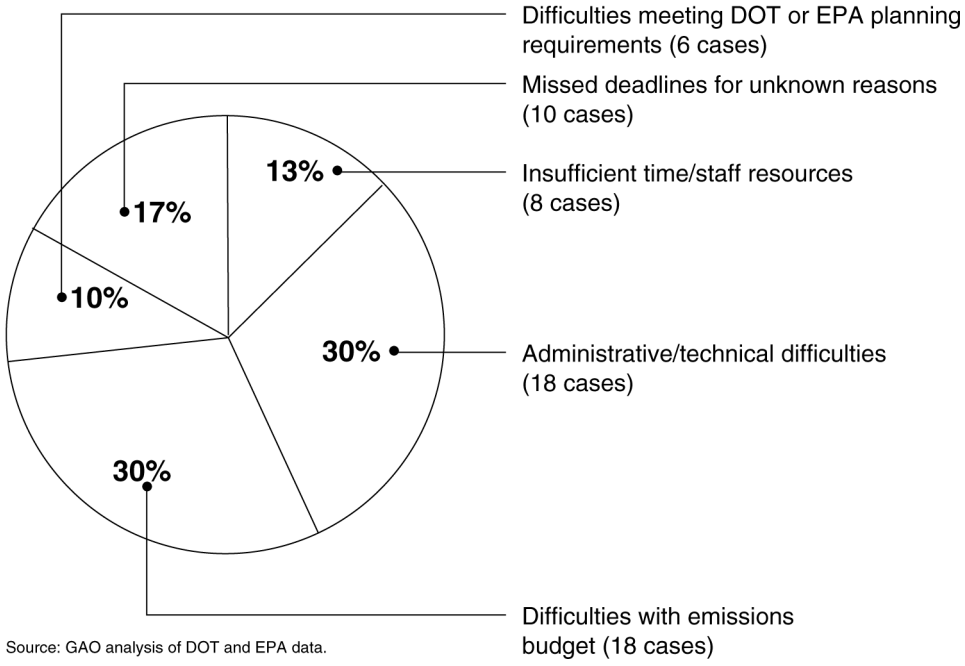
Lapses ranged from 4 days to just over 4 years, with the median lapse lasting approximately 4 months. Nine conformity lapses lasted a year or more, but EPA conformity program managers explained that most of these areas did not have pending new projects and, therefore, were not under time pressures to resolve their lapse. During the lapses, areas did not lose their federal transportation funds permanently; rather, federal funds were restricted to certain projects, such as safety, mass transit, and air quality projects, until the lapses were resolved. The data the agencies provided did not include information on the impacts that the lapses may have had on new transportation projects, but, according to the DOT conformity program manager, even short lapses can be disruptive to the transportation planning process. For example, in some states, a short lapse could delay the start of a project until the next construction season.

Most Conformity Lapses Were Caused by Resource, Administrative, or Technical Problems Rather than Difficulties Meeting Emissions Budgets

Twenty-six of the conformity lapses that occurred since 1997 were caused by areas' transportation planners lacking time and resources (8 lapses) to complete the conformity process by the established deadlines, or experiencing administrative or technical problems (18 lapses). For example, planners in eight of these areas indicated that they simply did not have enough time to complete the transportation planning and conformity processes. Several planners stated that they missed deadlines because their area's transportation planning organization did not have enough staff.

One of these planners noted that even though their organization had a relatively small staff, they had to complete all the same steps in the process as planning organizations with many more staff, such as the time-consuming step of coordinating the plan among all relevant stakeholders and the general public. Common administrative problems planners faced included misunderstandings as to when deadlines occurred, confusion about the specific requirements in the process, or delays at the federal level in processing required paperwork. Technical problems included difficulties related to the data needed to complete the process, such as the types of vehicles in use, or the model that estimates emissions from transportation plans and projects. Figure 4 shows the primary causes of conformity lapses.

Figure 4: Primary Causes of Conformity Lapses, 1997-2002



Source: GAO analysis of DOT and EPA data.

Another 18 lapses resulted from areas experiencing difficulties in designing a transportation plan that achieved sufficient emissions reductions to meet the budget. However, in 6 of these cases, the difficulty was with the conformity requirements and not with the amount of emissions expected from the proposed transportation projects. For example, some areas had more current data on the types of vehicles in use that they had to incorporate into their most recent demonstration. Even

though the planners did not change the mix of transportation projects in their plan, the use of the new data resulted in a higher estimate of emissions from the plan. In addition, areas must demonstrate that all 20 years of their long-term transportation plan will conform to the emissions budget. However, states typically only set a budget for 10 years or less, although in a few cases, states established budgets over a longer time period, according to EPA program managers. As a result, transportation planners generally must restrict emissions in each of the final 10 years of the transportation plan to the amount that is set in the 10th year of the emissions budget. This can pose problems because some areas are likely to experience growth that could increase emissions in these later years. Since the emissions budget does not cover these years, it does not account for this growth. Therefore, areas may have to be more restrictive than necessary in the types of projects they include in the later years of their plans.

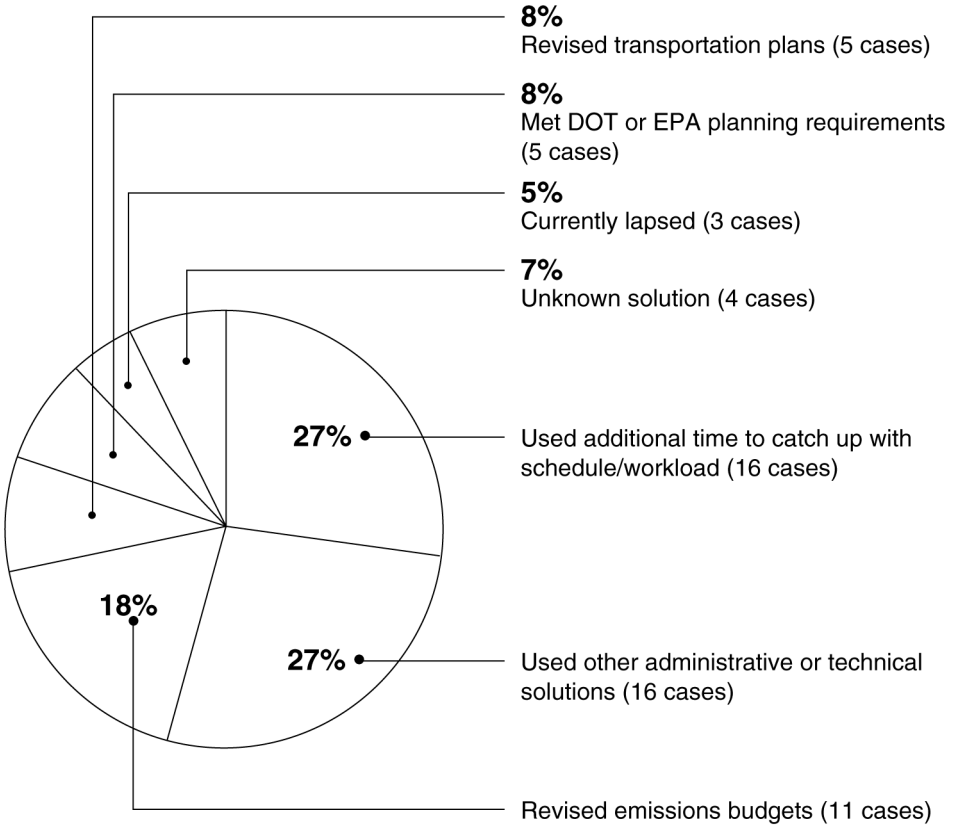
Finally, in six cases, planners in these areas experienced difficulties meeting certain additional federal planning requirements. These included DOT's requirement that planners prove their area will have sufficient funds to cover the projects in its TIP, and EPA's requirement that a state's air quality plan and emissions budget be approved or found to be adequate before it can be used for a conformity demonstration. In the remaining 10 cases, the EPA and DOT data did not provide the reasons why areas missed the conformity deadlines.

Most Areas Needed to Take More Time or Make Technical Corrections to Their Conformity Demonstration to Resolve Their Lapses

Areas used a range of activities to resolve their conformity lapses, according to the data EPA and DOT provided. For example, the 8 areas that lapsed as a result of insufficient time or staff resources were able to take the extra time to complete the process. Those 18 areas that experienced administrative or technical difficulties also resolved them by taking more time, making a technical change, using some other solution, or a combination of activities. Overall, we found that in 16 cases, areas used some administrative or technical solution to resolve the lapse, while in another 16 cases, areas took the additional time needed to catch up with their schedules or workload. For example, in 7 of the 16 cases where areas used an administrative or technical solution, areas had to apply the correct model or other methodology to their conformity demonstration. Several of these areas had to use updated versions of the model that predicts vehicle emissions, or to update or correct other calculations in the conformity analysis, such as projections of the number of miles people typically drive. In 5 of the 16 cases, lapses were resolved through administrative actions, such as federal agencies correcting delays in reviewing the required

paperwork to demonstrate conformity. Figure 5 shows the primary solutions used to resolve their lapses.

Figure 5: Primary Solutions to Conformity Lapses, 1997-2002



Source: GAO analysis of DOT and EPA data.

Another 16 lapses were resolved through more substantive steps, such as recalculating emissions budgets (11) or revising transportation plans (5). In most of the 11 cases, the states revised their air quality plans to reflect recalculated emissions budgets or to reflect strategies, such as the introduction of more stringent emissions tests for cars or tighter controls on emissions from industry and other sources, to reduce emissions. In the 5 cases, areas revised their TIP or long-range transportation plan to achieve the necessary emissions reductions to demonstrate conformity. For example, areas added mass transit projects to their plans because they produce relatively lower emissions. Similarly, areas may have resolved a lapse by taking credit for adding emissions-reducing programs to their plan that they will implement in the future, such as the heavy-duty diesel

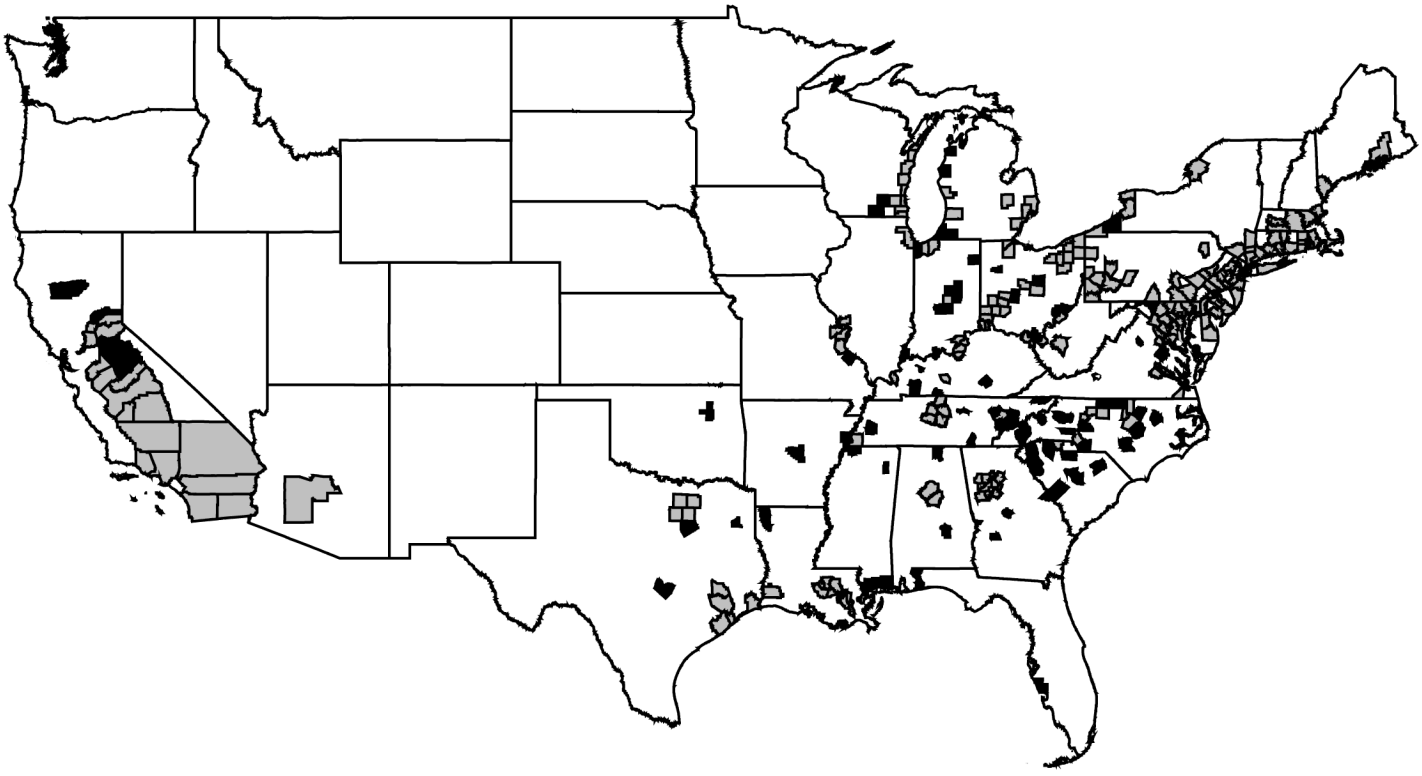
rule designed to reduce the sulfur content of diesel fuel, a critical component of provisions for reducing tailpipe emissions from heavy-duty diesel engines.

Some Areas May Have Difficulty Demonstrating Conformity in the Future, Especially under the New Air Quality Standards

While most areas have been able to demonstrate conformity or resolve a lapse through some administrative or technical action, some areas may have difficulty demonstrating conformity in the future. Of the 253 transportation planners nationwide responding to our survey, 91 (36 percent) reported anticipating having such difficulty in the future and, of these, 80 anticipated difficulty when EPA introduces the two new, more stringent air quality standards. Another 52 respondents (21 percent) did not know whether they would have difficulty demonstrating conformity in the future.

Of the 91 planners who anticipate having difficulty, 59 work in areas that already have air quality problems or had them in the past, and 32 work in areas that have not had problems. These 32 planners will have to demonstrate conformity for the first time if any county within their jurisdiction is designated as being in nonattainment for either of the standards. Using the most recent EPA air quality monitoring data, we estimated that 88 counties currently meeting the 1-hour standard will not meet the 8-hour standard. Figure 6 illustrates the counties that will not meet the new ozone standard for the first time.

Figure 6: Counties Expected to Violate the New Ozone Standard for the First Time



Source: GAO analysis of EPA data.

This estimate may be understated because EPA's data are based on data received only from those counties that have an ozone monitor showing a violation of the standards. However, a number of other counties do not have monitors or data on air quality. In these cases, the state governor or EPA can still designate such counties as not meeting the standard. For example, if the county without data is contiguous to a county with data that show it violates the standard, the governor can recommend that EPA designate the contiguous county as also not meeting the standard because it contributes to a violation in another county, or EPA can independently decide to make this designation.

According to an EPA conformity program manager, the agency has done a preliminary analysis of the counties with data that show they will violate either of the new standards, as well as contiguous counties that might be designated as being in nonattainment. Using this information, EPA has grouped counties into potential areas that would be subject to conformity under either of the new standards. EPA estimates that about 150 areas will be subject to conformity and that 50 of them will be demonstrating conformity for the first time.

Several transportation planners volunteered to provide additional details on why they were concerned about demonstrating conformity in the future. Their concerns included not having the trained staff or funds to complete the process. For example, one planner said the new standards will require that more time and attention be given to the transportation plans in order to demonstrate conformity, which will be burdensome and difficult for local transportation planning agencies that have a small number of staff. A DOT conformity program manager pointed out that in addition to demonstrating conformity for the first time, these new areas will now have to update their long-term plans every 3 years instead of 5 to comply with current requirements, increasing the demand on staff and resources. The program manager added that besides being resource intensive, demonstrating conformity is also very challenging. For example, the model used to estimate emissions is technically complex and some of the planners, as well as other key stakeholders, expressed concerns about whether the local planning organizations would have staff with the requisite skills to run the model. Another planner, as well as a key stakeholder, pointed out that while state transportation organizations currently run the model for some local planners, the state organizations might not have the staff or funds to manage an additional workload in the future. In addition, while state organizations receive federal funds to support local transportation planning activities, as more local planners have to demonstrate conformity and need resources to do so, the state agencies will have to spread these funds to a greater number of planners. Furthermore, as our analysis of the causes of conformity lapses shows, some transportation planners who had to demonstrate conformity to date had difficulty understanding all of the conformity requirements or lacked time to complete them, thus planners who will be demonstrating conformity for the first time could also face these problems.

EPA and DOT have recognized that new areas may need help in demonstrating conformity and have taken some action to provide it. For example, areas will have a 1-year grace period after EPA formally designates them as not meeting either one of the standards before the

transportation planners will have to demonstrate conformity. In addition, areas that meet the current ozone standard but that may violate the revised standard can enter into a compact with EPA. Under this Early Action Compact, an area can begin to take steps to control ozone now, and in exchange, EPA will defer the effective date of the nonattainment designation of the area, thereby postponing the requirement to demonstrate conformity. DOT conformity program managers noted that such compacts do not apply to areas that may be designated as being in nonattainment for the fine particulate matter standard. Furthermore, (1) DOT offered training courses on conformity and both agencies offered training on the latest version of the emissions model, (2) the agencies are developing several new courses, (3) they have entered into a cooperative agreement with the National Association of Regional Councils (NARC)—an association whose members include transportation planners—to provide some training to members, and (4) DOT has established a Web site for planners to exchange information on conformity issues. Finally, as EPA program managers pointed out, since some of the areas that will have to demonstrate conformity for the first time are contiguous to other areas that have already had to demonstrate conformity, transportation planners may already be experienced in the conformity process or, if not, can get help from other planners in the state. The agencies' actions to date, however, do not address planners' concerns about having enough resources or staff with the necessary technical skills to successfully demonstrate conformity.

Frequency of Demonstrating Conformity and Inconsistent Requirements for Updating Transportation and Air Quality Plans Cause Problems

Most of the planners who have to demonstrate conformity said the frequency under the current requirements limits the time and funds available to address other transportation challenges. A proposed change to the transportation planning process, which most of the planners favor, would reduce the frequency of conformity demonstrations, thereby helping to address the problem transportation planners identified. They also identified a second problem with the conformity process—the difference between requirements to update transportation and air quality plans—that the proposed change does not address. This difference can result in transportation planners having to revise their transportation plans in ways that may not best serve the transportation needs of the area.

Planners Said Current Frequency of Demonstrating Conformity Strains Time and Resources but Support a Proposed Change That Could Reduce This Burden

Transportation planners responding to our survey reported that updating their long-range plans as often as currently required does have certain advantages. One primary advantage they identified was that it gave them an incentive to work cooperatively with other agencies. Such cooperation for transportation planners that must demonstrate conformity can promote early and frequent coordination between transportation and air quality planners, helping to avoid last minute conformity problems and lapses. Furthermore, frequent updates can help focus public attention on transportation planning. For example, one transportation planner commented that updating the long-range plan helped provide the public with a greater understanding of the nature of air quality problems and why alternative modes of travel may be needed in the future.

Given these advantages, nevertheless, 77 of the 118 (66 percent) transportation planners who have to demonstrate conformity when they update their long-range plan reported that the current frequency can limit the amount of time available to address other transportation-related challenges, such as relieving congestion and ensuring safety. In addition, 79 of the 118 (69 percent) said that it strains staff resources. Some transportation planners expressed concern that once they complete a long-range plan update, and demonstrate conformity if required to do so, they are already behind in developing the next long-range plan. Some also said they have no time in between plan updates to think more strategically about future alternatives for their transportation network, build their modeling and other technical skills, or obtain better information for their planning process, such as congestion levels on certain roads.

The three proposals to change the transportation planning process that we reviewed could also result in less frequent conformity demonstrations, which would, in turn, address the planners' concerns. However, the majority of transportation planners responding to our survey favored only one of the proposals—reducing the frequency of required updates to the long-range transportation plan. Seventy-four percent (186) of the 253 transportation planners responding to our survey would be in favor of less frequent plan updates, most preferring that these updates be performed at least every 5 years. This could result in less frequent conformity demonstrations for some areas. Besides freeing up time and staff resources, another reason planners supported the change was that planning factors, such as travel behavior and the transportation projects already underway, do not change enough to justify the time and expense of revising the plan every 3 years. In addition, they also responded that extending the update cycle may provide more time to better coordinate their plans and projects with other agencies and stakeholders, such as

local land use agencies that guide an area's future growth and development.

Planners were less supportive of the two other proposals to change the transportation planning process that could also reduce the frequency of conformity demonstrations—reducing the frequency of required updates to the TIP and combining the TIP and plan into a single document. Although planners recognize that both proposals would have benefits, they noted that the changes would eliminate some advantages of the current requirement. While 45 percent (113) of the planners supported reducing the frequency of required updates to the TIP, a majority of the planners who did not support the change reported that frequent updates of the TIP allowed areas to add new projects that had not been part of the prior TIP because funding priorities changed in the meantime. According to the DOT conformity program managers, reducing the frequency of required updates to the TIP does not preclude transportation planners from conducting the updates more frequently.

Thirty-nine percent of the 253 planners responding to the survey did not favor combining the TIP and plan. Some of these planners felt that the two documents serve very distinct functions. For example, they believe the TIP allows them to more easily respond to changing needs. Therefore, some planners expressed concern that combining the two documents could undermine the effectiveness of both plans. On the other hand, 30 percent favored the change, stating that the TIP is really a subset of the plan and having to demonstrate conformity on both plans is unnecessarily redundant. (An additional 31 percent neither favored nor opposed the change or were unsure of their position.)

Seventeen of the 45 state air quality planners responding to our survey also supported reducing the frequency of updates to the long-range plan (12 did not support the change and 16 were unsure or had no opinion). When asked what effect the change would have on their state's ability to meet air quality standards, 16 said it would have a negative effect and 5 said it would have a positive effect (of the remaining planners, most said it would have no effect or they had no basis to judge its effect). Some of the air quality planners mentioned that the transportation network in high growth areas could generate increased travel, resulting in higher emissions. They suggested that these areas might warrant more frequent updates to the long-range plan than the proposal would provide to ensure that air quality goals are being met.

The air quality planners who thought the change could have a negative effect, however, were not asked to take into consideration the fact that the transportation planners will still be required to demonstrate conformity of their TIPs at least every 2 years when they are updated. In addition, EPA program managers also noted that if planners want to include a new project in their TIP that is not in their 20-year plan, they must demonstrate conformity on both the TIP and plan. Furthermore, as our survey showed, transportation planners could still choose to update their long-range plans more frequently than once every 5 years, at which time they would be required to demonstrate conformity. In fact, 58 (23 percent) of planners responded that they update their long-range plans more frequently than currently required, primarily to add new projects that are needed to address the area's changing transportation needs. All of these factors would help to preserve the role that conformity plays in protecting air quality, even under the proposed change. Because the proposal to extend the frequency of updates to the long-range plan—and, therefore, the frequency of conformity demonstrations—addresses the primary problem transportation planners have with the conformity process, and the proposal's potential effects on air quality protection could be limited, modifying conformity regulations and the Clean Air Act in this manner may be feasible.

Requiring Updates to Transportation Plans but Not Air Quality Plans Makes It Difficult to Demonstrate Conformity in Some Areas

Those transportation planners who experienced a lapse or said they had trouble demonstrating conformity in the past identified a second issue with the conformity process that stems from the difference between the update requirements for the transportation and air quality plans. State air quality planners are not required to regularly update their plans, even though an area may have experienced population growth and a sometimes unexpected increase in the types of certain vehicles in use, which in turn can result in an increase in emissions. States with areas in nonattainment for ozone and carbon monoxide are required to take an inventory of the emissions being generated by each of the major sources every 3 years, but are not generally required to update their air quality plans to reflect this data. Consequently, the state air quality planners do not regularly reassess to what extent they should revise the vehicle emissions budgets for transportation, or add other measures to reduce emissions from mobile sources to the plan, to offset this increase given their ability to reduce emissions from industrial or area sources where possible. Transportation planners, on the other hand, are required to update their TIP and plan on a regular basis—at least every 2 or 3 years respectively for areas in nonattainment or maintenance and every 2 or 5 years for areas in attainment of the standards. With each of these updates, planners are

required to use the most current model that estimates the vehicle emissions generated by their plans. They must also use the most current information on factors that are inputs to the model, such as population and the number and types of vehicles in use, so that they can more realistically determine whether their plans and TIPs are consistent with the emissions budget, according to EPA conformity program managers. When this model and data indicate an increase in emissions, the transportation planners must address it.

In the absence of an updated air quality plan, transportation planners must generally try to offset all of the extra emissions from transportation activities by revising their plan or TIP so that they do not have a conformity lapse. However, transportation planners may be limited in the ways in which they can make changes that reduce emissions enough to meet the vehicle emissions budget and demonstrate conformity. For example, one possible change is to remove projects that modeling estimates may increase emissions in an area, such as a highway or road expansion project, or to add measures, such as increasing the size of the bus fleet that uses diesel engines. However, such projects were most likely added to address other transportation challenges, such as reducing congestion or better linking existing road networks. Furthermore, as one transportation planner explained, planners in some areas may have few projects to eliminate because the transportation network is already developed.

Rather than eliminate projects, transportation planners can also try to add certain emissions control strategies to their TIP or plan. These include bicycle or pedestrian facilities or expanded transit options to discourage the use of vehicles. Other strategies include synchronized traffic lights to reduce idling vehicles, the conversion of public buses to cleaner burning fuels, and the retrofitting of certain vehicles with cleaner engines. EPA program managers also pointed out that transportation planners can estimate the emissions reductions that will be achieved by new programs they will implement but that are not yet in air quality plans, such as new emissions standards for light-duty trucks. The planners can take credit for the emissions reductions from such programs in order to demonstrate conformity. However, these strategies may provide relatively small emissions reductions.

For example, the Washington, D.C., region recently had difficulty demonstrating conformity, in part because many more drivers than anticipated were using higher-polluting sport-utility vehicles. Because transportation planning staff were updating the TIP and plan, they had to

use this new data on vehicle use in their conformity demonstration, even though the emissions budget that they had to meet was based on the older data. The new data caused a significant yet unanticipated increase in the emissions estimates for the area that the staff had to offset in order to meet these outdated budgets. They delayed plans to build 100 miles of new roads, but this did not create enough of a reduction. Therefore, they had to add a number of emission control measures, such as park and ride lots, shuttle bus services, and bicycle and pedestrian facilities at rail stations, however these measures may achieve relatively small emissions reductions.

The transportation planner in the Washington, D.C., region explained that if the air quality planners were required to update their plans periodically, account for the new model and data, and revise the emissions budgets, the transportation planners might be able to demonstrate conformity without cutting needed projects or adding costly control measures that achieve little emissions reductions. If states were required to periodically update their air quality plan, they would be required to reassess whether they had achieved or could achieve more cost-effective ways to reduce emissions in order to provide transportation planners with revised emissions budgets. For example, 12 of the 45 air quality planners responding to our survey said they had revised their air quality plan to update emissions budgets used to demonstrate conformity and 13 said they would consider doing so. Several planners that had updated their plan determined that the amount of projected emissions from all sources was less than the level needed to meet the standards, thus providing transportation planners a safety margin in the emissions budget. Such efforts can help an area compensate for unanticipated future growth or uncertainty in projected emissions.

In 2003, some states that used an older version of the emissions model for their plan will have to update their air quality plan with the most recent version, which could temporarily address the differing requirements in these areas. In addition, according to EPA program managers, some areas are in the process of voluntarily revising their SIPs with the new model as well, and other areas that are designated as nonattainment for either of the two new standards will have to submit new plans to address these pollutants. Thirty-two of the 45 state air quality planners responding to our survey reported that revising their plans would be somewhat challenging. For example, with every update, air quality planners would have to obtain public input and involve many stakeholders with competing interests, especially those representing the other sources of pollution, including industrial (point) sources. The air quality planners would also have to use a complex photochemical model that estimates emissions from all

sources, as well as the extent to which measures designed to control emissions achieve this result. According to air quality planners, running such a model requires a significant investment in resources and staff hours, and, according to one planner, can take as much as 3 years for a major metropolitan area with serious pollution problems to complete. Also, once a state revises its plan, EPA must review it and determine that it protects air quality before transportation planners can use the updated emissions budget to help them demonstrate conformity. Furthermore, according to EPA conformity program managers, some metropolitan areas will find they do not have the luxury of a safety margin to provide additional flexibility in their emissions budget. In considering whether to require updates of air quality plans to incorporate the most current data on travel patterns and emissions, as well as the most current emissions model, so as to resolve the difference with requirements to update transportation plans, stakeholders must weigh the potential benefits against the potential disadvantages.

Conclusions

Overall, the conformity requirements of the Clean Air Act have helped to integrate transportation and air quality planning processes to better consider the emissions from the nation's transportation systems and networks. In addition, few of the localities that have experienced a conformity lapse to date appear to have had to make major changes to their future transportation systems. Localities may have trouble demonstrating conformity in the future, however, if they cannot meet new air quality standards for ozone and fine particulate matter and may have to complete the conformity process for the first time. Both EPA and DOT have been working on guidance and training, among other things, to help the transportation planners in these areas, but some are concerned about having enough resources and staff with the necessary technical skills to successfully complete the conformity demonstration.

While the conformity process has its advantages, most transportation planners who have to demonstrate conformity find that the frequency with which they have to do this robs them of staff and resources that could be used to solve transportation problems. Extending the 3-year time frame between updates to the long-term transportation plans—as well as amending the conformity requirements in the Clean Air Act to match—would help to relieve some of this burden. Although some air quality planners fear this change would jeopardize their ability to meet clean air standards, this risk can be mitigated by several factors. For example, transportation planners will continue to demonstrate conformity when they update their TIPs or add new projects to the TIP that were not

previously in the plan. Also, a number of planners have already been updating their long-term plans more frequently than required and could continue to do so as needed under the change.

Finally, some transportation planners have found it difficult to manage the conflict posed by the fact that they must frequently update their TIP and long-term plan—incorporating the most current data on an area's population and travel patterns, as well as the most current version of the model that estimates emissions—while air quality planners do not. Establishing a requirement for air quality plans—and the vehicle emissions budgets they set for conformity—to be periodically updated with this new data and model could provide some benefits. These include incentives for areas to develop a more realistic emissions budget and to determine whether they could provide some flexibility in it so that transportation plans would not have to be restricted or modified in ways that may not be best for an area's future. Some states updated their air quality plans and have experienced such benefits. Recognizing that compliance with such a requirement would be challenging and resource intensive for some states, however, emphasizes the need to more comprehensively assess the advantages and disadvantages of establishing such a requirement. One option to consider would be to establish a long enough time frame between required updates of the air quality plan as a way to limit the impact on resources. In addition, better synchronizing the time frame for air quality updates with the time frames established for transportation planning updates, and basing both on the same, most current data and models, would address the problems transportation planners identified with the differences in requirements.

Recommendations for Executive Action

In order to make the conformity process a more effective and better link between air quality and transportation planning, we recommend the following to the Secretary of Transportation and the Administrator, EPA:

- DOT, in coordination with EPA, should consider extending the current 3-year time frame between required updates to the long-range transportation plan and submitting a legislative proposal to change the conformity provisions of the Clean Air Act so that they similarly extend the time frames between required conformity demonstrations for the plan.

- EPA, in coordination with DOT, comprehensively assess the advantages and disadvantages of establishing a Clean Air Act requirement to periodically update state air quality plans so that they

incorporate the same, most current planning data and emissions models used in updates to the TIP and long-term transportation plans.

Agency Comments and Our Evaluation

We provided DOT and EPA with a draft of this report for review and comment. We subsequently met with or received comments from representatives of the following offices:

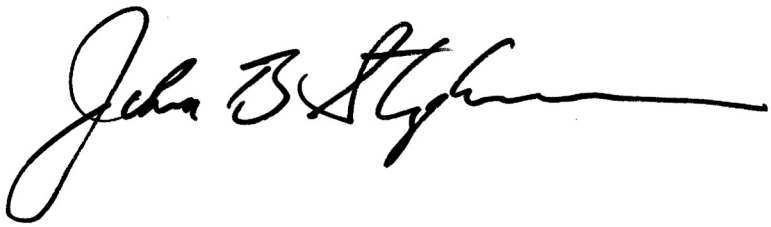
- DOT's Office of Natural and Human Environment within the Federal Highway Administration
- DOT's Office of Planning within the Federal Transit Administration
- EPA's Office of Transportation and Air Quality

In general, DOT agreed with our conclusions and recommendations and said that the report was timely and highlighted issues that needed to be addressed. The DOT representatives said they would work with EPA to address our recommendation to consider extending the current 3-year time frame between required updates to the long-range transportation plan, and looked forward to working with EPA to assess the advantages and disadvantages of establishing a requirement to periodically update state air quality plans. DOT also suggested some technical changes throughout the report that we have incorporated as appropriate. In general, EPA agreed with our conclusions and recommendations for changes to the transportation planning process and the associated requirements to demonstrate conformity. However, EPA neither agreed nor disagreed with our recommendation that the agency comprehensively assess the advantages and disadvantages of establishing a requirement to periodically update state air quality plans. The EPA representatives said they believe the states already have the flexibility to decide whether new data or models justify the costs of conducting an update to the state air quality plan and that states are in a better position to make this decision. EPA also stated that they would want to discuss the issue with the states to understand their perspectives and how the states currently decide whether air quality plan updates are needed, before agreeing with the recommendation. However, as our survey data show, even though states have flexibility in deciding whether to update their plans, not all states would be willing to consider doing so. Furthermore, our survey data show that the current practice among the states has not resolved the problems the transportation planners reported experiencing as a result of the difference between requirements to update transportation plans but not air quality plans, given that this was one of the most significant problems

transportation planners identified with the conformity process. Therefore, we believe this issue merits further assessment by EPA to determine if there is a possible solution, as we have recommended.

The EPA representatives also said they thought it was important to point out not only the number of areas that have experienced a lapse, but also the number of times an individual conformity demonstration resulted in a lapse. While EPA did not have actual data to provide this statistic, the agency estimated that since 1997, areas most likely conducted a total of between 550 to 600 conformity demonstrations and that only 10 percent of these demonstrations resulted in a lapse. Finally, EPA suggested some technical changes throughout the report that we have incorporated as appropriate.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 10 days from the report date. At that time, we will send copies of this report to the appropriate congressional committees; the Secretary of Transportation; the Administrator, EPA; Director, Office of Management and Budget; and other interested parties. We also will make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at http://www.gao.gov. If you or your staffs have any questions, please call me at (202) 512- 3841. Key contributors to this report were Teresa Dee, Elizabeth Erdmann, Samantha Goodman, Stuart Kaufman, Eileen Larence, Jonathan McMurray, and Anne Rhodes-Kline.



John B. Stephenson
Director, Natural Resources
and Environment

Appendix I: Objectives, Scope, and Methodology

The Ranking Minority Member of the Senate Environment and Public Works Committee, and Senator Lieberman asked us to determine (1) how many areas of the country have had their conformity lapse at least once since 1997 (the earliest date for which data are available), why, and what corrective actions were taken, and (2) what issues have planners encountered with the conformity process and the extent to which each of the proposed changes to the transportation planning process will address these issues.

To address the first objective, we analyzed datasets supplied by the Environmental Protection Agency (EPA) and Department of Transportation (DOT) that listed the conformity lapses that have occurred in nonattainment or maintenance areas over the last several years. EPA's Office of Transportation and Air Quality provided information supplied by its regional offices on lapses occurring since August 1997. The Federal Highway Administration, the agency within DOT that, along with the Federal Transit Administration, is directly responsible for making conformity determinations, provided information on lapses that have occurred since July 1999.

We compared the data provided by both agencies to create a single, more comprehensive, and accurate dataset of all conformity lapses that have occurred since August 1997. We discussed and corrected any discrepancies between the two datasets with each agency and achieved consensus on a method to summarize and categorize the individual data points. In addition, to the extent possible, we corroborated lapse information we obtained from the agencies with information we obtained directly from the transportation planners in the areas with lapses. We obtained this latter information through our survey of each of the 341 local transportation planning organizations responsible for the conformity process in nonattainment and maintenance areas around the country. Furthermore, to fill in any remaining gaps in information on the causes of, and solutions to, conformity lapses, we conducted telephone interviews with the relevant transportation planners in those areas.

To determine the accuracy and completeness of each agency's data and their validity in providing evidence to support our findings, conclusions, and recommendations, we performed a data reliability assessment. All available information indicated the data to be sufficiently reliable for these purposes; corroborating evidence was strong and provided additional information necessary to ensure that the final consolidated dataset was accurate and relevant. To conduct this assessment, we subjected the datasets to documented standards that determine the sufficiency,

competence, and relevance of supporting evidence. More specifically, we verified three data components that were key to our findings: (1) the location of nonattainment areas that have experienced a conformity lapse since 1997, (2) the reasons or contributing factors for each conformity lapse, and (3) the solutions or steps areas took to resolve each lapse.

To address the second objective, we conducted an Internet-based survey of the 341 local transportation planning organizations in existence as of November 2002. The survey included questions addressing the current requirements for updating the short- and long-range transportation plans, the current requirements for demonstrating conformity, and proposed changes to the transportation planning and conformity requirements. We did not attempt to gain information from the state departments of transportation, which are responsible for transportation planning in those areas without a designated local transportation planning organization. We did not do so because the areas that the state departments of transportation cover are relatively small—with a population less than 50,000. However, to help ensure that we identified any unique issues that these smaller areas may have with the conformity requirements, we met with officials of the American Association of State Highway and Transportation Officials. Its members are the state agencies that would conduct the conformity demonstrations for the smaller areas in their jurisdictions.

We also conducted an Internet-based survey of the 50 state air quality agencies, plus air quality planners in the District of Columbia and Puerto Rico. These offices are responsible for preparing the state implementation plan (SIP), which is a detailed description of the programs that a state will use to carry out its responsibilities under the Clean Air Act to reduce air pollution. This survey included questions concerning the air quality and transportation planning processes, including conformity. Both surveys were pretested with potential respondents to ensure that (1) the questions were clear and unambiguous, (2) the terms we used were precise, (3) the survey did not place an undue burden on the agency officials completing it, and (4) the survey was independent and unbiased.

The practical difficulties of conducting surveys may introduce errors into the results. Although we administered our survey to all known members of both populations, and thus our results are not subject to sampling error, nonresponse to the entire survey or individual questions can introduce a similar type of variability or bias into our results—to the extent that those not responding differ from those who do respond in how they would have answered our survey questions. We took steps in the design, data

collection, and analysis phases of our survey to minimize population coverage, measurement, and data-processing errors. These steps included checking our population lists against known lists of planning organizations, pretesting and expert review of the questions in the survey instrument, and follow-up with those not reachable at original E-mail addresses or otherwise not immediately responding.

The surveys were conducted using self-administered electronic questionnaires posted on the World Wide Web. We sent E-mail notifications to all 341 MPOs and 52 state air quality offices beginning on January 13, 2003, and January 22, 2003, respectively. We then sent each potential respondent a unique password and username by e-mail to ensure that only members of the target population could participate in the appropriate survey. To encourage respondents to complete the questionnaire, we sent an E-mail message to prompt each nonrespondent approximately 2 weeks after the initial e-mail message. We closed the surveys on February 28, 2003, and March 7, 2003, respectively. For the survey of transportation planners, we received a total of 253 responses, for an overall response rate of 74 percent. For the survey of state air quality offices, we received 45 out of 52 possible responses. Copies of each survey, with the quantitative results, can be found in appendixes II and III.

For our analysis of the anticipated impact of the 8-hour ozone standard, we used listings of the counties currently in nonattainment and maintenance for the 1-hour standard and a listing of counties expected to violate the 8-hour standard, both found on EPA's Web site. For the map depicting areas currently in nonattainment or maintenance for any of the criteria pollutants, we used county listings found on EPA's Web site, coded and graphed each one using the counties' Federal Information Processing Standards (FIPS) code. EPA's estimate of the number of counties likely to be in violation of the 8-hour ozone standard is based on 3 years of 8-hour monitoring data during 1999 through 2001. The 1-hour ozone data include counties in nonattainment of the standard as of February 6, 2003.

Furthermore, to address the second objective, we also interviewed cognizant officials and collected documented studies from the federal agencies administering air quality and transportation programs, as well as from relevant stakeholders. Specifically, we interviewed and gathered documentation from (1) EPA program managers in the Office of Transportation and Air Quality; (2) the Department of Transportation's (DOT) program managers in the Federal Highway Administration, including the Office of Natural and Human Environment, and in the Federal Transit Administration's Office of Planning; and (3) relevant

stakeholders, including the following—the Association of Metropolitan Planning Organizations, American Association of State Highway and Transportation Officials, Environmental Defense, National Association of Regional Councils, and the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials.

We conducted our review from August 2002 through April 2003 in accordance with generally accepted government auditing standards.

Appendix II: Survey of Local Transportation Planners

United States General Accounting Office

Survey of Metropolitan Planning Organizations on Transportation Planning and Conformity

Introduction

The U.S. General Accounting Office is an agency that gathers and analyzes information for the Congress. In preparation for the upcoming reauthorization of surface transportation legislation, the Ranking Minority Members of the Committee on Environment and Public Works and its Subcommittee on Clean Air, Wetlands, and Climate Change, U.S. Senate, asked GAO to survey metropolitan planning organizations (MPOs) to obtain their views on certain proposals to change the transportation planning and conformity demonstration processes. Therefore, we are asking all metropolitan planning organizations to complete the following questionnaire. We plan to summarize the questionnaire responses in a report to the Congress in the late spring.

Your participation in our study is essential for us to provide congressional decisionmakers the information they need. If you are not the appropriate person to answer these questions, please forward this questionnaire, or coordinate your responses with, the appropriate person, if possible.

Please complete this questionnaire within 10 days of receiving it. In testing this questionnaire, we found that it took approximately 30 minutes to complete. If your response will be delayed, or if you have any questions, please call or e-mail the expected response date or your questions to:

- Elizabeth Erdmann at (202) 512-8113 (e-mail address: erdmanne@gao.gov);
  or
- Samantha Goodman at (202) 512-4809 (e-mail address: goodmans@gao.gov).

In addition, please provide the following information on the most appropriate person to contact if we have any follow-up questions:

Name:

Title:

MPO Name:

Telephone:

E-mail:

Thank you in advance for your cooperation.

1

Overview of Current Transportation Planning and Conformity Requirements

As you know, the Clean Air Act requires that areas in nonattainment or maintenance status for achieving the national ambient air quality standards demonstrate conformity of a transportation improvement program (TIP) or transportation plan to the state implementation plan (SIP) when the TIP or transportation plan is adopted, but no less frequently than every 3 years. In these areas, federal transportation law currently requires that the TIP and transportation plan be updated at least every 2 and 3 years, respectively, and that conformity be demonstrated when each document is updated. Certain other events, such as revising control measures included in the SIP, may also trigger the requirement to demonstrate conformity.

In attainment areas, the TIP and transportation plan must be updated every 2 and 5 years, respectively, and the updates are not subject to a conformity determination. Nonattainment, maintenance, and attainment areas may elect to update either of these two planning documents more frequently.

PART 1 – CURRENT REQUIREMENTS FOR UPDATING TRANSPORTATION PLAN

Federal transportation law currently requires that transportation plans in nonattainment or maintenance areas be updated at least every 3 years and that conformity be demonstrated with each update. In attainment areas, transportation plans must be updated every 5 years. The following questions will assist us in identifying the advantages and disadvantages of this schedule.

1. In your opinion, to what extent, if at all, are each of the following items advantages of updating the transportation plan at least every 3 or 5 years, depending on your attainment status, under the **current** requirement? *(Check one box in each row.)*

Potential advantages	Very great extent (1)	Great extent (2)	Moderate extent (3)	Some extent (4)	Little or no extent (5)	No basis to judge (6)
a. Allows us to incorporate more current planning assumptions (e.g., population, employment, travel, or congestion estimates) into the travel demand model (N=251)	13%	31%	27%	18%	6%	4%
b. Provides incentive for interagency consultation on planning (N=251)	7	31	33	15	11	2
c. Allows us to frequently assess the effect of control strategies on emissions reductions and modify the strategies where appropriate (N=251)	1	8	14	15	24	38
d. Helps to ensure that we can demonstrate conformity for the years covered by the SIP (N=248)	3	11	24	13	15	34
e. Helps to ensure that we can demonstrate conformity for years beyond the attainment date of the SIP (out-years) (N=248)	2	8	21	16	18	36
f. Helps identify potential conformity lapses sooner (N=245)	2	12	16	16	18	36
g. Helps focus public attention on transportation planning (N=249)	12	31	29	14	12	1
h. Helps us guard against potential or pending litigation surrounding issues such as conformity, projects in the plan, and planning assumptions (N=250)	2	9	22	17	28	22

1-i. In the box below, please list any other potential advantages not listed above of updating the transportation plan according to the **current** requirement (i.e., at least every 3 or 5 years).

2

2. In your opinion, to what extent, if at all, are each of the following disadvantages of updating the transportation plan at least every 3 or 5 years, depending on your attainment status, under the **current** requirement? *(Check one box in each row.)*

Potential disadvantages	Very great extent (1)	Great extent (2)	Moderate extent (3)	Some extent (4)	Little or no extent (5)	No basis to judge (6)
a. Must incorporate new planning assumptions with each update, which may make it difficult for us to meet our mobile source emissions budget or emissions reduction test (N=249)	2%	8%	16%	14%	21%	38%
b. Limits time available to undertake other transportation planning activities, such as updating models or data on travel behavior (N=250)	16	24	25	18	13	4
c. Limits time available to address other transportation-related challenges, such as congestion, safety, and water quality protection (N=250)	11	29	25	20	12	3
d. Strains staff resources; adds technical and/or administrative burden (N=249)	19	35	22	14	8	2
e. Strains funds authorized for planning (N=243)	18	29	23	14	14	2
f. Limits time available to assess the effectiveness of existing control strategies included in the transportation plan (N=250)	6	14	20	17	20	23
g. Limits time available to explore innovative or proposed control strategies (N=250)	6	13	18	22	16	24
h. Makes it difficult to demonstrate conformity so frequently (N=250)	5	14	10	18	19	34

2-i. In the box below, please list any other potential disadvantages not listed above of updating the transportation plan according to the **current** requirement (i.e., at least every 3 or 5 years).

3. Please provide any actual experiences you had that demonstrate any of the advantages or disadvantages of updating the transportation plan according to the **current** requirement (i.e., at least every 3 or 5 years).

4. **In total**, how many times has your MPO updated or amended its transportation plan in a manner that required a new conformity demonstration from January 1, 1997 through December 31, 2002? *(Enter number.)*

_____

3

5. Was this more frequently than currently required (i.e., once every 3 or 5 years)? *(Check one.)* (N=253)

1. ☐ Yes → ***Continue with question 6.*** 23%
2. ☐ No → ***Skip to question 7.*** 72%
3. ☐ Do not know → ***Continue with question 7.*** 5%

6. If your MPO updated its transportation plan more frequently than required, which of the following reasons explain why? *(Check one box in each row.)*

		Yes (1)	No (2)	No basis to judge (3)
a.	Obtained new planning assumptions (e.g., population, employment, travel, or congestion estimates) and we needed to determine whether they would affect the plan (N=56)	23%	73%	4%
b.	Prefer to update the transportation plan at the same time as the transportation improvement program is updated (N=53)	34	64	2
c.	Needed to add control strategies in order to meet conformity requirements (N=54)	9	87	4
d.	Needed to add new projects to the transportation plan (N=56)	86	14	0
e.	Updating our transportation plan helped ensure that we were able to demonstrate conformity for the years covered by the SIP (N=54)	24	72	4
f.	Updating our transportation plan helped ensure that we were able to demonstrate conformity for years beyond the attainment date of the SIP (out-years) (N=54)	19	78	4
g.	Needed to account for changes in revenue forecasting or project priority (N=53)	49	49	2
h.	Helps us guard against potential or pending litigation surrounding issues such as conformity, projects in the plan, and planning assumptions (N=54)	17	76	7
i.	Needed to comply with state regulations requiring more frequent plan updates *(Please respond to 6i (supplemental) below)* (N=54)	9	85	6

6-i (Supplemental) If you answered "Yes" to item **6i** above, please describe the requirements for more frequent plan updates.

6-j. In the box below, please list any other reasons not listed above which explain why your MPO updated its transportation plan more frequently than required

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PART 2 – CURRENT REQUIREMENTS FOR UPDATING TRANSPORTATION IMPROVEMENT PROGRAM

Federal transportation law currently requires that transportation improvement programs in nonattainment or maintenance areas be updated at least every 2 years and that conformity be demonstrated with each update. In attainment areas, transportation improvement programs must also be updated every 2 years. The following questions will assist us in identifying the advantages and disadvantages of this schedule.

7. In your opinion, to what extent, if at all, are each of the following advantages of updating the transportation improvement program at least every 2 years under the **current** requirement? *(Check one box in each row.)*

Potential advantages	Very great extent (1)	Great extent (2)	Moderate extent (3)	Some extent (4)	Little or no extent (5)	No basis to judge (6)
a. Allows us to incorporate more current planning assumptions (e.g., population, employment, travel, or congestion estimates) into the model (N=251)	9%	18%	22%	20%	25%	6%
b. Provides incentive for interagency consultation (N=250)	13	32	28	15	8	4
c. Allows us to frequently assess the effect of control strategies on emissions reductions and modify the strategies where appropriate (N=251)	1	4	14	16	22	42
d. Updating our TIP ensures that we will be able to demonstrate conformity (N=250)	3	12	14	15	21	34
e. Allows us to proceed with a project previously not included in the TIP (N=250)	20	33	21	10	11	4
f. Helps identify potential conformity lapses sooner (N=249)	2	8	12	16	23	38
g. Helps focus public attention on transportation planning (N=250)	11	28	28	18	12	2
h. Helps us guard against potential or pending litigation surrounding issues such as conformity, projects in the transportation improvement program, and planning assumptions (N=249)	4	5	16	16	31	29

7-i. In the box below, please list any other potential advantages not listed above of updating the transportation improvement program according to the **current** requirement (i.e., at least every 2 years).

5

8. In your opinion, to what extent, if at all, are each of the following disadvantages of updating the transportation improvement program at least every 2 years under the current requirement? *(Check one box in each row.)*

Potential disadvantages	Very great extent (1)	Great extent (2)	Moderate extent (3)	Some extent (4)	Little or no extent (5)	No basis to judge (6)
a. Must incorporate new planning assumptions with each update, which may make it difficult for us to meet our mobile source emissions budget or emissions reduction test (N=249)	2%	5%	10%	14%	33%	35%
b. Limits time to undertake other transportation planning activities, such as updating models or data on travel behavior (N=249)	4	14	24	25	29	4
c. Limits time available for other transportation-related challenges, such as congestion, safety, and water quality protection (N=248)	4	12	25	29	28	3
d. Strains staff resources; adds technical and/or administrative burden (N=247)	7	19	20	29	23	2
e. Strains funds authorized for planning (N=248)	7	15	20	24	31	3
f. Limits time available to assess the effectiveness of existing control strategies included in the TIP (N=249)	2	10	10	18	32	29
g. Limits time available to explore the effectiveness of innovative or proposed control strategies (N=246)	4	7	13	16	30	31
h. Makes it difficult to demonstrate conformity so frequently (N=249)	4	9	10	13	26	37

8-i. In the box below, please list any other potential disadvantages not listed above of updating the transportation improvement program according to the **current** requirement (i.e., at least every 2).

9. Please provide any actual experiences you had that demonstrate any of the advantages or disadvantages of updating the transportation improvement program according to the **current** requirement (i.e., at least every 2 years).

10. **In total**, how many times has your MPO updated or amended its transportation improvement program in a manner that required a new conformity demonstration from January 1, 1997 through December 31, 2002? *(Enter number.)*

_____ Mean = 2.97, Median = 3.0

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11. Was this more frequently than currently required (i.e., once every 2 years)? *(Check one.)* (N=248)

1. ☐ Yes → ***Continue with question 12.*** 41%
2. ☐ No → ***Skip to question 13.*** 52%
3. ☐ Do not know → ***Continue with question 13.*** 7%

12. If your MPO updated its transportation improvement program more frequently than required, which of the following reasons explain why? *(Check one box in each row.)*

	Yes (1)	No (2)	No basis to judge (3)
a. Obtained new planning assumptions (e.g., population, employment, travel, or congestion estimates) and we needed to determine whether they would affect the transportation improvement program (N=101)	12%	81%	7%
b. Needed to add control strategies in order to meet conformity requirements (N=101)	6	80	14
c. Needed to add new projects to the transportation improvement program (N=102)	93	7	0
d. Updating our TIP ensures that we will be able to demonstrate conformity (N=100)	25	63	12
e. Needed to account for changes in revenue forecasting or project priorities (N=100)	65	33	2
f. Helps us guard against potential or pending litigation surrounding issues such as conformity, projects in the transportation improvement program, and planning assumptions (N=100)	8	77	15
g. Needed to comply with state regulations requiring more frequent plan updates *(Please respond to 12-h (supplemental) below)* (N=100)	27	66	7

12-g (Supplemental) If you answered "Yes" to item **12g** above, please describe the requirements for more frequent program updates.

12-h. In the box below, please list any other reasons not listed above which explain why your MPO updated its transportation improvement program more frequently than required

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PART 3 – CURRENT REQUIREMENTS FOR DEMONSTRATING TRANSPORTATION CONFORMITY

13. Is your MPO an attainment area that is not required to demonstrate conformity? *(Check one.)* (N=253)

1. ☐ Yes, we are in an attainment area and not required to demonstrate conformity → ***Skip to question 31.*** 52%
2. ☐ No, we are in a nonattainment or maintenance area so we must demonstrate conformity → ***Continue with question 14.*** 47%
3. ☐ Do not know → ***Skip to question 31.*** 1%

14. The Clean Air Act currently requires that conformity be demonstrated at least every 3 years. In your opinion, to what extent, if at all, are each of the following advantages of demonstrating conformity according to this schedule under the **current** requirement? *(Check one box in each row.)*

Potential advantages	Very great extent (1)	Great extent (2)	Moderate extent (3)	Some extent (4)	Little or no extent (5)	No basis to judge (6)
a. Allows us to account for new data (e.g. transit ridership, rideshare participation) that could positively affect emissions reductions (N=118)	4%	12%	27%	25%	28%	3%
b. Provides us with an early warning of potential air quality problems (N=117)	3	9	24	32	27	4
c. Helps us guard against potential or pending litigation surrounding issues such as conformity, projects in the plan, or planning assumptions (N=117)	2	4	15	31	38	11
d. Frequent demonstrations make it easier to maintain conformity (N=117)	2	8	22	23	42	3
e. Forces us to reexamine revenue and cost assumptions that could impact the viability of control strategies (N=117)	3	6	15	24	38	14

14-f. In the box below, please list any other potential advantages not listed above of demonstrating conformity according to the **current** requirement (i.e., at least every 3 years)

8

15. In your opinion, to what extent, if at all, are each of the following disadvantages of demonstrating conformity according to the **current** requirement (i.e., at least every 3 years)? *(Check one box in each row.)*

Potential disadvantages	Very great extent (1)	Great extent (2)	Moderate extent (3)	Some extent (4)	Little or no extent (5)	No basis to judge (6)
a. Must incorporate new planning assumptions (e.g., population, employment, travel, or congestion estimates) which may make it difficult for us to demonstrate conformity (N=116)	5%	15%	16%	24%	37%	3%
b. Limits time available to undertake other transportation planning activities, such as updating models or data on travel behavior (N=116)	10	28	25	22	13	1
c. Limits time available to address other transportation-related challenges, such as congestion, safety, and water quality protection (N=116)	11	27	28	19	14	1
d. Strains staff resources; adds technical and/or administrative burden (N=115)	17	32	19	19	11	1
e. Strains funds authorized for planning (N=115)	20	23	22	19	14	2
f. Limits time available to assess the effectiveness of existing control strategies included in the plan (N=116)	3	12	16	24	31	14
g. Limits time available to explore innovative or proposed control strategies (N=116)	6	9	16	28	28	13
h. Makes it difficult to demonstrate conformity so frequently (N=116)	7	10	20	25	36	2

15-i. In the box below, please list any other potential disadvantages not listed above of demonstrating conformity according to the **current** requirement (i.e., at least every 3 years).

16. Please provide any actual experiences you had that demonstrate any of the advantages or disadvantages of updating the conformity according to the **current** requirement (i.e., at least every 3 years).

17. **In total**, how many times has your MPO demonstrated conformity for either the transportation plan or the transportation improvement program from January 1, 1997 through December 31, 2002? *(Enter number.)*

_____ Mean = 5.0, Median = 4.0

9

18. Was this more frequently than required (i.e., once every 3 years)? *(Check one.)* (N=118)

1. ☐ Yes → ***Continue with question 19.*** 62%
2. ☐ No → ***Skip to question 20.*** 36%
3. ☐ Not applicable; we are an isolated rural area and not required to demonstrate conformity on a regular schedule → ***Skip to question 20.*** 0%
4. ☐ Do not know → ***Continue with question 20.*** 2%

19. If your MPO demonstrated conformity more frequently than currently required, which of the following reasons explain why? *(Check one box in each row.)*

	Yes (1)	No (2)	No basis to judge (3)
a. State implementation plan changed, thereby requiring a new conformity demonstration (N=70)	24%	73%	3%
b. Transportation plan was updated earlier than required, thereby requiring a new conformity demonstration (N=70)	47	53	0
c. TIP was updated earlier than required, thereby requiring a new conformity demonstration (N=69)	77	23	0
d. New data (e.g., population, employment, travel, or congestion estimates) became available that could have positively impacted emissions reductions, thereby helping us demonstrate conformity (N=70)	19	77	4
e. More frequent demonstrations provide us with an early warning of potential air quality problems (N=69)	4	90	6
f. More frequent demonstrations help us guard against potential or pending litigation surrounding issues such as conformity, projects in the plan, and planning assumptions (N=68)	6	87	7
g. More frequent demonstrations make it easier to maintain conformity (N=69)	6	87	7

19-h. In the box below, please list any other reasons that explain why your MPO demonstrated conformity more frequently than currently required

20. How easy or difficult was it for your MPO to complete its most recent conformity demonstration? *(Check one.)* (N=117)

1. ☐ Very easy 8%
2. ☐ Somewhat easy 13%
3. ☐ Neither easy nor difficult 32%
4. ☐ Somewhat difficult 27%
5. ☐ Very difficult 14%
6. ☐ No basis to judge 7%

10

21. Has your MPO experienced a conformity lapse since January 1, 1997? *(Check one.)* (N=118)

1. ❒ Yes → ***Continue with question 22.*** 19%
2. ❒ No → ***Skip to question 25.*** 78%
3. ❒ Do not know → ***Continue with question 25.*** 3%

22. How many times has your MPO experienced a conformity lapse from January 1, 1997 through December 31, 2002? *(Enter number.)*

_____

23. Please supply the beginning and ending dates of each conformity lapse in the space below.

24. If your MPO experienced a lapse, which of the following actions were taken to help resolve the lapse? *(Check one box in each row. If your MPO has experienced more than one lapse, please respond collectively for all the lapses.)*

		Yes (1)	No (2)	No basis to judge (3)
a.	Added or changed a transportation control measure (or similar project) in the TIP and/or transportation plan (N=22)	5%	86%	9%
b.	Eliminated or revised a transportation project, other than a transportation control measure or similar measure, in the TIP and/or transportation plan (N=22)	9	86	5
c.	EPA approved a previously missing or inadequate SIP, allowing our MPO to then demonstrate conformity (N=22)	9	82	9
d.	Revised planning assumptions (e.g., population, employment, travel, or congestion estimates) used in the travel demand model (N=22)	9	86	5
e.	Revised SIP budgets with new data, planning assumptions, or models (N=22)	23	73	5
f.	Created budgets for the period beyond the attainment date in the SIP (out-years) (N=22)	0	95	5
g.	Took credit for programs such as Tier 2, heavy duty diesel rule, etc. (N=22)	18	73	9
h.	Amended the SIP to increase the mobile source budget by allocating unused emissions reductions elsewhere in the SIP (i.e., used a "safety margin" that had been established in the SIP) (N=22)	18	73	9
i.	No action taken; Our attainment status changed as a result of revised clean air standards and we were no longer required to demonstrate conformity (N=20)	0	90	10
j.	Took additional time needed to complete the planning/conformity process (N=22)	50	45	5
k.	Applied the appropriate conformity methodology (e.g., vehicle miles traveled reconciliation method) to the conformity demonstration (N=22)	18	73	9

24-1. In the box below, please list any other actions that were taken to help resolve the conformity lapse.

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25. If your MPO has ever had a.) difficulty demonstrating conformity, b.) experienced a lapse, or c.) both, which of the following were contributing factors? *(Check one box in each row. If your MPO has experienced more than one lapse, please respond collectively for all the lapses. If your MPO has experienced neither, please check box below and skip to question 31.)* (N=118)

❒ Not applicable; we have **neither** encountered difficulty in demonstrating conformity **nor** have we ever lapsed 49% (N=58)
→ ***Skip to question 31.***

	Yes (1)	No (2)	No basis to judge (3)
a. Used different planning assumptions (e.g., population, employment, travel, or congestion estimates) in preparing the SIP than in preparing the transportation plan and/or the TIP, making it difficult for us to pass our mobile source emissions budget or emissions reduction test (N=57)	42%	56%	2%
b. Used different mobile source emissions model and/or inputs to the model (e.g., vehicle fleet mix data) in preparing the SIP than in preparing the transportation plan and/or the TIP, making it difficult for us to pass our mobile source emissions budget or emissions reduction test (N=57)	46	49	5
c. Missed the deadline for completing the conformity demonstration required at least every 3 years (N=58)	16	81	3
d. Missed the deadline for the conformity demonstration required for the initial or revised SIP (N=57)	5	89	5
e. Could not demonstrate conformity because SIP found to be inadequate (N=57)	9	88	4
f. Missed transportation plan update deadline (N=57)	28	70	2
g. Missed transportation improvement program update deadline (N=57)	5	89	5
h. Could not meet conformity requirements (e.g., mobile source emission budget or other emissions reduction test) for the years covered by the SIP (N=57)	26	68	5
i. Could not meet conformity requirements (e.g., mobile source emission budget or other emissions reduction test) for years beyond the attainment date of the SIP (out-years) (N=57)	32	65	4
j. Had administrative problems at the state or local level (N=57)	32	61	7
k. Experienced FHWA error or delay (N=56)	5	89	5
l. Experienced EPA error or delay (N=56)	27	66	7
m. Had difficulty understanding or applying appropriate data, models, or methodologies (N=56)	25	70	5
n. Had a misunderstanding regarding deadlines or paperwork requirements (N=56)	7	88	5

25-o. In the box below, please list any other contributing factors not listed above.

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26. To what extent, if at all, did different planning assumptions (e.g., population, employment, travel, or congestion estimates) used in preparing the state implementation plan (SIP) make it more difficult to demonstrate conformity? *(Check one.)* (N=58)

1. ❒ Not applicable, we did not find it difficult at all to demonstrate conformity	9%
2. ❒ Very great extent	17%
3. ❒ Great extent	12%
4. ❒ Moderate extent	19%
5. ❒ Some extent	9%
6. ❒ Little or no extent	28%
7. ❒ No basis to judge	7%

27. To what extent, if at all, did a different mobile source emissions model and/or inputs to the model (e.g., vehicle fleet mix data) used to prepare the SIP make it more difficult to demonstrate conformity? *(Check one.)* (N=58)

1. ❒ Not applicable, we did not find it difficult at all to demonstrate conformity	9%
2. ❒ Very great extent	19%
3. ❒ Great extent	16%
4. ❒ Moderate extent	10%
5. ❒ Some extent	12%
6. ❒ Little or no extent	22%
7. ❒ No basis to judge	12%

28. Was the SIP revised (e.g., new transportation control measures added, mobile source emission budget increased, revised entire SIP, etc.) in any way in order to enable your MPO demonstrate conformity? *(Check one.)* (N=58)

1. ❒ Yes	31%
2. ❒ No	53%
3. ❒ Do not know	16%

29. Did your MPO discuss the possibility of revising the SIP with state air quality staff? *(Check one.)* (N=58)

1. ❒ Yes	67%
2. ❒ No	21%
3. ❒ Do not know	12%

30. If the SIP was revised, please indicate in what way(s) in the box below.

31. Regardless of your current attainment status, does your MPO anticipate difficulty with future conformity demonstrations? *(Check one.)* (N=253)

1. ❒ Yes → ***Continue with question 32.***	36%
2. ❒ No → ***Skip to question 34.***	43%
3. ❒ Not sure at this time → ***Skip to question 34.***	21%

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32. Does your MPO expect this difficulty to occur for the years covered by the SIP, for the years beyond the attainment date in the SIP, or both? *(Check all that apply.)* (N=91)

1. ☐ Anticipate difficulty meeting the mobile source budget or passing the emissions reduction test for the years covered by the SIP (N=56)

2. ☐ Anticipate difficulty meeting the mobile source budget or passing the emissions reduction test for the years beyond the attainment date in the SIP (i.e., out-years) (N=57)

33. Which of the following reasons describe why you expect to have difficulty with future conformity demonstrations? *(Check one box in each row.)*

		Yes (1)	No (2)	No basis to judge (3)
a.	New standards (8-hour ozone and/or fine particulate matter (PM 2.5)) may increase difficulty of demonstrating conformity (N=91)	88%	8%	4%
b.	New mobile emissions model will predict higher emissions levels (N=89)	44	24	33
c.	Planning assumptions (e.g., population, employment, travel, or congestion estimates) used to create the SIP will differ from those that will be used to prepare the transportation plan and/or the TIP, making it difficult for us to pass our mobile source emissions budget or emissions reduction test (N=91)	36	35	29
d.	Mobile source emissions model and/or inputs to the model (e.g., vehicle fleet mix data) used in preparing the SIP will differ from that used demonstrate conformity of the transportation plan and/or the TIP, making it difficult for us to pass our mobile source emissions budget or emissions reduction test (N=90)	31	36	33
e.	Vehicle miles traveled are expected to continue to increase at a significant rate (N=90)	71	26	3
f.	Area anticipates rapid future growth (N=90)	53	42	4
g.	Staff have limited time to devote to the conformity process (N=90)	50	44	6
h.	Staff lack technical expertise (N=90)	31	63	6

33-i. In the box below, please list any other reasons why you expect to have difficulty with future conformity demonstrations.

14

PART 4 – PROPOSED CHANGES TO TRANSPORTATION PLANNING AND CONFORMITY REQUIREMENTS

According to current requirements, in nonattainment areas:

- Transportation plans must be updated every 3 years
- Transportation improvement programs (TIPs) must be updated every 2 years
- Conformity demonstrations must be completed every 3 years

34. In preparation for the upcoming reauthorization of surface transportation legislation, the Congress is considering certain proposals to require less frequent updates of the TIP and transportation plan for nonattainment or maintenance areas. Would your MPO be in favor of or opposed to less frequent updates of the TIP and transportation plan? *(Check one.)* (N=252)

1. ❒ Strongly favor	37%
2. ❒ Favor	27%
3. ❒ Not sure at this time	23%
4. ❒ Oppose	8%
5. ❒ Strongly oppose	2%
6. ❒ Not sure at this time	4%

35. In your opinion, how often (in years) should MPOs be required to update the transportation plan, and perform the related conformity demonstration if in a nonattainment or maintenance area? *(Enter number of years in the space below. If you are unsure, leave box blank.)*

At least every _____ years Mean = 5.02, Median = 5.0, Mode = 5.0

36. If your MPO would be in favor of less frequent updates of the transportation plan (and the related conformity demonstration) than currently required, would each of the following reasons be a major factor, a minor factor, or not a factor at all in your preference? *(Check one box in each row. If your MPO does not prefer less frequent updates of the transportation plan, check the "Not Applicable" box below and skip to question 37.)*

❒ Not applicable, we do not prefer less frequent updates of the transportation plan → ***Go to question 37.*** 26% (N=67)

	Major Factor	Minor Factor	Not a factor	No basis to judge
a. Reduces the likelihood we will have difficulty demonstrating conformity because we are not required to update the planning assumptions as frequently (N=180)	16%	24%	39%	21%
b. Provides time to undertake other transportation planning activities, such as updating models or data on travel behavior (N=180)	77	17	3	3
c. Provides time to address other transportation-related challenges, such as congestion, safety, and water quality protection (N=180)	73	22	3	3
d. Strains staff resources less; decreases technical and/or administrative burden (N=180)	76	19	3	2
e. Strains funds authorized for planning less (N=178)	61	28	9	2
f. Increases time available to assess the effectiveness of existing control strategies included in the plan (N=179)	37	32	17	14
g. Provides time to explore innovative or proposed control strategies (N=179)	32	32	21	15
h. Makes it easier to demonstrate conformity on a less frequent schedule (N=179)	30	24	26	21

15

36-h. In the box below, please list any other reasons why your MPO would prefer less frequent updates of the transportation plan.

37. In your opinion, how often (in years) should MPOs be required to update the transportation improvement program, and perform the related conformity demonstration if in a nonattainment or maintenance area? *(Enter number of years in the box below.)*

At least every _____ years Mean = 2.7, Median = 2.0, Mode = 2.0

38. If your MPO would prefer less frequent updates of the transportation improvement program (and the related conformity demonstration) than currently required, which of the following are reasons why? *(Check one box in each row. If your MPO does not prefer less frequent updates of the transportation improvement program, check the "Not Applicable" box below and skip to question 39.)*

❒ Not applicable, we do not prefer less frequent updates of the transportation improvement program → ***Go to question 39.***
55% (N=140)

	Major Factor	Minor Factor	Not a factor	No basis to judge
a. Reduces the likelihood we will have difficulty demonstrating conformity because we are not required to update the planning assumptions as frequently (N=101)	14%	28%	29%	30%
b. Provides time to undertake other transportation planning activities, such as updating models or data on travel behavior (N=102)	63	25	7	5
c. Provides time to address other transportation-related challenges, such as congestion, safety, and water quality protection (N=102)	63	26	7	4
d. Strains staff resources less; decreases technical and/or administrative burden (N=101)	70	20	7	3
e. Strains funds authorized for planning less (N=101)	62	22	13	3
f. Increases time available to assess the effectiveness of existing control strategies included in the transportation improvement program (N=101)	32	36	14	19
g. Provides time to explore the effectiveness of innovative or proposed control strategies (N=99)	31	35	15	18
h. Makes it easier to demonstrate conformity on a less frequent schedule (N=101)	28	18	25	30

38-i. In the box below, please list any other reasons why your MPO would prefer less frequent updates of the transportation improvement program.

16

39. The Congress is considering proposals to combine the transportation plan and the transportation improvement program into a single planning document for attainment, maintenance, and nonattainment areas, subject to a single conformity demonstration, if applicable. Would your MPO be in favor of or opposed to this change? *(Check one.)* (N=244)

1. ❒ Strongly favor → ***Continue with question 40.*** 13%
2. ❒ Favor → ***Continue with question 40.*** 17%
3. ❒ Neither favor nor oppose → ***Skip to question 42*** 18%
4. ❒ Oppose → ***Skip to question 42*** 20%
5. ❒ Strongly oppose → ***Skip to question 42*** 19%
6. ❒ Not sure at this time → ***Skip to question 42*** 13%

40. If your MPO would be in favor of combining the transportation plan and the transportation improvement program into a single planning document, subject to a single conformity demonstration, would each of the following reasons be a major factor, a minor factor, or not a factor at all in your preference? *(Check one box in each row.)*

	Major factor	Minor factor	Not a factor	No basis to judge
a. Transportation improvement program is a subset of the plan, so it is unnecessary to have two separate documents (N=73)	79%	16%	4%	0%
b. Demonstrating conformity of both documents is redundant and does not benefit the transportation planning process (N=73)	66	14	12	8
c. Demonstrating conformity of both documents does not provide additional benefit for air quality improvement (N=73)	64	12	14	10
d. Preparing a single document would free up time that could be used for other planning activities, such as updating models (N=73)	71	19	7	3
e. Preparing a single document would free up additional time to address other transportation-related challenges, such as congestion, safety, and water quality protection (N=72)	63	32	4	1
f. A single, consolidated plan would make it easier to coordinate with other local governments, agencies, and regional partners (N=73)	73	23	1	3
g. A single, consolidated plan would reduce the number of required conformity demonstrations (N=73)	62	11	15	12

40-h. In the box below, please list any other reasons why your MPO would be in favor of combining the transportation plan and the transportation improvement program into a single planning document

41. If your MPO would be in favor of combining the transportation plan and transportation improvement program into a single planning document, please indicate how often you think MPO's should be required to update this document and conduct the related conformity demonstration. *(Enter number of years in the box below. If you are unsure, leave the box blank.)*

At least every _____ years Mean = 4.6, Median = 5.0, Mode = 5.0

After completing question 41, please skip to question 43.

17

42. If your MPO would be opposed to combining the transportation plan and transportation improvement program into a single planning document or if you are unsure or have no opinion at this time, please briefly explain your reasons below.

18

Part 5 – Background Information on the Metropolitan Planning Organization

43. About how large, in square miles, is the geographic area that your MPO covers for transportation planning purposes? *(Enter number in the box below.)*

    Our MPO covers _____ square miles [ ]

44. What is the estimated population in the geographic area covered by your MPO for transportation planning purposes? *(Enter number in the box below.)*

    The estimated population of the area covered by our MPO is … [ ]

45. Is any part of the area covered by your MPO in nonattainment or maintenance for the national ambient air quality standards for any of the following pollutants: carbon monoxide, nitrogen dioxide, ozone (1-hour), or particulate matter less than 10 microns in diameter (PM-10)? *(Check one.)* (N=246)

    1. ☐ Yes 48%
    2. ☐ No 51%
    3. ☐ Do not know 1%

46. Please list below the counties, or parts of counties, over which your MPO has transportation planning authority. If the counties are in different states, please also identify the states.

    [ ]

47. Please list any counties, or parts of counties, your MPO includes for the purposes of demonstrating conformity that are not part of your MPO's transportation planning area.

    [ ]

48. If you could fix <u>one</u> thing about the conformity process, what would it be and briefly describe why?

    [ ]

49. If you have any additional comments on matters discussed in this survey or related to updating transportation plans and transportation improvement programs, please indicate them in the space below.

    [ ]

Thank you for your cooperation!

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Appendix III: Survey of State Air Quality Planners

United States General Accounting Office

GAO
Accountability • Integrity • Reliability

Survey of State Air Quality Offices On Transportation Planning and Conformity

Introduction

The U.S. General Accounting Office is an agency that gathers and analyzes information for the Congress. In preparation for the upcoming reauthorization of surface transportation legislation, the Ranking Minority Members of the Committee on Environment and Public Works and its Subcommittee on Clean Air, Wetlands, and Climate Change, U.S. Senate, asked GAO to survey state air quality agencies to obtain their views on certain proposals to change the transportation planning and conformity demonstration processes. In general, these proposals address the frequency of updating transportation planning documents and conformity demonstrations. The survey does not address other proposals to change the conformity process because they are under study by other research groups.

We are asking all state air quality offices to complete the following short survey. We plan to summarize the responses in a report to the Congress in the late spring. Your participation in our study is essential for us to provide congressional decisionmakers the information they need. If you are not the appropriate person to answer these questions, please forward this e-mail, or coordinate your responses with, the appropriate person, to the extent possible.

Please complete this survey within 10 days of receiving it. In testing this survey, we found that it took approximately 30-45 minutes to complete.

Thank you in advance for your cooperation.

If your response will be delayed, or if you have any questions, please e-mail or call the expected response date or your questions to:

- Elizabeth Erdmann (Washington, DC office)
  e-mail: erdmanne@gao.gov
  Phone: (202) 512-8113
  or
- Samantha Goodman (Washington, DC office)
  e-mail: goodmans@gao.gov
  Phone: (202) 512-4809

Please identify the person who completed the survey and should be contacted in the event that we need to clarify responses.

Name: _____

Title: _____

Address: _____

Phone #: _____

E-mail: _____

PART 1 - STATE IMPLEMENTATION PLAN

A potential problem with the conformity process is the mismatch between the planning assumptions (e.g., population, employment, travel, or congestion estimates) and/or the mobile source emission model or inputs to the model (e.g., vehicle fleet mix data) used in preparing the state implementation plan (SIP) and the assumptions/model/inputs used by the metropolitan planning organization (MPO) when demonstrating conformity.

One potential solution to this mismatch would be to submit a SIP revision that includes the latest planning assumptions, the most current mobile source emissions model, and/or updated mobile source emissions model inputs, thereby helping the MPO to demonstrate conformity.

1. In dealing with conformity issues, has your state submitted a SIP revision, or would it consider doing so in order to help the MPO demonstrate conformity? *(Check only one answer.)*

   1. ❒ State has submitted a SIP revision to help the MPO demonstrate conformity (*Please describe the revisions to the SIP in the space below*) — N=12
   2. ❒ State would consider submitting a SIP revision to help the MPO demonstrate conformity (*Please explain in what ways you would be willing to revise your SIP in the space below*) — N=13
   3. ❒ We have not submitted a SIP revision, nor would we consider doing so to help the MPO demonstrate conformity (*Please explain why in the space below*) — N=8
   4. ❒ No basis to judge — N=11

1a. Please briefly explain your answer to question 1 in the box below.

2. If your office were required to submit a SIP revision that includes the same planning assumptions, mobile source emissions model, and/or mobile source emissions model inputs required of the MPOs when demonstrating conformity, in your opinion, how easy or difficult would it be for your office to comply? *(Check only one answer.)*

   1. ❒ Very easy — N=1
   2. ❒ Somewhat easy — N=4
   3. ❒ Neither easy nor difficult — N=5
   4. ❒ Somewhat difficult — N=18
   5. ❒ Very difficult — N=14
   6. ❒ No opinion — N=3

2a. Please briefly explain your answer to question 2 in the box below:

2

3. If your office were required to submit a SIP revision on a regular basis using the latest planning assumptions, mobile source emissions model, and/or mobile source emissions model inputs, in your opinion, how frequently would you be able to comply with that requirement? *(Check only one answer.)*

1. ❒ No more than every 2 years	N=2
2. ❒ No more than every 3 years	N=11
3. ❒ No more than every 4 years	N=0
4. ❒ No more than every 5 years	N=10
5. ❒ No more than every 6 years	N=4
6. ❒ Other—*Please indicate frequency in question 3a below.*	N=13
7. ❒ No opinion	N=5

3a. Please briefly explain your answer to question 3 in the box below.

4. Currently, what are the top three challenges faced by your state air quality office in revising a SIP? *(Please describe in the boxes below.)*

1.

2.

3.

3

PART 2 - TRANSPORTATION PLAN AND TRANSPORTATION IMPROVEMENT PROGRAM

In preparation for the upcoming reauthorization of surface transportation legislation, Congress is considering certain proposals to require less frequent updates of the transportation plan, the transportation improvement program, and the related conformity demonstrations, if applicable.

5. We understand that some state have separate transportation planning requirements. Does your state currently have its own requirements with regard to the frequency of updates to the transportation plan and transportation improvement program? *(Check only one answer.)*

1. ☐ Yes N=6
2. ☐ No N=26
3. ☐ Don't know N=11

5a. If yes, please describe your state's requirements in the box below.

We are primarily interested in proposed changes to the current federal transportation planning requirements. Federal transportation law currently requires that transportation plans and transportation improvement programs in nonattainment or maintenance areas be updated at least every 3 and 2 years, respectively, and that conformity be demonstrated with each of the updates.

6. Would your state air quality office support less frequent updates of the transportation plan for nonattainment and maintenance areas? *(Check only one answer.)*

1. ☐ Yes N=17
2. ☐ No N=12
3. ☐ Not sure at this time N=11
4. ☐ No opinion N=5

6a. Please briefly explain your answer to question 6 in the box below.

7. If MPOs were allowed to update the transportation plan and perform the related conformity demonstration less frequently, what timetable (in years) would your state believe is an acceptable change from the current federal requirement? *(Check only one answer.)*

1. ☐ No change is acceptable; keep the current 3 year requirement N=14
2. ☐ Updating the transportation plan at least every **4** years N=1
3. ☐ Updating the transportation plan at least every **5** years N=11
4. ☐ Updating the transportation plan at least every **6** years N=2
5. ☐ Other—*Please indicate the timetable in question 7a below.* N=6
6. ☐ No opinion N=10

7a. Please briefly explain your answer to question 7 in the box below.

4

8. In your opinion, would less frequent updates of the transportation plan have a positive, negative, or no effect on your state's ability to attain the national ambient air quality standards? *(Check only one answer.)*

1. ❒ Very positive effect	N=3
2. ❒ Somewhat positive effect	N=2
3. ❒ No effect	N=9
4. ❒ Somewhat negative effect	N=8
5. ❒ Very negative effect	N=8
6. ❒ Would vary depending on the geographic area	N=5
7. ❒ No basis to judge	N=9

8a. Please briefly explain your answer to question 8 in the box below.

9. Would your state air quality office support less frequent updates of the transportation improvement program for nonattainment and maintenance areas? *(Check only one answer.)*

1. ❒ Yes	N=12
2. ❒ No	N=13
3. ❒ Not sure at this time	N=13
4. ❒ No opinion	N=6

9a. Please briefly explain your answer to question 9 in the box below.

10. If MPOs were allowed to update the transportation improvement program and perform the related conformity demonstration less frequently, what timetable (in years) would your state believe is an acceptable change from the current federal requirement? *(Check only one answer.)*

1. ❒ No change is acceptable; keep the current 2 year requirement	N=12
2. ❒ Updating the transportation improvement program at least every **3** years	N=9
3. ❒ Updating the transportation improvement program at least every **4** years	N=1
4. ❒ Updating the transportation improvement program at least every **5** years	N=6
5. ❒ Other—*Please indicate the timetable in question 10a below.*	N=4
6. ❒ No opinion	N=11

10a. Please briefly explain your answer to question 10 in the box below.

5

11. In your opinion, would less frequent updates of the transportation improvement program have positive, negative, or no effect on your state's ability to attain the national ambient air quality standards? *(Check only one answer.)*

1. ❒ Very positive effect	N=2
2. ❒ Somewhat positive effect	N=2
3. ❒ No effect	N=10
4. ❒ Somewhat negative effect	N=8
5. ❒ Very negative effect	N=6
6. ❒ Would vary depending on the geographic area	N=4
7. ❒ No basis to judge	N=12

11a. Please briefly explain your answer to question 11 in the box below.

Congress is also considering proposals to combine the transportation plan and the transportation improvement program into a single planning document for attainment, nonattainment, and maintenance areas, subject to a single conformity demonstration, if applicable.

12. Would your state air quality office favor combining the transportation plan and the transportation improvement program into a single planning document for attainment, nonattainment, and maintenance areas, subject to a single conformity demonstration, if applicable? *(Check only one answer.)*

1. ❒ Yes	N=24
2. ❒ No	N=4
3. ❒ Not sure at this time	N=12
4. ❒ No opinion	N=4

12a. Please briefly explain why you answered yes or no to question 12 in the box below.

13. If your state would be in favor of combining the transportation plan and transportation improvement program into a single planning document, how often do you think MPOs should be required to update this document and conduct the related conformity demonstration? *(Check only one answer.)*

1. ❒ Not applicable; we are not in favor of combining these into a single planning document	N=6
2. ❒ At least every **2** years	N=4
3. ❒ At least every **3** years	N=9
4. ❒ At least every **4** years	N=1
5. ❒ At least every **5** years	N=10
6. ❒ At least every **6** years	N=0
7. ❒ Other—*Please indicate frequency in question 13a below.*	N=2
8. ❒ No opinion	N=10

6

13a. Please briefly explain why you answered yes or no to question 13 in the box below.

14. In your opinion, would combining the transportation plan and transportation improvement program into a single planning document, subject to a single conformity demonstration, have a positive, negative, or no effect on your state's ability to attain the national ambient air quality standards? *(Check one.)*

1. ❒ Very positive effect	N=1
2. ❒ Somewhat positive effect	N=5
3. ❒ No effect	N=17
4. ❒ Somewhat negative effect	N=2
5. ❒ Very negative effect	N=1
6. ❒ Would vary depending on the geographic area	N=4
6. ❒ No basis to judge	N=14

14a. Please briefly explain your answer to question 14 in the box below.

15. If you have any additional comments on matters discussed in this survey or related to updating transportation plans and transportation improvement programs, please indicate them in the box below.

Thank you for your cooperation!

7

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