

A Guide to the

BAY AREA **AIR QUALITY** **MANAGEMENT** **DISTRICT**

Updated 2010



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

WWW.BAAQMD.GOV

Contact Information



General Business

(415) 771-6000

Public Information

(415) 749-4900

Compliance Assistance

(415) 749-4999

Engineering Services

(415) 749-4990

Vehicle Buy Back Program

(888) 690-2274



Websites

www.baaqmd.gov

www.sparetheair.org

www.twitter.com/@sparetheair

www.facebook.com/pages/Spare-the-Air-Bay-Area/47318701051



Daily Air Quality Forecasts

- Spare the Air Alerts
 - Agricultural Burn Days
 - Informational Materials
- (800) HELP AIR (435-7247)



Report Smoking Vehicles

(800) EXHAUST (394-2878)

www.1800exhaust.org



Air Pollution Complaints

(800) 334-ODOR (6367)



Winter Spare the Air Alerts

(877) 4-NO-BURN (466-2876)

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WELCOME TO THE AIR DISTRICT

Jack P. Broadbent
Executive Officer
Air Pollution Control Officer



The San Francisco Bay Area is known all over the world for its beauty, diversity, and quality of life. Our region's temperate climate and fresh coastal air are essential elements of its appeal. At the Bay Area Air Quality Management District, it's our mission to protect and preserve the air quality that contributes so integrally to the Bay Area's unique charms.

Though many Bay Area residents may not be familiar with us, or recognize us solely through our *Spare the Air* outreach programs, the fact remains that our actions affect you every time you take a breath.

The purpose of this guidebook is to introduce you to our agency, to explain how our programs and activities have been implemented to systematically reduce local air pollution and protect public health. The guidebook will answer questions about how we are organized, why we were created, what kinds of air pollution are a problem in the Bay Area, what we do about it, what our greatest current challenges are, and, ultimately, how

everyone can play an essential participatory role in the process by which we work to clear the air in the region.

As the Air District's Executive Officer, it's my pleasure to present *A Guide to the Bay Area Air Quality Management District*. We hope it will inspire you to join us in the ongoing good work we can all do together to ensure that there is fresh air to breathe for years to come.

Sincerely,

A handwritten signature in black ink that reads "Jack P. Broadbent". The signature is written in a cursive, flowing style.

Jack P. Broadbent
Executive Officer
Air Pollution Control Officer

WHO WE ARE

VISION

A healthy breathing environment for every Bay Area resident.

MISSION

To protect and improve public health, air quality, and the global climate.

CORE VALUES

EXCELLENCE - Air District programs and policies are founded on science, developed with technical expertise, and executed with quality.

LEADERSHIP - The Air District will be at the forefront of air quality improvement and will pioneer new strategies to achieve healthy air and protect the climate.

COLLABORATION - Involving, listening, and engaging all stakeholders, including partner agencies, to create broad acceptance for healthy air solutions.

DEDICATION - Committed staff that live and believe the Air District's mission.

EQUITY - All Bay Area residents have the right to breathe clean air.

The Bay Area Air Quality Management District is the public agency entrusted 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 composed of locally elected officials from each of the nine Bay Area 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, as well as the District Counsel, who manages the legal affairs of the agency.

The Air District consists of over 350 dedicated staff members, including engineers, inspectors, planners, scientists, and other professionals.

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

An independent, five-member Hearing Board serves to adjudicate regulatory compliance issues that may arise between the Air District and local industries, and also hears appeals of permitting decisions made by the Executive Officer.

OUR HISTORY



Since 1955, the Air District has worked to improve air quality in the Bay Area.

The California Legislature created the Air District in 1955 as the first regional air pollution control agency in the country, recognizing that air emissions overflow political boundaries. The nine counties of the San Francisco Bay Area form a regional air basin, sharing common geographical features and weather patterns, and therefore similar air pollution burdens, which cannot be addressed by counties acting on their own.

In the early 1950s, the science of air pollution was energized by the discovery that ground-level ozone was the main chemical in “smog,” a conjunction of “smoke” and “fog” that soon became a household word. Ozone was found to cause breathing problems, damage crops, and corrode buildings. Local agriculture in particular absorbed significant losses, and it was largely the organized efforts of Bay Area farmers that generated the political will to establish the first regional air district.

The first official meeting of the Air District’s Board of Directors was held on November 16, 1955, in San Francisco. Charged with regulating stationary sources of air emissions, the Air District set to work on its first two regulations, which banned open burning at dumps and wrecking yards, and established controls on dust, liquid droplets, and combustion gases from certain industrial sources.

Since then, the agency has used its expertise to clear the skies and diminish air pollution levels throughout the Bay Area. Its actions, along with the concentrated efforts of public and private organizations and concerned individuals, have dramatically improved air quality, despite significant increases in traffic and population. But much remains to be done, as new challenges arise in the Air District’s second half-century of stewardship of the air we breathe.

AIR POLLUTION IN THE BAY AREA

Air is the most precious of resources—all of life depends on it.

The air in our lower atmosphere is a dynamic, constantly shifting mixture of gases, liquid droplets, and small particles. It swirls and eddies around the globe like the water in an ocean, with winds and weather patterns resulting from this movement. Air isn't as light as it seems, either. A column of air one foot square and extending from sea level to the outer limit of the atmosphere would weigh nearly one ton. And contrary to what one might expect, the air we breathe in the lower atmosphere is not primarily composed of oxygen. Instead, it contains 78 percent nitrogen, 21 percent oxygen, and less than 1 percent gases like argon and carbon dioxide. Unfortunately, it can also contain substances that are unhealthy for us to inhale.

In the Bay Area, as in the entire state of California, a certain amount of air pollution comes from stationary industrial sources, such as refineries and power plants. But a greater percentage of harmful air emissions come from cars and trucks, construction equipment, and other mobile sources. California has more cars

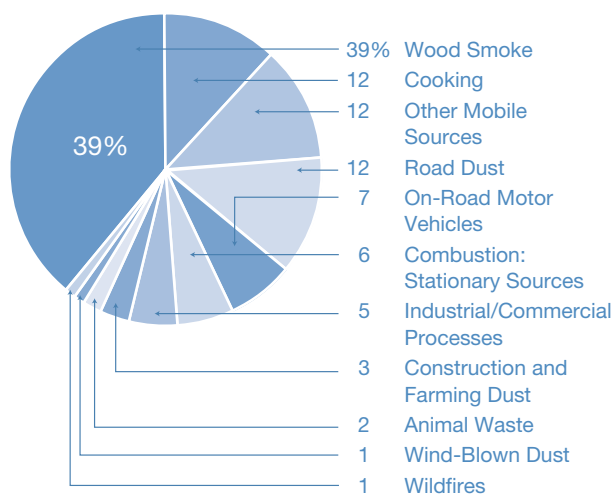
per household (1.8) than any other state, along with a thriving business economy and a continually expanding population. All of these factors contribute to the state's air quality challenges.

There are three major types of air pollutants that constitute a public health concern for the Bay Area: ozone, particulate matter, and toxic air contaminants.

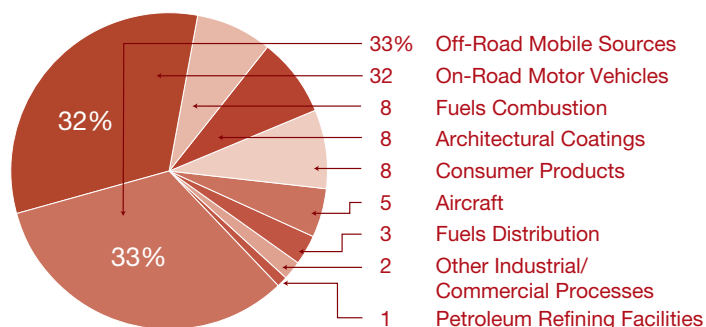
OZONE

Ozone is the main ingredient in the pollution haze commonly called "smog." Primarily a problem in the summertime, ozone is a colorless gas formed through a complex series of photochemical reactions involving sunlight and heat. It is not emitted directly into the air in significant quantities, but is formed in the presence of sunlight from chemical reactions involving other directly released precursor pollutants: reactive organic compounds and oxides of nitrogen.

BAY AREA SOURCES OF FINE PARTICLES (PM2.5) WINTER

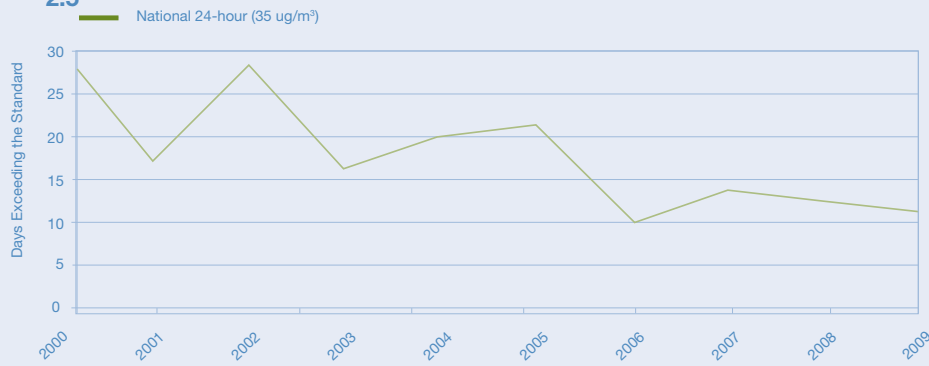


BAY AREA SOURCES OF OZONE-FORMING POLLUTANTS SUMMER

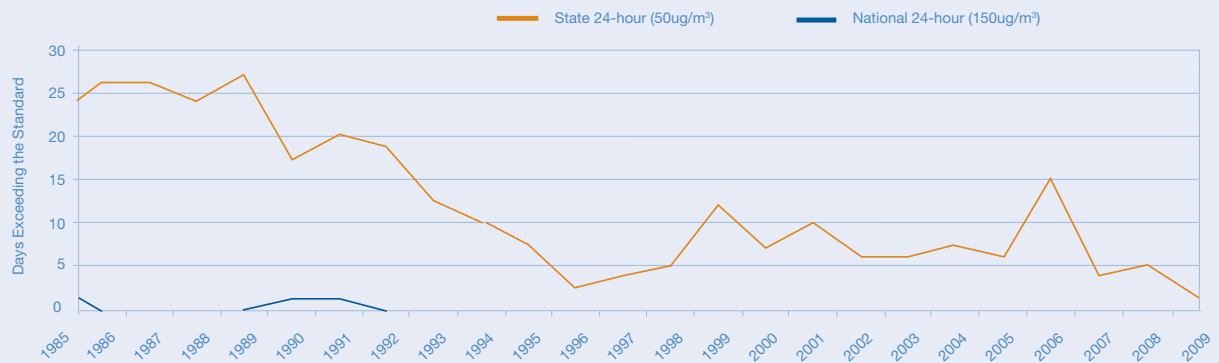


BAY AREA HISTORICAL EXCEEDANCES

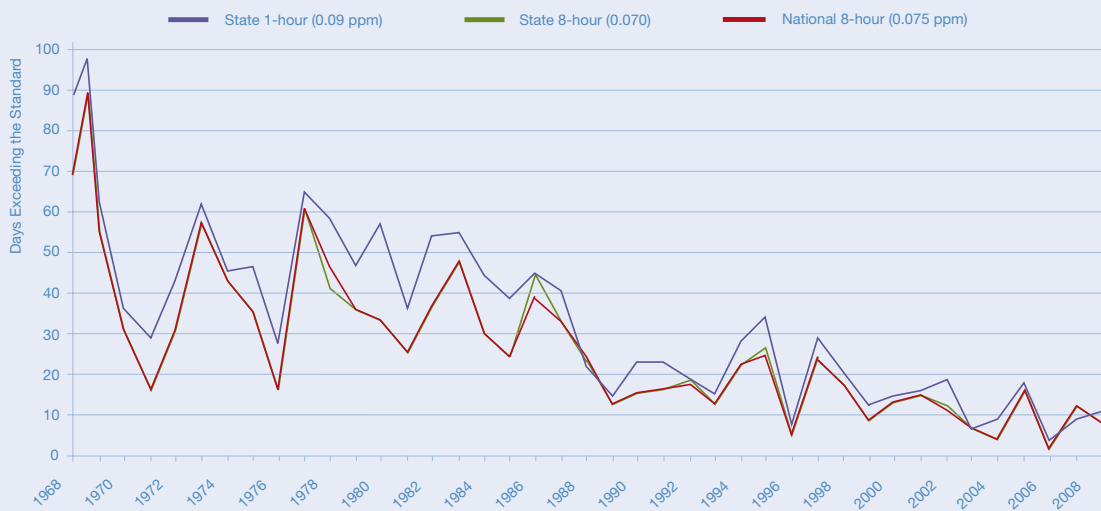
PM_{2.5} PARTICULATE MATTER



PM₁₀ PARTICULATE MATTER



O₃ OZONE



BAY AREA "IN ATTAINMENT" STATUS

Pollutant	CO	NO ₂	O ₃	Pb	SO ₂	PM ₁₀	*PM _{2.5}
National Standard	✓	✓		✓	✓	✓	✓
State Standard	✓	✓		✓	✓		

- CO** Carbon Monoxide
- NO₂** Nitrogen Dioxide
- O₃** Ozone
- Pb** Lead
- SO₂** Sulfur Dioxide
- PM₁₀** Particulate Matter
- PM_{2.5}** Particulate Matter

*The Bay Area is in attainment of the national annual PM_{2.5} standard, but has been designated out of attainment of the national 24-hour PM_{2.5} standard by the U.S. EPA.

PARTICULATE MATTER (PM₁₀ AND PM_{2.5})

Particulate matter, or PM, consists of microscopically small solid particles or liquid droplets suspended in the air. PM can be emitted directly into the air, or it can be formed from secondary reactions involving gaseous pollutants that combine in the atmosphere. Particulate pollution is primarily a problem in the winter, accumulating when cold, stagnant weather comes to the Bay Area.

PM is usually broken down further into two size distributions: PM₁₀ and PM_{2.5}. PM₁₀ refers to particles with diameters that are less than or equal to 10 microns in size (a micron is one-millionth of a meter), or about 1/7 the diameter of a human hair. PM_{2.5} consists of particles with diameters that are less than or equal to 2.5 microns in size.

PM_{2.5} is a more serious health concern than PM₁₀, since smaller particles can travel more deeply into our lungs and cause more harmful effects.

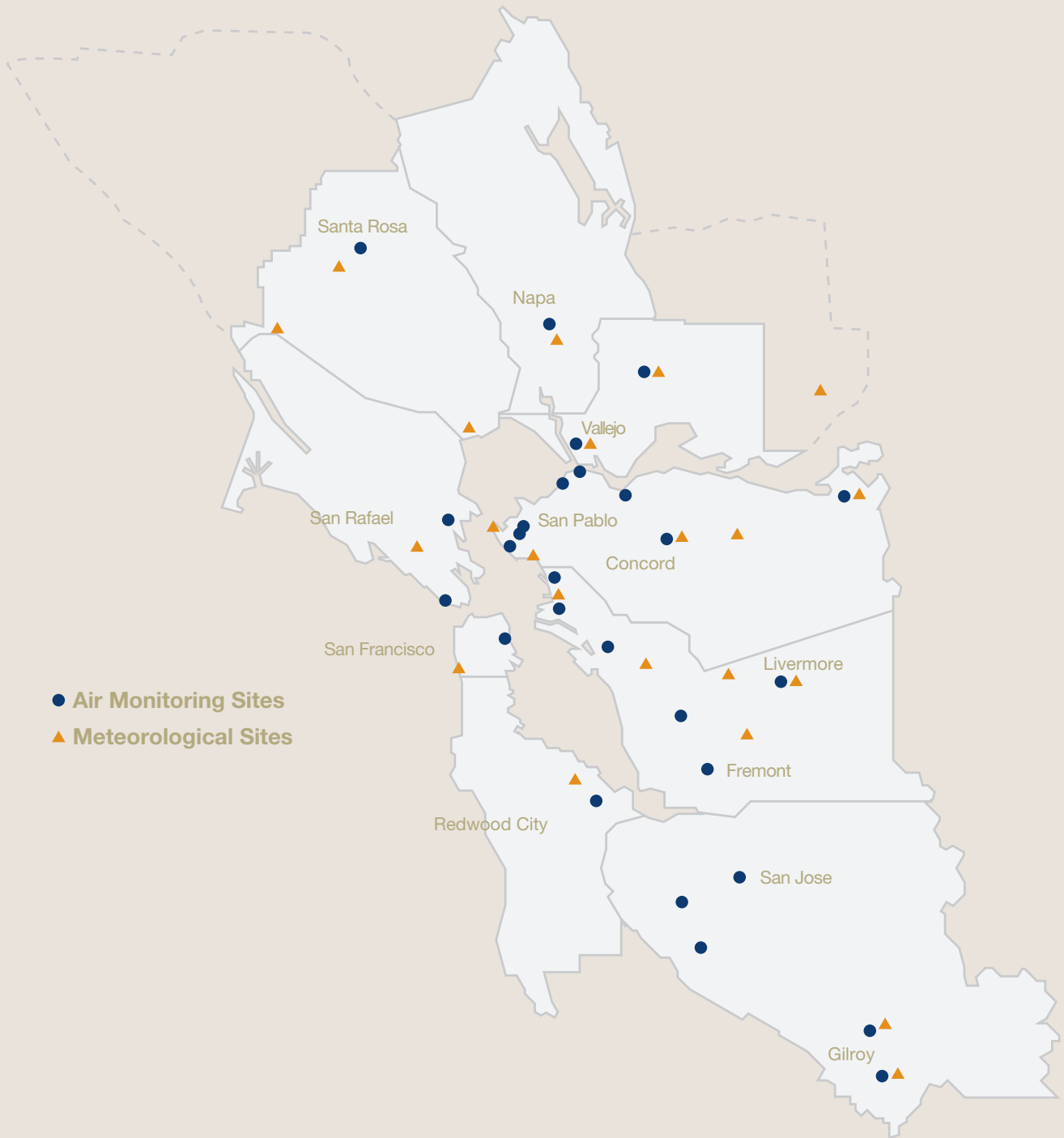
TOXIC AIR CONTAMINANTS (TACS)

Toxic Air Contaminants, or TACS, are a category of air pollutants that can potentially cause serious human health effects, such as cancer, in relatively small concentrations. The state of California has listed more than 180 TACs, which are emitted by mobile sources such as cars and trucks, large industrial plants such as refineries and power plants, and smaller facilities such as gas stations and dry cleaners. PM from diesel exhaust is listed as a TAC by the state of California.



Paul Hibser, Supervising Air Quality Specialist, develops and implements compliance assistance and enforcement programs that help Bay Area businesses and residents abide by air quality rules and regulations.

AIR MONITORING AND METEOROLOGY SITES



WHAT WE DO

The Air District has developed its core programs and implemented special initiatives to provide a flexible framework of solutions to air pollution in the Bay Area.

We Measure Air Quality

Before a problem like air pollution can be solved, it must be measured and analyzed.

AIR MONITORING

The Air District maintains one of the most comprehensive air quality monitoring networks in the country, consisting of 27 monitoring stations distributed among the nine Bay Area counties. These monitoring stations gather data on pollution levels that is used to determine impacts to the public. This network measures concentrations of pollutants for which health-based ambient air quality standards have been set by the U.S. Environmental Protection Agency, and by the California Air Resources Board, or CARB. These pollutants include ozone, particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide. The Air District's network also measures concentrations of 19 toxic air contaminants and various other pollutants of interest.

The District's network also includes two portable air monitoring stations similar to those used by CARB under the Children's Environmental Health Protection Program. These stations are placed in communities of interest for one to two years, in order to compare local air measurements with those obtained by the agency's monitoring network.

LABORATORY

The Air District maintains an extensive laboratory with state of the art equipment for testing air quality samples collected from ambient monitors, from source tests, or during accidental releases at permitted facilities. The laboratory also analyzes samples submitted by the Enforcement Division for compliance with District regulations.

FORECASTING

Weather patterns play a fundamental role in determining, on any given day, whether air pollution will disperse or accumulate. Air District meteorologists collect and analyze data from a network of meteorological sensors located throughout the nine Bay Area counties. This information—in combination with air monitoring measurements, computer models, and satellite feeds from weather services—is used to make daily air quality forecasts for the public.

The Air District prohibits open burning throughout the Bay Area, with the exception of a few types of fires (generally for agricultural or natural-resource management purposes) that are allowed on designated "burn" days. The Air District's meteorological staff issues "burn" or "no-burn" decisions for these types of permissible burns every day of the year.

We Make Plans and Develop Clean Air Rules

Air quality planning is an evolving process—the Air District constantly updates and refines its rules to meet the highest clean air standards.

AIR QUALITY STANDARDS

The Air District's regulations and programs are formally guided by a set of federal and state air quality standards that establish health-based concentration limits for specific pollutants, including ozone and particulate matter.

When an air district meets these standards, its region is considered to be *in attainment* for a given pollutant category. If it does not meet these standards, the air district is required to outline measures designed to reduce emissions and bring its region into attainment.

BAY AREA CLEAN AIR PLAN

The Air District is currently preparing the *Bay Area 2010 Clean Air Plan*, an update to the *Bay Area 2005 Ozone Strategy*. The *Plan* is being developed in association with the Air District's regional agency partners, MTC, ABAG, and BCDC. The *Plan* will review air quality progress to date in the Bay Area and develop a control strategy for achieving California's ozone standards. The Air District is taking a multipollutant approach by addressing ozone, particulate matter, air toxics, and greenhouse gas emission reductions in a single integrated plan. The primary purpose of the *Plan* is to protect air quality, public health, and the climate.

The *Bay Area 2010 Clean Air Plan* includes new, revised, and updated control measures in the three traditional categories of stationary sources, mobile sources, and transportation. The *Plan* also introduces two new categories of control measures, for land use and local impacts, and for energy and climate. Measures

relating to land use and local impacts promote mixed-use, compact development to reduce motor vehicle travel and emissions, and to ensure that the region plans for focused growth in a way that protects people from exposure to air pollution from stationary and mobile sources of emissions. Measures relating to energy and climate protect our climate by reducing greenhouse gas and air pollutant emissions.

CEQA GUIDELINES

The Air District is updating its *California Environmental Quality Act Guidelines* and revising its recommended CEQA air quality thresholds of significance. The California Environmental Quality Act, or CEQA, requires that state and local public agencies review the potential environmental impacts of projects that they carry out, fund, or approve. Last updated in 1999, the Air District's *CEQA Guidelines* are intended to help local jurisdictions identify and mitigate potential air quality impacts in such projects.

The updated *CEQA Guidelines* contain proposed thresholds of significance for air emissions stemming from construction, operational, or plan-related aspects of these projects. The new and revised thresholds set levels for emissions of criteria pollutants, ozone precursors, toxic air contaminants, odors, and for the first time, greenhouse gas emissions. The *CEQA Guidelines* also outline assessment methodologies and mitigation strategies. As part of the update process, the Air District is meeting with local governments, holding public workshops, and developing resources to assist lead agencies in applying the *CEQA Guidelines*.



Victor Douglas, Principal Air Quality Specialist, investigates and develops air pollution control regulations that are an integral part of the Air District's clean air mission.

RULE DEVELOPMENT

Rule development is the Air District's process of putting into place laws that limit emissions of air pollutants from stationary sources of pollution, like gas stations or refineries. These rules help the Bay Area meet federal and state air quality standards, reduce risk caused by emissions, and improve public health. The Air District's rules are adopted by the Board of Directors at public hearings which are open for public comment.

Rules are derived from documents like the *2010 Clean Air Plan*. Rules and rule amendments are the product of extensive technical research, cost and environmental analyses and public input. Public participation is an integral element of this process, and the Air District engages in extensive outreach to both affected industries and members of the public. Draft rules are reviewed at public workshops, and comments are considered and integrated prior to proposing final rules to the Board.

A current list of the Air District's rules and regulations is available at www.baaqmd.gov.



Carol Allen, Supervising Air Quality Engineer, reviews permit applications, conducts health risk assessments, and participates in workgroups that develop measures to reduce greenhouse gas emissions from landfills.

We Control Sources and Ensure Compliance

Reducing pollution at the source takes a coordinated effort.

PERMITS

The Air District evaluates permit applications and issues permits for stationary emission sources and abatement devices to comply with regulatory conditions, including requirements to use the Best Available Control Technology or provide emissions offsets. The Air District Permit Evaluation Program is responsible for emissions banking and interchangeable emission reduction credit activities in the Bay Area, as well as California Environmental Quality Act review for permitted sources.

These Air District evaluations include applications for Prevention of Significant Deterioration, Acid Rain, and federal Title V permits. The federal Title V Permit Program enhances compliance with the Clean Air Act by explicitly including all applicable federal, state, and local air quality requirements into a single permit.

TOXICS

The Air District's Toxics Evaluation Program integrates federal and state laws and regulations concerning toxic air contaminants into the Air District's permit program. As part of its permit process, the Air District performs health risk screening analyses for all new projects in the region that require air quality permits and emit toxic air contaminants in quantities greater than *de minimis* levels. The Air District also inventories existing commercial and industrial sources of toxic air contaminants. Facilities that emit significant quantities of toxic air contaminants are required to prepare health risk assessments that estimate the facility's health risks for local residents and offsite workers. A facility that is determined to pose an unacceptable health risk must implement measures to reduce risks to acceptable levels.

COMPLIANCE AND ENFORCEMENT

The Air District's Compliance and Enforcement Program includes a full range of educational and technical activities designed to help companies comply with air quality regulations. Activities such as inspections, air pollution complaint response, courtesy facility reviews, industry compliance schools, self inspection guidance, small business assistance and incentives, and green business inspections help to promote compliance with air quality regulations. When violations of air quality regulations are discovered, the program provides an appropriate level of enforcement action in conjunction with assistance to ensure companies comply with applicable regulations.

SOURCE TEST

The Air District monitors emissions from facilities with stationary pollution sources. The Air District's Source Test staff collect samples that can usually be analyzed on-site with instrumentation in specially outfitted vans. An immediate determination can typically be made as to whether or not emissions are in compliance with Air District regulations and permit conditions. The Air District also conducts source tests in support of its Rule Development and Emission Inventory efforts.

We Provide Incentives

Air quality is the result of everyday choices.

The Air District offers grant and incentive programs to improve air quality in the Bay Area.

These programs offer grant and incentive funding to public agencies, private companies and Bay Area residents for projects that reduce or eliminate air pollution from mobile sources—such as cars, trucks, marine vessels, locomotives, and construction equipment—wood burning, and greenhouse gases.

In the Bay Area, mobile sources and wood burning are the greatest contributors to air pollution.

TRANSPORTATION FUND FOR CLEAN AIR

Assembly Bill 434 authorized the Air District to levy a \$4 surcharge on all motor vehicles registered in the Bay Area, in order to mitigate the impact of vehicular emissions. The Air District allocates these revenues through the Transportation Fund for Clean Air, or TFCA.

TFCA revenues are distributed through two separate mechanisms. Forty percent of the TFCA funds are allocated directly to the region's nine county congestion management agencies for disbursement to eligible projects, as the TFCA County Program Manager Fund. The Air District distributes the remaining 60 percent, known as the TFCA Regional Fund, to eligible projects and programs that reduce motor vehicle emissions. In 2009, eligible projects include trip reduction (e.g. shuttles, ride sharing and bicycle projects) and alternative fuel vehicle and infrastructure projects.

A portion of the TFCA Regional Fund revenues are distributed to project sponsors on a competitive basis, and a portion used to fund several mobile-source emission-reduction programs directly administered by the Air District, such as the Smoking Vehicle Program.

THE VEHICLE BUY BACK PROGRAM

The Vehicle Buy Back Program pays owners \$1,000 to turn in an eligible engine model year 1989 or older light-duty vehicle for scrapping. Older vehicles have outdated emission controls and tend to pollute more than newer cars. Two contractors currently implement the program at more than 19 authorized locations throughout the Bay Area.

THE MOBILE SOURCE INCENTIVE FUND

AB 923, enacted in 2004, authorized local air districts to increase their motor vehicle registration surcharge up to an additional \$2 per vehicle. AB 923 stipulates that air districts may use the revenues generated by the additional \$2 surcharge for any of the four programs listed below:

- Projects eligible for grants under the Carl Moyer Program;
- New purchase of clean air school buses;
- Accelerated vehicle retirement or repair program; and
- Projects to reduce emissions from previously unregulated agricultural sources.

The revenues from the additional \$2 surcharge are deposited in, and administered via, the Air District's Mobile Source Incentive Fund, or MSIF.

THE CARL MOYER PROGRAM

The Carl Moyer Program is a state-funded incentive program originally created by the California Legislature to reduce emissions from heavy-duty engines. Managed locally by the Air District, the Carl Moyer Program provides grants primarily for installing new, cleaner engines or emission-control devices in heavy-duty equipment, such as trucks and buses, marine vessels, construction equipment, locomotives, and agricultural irrigation pumps.

Heavy-duty diesel engines are major sources of oxides of nitrogen, reactive organic gases, and particulate matter, all serious air pollutants.



Deepti Jain, Environmental Planner I, administers grant funding for projects that reduce vehicle trips in the Bay Area, such as smart growth, arterial management, regional ridesharing, and shuttle operation projects.

THE LOWER-EMISSION SCHOOL BUS PROGRAM

The Lower-Emission School Bus Program provides financial incentives for school districts to replace or retrofit older diesel-fueled school buses. The primary goal of this program is to reduce the exposure of schoolchildren to harmful diesel emissions.

GOODS MOVEMENT PROGRAM

The emphasis of the Goods Movement Program is to quickly reduce air pollution emissions and health risk from freight movement at the Bay Area's ports and along the region's major roadways. The program funds the retrofit and replacement of older, higher-polluting diesel trucks, locomotives, shore-side power systems, cargo-handling equipment, and marine vessels.

In the first year of this program, the Air District has concentrated on minimizing the pollution from drayage, or short-haul port trucks, ocean-going vessels, and on-road trucks. The focus yielded over 1,000 clean drayage trucks at the Port of Oakland and a 1 percent reduction in the region's total emissions from on-road vehicles. This reduction will have significant health benefits for residents in the West Oakland community surrounding the Port. The cancer risk in west Oakland due to ambient air pollution is three times higher than the Bay Area norm, and residents in that community have high rates of asthma and other respiratory conditions.

Emissions reductions reported are for projects paid out completely in calendar year 2009. The additional emissions reductions from the program will be reported in calendar year 2010.

We Encourage Clean Air Choices

The Air District encourages individual clean air choices through its public outreach campaigns.

Everyday activities—such as driving, painting, mowing the lawn, and even using aerosol hairsprays and deodorants—add substantial amounts of pollution to the air we breathe. Many of these activities fall outside the Air District’s regulatory jurisdiction. However, the Air District encourages Bay Area residents to “Spare the Air” through its outreach campaigns.

SPARE THE AIR EVERY DAY

The *Spare the Air Every Day* Program educates the public about air pollution and promotes long-term behavior changes that improve air quality. During the summer months, the Air District issues *Spare the Air Alerts* on days when ozone pollution is forecast to be high. On *Spare the Air* days, the Air District urges residents to cut back on any activities that cause pollution. People sensitive to pollution, such as children and the elderly, are cautioned to limit outdoor exposure.

Spare the Air Alerts and daily air quality forecasts are posted on the www.sparetheair.org website, recorded on the 1 (800) HELP AIR telephone line, announced in local newspapers, and broadcast on local TV and radio stations. Bay Area residents can also sign up on the website to be notified automatically via e-mail *AirAlerts*.

WINTER SPARE THE AIR

The *Winter Spare the Air* program runs from November through February, when particulate matter from woodstoves and fireplaces becomes a major health concern in the Bay Area. The Air District issues *Winter Spare the Air Alerts* on days when air quality is expected to reach unhealthy levels. Under the Air District’s wood-burning regulation, it is illegal for Bay Area residents to use any wood-burning devices, such as fireplaces, woodstoves, or pellet stoves, when these alerts are in effect.

SMOKING VEHICLE ASSISTANCE PROGRAM

The Air District’s Smoking Vehicle Program was implemented to decrease the number of vehicles spewing visible tailpipe exhaust on the region’s roads and highways. Residents can report smoking vehicles by phone to 1 (800) EXHAUST or online at www.800exhaust.org. Owners will be notified that their vehicle may be operating illegally and are encouraged to have it checked and repaired.

To assist owners of smoking vehicles, the Air District has also established a one-stop website, www.1800exhaust.org, where owners can obtain information about assistance programs for vehicle repair or retirement.

We Work with Local Communities

The Air District is dedicated to improving air quality for all Bay Area residents.

Each of the Bay Area's nine counties is made up of smaller communities and neighborhoods with unique air quality concerns. It is the Air District's job to adopt rules and policies that are fair and equitable to all residents of the Bay Area, and to ensure that community-level air pollution problems are not eclipsed by larger-scale policy issues.

COMMUNITY OUTREACH

As part of our community outreach program, the Air District organizes and facilitates meetings that provide an opportunity for local residents to share and receive information about air quality-related topics. Through these meetings the District provides information and seeks input on pending regulations, clean air plans and strategies, or other issues of interest to a particular community.

COMMUNITY INITIATIVES

The Air District supports and encourages community-based initiatives that reduce air pollution and model new modes of behavior that will help meet the challenges identified by local communities. Initiatives include efforts to reduce traffic at schools and reduce greenhouse gas emissions.

COMMUNITY RESOURCE TEAMS

The Air District collaborates with community-based resource teams comprising members from business, government, and non-profit organizations that work on projects to improve air quality on the local level.

YOUTH OUTREACH

An important component of the Air District's comprehensive community outreach effort is the youth outreach program. Youth outreach efforts include the promotion of an educational curriculum focused on criteria pollutants and science-based lesson plans on climate change.

GOODS MOVEMENT AND LOCAL PLANNING

The environmental impact of goods movement activities on communities near ports and railroad stations remains a central concern. Although mobile sources (which are the largest community sources of diesel PM and other TACs) are regulated at the federal and state levels, the Air District has worked closely with the California Air Resources Board, the Metropolitan Transportation Commission, the Port of Oakland, and other stakeholders to reduce air quality impacts from goods movement in the Bay Area.

The Air District also assumes an advisory role on air quality issues related to land-use development, housing, and transportation, and reviews and comments on local general plans and environmental documents.

MEETING 21ST CENTURY CHALLENGES

When it comes to air quality, the future is now.

Air in the Bay Area is substantially cleaner than it was more than 50 years ago, when the Air District was first created to address emissions in the region. This progress is due in large part to the Air District's controls on open burning and industrial sources, as well as state requirements for cleaner automobiles and fuels.

But managing air quality in the region requires constant effort and vigilance, as the agency keeps pace with an ever-increasing population and traffic base, and the continual evolution of industrial technologies. The District must also work to meet health-protective air quality standards that are periodically strengthened by the state and federal governments.

In years to come, the agency will continue to pursue emission reductions through its traditional programs, while developing and expanding newer initiatives to address such issues as climate change and the effects of particulate matter and diesel exhaust in our communities.

CLIMATE CHANGE

Climate change is one of the most urgent global issues of our time. The Air District has helped lead climate change policy in the Bay Area since 2005, when the Air District's Board of Directors adopted a resolution establishing the agency's Climate Protection Program.

Bay Area local governments are at the climate protection forefront, and the Air District has spearheaded several initiatives to assist them in implementing actions to mitigate the effects of climate change. Following up on the success of its 2006 Climate Summit, in which keynote speaker Al Gore gave a call to action to the Bay Area, the Air District hosted a Climate Action Leadership Summit in May 2009 geared to local government agencies. After listening to keynote speaker Thomas Friedman's presentation about America's green revolution,

the summit's 450 attendees participated in action-oriented workshops.

Through a partnership with the Institute for Local Governments, the Air District launched the Bay Area Climate Action Web Portal to highlight, share, and accelerate climate protection in the Bay Area. The site is located at: www.baaqmd.gov/climateplanning.

The Air District is currently updating its *California Environmental Quality Act*, or *CEQA, Guidelines*. The updated *CEQA Guidelines* will offer local jurisdictions recommendations for evaluating and mitigating greenhouse gas emissions in their new land use developments and plans.

The Air District continues to collaborate with its regional partners—the Association of Bay Area Governments, the Metropolitan Transportation Commission, or MTC, and the Bay Conservation and Development Commission—in supporting regional climate policies and programs. As Senate Bill 375 begins to take shape in the Bay Area, the Air District will work with these partners on the Sustainable Communities Strategy. The Sustainable Communities Strategy will reduce Bay Area greenhouse gas emissions from vehicles through land use policies, integrating regional planning for transportation, land use, and housing.

MTC's Regional Transportation Plan, Transportation 2035, includes \$400 million for a regional Transportation and Climate Action Campaign. The Air District led the regional agencies in developing the framework for this campaign and is working with MTC to implement its various components. The first implementation phase of the campaign includes \$80 million in funding for public education and outreach activities, Safe Routes to School programs, an innovative climate grants program, and a comprehensive evaluation of the effectiveness of each of these components.

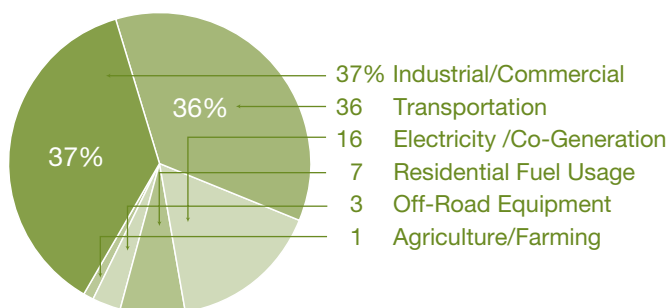
The agency has also targeted climate change with grant and incentive programs. In 2007, the Air District awarded \$3 million in grants to local entities for climate-related projects. In 2009, the Air District received a one-time payment of approximately \$4.4 million to administer the Greenhouse Gas Reduction Grant Program to fund projects that reduce greenhouse gas emissions in the areas surrounding the ConocoPhillips Refinery in Contra Costa County. Funding for this program resulted from a settlement agreement in 2007 between ConocoPhillips and the Attorney General of California regarding the environmental impact of greenhouse gas emissions from an expansion project.

The Air District also developed Protect Your Climate, a 4th and 5th grade comprehensive climate change curriculum, which is now used in 40 elementary school classrooms throughout the nine Bay Area counties.

As one of its first steps in establishing a climate program, the Air District developed a regional greenhouse gas emission inventory for base year 2007. This emissions inventory is an analysis and education tool for policy makers throughout the Bay Area. The inventory provides an overview of greenhouse gas emission sources in the Bay Area, including a breakdown by county and emission sectors.

The Air District also charges an annual fee to facilities and businesses in the Bay Area based on the amount of greenhouse gases they emit. These fees are levied as part of the agency's permit program, in order to recover the costs of the Air District's climate protection program activities relating to permitted stationary sources.

BAY AREA SOURCES OF GREENHOUSE GAS EMISSIONS



PARTICULATE MATTER

A conclusive body of scientific evidence associates exposure to fine particulate matter, or PM_{2.5}, with a variety of serious public health effects, from restricted lung development and elevated asthma rates in children to chronic bronchitis, heart attacks, and increased overall mortality rates.

The Air District has historically implemented a number of regulations and programs to reduce PM emissions. These include rules limiting open burning of agricultural and non-agricultural waste, controlling dust from earth-moving and construction/demolition operations, and limiting emissions from various combustion sources such as cement kilns, furnaces, and refinery heaters and boilers.

More recently, the agency's Board of Directors approved a regulation that reduces PM emissions from charbroilers at the largest, highest-emitting restaurants. The Board also strengthened the regulation controlling emissions from stationary internal combustion engines.

A regional PM analysis of particulate matter caught on filters revealed that the major wintertime source of PM is residential wood burning. An estimated 1.2 million households with fireplaces and woodstoves in the region produce about one-third of the overall fine particulate pollution.

In 2008, the Air District Board adopted a wood smoke regulation to further reduce harmful PM emissions. This rule prohibits the use of wood-burning devices on days when the agency has issued a *Winter Spare the Air Alert* due to forecasted unhealthy air quality. The rule also places year-round restrictions on visible emissions, prohibits the burning of garbage, plastics, or other inappropriate material, and requires that only clean-burning technology be installed in new construction and remodels.

Surveys have shown that Bay Area residents support the reduction of wood burning in order to improve public health, and have changed their behavior accordingly: wood burning has decreased 50 percent since the rule went into effect. The Air District will continue to monitor the rule's effectiveness through surveys and air sampling.

PM from diesel exhaust—which has been designated a toxic air contaminant by the California Air Resources Board—is a significant health concern throughout the Bay Area. Reducing emissions in communities impacted most by diesel engine pollution is one of the Air District’s foremost priorities, and is being addressed through a number of programs, including targeted incentives, the pioneering CARE program, and enforcement of the state’s Diesel Risk Reduction Plan, which includes new mobile source regulations in effect at the Port of Oakland.

The Air District will continue to explore and implement strategies for protecting public health from the harmful impacts of PM. The Air District is conducting research on key factors influencing local PM levels, including weather patterns that lead to its formation.

The Air District is currently in the process of developing the *2010 Clean Air Plan*, which identifies PM as the leading cause of mortality from air pollution in the Bay Area. The plan contains a number of strategies for reducing PM emissions, including a new set of measures entitled Land Use and Local Impact Measures. These address localized impacts of PM and other types of air pollution, and help local jurisdictions pursue transit-oriented infill development, while simultaneously protecting people from exposure to air pollution in these areas.

CARE PROGRAM

The Air District’s pioneering Community Air Risk Evaluation, or CARE, program analyzes the impact of toxic air pollutants on local Bay Area communities and focuses pollution reduction measures where they are most needed. This three-phase program was undertaken to help the Air District assess whether certain areas are particularly affected by toxic air pollution, in order to intervene more effectively.

The state of California has identified more than 180 compounds as toxic air contaminants, or TACs, including particulate matter from diesel engine exhaust, and benzene, a constituent of gasoline as well as a product of incomplete combustion. These compounds pose cancer risks; chronic, non-cancer risks, such as diseases of the lungs, liver, and kidneys; and acute risks, such as eye and respiratory irritations.

In Phase I of the CARE Program, completed in 2006, the Air District used emissions models and engineering calculations to develop a preliminary emissions inventory of TACs in the Bay Area, and compiled demographic and health-statistics data to help identify locations with populations that are especially sensitive to TACs.

Phase II of the CARE program, which continued through 2009, built on the accomplishments of Phase I to complete regional air quality modeling of TACs using emission estimates for year 2005. Based on this modeling, the Air District identified six communities where vulnerable populations are particularly impacted by TACs: Concord, Richmond/San Pablo, western Alameda County, San Jose, Redwood City/East Palo Alto, and eastern San Francisco. In follow-on work, the Air District has begun updating the TAC emissions estimates to future years 2015 and 2020 to evaluate the effects of current and planned mitigation measures.

In Phase III of the CARE Program, local-scale emissions development and modeling will be performed to improve TAC exposure estimates for Bay Area communities and to support the development of Community Risk Reduction Plans. These will be jointly developed by the Air District and local cities and counties to reduce exposures for current and future residents.

Information gained at each phase of the program is being used to help direct the Air District’s toxic mitigation strategies. For example, it is helping the Air District establish proposed new CEQA thresholds for local risks and hazards, and helping to focus grants and incentives in areas with high TAC exposures and sensitive populations.

Throughout the process, the Air District is assisted by a CARE Task Force, whose members have a wide variety of expertise in community advocacy, public health, medicine, air quality analysis, and industrial operations. The Task Force meets regularly to provide guidance and help shape the complex program parameters.



Tom Story, Advanced Projects Advisor, guided the development of the Air District’s first automated business systems and keeps these systems functioning effectively today.

WORKING TOGETHER

The Air District cannot make continued air quality progress unless individual members of the public actively participate in efforts to fight pollution. There are a number of things that Bay Area residents can do to improve air quality. Most of these clean air choices take little effort, such as using public transportation, buying the cleanest available vehicle, or conserving energy by purchasing “green” appliances that use less power.

Everyone who lives in the Bay Area has a stake in preserving our quality of life. In the future, as the popular slogan goes, the Air District will continue to “think globally and act locally,” expanding our climate protection activities and refining our efforts to address air pollution in local communities of the Bay Area. But we need your assistance as well. Air quality is a cooperative effort, and we must all work together, now and in the future, to preserve the clarity of our beautiful Bay Area skies.

WORKING WITH YOU

Preserving and maintaining air quality is essentially a group effort.

To do our job effectively, we rely heavily on the input and support of the many residents of the Bay Area. We cannot continue to make progress unless individual members of the public actively participate in our efforts to fight pollution.

Here are some ways you can get involved in the clean air process:

MAKE AN AIR QUALITY COMPLAINT

- 1 (800) 334-ODOR (6367)
- 1 (800) EXHAUST (394-2878)
- 1 (877) 4-NO-BURN (466-2876)

CONTACT US WITH YOUR GENERAL AIR QUALITY CONCERNS

- sparetheair@baaqmd.gov
- (415) 749-4900

KEEP UP WITH OUR LATEST RULE-MAKING ACTIONS AND COMMUNITY INITIATIVES

- www.baaqmd.gov/Calendar.aspx
- www.baaqmd.gov/The-Air-District/Board-of-Directors/Agendas-and-Minutes.aspx
- www.baaqmd.gov/Divisions/Planning-and-Research/Rule-Development.aspx

CHECK WINTER SPARE THE AIR ALERT STATUS

- 1 (877) 4-NO-BURN (466-2876)

SIGN UP FOR WINTER SPARE THE AIR PHONE ALERT NOTIFICATION

- 1 (800) 430-1515
- www.sparetheair.org/Stay-Informed/Subscribe-and-Share/Air-Alerts.aspx

GET INFORMATION ABOUT OUR GRANT AND INCENTIVES PROGRAMS

- (415) 749-4994
- grants@baaqmd.gov
- www.baaqmd.gov/Divisions/Strategic-Incentives.aspx

GET INFORMATION ABOUT OUR VEHICLE BUY BACK PROGRAM

- 1 (888) 690-2274
- www.baaqmd.gov/Divisions/Strategic-Incentives/Vehicle-Buy-Back-Program.aspx

GET INFORMATION ABOUT SMOKING VEHICLES

- www.1800exhaust.org

GET COMPLIANCE OR PERMIT INFORMATION, FOR BUSINESSES

- Compliance : (415) 749-4999
- www.baaqmd.gov/Divisions/Compliance-and-Enforcement/Compliance-Assistance.aspx

- Permits: (415) 749-4990
- www.baaqmd.gov/Divisions/Engineering/Application-Forms.aspx

- Open Burning: (415) 749-4600
- www.baaqmd.gov/Divisions/Compliance-and-Enforcement/Open-Burning.aspx

JOIN A LOCAL AIR QUALITY RESOURCE TEAM

- (415) 749-4900
- www.sparetheair.org/Get-Involved/Your-Community/Resource-Teams.aspx

JOIN THE SPARE THE AIR EMPLOYER PROGRAM

- (415) 749-4900
- www.sparetheair.org/Get-Involved/For-Employers.aspx

REQUEST A SPEAKER OR OUTREACH BOOTH AT A SCHOOL, COMMUNITY, OR BUSINESS EVENT

- (415) 749-4900

GET CURRENT AIR QUALITY INFORMATION

- 1 (800) HELP-AIR (435-7247)
- www.sparetheair.org



Rochelle Henderson, Air Quality Technician II, is the Air District's Public Records Coordinator, responsible for assisting the public with information requests about permitted sources of air pollution in the Bay Area.

[SIGN UP FOR E-MAIL NOTIFICATIONS](#)

AirAlerts

- www.sparetheair.org

What's New at baaqmd.gov

New Regulations

Board Meeting Agendas

- www.baaqmd.gov (see E-Mail Sign-Ups section)

[JOIN US – EMPLOYMENT AND INTERNSHIPS](#)

- (415) 749-4980
- www.baaqmd.gov/Divisions/Human-Resources/Employment.aspx

[VISIT THE AIR DISTRICT ON FACEBOOK AND TWITTER](#)

- www.facebook.com/pages/Spare-the-Air-Bay-Area/47318701051
- www.twitter.com/@sparetheair

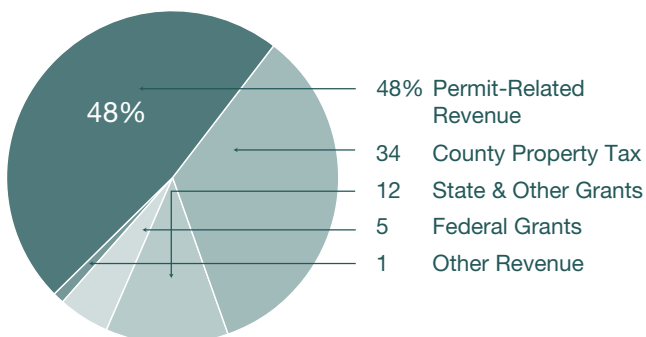
FUNDING CLEAN AIR



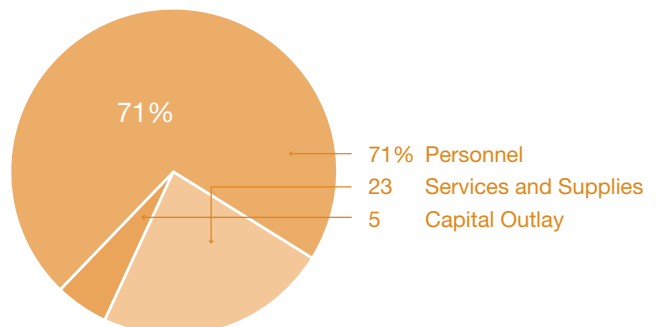
Julius Li, Mechanic II, ensures that the Air District's green vehicle fleet runs smoothly and efficiently.

The Air District's budget funds the programs and operations necessary for achieving its clean air goals.

REVENUE



EXPENDITURES



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District Counsel

Jeff McKay
Jean Roggenkamp
Deputy Air Pollution Control Officers

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