Session #6

"Air Apparent: How the MPO Can Work With Air Quality"

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ABSTRACT

Metropolitan Planning Organizations (MPOs) were established with the intention of providing the oft-quoted "comprehensive, continuing, and coordinated" transportation planning in urban areas of over 50,000 people. In reality, each MPO is defined by its members, and their interests, environment, and history. Many MPOs in high-growth areas have continued conflicts with traditional highway-oriented planning that do not mesh well with the implied and direct regulatory requirements contained in the Clean Air Act Amendments and surface transportation legislation. To make matters worse, the standards for the most critical component of pollution in many areas - ground-level ozone – have been tightened, a move that will force many more MPOs into the arena of air quality planning.

This paper attempts to answer two questions: what is the ability of an MPO to address air quality issues now, and what steps should be taken to develop an air quality plank in the MPO's overall platform? *The key elements of a successful and cost-effective program to work with air quality are also presented*, and will be the main benefit of this paper to most readers. Each program contains action items, resource requirements, and suggested sources for customizing their own program. The three tiers of programs are sensitive to the abilities of the MPO, recent changes and interpretations in air quality legislation, and should satisfy the needs of MPO constituents at a given stage of the MPOs evolution relative to air quality.

The foundation for this paper is the recent experience of an MPO and its staff administrator (the author) thrust into air quality conformity issues. The Capital Area MPO is centered on Raleigh, North Carolina, a city of 280,000 people. The total population of CAMPO is currently estimated to be about 580,000 people. In March of 1997, CAMPO encountered a conformity lapse with almost no warning. The results of the subsequent experience are presented here to help other MPOs, both in North Carolina and around the country, deal with the issue of air quality.

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Air Apparent: How the MPO Can Work With Air Quality

The current relationship of metropolitan planning and air quality has a substantial history. A precedent had already been achieved for regional planning efforts by the mid-1950's. Section 701 of the Federal Housing Act of 1954 doled out federal grants for councils of governments to address regional problems. The real public impact of the 1954 Act, however, was reserved for the inclusion of federal programs to subsidize home ownership with financing and insurance programs. Concerns about open space and the "suburbanization" of rural lands prompted grants for transit and open space preservation in the Federal Housing Act of 1961. An even greater stride was achieved in the 1962 Highway Act, which gave federal aid to urban areas of greater than 50,000 population. The criteria needed to receive this funding was significant: a planning process that was continuing, comprehensive, and coordinated must be established and maintained.(*1*)

Of course, not all of the existing stakeholders were ecstatic to find these new regional agencies in their midst. The Bureau of Public Roads (BPR) was responsible for the implementation of the 1962 Highway Act. Deeply intertwined with state highway departments and road construction, BPR saw the new regional agencies as a "potentially disruptive innovative force," threatening established procedures and decision-making systems. Not surprising was the outcome of this perspective: for nearly three decades the MPOs were to be an adjunct to decision-making, often called upon to collect data, but seldom relied upon for meaningful input into the decision-making process. Not until the 1973 Highway Act was the moniker "MPO" used in federal legislation. The culmination of a year-long battle, the 1973 Highway Act was seen by some as the first real defeat of the powerful highway lobby and by others as a promise to guard against domineering state highway departments. During the 1980's, energy resource concerns, deregulation, and concerns over acid rain and other environmental campaigns each played a role in defining the responsibilities of the MPO.(*1*)

This synergy culminated in the Intermodal Surface Transportation Efficiency Act of 1991. ISTEA granted MPOs the much sought-after right to select projects from certain federal aid funding sources, and forced consensus with the state departments of transportation on the remaining programs. Many of these MPOs were not well-equipped to deal with the new responsibilities. The poor starting position, combined with reluctance of traditional decision-makers to part with authority, made for a slow enactment of many of ISTEA's grand promises of a more efficient, balanced, and publicly influenced transportation system.

Thus it should not seem surprising that many MPOs – charged with regional concerns, consensus-building, and cooperative and comprehensive planning – were not prepared to participate in matters of air quality. In reality, the entangling of the MPO in air quality via long-range planning requirements represented a proverbial "unfunded mandate," the nemesis of local governments in the 1980's and early 1990's. The Clean Air Act Amendments of 1990 (CAAA), painfully passed by the Bush Administration in a losing bid to win back the mantle of environmentalism for the Republican Party, did not get the attention it deserved from the transportation community at large. Now MPOs were faced with the ultimate responsibility of determining conformity on long-range plans and incorporating poorly-understood regulatory

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requirements that have undergone nearly constant reinterpretation and revision by the Environmental Protection Agency (EPA) and Federal Highway Administration (FHWA). While the experience of the Capital Area MPO in Raleigh in partnering with FHWA local offices and the state departments of transportation and natural resources has been encouraging, there are still remaining problems to overcome. The regional nature of the offices of the Federal Transit Administration (FTA) and the EPA does not permit easy coordination. The former agency is partly responsible for "signing off" on conformity determinations, and the latter has a non-regulatory but still-powerful review role in the process. The local office of FHWA, while extremely helpful in many areas, is also painfully under-staffed and sometimes has a different perspective from its regional office.[1]

Any type of initiative would be difficult without a solid policy framework that could only arise from a high-quality partnership between state DOTs and MPOs, and to a lesser extent, the Federal Highway Administration. High-growth states driven primarily by economic policies on the local (land use) side, and state DOTs that are unable to accommodate even minor changes in policy directives, face considerable difficulties. Furthermore, the standards for the most critical component of pollution in many areas - ground-level ozone - were tightened in a Presidential Directive issued on July 16, 1997.(*2*) This is a move that will force many more MPOs into the arena of air quality planning(*3*), even though mobile source emissions have remained relatively stable even as vehicle miles of travel have doubled in the past 25 years(*4*).

The purpose of this paper is to provide the target audience (MPO staff and local planners) with a set of four descriptors that will categorize the MPO to determine which of three programs it should consider to deal with air quality planning. Elements of a successful and cost-effective program to work with air quality are also presented, and will be the main benefit of this paper to most readers. Each program contains action items and resource requirements. Suggested sources for continuing education are presented. The three tiers of programs are sensitive to the abilities of the MPO, recent changes and interpretations in air quality legislation, and should satisfy the needs of MPO constituents at any stage of air quality involvement.

This work is based largely on the recent, real-world experience of an MPO and its staff administrator (the author) thrust into air quality conformity issues. The Capital Area MPO is centered on Raleigh, North Carolina, a city of approximately 280,000 people. The total population of CAMPO is currently estimated to be 580,000. In March of 1997, CAMPO encountered a conformity lapse with almost no warning. The results of the subsequent experience are presented here to help other MPOs, both in North Carolina and around the country, work with the issue of air quality.

[1] The regional FHWA offices are consolidating into four "district" offices. This centralization will probably strain efforts at coordination even further.

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The Level of Involvement: Matching Resources With Need

Metropolitan Planning Organizations exist in a variety of sizes and forms. Differing skill levels exist within the MPO staffs, and regulatory and political environments are also varied. It is therefore desirable to equate these abilities with a range of actions that the MPO may wish to undertake in their involvement with air quality. To this end, a set of four variables ("descriptors") that count towards a summary rating were developed. This summary rating is then matched to one of three air quality involvement programs described later in the paper.

The purpose of this rating system is to understand both the MPO's ability to undertake a particular set of actions, as well as the actual need to do so. Resource levels (staffing), staff abilities, the air quality status of the MPO, and its size in terms of number of representative members are presented as factors in the rating system. The higher the summary score (which is simply the sum of each score for every descriptor), the more advanced the air quality planning effort for that MPO. The purpose of this system is to provide a "launching point" in the evolution of the MPO's air quality planning program. It should also assist the user in understanding and addressing the abilities of an MPO for undertaking an air quality program.

Resource Level (Man-Hours/Week)		**Staff Ability (see Definition)**		**Air Quality Status (see Definition)**		**MPO Size (Policy Members)**	
Measure	***Score***	**Measure**	***Score***	**Measure**	***Score***	**Measure**	***Score***
<3	*1*	I	*1*	Always Attainment	*1*	<4	*1*
3 - 5	*2*	II	*2*	Maintenance	*2*	4 - 7	*2*
6>	*4*	III	*3*	Non-Attainment	*5*	8 - 12	*3*
						13>	*4*

Sum of All Four Scores: _____

Recommended Air Quality Program Level (Range of Summary Scores):

- Program A (4 - 7)
- Program B (8 - 11)
- Program C (12 - 16)

Figure 1. MPO Air Quality Program Descriptors.

Definition of Descriptive Measures

The four descriptive measures shown in Figure 1 can be used to identify which Air Quality Program is appropriate for your MPO. The definitions of the descriptive measures are shown below, and should be reviewed carefully to ensure that the intent of the descriptor is met. In other words, if the reader feels that there may be extenuating circumstances that would "kick" the rating for a particular measure into a different category, then this needs to be considered when developing the final score.

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Resource Level (Man - Hours/Week)
This is simply the number of hours each week that a full-time staff member has to devote to air quality issues. If the agency is not currently involved in air quality, then this time will probably be "stolen" from other tasks and projects. An extenuating circumstance may be the employee that scores well on the Staff Ability descriptor that can get a task completed faster. Technical and clerical assistance should generally not be counted towards this measure, but the user may consider an adjustment (not to exceed one rating category) in the case of fairly advanced technical assistance being available.

Staff Ability (Index)
The level of ability of the staff person(s) working on air quality issues must be objectively considered. If the staff has a skill set that is compatible with carrying out air quality program initiatives, then a more advanced program becomes feasible. This measure should be developed for the same person(s) considered in the Resource Level descriptor above. Below is how the available staff should be rated. Consider the rating appropriate if any three of the following characteristics are met:

Rating	Characteristics
I	Less than two years of MPO experience, marginal writing skills, little graphics or technical communication ability, marginal analytical capability, weak policy background
II	Two to five years of MPO experience, good technical writer, knowledgeable of public outreach efforts, good analytical and policy analysis capabilities
III	More than five years of MPO experience (preferably dealing with DOT, FHWA, and state air quality monitoring agency officials during this time), strong technical communicator, good analysis capability with modeling experience, familiar with media relations

Figure 2. Ratings for Staff Ability Descriptor.

One example of an outside consideration may be where the MPO's primary air quality specialist can be assisted by someone else that has a characteristic that they lack, such as public outreach or marketing. A higher rating could then be achieved.

Air Quality Status
This descriptor is fairly self-explanatory, except for noting that it obeys a three-tiered classification system without further subdividing on the severity of non-attainment (e.g. moderate, serious, extreme). If an area has only recently been made attainment for either ozone or particulate matter, then it is suggested that the "Maintenance" category be selected for this descriptor. This is due to the anticipated consequences of tighter standards for these pollutants.

An obvious example of an extenuating circumstance that may make a difference on the selected score is where it is known that a "drop" in the MPO's attainment status is impending and unavoidable.

MPO Size (Number of Policy Members)

Metropolitan Planning Organizations must often work with a number of jurisdictions in their planning area. Each jurisdiction is represented on the policy-making board of the MPO. Additionally, transit agencies, governmental councils, and other transportation providers may also be represented on the policy board. The technical board usually has an even larger membership, representing not only the professional staffs, but also may have members that are advocates of bicycling, handicap access, freight, universities, or other transportation interests. Each additional member requires additional coordination to create an effective and integrated planning process[2]. Hence, for larger groups it is generally desirable to sponsor a more comprehensive air quality planning program[3].

Certainly, the ultimate score given on this descriptor may be influenced by the presence of a variety of jurisdictional sizes and policy positions. Smaller jurisdictions that have not experienced rapid growth may well have a different perspective on air quality issues and mitigation strategies than their larger counterparts. Bridging the gap between these perspectives can be expected to require an additional effort.

The Three Air Quality Planning Programs

The summary rating can be used to categorize the complexity and expense of a particular air quality planning program element. The content of each program is determined by (a) its cost in terms of time, labor and capital investment, and (b) the complexity of the element. An estimate of the resources required to undertake each measure is provided for budgeting purposes. Wage rates from the North Carolina Department of Transportation and City of Raleigh are used to convert hours into expenses. Wage rates vary by program due to the anticipated higher earnings of more experienced employees (see also the definition of the descriptor "Staff Ability" above). The user may adjust the wage rates to meet local conditions.

To facilitate comparisons, it was decided that every air quality planning program element should follow the same format for description (see Figure 3).

Name of Program Element	Hours	Staff ($)	Contracted ($)
• **Description of Program Element and Typical Actions** • **Resources/Funding**			
• **Goal(s) of the Program Element**			

Figure 3. Template for Air Quality Plan Element.

[2] As an example, the Capital Area MPO has 14 voting members on its Transportation Advisory Committee (TAC – the policy board), and 30 voting members on its Technical Coordinating Committee (TCC).

[3] The author recognizes that the opposite may be true; that is, higher membership in any organization places additional burdens on the support staff that may encourage a *reduced* effort for any given function. Nevertheless, the contention that the issue of air quality is a priority issue is a basic assumption in this report. Although the author believes that this assumption can be validated by federal regulatory requirements and the recent experiences of MPOs, like any new program, it should be tested and discussed between the board members and staff prior to commencement.

Note that both "Staff" and "Contracted" dollars are shown here, the primary difference being allowances for fringe benefits (i.e., longevity pay, health and life insurance, retirement benefits etc.) for in-house staff and a 10% administrative cost added to the contracted services, as well as a 154% overhead rate.

Figure 4 indicates the wages that were developed. Note that "Hours" of work (annual) are also shown so that adjustments can be made if either the wage rates or number of hours required to carry out each task are different for an organization. Such variability in cost can be ascribed to a number of external forces, such as employee longevity, regional wage differences, or the competition and availability of local consulting firms.

	In-House "Staff" ($/hour)	**"Contracted" Labor ($/hour)**
Planning	25	65
Public Involvement	28	75
Engineering	33	78
Graphics/CADD	18	50
Temporary	10	10
Overhead Rate (included)	30% Fringe Benefits + 10% (Administrative)	154% + 10% Oversight
Direct Costs		
1. Printing and Reproduction	8 cents/copy (B&W) 80 cents/copy (full color paper reproduction)	
2. Travel	0.325 cents/mile	

Figure 4. Implementation Costs.

The three programs described below can be viewed as a temporal evolution in air quality planning: staff education to policy board/planning actions to mitigation strategies. A small MPO that is just entering the arena of air quality planning could spend 6 to 18 months on Program A, and transition into the second and third programs. It is also expected that by the time a MPO enters Program C, numerous adjustments and additions could be made to expand and tailor an air quality planning program to the individual organizational needs. This is in fact highly desirable, and exchanges of information between MPOs then becomes very useful. Internet mailing lists, newsletters (e.g. Clean Air Transportation Report published by the National Association of Regional Councils), and professional associations should be encouraged to transition from high level information providers to more case studies of successful program elements. An important lesson is that no single program element can be successful on its own; it takes multiple passes and a varied program to get across the complex messages and tasks inherent in air quality issues.

Program A: Staff Education (total cost: $2,730)

Program A is intended to primarily educate and inform the staff about air quality matters, and to establish a flow of communication between the MPO staff, supervisor(s), and partners in air

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quality planning. There are just two elements in the scope of work for Program A: Coordination and Research. These two elements will form a cornerstone of all the programs.

Education	**30**	**$1,400**	**--**
• Approximately 30 hours of staff time should be spent on educating the MPO staff on matters of air quality. There are now many sources of information available to the user, many of which were not even in existence when the CAAA passed in 1990. A sample of these sources are provided at the end of this paper. A portion of the thirty hours should be spent attending at least one professional conference addressing the subject of air quality. Teleconferences have also become popular and cost-effective ways of acquiring information, although they lose the value of personal interaction. • Most of the cost is associated with planning staff time and attending a conference. Minimal direct costs are assumed, with a moderate amount of travel involved.			
• Primary Goal: To educate the staff that will be working on air quality issues about the subject matter. Understand the State Implementation Plan (if available), interagency working agreements (coordination policies), pollutant thresholds and where each county in the MPO area stands in relation to them, and the requirements of a conformity analysis and conformity determination. • Secondary Goal: Identify and mark sources of information, develop a library of practices used in other areas to deal with all phases of air quality planning from public education and outreach to construction solutions.			

Coordination (AQ Specialists)	**50**	**$1,330**	**--**
• Approximately 50 hours of staff time will be required to prepare and meet with the state air quality agency (in North Carolina, this is the Department of Health and Natural Resources, Air Quality Division) and the state department of transportation. Two meetings with the regional (district) offices of EPA, FTA, and FHWA are also assumed, which may be combined or handled without face-to-face interaction. Written correspondence is occasional. It is not recommended that contractual labor be utilized due to the required level of personal communication necessary to achieve the desired level of coordination. • Almost all of the cost is accrued to planning. Minimal direct costs are assumed, with some travel involved.			
• Primary Goal: To establish a positive working relationship with the individuals who are the key players in developing staff-level actions in air quality. • Secondary Goal: To provide the MPO staff with additional information on the specific focus of the primary review agencies involved in air quality planning.			

Program B: Coordination and Dissemination (total cost: $28,080)

Although the education process should never stop, the MPO quickly finds itself in the position of acting on the information it has gathered. This mainly takes two forms: working with air quality modeling, particularly in the form of data collection and refinement of inputs, and second, the preparation of conforming transportation plans. Recent FHWA guidance on the latter suggests that MPOs must look ahead a minimum of 23 years and perform updates every

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three years (non-attainment areas), or 25 years with five-year update cycles (attainment areas). What is often not stated is that it takes three-to-five years to develop and approve a transportation plan. Unable to accommodate these schedules, it is probable that many MPOs will turn to approving long-range transportation plans without prior approval by the individual agencies represented on their boards. To make the plan process work in such an environment requires an ever-increasing amount of coordination, not with the staffs involved only in air quality planning, but with the local municipalities.(*5*) The refinement of revenue projections, cost estimation techniques, strengthening public involvement, and addressing local needs in long-range plans must be undertaken in the same time frame.

Coordination (local staffs)	**100**	**$2,500**	**$6,565**
• At this level of coordination, several attempts at coordination with the municipal staffs and officials must be made. The establishment of a two-page, biennial newsletter to the members is a start. Agenda packages may contain one-page staff reports (preferably with slightly different letterheads to distinguish them immediately for the target audience) on breaking news or simply include copies of articles or professional association letters. If the MPO has not already done so, then participation in the Association of Metropolitan Planning Organizations (AMPO) is recommended. Coordination with the state air quality agency and state department of transportation will still be required. A review of the State Implementation Plan (SIP) and the coordination protocol is now being undertaken in North Carolina; MPOs in other areas should also participate in this process. Pushing for more involvement in the selection of transportation control measures (TCMs) in the SIP is a critical task. • Required resources lie primarily with planning labor costs, but there are also graphics and CADD costs. Direct costs for newsletters ($1,030/full color at 50 copies each) , AMPO membership (cost varies; approx. $800), and staff reports ($600 for three) must be added to moderate travel and reproduction expenses.			
• Primary Goal: To relate information to the primary customer base, the boards.			

Data Collection (Stage One)	**40 (+ temp)**	**$8,300**	**$9,815**
• Travel time (link speed) studies to improve the inputs to the air quality model are desirable to improve not only the accuracy of the emissions model, but also to move the MPO into a stronger partnership role. A sample of freight vehicle counts to determine vehicle mix is important, as heavy vehicles are major contributors of nitrogen oxides (NOx).(*6*) Vehicle occupancy counts will establish a baseline for high occupancy vehicle and other travel demand management actions that may be considered in future years. Both programs should be considered for a two- or three-year cycle, depending on the population and VMT growth. • Data collection activities can be assigned to temporary staff (interns at $10 per hour) with some supervision by planning staff. Automated travel speed/distance recovery hardware improves the collection process, but will add $400 to the cost. Travel costs may be significant if a personal vehicle is being used the during data collection.			
• Primary Goal: To improve the accuracy of emissions modeling.			
• Secondary Goal: Improve the partnership with the air quality agency.			

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Planning Provisions	240	$6,000	$11,700
• Although the requirements for long-range plans have been known for some time, it may be necessary to revisit them, particularly with the passage of the new transportation authorization bill, TEA21. The 15 (made 16 in 1995) planning factors have been consolidated into seven functional areas. Funding levels are different, requiring new revenue projections and factors. Experience suggests that the strictness with which the planning regulations are upheld is dramatically increasing. Therefore, many areas that have yet to address the requirements completely must do so prior to the next certification review (self-certifying MPOs, those under 200,000 in population, may also be facing a higher level of inspection). Create a list of transportation projects that are threatened if the long-range plan is found to be non-conforming. Such a list will require the identification of exempt projects and those that have passed certain milestones in their development[4]. The establishment of an air quality-sensitive protocol for modifications to regionally-significant projects in plans and programs will also be required. The final, and perhaps most critical, work task may be to address the discrepancy in planning year horizons between the long-range plan requirements and the Clean Air Act (and 1990 Amendments). Both AMPO and numerous MPOs have been active in trying to get recognition of this issue, which may hold a long-range transportation plan to short-range emission budget levels. • Resources consist primarily of planning staff labor in the areas of research, agenda and presentation preparation.			
• Primary Goal: Prepare the MPO for tougher certification reviews, and ensure that the planning process does not threaten to hold up needed construction improvements.			

Program C: Implementation (total cost: $72,725)

The MPO will be held responsible for the timely implementation of action items, typically called TCMs, as outlined in the State Implementation Plan[5]. This will require involvement in modeling, both air quality and travel forecasting. In North Carolina, the state department of transportation has long assumed the primary responsibility for travel demand modeling, and is working with the state air quality agency to ensure the validity of air quality models. However, this state of affairs is rapidly changing. It is anticipated that the MPOs, or regional agglomerations of MPOs, will gradually shift into the role of providing travel demand modeling services. This is desirable from at least two standpoints: one, it will keep the agency that is responsible for conformity analyses (MPO) at the forefront; and two, it allows the state department of transportation to consolidate its holdings as a technical resource and implementing agency.

[4] In North Carolina, these milestones were: Record of Decision, final design, right-of-way acquisition, and project letting/construction. If three years had passed since any of these had occurred, then the project was considered vulnerable during a lapse of conformity.

[5] This is true even though the ultimate decision about which TCMs are approved does *not* reside with the MPO, but with the state legislature and the EPA.

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Data Collection (Stage Two)	640	$9,225	$12,725
• One of the lingering problems with emissions modeling practice is the way in which roads are functionally classified. A classification system should take into account percent grade, signal spacing, driveway spacing, and other factors that may describe emissions potential.(*7*) The 12-category federal functional classification system does none of these, focusing instead on vehicle miles of travel and urban/rural differentiation. Local street systems, where the majority of cold starts and resulting high emission levels occur, are poorly modeled. An analysis of this problem followed by a data collection effort to enrich the current travel demand model would be required to rectify this problem. • The resources required to perform such an effort are substantial, and would probably consist of three months' intern work, possibly performed over one summer. Field work could be limited if adequate aerial photography is already available.			
• Primary Goal: To improve the validity of current emissions models.			

Mitigation/TCMs	800	$22,000	$60,000
• As the MPO gains more experience, it is probable that construction measures to offset increases in VMT-related emissions will be considered more thoroughly. These may include variable message signing, incident-detection programs, and HOV/HOT lanes.(*8, 9, 10*) The costs for preliminary planning, designing, and market research for even a single such project would result in costs such as those shown above. A lower-cost action would be the application of staff to grant writing for funding, such as the Mobile Source Emissions Grant or CMAQ funding (the application of which would most likely involve a grants-like process).(*11*) Another cost-effective action would be the establishment of both municipal and private programs for reducing air emissions. Mowing rights-of-way outside of the 9-2pm peak ozone-formation hours and sponsoring cafeteria lunch programs on ozone alert days are examples. • The consultant price tag seems more appropriate, since few MPOs can muster the range of expertise necessary to carry out this element. The primary source of costs is for engineering, although planning, public involvement/marketing (*12*), and CADD work is included. Obviously, cost-sharing with the private sector and the state department of transportation should be strongly considered.			
• Primary Goal: To mitigate emissions from mobile sources. • Secondary Goal: To achieve compliance with the SIP and emissions budgets.			

Summation and Resources

Space restrictions do not permit a detailed examination of all of the possible elements that might comprise an effective air quality planning strategy. For example, classroom education programs, air quality workshops, and web site development all would aid in education and dissemination, and none are mentioned. The establishment and broad acceptance of a set of solid performance objectives that include features of mobility *and* the environment are crucial to effectively using the MPOs' resources (*13, 14*). Even so, the local conditions, changing regulatory environments, and the variation among MPOs in their talents and resources would make such a list obsolete even before it could be distributed. It is much more appropriate to

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get our MPOs on a track to locating resources that they can use to build on. Substantial staff and funding commitments are a result of air quality planning. Avoiding the ramifications of adhering to air quality regulations to make life easier for the MPO staff and boards is a short-range position at best, and one that doesn't preclude additional efforts to deal with the regulatory requirements. It seems likely that these requirements will continue close to their present form, and unlikely that they will be substantially repealed.

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Federal Highway Administration - http://www.fhwa.dot.gov
North Carolina Department of Environment and Natural Resources, Division of Air Quality (NCDENR DAQ) - http://daq.state.nc.us.
Oregon Department of Air Quality (DEQ) – http://www.deq.state.or.us/aq/aq.htm
University of Tennessee: Environmental Reporting/Links – http://excellent.com.utk.edu/SCICOM/airqual.html

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