



AIR CURRENTS

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Air Resources Board Approves Ozone Attainment Plan

This November, the California Air Resources Board voted to approve the **Revised 2001 Bay Area Ozone Attainment Plan**. This plan was developed to bring the Bay Area back into attainment of the federal ozone standard. A detailed summary follows:

Introduction

Just as our solar system orbits the sun, the Air District's regulatory universe in many ways revolves around that most sun-struck of pollutants, ozone.

The Bay Area falls short of meeting both state and federal air quality standards for ozone—a polluting gas whose formation is catalyzed by sunlight. As a consequence, state and federal regulations require the Air District to develop and continually update two comprehensive planning documents that demonstrate how our policies and regulations will enable the Bay Area to achieve these standards in the future.

These documents are, respectively, a state *Clean Air Plan* (updated every three years, most recently in 2000), and a *Bay Area Ozone Attainment Plan* filed with the federal government.

On October 24, at the culmination of a long and arduous process, the Air District and our planning partners, the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), adopted the *Revised 2001 Bay Area Ozone Attainment Plan*.

Shortly thereafter, on November 1, the Plan was approved by the state's top air pollution agency, the California Air Resources Board (CARB). The Plan has

now been forwarded to the federal Environmental Protection Agency. If the EPA approves the *2001 Plan*, it will be consolidated into the State Implementation Plan (SIP) for all of California, and it will become the blueprint for future attainment of the federal ozone standard in the Bay Area.

EPA must find the transportation emission budgets in the *2001 Plan* to be adequate by January 2002, however, or there will be serious financial consequences. Federal funding for a wide range of transportation projects throughout the Bay Area will come to an unsettling halt.

—continued on next page

Summer 2001 is Second Cleanest on Record

The Bay Area's 2001 summertime smog season ended with only one day of exceedences of the federal one-hour ozone standard. This is the second lowest number of excess days recorded since the Air District first began to monitor the air in the 1960s. The only year with fewer excesses was 1997, when there were no excesses of the federal one-hour standard.

The single day of excess this year occurred on July 3. Exceedences were registered at the Air District's Bethel Island and Concord monitoring stations.

In 1999 and 2000, there were three days over the federal one-hour standard each

year. Historically, air quality in the Bay Area has shown steady improvement over the past thirty years: In 1969, the region experienced 65 days over the same federal one-hour ozone standard.

"We're very pleased that the federal air quality standard, which is set to protect public health, was only exceeded on one day at two locations this year," said Ellen Garvey, the Air District's Executive Officer. "Moving forward and meeting federal and state air quality standards is our top priority," Garvey said.

—Teresa Lee

Days over Ozone Standards in the Major California Air Basins in 2001

AIR BASIN	AIR QUALITY STANDARDS	
	Federal 1 hr (12 ppb)	State 1 hr (9 ppb)
Bay Area	1	15
San Diego	2	26
Sacramento	3	38
San Joaquin Valley	28	107
South Coast (Los Angeles)	37	118

all about ozone

Ozone, a form of oxygen, is a highly reactive gas. The old adage “two’s company, three’s a crowd” holds for oxygen atoms as well. Molecules of oxygen are normally made up of two atoms. Ozone, on the other hand, is a short-lived, unstable combination of three oxygen atoms.

In the lower atmosphere, ozone is formed by the photochemical effect of sunlight on carbon-based chemicals known as volatile organic compounds (VOCs) in interaction with another group of air pollutants called oxides of nitrogen (NOx). In the Bay Area, automobiles are the main source of these pollutants.

Ozone pollution in the lower atmosphere, or “ground-level ozone,” should not be confused with the protective layer of ozone in the upper atmosphere, which screens out harmful ultraviolet rays and is created by a different process.

Ground-level ozone is a transitory pollutant: here today and gone tomorrow. It builds up during the early afternoon and evening on hot, sunny days, and then dissipates at night. But it’s very instability contributes to its harmful effects—the temporary extra oxygen atom makes it an extremely reactive oxidizer. It interacts chemically with internal body tissues and irritates the lungs, causing chest pain, restricting air passages, and aggravating the symptoms of people who suffer from respiratory conditions like asthma and emphysema.

Ozone Plan

continued from page 1

Attainment History

To protect air quality, the federal government established National Ambient Air Quality Standards (NAAQS) for a handful of the most common “criteria” air pollutants. EPA tracks the progress of every state and region in meeting these health-based standards, and demands that a comprehensive plan be submitted if an area is determined to be out of attainment of the standard for any one of these pollutants.

The Bay Area is currently in attainment of the national standards for every one of these criteria pollutants except ozone.

The federal standard for ozone is 12 parts per hundred million, averaged over the course of one hour. (EPA has proposed a new federal eight-hour average ozone standard, but last year the Supreme Court remanded this standard back to EPA for further consideration.)

There are more than 20 air quality monitoring stations in the Bay Area, continuously recording concentrations of criteria pollutants in the ambient air. For

the entire region to be considered in attainment, EPA requires that no single one of these stations average more than one exceedance of the ozone standard per year, averaged over the most recent three-year period.

The Bay Area was designated out of attainment of the ozone standard for the first time in 1978, following passage of the 1977 federal Clean Air Act amendments. The Clean Air Act was next amended in 1990, and we were again designated as a nonattainment area in 1991.

In the spring of 1995, however, after several years of low ozone concentrations, EPA designated the Bay Area in attainment for ozone. Unfortunately, the succeeding summer brought on a series of excesses of the federal ozone standard, and the Bay Area was officially redesignated back to nonattainment in 1998.

At that time, the EPA required the Air District and our two regional agency partners, MTC and ABAG, to file a new *1999 Bay Area Ozone Attainment Plan*. EPA set November 15, 2000 as the deadline for the Bay Area to re-attain the ozone standard.

By the time in 1998 that EPA set the November 2000 deadline for attainment, there had been a sufficient number of exceedences of the standard, such that it was not possible for the Bay Area to attain the one-hour standard based on data averaged over the three-year period, 1998-2000. So EPA interpreted the attainment requirement for the *1999 Plan* to mean that the Bay Area had to show attainment progress by having no more than one exceedence at any monitoring station during the course of the year 2000.

The Air District developed the *1999 Bay Area Ozone Attainment Plan*, and in August 1999 CARB approved the Plan and submitted it to EPA for final action.

Partial Disapproval of 1999 Plan

In the summer of 2000, however, the federal ozone standard was exceeded twice at the air monitoring station in Livermore. Even though the second exceedence lasted for just one hour, it put the Bay Area as a whole in violation of the EPA’s attainment deadline.

And then, in January of 2001, a consortium of environmental groups sued the EPA for letting an October 2000 deadline pass without making a final decision on the *1999 Plan*. In March 2001, in response to this lawsuit, EPA proposed to partially approve and partially disapprove aspects of the *1999 Plan*. EPA filed official notice of this partial disapproval in August of 2001.

The following parts of the *1999 Plan* were approved by EPA:

- Baseline 1995 Emissions Inventory of Volatile Organic Compounds and Oxides of Nitrogen
- Reasonable Further Progress Demonstration
- Commitment to Achieve Additional Emissions Reductions through Implementation of New Control Measures

—continued on next page

Ozone Plan

continued from page 2

- Contingency Measures (to be implemented if the emissions reductions were not sufficient to attain the ozone standard by the year 2000 deadline)
- Proposal to Delete Four Transportation Control Measures that Have Already Been Implemented

But EPA disapproved the following elements of the *1999 Plan*:

Attainment Assessment. This is an estimate of the total amount by which emissions would have to be reduced for the Bay Area to meet the federal ozone standard. For EPA, the inadequacy of the *1999 Plan's* Attainment Assessment was based on the Bay Area's failure to attain the ozone standard by the November 2000 deadline.

Transportation Emission Budgets. These are emissions estimates based on projected emissions for motor vehicles in the attainment year, taking into account expected growth. The federal Clean Air Act requires that all federal actions conform to air quality planning goals. For the transportation sector, these on-road motor vehicle emissions projections, which include emission reductions for relevant control measures, become an upper bound "budget" not to be exceeded in future years.

These budgets are used by MTC to ensure that the Bay Area's regional transportation plans and programs are consistent with air quality attainment plans. Because the budgets in the *1999 Plan* are based on projected attainment emissions levels that did not result in attainment, EPA found them to be inadequate. And since these budgets must be approved and used to determine the consistency of MTC's regional transportation plan, disapproval of these budgets could potentially delay a wide range of transportation-related projects in the Bay Area. This will be discussed later.

CONTROL MEASURES

The *Revised 2001 Bay Area Ozone Attainment Plan* includes the following control measures:

Stationary and Area Source Control Measures — Developed by BAAQMD

- Improved Architectural Coatings Rule
- Improved Storage of Organic Liquids Rule (to reduce vapor loss from storage tanks)
- Surface Preparation and Cleanup Standards for Metal Parts Coating
- Aqueous Solvents (water-based, to reduce VOC content)
- Petroleum Refinery Flare Monitoring
- Low-Emission Refinery Valves
- Improved Process Vessels Depressurization Rule (to reduce emissions when refinery vessels are vented)

Mobile Source Control Measures — Developed by CARB

The Bay Area will benefit from emissions reductions that will take place as a result of previous control measures implemented by CARB.

In addition, the *Revised 2001 Plan* contains a mobile source control measure to improve the Motor Vehicle Inspection and Maintenance Program (Smog Check) by requiring Liquid Leak Inspection and an Improved Evaporative System Test.

Transportation Control Measures — Developed by MTC

- Regional Express Bus Program
- Bicycle/Pedestrian Program
- Transportation for Livable Communities/Housing Incentive Program
- Expansion of Freeway Service Patrol
- Transit Access to Airports

Further Study Measures

In addition, in response to public comments received during the year-long planning process, the *Revised 2001 Plan* includes several additional further study measures to evaluate whether significant emissions reductions can be achieved:

- Study of Potential for Accelerating Particulate Trap Retrofit Program for Urban Buses
- MTC HOV Lane Master Plan Update
- Study of Air Quality Effects of High Speed Freeway Travel
- Evaluation of Parking Management Incentive Program
- Enhanced Housing Incentive/Station Access Program
- Further Smog Check Program Improvements
- Parking Cash Out Pilot Program
- Refinery Blowdown, Pressure Vessel, and Flare Systems
- Refinery Wastewater Systems
- Organic Liquid Storage Tanks
- Marine Tank Vessel Activities

For more detailed information about these control measures, see the copy of the *Revised 2001 Bay Area Ozone Attainment Plan* posted on our website at www.baaqmd.gov.

Reasonably Available Control Measures (RACM) Determination. Under EPA's RACM guidance, states must consider all available air pollution control measures, adopt those that they consider "reasonably available," and offer justification for leaving any available measures out of their air quality plans. In their finding, the EPA felt that there were several public comments on the *1999 Plan* that called for

specific control measures which were not adopted and whose exclusion was not justified in terms of reasonable availability.

EPA's partial disapproval of the *1999 Plan* required the Air District and our planning partners to draw up a new plan that would correct these three elements. Because the Bay Area failed to attain the

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Ozone Plan

continued from page 3

one-hour ozone standard in 2000, EPA set the year 2006 as the new deadline for the new plan to bring the Bay Area back into attainment for the ozone standard.

2001 Plan

The Air District has been working for over a year to develop this new attainment plan. Now in its fourth version, it's currently known as *The Revised 2001 Bay Area Ozone Attainment Plan*.

The *2001 Plan* includes a revision to the three elements EPA disapproved, and also satisfies planning requirements that were triggered by the EPA's final finding of failure to attain the ozone standard.

Attainment Assessment. The *2001 Plan* contains a revised Attainment Assessment based on improved and updated information. Even better tools, including extensive field data and up-to-date photochemical modeling, will be available sometime in 2003 when the Central California Ozone Study (CCOS) is completed. As a result, the *2001 Plan* includes a provision for mid-term re-evaluation in 2004, with the CCOS results to be incorporated into a further revised edition of the plan.

Transportation Emission Budgets. The transportation emission budgets in the *2001 Plan* were updated. In order to prevent further transportation project delays, the EPA can approve these budgets separately, prior to approving the Plan as a whole.

Reasonably Available Control Measures Determination. During the course of the *2001 Plan's* development, a number of public meetings were held to solicit input. The *Revised 2001 Plan* includes an extensive discussion of the comments raised during public meetings and received in written form, and incorporates many of the suggestions collected during the past year. Of particular note are several further study measures that will be evaluated through a constructive, consultative process, in order to deter-

mine whether they are feasible and whether they would lead to significant additional emission reductions.

2001 Plan Emission Reductions

The *2001 Plan* contains 13 new industrial, mobile source, and transportation control measures. The new control measures should reduce emissions by 14 tons per day by 2006. These measures are listed in the box entitled "Control Measures" on page 3.

The new measures, in conjunction with some previous mobile source control measures already implemented by CARB—and considering expected growth in all source categories in the region—should result in a total reduction of volatile organic compound (VOC) emissions of 121 tons per day, and a reduction in oxides of nitrogen (NOx) emissions by 124 tons per day, between 2000 and 2006. This amounts to a greater than 20 percent reduction in both VOCs and NOx by the year 2006.

In addition, the *Revised 2001 Plan* commits to further VOC reductions, beyond those included in the original drafts of the *2001 Plan*. The new Attainment Assessment indicates that, at the very worst, 26 tons per day of additional reductions might be needed to put the Bay Area in attainment of the ozone standard by 2006. This figure will be reviewed in 2003 when the results of the CCOS ozone study are available, and the plan will be updated in 2004 to include these mid-course review findings, and to add any new control measures needed to demonstrate attainment by the 2006 deadline.

CEQA and Neg Dec.

To comply with the requirements of the California Environmental Quality Act (CEQA), Air District staff prepared a Negative Declaration. Based on a thorough Initial Study, staff determined that the control measures proposed in the *2001 Plan* would not result in significant

Ozone Attainment Plan Timeline

1978	Bay Area first designated as nonattainment for ozone under 1977 Clean Air Act (CAA)
Nov 6, 1991	Bay Area again designated as nonattainment following the 1990 CAA Amendments
May 22, 1995	Bay Area designated in attainment following several years without violations
July 10, 1998	Redesignated back to nonattainment following several years of violations
June 15, 1999	Deadline for submittal of 1999 Ozone Attainment Plan (OAP) to EPA
Aug 13, 1999	CARB approves and submits 1999 OAP to EPA
Oct 28, 2000	Deadline for EPA to take action on 1999 OAP
Nov 15, 2000	Deadline set by EPA for Bay Area to attain ozone standards
Jan 8, 2001	Lawsuit filed against EPA for missing approval deadline
March 30, 2001	EPA proposes to approve and disapprove parts of the 1999 OAP, requires new plan in 12 months after final decision.
April 3, 2001	EPA signs consent decree to settle lawsuit, commits to final decision by Aug 28, 2001
June 15, 2001	Air District, ABAG, MTC release Proposed Final 2001 OAP
July 18, 2001	Proposed Final 2001 OAP adopted by three agencies
July 26, 2001	CARB orders more community meetings held before deciding on 2001 OAP
Aug. 23-30, 2001	Six community meetings held to solicit additional public input on 2001 OAP
Aug 28, 2001	EPA officially partially approves/disapproves 1999 OAP
Sept 18, 2001	Revised 2001 OAP released by Air District, ABAG, MTC for comment
mid-Oct, 2001	Conformity freeze goes into effect for transportation projects in Bay Area
Oct 24, 2001	Revised 2001 OAP adopted by Air District, ABAG, MTC
Nov 1, 2001	CARB approves Revised 2001 OAP
Jan 21, 2002	Deadline for EPA to approve transportation conformity budgets in 2001 OAP or conformity lapse will result
Dec 15, 2003	Deadline for mid-course review of 2001 OAP
Apr 15, 2004	Deadline for new ozone plan
2006	Deadline for Bay Area to attain ozone standard

—continued on next page

Ozone Plan

continued from page 4

adverse environmental effects. On the contrary, they are expected to significantly reduce air pollution in the Bay Area.

Possible Consequences

Although the *Revised 2001 Plan* has been accepted by CARB and forwarded to EPA, there will be substantial financial consequences if EPA fails to approve the transportation emission budgets in the Plan in a timely manner. If these budgets are not approved, work on more than 100 highway and transit projects, totaling over one billion dollars, is at risk of coming to a halt on January 21, 2002.

The EPA's partial rejection of the *1999 Plan* has already triggered a *conformity freeze* on the approval of new or amended transportation plans and programs.

A *conformity freeze* means that the region is only allowed to advance transportation projects included in the first three years of MTC's current Transportation Improvement Program (TIP). This is the primary spending plan for all federal funding that is expected to flow to the region from all sources for transportation projects of all types. The TIP is updated every two years and, depending on the funding source, covers a three-to-seven year period.

This *conformity freeze* took effect in mid-October; 30 days after the federal register notice of EPA's partial disapproval of the *1999 Plan*.

Even more dramatically, if the new transportation conformity budget contained in the *2001 Plan* is not approved by EPA by January 21, 2002, a *conformity lapse* will take effect. This would halt initiation of all new work on transportation projects that require federal actions and approvals.

A *conformity lapse* will take effect because the transportation conformity budget in the *2001 Plan* must be used by the Federal Highway Administration and Federal Transit Administration to make a conformity finding on MTC's Regional Transportation Plan (RTP).

The RTP specifies the investments and strategies necessary for the maintenance, management, and improvement of the transportation network in the entire Bay Area—including mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities. MTC updates the RTP every three years, for periods extending 25 years into the future. Projects must be included in the RTP to be eligible to receive federal or state transportation funds for planning or construction. The current RTP expires on January 21, 2002, and a conformity finding cannot be made on a new RTP until the conformity budgets are approved.

A *conformity lapse* could potentially delay about one billion dollars in construction funding as well as close to 300 million dollars in design and right-of-way acquisition work.

Under a *conformity lapse*, no transportation projects can proceed—unless these projects are already under construction by the lapse date, are Transportation Control Measures in the approved California State Implementation Plan, or are exempt projects as defined by EPA's conformity regulations.

EPA will need to approve the entire *2001 Plan*—or make an “adequacy” finding on the transportation conformity budget portion of the Plan—prior to the January 21, 2002 RTP expiration date to forestall a *conformity lapse*.

Besides the current *conformity freeze* and the potential *conformity lapse*, the EPA's partial disapproval of the *1999 Plan* also began a countdown to a series of federal penalties—starting an 18-month clock on emissions offset sanctions for facilities wishing to locate in the Bay Area, a two-year clock on the complete withholding of federal highway funding, and a two-year clock for EPA to create and impose their own Federal Implementation Plan for attaining the ozone standard in the Bay Area.

It is unlikely, however, that these severe federal sanctions will be imposed. They would only go into effect if the Bay

Area continued to lack EPA approval for a viable ozone attainment plan.

Conclusion

The *Revised 2001 Bay Area Ozone Attainment Plan* is the culmination of a marathon planning process, and the fruit of many labors. The Air District and our two sister agencies believe that this is a solid plan, with real emissions reductions, that will bring the Bay Area back into compliance with the federal standard for ground level ozone by 2006. In so doing, it should provide healthy air for all of our residents to breathe.

—Aaron Richardson

Smart Growth Conference

From January 24–26, 2002, the Air District will be co-sponsoring a national conference in San Diego, entitled *New Partners for Smart Growth: Building Safe, Healthy, and Livable Communities*. Produced by the Local Government Commission (LGC) and Penn State University, this event represents the merging of two highly successful past conferences: the annual U.S. EPA *Partners for Smart Growth* series and LGC and Penn State's multidisciplinary *Redefining Community* conference.

This new conference will bring together diverse constituencies and demonstrate how smart growth can address each of their concerns. It will examine how we can most effectively work together to achieve our common goals: creating safe, healthy, and livable communities, and promoting a higher quality of life for all.

The program for the event will include a dynamic mix of keynotes, breakout sessions, implementation workshops, salons, and local tours. The 2001-02 Ahwahnee Awards Program is being held in conjunction with this event, with the awards being presented during the conference.

For more information on the conference program and registration information, visit the conference website at www.outreach.psu.edu/C&I/SmartGrowth. To receive information and a call for entries brochure for the Ahwahnee Awards Program, visit the LGC's website at www.lgc.org/center/awards.



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 415-771-6000/415-928-8560
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Newsletter Production

- Teresa Lee**, Director of Public Information
- Aaron Richardson**, Editor

A&WMA Winter Conference 2002

On February 11 and 12, 2002, the Air District will co-sponsor the Air & Waste Management Association's winter conference in San Francisco, entitled *Technologies for Emerging Energy Policies: Meeting Energy Demand with Secure, Environmentally Friendly Technologies*.

This conference will address the environmental issues associated with new and emerging energy technologies and policies. Discussion will center on the challenges involved in providing sufficient energy for our economy in an environmentally sensitive and sustainable manner. This first-of-a-kind conference brings together policy-makers, technologists, government, industry, and regulators to discuss the environmental challenges and lay the groundwork for effective solutions.

The conference includes sessions on:

- Electronic Security of Critical Infrastructure Systems
- Renewables and Sustainable Energy Generation: How Much and When?
- Meeting Energy Demand with Clean Coal Technologies
- Transportation and Distributed Generation (Resources)

The keynote speaker will be James Connaughton, Chairman of the Council on Environmental Quality. Mr. Connaughton serves as the senior environmental advisor to the President as well as Director of the White House Office of Environmental Policy, which oversees the development of environmental policy, coordinates interagency implementation of environmental programs, and mediates key policy disagreements among federal agencies, state, tribal and local governments, and private citizens.

The Winter Conference will be held at the Grand Hyatt in San Francisco, at 345 Stockton Street. For registration forms and further information, visit the A&WMA website at www.awma.org.

BAAQMD ACTIVITIES

	JUN	JUL	AUG
ENFORCEMENT			
Total Inspections	686	1,233	1,864
Complaints Processed	218	238	223
Violation Notices	106	203	150

LEGAL			
Cases Resolved	Information not currently available	36	42
Mutual Settlement		\$24,858	\$41,672
Civil Penalties		\$300,000	0

PERMIT SERVICES			
Authorities to Construct Granted	43	26	21
Permits to Operate Granted	105	67	73

TECHNICAL			
Highest Ozone AQI	104	145	72
Highest CO AQI	18	14	24
Highest Particulates AQI	51	38	50
State Ozone Excess Days	5	3	1
Source Tests	59	28	54

Pollutant values are expressed according to the Air Quality Index Scale: 0-50 Good; 51-100 Moderate; 101-150 Unhealthy for Sensitive Groups; 151- 200 Unhealthy; 201-300 Very Unhealthy; Over-300 Hazardous. *Results listed are preliminary.* The District issues "Spare the Air" requests when air quality forecasts predict that concentrations of pollutants will exceed the national health standard (100 on the AQI scale).

YEAR TO DATE (10/31/01)	
State Ozone Exceedences	15
Federal Ozone Exceedences (8-Hour)	7
Federal Ozone Exceedences (1-Hour)	1
Carbon Monoxide Exceedences	0

DAILY AIR QUALITY COMPLAINT LINE	1-800-HELP-AIR
SMOKING VEHICLES	1-800-334-ODOR
	1-800-EXHAUST