San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

BOARD OF SUPERVISORS

2012 MAR 15 A 10:1?

Supervisor William O'Brien
Stanislaus County
1010 Tenth St. Suite 6500
Modesto, CA 95354

Dear Supervisor O'Brien,

Our 2011 Annual Report to the Community is printed and available to the public in all our District offices. Additional, we are distributing the report to stakeholders, businesses, schools, non-profits and other District partners.

I have enclosed three copies here for you and your staff, and am happy to provide additional copies if needed. The report is also available electronically at www.valleyair.org.

If you have any questions, please don't hesitate to contact me at 559-230-5850, or by e-mail at jaime.holt@valleyair.org.

Best regards,

Jaime Holt
Chief Communications Officer

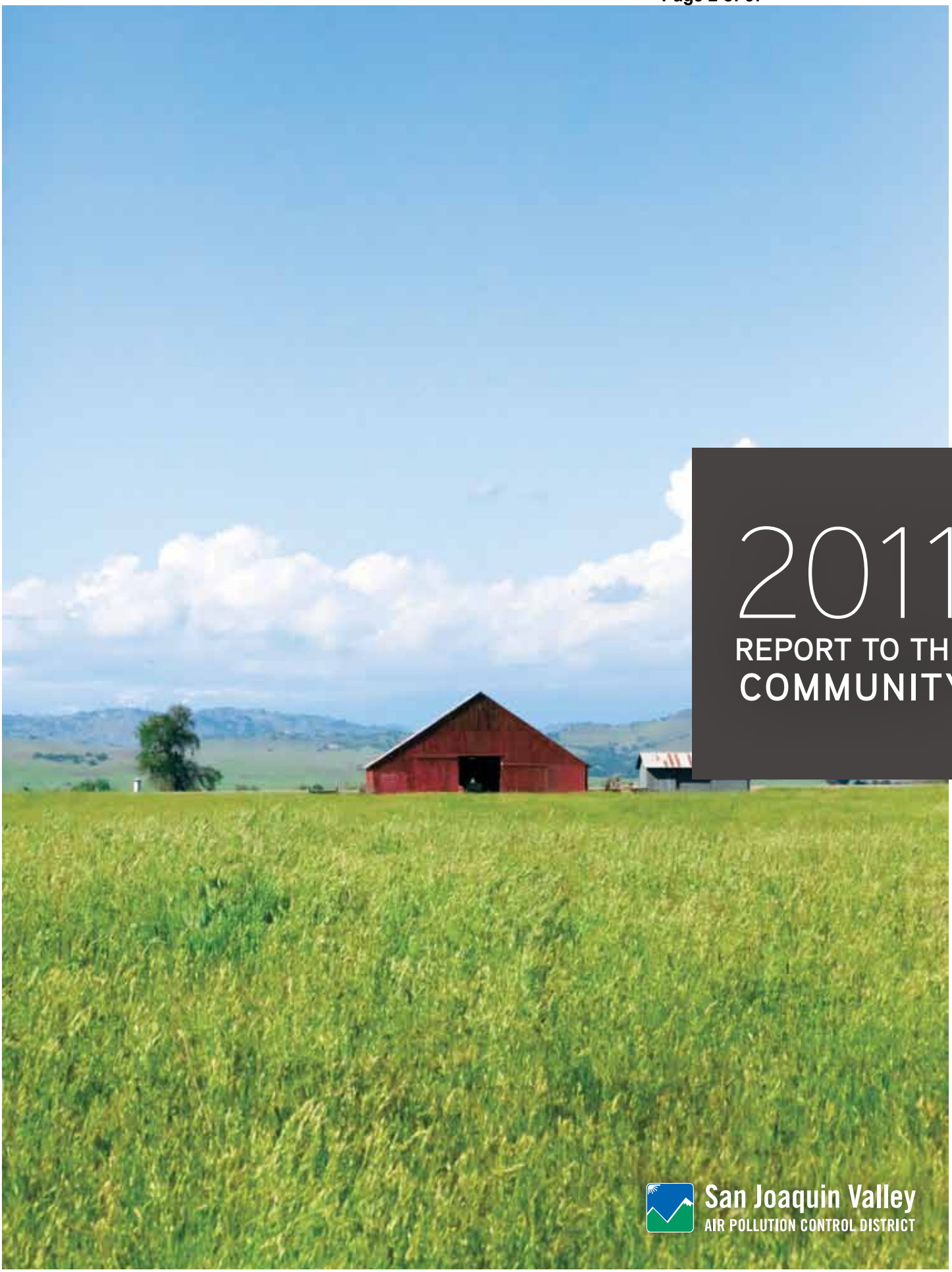
Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com



2011 REPORT TO THE COMMUNITY

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

Message from the Air Pollution Control Officer

To the residents of the San Joaquin Valley:

2011 was a year of much change at the Air District and in the Valley. We reached significant milestones and addressed daunting challenges. But throughout all the circumstances that called on us collectively to make thoughtful, immediate and far-reaching decisions, our identity as a unified valley continued to evolve and mature.

As the air basin continues to make improvements in our air quality and achieve a higher public profile, public participation also continues to climb, bringing new ideas to the table of public discourse. As an agency, and a Valley, we are the better for it.

The past year also brought the opportunity to craft new solutions to formidable issues. For example, the enforcement of a $29 million federal penalty for 1-hour ozone violations resulted in the District's Governing Board devising a solution that minimized individual impact on Valley residents and ensured these funds would return to the Valley for investment in clean-air projects. Although federal penalties are never popular, in this case, the resulting strategy was far superior to its alternative, which would have imposed an arduous burden on the Valley's economy that none of us can afford.

As another year comes to a close, the Valley's economy continues to struggle under the weight of a recessionary climate, and the Air District continues relief measures implemented two years ago that enable the regulated community to meet its legal obligations regarding emission reductions, resulting in cleaner air for the Valley.

The economy has also magnified the necessity of increased incentive and grant funding for business, industry and Valley residents, and this continues to be the largest growth area of the District. This past year, the District awarded more than $200 million for programs ranging from agricultural equipment to diesel trucks, to cleaner burning wood stoves and electric lawn mowers. Programs such as the Tune In Tune Up smog repair program gave money to Valley families to tune up their vehicles. In fact, funding dispersed by the District has increased tenfold in the past five years, and we continue to see increases on the horizon.

Another area of significant growth has been in our research funding practices. This past year, the District sponsored groundbreaking studies that examined the actual impacts of air pollution on the health of the Valley's populations, and this new knowledge will play an important role in future Air District policies and regulations. As always, our work is grounded in the best, most recent data available.

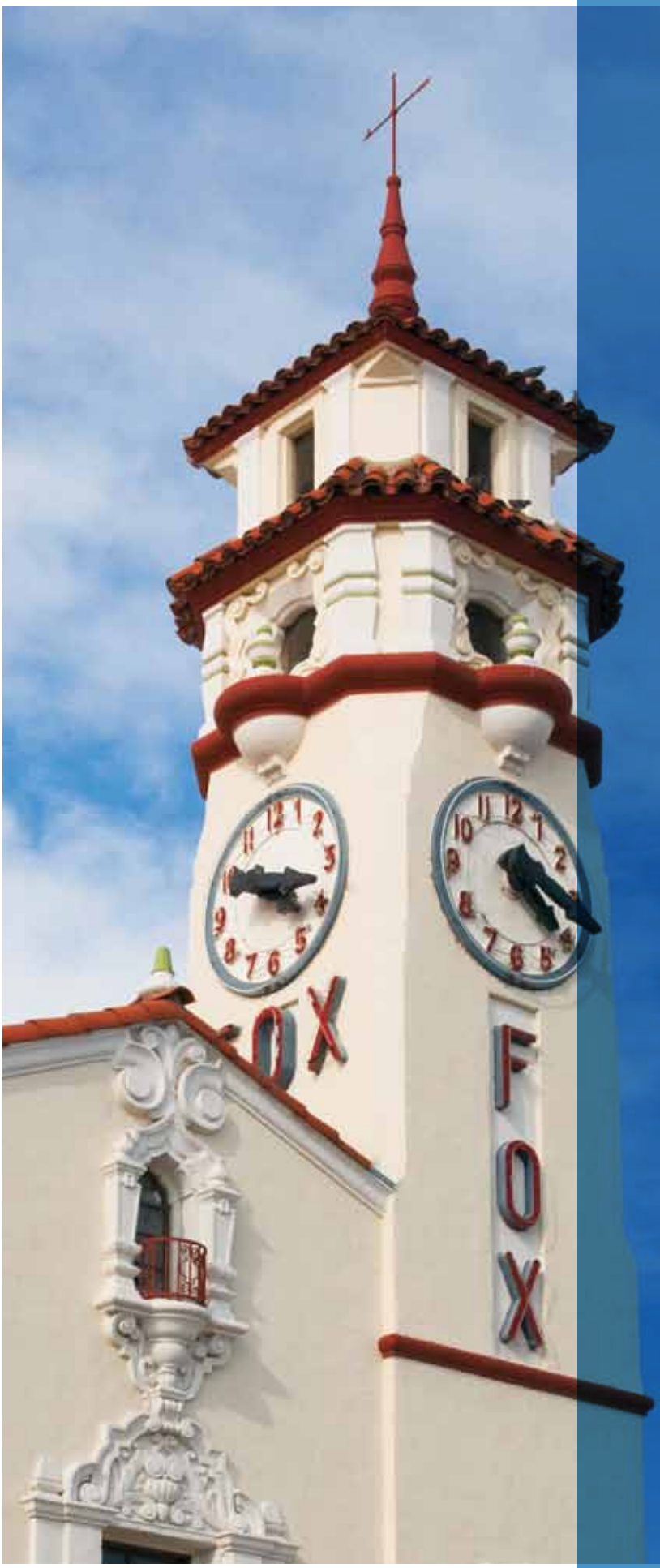
Finally, the Air District continues to grow its community resources such as the critical Environmental Justice Advisory Group, which advises the District on how our work affects environmental justice communities. This group, as with the Citizens Advisory Committee, brings important voices to the table and enfranchises the community at large, which is the Valley's greatest resource of all.

As we move closer to attaining important health standards that once were far out of reach, the inevitable new challenges we will face as a District and a Valley will be met with enthusiasm, hard work, ingenuity and the knowledge that, with the cooperation of all our residents and businesses, nothing is impossible.

Toward cleaner air,

Seyed Sadredin

Seyed Sadredin
Executive Director/Air Pollution Control Officer



Governing Board Members

William O'Brien
CHAIR
Stanislaus County

Skip Barwick
VICE CHAIR
City of Tulare

Oliver L. Baines III
City of Fresno

Tony Barba
Kings County

Sally J. Bomprezzi
City of Madera

Judith G. Case
Fresno County

Ronn Dominici
Madera County

Henry Jay Forman, Ph.D.
Appointed by the Governor

Harold Hanson
City of Bakersfield

Leroy Ornellas
San Joaquin County

Alexander C. Sherriffs, M.D.
Appointed by the Governor

Chris Vierra
City of Ceres

Hub Walsh
Merced County

Raymond A. Watson
Kern County

J. Steven Worthley
Tulare County

Contents

page 24
Real-Time Air Advisory Network

page 22
Air Alerts Aim to Prevent Ozone Violations, End Federal Penalties

AIR ALERT!

page 20
Incentives for Cleaner Cars

page 19
Technology Advancement Program

page 25
Valley Air Quality Research Celebrates 25th Anniversary

page 21
District Runs School Bus Grant Program for 18 California Air Districts

page 28
Executive Outreach Targets City Councils, County Boards

About the District

The San Joaquin Valley Air Pollution Control District is a regional agency responsible for air quality management in the eight counties in the San Joaquin Valley Air Basin: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the Valley air basin portion of Kern.

The District works with local, state and federal government agencies, the business community and the residents of the Valley to reduce emissions that create harmful air quality conditions.

The District's Mission

The San Joaquin Valley Air Pollution Control District is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality-management strategies.

The District's Vision

Healthful air that meets or exceeds air quality standards for all Valley residents. The District is a leader in air-pollution control. Valley residents take pride in our collective efforts to continuously improve air quality.

The District's Core Values

PROTECTION OF PUBLIC HEALTH

The District shall continue to strive to protect the health of Valley residents through efforts to meet health-based, state and federal ambient air-quality standards.

ACTIVE AND EFFECTIVE AIR POLLUTION CONTROL EFFORTS WITH MINIMAL DISRUPTION TO THE VALLEY'S ECONOMIC PROSPERITY

District staff shall work diligently to adopt and fully implement cost-effective air pollution-control measures, provide meaningful incentives for reducing emissions, and develop creative alternatives for achieving emissions reductions.

OUTSTANDING CUSTOMER SERVICE

District staff shall work to provide excellent customer service for stakeholders in activities including: rule and plan development; permitting and emissions inventory functions; compliance activities; financial and grant-funding transactions; and responses to public complaints and inquiries.

INGENUITY AND INNOVATION

The District values innovation and ingenuity in meeting the challenges we face. Examples of this spirit of innovation include developing programs that provide new incentives for emissions reductions, and providing alternate compliance strategies that supplement traditional regulatory efforts and generate more emissions reductions than could otherwise be reasonably obtained.

ACCOUNTABILITY TO THE PUBLIC

The District serves, and is ultimately accountable to, the people of the Valley for the wise and appropriate use of public resources, and for accomplishing the District's mission with integrity and honesty.

OPEN AND TRANSPARENT PUBLIC PROCESSES

The District shall continue to provide meaningful opportunities for public input and be responsive to all public inquiries.

RECOGNITION OF THE UNIQUENESS OF THE SAN JOAQUIN VALLEY

The Valley's meteorology, topography and economy differ significantly from those in other jurisdictions. Although it is valuable to review and evaluate efforts of other agencies, we must consistently look for solutions that fully consider the Valley's unique needs.

CONTINUOUS IMPROVEMENT

The District works to continually improve its internal operations and processes, and strives to streamline District operations through optimally utilizing information technology and human resources.

EFFECTIVE AND EFFICIENT USE OF PUBLIC FUNDS

The District shall continually strive to efficiently use all resources and to minimize costs associated with District functions.

RESPECT FOR THE OPINIONS AND INTEREST OF ALL VALLEY RESIDENTS

The District shall respect the interests and opinions of all Valley residents and fully consider these opinions, working collaboratively, in carrying out the District's mission.

Air Quality Progress & Challenges

Recent measurements of the amount of pollution in the air confirm that the technology investments by businesses and municipalities in the San Joaquin Valley, public participation in adopting air friendly behavior, and the effective public policy set by the District Governing Board, are producing the dividend of cleaner air for our residents. However, while the Valley air basin's ozone and particulate matter levels are declining over the long term, significant challenges remain and meteorology continues to perplex year-to-year progress. Valley businesses are subject to some of the most stringent air regulations in the nation. Additionally, the District has invested over $300 million in funding for voluntary clean air projects in the Valley. Since 1980, emissions from Valley businesses have been reduced by approximately 80 percent. New health-based standards established by EPA, however, demand further reductions in emissions which require new technologies that do not exist yet.

Ozone

Based on a review of several well-established air quality indicators, it is clear that the 2011 summer ozone season continued the long-term trend toward attainment of the federal 1-hour and 8-hour ozone standards. For the Valley to finally secure attainment of the 1-hour ozone standard, the challenge now is to eliminate a small number of scattered, less predictable exceedances. As emissions have been reduced to historically low levels, meteorology has become the predominant controlling factor in causing 1-hr ozone exceedances. The Valley's 1-hour ozone progress in 2011 is clear. However, undisputed evidence indicates that the Valley is nearly in attainment of the 1-hour ozone standard. This progress is remarkable given that just a few short years ago, EPA designated the Valley air basin as extreme nonattainment for the 1-hour ozone standard.

STATISTICAL HIGHLIGHTS FROM 2011

- Only three days of 1-hour ozone exceedance in 2011, down from 56 days in 1996, and 30 days just ten years ago in 2002. *See Figure 1.*
- 2011 saw the only August in history without an exceedance.
- 2011 saw the "latest first" exceedance, which occurred on September 22.
- 1-hour ozone peaks were generally lower than previous years.
- Two days had only one hour of exceedance each, and one day had only two hours of exceedance. In the past, exceedances would last for multiple hours.

FIGURE 1

10-year Trend | Number of Days Over the 1-Hour Ozone Standard
Somewhere on the Valley Floor
JANUARY 1 THRU OCTOBER 31

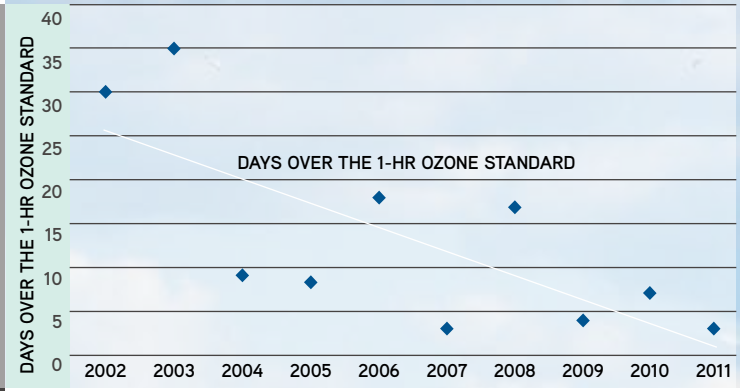
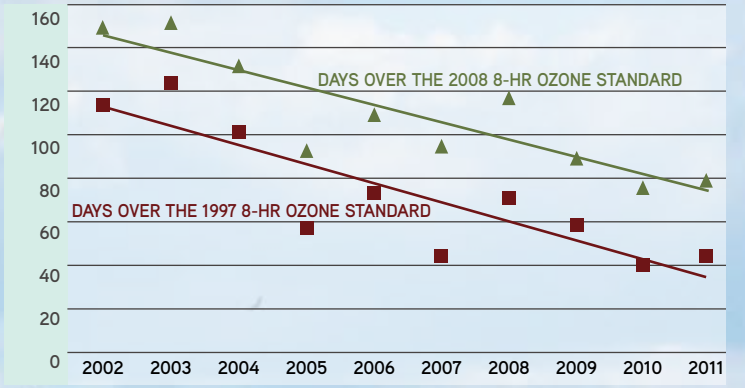


FIGURE 2

10-year Trend | Number of Days Over the 8-Hour Ozone Standards
Somewhere on the Valley Floor
JANUARY 1 THRU OCTOBER 31



For assessing public health impacts of air pollution, it is also important to recognize the differences in air quality throughout the region. In 2011, only Fresno County recorded any exceedances of the 1-hour ozone standard on the Valley floor.

Evaluating progress toward the 8-hour ozone standard requires a review of the number of exceedances of the 8-hour ozone standard as well as the Valley's 8-hour ozone Design Value. Design Value is the average of the yearly fourth-highest 8-hour ozone concentrations for a three-year period. To reach attainment, the Design Value must be at or below the standard.

8-HOUR OZONE PROGRESS HIGHLIGHTS

- 2011 saw the lowest 8-hour ozone Design Value in recent history
- The Valley's Design Value has been reduced by 13 percent in the last 10 years
- The last three years saw the lowest total number of 8-hour ozone exceedances, despite the addition of four new ozone monitors
- Exceedances of the ozone standard set in 1997 (84 parts per billion or ppb) have been reduced by 62 percent over the last decade
- Exceedances of the 2008 ozone standard (75 ppb) have been reduced by 42 percent over the last decade

Despite significant progress in reducing the Valley's 8-hour ozone Design Value and the annual number of exceedances, attaining the 8-hour ozone standard is proving to be more challenging in the San Joaquin Valley than in any other region in the nation. The enormity of this challenge is primarily due to the Valley's meteorology and topography, which create ideal conditions for generating and trapping ozone. For the 8-hour ozone standards, 2011 confirmed that significant challenges remain for the Valley.

SIGNIFICANT CHALLENGES REMAIN FOR THE 8-HOUR OZONE STANDARDS

- 2011 saw the second-highest number of 8-hour ozone exceedances in the nation
- The Valley's Design Value must be reduced by another 16 percent to attain the 1997 standard, and by another 25 percent to attain the 2008 standard
- Technology does not currently exist to achieve all the emission reductions that are necessary to reach the standards
- Due to the Valley's meteorology and topography, lowering the remaining peaks in ozone concentrations will be more difficult

FIGURE 3

10-Year Trend | 8-hour Ozone Design Value

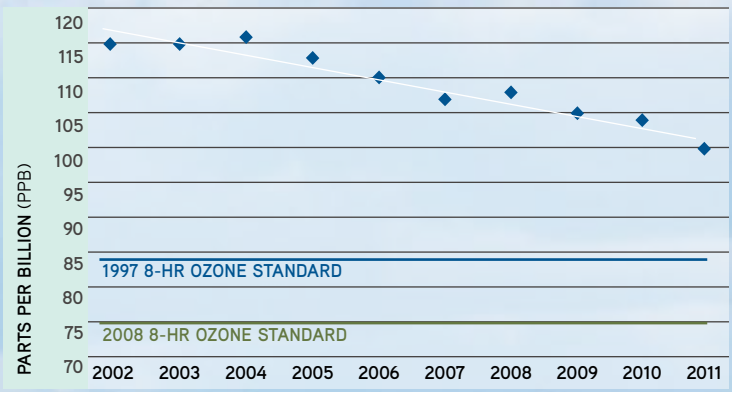
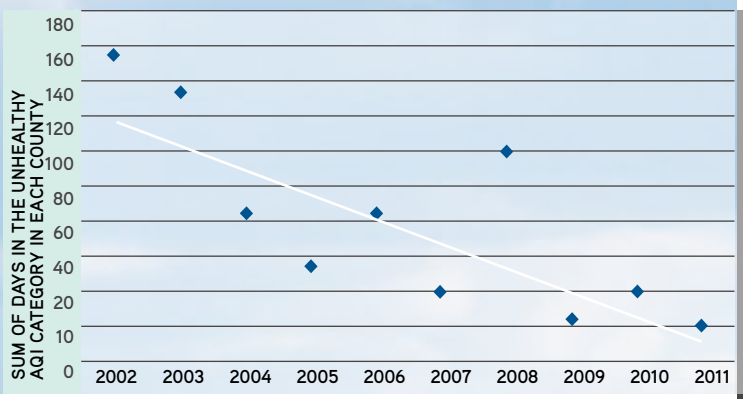


FIGURE 4

10-Year Trend | Ozone Season, Days ≥ AQI Unhealthy



As with 1-hour ozone, it is important to recognize the differences in air quality throughout the region. San Joaquin, Stanislaus, Merced, and Madera counties are now very close to attaining the 1997 8-hour ozone standard. *See Table 2.*

US EPA's Air Quality Index (AQI) provides another informative and robust metric for evaluating how air quality during the Valley's ozone season (May through October) has changed over time. Table 3 shows the number of AQI "Unhealthy" or worse days in each county during the 2011 ozone season, and Figure 4 shows the decline (more than 85 percent) in AQI "Unhealthy" or worse days in the San Joaquin Valley over the last decade. AQI reflects the highest 8-hour ozone concentration on each day in each county.

Particulate Matter

Ambient data indicates that the Valley's longstanding, progressive strategy for attaining the federal health-based Particulate Matter standards—both coarse PM10 and fine PM2.5—continues to produce positive results, and that a strong continued effort is still needed. Regarding PM10, in 2008 US EPA re-designated the San Joaquin Valley to attainment of the federal PM10 standard. In late 2010 and early 2011, the Valley achieved another season of maintaining that standard as no monitoring sites recorded PM10 violations.

For US EPA to reclassify the Valley to PM2.5 attainment, the Valley must meet two types of standards: one assessed on a daily basis and the other averaged over the entire year. There are three fundamental measures of progress toward these standards: the number of annual exceedances of the 24-hour standard, the 24-hour Design Value, and the Annual Design Value.

Currently there are two 24-hour PM2.5 standards in effect, the first established in 1997 at 65 micrograms per cubic meter, and the second established in 2006 at 35 micrograms per cubic meter. As shown in Table 4, several counties recorded no exceedances of the 1997 24-hour PM2.5 standard in 2010 (the latest full calendar year of data), and several counties are less impacted with regard to the 2006 standard. PM2.5 is more problematic in the more populous counties in the southern and central Valley, and in areas influenced by adverse local conditions.

Figure 5 indicates progress with regard to the number of exceedances of the two 24-hour standards. According to the calculated linear trends, exceedances of the 2006 standard have declined over 30 percent in the last decade and exceedances of the 1997 standard, which is the focus of the District's 2008 PM2.5 Plan, have declined by approximately 70 percent.

The 24-hour Design Value is the highest three-year average of the 98th-percentile value for each PM2.5 monitoring station in the Valley. Figure 6 shows how the Valley's 24-hour Design Value is changing in relation to both 24-hour standards. The 24-hour Design Value for PM2.5 in 2010 met the 1997 24-hr PM2.5 standard, but was still over 80 percent higher than the stringent 2006 standard.

Progress toward the PM2.5 Annual Standard is evaluated by reviewing the Valley's Annual Design Value. Annual Design Value is the Valley's highest three-year average of the annual mean value for each monitoring station. In essence, each year's Annual Design Value represents the Valley's highest annual-average PM2.5 concentration, and the trend shows how that peak has declined over time. Figure 7 shows that the Annual Design Value has been reduced by approximately 9 percent over the last

FIGURE 5

Exceedances of the 24-hour PM2.5 Standards

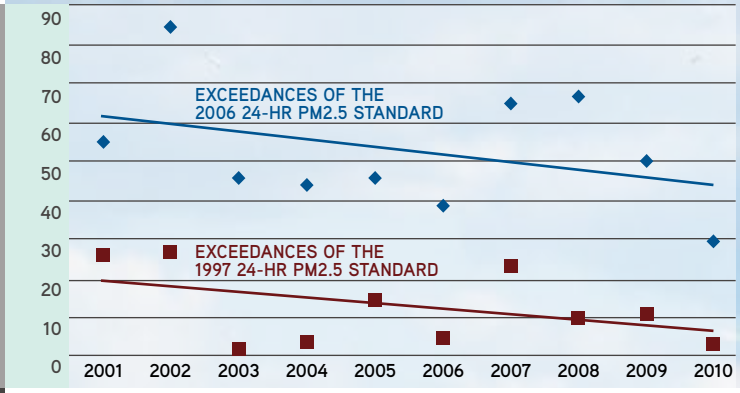


FIGURE 6

10-Year Trend | PM2.5 24-hour Design Value

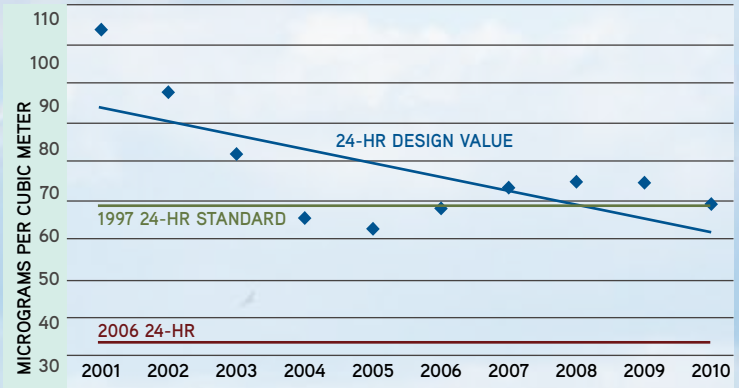


TABLE 1

Number of Exceedances of 1-Hour Ozone Standard
in Each County
2011, THROUGH OCTOBER 31

	SAN JOAQUIN	STANISLAUS	MERCED	MADERA	FRESNO	KINGS	TULARE	KERN
1-HR STANDARD	0	0	0	0	3	0	0	0

TABLE 2

Number of Exceedances of 8-hour Ozone Standards
in Each County (Valley floor)
2011, THROUGH OCTOBER 31

	SAN JOAQUIN	STANISLAUS	MERCED	MADERA	FRESNO	KINGS	TULARE	KERN
1997 STANDARD	2	6	1	0	33	6	1	29
2008 STANDARD	8	21	13	8	66	30	20	69

TABLE 3

Days ≥ AQI Unhealthy in Each County
2011 OZONE SEASON

	SAN JOAQUIN	STANISLAUS	MERCED	MADERA	FRESNO	KINGS	TULARE	KERN
AQI UNHEALTHY DAYS	0	0	0	0	11	1	0	7

TABLE 4

Number of Exceedances of 24-hour PM2.5 Standards
in Each County
2010

	SAN JOAQUIN	STANISLAUS	MERCED	MADERA	FRESNO	KINGS	TULARE	KERN
1997 STANDARD	0	0	0	0	1	1	0	4
2006 STANDARD	8	20	15	30*	28	29	11	28

**The Madera City monitoring station commenced operation in mid-2010 so the exceedance counts for the full year are estimated.*

TABLE 5

Days ≥ AQI Unhealthy in Each County
NOVEMBER 2010–FEBRUARY 2011

	SAN JOAQUIN	STANISLAUS	MERCED	MADERA	FRESNO	KINGS	TULARE	KERN
AQI UNHEALTHY DAYS	0	0	0	0	1	1	0	2

decade, and that the current Annual Design Value remains approximately 40 percent over the 15 micrograms per cubic meter standard. As such, the Annual Design Value appears to be the most resistant PM indicator, and thus represents the Valley's biggest challenge regarding PM2.5. It should also be noted that the year-to-year curve formed by the annual data points in Figures 6 and 7—a "declining sine wave"—is characteristic of the decreasing base of precursor emissions coupled with cyclic, multi-year weather patterns.

The San Joaquin Valley's PM2.5 season occurs each fall and winter, generally November through February. A review of health-based AQI data from the last decade shows that the Valley's winter air quality continues to improve. Over the last decade, "Unhealthy" or worse days have declined by almost 70 percent, and the winter of 2010–11 saw fewer "Unhealthy" air quality days as compared to recent years. *See Table 5 and Figure 8.*

FIGURE 7

10-Year Trend | PM2.5 Annual Design Value

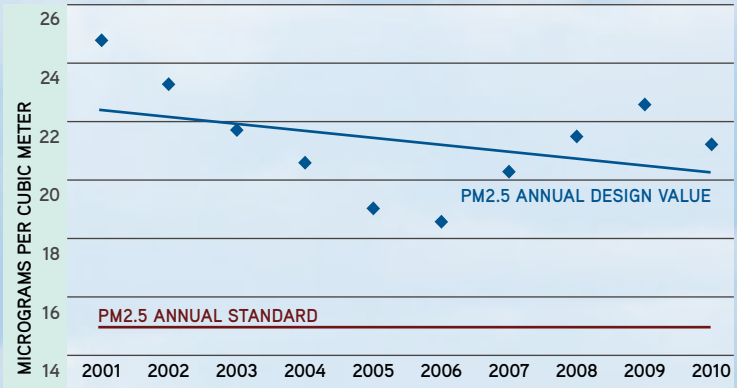
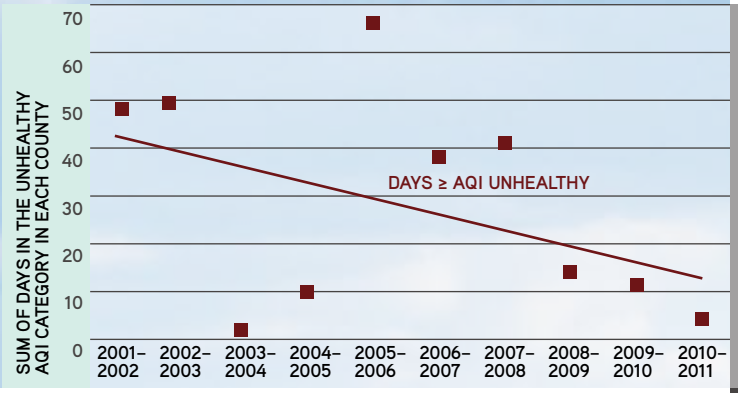


FIGURE 8

10-Year Trend | Wintertime PM2.5, Days ≥ AQI Unhealthy



High Elevation Park Monitors Distinguished from Valley Monitors

A significant wildfire in Sequoia National Forest this past summer resulted in abnormally elevated 8-hour ozone readings at the Ash Mountain and Lower Kaweah monitoring stations in the Sequoia-Kings Canyon National Park. The Lion Fire in Sequoia National Forest scorched nearly 20,500 acres in close vicinity of the monitoring stations. As a result of this fire, there were 16 days in 2011 when the Ash Mountain and Lower Kaweah stations were the only places in the Valley that violated the standard. The District has submitted an official request to EPA to have these ozone exceedances waived under the federal laws for Natural and Exceptional events.

Ash Mountain and Lower Kaweah monitoring stations, located at the elevations of 1,800 feet and 6,400 feet, respectively, are secondary stations and should not be used for assessing air quality conditions on the Valley floor. Unlike other air monitoring stations in the Valley that were sited in strict adherence to federal laws to ensure collection of data that is representative of the quality of air breathed by Valley residents, these stations were sited and installed by the national park for the primary purpose of measuring pollution levels at the park, which are primarily impacted by wildfires.

In order to prevent confusion and to provide more precise information to the public, future air quality forecasts and reports will distinguish between air quality data from the Sequoia National Park and those for the Valley. Under the new system, air quality data for high elevations in the park will be based on readings from the Ash Mountain and Lower Kaweah monitoring stations, and the Valley monitors will be used to report air quality for population centers and rural areas on the Valley floor.

Clean Air Investments *by Valley Businesses*

For two decades, the District has engaged in an exhaustive effort to identify and prescribe the most advanced and effective control technologies that are technologically and economically feasible. Stepping up to the public health needs and the stringent standards set by the District's Governing Board, the bulk of the investments to improve the Valley's air quality have been made by Valley businesses. In 2010 and 2011, Valley businesses once again responded to a large number of regulatory demands, including the following examples:

- In June 2010, approximately 600 small and medium-sized dairies began their implementation of Rule 4570 (Confined Animal Facilities), and larger dairies added more controls at their facilities, including unprecedented controls on silage feed stockpiles. These actions are expected to reduce VOC emissions in the Valley by more than 26 tons per day.
- In July 2011, operators of flares at petroleum refineries, oilfields, and sewage treatment facilities began curtailing flaring events. In total, operators achieved approximately 24 tons per year of reductions in oxides of sulfur (SOx). SOx is a PM2.5 precursor, and the reductions from the operators' flare minimization plans will assist the District in meeting its complex and considerable PM2.5 challenge.
- The Valley's largest employers, including stationary sources, and businesses and municipalities that have never before been regulated by the District, submitted the first phase of their Employer Trip Reduction Implementation Plan (eTRIP) to reduce commute trips by their employees. In anticipation of eTRIP's ultimate reduction of 440 tons per year of NOx and VOC emissions from passenger vehicles, more than 300 worksites began to implement the first phase of the eTRIP program. This effort represents more than 114,000 employees, and almost a quarter-of-a-million daily commutes to and from work.

Long recognized for its sustainability and low emissions footprint, solar energy is becoming more financially feasible and is becoming pervasive in the Valley for a wide variety of industrial and utility applications. Among the notable projects in the last year:

- In February, Berry Petroleum near Taft started receiving steam generated from a novel solar-powered steam generator for use in its thermally-enhanced oil recovery operation.
- Granite construction announced plans in May to use electricity from a new 1.2 megawatt solar plant at its aggregate facility in Coalinga.
- Lakeside Dairy near Hanford installed four acres of solar panels to generate 75 percent of the power needed to run the dairy's water wells, manure separators, milking machines and other equipment.
- Modesto Irrigation District approved an interconnection agreement with SunPower Corporation, who plans to install a 160-acre solar farm near Del Rio in Stanislaus County.

The bulk of the investments to improve the Valley's air quality have been made by Valley businesses. In 2010 and 2011, Valley businesses once again responded to a large number of regulatory demands.

New Federal Standards and the District's Risk-based Strategy

The Need for a Risk-based Strategy

Despite documented air quality progress and the encouraging growth of zero-emission technologies and vehicles, substantial air quality challenges remain for the Valley. The Valley's bowl-shaped topography and consistently-stagnant weather patterns exacerbate the formation and retention of high levels of air pollution. Furthermore, the District does not have direct jurisdiction over the mobile sources that generate about 80% of the Valley's NOx emissions, the most critical precursor for PM2.5 and ozone attainment.

These challenges will intensify under increasingly stringent National Ambient Air Quality Standards (NAAQS) being considered by the EPA. The EPA has recently proposed several changes to the ozone and PM2.5 NAAQS, as shown in the following table. Under these anticipated NAAQS changes, even some of the Valley's cleanest counties could begin to record NAAQS violations—despite improving air quality.

IMPACTS OF POTENTIAL NEW NAAQS
based on 2010 data

COUNTY	Federal 8-hour Ozone Standards				Federal 24-hour PM2.5 Standards		
	1997 NAAQS: 84 ppb	2008 NAAQS: 75 ppb	Potential New NAAQS		1997 NAAQS: 65 µg/m³	2006 NAAQS: 35 µg/m³	Potential New NAAQS: 25 µg/m³
			70 ppb	60 ppb			
	Days exceeding NAAQS Thresholds						
FRESNO	21	49	74	121	1	28	63
KERN	36	71	94	138	3	28	61
KINGS	17	38	53	98	1	17	40
MADERA	3	10	14	55	1	14	24
MERCED	6	17	33	71	0	15	40
SAN JOAQUIN	1	6	9	33	0	9	25
STANISLAUS	4	12	19	64	0	20	41
TULARE	36	79	102	130	0	11	38
	Maximum NOx Emission Inventory for Attainment of NAAQS						
Valleywide NOx emissions	160 tons per day	Approx. 110 tons per day	Approx. 85 tons per day*	Less than 50 tons per day*	Approx. 470 tons per day	To be determined in conjunction with PM2.5 and other precursors	

** Additional analysis is needed*

Clearly, the Valley faces unique and significant difficulties in achieving the anticipated NAAQS, which are approaching the Valley's naturally-occurring background concentrations. Attainment of the new NAAQS will require transformative, new air pollution controls, including zero-emission technologies, alternatives to long-practiced development patterns and transportation systems, and perhaps even the elimination of fossil-fuel combustion in the Valley.

Although the NAAQS are based on health effects research, they are essentially generic, mass-based standards that do not address the spectrum of health impacts of the individual components of NAAQS pollutants. For a pollutant category, for example PM2.5, the NAAQS does not distinguish health effects related to size, chemical composition, surface area, and other variables. In contrast, recent health-science research has substantially deepened our knowledge of air pollutant health risk beyond the current framework of the Clean Air Act and the NAAQS.

In September 2010, the District Governing Board adopted a research-driven Risk-based Strategy to proactively prioritize public health improvements while concurrently assuring the Valley's progress towards the mass-based NAAQS. As the District puts this strategy into practice, the District will be looking for opportunities to prioritize future control measures, incentive programs, and public engagement efforts that achieve the greatest health benefits.

Existing District Programs Prioritize Public Health

Several of the District's existing rules and programs already prioritize public health benefits, as distinguished from State Implementation Plan (SIP) requirements to attain the NAAQS. These programs provide a model of the success and future potential of a Risk-based Strategy.

- The District's Check Before You Burn program, which is based on District Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters), has been reducing harmful species of PM2.5 when and where those reductions are most needed: in impacted urbanized areas when the local weather is forecast to hamper PM dispersion. In 2008, the Central Valley Health Policy Institute found that District wood burning curtailments on high pollution days reduced annual exposure by about 13% in Bakersfield and Fresno, resulting in 30 to 70 avoided cases of annual premature mortality.

- The District's grant programs are achieving air pollutant reductions that are not achievable through District regulations. Through the District's popular Clean Green Yard Machine grant program, the District has replaced over 2,000 high-polluting gas-powered lawn mowers with clean electric mowers, decreasing the urban, localized health risks associated with the use of gas-powered equipment.

The District's information and educational programs, such as the Real-Time Air Quality Advisory Network (RAAN), also contribute to the Risk-based Strategy. RAAN utilizes real-time data from air monitoring stations throughout the Valley to provide hour-by-hour air quality updates to schools and other subscribers. Subscribers can use this information to make more informed decisions and plan outdoor activities for times with the best air quality, reducing potential air quality health risks. *See Real-Time Air Advisory Network, page 24.*

Health Research Lays the Groundwork for Risk-based Strategy

The foundation for the District's Risk-based Strategy is current and continuing health research. Health research has shown that air pollutant mass does not always equate to health impact:

- Ammonium nitrate is estimated to compose about 40% of the Valley's total PM2.5 concentrations, but it is generally regarded as having relatively low toxicity.
- Metals are found in relatively low concentrations in the Valley, but have higher health impacts.
- Ultrafine particles (PM0.1) are small enough to effectively deliver harmful chemicals into the lungs, bloodstream, and the brain, but typically comprise a small portion of the Valley's total airborne PM mass.
- Bioaerosols, such as mold spores, bacteria, pollen, and endotoxins, carry significant health risks for sensitive individuals.

The District has sponsored several Valley-based health research projects in recent years. In 2010–2011, the District sponsored a first-of-its-kind epidemiological investigation of health effects of air pollution in Modesto, Fresno, and Bakersfield. The study found that high PM and ozone concentrations clearly correlate to increased hospital and ER admission rates, especially for those 19 and younger. *See Landmark Study Links Air Pollution, Valley Illness, page 26.*

During 2011 and 2012, the District is sponsoring a pilot study of ultrafine particulates in Fresno and a follow-up epidemiological study. For the ultrafine study, UCSF-Fresno is investigating the quantity and spatial distribution of ultrafine particle plumes from motor vehicles, lawn care equipment, wood burning, and restaurants. The follow-up epidemiological study will examine which of the chemicals found in Valley PM2.5 are most highly-correlated with elevated ER and hospital admission rates.

Using Research Findings to Develop New Risk-based Attainment Strategies

Health research continues to demonstrate that not all air pollutants—nor all constituents of a single air pollutant—have equal public health impacts. The District will be translating these health study findings into risk-based strategies for upcoming attainment plans. One of the next steps in the Risk-based Strategy is to determine how much Valley residents are being impacted by the more toxic constituents in the federal pollutant categories. Toward that end, the District will develop more detailed emissions inventories and more detailed analysis of ambient measurements, and utilize geographic information systems (GIS) tools and atmospheric modeling to evaluate relative contributions as well as geographic variability. The District will also seek input from the District's Environmental Justice Advisory Group to continue identifying communities where vulnerability to air pollutants is significantly higher, and prioritize public health benefits in these areas.

The other principle step in the Risk-based Strategy is to determine what new options are available to reduce the most health-impacting pollutants. The District will be evaluating which potential regulations, incentives, and outreach strategies would be most effective. As a whole, the District's Risk-based Strategy assures that public health benefits are achieved as quickly as possible as the District continues to work with ARB and EPA within the framework of existing Clean Air Act requirements.

Advocating for the Valley *in DC and Sacramento*

In 2011, the District continued to take the lead in advocating, at the state and federal levels, on air quality issues that are important to the San Joaquin Valley. These efforts include:

- Continued requests for state and federal resources to reduce mobile source emissions;
- Pursuing legislation to make air quality incentive grants tax free;
- Continued push for air quality empowerment zone legislation;
- Advocating for "air-friendly" funding in the federal transportation bill;
- Seeking cost-effective alternatives to agricultural burning;
- Advocating for the repeal of Clean Air Act Section 185 penalty fees;
- Pursuing air quality funding in the Farm Bill;
- Pursuing state and federal policies and resources to reduce the public health impact of wildfires; and
- Pursuing energy efficiency and alternative energy measures to reduce emissions in the Valley.

One issue that was particularly high-profile in 2011 is EPA's consideration of new federal air quality standards. The District has advocated for EPA to allow implementation flexibility in regions like the San Joaquin Valley, where the new air quality standards approach natural occurring "background" concentrations. The focus of the District's effort has been to focus implementation of the new standard on reducing the public exposure to the most harmful pollutants first, rather than just require a particular emission reduction regardless of the benefit to public health. EPA has indicated that they plan on building flexibility into the implementation of the new standards.

How Incentive Funds Were Spent

In the 2010–2011 fiscal year, more than $60 million was paid out through the Air District's grant programs. The majority of incentive funds—over $55 million—were disbursed through three main components: the Proposition 1B Goods Movement Emission Reduction Program; the Heavy-Duty Engine Program; and the Lower Emission School Bus Program.

A significant portion of incentive funds were from California's Proposition 1B Program, a ballot measure approved by voters in 2006. Proposition 1B aims to reduce emissions from heavy-duty on-road diesel trucks by subsidizing engine retrofit, engine replacement (repower), and vehicle replacement projects. More than $23 million in Proposition 1B funding was used to replace or retrofit a total of 473 heavy-duty, on-road diesel trucks.

Through the Heavy-Duty Engine Program, owners of tractors, backhoes, dozers, wheel-loaders and excavators can apply for funding for engine retrofits and repowers. A total of 145 off-road vehicles were repowered and/or retrofitted in 2010–2011, for a total of nearly $5.7 million dollars in grants. The Stationary Agricultural Pump Engine component of the Heavy Duty Engine Program provides incentive funding for the replacement of diesel irrigation engines with cleaner diesel engines or electric motors, and the installation of electric motors on new wells. In 2010–2011, more than $6 million was awarded for a total of 331 new engines and motors.

The primary goal of the Lower-Emission School Bus Program is to reduce school children's exposure to both cancer-causing and smog-forming pollution. More than $20 million was expended through this program, which provides funds to replace and retrofit high-emitting public school buses.

In addition, the District spent nearly $1 million in Community Incentive grants through the Clean Green Yard Machine and Burn Cleaner Programs. In its continued partnership with Neuton, the District has provided more than 1,800 Valley residents with cordless electric lawn mowers at substantially reduced prices. The District also continued the success of the Burn Cleaner Wood Stove Change-Out Program, funding 812 new units with $470,800 in program funds.

More than **$23 million** was used to replace or retrofit **473 heavy-duty, on-road diesel trucks.**

145 off-road vehicles were repowered or retrofitted for a total of nearly **$5.7 million** in grants.

$6 million was awarded for a total of **331 new engines and motors** to replace diesel irrigation engines with cleaner diesel engines or electric motors.

The District provided more than **1,800** Valley residents with **cordless electric lawn mowers at substantially reduced prices.**

The District funded **812 new wood stoves** with **$470,800** in program funds.

Public Benefit Grants Program

The District prides itself in creating successful public and private partnerships in its incentive programs and is continually seeking ways to enhance its programs through the leveraging of funding and resources, and expanding partnership opportunities. In 2011, the District created a new Public Benefit Grants program to fund clean air projects that provide broad benefits to Valley residents, in partnership with local government agencies and public educational institutions in the Valley.

This program is designed to meet the urgent needs and challenges faced by Valley public institutions in their efforts to secure funding for clean-air, public-benefit projects, and will provide the necessary flexibility and leveraging to ensure the success of these efforts to effect positive change in communities throughout the Valley. This program will target air quality projects that provide a direct benefit to the public and encourage innovation at the local level by providing significant funding in the areas where it is needed most.

The District has identified a number of potential project categories based on requests and feedback received from Valley jurisdictions. The list of project categories is not exclusive, however, and the District is open to projects that have demonstrable air quality and public benefits. These project types include:

- Electric, hybrid or other alternative fuel vehicles or equipment
- Advanced transit systems and infrastructure (e.g., bus rapid transit, traffic light synchronization)
- Advanced vehicle fueling or charging infrastructure (e.g., electric, compressed or liquefied natural gas)
- Bicycle infrastructure and sharing
- Off-road and other heavy-duty fleet vehicle replacement/purchase
- Utility vehicles

The 2011-12 District Budget allocates $10 million in funding for this new program, which will utilize local motor vehicle surcharge fees authorized by the District's Governing Board in October 2010.

Technology Advancement Program

Despite major reductions in emissions and corresponding improvements in air quality, the San Joaquin Valley continues to face difficult challenges in meeting the federal ambient air quality standards. The attainment challenges will be compounded in the future, as EPA promulgates even tougher standards. Meeting the current air quality standards will require widespread deployment of currently-available, advanced technology; meeting tougher standards will require nothing short of transformational technological breakthroughs.

The establishment of the Technology Advancement Program (TAP) commenced a strategic and comprehensive program to identify and support technology innovation. The program sets the stage for technology breakthroughs in the Valley by accelerating the development of innovative clean air technologies and building research and development capacity locally.

In 2010, the District awarded TAP funding through a competitive proposal process. Those recipients are proceeding with their demonstration projects, including solar energy storage, next-generation off-road diesel retrofit, advancement of hybrid vehicle technology, and low-emission uses of biogas. The District is also participating with EPA Region 9, ARB, and South Coast Air Quality Management District in a collaborative effort called the Clean Air Technology Initiative (CATI). Through CATI, EPA has identified $400,000 in funding for innovative technology projects.

With locally generated funding, the District made available $1.4 million in TAP funds for a second round of demonstration projects. Outreach for this round of funding benefits from significant cooperation from EPA and other state agencies such as CalRecycle. In December 2011, the District's Governing board approved an additional eleven projects.

The District recognizes Valley universities for their expertise and potential for building capacity in the research and development of advanced technologies. Through TAP, the District will establish partnerships with Valley institutions to encourage development, demonstration, and deployment of new and innovative techniques and technologies to reduce air pollution.

Incentives for Cleaner Cars

Since its creation, the Polluting Automobile Scrap and Salvage (PASS) program has provided exciting opportunities for Valley drivers to make the change to cleaner automobiles. Successfully developing new funding sources has allowed the District to expand this important program, and in 2011, the District made two important improvements to the PASS program.

First, the District collaborated with the Foundation for California Community Colleges' Vehicle Repair, Retirement, Replacement for Motorists (VRRRM) Program to expand the PASS program. The PASS program now includes weekend repair events throughout the Valley. These Tune in & Tune-up events can accommodate up to 500 participants and have been well attended. Participants receive a free vehicle emissions screening, and for vehicles that fail the screening the owner may receive a $500 voucher good for emission-related repairs at a Gold Shield station, provided the vehicle is still operable. This expansion of the PASS program will bring over $3 million in screening, diagnosis, and repairs to the Valley from a grant provided by the state's Reformulated Gasoline Settlement Fund. This fund was created by an antitrust class-action lawsuit and funds projects with clean air or fuel efficiency benefits for California consumers.

Second, the District also received the first in a series of grants, in the amount of $500,000, from ARB for additional vehicle-replacement incentives for Valley participants. The District collaborated with the Bureau of Automotive Repair to offer up to $4,000 for participants interested in replacing certain high emission vehicles. The previous success of the District's PASS program was the model for the state program that provided this funding.

Securing Federal and State Funds for Incentive Grants

The District continues to dedicate significant effort to ensure that the San Joaquin Valley receives its share of state and federal incentive funds through a variety of sources. In addition to aggressively pursuing funding from the perennial state funding sources such as the Carl Moyer Program and Lower Emission School Bus Program, the District has been very successful in securing grants from the highly-competitive federal Diesel Emission Reductions Act (DERA) and the state AB 118 Air Quality Incentive Program (AQIP). These funds are used in a wide variety of innovative emission reduction programs throughout the Valley. Other examples of success in securing funds are a $500,000 state grant awarded for demonstrating zero-emission commercial lawn and garden technology and a $2 million federal grant for retrofitting locomotives with advanced emission control technology.

The District is engaged at every level of state and federal government to craft policy and funding targets that account for the Valley's unique challenges. To that end, the District is working closely with the Valley's legislative delegation to ensure that the Valley's needs are well represented in discussions of where to focus funding throughout the state and the region as a whole.

District Runs School Bus Grant Program *for 18 California Air Districts*

Due to the District's excellent track record in effectively and efficiently administering numerous grants, the California Air Resources Board (ARB) approached the District regarding assuming the administration of one of the state's flagship incentive programs for over half of the air districts in the state. ARB asked the District to administer the Proposition 1B funded Lower Emission School Bus Program on behalf of 18 small or rural air districts from all over California that did not have the staffing or technical resources to administer the program on their own.

Because of the respect and accolades that the District's incentive programs have garnered statewide and the technical capabilities of our grant staff, the District was uniquely positioned to assist our statewide partners in this important program. In addition to replacing or retrofitting hundreds of aging school buses in the Valley years ahead of schedule, the District has effectively administered over $65 million in much needed school bus funding throughout the state and has significantly reduced the toxic impact of school bus exhaust and increased the quality of life for one of our most vulnerable and cherished populations, the children of California.

The District has effectively administered over $65 million in much-needed school bus funding throughout the state.

Air Alerts Aim to Prevent Ozone Violations, End Federal Penalties

When the Valley exceeded the federal 1-hour ozone standard on seven days in 2010, a $29 million federal penalty was triggered, to be imposed on the Valley's businesses. The first response the District took was in 2010: recognizing that only 20% of the Valley's pollution comes from stationary sources and that most of the Valley's businesses have already invested heavily in advanced air pollution controls, the District developed an innovative, alternative fee program to satisfy the federal mandate while not penalizing well-controlled Valley businesses.

Then in 2011, the District introduced the summertime Air Alert program to directly avert violations of the federal 1-hour ozone standard by reducing emissions precisely when those reductions are needed. When the District issues an Air Alert, Valley residents and businesses are advised to put into place measures that reduce vehicle use. These can include carpooling, vanpooling, using alternative transportation, avoiding the use of drive-through services and refraining from vehicle idling. Air Alerts are issued when the Valley experiences conditions that may lead to violating a health-based ozone standard. Air Alerts are issued Valley-wide, and may last from several hours to several days.

In summer 2011, the District issued four Air Alerts. In addition to being an effective strategy to minimize ozone levels, the Air Alert program has also given the Air District a wealth of information and experience about how to effectively communicate complex messages to an exceptionally diverse audience.

The District's 2011 Air Alert outreach supplemented our public health message with a strong focus on "pocketbook" issues. Valley residents and businesses were urged to take action to reduce emissions in an effort to remove the $29 million per year non-attainment penalty and in ways that may reduce costs. We found that the focus on pocketbook issues resulted in an unprecedented level of heightened attention by the public and the media, and consequently, brought public-health issues of ozone exceedances into the spotlight. Instead of becoming a polarized "either/or" subject (as in, either monetary issues OR public health concerns), the topic of 1-hour exceedances provided an opportunity to educate the public, and public-health advocates, about the Real-Time Air Advisory Network (RAAN).

Another positive outcome from the heightened and invigorated media support is the successful leveraging by the District of a $20,000 investment in purchased media time into value-added exposure totaling $500,000—a growth of 2,500 percent and invaluable in terms of media reach and frequency.

The Air District also maximized a valuable opportunity to engage Sacramento-area media, which is very receptive to stories that carry a San Joaquin Valley news angle. The Air District will capitalize on this previously untapped market and incorporate northern region media into other District programs. An example of this was a news conference in Lathrop about the Air Quality Flag Program, which was organized by the District.

There was also encouraging support from business and industry. The Air District was informed, for example, of manufacturing facilities rescheduling their operations during Air Alert episodes to off-peak times when the impacts on ozone levels were minimal. The agricultural community responded to requests to modify harvest practices during Air Alert episodes, no small accomplishment during the critical, time-sensitive harvest season. Prescribed burning was also ceased by federal land managers during Air Alert episodes.

The Valley has made significant progress toward meeting the 1-hour ozone standard. Undisputed evidence indicates that the Valley is nearly in attainment of the standard. This progress is remarkable given that just a few short years ago, EPA designated the Valley air basin as extreme non-attainment for the 1-hour ozone standard. Reaching the standard, however, will be challenging:

PROGRESS:

- Only three days of exceedance in 2011; down from 56 days in 1996, and 30 days just ten years ago in 2002
- 2011, the only August in history without an exceedance
- 2011, the longest stretch without an exceedance (first exceedance occurred on Sept. 22)
- Lower 1-hour ozone peaks
- Two days only had one hour of exceedance each, and one day had only two hours of exceedance (in the past, exceedances would last for multiple hours)

REMAINING CHALLENGES:

- With emissions at historically low levels, meteorology now is the predominant controlling factor in causing exceedances

Real-Time Air Advisory Network: *not just for schools*

By combining advanced communication and air monitoring technologies, the District is now providing Valley schools, parents, and the general public with instant, real-time access to local air quality conditions. Developed in partnership with UCSF-Fresno and the American Lung Association with extensive input from Valley educational stakeholders, the District's first-in-the-nation Real-Time Air Advisory Network (RAAN) sends automated emails or text messages whenever ozone or PM2.5 concentrations are high enough to harm sensitive individuals. In addition, users have on-demand access to the RAAN webpage where local air quality concentrations are updated each hour. With this new risk management tool, school personnel and parents are now able to keep vulnerable students indoors during the most polluted times of day and redirect activities to safer times of day, typically in the morning. While the District will continue to make daily Air Quality Index predictions based on 8-hour periods for ozone and 24-hour periods for PM2.5, RAAN incorporates new health effects research indicating that sensitive individuals, especially children, can be harmed by one or two hours of exposure to poor air quality.
www.valleyair.org/Programs/RAAN/raan_landing.htm

Valley Air Quality Research Celebrates 25th Anniversary

Year 2011 marked the 25th year of the San Joaquin Valley Air Pollution Study Agency and the Central California Air Quality Studies (CCAQS). The Study Agency, a "sister agency" of the Valley Air District, has unique authority to combine public- and private-sector contributions to fund comprehensive, unbiased research on ozone and particulate matter in the San Joaquin Valley. The CCAQS research campaigns—most notably, the Central California Ozone Study (CCOS) and the California Regional Particulate Matter Air Quality Study (CRPAQS)—are planned and directed by the CCAQS Policy Committee, a partnering advisory group comprised of state, federal, and air district staff, and private sector stakeholders. CCAQS research projects are carried out by private sector contractors, academic institutions, and federal agencies with research capabilities.

This unique private-public partnership has invested over $50 million in the foundational research on air quality in Central California. Some of the essential products of CCAQS include:

- Assessments of pollution transported into and out of the San Joaquin Valley,
- Increasingly representative, spatially- and temporally-resolved emissions inventories for stationary and mobile sources,
- Important new emission factors for dairies and other confined animal facilities, and
- Regional air quality models used to develop and verify the efficacy of State Implementation Plans.

The Study Agency's research agenda for the next year is dedicated to the completion and critical synthesis work of the CCOS and CRPAQS campaigns, as well as enhancing the District's analytical capabilities for upcoming State Implementation Plans. In the near future, the Study Agency will be well-positioned to provide rigorous science and practical tools for the District's Risk-based Strategy.

Landmark Study Links Air Pollution, Valley Illness

Building on prior District funding of Valley health effects research, the District provided a grant to CSU-Fresno's Central Valley Health Policy Institute and UCSF-Fresno's School of Medicine to conduct the first major air quality epidemiological study of Valley residents. Using medical records and air quality data for Bakersfield, Fresno, and Modesto, the study examined whether daily emergency room (ER) or hospital admissions for respiratory and cardiovascular diseases rose in relation to increased PM 2.5 or ozone levels. Data on adults and those 19 and younger were examined separately. By looking at daily ER/hospital admission rates following the top 20% most polluted days vs. the cleanest 20% of days, researchers found the following.

Compared to winter days with clean air, during the Valley's worst wintertime PM2.5 pollution…

YOUTH ARE:

- 49% more likely to be admitted to an ER for asthma, and
- 67% more likely to be admitted to hospitals for asthma.

ADULTS ARE:

- 29% more likely to be admitted to an ER for asthma,
- 80% more likely to be admitted to hospitals for asthma,
- 28% more likely to be admitted to an ER for acute bronchitis, and
- 13% more likely to be admitted to hospitals for heart attack.

Compared to summer days with clean air, during the Valley's worst summertime ozone pollution…

- Youth are 69% more likely to be admitted to an ER for asthma.

Researchers also found strong evidence of a linear trend in admission rates, i.e., daily admissions rose in proportion to pollutant levels throughout the range. For the District, these findings provide some of the strongest evidence to-date that improved air quality resulting from restrictions in household wood burning and other episodic control measures do in fact result in reduced disease and associated health costs. At the same time, it is also apparent that further improvements in air quality are necessary.

Implementation of Climate Change Regulations

In 2010 and 2011, District staff fully implemented new streamlined procedures to fulfill requirements under the California Environmental Quality Act (CEQA) regarding climate impacts from certain projects subject to District permits. The District's methodology streamlines the process of determining the significance of a project's greenhouse gas (GHG) emission impacts, and it asks proponents of projects resulting in GHG increases to mitigate the GHG emissions by either implementing the District's pre-approved Best Performance Standards (BPS), or by reducing the project's GHG emissions by 29% compared to business-as-usual emissions during the 2002-2004 baseline period. The development of BPS for the most common types of equipment has allowed the District to issue permits and assist applicants in complying with new CEQA requirements without significant delays in the permitting process.

In December 2009, ARB adopted GHG regulations that require commercial and industrial operators of refrigeration systems to minimize leaks of refrigerant, which are a significant source of GHG emissions. Additionally, in June 2010, ARB adopted regulations that require the control of methane—a potent GHG—from certain municipal solid waste landfills. As there are numerous landfills and refrigeration systems in the San Joaquin Valley, the District held workshops with interested parties in 2011 to discuss and develop local programs to assist stakeholders in implementing these new ARB requirements.

Executive Outreach
Targets City Councils, County Boards

Beginning in early 2011, the Executive Director/Air Pollution Control Officer and District managers presented policy and technical updates to all eight county boards and all 60 city councils in the San Joaquin Valley. Along with a four-minute Healthy Air Living video featuring District Board members addressing the importance and simplicity of "making one change," District representatives presented information on the Valley's air quality progress, challenges facing the District, and the District's highly successful grant programs. The discussions with Valley leaders elicited numerous ideas on how to improve air quality and possible ways to improve District operations.

Environmental Justice
Advisory Group

The District's Environmental Justice Advisory Group (EJAG) was established in 2008, and continues to make great strides. Early in 2011, the group adopted a new set of goals and objectives for a 12-month period, received an overview of climate change programs from ARB staff and sought input from their constituents on various outreach programs and materials. In addition, EJAG also formed a Grants Committee, which will provide input and direction on grant money distribution.

The EJAG and the District continue to do extensive outreach Valley-wide to recruit candidates for EJAG. Details on the District's Environmental Justice Strategy and EJAG can be found at: www.valleyair.org/Programs/EnvironmentalJustice/Environmental_Justice_idx.htm

District Employees Pay It Forward

Through the District's STAR program (Service, Teamwork, Attitude, Respect), in mid-2010 District staff requested the opportunity to collectively volunteer for community service projects. In response, the Governing Board authorized Executive Director Seyed Sadredin to organize and facilitate District-sanctioned community service projects as a way to not only help our Valley communities, but also as a great teambuilding opportunity for interested staff.

To assure compliance with state law and District policy, the following safeguards are in effect:

- No public funds will be contributed to the service project;
- Employee participation will take place during non-work hours;
- Projects will not disrupt District operations or diminish service to the public;
- Donations, services, or fundraising activities will not personally benefit any employee or immediate family member;
- There will be no solicitation of external individuals or businesses to support or participate in the selected community project.

District managers oversee a variety of activities in support of these projects including silent auctions; donations of food toys, and school supplies; bake sales; and Saturday "work" days building houses and packaging food. Staff participation is strictly voluntary and takes place during non-work hours.

2011 STAR PROGRAM PROJECTS

During January 2011, staff from all three regional offices nominated 18 non-profit, community based charities or causes. After review of the nominations, eight projects were selected for the year.

American Red Cross
Blood Drive

Habitat for Humanity

Children's Hospital Central California

Community Food Bank
Fresno

Naomi's House
Homeless Shelter for Women

American Cancer Society
Relay for Life

Kern County Community Action Partnership
Food Bank

Jamison Children's Center

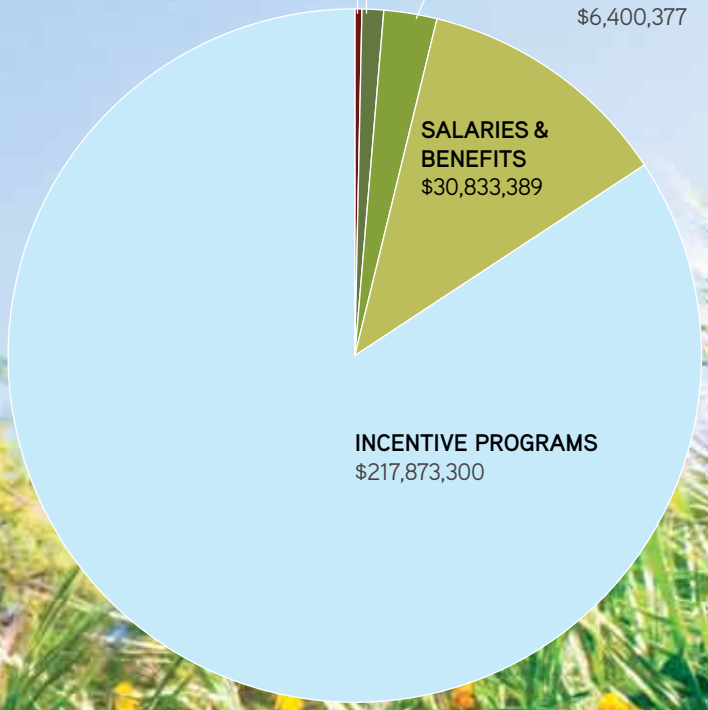
Overview *of District Operations*

A key purpose of this report is to provide useful information to the public concerning the Valley Air District's activities and operations. It is hoped that this information will help the public understand District operations, hold us accountable, and aid in our commitment to continuous improvement. The following sections provide summary information on activities for each core program within the District.

The District conducts the following activities:

- Develops and adopts **air quality plans** outlining strategies needed to reduce emissions.
- Develops, adopts and implements **rules and regulations** to reduce emissions.
- Organizes and promotes efforts to achieve early attainment through the Fast Track Strategy.
- Administers voluntary incentive grants offering financial assistance to reduce air pollution.
- Administers an efficient and comprehensive **permitting** system for stationary sources and offers meaningful business assistance to the regulated community in meeting applicable regulations.
- Maintains an active and effective enforcement program.
- Operates an extensive air monitoring network to measure air pollutants throughout the Valley and track air quality improvements.
- Maintains an **inventory of emissions** from Valley sources on an ongoing basis.
- Conducts comprehensive public education and outreach.
- Continues to set high standards in legal activities.
- Collaborates with state and local agencies.

2011–12 District Budget



Streamlining & Efficiency

Effective and efficient use of public funds is a core value of the District, so the District continually looks for opportunities to increase efficiency and minimize costs. Especially crucial in response to increased workload from new state and federal mandates and the continuing economic stagnation, in 2010-11 the District implemented the streamlining measures shown below.

Tablet Computers with Electronic Inspection Systems for Field Staff: New electronic inspection systems are being developed for hand-held tablet computers to eliminate time-consuming paperwork and manage inspection workflow. A pilot program is now in place with continued implementation to occur during the next year.

Air Monitoring Systems: The District is undertaking aggressive efforts to modernize air monitoring systems, automate air monitoring tasks, and allow remote connection to air monitoring stations located throughout the Valley to reduce travel time and the need for on-site service. These efforts are essential to meeting new air monitoring mandates and air quality data needs.

Compliance Staff Paperwork Reduction: A new automated Title V (major stationary source) report submittal and pre-screening program is nearing the end of development. Once completed, this program is expected to significantly cut the amount of time necessary to review the required reports submitted by Title V operations. This streamlining tool will be vital given the upcoming increase in the number of Title V sources following the Valley's re-classification to extreme non-attainment for the federal ozone standard.

Reducing Field Staff Travel Time with Increased Accountability: At more than 23,000 square miles, an area larger than many states, the Valley Air District is the largest air district in California. In addition to routine inspections, District field staff must also respond to unforeseen events such as public complaints and equipment breakdowns. The District recently installed Global Positioning Systems (GPS) in all field staff vehicles to provide supervisors with real-time data on vehicle location, enabling more effective deployment of field staff. Additionally, staff has been equipped with GPS navigation devices to ensure efficient travel.

District Goes Paperless *for Governing Board Agendas*

In an effort to save money, streamline operations, and conserve resources, the District has traded the monthly 500-page agenda packets for efficient Apple iPads. Doing so will result in savings of almost $20,000 per year in production and distribution costs, and will reduce paper usage by about 250,000 sheets per year. The District leads a growing list of public agencies converting from paper documents to electronic files—accessible anytime and anywhere.

Expansion of Web-based Submittal Processes: The District has created web-based tools to simplify annual emissions inventory and eTRIP plan submittals. These systems will help over 5,000 facilities, offering immediate online responses and resources to applicants, greatly streamlining the submittal process, and virtually eliminating associated paperwork.

Merger of District Engineering Services: The District has combined all engineering positions under one department, providing additional operational flexibility in assigning engineering tasks and improving response time to changes in workload, such as those caused by any sudden influx of permitting applications.

Agricultural Permitting Workshops: In late 2010 and early 2011, the District, in partnership with several agricultural organizations, held 32 workshops throughout the Valley to inform farmers and dairy producers of upcoming permitting requirements, engine regulations, and modifications to dairy emission reduction rules, and to assist them in submitting any necessary applications.

Title V "Major Source" Permitting Workshops: In 2010, District staff held workshops for nearly 400 facilities that may be newly subject to major source permitting requirements, including the obligation to obtain federal operating permits under the District's streamlined, single-permit, Title V permitting process.

Continued Work with Stakeholders to Streamline Permitting: District staff meets quarterly with industry stakeholders in an ongoing effort to identify opportunities for further gains in efficiency and productivity. Dozens of new procedures, application forms and evaluation templates have been developed in this cooperative effort. Recent examples include the following.

- Streamlined application forms and expedited permitting processes for existing dairies and other ag operations that are now required to obtain permits;
- Calculation methodologies for streamlined emissions assessments for the wine industry;
- Enhancements to expedited permitting processes for gas stations, body shops, and emergency engines;
- Expedited electronic conversion of Authorities to Construct to Permits to Operate, after equipment is constructed or modified;
- Cooperative District take-over of federal "Prevention of Significant Deterioration" permitting process; and
- Development of nationally-recognized dispersion modeling expertise, guidance, and tools that greatly streamline a very complex process.

The system works by allowing Governing Board Members to download agenda items to their iPads. Once files are on the iPad, Board Members can review, highlight and annotate items as they wish. During Governing Board meetings, Board Members can view each item on the iPad, along with any supporting electronic presentations.

During a three-month test period beginning in August 2011, District staff verified that the system was working properly. During the test period, both paper-based and electronic versions of the agenda packet were produced, and after the test ended the District stopped producing paper-based agenda packets. This project completed a larger effort to save paper that began several years ago. The agenda packet is also posted on the District's website for public reference.

Streamlining Grant Application and Inspection Processes: District staff continues to enhance and streamline existing grant programs to ensure efficiency for both District staff and grant applicants. Examples include the following:

- District staff now accepts Lawn and Garden program application information over the phone and enters it directly into a central database, eliminating the need for paper applications and avoiding duplicative handling of applicant information.
- The District's new voucher system for the Vanpool Program reduces staff processing time while significantly reducing administrative burden for program participants.
- For the Proposition 1B program, the District conducts weekend pre-inspection events, allowing District staff to inspect hundreds of trucks in a single day and allowing truck owners to determine their program eligibility without taking time out of their work weeks.

Grant Program Online Tools, Automation, and Modernization: The District leverages technology and automation to increase efficiency, accountability, and transparency while improving the stakeholder experience within the District's grant programs.

- The District continues to increase the availability of online grant applications and has converted all paper archives to electronic files.
- The District's Grant Management System (GMS) ensures efficient project assignment, tracking, and completion. For example, GMS enables staff to fund Lawn and Garden Program vouchers in large batches rather than one-by-one.
- The District has coupled GMS with enhanced project processing and review checklists to reduce application processing time and eliminate duplicative review during project finalization.

Enhancements to Daily Air Quality Forecasting: District forecasting staff has developed and implemented several automated applications for their daily Air Quality Index and burn allocation forecasting routines that significantly reduce the time spent on those tasks. The PM2.5 Forecast Model reduces the time spent forecasting during the winter PM2.5 season by approximately 15 to 30 minutes per day, and improves the accuracy of forecasts. In addition, District forecasters continue to work with state and federal land managers to improve communications and customer service, and reduce time spent on prescribed fires.

Improving Efficiency in Plan and Rule Development Activities: The District continues to improve efficiency for both staff and stakeholders within the Plan and Rule Development processes. By creating and streamlining project templates for Feasibility Studies, rule staff reports, and other projects, the District is promoting greater consistency, quality, and efficiency in document compilation. Staff has actively developed and improved project checklists, procedures, and project management tools to enhance cooperation between departments, allowing for effective use of staff skills and perspectives, which ultimately improves the District's resulting regulations and policy. The District continues to webcast and video-teleconference its plan and rule development workshops to ensure the most efficient use of staff and stakeholder time. The District also utilizes postcards as well as email for noticing of workshops to generate cost savings while remaining proactive about informing interested parties.

Air Quality Plans & Fast Track Strategy

The District has written several air quality plans (State Implementation Plans, or SIPs) over the years that serve as road maps for the new measures needed for the Valley to reach federal air quality standards. The District's air quality plans include emissions inventories showing the sources of air pollutants, evaluations of how well different control methods have worked, and a strategy for how air pollution will be further reduced. The plans also use computer modeling to estimate future levels of pollution and to ensure that the Valley will meet air quality goals on time.

Over 2010–2011, the District worked with ARB to provide EPA with additional documentation and information to support EPA approval of the 2007 Ozone Plan and 2008 PM2.5 Plan. The District also approved the 2008 PM2.5 Plan Progress Report in June 2008. This report included information regarding the adoption of regulatory measures, implementation of incentive programs, and resulting emissions reductions. The report also documented recent measured improvements in PM2.5 air quality, such as lower annual average PM2.5 concentrations and more "Good" Air Quality Index days. Also over 2010–2011, the District began its analysis to prepare for the 2012 PM2.5 Attainment Plan for the 2006 federal PM2.5 standard. This plan is due to EPA by December 2012.

The District's plans include not only a strategy of regulatory control measures and incentive programs, but other innovative strategies for accelerating attainment through non-regulatory measures such as the Fast Track strategy. In 2011, the District completed the last three Fast Track measures: Green Purchasing and Contracting, Urban Heat Island Mitigation, and Alternative Energy. The District developed practical guidance documents for each topic, focusing on voluntary actions that Valley businesses, jurisdictions, and the general public could take to reduce emissions. The documents highlight local success stories, win-win opportunities, and potential funding sources. www.valleyair.org/Programs/FastTrack/FastTrackUpdates.htm

Rules and Regulations

The Valley Air District continues its leadership in developing and implementing groundbreaking regulatory strategies to reduce emissions. Tough and innovative rules such as the District's rules for indirect source review, residential fireplaces, glass manufacturing, and agricultural burning have set benchmarks for California and the nation. Of the 26 control measure commitments in the 2007 Ozone Plan and the 2008 PM2.5 Plan, the District has adopted all measures but one for residential furnaces, which is scheduled for adoption in 2014 to allow time for technology development. Last year saw the following notable highlights.

Glass Melting Furnaces (Rule 4354): September 2010 amendments added a new compliance schedule allowing short-term compliance flexibility for flat-glass melting furnaces in exchange for more stringent long-term controls. Additional amendments adopted in May 2011 modified the start-up provision to accommodate the unique nature of an advanced emission control technology, oxy-fuel firing. Estimated reductions: 3.37 tons per day NOx, 1.12 tons per day of SOx, and 0.11 tons per day of PM10.

Adhesives and Sealants (Rule 4653): Amended in September 2010, this rule reduced the VOC content limits for sealants and adhesives. Estimated reductions: 0.12 tons per day of VOC.

Confined Animal Facilities (Rule 4570): October 2010 amendments implemented the latest phase in the District's continuing effort to reduce emissions from Valley dairies and poultry ranches. In developing these amendments, the District worked closely with researchers and industry stakeholders, and this work yielded new scientific information that sheds light on dairy feed emissions and emission control measures. The resulting emission reductions will far exceed the 2007 Ozone Plan emission reduction commitment. Estimated reductions: 26.4 tons per day of VOC.

New and Modified Stationary Source Review Rule (Rule 2201): Adopted on April 21, 2011, amendments incorporated federal PM2.5 New Source Review (NSR) permitting requirements and resolved the EPA's issue with the method the District uses to refer to the state's limited exemption from offsets for agricultural operations.

Federally Mandated Ozone Nonattainment Fee (Rule 3170): Amended in May 2011, this rule implements federal law requiring the District to collect fees from major stationary sources of NOx and VOC. The amendments enable the District to implement the federal mandate through an innovative alternative approach that collects the fees only from major sources that have not installed the best available air pollution control technology. Amendments also included tracking and reporting requirements to show that the fees collected from major sources, plus the mobile source fees collected under state Assembly Bill 2522, are, in total, sufficient to meet the federal requirements.

EMISSION REDUCTION COMMITMENTS AND ACHIEVEMENTS

In total, the rules adopted mid-2010 through mid-2011 exceeded the District's 2014 emission reduction goals for NOx, VOC, SOx, and PM10.

	PLAN COMMITMENTS	ADOPTED RULES	ASSESSMENT
NOx	Reduce emissions by **1.58 tons per day**	Adopted rules reduce emissions by **3.37 tons per day**	Reductions are **113% above target**
VOC	Reduce emissions by **19.1 tons per day**	Adopted rules reduce emissions by **26.5 tons per day**	Reductions are **39% above target**
SOx	No commitment	Adopted rules reduce emissions by **1.12 tons per day**	Reductions **accelerate attainment**
PM10	No commitment	Adopted rules reduce emissions by **0.11 tons per day**	Reductions **accelerate attainment**

Boilers, Steam Generators and Process Heaters—2 to 5 MMBtu/hr (Rule 4307): May 2011 amendments addressed tree nut pasteurizers which are subject to federal Food and Drug Administration restrictions and cannot be retrofitted with add-on pollution controls. No additional emissions are expected to result from this change.

Steam Enhanced Crude Oil Production Wells (Rule 4401): June 2011 amendments listed specific conditions allowing District approval of alternative testing requests. Amendments ended an EPA 18-month sanction clock.

Aerospace Assembly and Component Coating Operations (Rule 4605): June 2011 amendments added new coating categories and lowered two existing VOC limits to match the new federal CTG. Amendments ended an EPA 18-month sanction clock.

Prevention of Significant Deterioration (Rule 2410): Adopted on June 16, 2011, this new rule authorizes the District to administer the federal Prevention of Significant Deterioration (PSD) permitting program. PSD applies federal preconstruction review requirements to the pollutants for which the San Joaquin Valley has attained the federal National Ambient Air Quality Standards. Previously, EPA Region IX, administered the PSD program in the Valley by reviewing applications, issuing PSD permits and performing inspections.

Polyester Resin Operations (Rule 4684): June 2011 amendments added new specialty coating categories, lowered some VOC limits and raised VOC control system standards. Amendments ended an EPA 18-month sanction clock.

RIGOROUS ECONOMIC ANALYSIS ASSURES VALUE OF INVESTMENTS

For each rulemaking project, the District engages in an exhaustive process designed to satisfy federal and state mandates while minimizing impacts on Valley stakeholders. For rules that require new pollution controls, the District also carries out an extensive process for estimating pollution-control costs and economic impacts.

District staff first work closely with industry stakeholders to estimate the costs of the draft pollution-control requirements, including capital costs, operations/maintenance costs, and labor and energy costs. District staff use the cost and emission reduction estimates to assess the draft rule's Cost Effectiveness, (the unit-cost of reductions in terms of $/ton reduced) to compare the relative cost of the rule to other emission control strategies. District staff also estimate the total costs for all industries affected by the rule. This aggregate cost information is then sent to an independent economic analyst who prepares a Socioeconomic Analysis, which assesses financial impacts on affected industries and small businesses. This analysis also assesses the rule's direct and indirect impacts on Valley employment.

Throughout the process, District staff work closely with stakeholders to optimize the requirements of the draft rule, to achieve the needed reductions with the lowest possible cost. Finally, when the draft rule has been refined to sufficiently mitigate potential economic issues and meet District emission reduction goals, the economic analyst updates the report, disclosing the industry-wide costs and employment impacts, and the final economic report is presented to the District Governing Board in support of the proposed rule.

In its entirety, the economic analysis process enables District staff to systematically identify and mitigate the economic impacts associated with a draft rule, and accurately disclose these impacts.

Voluntary Incentive Grants

80% of the the Valley's NOx comes from mobile sources, which, for the most part, are not under the District's regulatory jurisdiction

Voluntary incentive programs play a critical and growing role in achieving and accelerating the emissions reductions required to meet the Valley's air quality goals. Meeting the current federal health-based standards for ozone and PM2.5 requires a 75% reduction in NOx emissions from the 2005 level. However, 80% of the Valley's NOx comes from mobile sources, which, for the most part, are not under the District's regulatory jurisdiction. Developed in response to this jurisdictional predicament, the District's successful voluntary incentive grant program helps the Valley achieve emission reductions beyond the District's regulatory bounds.

To date, the District has awarded more than $300 million in incentive funding resulting in more than 82,000 tons of lifetime emission reductions.

During the 2010–2011 fiscal year, the District executed more than 4,448 agreements for more than $60 million.

These projects are expected to reduce more than 6,782 tons of lifetime emissions.

The District's incentive program continues to be a model for other agencies throughout the state. Recent audits noted the District's efficient, robust, and effective use of incentive grant funds in reducing air pollution. Because of the District's excellent track record in administering grant programs, the District is implementing a statewide school bus retrofit program on behalf of the ARB.

Economic Assistance Initiative: The District continued to provide benefit to the Valley's economically challenged businesses and industries through implementation of its Economic Assistance Initiative program. For grants and incentive projects, the District has been able to expedite contracts so applicants are able to purchase equipment quickly, thus reducing operational down time. The District has been able to extend contract periods to allow applicants time to acquire matching funds. The District has also allowed applicants who, because of the downturn in the economy, were unable to afford the purchase of a new truck or retrofit device, to cancel their Proposition 1B contracts without penalty. The District was able to make funds from canceled projects available to other applicants.

Future Funding: An estimated $3 billion, or approximately $200 million per year, in incentive funds is necessary to bring the Valley into attainment of the current federal ozone standard. The District currently receives approximately $40 million per year in grant funding from the Department of Motor Vehicles (DMV) registration fees and the Carl Moyer Program. Beginning this year, DMV fees will generate an additional $38 million that will be available for grant awards to Valley businesses, residents and local jurisdictions. These fees are the result of the District's alternative approach to collecting federal ozone nonattainment fees. The District also uses Indirect Source Review and Voluntary Emission Reduction Agreement fee receipts for grants, but because these fees are tied to construction and land development, fee revenues fluctuate, especially during challenging economic times.

New Programs

- The **On-Road Voucher Incentive Program (VIP)** gives Valley trucking operators financial assistance to replace or retrofit older diesel trucks with new, cleaner trucks or engines. By using both federal and state funding to support this program, the District is able to maximize the number of vehicles and fleets able to take advantage of this program.
- The **Agricultural Tractor Replacement Program** has replaced approximately 700 of the oldest and most polluting tractors operating in the Valley. The agricultural community expressed great interest in this program, but in the first year of the program there was not enough available funding to meet the expressed need. The District will continue this program to meet the ongoing interest of the community.
- The District updated the Public Transportation and Commuter Vanpool Component of its highly successful **REMOVE (Reduce Motor Vehicle Emissions) Program** to increase participation, streamline implementation, and enhance flexibility. With these updates, partnering vanpool agencies that originate within the Valley may accept vouchers from vanpool participants. Participating vanpool riders can apply directly to the District for voucher booklets good for 12 monthly vouchers. The updates also allow participants to use vanpools for travel outside the Valley as long as trips originate in the Valley.
- In 2012, the District will conduct a demonstration project for commercial electric lawn and garden equipment. This project is supported by a grant from the ARB combined with District funds. Through its successful residential lawn and garden equipment replacement program, the District has seen the increasing popularity and acceptance of electric-powered lawn care. However, commercial operators have been slow to follow. This demonstration project will give commercial lawn and garden companies a low-risk opportunity to gain hands-on experience with the latest electric lawn care equipment.
- Electric cars have made their way to the San Joaquin Valley, and more are sure to follow with significant air quality benefits. The District will be partnering with local jurisdictions and non-profit groups to apply for state and federal funding to develop the needed electric charging infrastructure to support wide-scale use of electric cars.

TYPES OF PROJECTS FUNDED

The District's incentive and grant programs fund the following types of projects:

- Electric forklift purchases
- Bicycle path construction
- On-road and off-road vehicle replacement, engine retrofit and engine repower
- Wood-stove replacement
- School bus replacement, retrofits & CNG tank replacement
- Gross-polluting vehicle crushing, replacement and repair
- New, clean-vehicle purchases
- Transit pass subsidies
- Locomotive replacement & repowers
- E-mobility equipment
- Emerging technology demonstration projects
- Vanpool vouchers
- Lawn and garden equipment
- Zero-emission agricultural utility terrain vehicles
- Alternate fuel mechanic training
- Diesel agricultural irrigation pump replacement
- New electric well irrigation pumps

FUNDING SOURCES

During the 2010-11 fiscal year, the District's incentive and grant projects were funded through a variety of local, state and federal sources, including:

- DMV Surcharge Fees
- State Carl Moyer Memorial Air Quality Standards Attainment Program Funds
- State Proposition 1B Goods Movement Emission Reduction Program Funds
- State Proposition 1B Lower Emission School Bus Funds
- Voluntary Emission Reduction Agreement Funds
- San Joaquin Valley Emergency Clean Air Attainment Program Funds
- Federal Diesel Earmark Funds
- Federal Diesel Emission Reduction Act (DERA) Funds
- State Zero-Emission Agricultural Utility All-Terrain Vehicle Funds
- Lawn and Garden Equipment Replacement Funds
- Wood Stove Change Out Funds
- Reformulated Gasoline Settlement Funds

Permitting

The District has responsibility for issuing or denying permits, registrations and plan approvals for more than 30,000 non-mobile sources of air contaminants, and for tracking and assessing the impacts of these facilities' annual pollutant emissions.

2010-11 STATISTICS

- 4,995 Authority to Construct permits issued
- 577 new Permits to Operate issued
- 102 Permit-Exempt Equipment Registrations issued
- 1010 new Title V permits issued to seven facilities
- 1,648 Title V permit renewals issued to 34 facilities
- 2,019 Title V permit modifications
- 573 Conservation Management Practices plans issued
- 415 Emission Reduction Credit certificates issued or transferred

Authorities to Construct and Permits to Operate: Stationary sources of air pollution—from gas stations and body shops to refineries and power plants—must obtain air permits from the District before constructing or operating. The permitting process involves two steps:

1. The applicant must apply for an Authority to Construct (ATC) permit. This process provides an important opportunity for the project proponent, the District, and interested public to assess a project's compliance with federal, state and local air pollution control requirements prior to beginning construction. The requirements that must be met to obtain a permit in the Valley are among the strictest in the nation, requiring the best available air pollution control equipment and mitigation of emissions increases.
2. A Permit to Operate is issued after the applicant has properly installed the equipment allowed by the Authority to Construct.

Federally Mandated Operating Permits (Title V): The District has issued Title V permits to more than 200 facilities known as "major sources" of air pollution. Title V permits are required of major sources by federal law, and are designed to expand public and EPA participation in the permitting process for the largest emitters of air contaminants.

Conservation Management Practices (CMP) Plans: The District is responsible for regulating and updating more than 6,200 CMP plans designed to decrease air pollution emissions from agricultural operations.

Emission Reduction Banking: The District's Emission Reduction Credit (ERC) bank allows facilities that make voluntary emission reductions to store ERCs for later use as mitigation, or "offsets," of emissions increases. Facilities proposing increases in emissions may have to offset their emission increases by purchasing ERCs from facilities that have made voluntary emissions reductions.

Air Toxics Program: The District performs a number of tasks aimed at reducing the risks of hazardous (or toxic) air contaminants. The District implements state and federal air toxic control regulations, maintains an inventory of toxic emissions from Valley sources, and assures that those emissions, and any proposed toxic emissions increases, do not cause a significant risk to the residents of the San Joaquin Valley.

Emissions Inventory: Each year, the District gathers emissions and process data from over 5,000 facilities and other information sources, calculates each facility's annual emissions, and reports the emissions to the ARB. This inventory then acts as a cornerstone of our attainment plans.

- 815 toxic air contaminant risk-management reviews performed
- 5,465 annual emissions inventory statements and surveys processed
- 1,416 California Environmental Quality Act review requests processed
- 775 CEQA comment letters and 47 CEQA documents prepared
- 199 Indirect Source Review applications processed
- 298 of eTRIP plans

California Environmental Quality Act (CEQA): District staff carefully reviews land developers' project proposals, as well as new District permits, plans and rules, for compliance with CEQA. CEQA is the state law that requires projects' environmental impacts, including greenhouse gases, be assessed and publicly disclosed, and that any significant impacts be mitigated to the extent feasible.

Greenhouse Gas Emissions Inventory Services: District staff has developed protocols and processes for preparing inventories of greenhouse gases from local government operations and county-wide communities. These inventories are needed by cities and counties as they develop planning documents and climate change action plans, and the District is offering a consistent and low-cost emissions inventory preparation service to agencies in need.

Indirect Source Review (ISR): Indirect sources are buildings or facilities, such as new residential housing and shopping center developments that attract mobile sources of emissions, but may not directly emit pollution. The District's ISR group analyzes applications to assess the potential indirect emissions created by a development project, quantifies the mitigation proposed by the applicant, and may assess a development mitigation fee if insufficient mitigation is proposed by the applicant. An annual report of ISR activity, and the emission reductions generated by the program, is published by the District each year. The District also published a 5-year retrospective report on ISR in December 2010.

Employer Based Trip Reduction (eTRIP): The District has developed an easy-to-use online eTrip Plan submittal program that is now available to employers with more than 100 eligible employees at a single location. www.valleyair.org/Programs/Rule9410TripReduction/eTRIP_main.htm

Small Business Assistance (SBA): The District operates an effective SBA program to provide assistance to help stakeholders who lack the resources or expertise needed to efficiently obtain air permits. District SBA engineers provide expert advice on technology options, application processes and any other air quality issues. Interested parties can contact the District SBA through hotline telephone numbers in any region of the Valley.

DISTRICT SBA HOTLINES

559-230-5888 FRESNO AREA
661-392-5665 BAKERSFIELD AREA
209-557-6446 MODESTO AREA

Enforcement

The District ensures compliance with federal, state, and District air quality rules and regulations by conducting a robust inspection program along with a full range of educational and compliance assistance activities.

2010–11 STATISTICS:

- 26,775 units inspected
- 1,907 public complaints investigated
- 1,722 open burn sites inspected
- 3,408 incentive funding units (i.e., trucks, engines) inspected
- 1,974 asbestos projects reviewed and inspected

Inspections: The District routinely conducts detailed inspections and audits of equipment at new and existing facilities to ensure compliance with applicable rules and regulations. Source categories include petroleum and chemical refining, oil production, gasoline dispensing, dry cleaning, power plants, manufacturing, and agriculture. The District also inspects other activities that result in emissions, such as asbestos demolitions and renovations, construction, residential wood burning, agricultural burning, hazard reduction burning, and idling diesel trucks.

Air Pollution Complaints: The District responds to approximately 2,000 air pollution complaints from members of the public each year. Public complaints are often the initial indicator of air quality issues in a community. As such, the District places the highest priority on responding to air pollution complaints and operates an on-call program to ensure timely response to complaints, even during non-business hours.

Source Testing and Monitoring: The District monitors emissions from facilities using a variety of methods including vans outfitted with specialized monitoring equipment, hand-held portable emissions analyzers and leak detectors, and staff certified to read visible emissions. When non-compliance is suspected, an immediate compliance test can often lead to timely corrective action. In addition to Compliance and Enforcement work, the District also performs testing and monitoring in support of permitting, rule development, planning and emission inventory efforts.

Compliance Assistance and Education: The District provides a full range of educational and compliance assistance activities to proactively aid facilities and individuals in complying with air quality rules and regulations. The District provides this assistance and education through training classes, certification programs, bulletins, email blasts, workshops and one-on-one meetings.

Enforcement Actions: When violations of rules and regulations are discovered, the District delivers an appropriate level of enforcement action to ensure an expeditious return to compliance, and assesses monetary penalties to deter future violations. Disputed cases are generally handled in-house and settled through a mutual settlement process. On the rare occasion that a case cannot be settled through the mutual settlement process, the case may be transferred to District Counsel for more formal action. In fiscal year 2010-11, the District processed nearly 3,000 issued notices, transferred 300 cases to District Counsel, and collected approximately $6 million in settlements.

Hearing Boards: The Hearing Boards are quasi-judicial panels who act independently of the District. The Hearing Boards are authorized by state law to provide temporary relief from District rules and regulations if strict conditions prescribed under the California Health and Safety Code are met. Any excess emissions associated with the temporary relief granted by the Hearing Boards represent only a very small fraction of the Valley's total emission inventory and cannot by law be likely to interfere with the attainment and maintenance of health-based air quality standards or cause a public nuisance. In fiscal year 2010-11, 108 variance petitions were heard at 48 hearings.

Air Monitoring

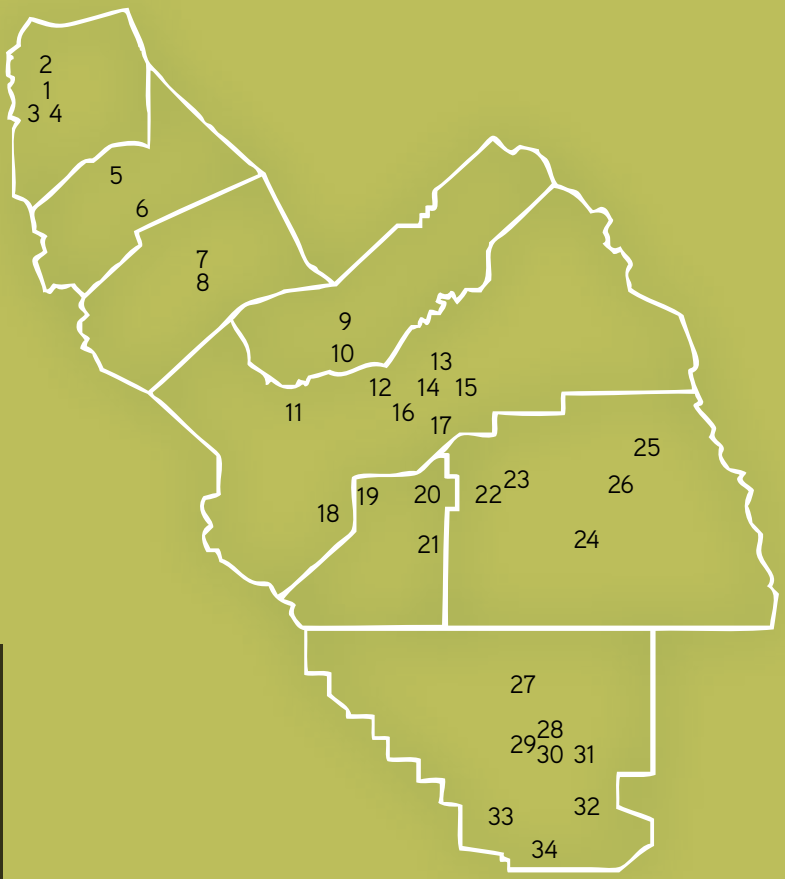
The Valley Air District operates an extensive network of air quality monitors to support its mission of improving air quality and protecting public health. The District uses hourly readings from its real-time monitors to generate a daily Air Quality Index (AQI) forecast for each Valley county. The AQI communicates the state of air quality to Valley residents so they can keep air quality in mind as the plan their activities. On a longer time-scale, the District rigorously analyzes collected air quality data to help chart the future path to ozone and PM2.5 attainment.

Leveraging recent advancements in technology, the District will continue to expand the use of automated monitoring equipment and remote connection systems to allow for remote diagnostics and repairs of monitoring equipment. This results in increased efficiency and reduced travel to distant monitoring stations. The District has added, or is in the process of adding, several new monitoring stations to its network to address federal requirements, to improve modeling and forecasting analyses, and to provide additional air quality information to Valley residents. New stations are located in Madera and Manteca. The District is also in the process of relocating the Bakersfield station that was formerly on Golden State Avenue to a new location at Bakersfield Municipal Airport.

New air monitoring stations are located in Madera and Manteca. The District is also in the process of relocating the Bakersfield station that was formerly on Golden State Avenue to a new location at Bakersfield Municipal Airport.

Air Monitoring Sites in Operation

April 2011



SAN JOAQUIN COUNTY
- 1 Hazelton: G,M,P,F,T
- 2 Wagner/Holt: P
- 3 Tracy: G,M,P,F
- 4 Manteca: P,F,M

STANISLAUS COUNTY
- 5 Modesto: G,M,P,F
- 6 Turlock: G,M,P,F

MERCED COUNTY
- 7 M Street: P,F
- 8 Coffee Street: F,G,M

MADERA COUNTY
- 9 Madera City: G,P,F,M
- 10 Madera-Pump Yard: G,M

FRESNO COUNTY
- 11 Tranquillity: G,F,M
- 12 Sierra Sky Park: G,M
- 13 Clovis: G,M,P,F
- 14 First Street: G,M,P,F,T,N
- 15 Fresno-Pacific: F
- 16 Drummond: G,P,M
- 17 Parlier: G,M
- 18 Huron: F,M

KINGS COUNTY
- 20 Hanford: F,G,P,M
- 21 Corcoran: G,M,P,F

Other:
Tachi Yokut Tribe
- 19 Santa Rosa Rancheria: G,M,P

TULARE COUNTY
- 22 Visalia Airport: M
- 23 Church Street: G,M,P,F
- 24 Porterville: G,F,M

Other:
National Park Service
- 25 Kaweah: A,G,M
- 26 Ash Mountain: A,G,M,F

KERN COUNTY
- 27 Shafter: G,M
- 28 Oildale: G,M,P
- 29 California Avenue*: A,G,M,P,F,T
- 30 Planz Road: F
- 31 Edison: G,M
- 32 Arvin-Di-Giorgio: G,M
- 33 Maricopa: G,M
- 34 Lebec: F,M

MONITORING OPERATION:
- = Site operated by the District
- = Site operated jointly by the District and ARB

*Temporary PM10 monitor operated by the District.

MONITORING DESIGNATIONS
- A: Acid Deposition
- F: Fine Particulate (PM2.5)
- G: Gaseous
- M: Meteorological
- P: Particulate (PM10)
- N: National Core
- T: Toxics

Outreach & Communications

During 2011, the District's Outreach and Communications Department advanced the public understanding of the Valley's complex air quality issues, in the context of lingering economic challenges. Active, ongoing outreach for the District's hallmark programs, plus new regulations and an expanding grants program, also continued to be critical functions of the District's outreach activities.

2010/11 STATISTICS:

- 255 Media calls
- 1,431 Public calls
- 49 News releases
- 150 Presentations/outreach events

The District's perennial outreach programs, including the Air Quality Flag program and Check Before You Burn, enjoyed steadily increasing public participation and support, while new programs, such as Air Alert, Real-Time Air Advisory Network, and targeted outreach for Employer-Based Trip Reduction (eTRIP), empowered Valley residents and businesses with new tools for assessing and responding to air-quality issues.

eTRIP: Outreach and Communications, which developed web-based and print tools to assist eligible employers in enrolling in the program, including an opportunity to earn valuable credit through the Healthy Air Living Partners program.

RAAN: The Real-Time Air Advisory Network rolled out to an enthusiastic reception among the Valley's educational institutions and the general public. This innovative, real-time, localized air quality data vehicle was an instant success. Although developed with the Valley's educational sector in mind, RAAN is accelerating in popularity with the general public.

Healthy Air Living: Since its debut in 2008, Healthy Air Living has quickly become the District's most-recognized program, the umbrella initiative that encompasses all other outreach. With components tailored specifically to segments of the business community, the public and education, Healthy Air Living is flexible and adaptable, and popular annual Healthy Air Living programs, such as the Healthy Air Living For Reel Video Contest and the Healthy Air Living Kids Calendar, gain in participation each year. A revamped website, regular postings of new videos and fresh, new, seasonal multimedia campaigns support Healthy Air Living. And in summer 2011, the District introduced Air Friendly Fridays, a Healthy Air Living Partners-oriented weekly event that encourages carpooling, ordering lunch in and other fun, team-building alternatives to driving alone that boost workplace morale and reduce emissions.

Air Quality Flag Program: With new enrollees to this free, school-based program every week, the flag program is a vital tool to managing air-quality issues for the Valley's students. The outreach team updated the catalog of flag program materials—including Spanish-language—this year and continued its partnerships with important flag program cosponsors.

The Outreach and Communications team represents the District and its clean-air mission 365 days a year, 24 hours a day, with professionalism, intuitive understanding of the District's exceptionally diverse population, experience and highly developed skills...and sometimes that happens on a bike ride to work.

CHECK BEFORE YOU BURN

Check Before You Burn: The Valley's most important wintertime air-management tool, Check Before You Burn is firmly entrenched in the public's consciousness and residential wood-burning behavior. In fact, overwhelming public support and compliance with Check Before You Burn is credited for the air basin's historically clean past two winters. With a fresh new media campaign and support material, Check Before You Burn is another remarkable outreach success story.

Grants and incentives outreach: An example of the interdepartmental teamwork and cooperation that distinguishes the District is Outreach and Communication's involvement in the grants and incentives program, the fastest-growing segment of the District's operations. Valuable outreach support and expertise ensures that all dollars dedicated to grants find their way to the people and organizations that need them. Programs such as Clean Green Yard Machines, Burn Cleaner woodstove change-out and, at the state level, heavy-duty diesel replacement funds all benefit from the outreach team's multilingual campaigns.

Partnerships: Outreach and Communications continues to develop vital, new partnerships with community organizations that emphasize health, wellness and environmental stewardship, such as the Fresno Fuego soccer team. Outreach staff provided staffing at Fuego games and other events, providing an ideal opportunity for education and one-on-one communication with members of the community.

The Outreach and Communications team represents the District and its clean-air mission 365 days a year, 24 hours a day, with professionalism, intuitive understanding of the District's exceptionally diverse population, experience and highly developed skills.

Legal Activities

US Supreme Court Will Not Review Challenge to Indirect Source Review Rule

On June 6, 2007, the National Association of Home Builders (NAHB) filed suit against the District in federal court claiming that Rule 9510 (Indirect Source Review) operates as an engine emissions standard that is preempted by the Clean Air Act. In fact, Rule 9510 simply requires developers of larger new residential and commercial development projects to mitigate a portion of the resulting PM10 and NOx emissions. The District prevailed before the district court and the Ninth Circuit Court of Appeals. The Ninth Circuit denied NAHB's request to rehear the case and, on June 16, 2011, NAHB filed a petition asking the US Supreme Court to review the decision. On October 3, 2011, the Supreme Court declined to hear the case.

District Actively Defends 1-Hour Ozone Planning Activities and Obligations

The District adopted its Extreme Ozone Attainment Demonstration Plan to attain the 1-hour ozone standard in October 2004 and amendments thereto in 2005. EPA then revoked the 1-hour ozone standard in June 2005, and by 2007 the District had adopted all of the rule commitments in its plan. Six years after EPA revoked the standard, various environmental groups are challenging EPA's approval of the District's 1-hour plan in the Ninth Circuit Court of Appeals. The District has intervened in the case to defend its and EPA's actions. The District is also seeking to intervene in a related suit filed by environmental groups against EPA in federal district court. That suit attempts to force EPA to make an attainment finding for the Valley for the revoked 1-hour ozone standard even though EPA's formally-adopted guidance transitioning to the 8-hour standard states that EPA will no longer make such findings for the revoked standard.

Chief Counsel Retires, Legal Work Continues Supporting New Programs

After nearly eighteen years of service, Phil Jay, the District's first Chief Counsel, retired on March 30, 2011. Mr. Jay brought a wealth of legal knowledge and litigation skill to the District and he will be missed. Catherine Redmond, Mr. Jay's deputy counsel of seven years, was appointed to replace him in April 2011.

Prior to Mr. Jay's retirement, and continuing thereafter, the District Counsel's Office spent much of the last year supporting many new and innovative District efforts, including new grant programs, a busy legislative agenda, new partnerships with other state and local agencies, and rulemaking efforts such as groundbreaking amendments to Rule 4570 (Confined Animal Facilities) and the District's alternative and equivalent Rule 3170 (Federally Mandated Ozone Nonattainment Fee).

Partnering
with State & Local Agencies

Air Resources Board

Between July 2010 and June 2011, the ARB took significant action to reduce air pollution in California. These actions were driven by need to dramatically reduce emissions that contribute to the ozone and particulate matter air quality challenges in the San Joaquin Valley. Other actions lessen California's contribution to global climate change and reduce greenhouse gas emissions from sources operating statewide. Revisions to incentive program guidelines provide additional funding opportunities while ensuring the program continues to successfully reduce surplus emissions. ARB also revised its area designations for state ambient air quality standards. The table to the right shows ARB's considerable action over the past year, and provides web-links for more information.

Metropolitan Planning Organizations

The Valley's eight metropolitan planning organizations (MPOs) are important partners in reaching the Valley's air quality goals. Working collaboratively, the District, ARB, and CalTrans, the MPOs develop county-specific regional transportation plans (RTP) and federal transportation improvement program (FTIP) lists of projects that take into account the transportation realities and anticipated needs of each county and the region. In response to the California Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375), MPOs will also need to consider the impacts of land use patterns and transportation choices on greenhouse gas emissions. SB 375 also requires ARB to establish regional greenhouse gas emissions reduction targets. To link these two requirements of SB 375, MPOs must develop a Sustainable Communities Strategy (SCS), which is part of the RTP that must take into account the region's fiscal realities and socio-economic constraints.

ARB adopted SB 375 regional greenhouse gas targets on September 23, 2010, targets that were higher than the Valley MPOs felt they could achieve given the lack of available data and inadequacies of the Valley MPO transportation models. In recognition of these issues, ARB committed to work with the Valley MPOs to improve their transportation models and re-evaluate the Valley regional targets based on the results of those models. In response, the Valley MPOs adopted a model improvement program to develop state-of-the-art modeling tools to analyze transportation impacts and emissions associated with complex land use alternatives. To fund this endeavor, the MPOs received a $2.5 million Proposition 84 grant from the Strategic Growth Council, and approximately $1 million from ARB to more closely assess interregional travel between neighboring regions and the Valley. The District, in turn, pitched in an additional $250,000 to help fund improvement to MPO models. Specifically, the District funds will help to improve the base data that forms the foundation of the models, and purchase new modeling software.

AIR RESOURCES BOARD REGULATIONS

Mid-2010 through Mid-2011

JULY 2010	Energy Efficiency from Large Industrial Facilities	http://www.arb.ca.gov/regact/2010/energyeff10/energyeff10.htm
SEPTEMBER 2010	Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks for 2020 and 2035	http://www.arb.ca.gov/cc/sb375/sb375.htm
OCTOBER 2010	Stationary Compression Ignition Engines	http://www.arb.ca.gov/regact/2010/atcm2010/atcm2010.htm
	Amendment to Periodic Smoke Inspection Program of Diesel Vehicles	http://www.arb.ca.gov/regact/2010/psip2010/psip2010.htm
NOVEMBER 2010	In-Use Diesel-Fueled Transport Refrigeration Units, Generator Sets, and Facilities Where Units Operate	http://www.arb.ca.gov/regact/2010/tru2010/tru2010.htm
	California Consumer Products Regulation	http://www.arb.ca.gov/regact/2010/cp2010/cp2010.htm
DECEMBER 2010	California Greenhouse Gas Emissions Cap-and-Trade Program	http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm
	Mandatory Reporting of Greenhouse Gas Emissions	http://www.arb.ca.gov/regact/2010/ghg2010/ghg2010.htm
	In-Use Truck and Bus Regulation	http://www.arb.ca.gov/regact/2010/truckbus10/truckbus10.htm
	Tractor-Trailer Greenhouse Gas Regulation	
	In-Use Drayage Truck Regulation	
	In-Use Off-Road Diesel Vehicle Fleet Regulation	http://www.arb.ca.gov/regact/2010/offroadlsi10/offroadlsi10.htm
	Large Spark-Ignition (LSI) Fleet Regulation	
FEBRUARY 2011	Amendments to the Carbon Intensity Lookup Tables in the Low Carbon Fuel Standard Regulation	http://www.arb.ca.gov/regact/2011/lcfs11/lcfs11.htm
APRIL 2011	Revisions to the Carl Moyer Memorial Air Quality Standards Attainment Program Guidelines	http://www.arb.ca.gov/msprog/moyer/moyer.htm
	State Implementation Plan Revisions for PM2.5 *South Coast and San Joaquin Valley*	http://www.arb.ca.gov/planning/sip/sip.htm
JUNE 2011	Measurement Allowance for Heavy-Duty Diesel Vehicle Compliance Testing	http://www.arb.ca.gov/regact/2011/hdiuc11/hdiuc11.htm
	Area Designations 2011, for State Ambient Air Quality Standards	http://www.arb.ca.gov/regact/2011/area11/area11.htm
	Requirements for Ocean-Going Vessels	http://www.arb.ca.gov/ports/marinevess/ogv.htm

Sources of Air Pollution
in the San Joaquin Valley

Despite major improvements in air quality, the Valley still faces significant challenges in meeting the federal health-based ozone and particulate matter standards. These challenges are the result of the Valley's unique geography, topography and climate, which create ideal conditions for creating and trapping air pollution.

Ozone is the major component of the Valley's summertime "smog," and it affects human health and vegetation. Ozone is not emitted directly into the air, but is created by photochemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight.

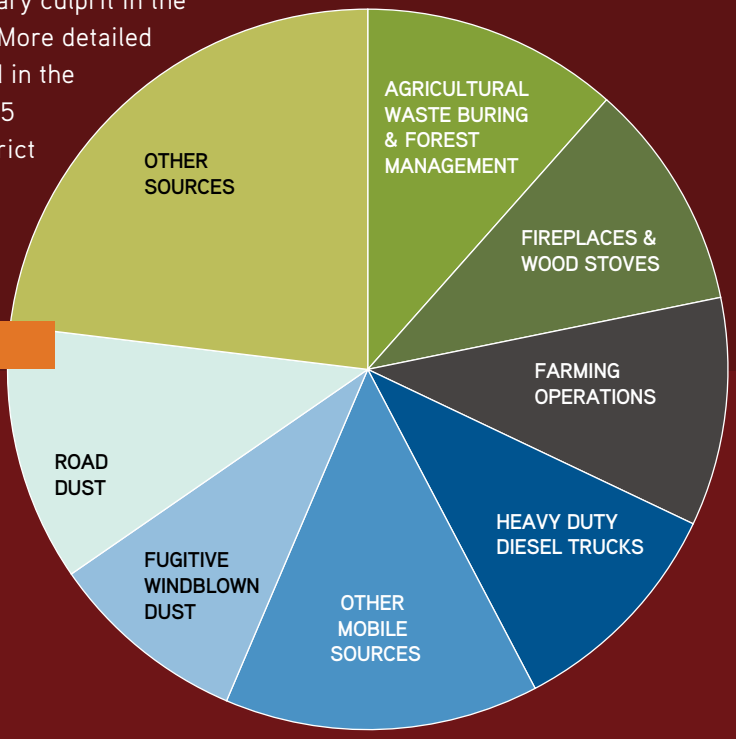
Ozone is the major component of the Valley's summertime "smog," and it affects human health and vegetation. Ozone is not emitted directly into the air, but is created by photochemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight.

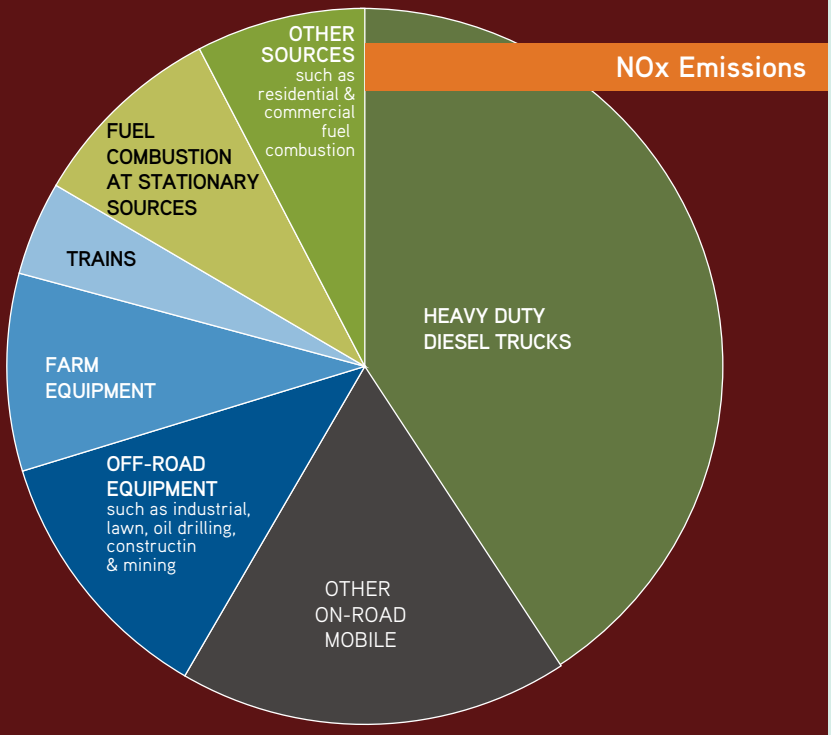
Particulate matter (PM) consists of tiny particles of solids or liquids (except pure water) that are suspended in the atmosphere. Particulate matter includes PM2.5 (particles less than 2.5 micrometers in diameter) and PM10 (particles less than 10 micrometers in diameter). Particulate matter can be emitted directly (primary PM, such as dust or soot), and can form in the atmosphere through photochemical reactions of gaseous precursors (secondary PM). Much of the Valley's ambient PM10 and PM2.5 is secondary PM, formed in atmospheric reactions of NOx.

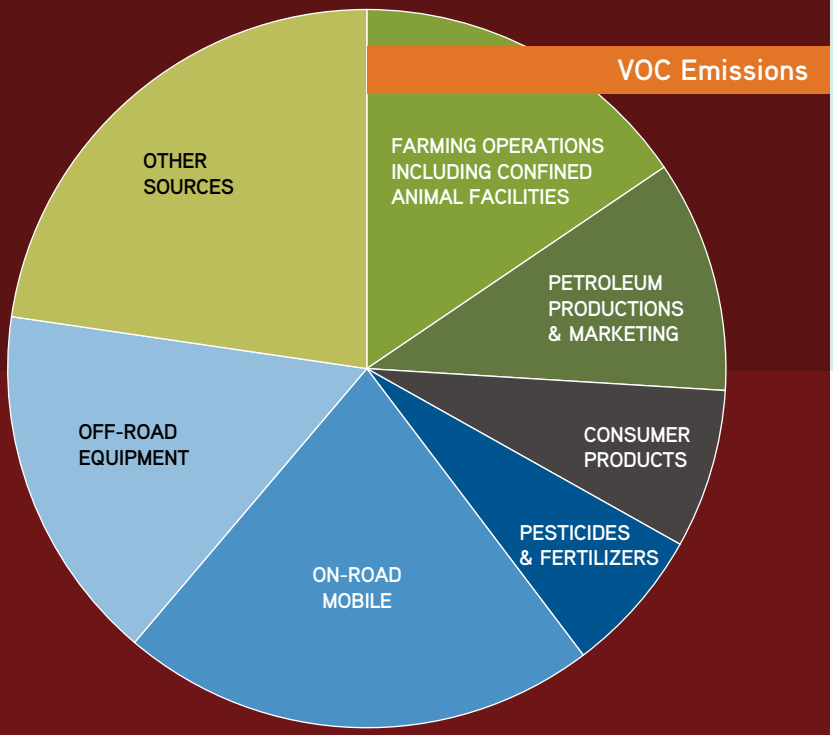
In the San Joaquin Valley, due to our climate and the chemical composition of the air pollutants, NOx is the primary culprit in the formation of both ozone and PM2.5. More detailed information on emissions is provided in the 2007 Ozone Plan and the 2008 PM2.5 Plan, which are available on the District website, www.valleyair.org.

In the San Joaquin Valley, due to our climate and the chemical composition of the air pollutants, NOx is the primary culprit in the formation of both ozone and PM2.5.

Directly Emitted PM2.5







Linking the Emissions Inventory to the Risk-based Strategy

As discussed elsewhere in this report, federal standards do not adequately account for all aspects of air pollutant health impacts. District staff can assess the relative contributions of the more health-impacting pollutants to ambient concentrations by chemically speciating collected samples of the Valley's particulate matter, and by evaluating the emissions inventory. The emissions inventory can reveal not only the magnitude and chemical composition of emissions, but also the timing and location of emissions, which relate to the likelihood of photochemical reactions that can create more health-impacting or reactive air pollutants. In upcoming attainment planning and other strategy development efforts, the District will seek to reduce those emissions that are determined to cause the most health-impacting air pollution, while concurrently pursuing the emissions reductions that will help the Valley reach federal air quality standards.

Looking Forward

Although Valley businesses are subject to some of the toughest air regulations in the nation, meeting the new health-based standards established by the federal Environmental Protection Agency require more reductions in emissions. In 2012, the District will prepare a new attainment plan for PM2.5 (2006 Standard) with an attainment deadline of 2026. This will be followed by a new attainment plan for the 2008 ozone standard with an attainment deadline in 2031.

In the past 20 years, the Air District has pioneered effective, innovative regulations that address all sources of air pollution under its regulatory authority, from agriculture to residential wood-burning fireplaces. The District has also secured and invested over $369 million in voluntary clean air projects through its grants and incentives programs. Because of the cooperation and support of the Valley's businesses and residents, we have seen a huge improvement in Valley's air quality. However, given the Valley's unique characteristics, our challenge in meeting the new federal standards is unmatched by any other region in the nation. We will adhere to the following guiding principles in developing new plans and strategies to meet the federal ambient air quality standards:

1. With public health as the number one priority, meet federal standards as expeditiously as practicable
2. Use sound science as the foundation
3. Develop cost-effective strategies: provide adequate operational flexibility, minimize costs to Valley businesses
4. Consider all opportunities for timely, innovative, and cost-effective emission reductions: traditional regulations, monetary incentives, policy initiatives, guidance documents and outreach
5. With 80% of Valley's emissions originating from mobile sources, provide a balanced approach to reducing mobile and stationary source emissions.
6. Devise and implement reasonable strategies that involve the public in reducing emissions
7. Prioritize strategies that contribute to the District's Risk-based Strategy
8. Prioritize strategies that contribute to attainment of multiple standards
9. There is no "silver bullet" for attainment. Every sector must continue to reduce emissions
10. Consider significant investment in developing and advancing new clean air technologies
11. Compel State and Federal agencies to provide adequate resources and regulatory assistance to reduce emissions from sources under their jurisdiction
12. Provide ample opportunity for public participation and feedback in plan design and implementation. Utilize the planning process to also inform participants of the Valley's air quality challenges and successes as well as actions that can be taken to improve Valley air quality

We welcome and encourage public involvement and participation as we continue to move forward in our journey to cleaner air.

Make One Change: Improve Air Quality

AT HOME

Your home is a great place to make small changes that will help improve air quality and save you money. By reducing energy consumption, choosing sustainable products and eliminating the use of high polluting products, you can be part of the solution.

New technology means that you have options. You can replace old dirty equipment with cleaner more efficient models.

1. Turn the lights off when you leave a room.
2. Opt for a fan instead of air conditioning.
3. Use a programmable thermostat and set it to 78˚F in the summer and 68˚F in the winter.
4. Recycle paper, plastic, metals and organic materials.
5. Don't use your wood stove or fireplace.
6. Wash laundry in cold water and line dry.
7. When ready to replace, look for Energy Star appliances.
8. Use a propane or natural gas barbecue rather than charcoal.
9. Eat locally, shop at farmers' markets and buy organic products.
10. Use durable reusable grocery bags and keep them in your car so you're never caught off guard.
11. Paint with a brush instead of a sprayer.
12. Store all solvents in airtight containers.
13. Use an electric or push lawn mower. Replacing your old gas-powered lawn mower is like taking 40 cars off the road.
14. Use a rake or broom instead of a leaf blower.
15. Use water-based cleaning products that are labeled "zero VOC".
16. Insulate your water heater and any accessible hot water pipes.
17. Plant a tree! They filter the air and provide shade.
18. Get free money, visit www.valleyair.com and learn how to take advantage of one of our many grant programs.

AT WORK

There are multiple ways of reducing consumption at the workplace.

1. Stay in. Take your lunch to work or school or walk to the restaurant.
2. Encourage energy efficiencies at your workplace.
3. Telecommute.
4. Start a recycling program and encourage the purchase of recycled paper products.
5. Print and photocopy on both sides of paper.
6. Become a Healthy Air Living Partner at www.healthyairliving.com

ON THE ROAD

In the San Joaquin Valley, about 80% of the air pollution comes from cars and trucks. Fewer trips in your vehicle can help improve our air quality.

1. Share a ride. Carpool to work, school or activities.
2. Walk or ride a bike when possible.
3. Stay in. Take your lunch to work or school or walk to the restaurant.
4. Organize and condense errands into one trip.
5. When driving, accelerate gradually and obey the speed limit.
6. Drive less, particularly on days with unhealthy air.
7. Tune up your vehicle and keep your tires properly inflated.
8. Don't idle your vehicle. Turn off your car when you pick up your student and avoid the drive-thru line.
9. When in the market for a new car, look for the most efficient, lowest-polluting vehicle or even a zero-emission electric car.

We all breathe Valley air, and we are all responsible for making sure it is healthy. If every Valley resident Makes One Change, we will see cleaner air quality in the San Joaquin Valley.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

San Joaquin Valley Air Pollution Control District
1990 E. Gettysburg Ave.
Fresno, CA 93726

559-230-6000 CENTRAL REGION OFFICE
209-557-6400 NORTHERN REGION OFFICE
661-392-5500 SOUTHERN REGION OFFICE

www.valleyair.org
www.healthyairliving.com