



401 B Street, Suite 800  
 San Diego, CA 92101-4231  
 (619) 699-1900  
 Fax (619) 699-1905  
 www.sandag.org

# MEETING NOTICE AND AGENDA

## SAN DIEGO REGION CONFORMITY WORKING GROUP

The San Diego Region Conformity Working Group may take action on any item appearing on this agenda.

Wednesday, November 29, 2006

**10:30 a.m. to 12 noon**

SANDAG, Conference Room 8B  
 401 B Street, Suite 800  
 San Diego, CA 92101-4231

Staff Contact: Rachel Kennedy  
 (619) 699-1929  
 rke@sandag.org

### AGENDA HIGHLIGHTS

- 2007 REGIONAL TRANSPORTATION PLAN AIR QUALITY CONFORMITY: CRITERIA AND PROCEDURES
- STATUS OF THE STATE IMPLEMENTATION PLAN FOR 8-HOUR OZONE STANDARD

***Please contact Rachel Kennedy prior to the meeting if you wish to participate by conference call.***

*SANDAG offices are accessible by public transit. Phone 1-800-COMMUTE or see [www.sdcommute.com](http://www.sdcommute.com) for route information.*

*In compliance with the Americans with Disabilities Act (ADA), SANDAG will accommodate persons who require assistance in order to participate in SANDAG meetings. If such assistance is required, please contact SANDAG at (619) 699-1900 at least 72 hours in advance of the meeting.*

*To request this document or related reports in an alternative format, please call (619) 699-1900, (619) 699-1904 (TTY), or fax (619) 699-1905.*

#### MEMBER AGENCIES

Cities of  
 Carlsbad  
 Chula Vista  
 Coronado  
 Del Mar  
 El Cajon  
 Encinitas  
 Escondido  
 Imperial Beach  
 La Mesa  
 Lemon Grove  
 National City  
 Oceanside  
 Poway  
 San Diego  
 San Marcos  
 Santee  
 Solana Beach  
 Vista  
 and  
 County of San Diego

#### ADVISORY MEMBERS

Imperial County  
 California Department  
 of Transportation  
 Metropolitan  
 Transit System  
 North San Diego County  
 Transit Development Board  
 United States  
 Department of Defense  
 San Diego  
 Unified Port District  
 San Diego County  
 Water Authority  
 Mexico

# SAN DIEGO REGION CONFORMITY WORKING GROUP (CWG)

Wednesday, November 29, 2006

ITEM #		RECOMMENDATION
1.	INTRODUCTIONS	
+2.	SUMMARY OF OCTOBER 18, 2006, MEETING	INFORMATION
3.	PUBLIC COMMENTS/COMMUNICATIONS	
+4.	2007 REGIONAL TRANSPORTATION PLAN AIR QUALITY CONFORMITY: CRITERIA AND PROCEDURES	DISCUSSION
	The CWG will continue discussion of the conformity criteria and procedures to be followed to determine conformity of the 2007 Regional Transportation Plan (RTP). SANDAG staff will make brief presentations on the following topics:	
	(a) Use of Latest Planning Assumptions Staff will present information on travel demand modeling efforts.	
	(b) Consultation/Public Outreach On September 1, 2006, the SANDAG Transportation Committee released the draft 2007 RTP Public Involvement Program for distribution and a 45-day public comment period. The plan was approved by the SANDAG Board on October 27, 2006. SANDAG staff will provide the CWG with an overview of the adopted plan and public outreach efforts currently underway	
+5.	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 2006 REVISED PARTICULAR MATTER STANDARDS	DISCUSSION
	The CWG will discuss the revised Particular Matter Standards and their potential conformity implications for the San Diego region.	
6.	STATUS OF THE STATE IMPLEMENTATION PLAN FOR 8-HOUR OZONE STANDARD	DISCUSSION
	The CWG will discuss updates on the development of the 8-Hour Ozone State Implementation Plan.	
7.	REPORT ON AIR RESOURCES BOARD EMFAC 2007 WORKSHOPS	DISCUSSION
	The CWG will discuss information presented at the EMFAC (EMission FACtors) 2007 Workshops held this month.	
8.	OTHER BUSINESS	

+ next to an item indicates an attachment

The next meeting of the San Diego Region Conformity Working Group is scheduled for Wednesday, December 13, 2006, from 10:30 a.m. to 12 noon at SANDAG.

# CONFORMITY WORKING GROUP

November 29, 2006

AGENDA ITEM NO.: **2**

**Action Requested: INFORMATION**

SUMMARY OF OCTOBER 18, 2006, MEETING

File Number 3001300

## **Item #1: Introductions**

Self-introductions were made. See attached attendance list.

## **Item #2: Summary of July 19, 2006, Meeting**

There were no comments or corrections to the meeting notes.

## **Item #3: Public Comments/Communications**

There were none.

## **Item #4: 2007 Regional Transportation Plan Air Quality Conformity: Criteria and Procedures**

On October 13, 2006, the SANDAG Board was asked for input on what financial assumptions should be included in Revenue Constrained and Reasonably Expected funding scenarios for the 2007 Regional Transportation Plan (RTP). Susan Brown, SANDAG, provided the CWG with an overview of the Board funding assumption feedback. The Board did not want to include new funding assumptions in the revenue constrained scenario, therefore this scenario will include updated numbers for the same funding sources that were included in the 2030 Revenue Constrained RTP: 2006 Update.

In the Reasonably Expected scenario there will be additional financial assumptions. Staff will explore the inclusion of some toll roads, goods movement user fees, use of managed lanes for goods movement; examine parking fees at some transit stations, rental car fees, additional transportation demand management, including requiring employer contributions, joint development revenues, and an increase in vehicle license fees. SANDAG will also look at some additional sales tax within the Reasonably Expected scenario.

Ed Schafer, SANDAG, provided the CWG with an overview of the 2030 Regional Growth Forecast update. The update is similar to the original 2030 forecast and incorporates two iterative phases. First, a forecast of the entire region is produced based largely on economic trends and the associated demographic characteristics. The second phase allocates these overall forecasts to jurisdictions and smaller geographic areas based upon the region's general and community plans and their relationships with the regional transportation system. An interregional community model is then used to determine what percentage of the growth will occur within the San Diego region and the adjoining interregional and binational areas.

#### **Item #5: 2007 Regional Transportation Plan Air Quality Conformity Schedule**

Rachel Kennedy, SANDAG, highlighted a number of air quality conformity and SIP development dates. Dennis Wade, ARB, inquired if SANDAG would be using EMFAC (EMission FACTors) 2007 for the 2007 RTP conformity. Ms. Kennedy informed the CWG that SANDAG is considering running both the EMFAC 2002 and EMFAC 2007 models as it is not certain if the new budgets will have been approved by Environmental Protection Agency (EPA) at the time of the RTP adoption in November 2007. If this approach is taken, both model runs would be included in the draft RTP and be distributed for public comment. The conformity finding would be made in November 2007 with the applicable EMFAC model and adopted budget.

#### **Item #6: Status of the State Implementation Plan for 8-Hour Ozone Standard**

Carl Selnick, APCD, provided the CWG with an update on the status of the State Implementation Plan (SIP) development. The preliminary modeling has been completed and it is anticipated that attainment will be demonstrated in 2008. By demonstrating attainment in 2008, the SIP has a more streamlined set of EPA requirements that must be met.

Carla Walecka, TCA, inquired if the SIP will include any new transportation control measures (TCM) and when the public workshops will occur. Mr. Selnick noted that the SIP is anticipated to be released in early December for a 30-day public review period with a workshop in early January 2007. The final SIP is scheduled for release in February 2007 for public review prior to Board action in mid-March 2007. The ARB Board meeting is anticipated to be held in April 2007. New TCMs are not anticipated.

#### **Item #7: 2006 Regional Transportation improvement Program Conformity Finding and 2030 Regional Transportation Plan: 2006 Update Conformity Redetermination**

The SANDAG Board of directors adopted the 2006 Regional Transportation improvement Program (RTIP) and its conformity determination on August 4, 2006, along with the conformity redetermination of conformity of the 2030 Revenue Constrained RTP. On October 2, 2006, the U.S. Department of Transportation made an air quality conformity determination for both the 2006 RTIP and 2030 RTP.

#### **Item #8: Report on Statewide Attainment Strategy Symposium**

Members of the CWG attended the symposium via Web cast. It was noted that the meeting materials were available online.

#### **Item #9: Other Business**

Due to conflicting meeting and holiday schedules, the CWG has scheduled the next two meetings for November 29, 2006, and December 13, 2006. Both meetings will be held from 10:30 a.m. to noon at SANDAG.

Mike Brady noted that we may want to include an item on the new Particular Matter 2.5 ruling on the November 2006 CWG meeting agenda.

## San Diego Region Conformity Working Group

Meeting Attendance

October 18, 2006

<b>Name</b>	<b>Agency</b>
Mike Brady (phone)	Caltrans
Sandy Johnson	Caltrans
Jean Mazur (phone)	FHWA
Karina O'Connor (phone)	EPA
Carl Selnick	APCD
Dennis Wade (phone)	ARB
Carla Walecka (phone)	TCA
Elisa Arias	SANDAG
Susan Brown	SANDAG
Rachel Kennedy	SANDAG
Ed Schafer	SANDAG



**BOARD OF DIRECTORS  
OCTOBER 27, 2006**

**AGENDA ITEM NO. 06-10-14  
ACTION REQUESTED - APPROVE**

**2007 REGIONAL TRANSPORTATION PLAN:  
PUBLIC INVOLVEMENT PROGRAM**

File Number 3000400

**Introduction**

A comprehensive public involvement program is an important component for developing the 2007 Regional Transportation Plan (RTP). SANDAG has developed this public involvement program following outreach and input from a number of committees, working groups, and other stakeholders. SANDAG also has followed guidelines for public involvement programs that are included in the new Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The draft plan was presented, discussed and distributed to the Regional Planning Stakeholders Working Group, Social Services Transportation Advisory Council, Transportation Committee, and other community and regional stakeholders.

**Recommendation**

The Board of Directors is asked to approve the Public Involvement Program for the 2007 Regional Transportation Plan.

In addition to the budgeted outreach efforts already in the 2007 OWP, staff is recommending approval to conduct research such as telephone surveys and focus groups for the 2007 Regional Transportation Plan.

A major goal of this public involvement effort is to reach out to nontraditional as well as traditional audiences to include them in the transportation planning process. This program will help ensure that environmental justice issues are addressed and that interested members of the public have ample opportunity to understand and provide meaningful input while the RTP is in its early stages. This program will be combined with the public involvement efforts to develop the Coordinated Public Transit and Human Services Transportation Plan ("Coordinated Transportation Plan") that will serve as the San Diego region program to improve services for people with disabilities, older adults, and individuals with low incomes. Early public involvement and comment about the RTP and Coordinated Transportation Plan are important to SANDAG as part of developing a transportation public policy blueprint that meets the travel needs of our residents.

**Discussion**

***Public Involvement Program Objectives***

- Solicit participation from a broad range of groups and individuals in the 2007 RTP and Coordinated Transportation Plan development and decision-making process
- Raise awareness and offer opportunities for public input about the 2007 RTP and the Coordinated Transportation Plan
- Provide information to San Diego region residents and other stakeholders

- Stimulate dialogue about the transportation challenges facing the San Diego region
- Develop and incorporate into the Plans, realistic solutions that address the diverse mobility needs of the region's residents, visitors and business people
- Build public support for transportation improvements outlined in the 2007 RTP and the Coordinated Transportation Plan

The draft Public Involvement Program was released for public review and comment at the September 1, 2006, Transportation Committee meeting. SANDAG received comments from Caltrans, North County Transit District, Metropolitan Transit System, and members of the public. Comments and responses are included in Attachment 1.

*Implement Community Based Outreach Program*

To help ensure diverse and direct input into the 2007 RTP from residents throughout the San Diego region, SANDAG will implement an innovative program to secure participation from communities and individuals typically not involved in the regional transportation planning process. SANDAG has awarded grant funding to the following community-based organizations through a competitive-bid process. The selected organizations will conduct outreach activities to secure public involvement from stakeholders in their communities, to engage community-based participation in setting regional transportation priorities, and to generate feedback on the RTP. This program is modeled after a similar successful effort SANDAG conducted during the development of the Regional Comprehensive Plan.

<b>Organization</b>	<b>Community Served</b>
South Bay Community Services	<i>Chula Vista, Otay Ranch, South County communities</i>
Able-Disabled Advocacy	<i>People with disabilities throughout San Diego County</i>
Bayside Community Center	<i>Linda Vista community outreach to seniors, and communities that speak Vietnamese, Chinese, and Spanish</i>
City Heights CDC	<i>Outreach to residents in greater City Heights Mid-City communities that include: seniors, low income, and those involved in revitalizing these neighborhoods</i>
All Congregations Together	<i>Communities in the southeastern part of the City of San Diego and the Diamond Business District</i>
El Cajon Collaborative	<i>El Cajon/East County community members, businesses, schools, social service &amp; health care providers, and law enforcement</i>
Escondido Education COMPACT	<i>High school youth and college student outreach in Escondido, San Marcos, and North Inland areas; will include youth and college students in outreach effort to solicit input on transportation issues.</i>

*Distribute/present information at regularly-scheduled meetings*

Present RTP updates and solicit input at SANDAG Committee meetings, jurisdiction council/board meetings, local/regional agency meetings, city and county Community Planning Groups, Chambers of Commerce, Economic Development Organizations, community and business group meetings, public service organizations, and other stakeholder groups.

*Develop Web pages for RTP outreach effort*

Maintain 2007 RTP Web pages on the SANDAG Web site to provide information and timely updates on the RTP development process. Promote upcoming meetings and events and provide options for feedback.

*Distribute information via brochures, newsletters, and other publications*

Use SANDAG publications such as the electronic rEgion newsletter, SANDAG Board Actions, RideLink newsletter, and other publications to provide updates on the RTP and to solicit feedback. Send news items to jurisdictions and other organizations to promote the RTP.

*Implement media outreach program*

Provide ongoing information to local/regional media to secure coverage in print and broadcast news. Write and secure publication of opinion pieces by SANDAG directors or other regional leaders on the RTP.

*Promote outreach through SANDAG Speakers Bureau*

Contact organizations throughout region for opportunities to conduct RTP workshops or to present information and solicit feedback on the 2007 RTP.

*Hold subregional meetings/workshops*

As the draft RTP is developed this spring, hold subregional meetings/workshops to solicit additional feedback. Involve Regional Planning Stakeholders Working Group in the planning efforts for these meetings. Partner with member agencies, city and county Community Planning Groups, Chambers of Commerce, Economic Development Organizations, community and business group meetings, public service organizations, and other stakeholder groups to secure broad participation at the workshops. Regional meetings and workshops for the Coordinated Plan also will be held.

*Hold Public Hearings*

As a final step in the 2007 RTP development process, hold public hearings on the Regional Transportation Plan and its associated Environmental Impact Report.

**Budget**

Many of the activities and support are covered in the FY 2007 Overall Work Program and include staff support for meetings, outreach efforts, graphics support, Web support, workshop planning activities, media outreach, and speaking engagements. Direct expenses budgeted for this project are \$70,000. These expenses are outlined below.

<b>RTP Public Outreach Activity</b>	<b>Cost</b>
Community Based Grants	\$48,623
Printing: direct mail, flyers, brochures, etc.	6,000
Advertising: for workshops, public hearings, etc.	10,000
Workshop expenses: meeting supplies and materials	5,377
<b>Total</b>	<b>\$70,000</b>

Staff recommends approval of additional funding for research such as a regionwide telephone survey and subregional focus groups to develop a broader spectrum of input into the 2007 RTP and help the Board in its policy deliberations in the coming months. This funding is available from salary savings in FY 2007.

<b>Research Activities</b>	<b>Cost</b>
Telephone Survey	\$50,000 - 60,000-
Focus Groups	5,000 per focus group (up to six focus groups)
<b>Total</b>	<b>\$90,000</b>

GARY L. GALLEGOS  
Executive Director

Attachment: 1. 2007 RTP Public Involvement Plan Comments and Responses

Key Staff Contact: Anne Steinberger, (619) 699-1937, ast@sandag.org

Funds are budgeted in Work Element: #3000400, #1110300, and #300023

**2007 Regional Transportation Plan  
Public Involvement Plan Comments and Responses**

<b>2007 RTP Public Involvement Plan Comment</b>	<b>SANDAG Response</b>
<p>September 1, 2006, public comment from Chuck Lungerhausen at the Transportation Committee Meeting:</p> <p>He supports the transit system, including the recent improvements to convert to a low-floor system where people just walk on the bus or trolley. He stated that he did not support bus rapid transit (BRT) taking the place of trolley service in the Mid-Coast Corridor.</p>	<p>The RTP will advance funding options for vehicle maintenance and procurement. SANDAG will be preparing a Subsequent Environmental Impact Report and Supplemental Environmental Impact Statement for the Mid-Coast Corridor. As required by law, SANDAG will be considering all reasonable alternatives to the Locally Preferred Alternative (Light Rail Transit), including Bus Rapid Transit (BRT).</p>
<p>September 25, 2006, from Robert Hoffman:</p> <p>SANDAG should “make full disclosure” in presentations on the RTP on how transportation plans/improvements will affect the system.</p>	<p>Staff will provide information in the draft RTP as well as at public meetings on how proposed improvements will affect the transportation system. Staff also will structure public meetings so residents can ask questions and receive answers about proposed improvements.</p>
<p>October 10, 2006, from Caltrans:</p> <p>SANDAG was encouraged to follow SAFETEA-LU guidelines for implementing public involvement programs especially when including “non-traditional” audiences in the public involvement process.</p>	<p>The community-based outreach program and general public outreach effort will follow SAFETEA-LU guidelines.</p>
<p>October 16, 2006, from NCTD:</p> <p>NCTD supports the public involvement program and offered to assist in promoting public involvement efforts with Rider Alerts on COASTER trains and BREEZE buses. NCTD recognized the importance of including transit system users in the planning process.</p>	<p>SANDAG will work with NCTD throughout the public involvement process for the RTP. NCTD will be included in public workshops and other outreach efforts.</p>
<p>October 16, 2006, from MTS:</p> <p>The RTP will be a much stronger document if the community outreach provider(s) is required to reach a representative number of current transit riders as well as potential new users of public transit from throughout the region. To ensure participation of transit riders, and to keep riders informed and aware of the RTP process, MTS would be happy to provide space at transit centers at which input can be solicited and to post RTP updates in its onboard newsletter.</p>	<p>SANDAG will work with MTS throughout the public involvement process for the RTP. MTS will be included in public workshops and other outreach efforts. SANDAG will coordinate with the community based outreach programs to specifically secure public input from transit riders and potential transit riders.</p>

**FACT SHEET**  
**FINAL REVISIONS TO THE NATIONAL AMBIENT AIR QUALITY STANDARDS**  
**FOR PARTICLE POLLUTION (PARTICULATE MATTER)**

**SUMMARY OF ACTION**

- To better protect public health and welfare for millions of Americans across the country, EPA on September 21, 2006 issued the Agency's most protective suite of national air quality standards for particle pollution ever.
- Particle pollution, also called particulate matter or PM, is a complex mixture of extremely small particles and liquid droplets in the air. When breathed in, these particles can reach the deepest regions of the lungs. Exposure to particle pollution is linked to a variety of significant health problems. Particle pollution also is the main cause of visibility impairment in the nation's cities and national parks.
- The final standards address two categories of particle pollution: *fine particles* (PM<sub>2.5</sub>), which are 2.5 micrometers in diameter and smaller; and *inhalable coarse particles* (PM<sub>10</sub>) which are smaller than 10 micrometers. (A micrometer is 1/1000<sup>th</sup> of a millimeter; there are 25,400 micrometers in an inch.)
- EPA is strengthening the 24-hour fine particle standard from the 1997 level of 65 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) to  $35\mu\text{g}/\text{m}^3$ , and retains the current annual fine particle standard at  $15\mu\text{g}/\text{m}^3$ . The Agency also is retaining the existing national 24-hour PM<sub>10</sub> standard of  $150\mu\text{g}/\text{m}^3$ .
- The Agency is revoking the annual PM<sub>10</sub> standard, because available evidence generally does not suggest a link between long-term exposure to current levels of coarse particles and health problems. EPA is protecting all Americans from effects of short-term exposure to inhalable coarse particles by retaining the existing daily PM<sub>10</sub> standard of 150 micrograms per cubic meter.
- Scientific studies have found an association between exposure to particulate matter and significant health problems, including: aggravated asthma; chronic bronchitis; reduced lung function; irregular heartbeat; heart attack; and premature death in people with heart or lung disease.
- EPA selected levels for the final standards after completing an extensive review of thousands of scientific studies on the impact of fine and coarse particles on public health and welfare. The Agency also carefully reviewed and considered public comment on the proposed standards. EPA held three public hearings and received about 120,000 written comments.
- The Agency provisionally assessed new, peer-reviewed studies about particle pollution and health (including some studies received during the comment period) to ensure that the

Agency was aware of new science before setting the final standards. That assessment did not materially change EPA's understanding of PM. EPA did not base its decision on these new studies, however, because they have not been through as rigorous a level of review as the science on which the Agency based its December 2005 proposal. EPA will consider these new studies during the next review of the PM standards.

- EPA has issued rules that will help states meet the standards by making significant strides toward reducing fine particles. These rules include the Clean Air Interstate Rule to dramatically reduce and cap particle pollution-forming emissions from power plants in the eastern United States, the Clean Diesel Program to dramatically reduce emissions from highway, nonroad and stationary diesel engines, and the Clean Air Visibility rule, which will reduce emissions affecting air quality in national parks.

## **THE FINAL STANDARDS**

- For both fine and coarse particles, EPA sets two types of standards: primary standards, to protect public health; and secondary standards, to protect the public welfare from effects including visibility impairment, damage to building and national monuments, and damage to ecosystems.

### ***Fine Particle Standards***

- EPA has two primary standards for fine particles: an annual standard, designed to protect against health effects caused by exposures ranging from days to years; and a 24-hour standard, designed to provide additional protection on days with high peak PM<sub>2.5</sub> concentrations.

#### **24-hour standards**

- o *Primary* -- EPA has substantially strengthened the primary 24-hour fine particle standard, lowering it from the current level of 65 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) to  $35\mu\text{g}/\text{m}^3$ . EPA based this decision on an assessment of a significantly expanded body of scientific information. The assessment concluded that the standard should be strengthened to better protect the public from the health effects associated with short-term fine particle exposures.
- o *Secondary* -- The Agency has set the secondary standard at the same level as the primary standard ( $35\mu\text{g}/\text{m}^3$ ).

#### **Annual standards**

- o *Primary* -- EPA is retaining the primary annual standard at  $15\mu\text{g}/\text{m}^3$  based on its assessment of several expanded, re-analyzed and new studies that have increased the Agency's confidence in associations between long-term PM<sub>2.5</sub> exposure and serious health effects that were documented in the prior review. The assessment concluded that this standard continues to be appropriate to protect the public from health effects associated with long-term fine particle exposures.  
*Secondary* -- The Agency has set the secondary standard at the same level as the primary standard ( $15\mu\text{g}/\text{m}^3$ ).

## *Coarse Particle Standards*

### **24-hour standards**

- EPA is retaining the current 24-hour PM<sub>10</sub> standards to protect against health and welfare effects associated with exposure to some types of coarse particles. Short-term exposure to coarse particles in urban and industrial areas is associated with serious health effects. Retaining this standard will provide protection in all areas of the country against the effects of short-term exposure to such coarse particles.
- Scientific evidence links health problems to coarse particle exposure in urban and industrial areas, but evidence about exposure in rural areas is limited. The Agency is recommending that States focus their control programs on urban and industrial sources that are contributing to air quality violations.
- The Agency intends to characterize uncertainties in the currently available information on coarse particles as part of the Agency's ongoing PM research program.

### **Annual standards**

- EPA is revoking the annual PM<sub>10</sub> standards, because there is insufficient evidence linking health problems to long-term exposure to inhalable coarse particle pollution.

## **THE FORM OF THE STANDARDS**

- When EPA sets air quality standards, it also must specify the air quality statistics that the Agency will use to determine whether an area is meeting the standards. These statistics are known as the "form of the standard" and are derived separately for each standard.

### *Fine particles – form of the 24-hour standard*

- An area will meet the 24-hour standard if the 98<sup>th</sup> percentile of 24-hour PM<sub>2.5</sub> concentrations in a year, averaged over three years, is less than or equal to the level of the standard of 35 µg/m<sup>3</sup>. This is the same form as the current 24-hour standard.

### *Fine particles – form of the annual standard*

- An area will meet the annual PM<sub>2.5</sub> standard when the three-year average of the annual average PM<sub>2.5</sub> concentration is less than or equal to 15 µg/m<sup>3</sup>. This is the same form as the current annual standard.
- The revisions limit the conditions under which some areas may average measurements from multiple community-oriented monitors to determine compliance with the annual standard.

### ***Inhalable coarse particles – form of the 24-hour standard***

- An area will meet the 24-hour PM<sub>10</sub> standard when the 150µg/m<sup>3</sup> level is not exceeded more than once per year on average over a three year period. This is the same form as the current 24-hour standard.

## **SOURCES OF PARTICLE POLLUTION**

### ***Fine particles***

- Fine particles can be emitted directly, such as in smoke from a fire, or they can form from chemical reactions of gases such as sulfur dioxide, nitrogen dioxide and some organic gases.
- Sources of fine particle pollution (or the gases that contribute to fine particle formation) include power plants, gasoline and diesel engines, wood combustion, high-temperature industrial processes such as smelters and steel mills, and forest fires.

### ***Coarse particles***

- Coarse particles can be generally divided into rural, natural crustal material such as dust and urban particles such as road dust kicked up by traffic (called *resuspended* dust), construction and demolition, industries; and biological sources.

## **PARTICLE POLLUTION AND PUBLIC HEALTH**

- Thousands of new scientific studies on particulate matter have been published and peer-reviewed since EPA last reviewed the standards in 1997, and before the "cutoff date" for inclusion in the "criteria document" of studies for this review. These include several studies used in the 1997 review that have been extended, and the data reanalyzed.
- The majority of the studies assessed for the current review were published prior to 2003. To ensure that the EPA Administrator was fully aware of new science before making a final decision on the standards, EPA conducted a survey and provisional assessment of relevant new studies. The Agency did not rely on these studies in making its decision on the standards, however, because they have not been through as rigorous a level of review as the science on which the Agency based its December 2005 proposal. EPA will consider these studies in its next review.

### ***Exposure to fine particle pollution***

- **Health effects associated with short-term exposure to fine particles (PM<sub>2.5</sub>) include:**
  - o Premature death in people with heart and lung disease
  - o Non-fatal heart attacks
  - o Increased hospital admissions, emergency room visits and doctor's visits for respiratory diseases
  - o Increased hospital admission and ER visits for cardiovascular diseases
  - o Increased respiratory symptoms such as coughing, wheezing and shortness of breath
  - o Lung function changes, especially in children and people with lung diseases such as asthma.
  - o Changes in heart rate variability
  - o Irregular heartbeat

- **Health effects associated with long-term exposure to fine particles (PM<sub>2.5</sub>) include:**
  - o Premature death in people with heart and lung diseases, including death from lung cancer
  - o Reduced lung function
  - o Development of chronic respiratory disease in children

***Exposure to coarse particle pollution***

- **Health effects associated with short-term exposure to coarse particles include:**
  - o Premature death in people with heart or lung disease
  - o Hospital admissions for heart disease
  - o Increased hospital admissions and doctors' visits for respiratory disease
  - o Increased respiratory symptoms in children
  - o Decreased lung function
- Available evidence generally does not suggest a link between *long-term* exposure to coarse particles and health problems.

**IMPLEMENTING THE STANDARDS**

- The Clean Air Act requires EPA to designate areas as attainment (meeting the standards) or nonattainment (not meeting the standards) when the Agency sets a new standard, or revises an existing standard.
- **The following schedule will apply to areas not meeting the 24-hour fine particle standard:**
  - o States will make recommendations by Nov. 2007 for areas to be designated attainment (meeting the standards) and nonattainment (violating the standards).
  - o EPA will make designations by November 2009; those designations will become effective in April 2010.
  - o State Implementation Plans, which outline how states will reduce pollution to meet the standards, will be due three years after designations, in April 2013.
  - o States must meet the standards by April 2015, with a possible extension to April 2020.
- EPA has issued a number of rules to help states to meet the standards. These rules make significant strides toward reducing fine particle pollution both regionally and across the country. These rules include the Clean Air Interstate Rule to reduce emissions from power plants in the eastern United States; the Clean Diesel Program to reduce emissions from highway, nonroad and stationary diesel engines nationwide, and the Clean Air Visibility Rule to reduce emissions affecting air quality in national parks.
- EPA will not designate new attainment and nonattainment areas for the 24-hour PM<sub>10</sub> standards.

## **BENEFITS AND COSTS**

- While the Clean Air Act prevents EPA from considering costs in setting or revising National Ambient Air Quality Standards, the Agency does analyze the benefits and costs of implementing standards as required by Executive Order 12866 and guidance from the White House Office of Management and Budget.
- To estimate the benefits of meeting a standard, EPA uses peer-reviewed studies of air quality and health and welfare effects, sophisticated air quality models, and peer-reviewed studies of the dollar values of public health improvements.

When fully met, the revised 24-hour PM<sub>2.5</sub> standards are estimated to yield between \$9 billion and \$75 billion a year in health and visibility benefits in 2020. This estimate is based on the opinions of outside experts on PM and the risk of premature death, along with other benefits information.

- Based on published scientific studies alone, EPA estimates that the most likely benefits of meeting the revised 24-hour PM 2.5 standards will range from \$17 billion to \$35 billion.
- The benefits of meeting the revised 24-hour PM<sub>2.5</sub> standards include the value of an estimated reduction in:
  - 2,500 premature deaths in people with heart or lung disease.
  - 2,600 cases of chronic bronchitis.
  - 5,000 nonfatal heart attacks,
  - 1,630 hospital admissions for cardiovascular or respiratory symptoms,
  - 1,200 emergency room visits for asthma,
  - 7,300 cases of acute bronchitis,
  - 97,000 cases of upper and lower respiratory symptoms,
  - 51,000 cases of aggravated asthma,
  - 350,000 days when people miss work or school, and
  - 2 million days when people must restrict their activities because of particle pollution-related symptoms.
- As with any scientific analysis, actual results could be higher or lower. EPA will outline the uncertainties inherent in these estimates in a Regulatory Impact Analysis, which the Agency will issue shortly.
- EPA estimates the cost of meeting the revised 24-hour PM 2.5 standards at \$6 billion.
- The benefits of meeting the revised 24-hour standards are in addition to the benefits of meeting the 1997 annual fine particles standards, which EPA has retained.
- Based on recently updated estimates, meeting the annual standard will result in benefits ranging from \$20 billion to \$160 billion a year in 2015. These updated estimates include the opinion of outside experts on the risk of premature death, along with other benefits information. EPA estimates the cost of meeting the 1997 standards at \$7 billion.

## **BACKGROUND ON THE STANDARDS REVIEW**

- The Clean Air Act directs EPA to set National Ambient Air Quality Standards for pollutants that the Agency has listed as “criteria pollutants,” based on their likelihood of harming public health and welfare. EPA sets national air quality standards for six common air pollutants: ground-level ozone (smog), carbon monoxide, lead, nitrogen dioxide, sulfur dioxide, and particulate matter.
- For each of these pollutants, EPA has set health-based or "primary" standards to protect public health, and "secondary" standards to protect the public welfare from harm to crops, vegetation, wildlife, buildings and national monuments, and visibility.
- The Clean Air Act requires EPA to review the standards once every five years to determine whether revisions to the standards are appropriate.
- EPA has regulated particulate matter since 1971. The Agency added specific standards for fine particles following its last review, in 1997.
- Under terms of a consent decree, EPA agreed to issue a proposal on the particulate matter standards by December 20, 2005; and committed to finalizing any revisions to the standards by September 27, 2006.
- The review of a standard begins with an assessment of science about the particular pollutant and its effects on public health and welfare. EPA’s National Center for Environmental Assessment undertakes an extensive scientific and technical assessment process during the standard review for any pollutant. The first step in the process is the preparation of an "Air Quality Criteria Document," an extensive assessment of scientific data pertaining to the health and environmental effects associated with the pollutant under review.
- EPA’s Office of Air Quality Planning and Standards then prepares a document (known as a "staff paper") that interprets the most relevant information in the "criteria document" and identifies: 1) factors EPA staff believes should be considered in the standard review; 2) uncertainties in the scientific data; and 3) ranges of alternative standards the staff believes should be considered. Technical staff then compiles a paper that outlines the policy implications of the science. This paper represents the views of the staff and, in final form, is ultimately used as the basis for staff recommendations to the EPA Administrator.
- Drafts of both the "criteria document" and the "staff paper," which are based on thousands of peer-reviewed scientific studies, receive extensive review by representatives of the scientific community, industry, public interest groups and the public, as well as the Clean Air Scientific Advisory Committee (CASAC) -- a group of independent scientific and technical experts established by Congress.
- As part of its mandate, CASAC makes recommendations to EPA on the adequacy of the existing standards and revisions it believes would be appropriate. Based on the scientific

assessments, and taking into account the recommendations of CASAC and public comments, the EPA Administrator must judge whether it is appropriate to propose revisions to the standards.

- EPA undertakes an extensive public review and comment process, considering and analyzing issues raised in public comments before announcing a final decision. As with every proposed and final rule, all other relevant federal agencies are given the opportunity to participate in the process.
- The law requires that the EPA Administrator set the primary standards at a level he judges to be “requisite to protect the public health with an adequate margin of safety” and establish secondary standards that are “requisite” to protect public welfare. The Clean Air Act defines welfare as including environmental effects such as visibility impairment, damage to crops and ecosystems, deterioration of manmade materials, among others.
- The Clean Air Act bars the Administrator from considering costs when setting the standards. The U.S. Supreme Court upheld this requirement in a 2001 decision.

#### **FOR MORE INFORMATION**

- Interested parties can download the notice from EPA's Web site at:  
<http://www.epa.gov/air/particles/actions.html>