

REGION 9

FHWA/EPA

AIR QUALITY GUIDELINES SUPPLEMENT

REGIONAL TRANSPORTATION PLAN

CONSISTENCY DETERMINATION

MAY 1976

REGION 9

FHWA/EPA

AIR QUALITY GUIDELINES SUPPLEMENT

REGIONAL TRANSPORTATION PLAN

CONSISTENCY DETERMINATION

MAY 1976

TABLE OF CONTENTS

Preface.....	Page 1
Background	
The Law (23 U.S.C. 109(j))	
The Regulations (FHPM 7-7-9)	
The Region Nine Guidelines	
Relationship to Overall Work Program	
Part I: Development of the Consistency Determination.....	Page 3
A. Guidelines for the formation of a "Continuing Review Procedure"	
B. Guidelines on the selection and use of an air quality analysis	
C. S.I.P. strategy coordination	
D. Mitigation of air quality impacts	
Part II: Contents and Format of an Annual Consistency Submittal.....	Page 6
Part III: Review/Approval Process.....	Page 8
Appendix A: Air Quality Guidelines (FHPM 7-7-9)	
Appendix B: Guidelines for Analysis of Consistency Between Transportation and Air Quality Plans and Programs (April 1975)	

PREFACE

Section 109(j) was added to Title 23 (Highways) of the United States Code by the 1970 Highway Act (Public Law 91-605, Section 136(b)). In its entirety, Section 109(j) reads as follows:

"The Secretary (of transportation), after consultation with the Administrator of the Environmental Protection Agency, shall develop and promulgate guidelines to assure that highways constructed pursuant to this title, are consistent with any approved plan for the implementation of any ambient air quality standard for any air quality control region designated pursuant to the Clean Air Act, as amended."

The underlying intent of Section 109(j) was to prevent the expenditure of Federal funds on the development of plans for the expansion of transportation systems that are incompatible with plans for the improvement of air quality.

On November 14, 1973, the Federal Highway Administration issued interim guidelines referenced in the law. The new "Air Quality Guidelines" were contained in Volume 7, Chapter 7, Section 9 of the Federal-aid Highway Program Manual (FHPM 7-7-9). After an Environmental Impact Statement covering the guidelines was circulated, the permanent directive was issued on November 26, 1974, and became effective 30 days later (December 26, 1974). There were no significant changes in the portions of the regulation that pertain specifically to transportation plans and programs.

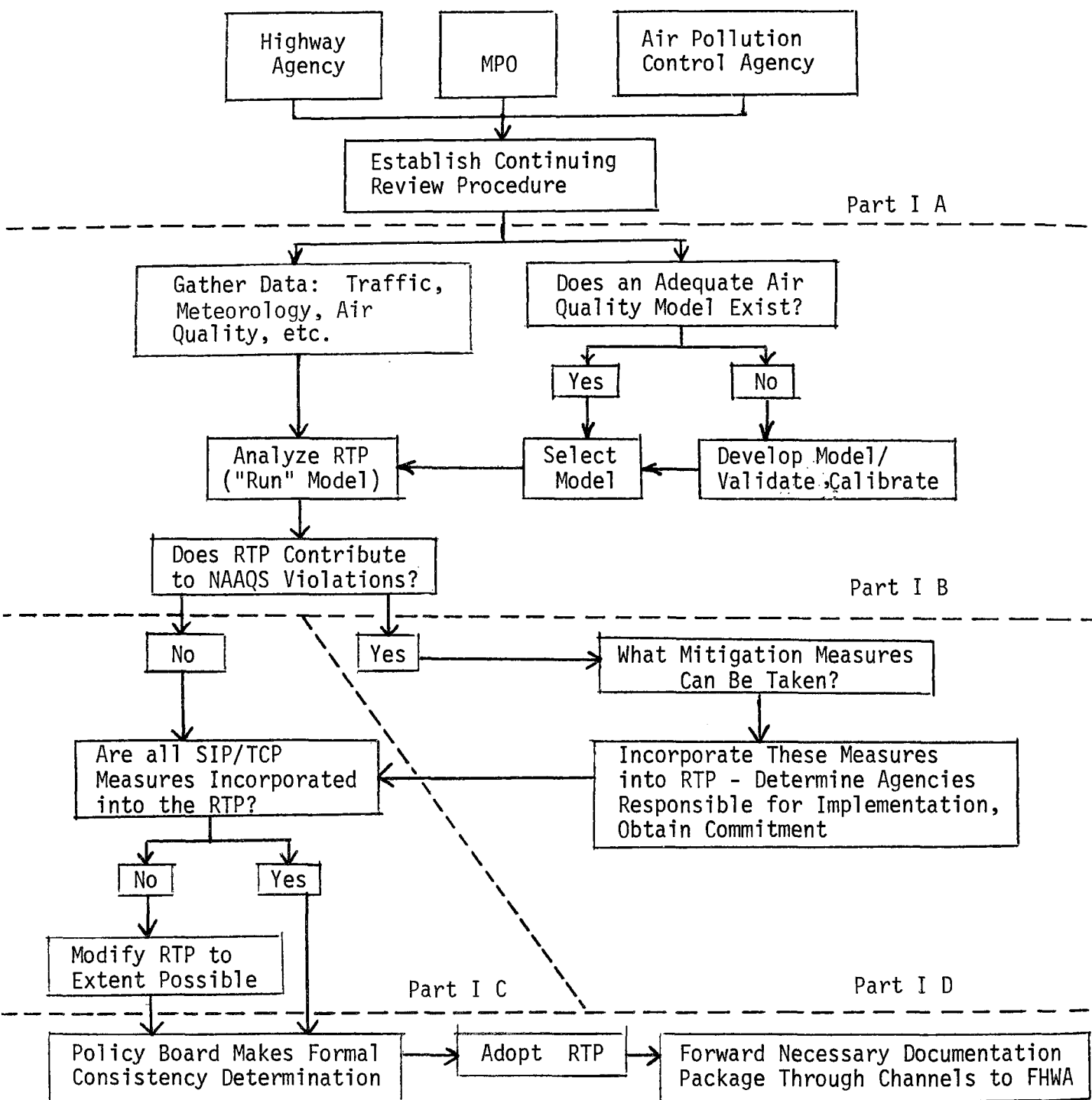
The Air Quality Guidelines are reproduced in Appendix A: paragraph 7 of the Air Quality Guidelines provides procedures for the project level air quality analysis of highway improvements, and paragraph 8 requires consistency between construction practices and the State Implementation Plan. Paragraph 6 contains procedures for the systems level air quality analysis and is the subject of these regional guidelines.

These guidelines are intended to serve as a supplement to the Air Quality Guidelines and as an aid to those involved in the preparation and review of air quality consistency determinations relating to transportation plans and programs. These regional guidelines are not intended to take the place of the Air Quality Guidelines (FHPM 7-7-9).

Figure 1 represents the process discussed in these guidelines. The narrative that follows refers to the appropriate sections of Figure 1 as shown by the broken lines.

Work elements covering related activities should be included in the annual Overall Work Program submitted to the Regional Intermodal Planning Group (IPG) and appropriate funding should be budgeted. The work required to be done by the Air Quality Guidelines is eligible for full funding by FHWA; however, if the region has 208 or AQMA designation, the MPO may wish to explore the possibility of using these programs as partial funding sources should additional funding be necessary. The mechanism described in Part I.A. of these guidelines should be shown in the "Activity Network" required by the "Guidelines for Metropolitan Planning Organizations' Preparation of Overall Work Program."

Figure 1



Parts II and III

PART I: DEVELOPMENT OF THE
CONSISTENCY DETERMINATION

A. Guidelines for the formation of a "Continuing Review Procedure"

In order to achieve an adequate degree of coordination in the regional comprehensive planning process between air quality planning and transportation planning, it is desirable to establish and maintain a mechanism that will insure that air quality planning constraints are properly considered in the transportation planning process and vice versa. Ideally, the mechanism will involve input and coordination among all of the cognizant agencies involved in either air quality planning or transportation planning. The Air Quality Guidelines refer to such a mechanism as a "continuing review procedure."

Rather than list the ingredients that are required to achieve an adequate review coordination mechanism, the following questions can be used to guide the Metropolitan Planning Organizations (MPO's) in their development of a continuing review procedure:

1. Which are the agencies responsible for air quality and transportation planning for the region?
2. What are the functional responsibilities of those agencies?
3. How do these responsibilities interrelate?
4. Who are the appropriate staff level contact individuals for each agency?
5. What has been the past interaction among the agencies?
6. What will be the future interaction among the agencies?
7. Which steps must be taken to bring about an adequate level of interaction among the agencies?
8. How will this be accomplished (formal agreement? modification of existing agreements? etc.)?
9. What timetable is proposed for accomplishment of this interaction?
10. How will this insure adequate integration of air quality considerations into the transportation planning process?

Where other requirements for integration of transportation and air quality planning exist, such as Air Quality Maintenance Planning (AQMP), these must be recognized and coordinated with the Continuing Review Procedure requirements.

B. Guidelines on the selection and use of an air quality analysis

A second requirement of the Air Quality Guidelines is an annual determination of consistency of the Regional Transportation Plan (RTP) with the State Implementation Plan (SIP) for air quality by the MPO policy board. In order to be meaningful, the consistency determination must be based upon a suitable technical analysis, which must be coordinated with all other air quality analyses of the RTP being made for other planning efforts (i.e., AQMP and EIR analyses). The following questions are presented in order to guide the MPO's in their selection of that technical analysis method:

1. What basic analysis technique (including simulation modeling) will be used?
2. How will the analysis technique be selected? (For example, the selection of an analysis method could be made by consensus of the agencies participating in the continuing review procedure.)
3. What are the assumptions upon which the analysis is made? How valid are these assumptions for the region under consideration? How sensitive is the analysis to the various assumptions?
4. What input data are required for the analysis?
5. Are these input data available? (If not, how will they be obtained?)
6. Upon what assumptions are the input data based: How valid are these assumptions for the region under consideration? How sensitive is the analysis to these assumptions?

Further guidance on the selection of a level of analysis is found in Appendix B. The regional offices of FHWA and EPA are available to assist the MPO's in the selection of an analysis technique on an individual basis.

C. SIP strategy coordination

RTP/SIP consistency implies, among other considerations, the inclusion of SIP transportation control strategy measures into the RTP. The MPO/HA/air quality agency's continuing review mechanism should include the continuous assessment of both the SIP and the RTP for the purpose of determining the degree of progress being made toward that end.

1. What SIP measures come under the planning responsibilities of the MPO/HA?

2. What progress is being made toward incorporating these measures into the RTP?

3. What steps remain to be taken in order to fully incorporate all relevant SIP requirements into the RTP?

4. How will this be accomplished? What is the anticipated time schedule?

D. Mitigation of Air Quality Impacts

In the event that the air quality analysis uncovers any potential air quality problems that will result from implementation of the RTP, steps will need to be taken to insure that they are mitigated to the extent possible. As the Regional Transportation Plan evolves, additional mitigation measures may need to be included to offset any adverse impacts likely to result from implementation of the RTP.

1. What air quality problems have been identified in the air quality analysis (if any)?

2. What mitigation measures are proposed?

3. What evidence exists to indicate that these measures will be adequate?

4. How will these mitigation measures be incorporated into the RTP?

5. Should these mitigation measures be incorporated into other plans (i.e., the AQMP and/or the SIP)? If so, how will this be accomplished?

6. What progress has been made toward including in the current RTP those mitigation measures that have been proposed in previous years?

PART II: CONTENTS AND FORMAT OF AN ANNUAL CONSISTENCY DETERMINATION SUBMITTAL

The Air Quality Guidelines require the MPO and highway agencies to:

1. Establish a continuing review procedure with the air pollution control agency.
2. Assess the consistency of the transportation plans and programs with the approved SIP.
3. Annually solicit comments from the air pollution control agency prior to transportation plan approval by the policy board.
4. Identify and attempt to resolve differences with the air pollution control agency.

Further, the MPO policy board is required to make a formal annual determination of consistency between the current RTP and the approved SIP.

The Air Quality Guidelines also charge the Regional Administrators of the Federal Highway Administration and the Environmental Protection Agency with annually: (1) assessing the degree of coordination, and (2) reviewing the determination of consistency. With this in mind, following is a list of minimum items to be contained in the annual air quality submittal:

A. Contents

1. A description of the continuing review procedure: As a minimum, this should consist of a discussion of all the points in Part I.A. of these guidelines. It is likely that a flow chart (with a time line) will be of great value in demonstrating how the various agencies will interact and how the review procedure will be integrated into the transportation planning process. The inclusion of such a flow chart into the air quality submittal is strongly encouraged.
2. Technical analysis: This portion shall consist of a discussion of the rationale and a summary of the analysis used to support the determination of consistency. Included in the discussion of the rationale will be, as a minimum: the points discussed in Part I.B. of these guidelines, the results of the technical analysis to determine what the future impact of the RTP on air quality will be, and the points outlined in Part I, Sections C and D, of these guidelines.

3. Written comments received from the air pollution control agency: This should contain only those comments pertinent to the RTP/SIP Consistency Determination. Unless there is complete agreement between the MPO and the APCA, this section should contain a thorough discussion of the disposition of the air pollution control agency's comments by the MPO policy board. For example, if the MPO policy board makes a positive determination of consistency in spite of a negative determination by the air pollution control agency, a detailed explanation is obviously warranted.
4. A record of consistency determination by the policy board: Any reasonable documentation, such as: a copy of a resolution passed by the policy board (desirable); a copy of the policy board meeting minutes; or a statement that the consistency determination was made by the policy board in the MPO's transmittal letter will be acceptable. (However, if the policy board's consistency determination contains qualifying clauses, then these qualifying statements should be pointed out and fully explained in the transmittal.)
5. A report on accomplishments addressing previously cited deficiencies relating to the Air Quality Consistency Determination.
6. The Transportation Plan and Program, or suitable summary.

B. Format

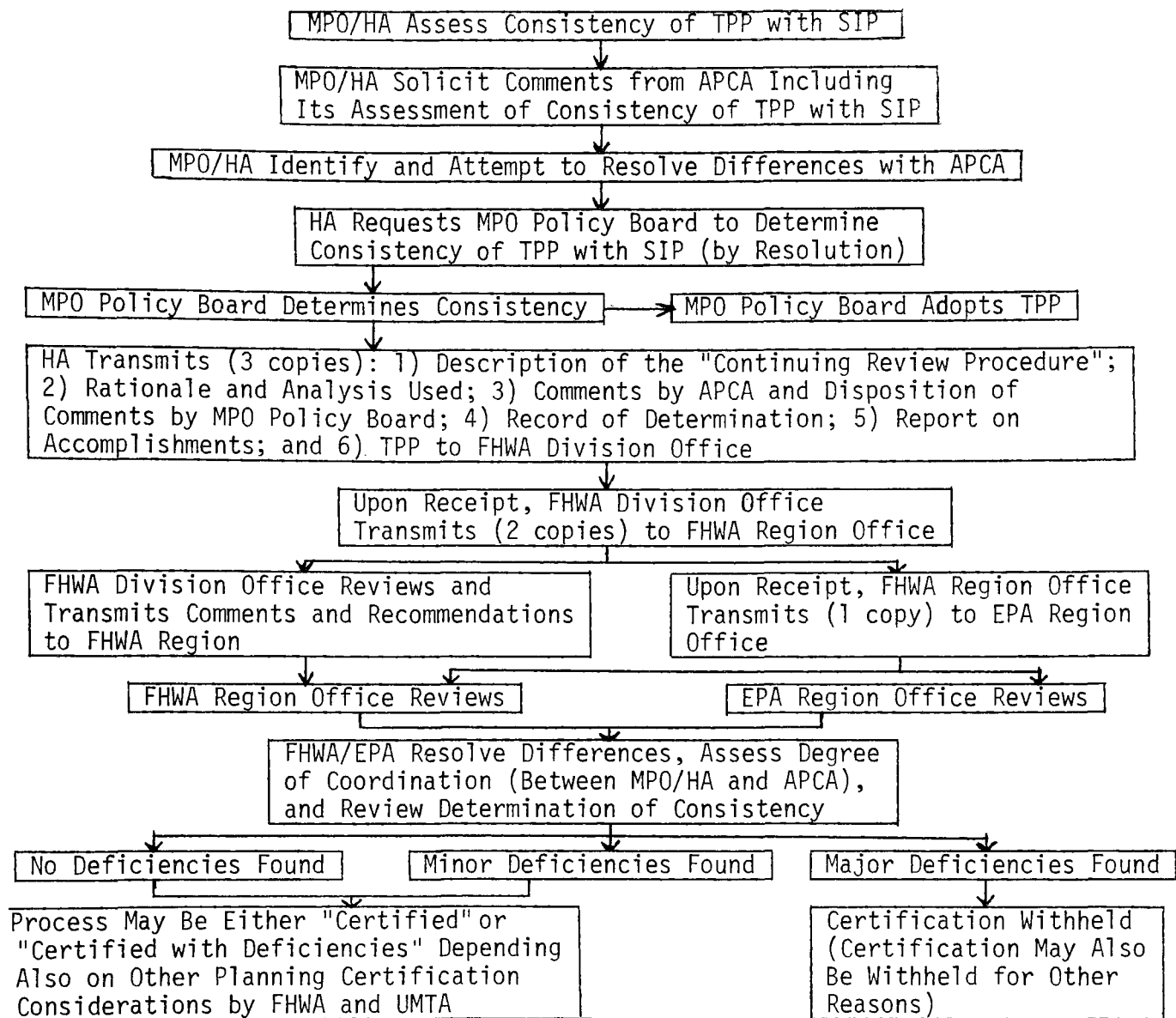
To the extent possible, all of the pertinent information related to the Air Quality Consistency Determination shall be consolidated into a separate statement which should be self-contained to the extent practicable. In the case where an Environmental Impact Report is prepared on the plan, it may be necessary to repeat information contained in the EIR to eliminate excessive references to it.

PART III: REVIEW/APPROVAL PROCESS

Figure 2 is a flow chart combining the steps required by the Air Quality Guidelines (FHPM 7-7-9) and the steps that will be followed by this region in reviewing the air quality submittals. Note particularly that three copies of the submittal will be needed.

It is advisable that the highway agency and the MPO keep FHWA apprised of significant accomplishments throughout the development of the annual consistency determination. This should be done as informally as possible.

Figure 2



LEGEND:

HA	Highway Agency
MPO	Metropolitan Planning Organization (3C Planning Agency)
APCA	Air Pollution Control Agency (State and/or Local)
TPP	Transportation Plan and Program
SIP	State Implementation Plan (as approved or promulgated by EPA, latest revision)
FHWA	Federal Highway Administration
EPA	Environmental Protection Agency
UMTA	Urban Mass Transportation Administration

*Reference FHPM, Volume VII, Chapter 7, Section 9, paragraph 6



U. S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

FEDERAL-AID HIGHWAY PROGRAM MANUAL

VOLUME	7	RIGHT-OF-WAY AND ENVIRONMENT
CHAPTER	7	ENVIRONMENT
SECTION	9	AIR QUALITY GUIDELINES

Transmittal 105
November 26, 1974
HEV-10

- Par. 1. Purpose
 2. Authority
 3. Definitions
 4. Policy
 5. Application
 6. Urban Transportation Plans and Programs
 7. Highway Sections
 8. Construction of Highways

1. PURPOSE

- * *To issue policy and procedures covering air quality guidelines for use in planning, location and construction of highway improvements pursuant to 23 U.S.C.*

2. AUTHORITY

- a. *23 U.S.C., Sections 109(h) and 109(j).*
b. *42 U.S.C., Section 4332.*

3. DEFINITIONS

- a. *Action. The construction or reconstruction, including associated activities, of a highway section.*
b. *Air Quality Control Region. An interstate or intra-state area designated by the Administrator of the Environmental Protection Agency (EPA) pursuant to U.S.C. 1857 (Section 108 of the Clean Air Act of 1970).*

*Regulatory material is italicized

- c. Air Pollution Control Agency. The State, local or multistate agency as defined by 42 U.S.C. 1857 (Section 302(b) of the Clean Air Act of 1970).
- d. Environmental Impact Statement (EIS). A detailed statement prepared in response to 42 U.S.C. 4332 (Section 102(2)(C) of the National Environmental Policy Act of 1969).
- e. Highway Agency. The agency with the primary responsibility for initiating and carrying forward the action. For highway sections financed with Federal-aid highway funds, the highway agency will normally be the appropriate State, county or city highway agency. For highways financed with other funds, such as forest highways, park roads, etc., the highway agency will be the appropriate Federal or State agency with the primary responsibility for initiating and carrying forward the action.
- f. Highway Section. A highway development proposal between logical termini (population centers, major traffic generators, major crossroads, etc.) as normally included in a location study or multiyear highway improvement program.
- g. Indirect Source Review Agency. The agency designated in an applicable State implementation plan to meet the requirements of 40 CFR 51.18 (38 Federal Register 15834, June 18, 1973).
- h. National Ambient Air Quality Standards. The National Ambient Air Quality Standards established pursuant to 42 U.S.C. 1857 (Section 109 of the Clean Air Act of 1970).
- i. Negative Declaration. A document supporting a determination that a proposed major action will not have a significant impact upon the quality of the human environment of a magnitude to require the processing of an EIS.
- j. Policy Board (Policy Committee, Coordinating Committee, etc.). That group of local officials, individuals or representatives of agencies or organizations which have been designated by the State to provide policy guidance and direction in the conduct of the urban transportation planning process in an urbanized area.

- k. Urban Transportation Planning Process (3C Planning Process). The continuing, comprehensive and cooperative planning process established pursuant to 23 U.S.C. 134.
- l. State Implementation Plan (SIP). The plan required by 42 U.S.C. 1857 (Section 110 of the Clean Air Act of 1970) to attain and maintain a national ambient air quality standard. For the purpose of this directive, an approved SIP is the implementation plan, or most recent revision thereof, which has been approved or promulgated by the Environmental Protection Agency under Section 110 of the Clean Air Act.
- m. Urban Transportation Plans and Programs. Proposed areawide plans and proposed capital improvement programs developed through the urban transportation planning process.

4. POLICY

It is the policy of the Federal Highway Administration (FHWA) that highway agencies responsible for the planning, location and construction of highways pursuant to 23 U.S.C. consult with the local, State and Federal air pollution control agencies, as appropriate, and assure that decisions on highways are consistent with approved State implementation plans and that adequate consideration is given to preservation and enhancement of air quality.

5. APPLICATION

Land use, air quality and transportation planning are interdependent. It is, therefore, essential that planning activities be closely coordinated in the conceptual stages and throughout the highway development process. The highway agency shall follow the appropriate procedures outlined in paragraphs 6 through 8 in order to assure that the planning, location, and construction of highways are consistent with the approved State implementation plan for attainment and maintenance of air quality standards.

- a. The continuing review procedure described in paragraph 6 shall be a requirement for each transportation planning process established pursuant to 23 U.S.C. 134.

- b. The procedures for consideration of air quality described in paragraph 7 shall apply to the processing of Federal-aid highway proposals.*
- c. The procedures described in paragraph 8 shall apply to the consideration of construction specifications as related to air quality.*

6. URBAN TRANSPORTATION PLANS AND PROGRAMS

- a. To assure that land use and transportation planning conducted pursuant to 23 U.S.C. 134 and air quality planning conducted pursuant to 42 U.S.C. 1857 and the transportation plans resulting therefrom are coordinated, the responsible highway agency in cooperation with each 3C planning agency shall establish a continuing review procedure with the air pollution control agency to:*
 - (1) assess the consistency of the transportation plan and program with the approved State implementation plan,*
 - (2) solicit comments annually from the air pollution control agency including its assessment of the consistency of the transportation plan and program with the approved State implementation plan prior to transportation plan approval by the policy board, and*
 - (3) identify and attempt to resolve differences with the air pollution control agency.*
- b. The highway agency shall request the policy board to annually determine the consistency of the current transportation plan and program with the approved State implementation plan. The highway agency shall furnish FHWA a record of this determination along with any written comments received from the air pollution control agency and the policy board's disposition of these comments.*
- c. The Regional Federal Highway Administrator, in consultation with the Regional Administrator of the Environmental Protection Agency, shall annually:*
 - (1) assess the degree of coordination in the planning process between planning for transportation and air quality planning, and*

- (2) review the determination on consistency between the transportation plan and program and the approved State implementation plan.
- d. Any deficiencies shall be cited to the highway agency. Significant deficiencies (including major instances of inconsistency) shall be considered by the Regional Federal Highway Administrator as grounds for withholding planning certification.

7. HIGHWAY SECTIONS

- a. The following procedures shall apply to highway sections for which both the draft and the final environmental impact statement are submitted to FHWA or for which a negative declaration is considered by FHWA after the effective date of this directive:
 - (1) The studies and coordination activities related to the construction or reconstruction of a highway section shall include an appropriate consideration of air quality. The level of this consideration and/or the air quality analysis is to be determined on the basis of the nature and location of the highway section, anticipated traffic volume, existing air quality problems, sensitivity of nearby receptors to air pollution, and meteorological conditions. It is anticipated that lower volume facilities in areas without critical air quality problems can be satisfactorily analyzed using simplified analysis techniques and that onsite measurements will not be required. High volume facilities in areas with critical air quality problems will usually require onsite data gathering and a high level of analysis.
 - (2) For highway sections where a negative declaration rather than an EIS is to be prepared, the negative declaration shall briefly outline the air quality considerations involved in the development of the highway proposal. For highway sections subject to the requirements of 40 CFR 51.18 (see Attachment 1), "Review of New Sources and Modifications," the negative declaration shall also include a record

of required coordination with the indirect source review agency. The FHWA Division Engineer shall review the air quality information in the negative declaration for adequacy. FHWA adoption of the negative declaration shall constitute the FHWA determination that the highway is considered to be consistent with the approved State implementation plan.

- (3) For highway sections on which a draft EIS is prepared, the draft shall contain:*
 - (a) an identification of the air quality impact of the highway section,*
 - (b) an identification of the analysis methodology utilized,*
 - (c) a brief summary of the early consultation with the air pollution control agency and, where applicable, a brief summary of consultation with the indirect source review agency,*
 - (d) any comments received from the air pollution control agency and, where applicable, any comments received from the indirect source review agency, and*
 - (e) the highway agency's determination on the consistency of each alternative under consideration with the approved State implementation plan.*
- (4) Where required by 40 CFR 51.18 (see Attachment 1), the preferred alternative shall be submitted to the indirect source review agency for review. The proposed final EIS shall not be submitted to the FHWA Regional Administrator for adoption if the indirect source review agency has found as a part of the procedures established pursuant to 40 CFR 51.18 that the highway section will result in a violation of applicable portions of the control strategy or will interfere with the attainment or maintenance of the National Ambient Air Quality Standards.*

- (5) *The final EIS may be adopted by the FHWA only after FHWA has determined that the proposed highway section is consistent with the approved State implementation plan. The determination on consistency shall be made by the Regional Federal Highway Administrator.*
 - (6) *In making his determination, the Regional Federal Highway Administrator shall consider the following:*
 - (a) *the adequacy and the conclusions of the air quality analysis,*
 - (b) *the comments received from the air pollution control agency resulting from the requirements of paragraphs 6a(2) and 7a(3) (Where issues raised by the air pollution control agency have not been resolved by the highway agency or the FHWA Division Engineer prior to submission of the proposed final EIS to the FHWA, the Regional Administrator shall not make a positive determination on consistency without first consulting with the EPA Regional Administrator), and*
 - (c) *comments received from other agencies as part of the EIS procedure and the disposition of these comments.*
 - (7) *The Regional Federal Highway Administrator shall furnish the results of any consultation with the EPA Regional Administrator on the final EIS and the FHWA determination on consistency in the transmitted information for those final environmental impact statements which require review by FHWA Headquarters.*
- b. *The following procedures shall apply to highway sections for which the draft environmental impact statement was submitted to the FHWA prior to the effective date of this directive and for which the final environmental impact statement is submitted to FHWA after the effective date of this directive:*
- (1) *Prior to the processing of the final EIS, the highway agency, in consultation with the FHWA Division Engineer, shall review available material*

on the development of the highway section, including the draft EIS, and shall make a written determination on the adequacy of the consideration of air quality for the highway section.

- (2) If the determination concludes that the consideration of air quality is adequate, the final EIS may be processed following established EIS processing procedures.*
- (3) If the determination concludes that additional information and/or analysis are necessary, a revised draft or supplement shall then be furnished to appropriate local, State and Federal agencies with expertise in air quality. At least 45 days shall be allowed for comment by interested agencies.*
- (4) Comments received shall be incorporated and addressed in the final EIS as required in Volume 7, Chapter 7, Section 2 of the Federal-Aid Highway Program Manual, "Environmental Impact and Related Statements."*
- (5) Where required by 40 CFR 51.18 (see Attachment 1), the preferred alternative shall be submitted to the indirect source review agency for review. The proposed final EIS shall not be submitted to the FHWA Regional Administrator for adoption if the indirect source review agency has found as a part of the procedures established pursuant to 40 CFR 51.18 that the highway section will result in a violation of applicable portions of the control strategy or will interfere with the attainment or maintenance of the National Ambient Air Quality Standards.*
- (6) Where issues raised by the air pollution control agency have not been resolved by the highway agency or the FHWA Division Engineer prior to submission of the proposed final EIS to the FHWA, the FHWA Regional Administrator shall not make a positive determination on consistency without first consulting with the EPA Regional Administrator.*
- (7) Adoption of the final EIS by the FHWA shall constitute the FHWA determination that the highway section is considered to be consistent with the approved State implementation plan.*

c. *The following procedures shall apply to highway sections for which the final environmental impact statement is submitted to FHWA not later than the effective date of this directive, for which a substantial amount of the grade and drain work remains to be advertised for bids, and for which a decision on the consistency of the highway section with the approved State implementation plan has not been made by the Regional Federal Highway Administrator:*

- (1) The highway agency shall review the information available on the development of the highway section, including the final EIS, and shall prepare a report for the FHWA on the consistency of the proposed action with the approved State implementation plan.*
 - (a) If the highway agency or the FHWA Division Engineer concludes that additional information and/or analysis are necessary to make a determination on consistency, the highway agency shall develop such information or perform such analysis before making the report.*
 - (b) If the information on the development of the highway section or the air quality analysis indicates that implementation of the proposed action will result in a significant air quality impact, the highway agency shall solicit comments from and consult with the air pollution control agency. In such cases, the report shall set forth the anticipated air quality effects of the proposal, a brief summary of coordination with the air pollution control agency, including comments received, and a discussion of substantial unresolved air quality issues, if any.*
- (2) The FHWA Division Engineer may concur in such reports, except those which include an inconsistency finding by the air pollution control agency. Concurrence in the report by the FHWA Division Engineer shall constitute the FHWA determination that the highway section is considered to be consistent with the approved State implementation plan.*

- (3) *Reports containing an inconsistency finding shall be forwarded to the FHWA Regional Administrator. Before concurring in proposed highway section approvals, the FHWA Regional Administrator shall consult with the EPA Regional Administrator for the purpose of reviewing the air quality information and consistency determination presented in the report.*
 - (4) *Concurrence in proposed highway section approvals by the FHWA Regional Administrator shall constitute the FHWA determination that the highway section is considered to be consistent with the approved State implementation plan.*
 - (5) *The FHWA Regional Administrator may request preparation and processing of a revised or supplemental EIS for the highway section where, in his judgement, the air quality issues raised are of such magnitude as to make the processing in this form necessary. The revised or supplemental EIS shall be processed in accordance with procedures contained in Volume 7, Chapter 7, Section 2 of the Federal-Aid Highway Program Manual, "Environmental Impact and Related Statements."*
- d. *Advancement of highway sections may continue under the provisions of 23 U.S.C. where the Regional Federal Highway Administrator has made a consistency determination in accordance with the interim regulations (23 CFR 770, 38 FR 31677) or where a substantial amount of the grade and drain work has been authorized prior to the effective date of this directive.*

8. CONSTRUCTION OF HIGHWAYS

- a. *The highway agency shall take steps to assure that its current specifications, and any revisions thereof, and the use of specific equipment and/or materials associated with construction are consistent with the approved State implementation plan. This shall be accomplished in coordination with the air pollution control agency.*
- b. *The highway agency shall establish procedures in order that any changes in the State implementation plan will be reviewed to determine if revisions to the construction specifications will be necessary.*

- c. Revisions to the construction specifications resulting from the above requirements shall be made in consultation with FHWA.*

REVIEW OF NEW SOURCES AND MODIFICATIONS
(40 CFR 51.18)
"Indirect Source Regulations"

As a result of a court order by the U.S. Court of Appeals for the District of Columbia, Code of Federal Regulations Title 40, Chapter I, Part 51, Section 18 (40 CFR 51.18), "Review of New Sources and Modifications," was promulgated June 18, 1973, requiring the States to submit revisions to the State implementation plans in order to include a consideration of the air quality impact not only of pollutants emitted directly from the stationary sources, but also of pollution arising from mobile source activity associated with such buildings or facilities (termed indirect sources). Indirect sources were defined to include, but were not limited to, highways and roads, shopping centers, commercial or industrial developments, recreation centers, parking lots and garages, sports stadiums and airports.

In order to comply with the indirect source regulations, the States were to submit revisions to their State implementation plans by August 15, 1973; where States submitted inadequate plan revisions or where no submission was made, the Environmental Protection Agency (EPA) was required to promulgate plan revisions which would meet the air quality maintenance requirements.

By August 15, 1973, only a very few States had submitted acceptable revisions to their State implementation plans. Consequently, EPA promulgated regulations for review of indirect sources for those States not submitting acceptable revisions. The promulgated regulations (40 CFR 52.22) were published in final form on February 25, 1974 (39 FR 7270), and revised on July 9, 1974 (39 FR 25292).

These regulations assign the responsibility for review of indirect sources to the Administrator of EPA. The revised regulation (40 CFR 52.22) requires that those highways in Standard Metropolitan Statistical Areas (SMSA) meeting the following criteria be subject to indirect source review:

1. any new highway project with an anticipated average annual daily traffic volume of 20,000 or more vehicles per day within 10 years of construction, or

2. any modified highway project which will increase average annual daily traffic volume by 10,000 or more vehicles per day within 10 years after modification.

For new highway projects with anticipated traffic volume greater than 20,000 but less than 50,000 vehicles per day, an evaluation of the carbon monoxide concentration at reasonable receptor locations is required.

For new highway projects with an anticipated average daily traffic volume of 50,000 or more vehicles within 10 years of construction (or modified highway projects resulting in an increase of the average daily traffic volume by 25,000 or more vehicles within 10 years after modifications) an area-wide analysis of expected concentrations of photochemical oxidants and nitrogen dioxide is required in addition to the evaluation of carbon monoxide concentrations.

The regulations provide that the construction or modification of an indirect source shall not commence after December 31, 1974, without approval from EPA. The phrase "to commence construction" has been defined in the regulation as follows: "To engage in a continuous program of onsite construction including site clearance, grading, dredging, or land filling specifically designed for an indirect source in preparation for the fabrication, erection, or installation of the building components of the indirect source."

The regulations establish a process with specific time frames identified for each element of the review process. Within 30 days of receipt of an indirect source application, EPA is required to make a preliminary determination of approval or disapproval and to notify the public of the proposal and of its preliminary determination. EPA is also required to allow an additional 30 days for public comment. No later than 10 days after the 30-day comment period, the applicant may submit a written response to any comments submitted by the public. EPA must take final action on the application within 30 days after the close of the public comment period (or within 90 days of the application date).

The Administrator of EPA has continued to encourage States to develop and submit their own indirect source review procedures with the understanding that EPA will revoke its promulgated plan upon finding a State's procedures to be acceptable.*

*As of September 1, 1974, the States of Alabama, Florida, Kentucky, and North Carolina had submitted acceptable revisions to their State implementation plans to provide for the review of indirect sources.

GUIDELINES FOR ANALYSIS OF CONSISTENCY
BETWEEN TRANSPORTATION AND AIR QUALITY PLANS AND PROGRAMS



PREPARED JOINTLY BY
THE FEDERAL HIGHWAY ADMINISTRATION
and
THE ENVIRONMENTAL PROTECTION AGENCY

April 1975

UNITED STATES GOVERNMENT

Memorandum

DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

DATE: APR 11, 1974

SUBJECT: "Guidelines for Analysis of Consistency Between
Transportation and Air Quality Plans and Programs"

In reply
refer to: HHP-23

FROM : Associate Administrator for Planning
Washington, D.C. 20590

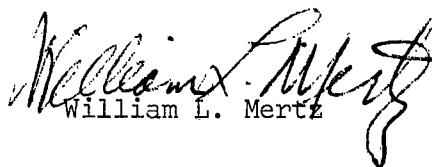
TO : Regional Federal Highway Administrators
Regions 1 through 10

The attached "Guidelines for Analysis of Consistency Between Transportation and Air Quality Plans and Programs" were developed jointly by the Federal Highway Administration (FHWA) and the Environmental Protection Agency (EPA). The guidelines represent agreement between the FHWA and the EPA, at the national level, on the methods of analysis appropriate for determining whether metropolitan planning organization transportation plans and programs are consistent with State plans for implementing national ambient air quality standards. A primary objective in developing the guidelines was to identify levels of analysis commensurate with the severity of the air pollution problem in a specific geographic area.

The guidelines for analysis are being distributed to assist in implementing the procedures described in the FHWA "Air Quality Guidelines," Volume 7, Chapter 7, Section 9, of the Federal-Aid Highway Program Manual. As noted in the introduction to the guidelines for analysis, the guidelines should not be interpreted as a limitation on the types of air quality assessment methods that may be used. The purpose of the analysis guidelines is to provide assistance to all the agencies preparing and reviewing consistency determinations in reaching agreement on what constitutes an adequate air quality analysis.

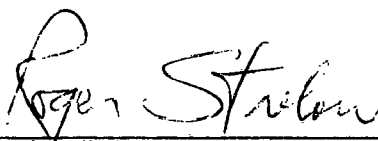
The joint FHWA-EPA working group that prepared the analysis guidelines will refine and supplement the guidelines, as necessary, based on the experience gained during the consistency determination reviews. Any comments you may have concerning the analysis guidelines will be appreciated.

The EPA concurs in the recommendations of air quality analysis procedures contained in "Guidelines for Analysis of Consistency Between Transportation and Air Quality Plans and Programs."


William L. Mertz

Attachment

Concurrence by:


Roger Strelow
Assistant Administrator for Air and
Waste Management
Environmental Protection Agency

Date:

APR 25 1975

I.	INTRODUCTION	1
II.	DETERMINATION OF LEVEL OF ANALYSIS	2
A.	Analysis Area Air Quality	3
	1. AQCR Priority Classification	
	2. TCP Adoption or Promulgation	
	3. AQMA Designation	
B.	Years of Analysis	5
	1. Initial Air Quality Analysis Years	
	2. Long-Range Plan Year	
	3. Interim Analysis Years	
	a. Attainment Year	
	b. Short-Range Transportation Improvement Program (TIP) Year	
	c. AQMP Year	
C.	Analysis Input Data Requirements	8
	1. Development of Levels A and B Data	
	2. Determination of Appropriate Data Level	
D.	Methods of Analysis	12
	1. Total Pollutant Burden	
	2. Rollback Modeling	
	3. Air Quality Simulation Modeling	
	4. Selection of Analysis Method	
III.	INTERAGENCY COORDINATION	14
IV.	DETERMINATION OF CONSISTENCY	16
V.	APPENDICES	
A.	Priority Classification Criteria	
B.	Priority I AQCRS	
C.	Priority III AQCRS With Violations on the NAAQS	
D.	AQCR With TCPS	
E.	AQMA's for Transportation Related Pollutants	

GUIDELINES FOR ANALYSIS OF PLAN AND PROGRAM CONSISTENCY

I. INTRODUCTION

The 1970 Federal-Aid Highway Act added Section 109(j) to Title 23 U.S.C. and directed the Department of Transportation to develop and promulgate guidelines to assure that highways constructed with Federal funds are consistent with any approved plan for implementation of any ambient air quality standard. On November 26, 1974, the Federal Highway Administration (FHWA) published final regulations ^{1/} setting forth the procedures for establishing such consistency with approved State air quality implementation plans. The regulations require annual determinations by the policy board of Metropolitan Planning Organizations (MPO's) that the transportation plans and programs of the agencies are consistent with the State implementation plans. The regulations also require continuing coordination between the transportation planning process and the relevant air pollution control agencies.

Under the FHWA regulations, the Environmental Protection Agency (EPA) has certain responsibilities in the implementation of section 109(j). The FHWA regional administrator must consult annually with the regional administrator of the EPA to (1) assess the degree of coordination in the planning process between planning for transportation and air quality planning, and (2) review the determination on consistency between the transportation plan and program and the approved State implementation plan. The primary purpose of these guidelines, developed jointly by the EPA and FHWA, is to assist State and local agencies in identifying the appropriate levels of analyses for determining the effect of MPO's transportation plans and programs on air quality and to provide EPA

and FHWA regional offices with guidance in reaching agreement in their review of air quality assessments upon which the policy board's consistency determinations are made.

The EPA and the FHWA recognize that, in many instances, these guidelines will not be available in sufficient time to be used by State and local agencies in making the consistency determinations required for the 1975 fiscal year. These guidelines should not be interpreted as a limitation on the types of air quality assessment methods that may be used. The guidelines are not meant to require additional study or analysis if the agencies preparing the air quality assessments to be used as a basis for the consistency determinations have reached agreement with reviewing agencies on the appropriate methods of analysis. The guidelines are also not meant to restrict the scope of already agreed upon studies. If agreement is not reached on what constitutes an adequate analysis on which to base a consistency determination, these guidelines should be used as a means of reaching agreement. Although some minor changes in the guidelines may occur as a result of the increased experience gained during the 1975 consistency determinations, no major modifications are anticipated.

II. DETERMINATION OF THE LEVEL OF ANALYSIS

The scope and detail of the air quality analysis on which the policy board's consistency determinations are based should be commensurate with existing and possible future air quality problems in the MPO planning areas.

The air quality analysis procedures can be separated into four components. By using variations of each of these components, levels of analysis can be developed which are appropriate for specific air quality problems, existing or potential, in the MPO planning areas.

The four components are:

- A. Analysis Area Air Quality
- B. Analysis Years
- C. Analysis Input Data Requirements
- D. Analysis Methods

A. Analysis Area Air Quality

The level of air quality analysis and the years for which the analysis is carried out should be based on the nature and severity of the existing and forecasted air quality problems in the MPO's planning area. Three criteria are used to determine the nature and severity of transportation-related air quality problems:

- 1. Air quality control region (AQCR) priority classifications for carbon monoxide (CO), photochemical oxidants (O_x) and nitrogen dioxide (NO₂).
- 2. Transportation control plan (TCP) adoption or promulgation.
- 3. Air quality maintenance area (AQMA) designation for CO, O_x or NO₂.

1. AQCR priority classification

In 1972 AQCR's were classified priority I or priority III for CO, O_x, and NO₂, the transportation-related pollutants. The priority classifications were based either on existing air quality measurements or, if no air quality measurements had been made, on the

size of the urban population in the AQCR. The purpose of the classifications was to establish the levels of analysis necessary in preparing State plans to implement the National Ambient Air Quality Standards (NAAQS). AQCR's were classified priority I where pollutant concentrations at certain levels above the NAAQS were measured. In the absence of measured data AQCR's were also classified priority I, with respect to CO, O_x and NO₂, if they contained an area whose 1970 "urban place" population exceeded 200,000. All other AQCR's were classified priority III. The CO, O_x, and NO₂ concentrations used as criteria for making AQCR priority classifications are listed in Appendix A. AQCR's which have been classified priority I for any of these three pollutants are listed in Appendix B. The counties and urban areas in each AQCR are listed in the EPA publication "Federal Air Quality Control Regions."^{2/}

Some areas, where there were no air quality measurements and where the 1970 populations were under 200,000, were erroneously designated priority III. Recent air quality monitoring data have revealed that some of these areas now experience pollutant concentrations in excess of the levels used as criteria for priority I classification. In addition, other areas having measured pollutant concentrations less than priority I level at the time of AQCR classification now have levels sufficiently high to be reclassified priority I. Attachment C lists those priority III AQCR's in need of reclassification. Because the EPA intends to change the priority I criteria from the levels listed in Appendix A to levels coinciding with NAAQS, Appendix C lists all priority III areas with measured concentrations above NAAQS. The MPO Policy Board should be aware of the impending classification changes and should begin making preparation for appropriate AQCR air quality analysis.

2. TCP adoption or promulgation

In 31 metropolitan areas, the emission reductions resulting from implementation of relatively stringent stationary source controls and of Federal emission standards for new motor vehicles will be insufficient to attain national ambient air quality standards by the attainment dates required by the Clear Air Act. In these areas measures were adopted by the States or promulgated by the EPA to reduce emissions from individual vehicles or to reduce vehicle travel. The areas in which TCP's are required as parts of the State plans to implement NAAQS are listed in Appendix D.

3. AQMA designation

The States and the EPA have made preliminary identifications of geographical areas where the potential exists for violation of NAAQS in the years following the attainment of these standards through 1985. For these areas, States must include within their air quality implementation plans additional measures to assure the maintenance of the NAAQS, once attained. These additional measures comprise and are referred to as the "air quality maintenance plan" (AQMP) for the period 1975-1985. Areas which have been tentatively designated AQMA's for transportation-related pollutants are listed in Appendix E.

B. Years of Analysis

Again, the years for which analyses of the MPO transportation plans and programs should be carried out as part of the determination of consistency with State air quality implementation plans should be determined by the nature and severity of the air pollution problem

in the planning area and by whether violations of NAAQS are existing or potential. The analyses should be completed for an initial air quality analysis year, for the year of the long-range plan, and for one or more interim years. The interim years may include the year for NAAQS attainment, and the year projects in the short-range transportation improvement program (TIP) are expected to be completed, or the year of the AQMP.

1. Initial air quality analysis year

Analysis of some past year is necessary to establish relationships between air pollutant emissions and concentrations which can then be used in forecasting the future year emissions allowable if NAAQS are to be attained and maintained. The selection of the initial air quality analysis year is determined primarily by the availability of air quality concentration measurements. In some instances, air pollutant concentrations will not have been monitored during the most recent year for which the MPO has collected and analyzed transportation and land use information. In these cases, a proportional type adjustment in the emissions estimated from base year transportation and land use data will be necessary to have measured air quality concentrations and emissions data for a common year.

2. Long-range plan year

The long-range plan year will vary from area to area depending, in part, on the year the transportation planning process was initiated or on the year of the most recent plan update. In general, the target year of the long-range plan will be about 20 to 25

years from the year of plan development or the most recent update and will include evaluation of alternative transportation systems for one or more land use forecasts. One alternative normally evaluated is a "no-build" case where future transportation demands are accommodated on the existing transportation system. In general, the analysis of the effect of the long-range plan on air quality should include an assessment of the no-build alternative as well as of the selected plan alternative.

3. Interim analysis years

To assure attainment and maintenance of NAAQS in AQCR's where violations of the standards now exist or are forecasted, one or more years between the base year and the year of the long-range plan should be analyzed as part of the consistency determination. If a major highway or airport requiring an indirect source permit from EPA or a State, or local agency is being proposed, this may also influence the interim year or years selected for analysis.

a. Attainment year. The 1970 amendments to the Clean Air Act require that NAAQS must be attained by 1975 or no later than 1977, if an extension for attainment has been granted by the Administrator of the EPA. To assure that the air quality standards are attained within the applicable time frame, those areas where transportation control plans have been adopted by States or promulgated by the EPA should be analyzed for the attainment year.

b. Short-range Transportation Improvement Program (TIP) Year. The short-range TIP identifies proposed transportation system improvements proposed for implementation in the planning area in the near term. These programs represent the

MPO's projection of projects proposed for implementation and, as such, provide an indication of what the transportation system will include in some future year prior to the long-range plan target year. By estimating the emissions from the existing transportation system and including the short-range program improvements, it is possible to provide a general indication of the air quality of the area in the year the short-range program is fully implemented and open to traffic. This year will be approximately 10 years from the current year and may coincide with the AQMP year.

c. AQMP year. Additional provisions are being added to State plans to implement NAAQS to assure that the plans provide for maintenance of the standards once attained. States are required by EPA regulations to develop air quality maintenance plans for 1985 for those geographical areas where a potential exists for future violations of standards. For these areas, some form of analysis should be conducted for 1985 to assure that the transportation plan is consistent with the AQMP when AQMP's are required for the transportation-related pollutants (CO , O_x and NO_2).

C. Analysis Input Data Requirements

Two general levels of transportation and land use data, A and B, may be used as input in estimating the emissions and air quality information necessary to assess whether the plans and programs developed by the MPO's are consistent with State plans to attain and maintain NAAQS. The basic difference between levels A and B is the manner in which motor vehicle travel and land use data, which provide the basis for estimating mobile and stationary source emissions, are determined. The level of data input appropriate for use in the analyses on which the consistency

determinations are based is once again dependent on the severity of the air pollution problem.

1. Development of levels A and B data

Level A analysis data is that information which results from the land use and transportation modeling and survey procedures typically used in transportation planning. In assessing the air quality associated with MPO transportation plans and programs using level A data, the results of these procedures are used directly. For example, motor vehicle emissions for past years are determined using information such as vehicle miles of travel (VMT), average speeds, and travel mode distributions available from the network assignments. Similarly emissions from stationary sources are calculated using information from land use inventories. Emissions for the year of the long-range plan are forecasted using the results of travel models for estimating motor vehicle emissions and the results of an activity allocation process for estimating stationary source emissions.

Level B analysis data is that data which does not result directly from land use and transportation modeling and survey procedures, but is determined by interpolation between information available for the years for which level A analysis data has been developed. Level B analysis data is used primarily to estimate emissions for intermediate years when the air quality problems in a given area appear minor and do not justify development of level A analysis data. For example, if an urbanized area is part of a priority I AQCR, but has not been designated as an AQMA and has no TCP requirements, then B level data would be appropriate for the intermediate year analysis. The travel data needed to estimate mobile source emissions for years between a past year and the year of the long-range plan can be interpolated from the past year travel data developed

through network assignment (A level) and the plan year travel data forecasted by travel models (A level). Similarly, land use data needed to determine intermediate year stationary source emissions can be determined by interpolation between past year land use inventories and projected land use developed through a land use allocation process.

2. Determination of appropriate data level

The development of level A data requires a substantial amount of time and resources. Only a limited number of MPO's develop such data for any years between the year of the long-range plan preparation or update and the target year for the long-range plan. Because of the time and resources required, level A data should be developed for only areas where a serious transportation related air quality problem has been forecasted (see Table I). Also, because of the time and resources required, level A data shall be developed only when the MPO undertakes a level 2 major review of the long-range plan, as described in the FHWA instructional memorandum 50-4-68. The IM prescribes that transportation plans should undergo major reviews every five years. Until a level 2 review is carried out, level B data may be used in the consistency determination.

An additional consideration in determining the interim analysis years for which to develop level A data is the EPA requirement for preconstruction review of major new highways and highway modifications. For proposed new highways having anticipated daily traffic volumes of 50,000 or more vehicles within 10 years of construction or highway modifications which will increase average daily volumes by 25,000 vehicles, an areawide O_x and NO_2 assessment, similar to that necessary for consistency determination, will be required by the EPA. The EPA is now developing indirect source review procedures that will allow the system air quality analyses for consistency determination to be used to satisfy the indirect source requirements for assessments of the effects of new highways or highway modifications on O_x and NO_2 concentrations provided:

TABLE I RECOMMENDED METHODS OF ANALYSIS FOR ASSESSING
THE AIR QUALITY EFFECTS OF MPO PLANS AND PROGRAMS

ANALYSIS YEARS				
AQCR CATEGORY	INITIAL AIR QUALITY ANALYSIS YEAR	NAAQS ATTAINMENT YEAR	SHORT-RANGE TIP/AQMP YEAR	LONG-RANGE PLAN YEAR
Priority III AQCR for CO, O _x , or NO ₂ and with no AQMA designation for CO, O _x , or NO ₂	No annual analysis required; analysis only required at time of level 2 major reviews*	No analysis required	No analysis required	No annual analysis required; analysis only required at time of level 2 major reviews
Priority I AQCR for CO, O _x , NO ₂ with no TCP and no AQMA designation for CO, O _x , or NO ₂	A level transportation and land use data used to estimate emissions; emissions -- air quality relationship established	No analysis required	B level transportation and land use data used to estimate emissions; air quality estimated using proportional model	A level transportation and land use data used to estimate emissions; air quality estimated using proportional model
TCP area, but no AQMA designation for CO, O _x , or NO ₂		B level transportation and land use data used to estimate emissions; air quality estimated using proportional model		
AQMA designation for CO, O _x , or NO ₂ , but no TCP		No analysis required	B level transportation and land use data used to estimate emissions until level 2 major review; level A data used for year of level 2 review; air quality estimated using proportional model	
TCP area and AQMA designation for CO, O _x , or NO ₂		B level transportation and land use data used to estimate emissions; air quality estimated using proportional model		

*Analysis at the time of a level 2 major review should be the same as the analysis required for a priority I AQCR with no TCP and no AQMA designation.

NOTE: Once an air quality analysis has been satisfactorily performed, a reanalysis should be performed only when either the transportation plan is revised or updated or when there are changes in air quality requirements, or when other changes occur that significantly affect pollution.

- (1) the transportation systems analyzed include the proposed facility and
- (2) the analysis is based on A level data.

The indirect source analysis is required for the 10 years after the new highway modification is completed.

D. Methods of Analysis

There are three general methods that can be used to assess the effects of the MPO transportation plans and programs on air quality:

1. Total pollutant burden
2. Proportional or "rollback" modeling
3. Air quality simulation modeling

The method selected for use should reflect the nature and severity of the air pollution problem in the MPO transportation planning area. The conditions under which each method of analysis is generally appropriate are identified in Table I. Additional characteristics of the methods are summarized in the EPA publication, "Guidelines for Air Quality Maintenance Planning and Analysis, Volume 12: Applying Atmospheric Simulation Models to Air Quality Maintenance Areas." ^{3/}

1. Total pollutant burden

The total pollutant burden approach involves estimating only motor vehicle and stationary sources pollutant emissions associated with a particular transportation plan or program and does not include relating the resultant emissions to pollutant concentrations and forecasting air quality. The approach is thus appropriate for making relative comparisons between transportation system alternatives or between systems for different years, but cannot be used to demonstrate attainment or maintenance of NAAQS. The pollutant burden approach is generally most appropriate for urbanized areas where no transportation control strategies

are required and no violations of NAAQS for CO, O_x or NO₂ have been forecasted.

2. Rollback modeling

The basic assumption on which rollback modeling is based is that pollutant concentrations are proportional to pollutant emissions; any increase or decrease in pollutant emissions will be reflected by an accompanying increase or decrease in pollutant concentrations. Both linear and nonlinear models have been developed. In general, the linear models are appropriate for estimating concentrations of the relatively inert pollutants such as carbon monoxide, while the nonlinear models are appropriate for estimating photochemical oxidant concentrations.

3. Air quality simulation modeling

Air quality simulation models are numerical models for estimating the spatial and temporal distribution of pollutant concentrations in an urban area under various meteorological conditions. Models have been developed to determine the concentrations of both the relatively inert and the reactive pollutants. The models for the reactive pollutants are the least developed of the two types and have been applied to only a limited number of urban areas. Because air quality simulation modeling for reactive pollutants is still in essentially a research stage at this time, such modeling should not be a required method of analysis for the section 109 (j) consistency determinations. Modeling for reactive pollutants is an analysis method that is being encouraged to advance the present state-of-the-art in estimating O_x concentrations; it is not recommended for evaluating air quality as part of the MPO consistency determination.

4. Selection of analysis method

Table I combines the four components of analysis and provides general guidance as to the methods which are appropriate for determining the effects of a transportation plan or program on air quality. The recommendations of appropriate methods are based on the nature and severity of the air quality problem and on the quality of the information available. For example, the decision whether to use rollback modeling or total pollutant burden estimation would depend on the availability of air quality concentration measurements at some time relatively close to the base year or update year of the transportation plan.

III. INTERAGENCY COORDINATION

The discussion thus far has focused on the appropriate approaches to be used in completing the analyses necessary for a determination of consistency by the MPO policy board and has not dealt with the possible ways the analyses could be carried out. In many cases, certain expertise and information necessary to complete the analyses will not be readily available to the MPO or to the State transportation agency, but may rather be found in the State or local air pollution control agency. This is particularly true of expertise and information relating to stationary sources of air pollution and their control and to air quality monitoring. Because the results of the air quality analyses for consistency determinations should be useful to both transportation and air pollution control agencies, the FHWA and the EPA strongly encourage that the analyses be a coordinated effort involving both types of agencies. As indicated earlier, the FHWA air

quality guidelines do require interagency coordination; assessments of the coordination are made annually by the regional administrators of the FHWA and the EPA. The AQMP requirements which EPA will be publishing shortly also require interagency coordination.

The variations in State and local governmental organizations and responsibilities and in the expertise and information available within agencies precludes any description of a division of agency responsibilities which will have general applicability. Table II provides one possible way in which agency responsibilities could be divided in a coordinated analysis for consistency determination.

TABLE II. DIVISION OF AGENCY RESPONSIBILITIES IN CONSISTENCY DETERMINATION ANALYSES

Transportation/Land Use Agency Responsibilities	Air Pollution Control Agency Responsibilities
Develop or acquire transportation and land use data for all analysis years.	Estimate stationary source emissions based on land use data supplied by transportation agencies, on technology forecasts, and on existing and future regulations.
Estimate transportation-related emissions for all analysis years	Analyze air quality data and determine allowable transportation-related and stationary emissions of CO, Hydrocarbons, and NO ₂
Determine, if necessary, changes in MPO transportation plans or programs to reduce transportation-related emissions	Determine, if necessary, regulatory or other changes to reduce stationary source emissions

IV. DETERMINATION OF CONSISTENCY

For MPO transportation plans and programs to be consistent with State plans to implement NAAQS, the plans and programs, when implemented, should meet five basic criteria.

1. The MPO transportation plans and programs must not exacerbate any existing violations of NAAQS. This does not mean that new highways or highway modifications cannot be completed until NAAQS are attained, only that proposed facilities should not increase pollutant concentrations beyond the levels that already exist.
2. The MPO transportation plans and programs must not contribute to a violation of NAAQS for a pollutant for which no concentrations in violation of standards have been measured.
3. The MPO transportation plans and programs must not delay the attainment of NAAQS. The attainment deadline for NAAQS, as now specified in the Clear Air Act, is 1975 unless an extension has been granted by the Administrator of the EPA. Extensions may be granted through 1977. The EPA has requested from Congress authority to grant further extensions in meeting deadlines, if all reasonable control measures have been implemented and NAAQS still cannot be attained.
4. The MPO transportation plans and programs must not interfere with maintenance of NAAQS, once the standards are attained.

5. The MPO transportation plans and programs must include all appropriate portions of State plans to implement NAAQS, including the transportation control measures either adopted by a State or promulgated by the EPA to reduce VMT, such as exclusive buslanes, carpool matching programs, etc. Other transportation control measures to reduce pollutant emissions from individual vehicles should not be included in MPO transportation plans and programs, but should be reflected in the estimation of emissions as part of the air quality analyses. For example, measures such as mandatory inspection and maintenance of vehicles will reduce hydrocarbon and carbon monoxide emissions from individual vehicles. This reduction should be taken into account in forecasting such emissions for future years.

The MPO policy board should consider these five criteria, and other appropriate criteria determined jointly with State and local air pollution control agencies, in determining the consistency of the MPO transportation plans and programs. The regional administrators of the FHWA and the EPA will then review board's determination.

REFERENCES

1. U.S. Department of Transportation, Federal Highway Administration, "Air Quality Guidelines," Vol, 7, Chapt. 7, Section 9 Federal-Aid Highway Program Manual, November 26, 1974. The regulations are also published in the December 24, 1974, Federal Register (39 FR 44441).
2. U.S. Environmental Protection Agency, Federal Air Quality Control Regions, AP-102, January 1972.
3. U.S. Environmental Protection Agency, Applying Atmospheric Simulation Models to Air Quality Maintenance Areas, Vol. 12, Guidelines for Air Quality Maintenance Planning and Analysis, EPA-450/4-7-013, September 1974.
4. U.S. Department of Transportation, Federal Highway Administration, "Operations Plans for Continuing Urban Transportation Planning," Instructional Memorandum 50-4-68, May 3, 1968.

APPENDIX A
CRITERIA FOR PRIORITY I CLASSIFICATION
FOR CO, O_x, AND NO₂*

<u>POLLUTANT</u>	<u>AMBIENT CONCENTRATION LIMITS</u>
CO	Equal to or above 55 milligrams per cubic meter (48 p.p.m.), 1-hour maximum; or 14 milligrams per cubic meter (12 p.p.m.), 8-hour maximum
NO ₂	Equal to or above 110 micrograms per cubic meter (0.06 p.p.m.) annual maximum
O _x	Equal to or above 195 micrograms per cubic meter (0.10 p.p.m.), 1-hour maximum

*Published in the August 14, 1971 Federal Register at page 15488.

APPENDIX B

PRIORITY I AQCR'S FOR CO, O_x, OR NO₂

STATE	AQCR	CO	O _x	NO ₂
Alabama	Metropolitan Birmingham Intrastate	x	x	
	Mobile-Pensacola-Panama City-		x	
	Southern Mississippi Inter-			
	state			
Alaska	Northern Alaska Intrastate	x		
Arizona	Clark-Mohave Interstate	x	x	
	Phoenix-Tucson Intrastate	x	x	
Arkansas	Metropolitan Memphis Interstate		x	
California	San Francisco Bay Area Intrastate	x	x	
	North Central Coast Intrastate		x	
	Metropolitan Los Angeles Intrastate	x	x	x
	Sacramento Valley Intrastate	x	x	
	San Joaquin Valley Intrastate	x	x	
	Southeast Desert Intrastate		x	
	San Diego Intrastate	x	x	
Colorado	Metropolitan Denver Intrastate	x	x	
Connecticut	New Jersey-New York-Connecticut	x	x	x
	Interstate			
	Hartford-New Haven-Springfield	x	x	
	Interstate			
Delaware	Metropolitan Philadelphia Interstate	x	x	
District of Columbia	National Capital Interstate	x	x	
Florida	Mobile-Pensacola-Panama City-		x	
	Southern Mississippi Inter-			
	state			
	Jacksonville-Brunswick Interstate		x	
Georgia	Jacksonville-Brunswick Interstate		x	
Idaho	Eastern Washington-Northern Idaho	x		
	Interstate			

2.

STATE	AQCR	CO	O _x	NO ₂
Illinois	Metropolitan Chicago Interstate	x	x	x
	Metropolitan Dubuque Interstate	x		
	Metropolitan St. Louis Interstate	x	x	
Indiana	Louisville Interstate		x	
	Metropolitan Chicago Interstate	x	x	x
	Metropolitan Cincinnati Inter- state		x	
	Metropolitan Indianapolis Intrastate	x	x	
Iowa	South Central Iowa Intrastate		x	
Kansas	Metropolitan Kansas City Interstate	x	x	
	South Central Kansas Intrastate		x	
Kentucky	Louisville Interstate		x	
	Metropolitan Cincinnati Interstate		x	
Louisiana	Southern Louisiana-Southeast Texas Interstate		x	
Maryland	Metropolitan Baltimore Intrastate	x	x	x
	National Capital Interstate	x	x	
Massachusetts	Metropolitan Boston Intrastate	x	x	
	Hartford-New Haven-Springfield Interstate	x	x	
Michigan	Metropolitan Toledo Interstate		x	
Minnesota	Minneapolis-St. Paul Intrastate	x		
Mississippi	Mobile-Pensacola-Panama City- Southern Mississippi Interstate		x	
	Metropolitan Memphis Interstate		x	
Missouri	Metropolitan Kansas City Interstate	x	x	
	Metropolitan St. Louis Interstate	x	x	
Nevada	Clark-Mohave Interstate	x	x	
New Jersey	New Jersey-New York-Connecticut Interstate	x	x	x
	Metropolitan Philadelphia Interstate	x	x	
	New Jersey Intrastate	x		

3.

STATE	AQCR	CO	O _x	NO ₂
New Mexico	Albuquerque-Mid Rio Grande Intrastate		x	
	El Paso-Las Cruces-Alamogordo Interstate	x	x	
New York	Niagara Frontier Intrastate		x	
	Central New York Intrastate	x	x	
	Genesee-Finger Lakes Intrastate		x	
	New Jersey-New York-Connecticut Interstate	x	x	x
North Carolina	Metropolitan Charlotte Interstate		x	
Ohio	Greater Metropolitan Cleveland Intrastate		x	
	Metropolitan Cincinnati Interstate		x	
	Metropolitan Columbus Intrastate		x	
	Dayton Intrastate		x	
	Metropolitan Toledo Interstate		x	
Oklahoma	Central Oklahoma Intrastate		x	
	Northeastern Oklahoma Intrastate		x	
Oregon	Portland Interstate	x	x	
Pennsylvania	Metropolitan Philadelphia Interstate	x	x	
	Southwest Pennsylvania Intrastate	x	x	
Rhode Island	Metropolitan Providence Interstate	x	x	
South Carolina	Metropolitan Charlotte Interstate		x	
Tennessee	Middle Tennessee Intrastate		x	
	Metropolitan Memphis Interstate		x	
Texas	Austin-Waco Intrastate		x	
	Corpus Christi-Victoria Intrastate		x	
	Metropolitan Houston-Galveston Intrastate		x	
	Metropolitan Dallas-Fort Worth Intrastate		x	
	Metropolitan San Antonio Intrastate		x	
	Southern Louisiana-Southeast Texas Interstate		x	
	El Paso-Las Cruces-Alamogordo Interstate	x	x	

4.

STATE	AQCR	CO	O _x	NO ₂
Utah	Wasatch Front Intrastate	x	x	x
Virginia	State Capitol Intrastate		x	
	Hampton Roads Intrastate		x	
	National Capital Interstate	x	x	
Washington	Eastern Washington-Northern Idaho Interstate	x		
	Portland Interstate	x	x	
	Puget Sound Intrastate	x	x	
Wisconsin	Southeastern Wisconsin Intrastate		x	

APPENDIX C

PRIORITY III AQCR'S WITH VIOLATIONS OF NAAQS*

STATE	AQCR	CO	O _x
California	South Central Coast Intrastate	x	x
	Southeast Desert Intrastate	x	
Florida	Southeast Florida Intrastate		x
	Southwest Florida Intrastate		x
Georgia	Metropolitan Atlanta Intrastate	x	
Hawaii	Hawaii	x	x
Illinois	Paducah-Cairo Interstate	x	
Indiana	Evansville-Owensboro-Henderson Interstate	x	
	Louisville Interstate	x	
Iowa	Metropolitan Omaha-Council Bluffs Interstate	x	
	South Central Iowa Intrastate	x	
Kansas	Northeast Kansas Intrastate	x	
	South Central Kansas Intrastate	x	
Kentucky	Evansville-Owensboro-Henderson Interstate	x	
	Huntington-Ashland-Portsmouth-Ironton Interstate	x	
	Louisville Interstate	x	
	Paducah-Cairo Interstate	x	
Maine	Androscoggin Valley Interstate		x
Maryland	Cumberland-Keyser Interstate	x	
Massachusetts	Merrimack Valley-Southern New Hampshire Interstate	x	x
Michigan	Metropolitan Detroit-Port Huron Intrastate		x
Minnesota	Minneapolis-St. Paul Intrastate		x
Nebraska	Metropolitan Omaha-Council Bluffs Interstate	x	

2.

STATE	AQCR	CO	O _x
Nevada	Northwest Nevada Intrastate	x	
New Hampshire	Androscoggin Valley Interstate		x
	Merrimack Valley-Southern New Hampshire Interstate	x	x
New Jersey	Northeast Pennsylvania-Upper Delaware Valley Interstate	x	
New Mexico	Albuquerque-Mid Rio Grande Intrastate	x	
New York	Champlain Valley Interstate		x
	Genesee-Finger Lakes Intrastate	x	
	Hudson Valley Intrastate	x	x
	Niagara Frontier Intrastate	x	
North Carolina	Metropolitan Charlotte Interstate	x	
	Western Mountain Intrastate		x
Ohio	Dayton Intrastate	x	
	Greater Metropolitan Cleveland Intrastate	x	
	Huntington-Ashland-Portsmouth-Ironton Interstate	x	
	Northwest Pennsylvania-Youngstown Interstate		x
Oklahoma	Central Oklahoma Intrastate	x	
	Northeastern Oklahoma Intrastate	x	
Pennsylvania	Northeast Pennsylvania-Upper Delaware Valley Interstate	x	
	Northwest Pennsylvania-Youngstown Interstate		x
South Carolina	Metropolitan Charlotte Interstate	x	
Vermont	Champlain Valley Interstate		x
Virginia	Hampton Roads Intrastate	x	
	State Capitol Intrastate	x	
West Virginia	Cumberland-Keyser Interstate	x	
	Huntington-Ashland-Portsmouth-Ironton Interstate	x	

Based on "Monitoring and Air Quality Trends Report, 1973," EPA-450/1-74-007, published in October 1974 by the Environmental Protection Agency.

APPENDIX D

AQCR'S WITH TCP'S FOR CO OR O_x

STATE	AQCR	CO	O _x
Alaska	Northern Alaska Intrastate	x	
Arizona	Phoenix-Tucson Intrastate	x	
California	San Francisco Bay Area Intrastate	x	x
	Metropolitan Los Angeles Intrastate	x	x
	Sacramento Valley Intrastate	x	x
	San Joaquin Valley Intrastate	x	x
	Southeast Desert Intrastate	x	x
	San Diego Intrastate	x	x
Colorado	Metropolitan Denver Intrastate	x	x
District of Columbia	National Capital Interstate	x	x
Illinois	Metropolitan Chicago Interstate	x	
Indiana	Metropolitan Indianapolis Intrastate		x
Maryland	Metropolitan Baltimore Intrastate	x	x
	National Capital Interstate	x	x
Massachusetts	Metropolitan Boston Intrastate	x	x
	Hartford-New Haven-Springfield Interstate	x	
Minnesota	Minneapolis-St. Paul Intrastate	x	
New Jersey	New Jersey-New York-Connecticut Interstate	x	x
	Metropolitan Philadelphia Interstate	x	x
New York	Genesee-Finger Lakes Intrastate		x
	New Jersey-New York-Connecticut Interstate	x	x
Ohio	Metropolitan Cincinnati Interstate		x
Oregon	Portland Interstate	x	x
Pennsylvania	Metropolitan Philadelphia Interstate	x	x
	Southwest Pennsylvania Intrastate	x	x

2.

STATE	AQCR	CO	O _x
Texas	Austin-Waco Intrastate		x
	Corpus Christi-Victoria Intrastate		x
	Metropolitan Houston-Galveston Intrastate		x
	Metropolitan Dallas-Fort Worth Intrastate		x
	Metropolitan San Antonio Intrastate		x
	El Paso-Las Cruces-Alamogordo Interstate		x
Utah	Wasatch Front Intrastate	x	
Virginia	National Capital Interstate	x	x
Washington	Eastern Washington-Northern Idaho Inter- state	x	
	Puget Sound Intrastate	x	

APPENDIX E

AQCR'S CONTAINING ALL OR PART OF PROPOSED AQMA'S FOR CO, O_x, OR NO₂*

STATE	AQCR	CO	O _x	NO ₂
Arizona	Clark-Mohave Interstate	x	x	
	Four Corners Interstate	x		
	Phoenix-Tucson Intrastate	x	x	
California	North Central Coast Intrastate		x	
	Sacramento Valley Intrastate	x	x	
	San Diego Intrastate	x	x	
	San Francisco Bay Area Intrastate		x	
	San Joaquin Valley Intrastate	x	x	
	Metropolitan Los Angeles Intrastate	x	x	x
	Southeast Desert Intrastate	x	x	x
	South Central Coast Intrastate	x	x	x
Colorado	Four Corners Interstate	x		
	Pawnee Intrastate	x	x	
	Metropolitan Denver Intrastate	x	x	x
	San Isabel Intrastate	x		
	Yampa Intrastate	x	x	
	Grand Mesa Intrastate	x	x	
Connecticut	New Jersey-New York-Connecticut Interstate	x	x	x
	Hartford-New Haven-Springfield Interstate	x	x	
District of Columbia	National Capital Interstate		x	x
Florida	West Central Florida Intrastate		x	
Illinois	Metropolitan Chicago Interstate		x	x
	Metropolitan St. Louis Interstate		x	
Indiana	Metropolitan Chicago Interstate		x	x
	Metropolitan Cincinnati Interstate		x	
	Metropolitan Indianapolis Intrastate		x	
Iowa	South Central Iowa Intrastate	x		
Kentucky	Metropolitan Cincinnati Interstate		x	

2.

STATE	AQCR	CO	O _x	NO ₂
Louisiana	Southern Louisiana-Southeast Texas Interstate		x	
Maryland	Metropolitan Baltimore Intrastate		x	x
	National Capital Interstate		x	x
Massachusetts	Metropolitan Boston Intrastate		x	
	Metropolitan Providence Interstate		x	
	Merrimack Valley-Southern New Hampshire Interstate		x	
	Hartford-New Haven-Springfield Interstate	x	x	
Missouri	Metropolitan St. Louis Interstate		x	
Montana	Billings Intrastate	x		
	Great Falls Intrastate	x		
	Missoula Intrastate	x		
Nevada	Clark-Mohave Interstate	x	x	
New Jersey	New Jersey-New York-Connecticut Interstate	x	x	x
	Metropolitan Philadelphia Interstate		x	
New Mexico	Albuquerque-Mid Rio Grande Intrastate	x	x	
	Four Corners Interstate	x		
	El Paso-Las Cruces-Alamogordo Interstate	x	x	
	Pecos-Permian Basin Intrastate	x		
	Upper Rio Grande Valley Intrastate	x		
New York	New Jersey-New York-Connecticut Interstate	x	x	x
North Dakota	North Dakota Intrastate		x	x
Ohio	Metropolitan Cincinnati Interstate		x	
Oklahoma	Central Oklahoma Intrastate		x	
	Northeastern Oklahoma Intrastate		x	
Oregon	Portland Interstate	x	x	
Pennsylvania	Southwest Pennsylvania Intrastate		x	
	Metropolitan Philadelphia Interstate		x	
Rhode Island	Metropolitan Providence Interstate		x	

3.

STATE	ACQR	CO	O _x	NO ₂
Texas	Southern Louisiana-Southeast Texas Interstate		x	
	Corpus Christi-Victoria Intrastate		x	
	Metropolitan Dallas-Fort Worth Intrastate		x	
	Metropolitan Houston-Galveston Intrastate		x	
	El Paso-Las Cruces-Alamogordo Interstate	x	x	
	Metropolitan San Antonio Intrastate		x	
	Austin-Waco Intrastate		x	
Utah	Four Corners Interstate	x		
	Wasatch Front Intrastate			x
Virginia	National Capital Interstate		x	x
Washington	Portland Interstate	x	x	
Wisconsin	Southeastern Wisconsin Intrastate		x	

*Proposed AQMA's are published in the July 10, 1974 Federal Register at pages 25330-25351 and in the August 12, 1974 Federal Register at pages 28906-28910.