

clean air for life



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

939 Ellis Street • San Francisco, CA 94109 • www.baaqmd.gov

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the clean air journey



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

**...the Air District is governed by a 22-member Board of Directors
comprised of elected officials from each of the nine counties...**

board of directors

Alameda County

Roberta Cooper
Scott Haggerty
Nate Miley
Shelia Young

Contra Costa County

Mark DeSaulnier
Mark Ross, *Secretary*
Erling Horn
Gayle B. Uilkema, *Vice-Chairperson*
Michael Shimansky

Marin County

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Napa County

Brad Wagenknecht

San Francisco County

Chris Daly
Jake McGoldrick
Gavin Newsom

San Mateo County

Jerry Hill
Marland Townsend, *Chairperson*

Santa Clara County

Erin Garner
Liz Kniss
Patrick Kwok
Julia Miller

Solano County

John F. Silva

Sonoma County

Tim Smith
Pamela Torliatt

executive staff

Jack P. Broadbent
*Executive Officer/
Air Pollution Control Officer*

Brian C. Bunger
District Counsel

Peter Hess
Jean Roggenkamp
*Deputy Air Pollution
Control Officers*

Mary Ann Goodley
Office Manager

division directors

Brian Bateman
Engineering

Henry Hilken
Planning

Gary Kendall
Technical Services

Teresa Galvin Lee
Public Information and Outreach

Jeff McKay
Information Systems

Wayne Tanaka
Administrative Services

Kelly Wee
Compliance and Enforcement

The Bay Area Air Quality Management District was entrusted in 1955 with regulating stationary sources of air pollution in the nine counties that surround San Francisco Bay – Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano and southern Sonoma counties.

The Air District is governed by a 22-member Board of Directors comprised of locally elected officials from each of the nine counties. The number of board members from each county is proportionate to its population.

The Board oversees policies and adopts regulations for the control of air pollution within the district. The Board also appoints the Air District's Executive Officer/Air Pollution Control Officer who implements Board policies and gives direction to staff, and the District Counsel who manages the legal affairs of the agency.

The Air District is comprised of over 340 dedicated staff including engineers, inspectors, planners, scientists, and other professionals who have dedicated their careers to protecting public health by improving air quality for the residents in the Bay Area.

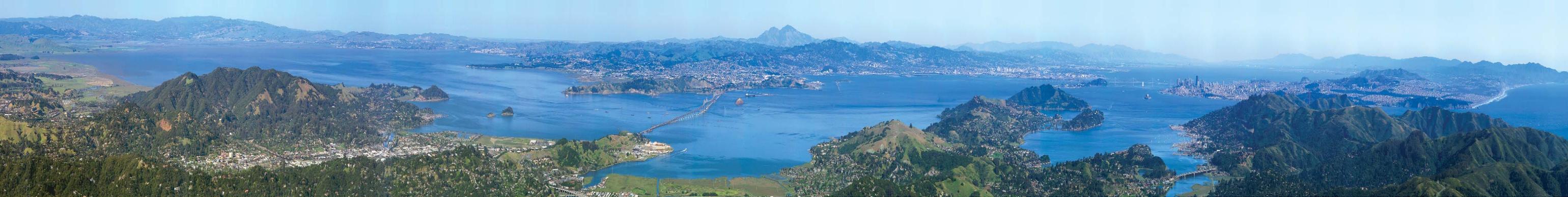
The Air District is assisted by an Advisory Council that provides input to the Board of Directors and Executive Officer on air quality matters. The Council is made up of 20 representatives from community, health, environmental and other organizations.

An independent and quasi-judicial five member Hearing Board serves to adjudicate regulatory compliance issues that may arise between the Air District and local industries and appeals of permitting decisions made by the Air Pollution Control Officer.



**...the Bay Area Air
Quality Management
District is committed
to achieving clean
air to protect the
public's health and
the environment...**





THE 50TH ANNIVERSARY OF THE BAY AREA AIR QUALITY
MANAGEMENT DISTRICT AFFORDS THE OPPORTUNITY
TO REFLECT ON THE PAST, CELEBRATE OUR ACCOMPLISH-
MENTS AND PLAN FOR THE CLEAN AIR JOURNEY AHEAD.

the clean **air** journey

we have a lot to **celebrate**

Bay Area air is substantially cleaner than it was fifty years ago. In the 1950's, air pollution concentrations were rising at an alarming rate and black smoke plumes could be seen in the sky on a daily basis. Smog was so prevalent that agricultural crops were damaged and lost and industry leaders feared new businesses would not locate here. Because of damage to health and crops – particularly to flowers in the Santa Clara Valley – area farmers went to Sacramento

and lobbied State legislators. The Legislature responded by forming the State's first regional air pollution agency – the Bay Area Air Pollution Control District, later renamed the Bay Area Air Quality Management District.

In contrast, 2004 was the Bay Area's cleanest year on record. We met federal standards for ground level ozone every day, and today, the Bay Area has the cleanest air of all of California's major urban areas.



**...to succeed, it will
take leadership, an
integrated approach,
and even stronger
relationships with
all of our partners
and individuals....**

THE BIGGEST CHALLENGES LIE AHEAD

Maintaining what we have may be the biggest challenge yet. Even in our cleanest year, the Bay Area is still not in attainment with more stringent State ozone and particulate matter standards. Expected increases in population, motor vehicle ownership, distances traveled and climate change will exacerbate this situation and could turn the clock back if we do not begin to address these issues now.

THE AIR DISTRICT IS UP TO THE TASK

The Bay Area Air Quality Management District already has a good track record, but with appropriate foresight and planning, the Air District can do more.

To succeed, it will take leadership, an integrated approach – from cutting edge science to implementation of smart growth measures – even stronger relationships with all of the Air District’s partners and the active engagement of communities and individuals.

This *Clean Air Journey* lays out the Air District’s vision for the future and describes core programs and initiatives that will move the region in the right direction. Each initiative – reducing greenhouse gases, woodsmoke, diesel particulate matter and air toxics; supporting conversion to alternative fuels; actively promoting smart, clean air choices; and expanding the clean air message to reduce asthma and other air related health triggers – represents a partial solution to some of the challenges that lie ahead. The Air District hopes you find the content of this document informative, provocative and a catalyst for discussion about how we can not only preserve, but also improve clean air well into the future.

the air district’s **vision** for the future

Looking ahead – to the next 50 years – the Air District envisions a Bay Area that remains a healthy, vibrant and beautiful place to live. People will be healthier and their lives will improve. Physical fitness will be easier to achieve because there will be no times of the day or days of the week when it is better to stay indoors than to be outside exercising. The average life expectancy will, once again, be on the rise so children and adults will live longer and have more productive lives. Smart growth will have taken effect with new, high-density, energy efficient housing located near major transit centers. Zero emission vehicles will be the norm. Safe bicycle paths and pedestrian walkways will crisscross every community. The economy will be booming, without increasing air pollution. Business and industry will want to be environmentally responsible, because they know it is not just better for the environment, but is also the most cost-effective approach.

What is the one characteristic that these attributes have in common? Clean air. Some, like zero emission vehicles, smart growth measures and green buildings, will help create it. Others, like better health and a robust economy, will be the results. But none of them will happen without active leadership and incentives to make them a reality. The Bay Area Air Quality Management District is committed to achieving clean air to protect the public’s health and the environment. It is the Air District’s vision to be in the forefront,

developing and implementing effective air pollution control programs in an environment of mutual respect and trust.

CORE PROGRAMS

Sound science will continue to form the fundamental basis of all of the Air District’s work. The Air District has a dedicated staff of scientists, engineers, inspectors, planners, attorneys and other technical professionals who are up to the task. Core programs like permitting, planning, air monitoring, forecasting and enforcement will remain a priority and will be enhanced in the future. The Air District will continue with technological improvements that allow field staff to effectively communicate with headquarters, including having access to up to date information on permitted sources and air monitoring data. Augmented grants will allow the Air District to fund cost-effective projects that reduce air pollution in impacted communities. The Air District will also continue to expand the technical information readily available to Bay Area residents via the web (www.baaqmd.gov), making it easier for the public to become active partners in Air District programs and activities.





challenges



The greatest challenges are yet to come – energy consumption will increase with population and economic growth, and that, particularly when combined with a changing climate, could cause significant increases in air pollution. The region’s ability to overcome these obstacles will be largely dependent on a major shift in public perception and a stronger movement towards personal responsibility for clean air.



POPULATION AND ECONOMIC GROWTH

Today, the Bay Area’s largest source of smog forming emissions – over 60% – comes from mobile sources like cars, trucks, buses and construction equipment. The number of mobile sources will rise considerably along with expected population growth. The Bay Area’s population is forecast to increase by 29% by the year 2030 – from 6.8 million in

2000 to 8.8 million in 2030 with the number of jobs increasing to 5.2 million. Even with anticipated gains in transit ridership and carpooling to work, the region is projected to have a minimum of 35% more – or 7.5 million additional – vehicular trips a year.

INDIVIDUAL RESPONSIBILITY

Individual behavior must be changed if we are to succeed because the majority of Bay Area air contaminants come from activities that involve individuals, like driving motor vehicles or using consumer products and gasoline powered lawn and garden equipment. While there is still work to be done to reduce industrial emissions to even lower levels, individual consumers must change their behavior if we are to make substantial emissions reductions.

CLIMATE CHANGE

The earth’s surface and ocean temperatures are rising, with the 1990’s the warmest decade on record. Today, most scientists agree that greenhouse emissions are at least partly to blame. The largest source of greenhouse emissions in the Bay Area is mobile sources. Carbon dioxide is the most abundant of the greenhouse emissions; however, other emissions like methane, particulate matter and nitrous oxide are also involved.

Ground-level ozone (commonly called smog) is formed from photochemical reactions between nitrogen oxides and volatile organic compounds in the presence of sunlight and heat. With warmer temperatures there will be more ozone formation. The combination of stagnant air and heat can be particularly harmful in the Bay Area, resulting in more days in violation of federal and state health-based air quality standards. Unless we make substantial cuts in emissions to counterbalance or mitigate the heat effect in other ways, we should expect more unhealthy air days.

Finding emission reductions will not be easy, because warmer temperatures also cause an increase in harmful air emissions. When it’s warmer, more fuel evaporates, engines work harder and demand for electric power results in more pollution from power plants. Warmer weather may have other bad health effects – extending blooming seasons and exacerbating conditions for those with allergies and asthma.



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future efforts

The Air District is responding to emerging challenges. Drawing from the expertise of the staff and the community, the Air District will develop a more integrated approach and help fill existing gaps to move towards becoming a full-service air quality agency.

Initiatives underway include reducing woodsmoke, diesel particulate matter and other air toxics, and supporting conversions to alternative fuels. Future efforts under development include reducing greenhouse emissions, expanding the Air District's message to help reduce asthma related triggers and actively promoting smart, clean air choices. Over time, the Air District will develop and evaluate these efforts and make adjustments as new information and technologies become available.



REDUCING GREENHOUSE EMISSIONS

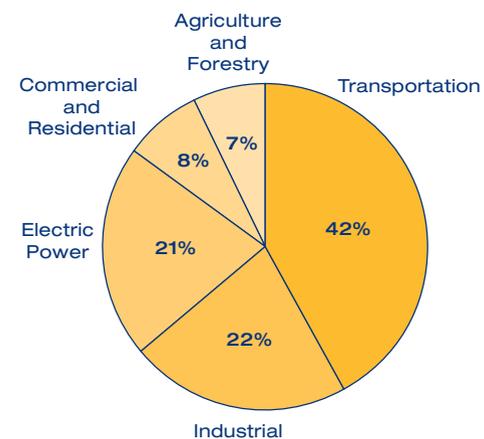
On June 1, 2005, the Air District's Board of Directors adopted a resolution to address climate change and climate protection through outreach and education, data collection and analysis, technical assistance and leadership and support for local efforts to reduce greenhouse emissions.

This initiative is still in the formative stage, but much of the work the Air District is already doing to reduce air pollution will be incorporated into it because making reductions in criteria pollutants has the co-benefit of reducing greenhouse emissions too.

Many municipal and community-based climate change programs are underway in the region, and the Air District believes that its leadership will stimulate additional activities and strengthen existing efforts. Supporting the development of local greenhouse emission inventories, similar to the Air District's work with Sonoma County in 2004, is an option. Developing appropriate model ordinances is also being considered, along with incorporating greenhouse emission information into the Air District's educational materials. The Air District is also working with leaders in the effort to get cities involved in addressing climate change.

California Sources of Greenhouse Gases

Source: California Energy Commission 2005



ADDRESSING COMMUNITY AIR TOXICS

The Community Air Risk Evaluation (CARE) program was launched in 2004 to assess and reduce health risks from toxic air contaminants in the Bay Area, including diesel particulate which has been identified as a carcinogen and a contributor to respiratory diseases like asthma.

At the heart of CARE is a technical study to identify areas that experience the highest levels of air toxic emissions, including diesel emissions. To make this determination, the Air District is developing emission inventories that include not only stationary sources of air pollution but also mobile sources – like cars, trucks, ships, trains and other transportation vehicles, as well as area sources like paints and consumer products. The data will be mapped to identify areas with the highest emissions. The Air District can then dedicate resources to reducing toxic air emissions in the most impacted communities. A CARE Task Force, comprised of representatives from community and environmental groups, industry, academia, public health organizations, and technical firms, is giving input to the Air District on this project.

REDUCING WOODSMOKE

Wood burning is a major source of particulate matter air pollution in the Bay Area during the winter months. The Air District's woodsmoke initiative focuses on promoting model ordinances to reduce woodsmoke and educating the public about the health risks associated with breathing it. On a typical winter night, woodsmoke from the Bay Area's 1.7 million wood burning fireplaces and stoves produces about 30% of the particulate pollution in our air. On nights when there are temperature inversions, the percentage can be higher.

Each year, the Air District asks cities and counties that have not adopted a woodsmoke ordinance to do so. The model ordinance applies to new housing, or renovations of existing homes when a fireplace is involved. The model ordinance allows the installation only of natural gas fireplaces, EPA-certified equipment and pellet stoves. These "cleaner" burning appliances reduce woodsmoke pollution from 75 to 99% over traditional, open-air fireplaces. In addition, the ordinance prohibits burning wood when the Air District issues a Spare the Air Tonight advisory because air quality is expected to be unhealthy. To date, 37 out of 101 Bay Area cities and 7 of the 9 Bay Area counties have adopted some version of the woodsmoke ordinance. To further protect the public's health, the Air District is considering ways to enhance the woodsmoke prevention campaign, including the Spare the Air Tonight program.





future efforts

EXPANDING THE AIR DISTRICT'S MESSAGE

Almost 12% of Californians have asthma – with the greatest incidence among children from 12 to 17 years old. Asthma is greatly affected by air pollution both indoors and outdoors. The Air District's concerns about poor air quality do not stop when someone goes inside and closes the door. A typical pollutant released indoors has a 1,000 times greater chance of being inhaled as the same pollutant released outdoors into urban air. In addition, most people spend the vast majority of their time indoors – California adults an average of 87% and children under the age of 12 only slightly less, 86%.

Many sources of indoor air pollution that trigger asthma and other health conditions, including smoking, improperly vented gas stoves, off-gassing of toxics used in building materials and furnishings, ozone-creating air cleaners, mold, asbestos and even outdoor air. Most of these sources can be reduced substantially through education. The Air

District is exploring ways to address this issue as part of its commitment to improve air quality – both indoors and out

ACTIVELY PROMOTING SMART, CLEAN AIR CHOICES

The Air District continues its efforts to promote smart, clean air choices that will also help build our relationships with local partners and communities. Aimed at individual consumers, messages will focus on personal responsibility and things that anyone can do to reduce air pollution – most with little effort – but which collectively can have a big effect on energy consumption and air quality. As part of this outreach campaign, the Air District is researching resources designed to give the public the information they need to make clean air choices, like buying the cleanest car, purchasing green appliances and living in communities that are transit and pedestrian friendly. These are money-saving choices as well.



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SUPPORTING CONVERSIONS TO ALTERNATIVE FUELS

Because motor vehicles are the major source of air pollution in the Bay Area, the Air District promotes less driving first. But for those vehicles that must be on the road, the Air District actively encourages the use of advanced technology, low emission vehicles. Several grant programs help fund the purchase of alternative fueled light and heavy-duty vehicles and the fueling infrastructure to support them, as well as replacement or retrofitting of diesel engines. These programs are expected to expand over the next few years, both in terms of the amount of new funding and the availability of more incentives to convert private sector vehicles. Until now, the focus has been primarily on public fleets.

The Air District is also supporting a hydrogen-fueled bus demonstration project involving AC Transit, Golden Gate Transit, the Santa Clara Valley Transportation Authority and San Mateo County Transit. The goal of the project is to find the most effective way to operate a hydrogen-fueled bus fleet before transit districts make heavy investments of taxpayer dollars in the new technology. The Air District is taking part in a demonstration project using two Daimler Chrysler hydrogen fuel cell cars to gather data on their performance, as well.



...the Air District actively encourages the use of advanced technology, low emission vehicles...



meeting the challenge

The Air District is committed to assuring that Bay Area residents will have clean air to breathe, well into the future. The Air District cannot succeed without the involvement and participation of all the diverse communities in the nine Bay Area counties. The Air District has decided to use this occasion – its 50th Anniversary – to officially invite you to join in this effort.

Everyone who lives in the Bay Area has a stake in preserving and improving our quality of life. Partner with the Air District, become educated about the challenges, and take personal responsibility for making the changes that are necessary. Join the Air District as we, in the Bay Area, embark on the clean air journey ahead.



contact information

www.baaqmd.gov
www.sparetheair.org

Public Information
(415) 749-4900

General Business
(415) 771-6000

Compliance Assistance
(415) 749-4999

Engineering Services
(415) 749-4990

Daily Air Quality Forecasts
(800) HelpAir (435-7247)
Spare the Air Advisories
Agricultural Burn Days
Informational Materials

Report Smoking Vehicles
(800) EXHAUST (394-2878)
www.800exhaust.org

Air Pollution Complaints
(800) 334-ODOR (6367)

...we cannot succeed without the involvement and participation of
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