

Ozone Advance

Introduction

Ozone Advance is a collaborative effort by EPA, states, tribes, and local communities to encourage emission reductions in ozone attainment areas nationwide to maintain the 2008 National Ambient Air Quality Standard (NAAQS) for ozone. The goals of the program are to (1) help attainment areas take action in order to keep ozone levels below the level of the standard to ensure continued health protection for their citizens, (2) better position areas to remain in attainment, (3) efficiently direct available resources toward actions to address ozone problems quickly, and (4) encourage strategies to reduce ground-level ozone.

The Ozone Advance program offers participating states, tribes, and local communities the opportunity to work in partnership with EPA within a framework that can help focus participants' efforts to keep their air clean. While participation in the program is not a guarantee that an area will avoid a future nonattainment designation, it can better position the area to comply with the requirements associated with such a designation. For example, emission reduction actions undertaken as part of the program could potentially receive "credit" in State/Tribal Implementation Plans (SIPs/TIPs) in the event an area is eventually designated nonattainment with a Moderate or higher classification, either in terms of reflecting a lower baseline from which additional reductions are needed to meet reasonable further progress goals or, if they occur after the baseline year, as a measure that shows progress toward attainment.¹

Other flexible ozone attainment programs preceded the current Ozone Advance program, including the Flexible Attainment Region (FAR) approach in the 1990s, the 2001 1-hour Ozone Flex Program,² and the 2006 8-hour Ozone Flex Program,³ each of which was focused on taking proactive steps to reduce emissions of ozone precursors in attainment areas in order to ensure continued maintenance of the relevant ozone standard. The Early Action Compact (EAC) program⁴ was distinct from these attainment area programs in that it focused on areas violating the 1997 NAAQS at the time of designation, but was similar in that it encouraged early action, the use of innovative measures, and the development of stakeholder groups.

¹ In order to receive emission reduction credit as a measure in a SIP, the measure would need to be quantifiable, surplus, federally enforceable, and permanent. It would also need to meet any other relevant requirement in CAA section 110 and/or 172, and if the measure is voluntary, the state would need to make an enforceable commitment to ensure that the estimated emissions reductions are achieved.

² Six areas participated in the 2001 1-hour Ozone Flex program: Austin and Corpus Christi, TX; Little Rock, AR; Shreveport-Bossier City, LA; Tulsa, OK; and Quad Cities Metropolitan Area, IA/IL.

³ Four areas participated in the 2006 8-hour Ozone Flex program: Corpus Christi, TX; Oklahoma City, OK; Tulsa, OK; Austin-Round Rock, TX; and Quad Cities Metropolitan Area, IA/IL.

⁴ Information about the former EAC program can be found at <http://www.epa.gov/ttn/naaqs/ozone/eac/>

This document provides guidance on Ozone Advance, including general applicability, regulatory issues, program participation, and timelines. This program guidance has been developed with the input of stakeholders that include state and local government officials and organizations, tribes and tribal organizations, and environmental and health groups.

Please contact Laura Bunte, EPA Office of Air Quality Planning and Standards, at (919) 541-0889, bunte.laura@epa.gov if you would like additional information about Ozone Advance.

General Applicability

1. What is the purpose of this program?

Ozone Advance is intended to provide a structure for local actions that reduce emissions and thus help in maintaining air quality that meets the 2008 ozone NAAQS, and to provide a means for states, tribes, and local communities to take the initiative in maintaining and improving their air quality. Local communities can take steps to reduce ozone on their own, and EPA encourages these proactive efforts. However, some states, tribes, or local communities may prefer to pursue reductions within the program framework with closer involvement and support from EPA. Representatives from participating areas will work with EPA to quickly evaluate, select, and implement control measures and programs. EPA can point to available tools and resources that may be used to resolve their issues, provide technical advice and other support, and, where appropriate, may recognize areas that have been especially proactive and successful in pursuing reductions.

2. What is Ozone Advance?

Ozone Advance is a collaborative effort intended to preserve or improve the air quality in ozone attainment areas, particularly in areas that have ambient ozone levels close to the level of the NAAQS and thus are at the greatest risk of violating the standard. The program may assist an area with (1) reducing pollution, (2) ensuring continued healthy air quality levels, (3) avoiding violating the NAAQS and potentially leading to nonattainment and associated requirements, and (4) increasing public awareness.

3. Why should an area want to take action to reduce emissions that contribute to ozone formation now, if it is not currently required to do so?

Proactive work to address ozone precursors can reduce emissions sooner and avoid violations of the ozone NAAQS that might compromise public health. In addition, if the ozone NAAQS is ever lowered in the future, reductions now could position an area to achieve air quality concentrations that enable it to avoid a nonattainment designation or, if eventually

designated nonattainment, could result in a lower classification. A lower classification means fewer mandated control requirements for the area. By acting in the near-term, a local area or state will have greater flexibility to choose which control measures make the most sense and are the most cost-effective for an area. Once a nonattainment designation is made, specific federal requirements apply, some of which, for Moderate and higher classifications, relate to specific categories of sources. Early actions to reduce ozone that keep an area in attainment, whether through Ozone Advance or otherwise, are expected to be less resource intensive than waiting until a nonattainment designation occurs before taking action.

We also note that many measures that a local government, tribe or state may choose to implement could result in multi-pollutant benefits. For example, reductions of nitrogen oxides can lead to lower ambient fine particulate matter levels as well as lower ambient ozone levels. An area interested in taking proactive steps to address ozone has the opportunity to maximize ozone control co-benefits per the area's unique situation.

4. Does EPA also plan to work with particulate matter (PM) near-nonattainment areas to achieve emission reductions that will ensure continued maintenance of the PM NAAQS?

We envision offering a program similar to Ozone Advance to address PM in near-nonattainment areas. Strategies to achieve multipollutant (NO_x and PM in particular) reductions related to diesel emissions will be central to this work, as well as efforts to reduce residential wood smoke and other PM sources.

5. Who can sign up to participate in Ozone Advance?

States, tribes, and/or local governments can sign up to participate with respect to areas (1) that are designated as attainment, unclassifiable/attainment, or unclassifiable for the 1997 8-hour ozone standard, and (2) that are not yet designated nonattainment for the 2008 standard at the time a sign up letter is submitted to EPA. To participate in the program, the state, tribe and/or local government must be able to identify the air monitor(s) that reflect the air quality in the area. In addition, EPA will evaluate a state's compliance with existing inventory requirements before accepting a state into the program; states should meet their reporting obligations for the National Emissions Inventory prior to applying for participation in Ozone Advance.

Areas that have been redesignated to attainment and that have an approved 1997 8-hour NAAQS maintenance plan may participate in Ozone Advance. However, these areas must implement their maintenance plans as approved. Participation in Ozone Advance would not relieve any area from any requirements to which they are otherwise subject under the Act or from any requirement in an approved SIP. Measures undertaken as part of Ozone Advance

would be in addition to those included in the approved SIP, and could provide the area with a buffer against future violations.

Former EAC areas that are designated attainment for the 1997 8-hour ozone NAAQS at the time they initiate participation in the program are eligible to participate in Ozone Advance. Similarly, former Ozone Flex areas are eligible to participate in Ozone Advance if they are designated attainment. Some of the plans developed as part of Ozone Flex are still in effect, and some of the areas are currently considering renewing/supplementing their plans in order to maintain the 2008 ozone NAAQS of 0.075ppm. EPA encourages Ozone Flex areas to continue this proactive work, whether on their own or in conjunction with EPA as part of Ozone Advance.

Prospective program participants should coordinate ahead of time with EPA, the state, any potentially affected tribes, and appropriate stakeholders.

6. Who cannot sign up for Ozone Advance?

States, tribes, and/or local governments cannot sign up for the program if the area of concern is designated nonattainment for the 1997 8-hour and/or 2008 ozone NAAQS. However, participating states, tribes, and/or local governments may continue to participate in the program if the area of concern is eventually designated nonattainment and classified Marginal. Such areas would not be exempt from any requirements that apply to them, including New Source Review and transportation conformity. Marginal areas do not otherwise have planning requirements; rather than wait until planning is required, it makes sense for these areas to actively step up their efforts to reduce ozone. This may better position an area to attain within three years after designation, and thereby avoid reclassification as Moderate. Regardless of a Marginal area's participation in the program, if the area continues to violate and is not eligible for the Clean Air Act's one-year extensions, it will be reclassified as Moderate, and it will no longer be able to participate in the program.

7. What is the timing for participation in Ozone Advance?

We encourage attainment areas to participate in Ozone Advance as early as possible, but there is no requirement that an area commit to the program by a specific date as long as they sign up prior to being designated nonattainment. There is currently no expiration date for enrollment. We recommend that an area commit to Ozone Advance for a five-year term, with the option to renew at the end of the first term and each successive term. An area can choose to end its participation in the program at any time, with notice to EPA.

8. How can an area apply for participation in Ozone Advance?

We encourage interested states, tribes, and communities to carefully consider participation, reviewing pertinent issues including, but not limited to, projected industrial and population growth, trends and concerns regarding air quality, and support of such a program by the state, tribe(s), and local community.

To sign up for the program, submit a brief **“sign up letter”** to Laura Bunte of the EPA Office of Air Quality Planning and Standards (OAQPS) at bunte.laura@epa.gov and/or to the following address:

Ozone Advance
c/o Laura Bunte, Mail Code C304-01
109 TW Alexander Drive
RTP, NC 27711

The sign up letter should be signed by the appropriate local, state, and/or tribal government official(s) with the authority to implement the program and to assist in leveraging staff and program funds as needed. A copy should also be sent to the relevant EPA Regional Office. EPA will ensure that the basic program eligibility requirements are met, and will then indicate whether the state, tribe, and/or local community has been accepted into the program.

9. Must an MOU be developed and signed in order to participate in Ozone Advance?

No. However, to the extent a participating state, tribe, or local government would benefit from having a more formal agreement in place, EPA would be willing to work with them to develop an MOU.

10. What other submissions to EPA are needed?

As a first step toward minimizing the potential for ozone concentrations in excess of the ozone standard, a participating area should evaluate a variety of voluntary and mandatory control options and other programs. EPA can provide advice during this evaluation. No later than one year after signing up for the program, the area should submit a **“path forward letter”** to the EPA program contact via mail per #8 above, or via e-mail to bunte.laura@epa.gov, with a copy to the relevant EPA Regional Office. The path forward letter should fully describe the measures and/or programs the area will implement and provide a schedule for the implementation of each one. Information from these letters and/or the letters themselves may be made available on the program website.

Unlike a formal SIP submission, EPA will not approve or disapprove the commitments made by the state/tribe/local government, and the input provided by EPA during the course of Ozone Advance will not serve as an approval for purposes of any eventual SIP. However, EPA may provide feedback to the area regarding whether commitments are likely to result in emission reductions and/or other public health benefits.

The path forward letter can be submitted by a state and/or a tribe and/or a local community, although preferably it would be submitted by all of the above where applicable. The letter specifies actions the signatories have agreed to implement to reduce ozone precursor emissions and thereby improve local air quality. The path forward letter is not a federally enforceable document and does not institute any legal or financial obligations on any entity.

11. What happens after a path forward letter is submitted?

The area should begin or continue implementing the selected measures and programs expeditiously. In order to most quickly impact ambient ozone levels, implementation should occur to the extent possible for the ozone season immediately following the path forward letter, recognizing that some measures/programs may take longer to implement or may have longer lead times until emission reductions are realized.

12. Should participants periodically share information with EPA?

Yes, participants should stay in communication with EPA periodically throughout the program. In addition, at least once a year from the time the path forward letter is sent to EPA, a participating area should briefly and informally summarize the status of each of the area's measures and programs undertaken under Ozone Advance (including a comparison between current status for each measure/program as compared with the schedule laid out in the path forward letter), current air quality, stakeholder meetings/events, and any other information the area would like to highlight. The information should be sent to the EPA program contact via mail per #8 above, or via e-mail to bunte.laura@epa.gov. Information from these annual check-ins may be made available on the program website.

Regulatory Issues

13. Does Ozone Advance establish new or avoid existing regulatory requirements?

No, this program neither creates nor avoids regulatory requirements. If, as part of the program, state or local authorities adopt regulations, such regulations likely would establish enforceable requirements on the regulated entities. As noted previously, participation in Ozone

Advance does not allow the participating communities to avoid applicable requirements under the Clean Air Act or under an approved SIP.

14. What happens if violations of the standard begin to occur despite an area's participation in the program?

The area should quickly evaluate, select, and implement additional measures and programs. However, Ozone Advance does not shield an area from being redesignated nonattainment if the area eventually violates the standard. Should a violation occur, EPA would consider the factors in section 107(d)(3)(A) of the Act. These include "air quality data, planning and control considerations, or any other air quality-related considerations the Administrator deems appropriate," including time to allow the implemented control measures to work. As long as Ozone Advance control measures are being fully implemented and appropriately documented, EPA would consider that circumstance among the other factors specified in the Act when exercising its discretion in deciding whether to redesignate the area to nonattainment.

15. Will states receive SIP "credit" for emission reduction measures undertaken as part of Ozone Advance?

EPA will not, as part of Ozone Advance, review commitments made under the program for purposes of approval or disapproval into a SIP. However, if an area participating in Ozone Advance is subsequently designated nonattainment for the 2008 ozone standard or a future revised ozone standard, emission reductions achieved from measures implemented as part of the program could be accounted for in future SIP planning. We describe two ways in which they could potentially be accounted for below in #16.

EPA encourages participating states, tribes, and/or local communities to adopt proven, effective control measures to reduce ozone expeditiously. We also recognize that some of the measures states, tribes, and localities may choose to adopt under the program may be innovative measures. EPA supports flexible approaches that account for the complex nature of ozone formation and has provided SIP credit for measures that meet SIP approval criteria.⁵ EPA is interested in working with areas to help them identify ways to receive credit for innovative measures.⁶

⁵ EPA encourages states to seek SIP credit for voluntary emission reductions. A variety of guidance materials are available to guide states considering voluntary measures for adoption into a SIP. See Attachment C for some examples; this list is not exhaustive of all guidance on SIP credit.

⁶ In order to receive emission reduction credit as a measure in a SIP, the measure would need to be quantifiable, surplus, federally enforceable, and permanent. It would also need to meet any other relevant requirement in CAA section 110 and/or 172, and if the measure is voluntary, the state would need to make an enforceable commitment to ensure that the estimated emissions reductions are achieved.

16. How can early reductions achieved as part of Ozone Advance be recognized in any future SIP that the area may need if designated nonattainment with a Moderate or higher classification for the 2008 ozone NAAQS or a future ozone NAAQS?⁷

If emission reductions occur through Ozone Advance **prior to** the baseline year for purposes of attainment demonstration modeling or a reasonable further progress demonstration, then the reductions would lower the emissions baseline. A lower baseline means that the area would need fewer future emission reductions in order to demonstrate attainment and/or proportionally less emission reductions would be needed to show reasonable further progress.

If emission reductions occur through Ozone Advance **after** the baseline year, the area can take credit for those reductions subject to certain Clean Air Act restrictions, such as demonstrating that the reductions are surplus, quantifiable, enforceable, and permanent. Credit earned in this way reduces the overall emission reductions needed to demonstrate attainment, thereby bringing the finish line of attainment with the standard closer.

For example, if the area must achieve a 15% reasonable further progress reduction in VOC emissions over six years, reductions that occurred before the baseline year for calculating the 15% would be reflected in a reduced baseline; reductions that occur after the baseline year but during the six year period could be counted toward the 15% reduction requirement.

17. Can EPA guarantee that participating in Ozone Advance will cause an area to remain in attainment?

EPA can provide no guarantees. A participant's success in the program depends largely on their level of commitment. Evaluating, choosing, and expeditiously implementing measures and programs that result in actual emission reductions will be critical, and in many cases essential, to success. One of the benefits of participating in the program is that governmental entities and citizens become more aware of emission sources and what may cause ozone levels to increase, and may be more likely to react to potential issues before ozone levels rise. Proactive work to address these issues should lead to a greater chance of success in keeping ambient levels of ozone below the level of the NAAQS or, if the area is eventually designated nonattainment, could help prevent a higher classification than the area would otherwise have had (e.g. Marginal instead of Moderate).

⁷ Once a nonattainment designation with a Moderate or higher classification occurs, the area will no longer be eligible to participate in Ozone Advance. Marginal areas may continue their participation in the program if they signed up for the program prior to designation, and until such time as they may be reclassified as Moderate.

Program Participation

18. What are the steps in participating in Ozone Advance?

Step 1 – Send a Sign Up Letter to EPA

Participation in Ozone Advance is begun by EPA acceptance of a sign up letter from the local community, state, and/or tribal air quality agency to EPA. The letter should express the willingness of all of the signatories to coordinate with each other and with EPA and to quickly implement measures and other programs to reduce ozone. The monitors that reflect the area's air quality should be identified in the sign up letter. Specific measures do not need to be identified in the sign up letter. The letter should be signed by the appropriate local, state, and/or tribal official(s) with the authority to implement the program and to assist in leveraging staff and program funds as needed.

Step 2 – Identify Available Information Regarding the Area's Ozone Issue

This information could relate to the sources of ozone precursors, the degree of the local contribution to ozone based on available modeling by EPA or others, the appropriate area from which emissions reductions should occur, and existing or upcoming control measures and programs affecting sources in the area.⁸ It would be helpful if this information were shared informally with EPA.

Step 3 – Secure Stakeholder Participation

It is important to identify, contact, and secure the participation of key stakeholders. This is most commonly accomplished by the formation of a local air quality committee consisting of representatives from local government, industry, environmental and citizens groups (such as environmental justice organizations), and other interested parties. Stakeholders may need to be added as emissions sources and control measures are identified.

Step 4 – Coordinate Control Strategy Development

The participating state, tribe, and/or local government will lead coordination efforts with stakeholders and with EPA. EPA will work with the participating state, tribe, and/or local government as needed to identify and resolve technical and other issues and provide information about emission reduction and public awareness/education options.

⁸ One source of information on the emissions sources in the area is the National Emissions Inventory (NEI). NEI data can be found at www.epa.gov/ttn/chief/.

The control measures an area chooses to implement may require businesses, industries, and citizens to comply with ordinances, codes, or other binding state or local regulations, or may encourage voluntary actions that reduce ozone precursors. The geographic area covered by such measures should be based on the location and nature of sources, or other factors important to the community and to achieving reduction of ozone precursor emissions. Other programs that relate to public education and awareness may be considered as well. The process should offer opportunities for discussion and debate among stakeholders; these opportunities should be provided and led by the participating state, tribe, and/or local community.

State/tribal and EPA representatives can provide valuable information for local communities. It may be helpful to meet with the state/tribal and EPA representatives to discuss issues and options before the path forward letter is submitted. EPA will review and provide comments on the area's preliminary decisions and will work with local technical or policy committees and the state/tribe(s). Local plans should complement current or potential future state/tribal or Federal efforts for the area. Local governments participating in Ozone Advance should identify the state-level controls and programs that may impact local ozone, and, similarly, participating states should identify any local controls and programs that may have an effect in the local area.

EPA suggests that participating areas consider developing an action plan which includes an executive summary, list of measures to be implemented and a detailed implementation schedule, discussion of roles and responsibilities, and provisions for public/stakeholder involvement. Such a plan is not a requirement for participation in Ozone Advance; however it could serve as a useful blueprint for the area to work from in working with stakeholders and as a focal point for public recognition of the area's efforts to improve air quality. See Attachment A for further information regarding action plans.

Some participating areas may also consider technical work (e.g., emissions inventory development/refinement, air quality modeling) to support their work to address ozone. Although the development of technical analyses is not a requirement of the program, to the extent a program participant elects to pursue appropriate technical work, EPA encourages these efforts and will be available to provide advice. The development of technical support should be of particular interest to areas that are very close to, or already violating the 2008 ozone standard, in order to best align their efforts under Ozone Advance with any eventual SIP requirements.

Step 5 – Submit a Path Forward Letter to EPA

Once the area has sought stakeholder involvement and input, the area should send a letter to EPA describing the measures/programs the area will implement and providing a schedule for

the implementation of each measure/program selected. If the area developed an action plan (see Attachment A), the area can submit the plan to EPA in lieu of a path forward letter.

Step 6 – Implement Control Strategy Per Schedule and Provide Annual Status Updates

Program participants should begin implementing the measures and programs specified in the path forward letter immediately, per the schedule laid out in the letter. Participants should stay in communication with EPA periodically throughout the program. In addition, each year from the time the path forward letter is sent to EPA, a participating area should briefly summarize the status of each of the area's measures and programs undertaken under Ozone Advance (including a comparison between current status for each measure/program as compared with the schedule laid out in the path forward letter), current air quality, stakeholder meetings/events, and any other information the area would like to highlight. These status updates should be provided via letter or e-mail to the EPA contact noted in #8 above.

Step 7 – Apply for Federal Grants, if Desired

The Federal grants website <http://www.grants.gov> may be of interest to program participants. The website enables agencies and organizations to electronically find and apply for competitive grant opportunities from all Federal grant-making agencies. Over 1,000 grant programs offered by the 26 Federal grant-making agencies can be accessed from the website, and some of these may be useful in the context of this program.

19. What should an action plan contain, should the participating area elect to develop one?

Attachment A provides suggestions regarding the content of an action plan.

20. Must a participating area undertake emissions inventory development or modeling?

No, emissions inventory development and modeling are not necessary prerequisites to an area's participation in Ozone Advance. However, EPA encourages participating areas to consider existing emissions inventories and modeling information and/or develop new analyses as necessary in order to characterize the nature of the ozone issue in the area (i.e. is the area NOx or VOC limited), provide a technical foundation for control selections and schedules, and ensure that available resources are used efficiently and effectively. Attachment B provides a general discussion of emissions inventories, modeling, and controls.

21. What happens if the ozone concentrations in an area violate the standard?

The success of Ozone Advance for a given area will lie in the area's willingness to undertake new measures that result in real emission reductions. EPA recognizes that some areas are affected by the transport of upwind pollution, however it is still important for local reductions to be achieved, where possible. As soon as an area determines that the air quality is deteriorating, the area should act quickly to supplement the measures and programs as listed in its path forward letter and/or action plan with additional measures/programs. If the air quality in the area deteriorates and a violation occurs, EPA may exercise its discretion to redesignate the area to nonattainment.

22. Must a participating area commit to contingency measures?

No. Areas participating in the Ozone Flex program in the past were asked to identify contingency measures to respond to increases in local ozone concentrations. Ozone Advance does not require that these measures be specified. EPA has attempted to streamline the program to the extent possible in order to encourage areas to keep their focus on actually taking proactive steps to improve their air quality. The goal is to encourage areas to take action to reduce ozone concentrations even though they are not currently required to do so. In lieu of contingency measures, Ozone Advance participants should consider quickly supplementing their list of measures should the quality of the air in their area begin to deteriorate. Measures undertaken should not be discontinued even if the area continues to remain in attainment, in order to protect against increases in local ozone concentrations.

23. What implementation schedule will participating areas follow?

EPA recommends that an area commit to Ozone Advance for a five year term, with an option to renew at the end of the term and each successive term. An area's ambient air quality over the next several years would potentially affect designations following any possible revisions to the NAAQS in 2014, therefore it is important that the area work to improve air quality for a sustained period in order to best ensure it remains in attainment. The path forward letter should provide a schedule for implementation of the indicated measures. Significant actions that are necessary or may affect control measure implementation, such as required reviews/approvals, acquisition of equipment, etc., should be included in the schedule.

The Ozone Flex program specified the submission of a semi-annual program report, which could become an annual report if the area's design value was maintained or decreased. EPA contemplated eliminating these reports in order to further streamline the administration of Ozone Advance and the level of state/tribal/local resources directed to the program. However, EPA believes that some level of information sharing is beneficial to ensure that all parties are

kept informed about program progress. The intention is that the status updates submitted to EPA each year will be informal (e.g. in the form of a check-in e-mail or letter) and will provide a brief, general summary of the status of each of the area's measures and programs undertaken under Ozone Advance (including a comparison between current status for each measure/program as compared with the schedule laid out in the path forward letter), current air quality, stakeholder meetings/events, and any other information the area would like to highlight.

24. What provisions should be made for public and stakeholder involvement?

Support for the proposed measures in the area's list of Ozone Advance commitments from organizations and institutions in the area is vital. Local officials can determine the best means to seek and respond to input from groups or individuals interested in or affected by the measures. We recommend that the commitments be developed by a local air quality committee that includes environmental, health, and citizens groups, as well as representatives from local industry and government. Input on appropriate measures from environmental and health groups, citizens groups, industry representatives, the general public, states/tribes, and EPA should be given thoughtful consideration by the committee.

25. How long should an area plan on participating in Ozone Advance?

Participation should last for a period of 5 years or longer as needed/desired. Participants may terminate their involvement in Ozone Advance at any time, with notice to EPA. Similarly, EPA may end a state's, tribe's or local area's participation in the program at any time, such as where a participant does not demonstrate any effort to make air quality improvements during the course of the program.

26. How does the Ozone Advance timeline compare with EPA's current schedules for implementation of the current (2008; 75ppb) ozone standard and the next ozone NAAQS review?

Ozone Advance participants should keep the NAAQS implementation dates in mind when deciding upon the extent and timing of the measures and programs to be put in place. In particular, areas likely to be designated nonattainment with a Marginal classification should be aware of their window of opportunity to effect change before reclassification to Moderate may occur.

Sample Timeline

Current as of [insert date when final guidance is sent to Regional Offices]; all dates are tentative

Early 2012 State, tribe, and/or local agency submits sign up letter to EPA

Mid-2012 Effective date of 2008 ozone NAAQS designations

By early 2013 Participant decides on measures/programs, submits path forward letter

Mid-2014	Completion of next ozone NAAQS review, including any revision of the NAAQS determined necessary
Mid-2015	2008 NAAQS Marginal area attainment date
Mid-2015	State recommendations for designations for any revised 2014 ozone NAAQS
Mid-2015	Attainment demonstration/ROP/RFP SIPs due for areas classified as Moderate or higher for the 2008 ozone NAAQS
Mid-2016	Final designations for any revised 2014 ozone NAAQS
Mid-2018	2008 NAAQS Moderate area attainment date
2019	Attainment demonstration/ROP/RFP SIPs due for areas classified Moderate or higher for any revised 2014 ozone NAAQS

27. EPA Contacts

An Ozone Advance website is available at www.epa.gov/. Questions about Ozone Advance may be referred to Laura Bunte, Office of Air Quality Planning and Standards, (919) 541-0889 or bunte.laura@epa.gov, or to the appropriate EPA Regional Office. Questions about mobile sources may be directed to Rudy Kapichak, Office of Transportation and Air Quality, (734) 214-4574 or kapichak.rudolph@epa.gov.

Attachment A

Ozone Advance Action Plan

The focus of Ozone Advance is on participating areas adopting measures and other programs that will achieve emission reductions of ozone precursors for the purpose of helping the area remain in attainment of the 2008 ozone NAAQS or any future NAAQS. The program does not require extensive upfront analysis and planning, such as is required as part of the SIP process. However, participating areas may have an interest in developing a plan that lays out the current status of the area's air quality issues, describes any technical analysis undertaken by the area, such as modeling to understand the area's emission sources and appropriate controls, and indicates the path the area will take to reduce ozone. Although this work is not required as part of participation in the program, EPA encourages participating areas to develop an action plan. Such a plan can serve as the area's blueprint for actions into the future, and can help focus stakeholder and public understanding of the amount of pollution reduction needed in order to ensure the plan will be effective, as well as the steps the area is taking to ensure continued protection of citizens' health.

EPA suggests that the following sections be included in an action plan, if a participating area chooses to develop one:

- Introduction
- Description of the measures and programs to be implemented, responsible parties, how the measure will be implemented
- Implementation schedule for each measure and program
- Provisions for public and stakeholder involvement

A. Introduction

In the introductory section, information should be provided about the area to be covered by the plan, including the rationale for choosing the geographic boundaries. At a minimum, the geographic area should include the urbanized area, where applicable.⁹ A map showing the geographic boundaries would be helpful. It is important to include brief information about the participating groups/agencies, and the general objectives of the plan. The executive summary should also identify the plan's duration.

⁹ An urban area generally consists of a large central place and adjacent densely settled census blocks that together have a total population of at least 2,500 for urban clusters, or at least 50,000 for urbanized areas. An urban area can be in a metropolitan or non-metropolitan area.

The number and location of ozone monitors, and the number and extent of ozone concentrations above the standard should be provided, along with observed trends in emissions and ozone concentrations. If any modeling has been conducted, it should be mentioned as well.

Information on the sources (i.e., point, area, non-road, and on-road) and the total amounts of emissions should be summarized. It is important to note the extent and availability of information about nitrogen oxide (NO_x) and volatile organic compound (VOC) emissions which contribute to ozone formation in the area. To the extent known, indicate the types of sources of these pollutants and the extent to which each type or specific source contributes to the total emissions in the area. Large sources in adjacent areas should be identified.

B. Description of Measures to be Implemented and Responsible Parties

The specific control measures or programs the local government, state, tribe, and/or community organizations commit to undertake as a result of Ozone Advance should be described in detail. The description for each measure should indicate how, where, when, and by whom the measure will be implemented. At a minimum, the list of measures should be designed to keep ozone levels below the current ozone standard. More stringent air quality targets can be agreed to by the interested parties. Reductions should be achieved as expeditiously as practicable to provide maximum benefits.

The measures and programs may be mandatory or voluntary. The plan should include details about the means of ensuring the implementation of any measures and programs selected by the area, such as regulations, agreed orders, and verification mechanisms. It should also discuss how the effectiveness of voluntary measures might be assessed. The effectiveness of these measures may vary depending on the extent of participation or other circumstances.

Any existing background explaining how the list of measures was selected, such as any technical analysis conducted, would be helpful. Areas should consider developing or refining emissions inventories, assessing whether VOC or NO_x emission controls are most needed, and conducting photochemical modeling. While this work is not required in order to participate in the program, it would be helpful; EPA and Regional Planning Organizations can provide assistance in the direction and scope of these efforts, such that available resources can be used most effectively. If existing modeling is unavailable for reference and new analyses are not conducted by the area, the action plan should explain what means were used to select the measures in the plan. These technical efforts provide a foundation for an area's plan, and can be used to identify and analyze the sources of emissions in the area. Such information will suggest which control strategies may be most effective in reducing emissions that lead to ozone formation, and could help the area most efficiently use its limited resources. Attachment B

contains more detailed information about the emissions inventory, modeling, control measures and selection.

EPA encourages use of the latest planning assumptions and emissions models available to evaluate and accurately estimate the benefits that control measures provide. Examples of assumptions include estimates of current and future population, employment, activity, projections and growth factors, and vehicle age and fleet mix. For on-road mobile source emission estimations, the current emissions model is MOVES (Motor Vehicle Emissions Simulator) (<http://www.epa.gov/otaq/models/moves/index.htm>). The most current version should be used. For non-road mobile sources, the current model is NONROAD2008a (<http://www.epa.gov/otaq/nonrdmdl.htm>). Areas in California would use the latest Emission Factors (EMFAC) model.

All measures in the plan should achieve emission reductions beyond those already being achieved in the area, and should not be measures required under state/tribal or Federal law, such as the measures included in approved maintenance plans. There should also be a commitment to adjust the list of measures and programs as appropriate in order to speed up progress in achieving reductions, and to ensure continued attainment in light of newly tightened NAAQS. To the extent possible, the amount of NO_x and/or VOC emission reduction anticipated from each measure or combination of measures should be estimated.

C. Implementation Schedule

EPA recommends that an area commit to Ozone Advance for a five year term, with an option to renew at the end of the term and each successive term. See sample timeline in #26 above. The path forward letter should provide a schedule for implementation of the indicated measures. Significant actions that are necessary or that may affect control measure implementation, such as required reviews/approvals, acquisition of equipment, etc., should be included in the schedule.

D. Provisions for Public/Stakeholder Involvement

Support for the proposed measures in Ozone Advance commitments is vital. Local officials can determine the best means to seek and respond to input from groups or individuals interested in or affected by the measures. We recommend that the commitments be developed by a local air quality committee that includes environmental and citizens groups, as well as representatives from local industry and government. Input on appropriate measures from environmental groups, citizens groups, industry representatives, the general public, states/tribes, and EPA should be given thoughtful consideration by the committee.

Attachment B
Ozone Advance
Emissions Inventory, Modeling, and Controls

Emissions inventory (EI) work and source apportionment, dispersion, or other modeling are not required as part of Ozone Advance. However, the use of an emissions inventory and technical support for the selection of control measures is encouraged, and EPA will provide technical advice to participating areas who seek it. Areas with well developed emissions inventories and technical support are better positioned to target and select control measures that maximize emission reductions that will result in air quality improvements given local conditions and characteristics.

Emissions Inventory

One of the first steps in determining how to improve air quality in an area is to gather information on the sources and amounts of emissions. In many cases, existing state, multijurisdictional or regional planning organization (MPO/RPO), and Federal EIs may provide a guide in targeting sources of interest in a particular local area to enable appropriate control selections. Ozone Advance participants are not required to develop a baseline emissions inventory for NO_x and VOCs, however they are encouraged to do so in order to identify the level of emissions that would represent continued attainment (or that would cause a violation) for the area and to monitor growth.

The extent of the geographic area inventoried will vary by community. The EPA recommends evaluating the Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area (MSA/CMSA) (or the county or parish if there is no MSA) and enlarging the area if necessary. Local EIs can help an area identify, target, and obtain emission reductions that are feasible and that are most likely to lead to reduced ozone formation in the area. EPA's protocol for developing an EI and additional information on EIs is available at <http://www.epa.gov/ttn/chief/eiinformation.html>. In particular, information regarding EPA's Emission Inventory Improvement Program (EIIP) can be found at <http://www.epa.gov/ttn/chief/eiip>. While some aspects of this website, such as mobile source information, are out of date, much of the information provided may be useful to participating states, tribes, and local governments that want basic information about how to further develop and refine their EIs.

Emissions are generated by stationary sources (industrial or commercial facilities), mobile sources (on and off-road vehicles, aircraft, ships and locomotives), and area sources (gas stations, dry cleaners, auto body paint shops, etc). Emissions of NO_x and VOC contribute to ozone formation and should be the focus of EI efforts.

Information should be gathered on the number and types of emission sources in the area and the types and amounts of pollutants emitted. It is important to summarize the extent and availability of information on NO_x and VOC emissions which contribute to ozone formation in the area. To the degree it is known, the extent to which each type of source or specific source contributes to the release of the total emissions in the area should be specified.

Expected emission reductions from planned efforts or controls should be identified and should be quantifiable, to the extent possible. Emission reductions from some measures may be difficult to quantify (e.g., voluntary measures due to unknown levels of participation) but it may be possible to specify a percentage, range, or time-adjusted sequence of anticipated emission reductions from each or a combination of these “hard to estimate” measures.

The following steps outline the process for emissions inventory development:

Step 1: Determine if inventory information currently exists

The state/tribe may have information on the sources and emissions in the area. EPA and MPOs/RPOs may have additional information. EPA compiles the NEI every three years. The most recent NEI includes 2008 emissions. States are required by the Air Emissions Reporting Requirements (AERR) rule to submit emissions inventory information every three years. Ozone Advance participants should identify information sources and compile the information relevant to their area.

Step 2: Determine the extent of available information

The extent of available EI information varies from area to area. The state/tribe or EPA can provide guidance on the types of EI information that has been collected for your area and which may be useful for your local efforts.

Step 3: Gather additional information as necessary

In addition to specific EI data from the state/tribe or EPA, the following information may be of use to local EI development:

Stationary source data:

- VOC/NO_x sources/emissions not included in the state/tribal emissions inventory
- Determination/reporting of excess facility emissions during start-up, shutdown, and malfunction
- Development of the most current EI possible for a year with high ozone observed in the area

Mobile source data:

- Useful mobile source information that could improve estimates available from other sources such as the NEI
- Non-road vehicle, engine and equipment types, numbers, emissions, hours/frequency of operation
- On-road vehicle types, numbers, emissions, vehicle miles traveled (possible data sources include local Metropolitan Planning Organizations and the local Department of Transportation)
- For additional information on the use of MOVES for estimating on-road emissions and NONROAD for estimating emissions from most types of non-road equipment please see: <http://www.epa.gov/otaq/models.htm>.

Additional useful information regarding EIs is available electronically through <http://www.epa.gov/ttn/chief/>.

Modeling and Data Analysis

Photochemical air quality modeling that can predict the effectiveness of a proposed control strategy or a proposed control measure in reducing the local ozone concentration, and other modeling or data analyses are not required for participation in Ozone Advance. These types of analyses could be used as a tool in the program to help areas identify which emissions may be the most beneficial to reduce. Before beginning any modeling effort, an area should contact the state/tribe or EPA Regional Office for suggestions regarding whether sufficient relevant modeling information for the area already exists, and, if not, what types of analyses are appropriate. A review of any existing modeling could add credence to the selection of control measures and could conserve both time and money. If the area intends to perform modeling, it should follow EPA or state-approved modeling protocols; see the EPA modeling information at <http://www.epa.gov/scram/>.

Other considerations include:

A. Photochemical Grid Modeling

If used, photochemical grid modeling should be SIP-quality and developed according to current EPA ozone modeling guidance. This modeling can help answer questions such as:

- Is it more effective for Ozone Advance efforts to concentrate on reductions of VOCs, NO_x, or both?
- If a combination of both VOC and NO_x reductions appears to be called for, what percentage of each would be appropriate?

- What amounts of reductions are necessary to make a difference in ozone concentrations?
- Which control measures will result in emission reductions that would be most effective at reducing ozone concentrations in the area?

Photochemical grid modeling may also be used to assess the effectiveness of a control strategy in helping to reduce ambient ozone levels. In such a demonstration, there may be a need for assessing some future year(s), and for developing future emissions inventories.

B. Air Quality Data Analysis

In some cases, it may be possible to address the questions posed in the previous section without the use of time and resource intensive photochemical grid modeling via careful statistical analysis of monitored ambient ozone, ozone precursor, and meteorological data. This analysis is used to produce a meteorologically-adjusted ozone trend that reflects summertime average ozone levels under typical meteorological conditions. Data analysis efforts designed to answer the questions listed below can be used to support and confirm any modeling results.

- Which meteorological conditions are most often associated with elevated ozone concentrations in the area?
- Does the meteorologically-adjusted trend confirm that summertime average ozone concentrations in the area are decreasing?
- Has there been a relationship in the recent past between local ozone precursor emissions reductions and the meteorologically-adjusted trends?

C. Data and Time Periods of the Assessment

If a participating state, tribal, or local government decides, in consultation with EPA, that analyses are needed in order to understand the area's air quality issues, decisions will need to be made regarding which data will be used, and the period(s) to be modeled. The following questions are among those that would be answered:

- How many and which sources should be modeled?
- What types of pollutants and amounts of emissions from each source should be evaluated?
- Are the emissions inventory and other necessary data (i.e., meteorological data) available?
- Should modeling be done for an extended period such as five years or for shorter periods, such as each year?

D. Use of an Appropriate Model

Different models are available to predict air quality impacts. Participating local governments should consult with the state/tribe and EPA Regional Office regarding which models would be appropriate for the purpose intended as well as the area, pollutants and sources to be evaluated. As stated earlier, a review of existing modeling analyses, if they exist, could simplify the selection of control measures and conserve resources.

Pollution Reduction Measures and Programs

Once the sources and types and amount of emissions are generally known, a list of potential air quality improvement and/or emission pollution reduction options can be developed. These options should be different from actions required by state/tribal or Federal law prior to or during the agreement term. These options may include, for example, public awareness, notification, and participation in local programs; requiring the installation of control devices or implementation of procedures by stationary sources; or mobile source control options. Other options may include voluntarily adopting state/tribal or certain Federal measures like those designed and mandated for ozone nonattainment areas.¹⁰ To the extent that it is possible, these measures could be implemented on a voluntary basis and adapted as necessary. Consideration of multipollutant benefits (such as maximizing reductions in both NO_x and PM) should be incorporated into any selection of measures and programs.

Emission reduction measures are specific emission reduction commitments from specific facilities or industrial sources, broader measures applicable to an entire area, measures which target a specific group of emission sources or category of emissions (e.g. sources with VOC emissions greater than 25 tons per year), or voluntary programs such as those that encourage behavior change in order to achieve reductions (e.g. transportation programs that reduce vehicle miles traveled). Public notification and education programs include activities to inform and educate the public of the impact of their daily activities and to encourage them to participate in efforts to improve local air quality and to take actions to protect their health when exposed to poor air quality.

New state/tribal or Federal requirements may impact the emissions in an area. In order to best ensure continued attainment of the standard, Ozone Advance participants may need to consider going beyond Federal and state/tribal requirements that are already in place or that are anticipated in the near term, to the extent possible. Consequently, in order to effectively evaluate potential control measures to adopt, local areas should become informed of requirements that

¹⁰ Some federal measures are not available for state or local adoption because they are preempted legally. Vehicle emission standards and fuel standards are examples of this. Please consult your EPA Regional Office early in your process for considering measures.

already apply or are scheduled to apply within the area. Even where Federal, state, and tribal controls are generally expected to be sufficient to keep an area in attainment, local measures may provide an extra buffer against future violations, and will help to ensure continued public health benefits.

A variety of sources provide information about air quality improvement options that areas may want to explore. These include, for example, the Reasonably Available Control Technology/Best Available Control Technology/Lowest Achievable Emission Rate (RACT/BACT/LAER) Clearinghouse (<http://cfpub.epa.gov/RBLC/>), the Ozone Reduction Strategies website (<http://www.epa.gov/airquality/ozonestrategy/>), and the State and Local Transportation Resources website, <http://www.epa.gov/otaq/stateresources/index.htm>. EPA will be available to provide assistance in identifying options that may best suit an area's unique needs and priorities.

Also consider contacting other state/tribes or local communities, particularly those with similar sources and air quality issues, for information on measures they have considered or implemented. A list of some general categories of control measures follows, but Ozone Advance participants are not limited to these categories for sources of controls. Additional information on emission control options for specific sources can be obtained from EPA. Also, see Attachment C for a list of guidance documents that apply to a wide variety of control measures for stationary, area, and mobile sources.

Control Measure Selection

Emissions, modeling, source, and control information can be analyzed to select appropriate control measures that will help achieve emission reductions and prevent high ozone levels. Specific Ozone Advance action plans can tailor the use, combination, and timing of specific measures to meet local needs. Aside from control measures/programs identified in the plans, the plans may contain public education and awareness programs. Factors which may be considered in selecting control measures include, but are not limited to:

A. Determination of amount/type of emission reductions

The type and amounts of emission reductions impacts the selection of controls. An area with air quality affected predominantly by mobile sources and needing NO_x emission reductions would need different control measures than an area with air quality affected predominantly by large stationary sources of VOCs. Emissions inventory and modeling data may be beneficial in making these determinations. Considerations include:

- Is ozone formation in the area driven by NO_x or VOC emissions or a combination of the two?

- What are the primary types of NO_x and VOC emissions sources in the area? For example, are mobile or stationary sources emitting most of the NO_x or VOC in the area?
- Are there a few very large emitters of NO_x or VOC, many smaller ones, or a combination?
- Are there additional air quality improvements, such as toxic emissions reductions, that result from implementation of the controls under consideration for this program?
- Are there possible benefits to environmental justice communities?

B. Analysis of available control measures

Even if the types and amounts of emission reductions that would provide the greatest benefits are known, the availability and ease of implementation of emission control options may impact selection of a particular measure. Considerations include:

- What available control technologies/measures would be feasible to implement?
- What is the effectiveness of these control technologies/measures in achieving emission reductions?
- What are the timeframes necessary to implement the measure and see results?
- What is the cost (dollars/resources) necessary to implement the measure?
- What are the challenges to “sell” the measure to specific companies, decision makers or citizens?

It is worth noting that, although local ordinances imposing mandatory control measures may or may not satisfy the requirements associated with eventual SIP “credit,” these measures are certainly acceptable in terms of actions that may be taken as part of a community’s proactive work under Ozone Advance.

C. Selecting the proposed control measures

The state/tribe and EPA can assist in evaluating data and in reviewing the modeling for control options. Cooperative discussions with stakeholders can help determine the most appropriate control measures. Other states/tribes or local communities with similar sources and air quality issues, could be contacted for additional ideas or measures to consider.

Attachment C
Ozone Advance
Relevant EPA Guidance

A. Websites

1. Ozone Reduction Strategies, <http://www.epa.gov/airquality/ozonestrategy/>
2. State and Local Transportation Resources,
<http://www.epa.gov/otaq/stateresources/index.htm>
Note: Includes information concerning a wide variety of policy and guidance, partnership programs, grants and other sources of funding, and calculators and modeling tools.
3. National Clean Diesel Campaign (NCDC), <http://epa.gov/cleandiesel/>
4. Emission Inventory Improvement Program, <http://www.epa.gov/ttn/chief/eiip/techreport/>
5. Heat Island Effect, <http://www.epa.gov/heatisland/>

B. Documents

1. Improving Air Quality with Economic Incentive Programs, EPA-452/R-01-001, Jan. 2001, <http://www.epa.gov/ttncaaa1/t1/memoranda/eipfin.pdf>
2. Incorporating Voluntary Stationary Source Emission Reduction Programs Into SIPs-- Final Policy, Jan. 19, 2001, <http://www.epa.gov/ttncaaa1/t1/memoranda/coverpol.pdf>
Note: This guidance has been subsumed in 4, below.
3. Incorporating Emerging and Voluntary Measures in a State Implementation Plan (SIP), Sept. 2004, http://www.epa.gov/ttncaaa1/t1/memoranda/evm_ievm_g.pdf
4. Roadmap for Incorporating Energy Efficiency/Renewable Energy Policies and Programs Into State Implementation Plans/Tribal Implementation Plans, External Review Draft, March 30, 2011, <http://www.epa.gov/airquality/pdfs/eeremanual.pdf>
5. Guidance on Incorporating Bundled Measures in a State Implementation Plan, Aug. 16, 2005, <http://www.epa.gov/ttn/caaa/t1/memoranda/10885guideibminsip.pdf>

6. A Toolkit for States: Using Supplemental Environmental Projects (SEPs) to Promote Energy Efficiency (EE) and Renewable Energy (RE), Jan. 27, 2005,
http://www.epa.gov/statelocalclimate/documents/pdf/sep_toolkit.pdf
7. Guidance on SIP Credits for Emission Reductions from Electric Sector Energy Efficiency and Renewable Energy Measures, Aug. 5, 2004,
http://www.epa.gov/ttncaaa1/t1/memoranda/ereserem_gd.pdf
8. Guidance on Airport Emission Reduction Credits for Early Measures Through Voluntary Airport Low Emission Programs, Sept. 30, 2004,
http://www.epa.gov/airprog/oar/genconform/documents/aerc_040930.pdf
9. Policy and Guidance Documents to Assist Areas in Developing Strategies to Reduce Emissions from On-road and Non-road Sources,
<http://www.epa.gov/otaq/stateresources/policy/index.htm>

The web page provides access to numerous guidance documents including:

Guidance on Innovative and Voluntary Air Pollution Control Strategies:

Guidance on Incorporating Voluntary Mobile Source Emission Reduction Programs in State Implementation Plans (SIPs), Oct. 27, 1997

Transportation-related Documents:

- Diesel Retrofits: Quantifying and Using Their Benefits in SIPs and Conformity, Guidance for State and Local Air and Transportation Agencies, EPA420-B-06-005, June 2006
- Guidance for Quantifying and Using Long Duration Truck Idling Emission Reductions in State Implementation Plans and Transportation Conformity, Jan. 14, 2004
- Guidance for Quantifying and Using Long Duration Switch Yard Locomotive Idling Emission Reductions in State Implementation Plans, Jan. 14, 2004
- Analyzing Emissions Reductions from Travel Efficiency Strategies
- Information on Developing and Implementing Transportation Control Measures
- Improving Air Quality Through Land Use Activities
- Methodologies for Assessing Transportation and Air Quality Impacts of Brownfields and Infill Development
- SmartWay SIP and Conformity Guidance
- Implementation of Accelerated Retirement of Vehicles Programs

10. Information on clean diesel programs, technologies, emission reduction strategies and a broad array of other related information, <http://epa.gov/cleandiesel/publications.htm>

The web page provides access to numerous documents on clean diesel programs that address specific types of vehicles or equipment and other related information including:

School buses	Emission Reduction Technologies
Ports	Cost Effectiveness and Incentives
Construction and Agriculture	SmartWay Transport

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