



Report to the
COMMUNITY
2016-2017





A message from the AIR POLLUTION CONTROL OFFICER

On behalf of the Valley Air District's Governing Board, it is my pleasure to present to all Valley residents this year's Report to the Community. Once again, we hope that this report will provide Valley residents with a concise and easy to follow account of our progress, the challenges that remain and upcoming efforts to achieve cleaner air in the San Joaquin Valley.

While we continue to face daunting challenges in meeting the latest federal air quality standards and related mandates, the tremendous progress that we have made to date gives us hope and confidence that we can do it again. We in the Valley, including the District and Valley residents and businesses, are committed to leaving no stone unturned in devising and implementing reasonable measures to clean the air. Given the enormity of the challenges, however, success requires that our partners at the state and federal level continue to do their fair share. This includes state and federal aid to the Valley with regulatory and incentive based measures to reduce air pollution from mobile sources, and fine tuning of the federal mandates to ensure fairness and an expeditious attainment of federal standards.

Looking back over the past twelve months, with ingenuity, creativity and a great deal of sacrifice by Valley businesses, we fulfilled or exceeded all state and federal mandates in a timely fashion. Last year, Valley-wide reductions in emissions were above the federally mandated targets by 73% for nitrogen oxides and 99% for PM2.5.

2016 was the cleanest year on record for PM2.5. For the first time in recorded history we had no violations of the 1997 daily PM 2.5 standard anywhere in the Valley, and we had the highest number of days with Good air quality and the lowest number of days with Unhealthy air quality throughout the Valley. In addition, the EPA declared that the Valley now meets the long-sought 1-hour standard for ozone becoming the first region in the nation to meet a standard after having been classified as extreme non-attainment.

With productivity and efficiency in our stewardship of public funds being a top objective, we were heartened by the State Auditor's report in 2016 reaffirming the long-held position that the District, despite having very low fees, maintains an active and effective air pollution control program.

At the District we want to express our gratitude to our partners throughout the Valley that helped us successfully compete for state and federal funds for voluntary clean air projects. We are also grateful to the state and federal elected officials and administrators who responded positively to the Valley's needs and requests. In 2016, the District provided more than 91 million dollars in grants to Valley residents and businesses for over 28,000 projects which will reduce Valley emissions by over 6,000 tons utilizing a variety of local, state and federal funding sources.

In the coming year we invite Valley residents and businesses to continue to work with the District to craft and implement wise strategies to achieve cleaner air in the San Joaquin Valley.

Seyed Sadredin
Executive Director / Air Pollution Control Officer



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ABOUT THE DISTRICT

The San Joaquin Valley Air Pollution Control District is a regional public health agency responsible for air quality management in the eight counties of 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. Our Core Values have been designed to ensure that our mission is accomplished through common sense.

THE DISTRICT'S VISION

The District's vision is 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.



CORE VALUES

PROTECTION OF PUBLIC HEALTH

The District shall continue to strive to protect the health of all 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 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 ingenuity and innovation 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 INTERESTS 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.



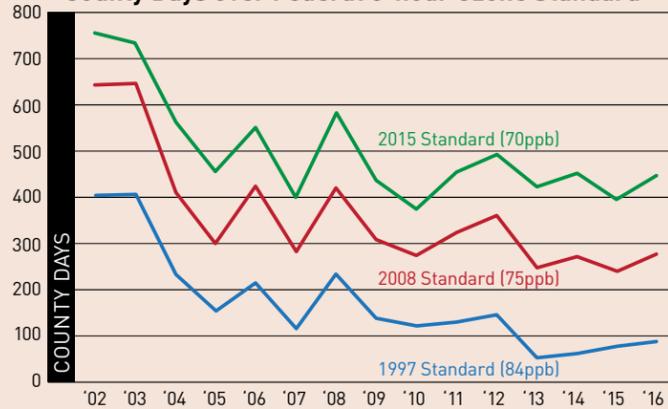
Ozone Trends

County Days over Federal 1-hour Ozone Standard



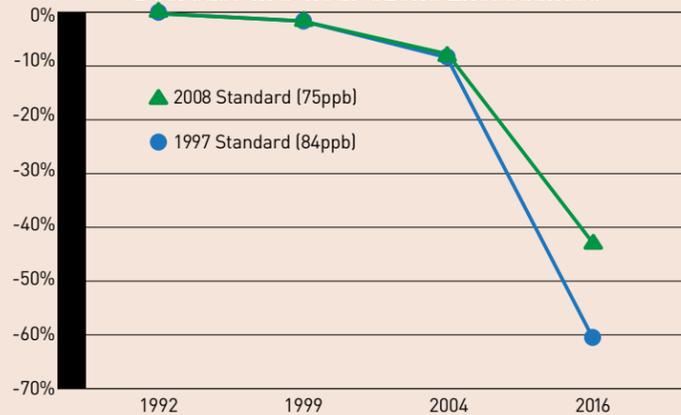
The Valley has demonstrated attainment of the federal 1-hour ozone standard, and continues to observe no violations of the standard.

County Days over Federal 8-hour Ozone Standard



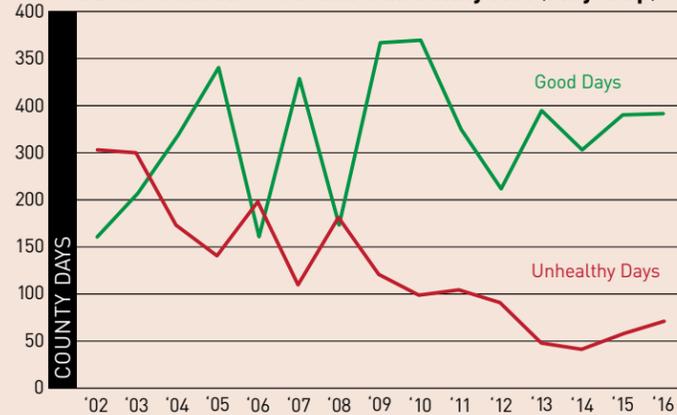
Days over the federal 8-hour ozone standards have declined significantly compared to previous years.

Decrease in 8-hour Ozone Exceedances

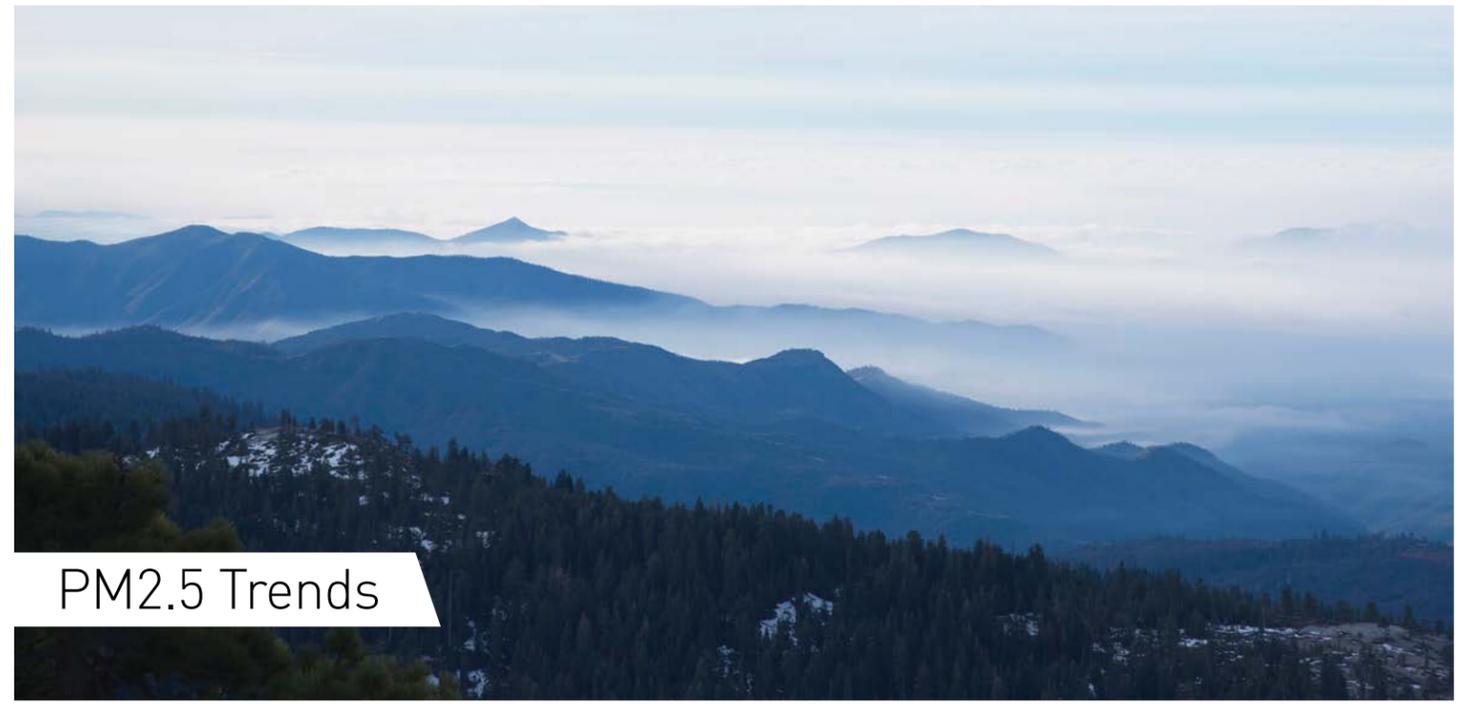


Since 1992, 43% decrease in days over the 2008 8-hour ozone standard and 61% decrease in days over the 1997 standard.

Ozone Season Good and Unhealthy AQI (May-Sep)

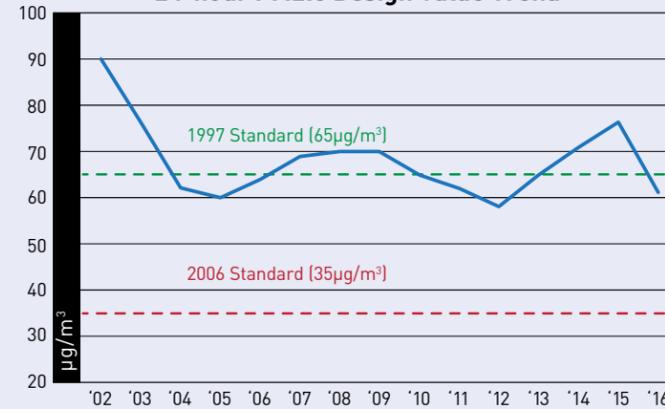


Since 1992, 43% decrease in days over the 2008 8-hour ozone standard and 61% decrease in days over the 1997 standard.



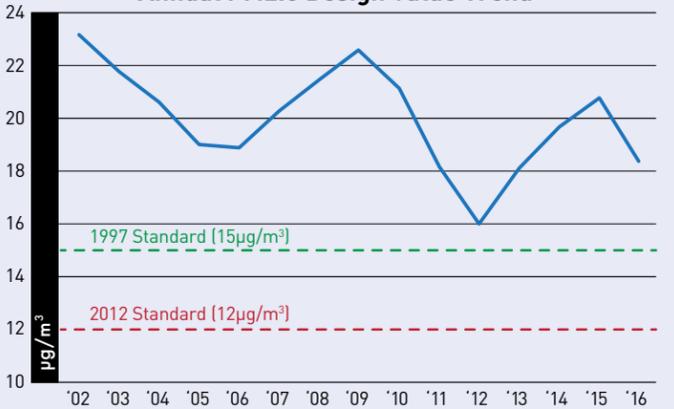
PM2.5 Trends

24-hour PM2.5 Design Value Trend



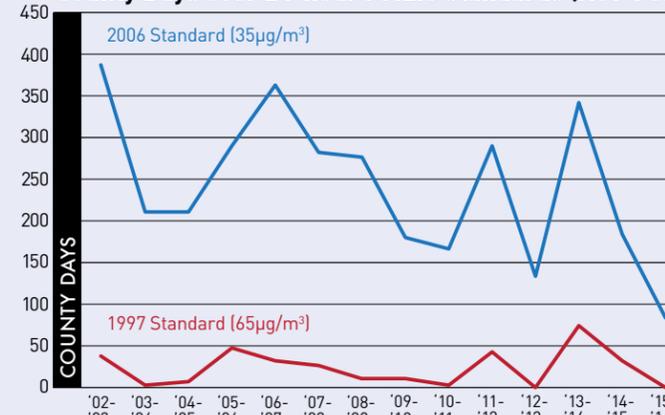
24-hour PM2.5 design value (calculated using a 3-year average) dropped below the 1997 standard in 2016. Recent years were affected by the extreme weather conditions, including abnormally long periods of wintertime stagnation.

Annual PM2.5 Design Value Trend



Annual PM2.5 design value (calculated using a 3-year average) has improved as the Valley moves further away from extreme weather conditions, including abnormally long periods of stagnation during the winter seasons.

County Days over 24-hour PM2.5 Standards (Nov-Feb)



The Valley had the cleanest season on record, with no exceedances of the 1997 federal standard and the lowest number of exceedances of the 2006 federal standard.

PM2.5 Season Good and Unhealthy AQI (Nov-Feb)



The Valley experienced the most Good AQI days since the 2002-2003 winter season, and for the first time recorded zero Unhealthy AQI days.

Valley Experiences RECORD SETTING AIR QUALITY IN 2016

In 2016, the Valley experienced the region's cleanest air quality year on record for PM2.5 and also recorded one of the best ozone seasons, bringing the Valley closer to attainment of federal air quality standards. Specifically, the Valley achieved the following air quality milestones:

- Zero exceedances of the 1997 PM2.5 24-hour standard of 65 µg/m³ for the first time in Valley history
- Fewest exceedances of the 2006 PM2.5 24-hour standard of 35 µg/m³ (40 exceedances)
- Zero "Unhealthy" or worse Air Quality Index (AQI) days across all of the counties in the District during the 2015-2016 winter wood burning season
- Highest number of Good AQI days across all of the District's counties (1,009 county-days)
- Fewest number of Unhealthy AQI days across all counties (63 county-days)
- With respect to efforts to meet the Annual PM2.5 Standard of 12 µg/m³, the Valley's peak annual average in 2016 was 16 µg/m³, reflecting a 30% drop from 2013 bringing the Valley to the closest it has ever been to reaching the federal standard.
- Since 2001, the Valley has experienced a 78% decrease in population being exposed to annual average concentrations above the 15 µg/m³ annual standard, bringing the Valley even closer to attainment of the annual PM2.5 standards.
- Of course air quality would have been better had it not been for wildfires. District's analysis indicates that without wildfires annual average concentrations of PM2.5 would be lower by as much as 35% (2013-2015).

In addition, despite strings of triple digit temperatures and multiple wildfires, the Valley had another great ozone season in 2016, continuing the

trend toward bringing the region into attainment of the federal ozone air quality standards. In particular, the Valley achieved the following in 2016:

- Continued low number of days exceeding the federal 8-hour ozone standards
- Fourth consecutive year without violating the federal 1-hour ozone standard
- 91% reduction in Valley residents' exposure to high ozone concentrations (above the 84 ppb standard) since 2002 and a 73% reduction in population exposure for the 75 ppb standard
- Second lowest 8-hour ozone design value (DV) on record for the Valley, the official metric used to measure progress towards meeting federal ozone standards (DV of 94 ppb)
- Overall, 2016 was a near-record clean ozone year and continued to demonstrate tremendous progress with respect to ozone throughout the Valley

These air quality improvements and achievements are the result of more than two decades of implementing numerous air quality plans and strategies, including the adoption of over 600 of the most stringent rules in the nation, and implementation of a voluntary incentive program that has invested over \$1.6 billion in clean-air projects. These efforts have resulted in over 130,000 tons of emission reductions needed to reach attainment of the health-based national ozone standards. These improvements would not be possible without the commitment from the Valley's stakeholders in doing their part to reduce emissions as much as possible. Recognition of these efforts lends credibility to the effective strategies that have been used and builds a stronger foundation for the additional work that remains in continuing to make progress toward meeting other air quality standards.



District's Response to WILDFIRE SEASON

Emissions from wildfires can easily exceed the daily emissions inventory for an entire region, including all mobile and industrial sources combined. The magnitude of these emissions can quickly overwhelm a region's pollution control measures, creating challenging air quality conditions. The extreme drought in the San Joaquin Valley and across the western United States has led to a number of conditions that have exacerbated the Valley's air quality challenges. Due to the excessively dry conditions, the buildup of combustible materials, and the mortality of millions of trees from the drought and bark beetle infestation, the region has experienced a number of large wildfires and California has reached an all-time high for fire danger.

Multiple fires burning throughout the State in 2016 increased PM2.5 concentrations in the Valley this summer. Summertime is when the concentrations are normally lower for PM2.5. Since wildfires produce ozone precursors of NO_x and VOC, the Valley also experiences elevated ozone concentrations during periods of wildfire impacts. Of the fires that occurred in the area, the Soberanes Fire (discovered on July 24, 2016) in Monterey County was the largest, and burned nearly 132,000 acres within the Los Padres National Forest. It had the greatest impact on the Valley's PM2.5 and ozone concentrations. Other large fires that impacted the Valley's air quality were the Sand Fire in Los Angeles County (41,000 acres), Cedar Fire in Kern County (29,000 acres), and the Chimney Fire in San Luis Obispo County (46,000 acres). A number of other smaller fires in the area transported smoke to the Valley as well.

During wildfires, when smoke is impacting the Valley floor or mountain residents, District staff works with public land managers to see if more firefighting resources can be put in place in those areas to minimize smoke. District staff also partners with the California Office of Emergency Response and public land managers to deploy portable air monitoring equipment in areas being impacted by smoke. This information, combined with public land manager data, allows for more precise characterization of smoke impacts, more informed decisions, and more accurate and timely information for the public.

In addition, during severe wildfire impact situations, the District strives to provide timely information to Valley residents to minimize wildfire smoke exposure. The District's state of the art Real-time Air Advisory Network (RAAN) serves to inform Valley residents about local air quality conditions. RAAN notifications are particularly important when wildfire plumes enter the Valley and elevate ozone and PM2.5 pollution to dangerous levels. During this past wildfire season, these notifications were utilized by schools and the public in order to curtail outdoor activities during high pollution/smoke episodes. Anticipating the public's need for additional information regarding the wildfires, the District created a comprehensive wildfire information website that serves as a clearinghouse for updated fire and air quality information from various sources.

In 2016, District staff pursued additional strategies for reducing fuel buildup as a means of reducing wildfire emissions. This included identifying ways to facilitate a more effective use of prescribed burning and other practices as means to reduce the number and severity of future wildfires. The District also supported federal and state legislation to increase funding for land and forest management.

District Petitions EPA to Adopt National Standards to Reduce Air Pollution

In June 2016, the District submitted a petition to the EPA requesting that the EPA take regulatory action to reduce air pollution from heavy duty trucks and locomotives. Despite achieving significant emissions reductions through decades of implementing the most stringent stationary and mobile regulatory control program in the nation, meeting the latest standards requires enormous reductions from mobile sources of air pollution. The District does not have the authority to regulate tailpipe emissions from mobile sources and a state-only standard will only achieve minimal reductions. Therefore, the District's petition asks EPA to establish national point-of-sale standards for new trucks and locomotives. The petition further asks the EPA to establish national standards for in-use and remanufactured locomotives.

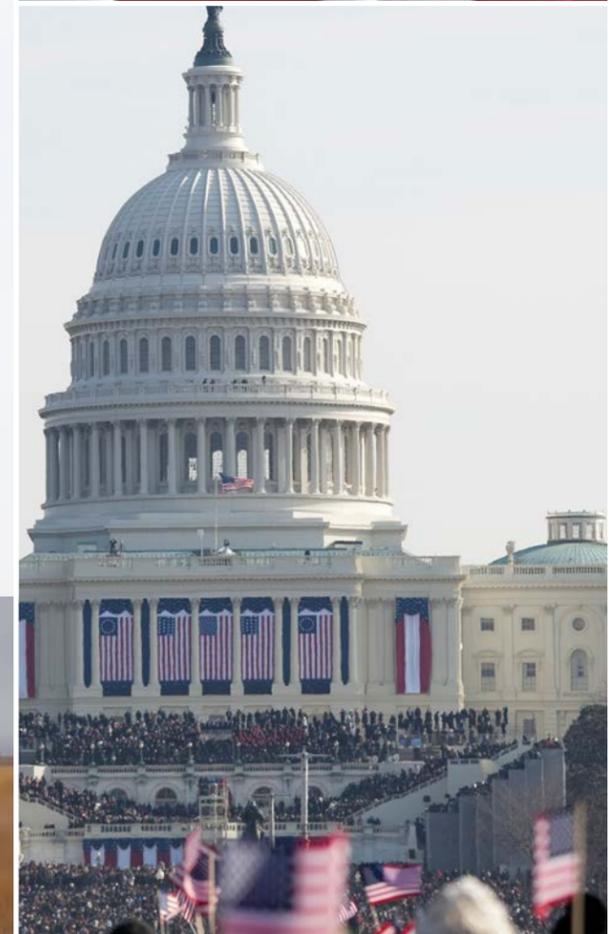
Presidential Transition White Paper

The District Governing Board has adopted a number of policies and initiatives aimed at addressing the San Joaquin Valley's challenges related to fulfilling federal mandates and improving public health. The District Governing Board and staff have spent significant time and effort over the past few years to educate policy makers at the federal level about the unique air quality challenges faced by the San Joaquin Valley.

Given the unique and difficult challenges that the Valley faces, the District recognized that it is imperative to provide timely and effective input as the new President completes the transition process and establishes a new federal administration. The District Governing Board established an Ad-Hoc Subcommittee to develop and guide the District's strategy to communicate the Board's perspectives with the new administration during the transition period. As part of that process, the Ad-Hoc Subcommittee developed the Presidential Transition White Paper which highlights the federal actions and policies that are necessary for the Valley to continue to improve public health and successfully comply with federal mandates.

The issues that were highlighted in the Presidential Transition White Paper are on the following page.

- A. Eliminate duplicative requirements, confusion, and costly bureaucratic red tape by synchronizing progress milestones when a new standard is published by EPA.
- B. In establishing deadlines and milestones, require control measures that lead to the most expeditious attainment while considering technological achievability and economic feasibility.
- C. Allow states to focus efforts on meeting new standards in the most expeditious fashion through deployment of scarce resources in a manner that provides the utmost benefit to public health (e.g. greater weight for NOx reductions).
- D. Eliminate the requirement for contingency measures in areas classified as "extreme" non-attainment.
- E. Allow states to take credit for all transportation control measures and strategies and not punish areas that have implemented transportation control measures and strategies that have achieved early reductions in emissions.
- F. Local regions should not be subjected to federal sanctions when their inability to attain federal standards is due to pollution sources outside their regulatory authority:
 1. Direct EPA to work closely with local air quality agencies to develop incentive-based control measures that are federally approvable.
 2. Provide federal funding for voluntary incentive-based control measures that expedite emissions reductions while investing in the national and local economy.
 3. Adopt new national standards for on-road heavy-duty trucks and locomotives under federal jurisdiction.
 4. Direct EPA to further streamline the process for considering Exceptional Events and to allow for reasonable inclusion of exceptional drought conditions as Exceptional Events.
- G. Support adequate resources and policies to reduce the impact of wildfires and their attendant public health impact.



Public Process to Develop an Integrated ATTAINMENT STRATEGY for PM2.5

As a result of the Valley's stringent and comprehensive air quality management strategy, Valley residents are experiencing significant air quality improvements and reductions in the number of days when the federal air quality standards are exceeded. For over twenty years, the District has implemented attainment plans and multiple generations of effective emissions control measures for stationary and area sources for multiple federal air quality standards. Similarly, the California Air Resources Board (ARB) has adopted stringent regulations for mobile sources. Together, these efforts represent the nation's toughest air pollution regulations and have greatly contributed to reduced ozone and particulate matter concentrations in the Valley.

Due to the ever-tightening National Ambient Air Quality Standards (NAAQS) adopted by EPA under the Clean Air Act, the District is required to prepare attainment plans to address multiple standards. The District is in the process of developing a single integrated attainment plan that addresses the following PM2.5 standards for submission to the EPA by August of 2017:

- 1997 PM2.5 Standard (24-hour 65 $\mu\text{g}/\text{m}^3$ and annual 15 $\mu\text{g}/\text{m}^3$)
- 2006 PM2.5 Standard (24-hour 35 $\mu\text{g}/\text{m}^3$)
- 2012 PM2.5 Standard (annual 12 $\mu\text{g}/\text{m}^3$)

Preparing a single integrated plan addressing multiple standards instead of three separate plans is not only a more efficient use of resources but also provides the path for developing a much stronger plan that incorporates additional and stronger control measures. Furthermore, a singular and more efficient public process provides greater opportunity for robust public participation.

In December 2016, the District Governing Board adopted the following policy positions in working with the California Air Resources Board (ARB) to prepare the District's attainment strategy for PM2.5. These policy positions detail strong action by the District consistent with previous guidance provided by the District Governing Board while asking ARB to do its fair share for sources under its jurisdiction.

- 1 Prepare a single attainment plan that integrates all three PM2.5 standards (1997, 2006, and 2012) under the federal Clean Air Act.
- 2 Do not ask for an attainment deadline extension or a bump up to a classification with delayed attainment unless a finding is made by the District and ARB that all available and reasonable mobile and stationary control measures are not adequate to achieve attainment by the prescribed deadlines.
- 3 Work closely with ARB, taking advantage of District's recently acquired modeling capabilities, to conduct in-depth air quality modeling that more precisely and accurately predicts PM2.5 concentrations in the Valley at peak monitoring sites, taking into account source-specific characteristics such as location, emissions particle size speciation, seasonality, temporal patterns, and current control programs that include episodic curtailment based on meteorological conditions.
- 4 Continue to leave no stone unturned in adopting and implementing technologically feasible and cost-effective measures for sources under the District's jurisdiction that expedite attainment and protect public health.
- 5 Work with ARB to ensure that the State provides all possible mobile source control strategies including incentive-based measures that result in additional reductions in emissions beyond those included in the current control programs.
- 6 Compel ARB to provide incentive funding to replace residential wood-burning devices in the San Joaquin Valley.
- 7 ARB to adopt point-of-sale particulate emissions standards for residential wood/pellet burning devices equivalent to or exceeding those in place in the State of Washington.

The District places a great value on full public participation in the development and adoption of air quality management strategies and therefore intends to provide ample opportunity for meaningful participation by the general public and other stakeholders as the specific details of the attainment plans are formulated. The extensive public process to develop an integrated plan has already begun with ARB holding their first workshop in Fresno on December 1, 2016 and the District holding another workshop on December 7, 2016. Additionally, the District reconvened the Public Advisory Workgroup (PAW) committee consisting of representatives from regulated entities (industry, farms, dairy families and municipalities), community advocates, and advisors from EPA and ARB. Beginning with two public PAW committee meetings in January 2017, the District will conduct additional numerous workshops and PAW meetings to engage the public in the development of this integrated plan.

Valley Residents will soon be able to access REAL-TIME AIR QUALITY DATA for their NEIGHBORHOOD

In late 2015, the District launched a new online tool allowing the public to view historical air quality information for any location in the San Joaquin Valley by simply entering an address of their choosing. This Web-Based Archived Air Quality (WAAQ) System allows users to compare historical air quality data from the last two decades using air quality information specific to their neighborhood. The District established each "neighborhood" by breaking the Valley up into 4 km x 4km grid cells, resulting in over 3,600 neighborhoods. By visiting www.valleyair.org/WAAQS, residents are able to check their neighborhood level statistics for ozone, PM2.5, good AQI days and unhealthy AQI days. The WAAQ system can also provide a side by side statistical comparison to the user's county or to the entire air basin for the same time period.

Building off of the success and technical foundation of the WAAQ System, the District has recently expanded the neighborhood level air quality concept to a real-time basis through the Real-time Air Advisory Network (RAAN) program. Through this enhanced version of RAAN, Valley residents will soon be able to access hourly ozone and PM2.5 air quality information for their specific neighborhood or location of interest, as opposed to being limited to just the stationary air monitoring sites located throughout the Valley. This improvement will increase the number of sources of air quality data from the current 30 air monitoring stations used in RAAN to over 3,600 neighborhoods throughout the Valley. The RAAN system is an integral part of the District's Healthy Air Living Schools program and this improvement will help schools receive even more accurate information for their location. The Healthy Air Living Schools program also provides additional information to students and parents about what they can do to reduce air pollution such as to reduce idling at school sites. The District will soon be releasing a beta version of this enhanced RAAN program, and plans to make this enhancement available to the public by the end of 2017.



Reducing Emissions from UNDER-FIRED CHARBROILERS

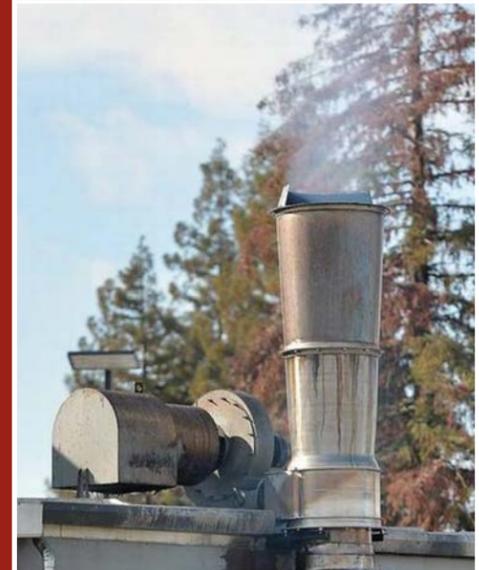
Despite significant progress in improving the Valley's air quality, more reductions in emissions are needed to attain the ever-toughening federal standards. Beginning in 2002, the District has required installation and operation of particulate matter control devices on chain-driven commercial charbroilers. However, under-fired charbroilers used at steakhouses, barbecue restaurants and other restaurant grills, present a special set of challenges that require different emissions control equipment than chain-driven charbroilers most commonly found at fast food hamburger restaurants. The lack of availability of a feasible and cost-effective control technology has been the barrier to the District's attempt to impose similar requirements for under-fired charbroiling operations.

Since 2009, the District has partnered with the South Coast Air Quality Management District, Bay Area Air Quality Management District, and EPA to further the research and evaluation of emission control technologies for under-fired charbroilers. Although under-fired charbroiler technology advancements have been made in lab settings, these technologies are still largely un-tested in real-life applications and need further evaluation and demonstration at Valley restaurants. Technological feasibility issues and logistical issues such as the need to modify hoods and exhaust systems and reinforce roof supports in addition to the purchase, installation, maintenance, and labor costs must all be evaluated.

In June 2015, the District's Governing Board approved \$750,000 to fund the Restaurant Charbroiler Technology Partnership (RCTP) program. The RCTP program connects under-fired charbroiler control system manufacturers with restaurants who are interested in installing these control systems. Since these restaurants will be early adopters of under-fired charbroiler technology and will be providing a platform to demonstrate the effectiveness of the control systems, this program funds the full cost of purchase, installation, operation, maintenance of control equipment, and other costs such as modifications to the existing system configurations and structural reinforcements.

Despite the District's efforts in promoting available funding under the RCTP program, the District has faced difficulty in finding restaurants willing to demonstrate new technologies. In 2016, the RCTP program completed one year of successful demonstration of a wet-scrubber based control device at a restaurant in Stockton. Additionally, the District approved funding to install a microwave regenerated particulate filter at a restaurant in Bakersfield.

Due to the limited availability of demonstrated control technologies, the District will continue its efforts to identify potential demonstration projects for new emission control technologies. The District will continue to engage the restaurant community, technology manufacturers, and other stakeholders to identify what the appropriate measures may be for reducing emissions from under-fired charbroilers. This and other technology projects are critical as the District continues to develop the new Integrated Attainment Strategy for PM2.5.



District Brings Significant CAP & TRADE FUNDING to the VALLEY

In May 2015, the District Board approved a comprehensive action plan for securing the Valley's fair share of State Cap and Trade funds. This plan includes several key components that are critical to ensuring that a significant portion of Cap and Trade funds collected by the State Air Resources Board are directed to the Valley, particularly given that the Valley is home to 23 out of the top 30 disadvantaged communities in the state. In addition, this plan places significant effort on building a unified Valley coalition and influencing state policy to ensure that the Valley's needs are addressed with this funding now and into the future.

Since this action plan was approved in 2015, there has been significant progress on implementing the plan and ensuring that the Valley effectively competes for Cap and Trade funding:

- 1 The District has recently successfully partnered with several other large air districts in the state on a multi-agency proposal to the California Air Resources Board (ARB) for Cap and Trade funds to demonstrate advanced zero and near-zero emission technology for up to 43 heavy-duty trucks throughout California. This proposal supports the necessary development of transformative, zero/near-zero technologies for the heavy-duty truck sector, the single largest source of emissions in the Valley. This proposal was selected for funding in the amount of \$23,658,500, the maximum amount awarded under this solicitation. Of this total award, approximately \$2.5 million will come to the Valley to deploy and demonstrate zero and near-zero-emission truck technology.
- 2 In January 2016, the District submitted several grant proposals in response to ARB's Zero Emission Truck and Bus Pilot Commercial Deployment Projects competitive grant solicitation under the Low-Carbon

Transportation Program. These projects proposed to deploy a variety of commercially available zero-emission truck and bus technologies for use in multiple modes of operation. Three of the District's proposals were selected for a total of \$25,097,400 in funding. In addition, a project submitted by the City of Porterville in which the District will take the lead administrative role was also selected for funding in the amount of \$9,516,422, for a total of \$34,613,822 in funding coming to the Valley through this grant solicitation.

- 3 The District has played a key role in leading statewide efforts to develop and implement incentive programs aimed at replacing old passenger vehicles with cleaner vehicles. In fact, the District's vehicle replacement pilot program that was implemented in partnership with Valley Clean Air Now (Valley CAN) served as a model for developing a new statewide Enhanced Fleet Modernization Program (EFMP). Due to the importance and the

tremendous success of this program, the state legislature recently approved funding for EFMP of up to \$60 million statewide. Because the District is one of only two air districts in California that currently operates an EFMP program, the District's share of this funding is anticipated to be \$25 million for a significantly expanded program, with the District likely receiving an initial allocation of \$15 million to be followed by additional funding based on program demand.

- 4 The Strategic Growth Council's (SGC) Affordable Housing and Sustainable Communities (AHSC) Program provides grants and affordable housing loans for compact transit-oriented development and related infrastructure and programs that reduce greenhouse gas (GHG) emissions. These projects increase the accessibility of housing, employment centers, and key destinations via low-carbon transportation options (walking, biking, transit), resulting in fewer vehicle miles traveled (VMT).

The District is committed to providing technical assistance to any Valley stakeholder as necessary to complete AHSC applications. The District consults on GHG emissions and associated mitigation measures, as well as quantification of GHGs according to the accepted methodologies. In 2016, the District provided comprehensive service to all stakeholders that requested assistance on these project assessments and submittals. Of these Valley projects, three were selected for funding, resulting in total awards of \$30 million.

The AHSC Program is funded by the Greenhouse Gas Reduction Fund (GGRF), which is part of the State's overall climate investment efforts to reduce GHGs as required by Assembly Bill 32.



District Partners with City of Bakersfield to Implement DUST MITIGATION IN THE AREA SURROUNDING CRITICAL AIR MONITOR

As the San Joaquin Valley continues to plan and make progress towards attaining ever-tightening federal standards for fine particulate matter (PM2.5), the Bakersfield area has continued to record the peak concentrations of PM2.5 in the region. This has proven to be a challenge for PM2.5 air quality planning in the Valley. Despite major reductions in emissions throughout the Valley, the Bakersfield-Planz air monitoring site, operated by the state Air Resources Board, records some of the highest PM2.5 concentrations in the nation.

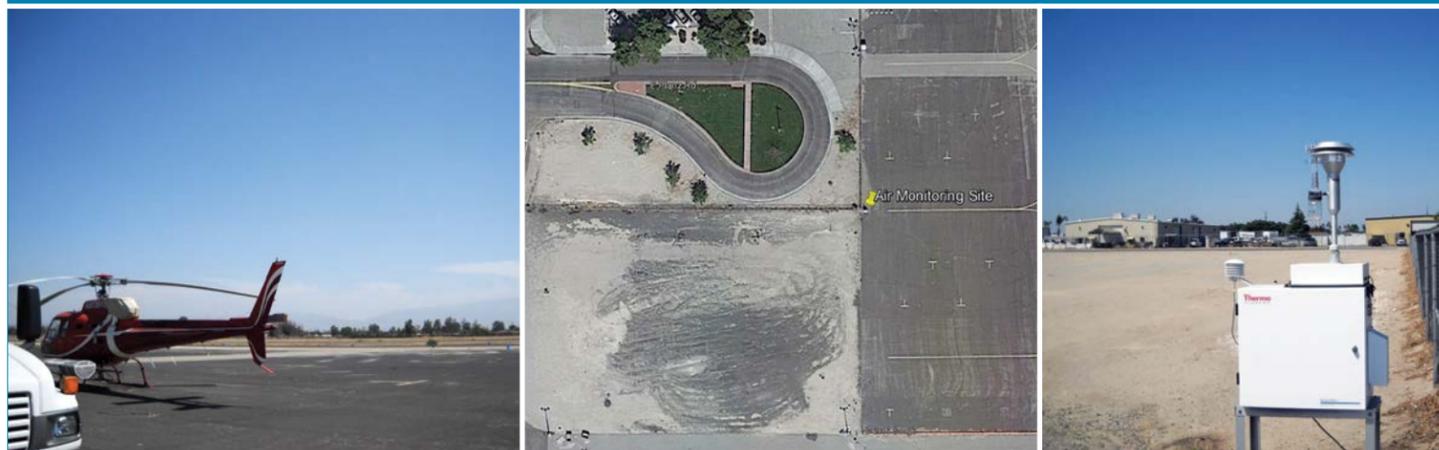
The District has repeatedly expressed concerns that the Bakersfield-Planz PM2.5 monitor located near Planz Road at the Bakersfield Municipal Airport is surrounded by large areas of dry open land with silty soils. Also, site specific activities, including aircraft takeoffs and landings, street sweeping operations, and utility vehicle operations create localized emissions. These site characteristics create emissions that significantly impact PM2.5 concentrations and measurements at this site that are not representative of the actual concentrations experienced by Bakersfield or Valley residents.

Past efforts to discuss with EPA the potential relocation of this site to other more appropriate locations have not proven fruitful. Based on the location of this monitor, and given the importance of this monitor's measured concentrations in driving the Valley's nonattainment status with respect

to PM2.5, the District moved forward in partnering with the City of Bakersfield, who operates the airport property, by providing \$782,500 to implement a comprehensive dust mitigation strategy on the property in an effort to reduce localized fugitive dust emissions from impacting PM2.5 monitoring.

The planned project between the City of Bakersfield and the District includes the paving of service roads on the property that are commonly used by City of Bakersfield vehicles, which currently generate dust as they are traveled upon. In addition, over 80 acres of open land will be covered with wood chips as a ground cover to eliminate the entrainment of blowing dust emissions from these areas due to commonly occurring high wind events in the region. The wood chips for this project will be sourced from the City of Bakersfield's green waste facility, making the project even more cost-effective and environmentally responsible through the use of free and unused renewable resource materials.

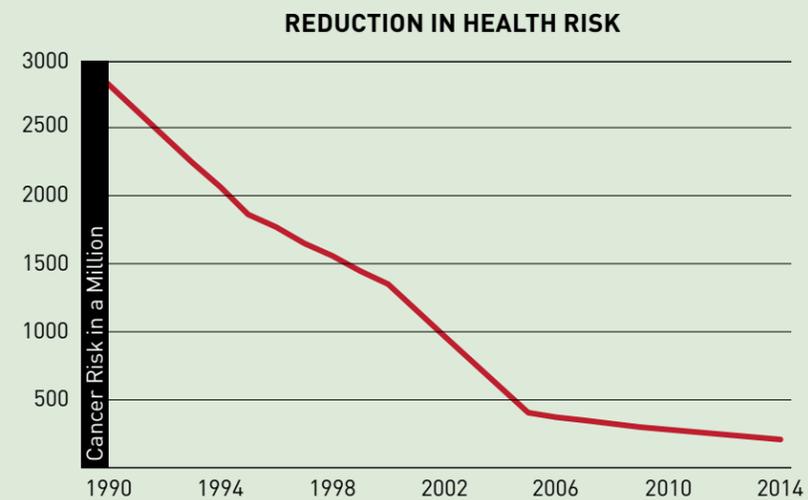
In January 2017, the District and the City of Bakersfield entered into an agreement for this project, which is planned to be completed later in 2017. Through these efforts, dust emissions in the area will be reduced, and through minimizing the impact from localized sources, the Bakersfield-Planz air monitoring site will record more representative PM2.5 concentrations, ultimately assisting the District in PM2.5 attainment planning efforts.



Efforts by the Air District to PROTECT VALLEY RESIDENTS FROM TOXIC EMISSIONS

In addition to a myriad of efforts aimed at reducing ozone and particulate emissions throughout the Valley, the District also devotes significant resources and implements comprehensive strategies to reduce toxic air pollutants. The District's integrated air toxics program fulfills the state Hot Spots mandates which are aimed at quantifying and assessing localized health risk, notifying affected residents, and reducing risk from facilities with high risk caused by air toxic emissions. Another state mandate addressed by the District's integrated air toxics program is the Airborne Toxic Control Measure regulations promulgated by the Air Resources Board requiring prescribed control measures for various source categories that cause significant risks at a regional level. Additionally, the District's integrated program fulfills federal mandates under Title III of the federal Clean Air Act, requiring Maximum Available Control Technology for sources of air toxics. In addition to the state and federal mandates, the District's integrated air toxics program also implements the more stringent local permitting and California Environmental Quality Act requirements, to ensure installation of Best Available Control Technology for air toxics and that new permits or modifications to existing facilities will not result in a significant increase in health risk to the public. These efforts are detailed in the latest Annual Air Toxics Report to the Board, available on the District's website, www.valleyair.org.

As illustrated in the figure below, the District's integrated air toxics program has resulted in significant reductions (over 90%) in health risk exposure for Valley residents.



State Auditor Conducts AUDIT of the DISTRICT'S BUDGET and PROGRAMS

As requested by the Joint Legislative Audit Committee, the California State Auditor conducted an audit concerning the revenues and expenditures of the District and its implementation of various program requirements. The District has always believed that routine audits of public agencies are imperative, and that well-crafted audit reports can serve to enhance public accountability and transparency, and can advance good government by identifying and promoting good business practices. This is especially true for an agency like the District which has been entrusted with large sums of public funds and the responsibility to improve quality of life for a large segment of the state's population.

The State audit report released on April 5, 2016 reaffirms the District's long held position that its permit fees, although very low, when used in conjunction with supplemental revenues are adequate to maintain

an active and effective program. The audit report does not propose any changes or recommendations concerning the District's fees. The audit report notes that the District routinely assesses the costs and needed revenues for administering an active and effective air quality management program. With a strict adherence to the zero-based budgeting principles, significant investment in automation, and implementation of countless streamlining and efficiency measures, the District has been able to achieve low administrative overhead and great productivity in all program areas and therefore reduced costs.

The District Governing Board approved sending letters of appreciation to the State Auditor's office and Assemblymember Cooper, who requested the audit, thanking them for their roles in the audit process.



Emission Reduction

AGREEMENT WITH KERN COUNTY

The District Governing Board approved an Emission Reduction Agreement with Kern County to ensure that air pollution from future oil and gas production activities are fully mitigated. This agreement fulfills a commitment by Kern County and the oil and gas industry under the 2015 Kern County Zoning Ordinance Focused on Oil and Gas Activities. The newly adopted county ordinance requires oil and gas production operations to undertake local projects that reduce emissions or pay a mitigation fee that will be forwarded to the District to fund clean air projects that mitigate the potential air quality impact from growth in oil and gas production activities.

It is estimated that mitigation funds generated under this agreement could range from \$2 to 3 million per year during the current decline in oil and gas production activity, and up to \$27 million annually under a maximum oil and gas production scenario. Utilizing the District's successful incentive grant programs, the funds provided to the District will be reinvested in local emission reduction projects through awards to businesses, residents, and municipalities, to replace older, higher polluting trucks, tractors, and other equipment with newer, cleaner technologies.

PUBLIC BENEFIT GRANTS

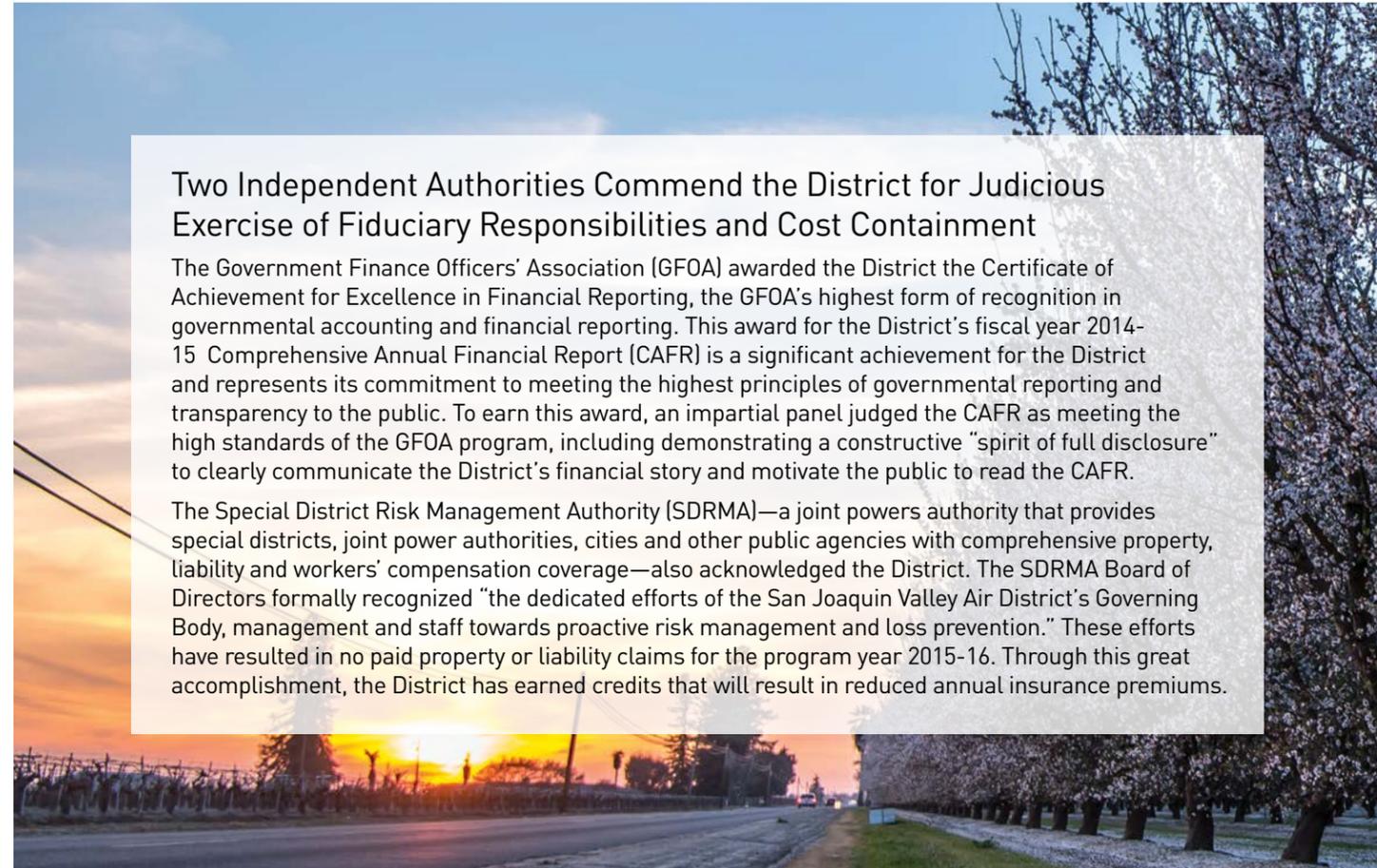
Approved by the Governing Board in 2011, the Public Benefit Grants Program funds a wide variety of clean-air projects in partnership with Valley public agencies that directly benefit Valley residents. Eligible applicants are public agencies and public educational institutions within the geographical boundaries of the Valley air basin. The program has three components: New Alternative Fuel Vehicle Purchase, Enhanced Transportation Strategies and Alternative Fuel Infrastructure. In 2016, the District awarded over \$5 million for almost 300 plug-in hybrid, plug-in electric and compressed natural gas vehicles for the New Alternative Fuel Vehicle Purchase component. Continuing its efforts to assist local public agencies with their clean-air transportation projects, the District held a competitive solicitation under the Alternative Fuel Infrastructure component. Of the 13 proposals received seeking almost \$18 million in funding, six proposals were awarded for a total of \$5 million in funding. To better serve local public agencies, the District has renamed the "Enhanced Transportation Strategies" component to the "Community Improvement Projects that Reduce Vehicular Use and Emissions" component. Project eligibility for this component was redefined to more closely align with similar state and federal funding programs. Funding provided under this component will give local public agencies the necessary leverage for their projects to be competitive for these state and federal programs.



Two Independent Authorities Commend the District for Judicious Exercise of Fiduciary Responsibilities and Cost Containment

The Government Finance Officers' Association (GFOA) awarded the District the Certificate of Achievement for Excellence in Financial Reporting, the GFOA's highest form of recognition in governmental accounting and financial reporting. This award for the District's fiscal year 2014-15 Comprehensive Annual Financial Report (CAFR) is a significant achievement for the District and represents its commitment to meeting the highest principles of governmental reporting and transparency to the public. To earn this award, an impartial panel judged the CAFR as meeting the high standards of the GFOA program, including demonstrating a constructive "spirit of full disclosure" to clearly communicate the District's financial story and motivate the public to read the CAFR.

The Special District Risk Management Authority (SDRMA)—a joint powers authority that provides special districts, joint power authorities, cities and other public agencies with comprehensive property, liability and workers' compensation coverage—also acknowledged the District. The SDRMA Board of Directors formally recognized "the dedicated efforts of the San Joaquin Valley Air District's Governing Body, management and staff towards proactive risk management and loss prevention." These efforts have resulted in no paid property or liability claims for the program year 2015-16. Through this great accomplishment, the District has earned credits that will result in reduced annual insurance premiums.



District's Tune In, Tune Up Serves as MODEL FOR THE STATE

The District continued implementation of its award-winning Tune In, Tune Up program by providing an additional \$5 million in vehicle repair funding as well as \$6.4 million in funding for vehicle replacement projects designed for residents in low-income, disadvantaged communities. The Tune In, Tune Up program hosted 23 weekend events throughout the San Joaquin Valley designed to identify and repair or replace high emitting vehicles. The District's vehicle replacement pilot program implemented through the Tune In, Tune Up program has served as a model for developing a new statewide Enhanced Fleet Modernization Program (EFMP) and the Plus Up program. Through these new state-wide programs, the District will be receiving \$25 million in new funding.

The Tune In, Tune Up program is operated in partnership with Valley Clean Air Now, which has a long history of successfully implementing this program and excels at reaching residents in disadvantage communities who otherwise may not be able to afford costly vehicle repairs. Reaching this key demographic is essential as the emission reductions are most needed in low-income communities, which are historically home to the greatest percentage of high-emitting vehicles.

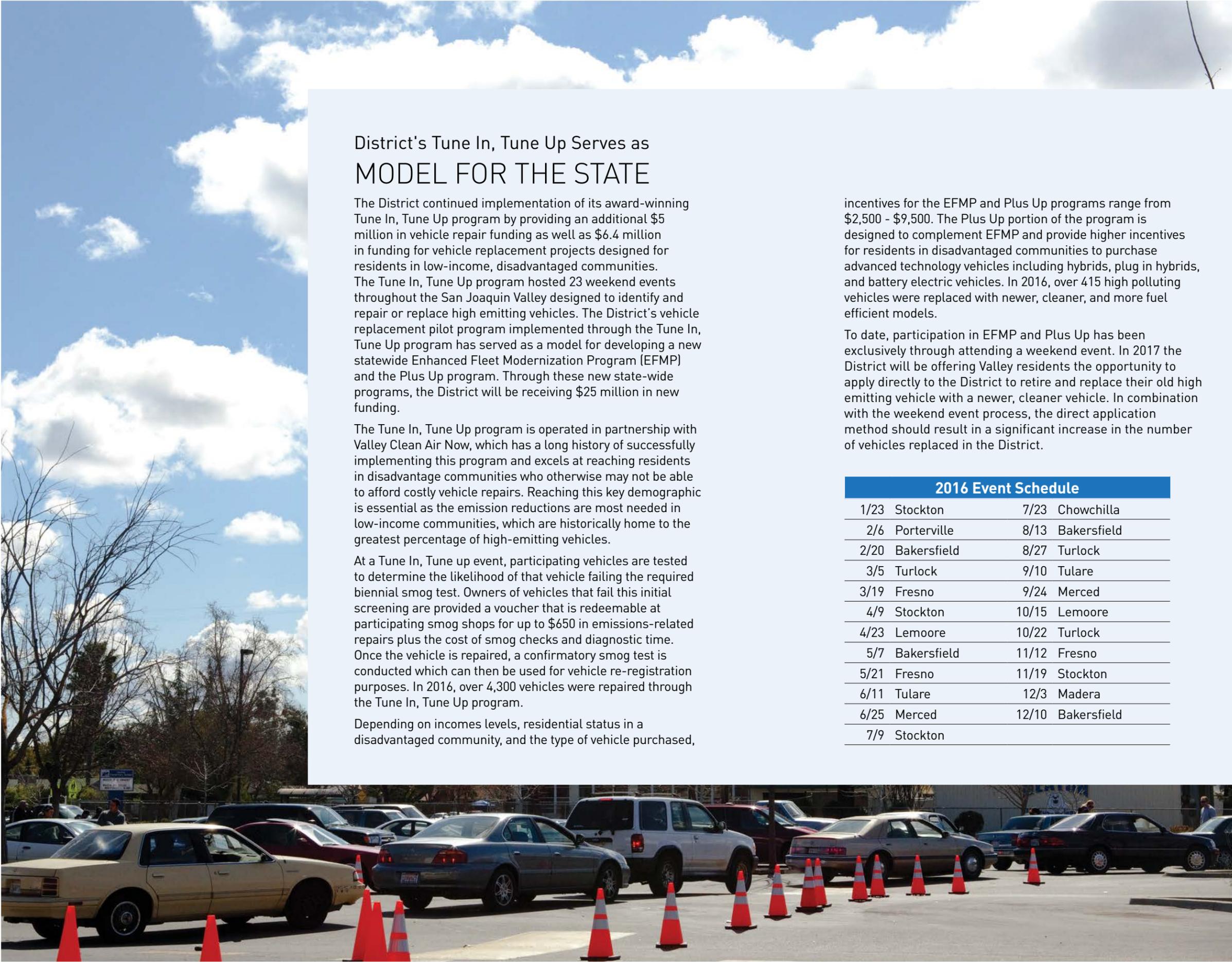
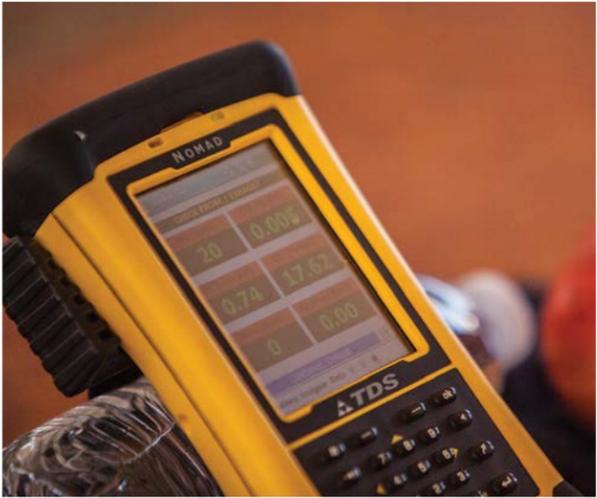
At a Tune In, Tune up event, participating vehicles are tested to determine the likelihood of that vehicle failing the required biennial smog test. Owners of vehicles that fail this initial screening are provided a voucher that is redeemable at participating smog shops for up to \$650 in emissions-related repairs plus the cost of smog checks and diagnostic time. Once the vehicle is repaired, a confirmatory smog test is conducted which can then be used for vehicle re-registration purposes. In 2016, over 4,300 vehicles were repaired through the Tune In, Tune Up program.

Depending on incomes levels, residential status in a disadvantaged community, and the type of vehicle purchased,

incentives for the EFMP and Plus Up programs range from \$2,500 - \$9,500. The Plus Up portion of the program is designed to complement EFMP and provide higher incentives for residents in disadvantaged communities to purchase advanced technology vehicles including hybrids, plug in hybrids, and battery electric vehicles. In 2016, over 415 high polluting vehicles were replaced with newer, cleaner, and more fuel efficient models.

To date, participation in EFMP and Plus Up has been exclusively through attending a weekend event. In 2017 the District will be offering Valley residents the opportunity to apply directly to the District to retire and replace their old high emitting vehicle with a newer, cleaner vehicle. In combination with the weekend event process, the direct application method should result in a significant increase in the number of vehicles replaced in the District.

2016 Event Schedule		
1/23	Stockton	7/23 Chowchilla
2/6	Porterville	8/13 Bakersfield
2/20	Bakersfield	8/27 Turlock
3/5	Turlock	9/10 Tulare
3/19	Fresno	9/24 Merced
4/9	Stockton	10/15 Lemoore
4/23	Lemoore	10/22 Turlock
5/7	Bakersfield	11/12 Fresno
5/21	Fresno	11/19 Stockton
6/11	Tulare	12/3 Madera
6/25	Merced	12/10 Bakersfield
7/9	Stockton	



Success in competing for FEDERAL CLEAN AIR FUNDS

In 2016, the U.S. Environmental Protection Agency (EPA) awarded the District a total of \$5,936,493. The District submitted six applications to the EPA in response to the Targeted Air Shed Request for Proposal and three applications to the National Clean Diesel Emission Reduction Act (DERA) Request for Proposal. Through the highly competitive national programs, the District was awarded funding for three proposals: two for heavy-duty truck replacements through the District's Truck Voucher Program and one for wood burning device change out through the District's Burn Cleaner Program. The six proposals that were submitted in response to the Targeted Air Shed Request for Proposal were scored numbers 1, 2, 3, 5, 7 and 11 out of the 23 proposals that were submitted nationwide. EPA funded six of the twenty-three proposals that were submitted. Based upon the rankings four of the District's proposals should have been selected for funding but EPA stated they were obligated to fund projects in other parts of the United States because this was a nationwide program.

HEAVY-DUTY TRUCK REPLACEMENT PROGRAM

To administer the DERA and Targeted Air Shed grants, staff will utilize the District's existing Truck Voucher Program (TVP) Guidelines. The program has successfully obligated over \$50 million to replace more than 1,230 Valley-based heavy-duty trucks with new, cleaner heavy-duty trucks. The TVP operates as a partnership with Valley trucks owners and dealerships to replace old high polluting heavy-duty trucks with new low emission heavy-duty trucks. The \$2,477,450 awarded from the Targeted Air Shed program and the \$981,993 awarded from the DERA program will help fund the replacement of approximately 153 heavy-duty trucks. Combined with the District's match of approximately \$4,045,358, this will provide up to 35% of the total cost of each new heavy-duty truck.

BURN CLEANER PROGRAM

To administer this grant, staff will utilize the District's existing Burn Cleaner Program Guidelines. The program has successfully obligated over \$15.5 million to install more than 11,692 clean burning devices in homes throughout the Valley. The program operates as a partnership with Valley residents and hearth retailers to install new clean burning devices. The \$2,477,450 EPA award, combined with the District's match of \$2,229,525 brings the applicants cost-share to about 53% of the new device. Through this funding, 2,477 old wood burning devices will be replaced in the Valley with new clean burning devices.



District Engages Chambers of Commerce in ENERGY EFFICIENCY PROGRAMS

As part of the District Regional Energy Efficiency strategy, the District has worked with a number of chambers of commerce to develop energy efficiency programs. The programs are designed to provide tools and resources to chamber members to reduce energy usage which in turn reduces emissions. The Governing Board approved up to \$50,000 to contract with chambers of commerce to continue and expand upon past efforts. The program began with Greater Stockton Chamber of Commerce's Green Team San Joaquin program. The strength of the program is its ability to connect businesses with other businesses to share ways to save energy and improve the bottom line.



PASPort System

Consistent with the core values of customer service, efficiency, and transparency, the District has developed and now provides an online tool to regulated facilities. This tool, named PASPort, provides around the clock access for facilities to review permit information and related documents. The PASPort system allows facility personnel or their designated representatives to submit electronic copies of permit applications, supplemental correspondence for permit applications, and to check the status of previously submitted permit applications. PASPort also allows authorized users to submit emission source test reports, breakdown/deviation reports, and many other compliance-related reports 24 hours per day and 7 days per week without the need to contact the District's office staff. The PASPort system enables participating facilities to independently manage user access to their permits and related information. The District actively works with the regulated community to continuously enhance and expand the capabilities of the PASPort system. The industry response to the PASPort system has been overwhelmingly positive, with more than 1,400 participating facilities.



CEQA Streamlining

The District provides project-specific comments at the request of Valley land-use agencies on approximately 1,500 environmental documents every year while serving as a commenting agency under the California Environmental Quality Act (CEQA). These comments are designed to ensure that new developments in the San Joaquin Valley are designed with air friendly concepts in mind, and that any significant air quality impacts are mitigated to the extent feasible as required under CEQA. In keeping with the District's continuous focus on improving processes and gaining efficiency, the District has developed a web-based tool, CEQA Connected, designed to programmatically streamline this commenting process. The CEQA Connected website reduces the time it takes land-use agencies to request comments and then instantly provides the land-use agency with District comments that are tailored to the specific development project being proposed. The new system is also available to project proponents, enabling them to better incorporate air friendly project design elements and mitigation measures into their projects, leading to better projects with minimized impacts on air quality. The development of this online tool is phased, with the initial phase, already online, aimed at addressing residential development projects. Future phases will streamline the CEQA commenting process for industrial and commercial development projects. The District received strong support from land-use agencies for this streamlining effort during several workshops held in 2016 and has worked collaboratively with them throughout the process to ensure their needs are met. Visit CEQA Connected at: www.valleyair.org/ceqaconnected.



Sharing the STAR Culture Service, Teamwork, Attitude and Respect

SHARING THE DISTRICT'S EXPERIENCE

The District's STAR work culture has enabled the District to excel in the fields of customer service, continuous improvement and employee satisfaction. At the request of Valley elected officials and other stakeholders, the District has developed materials that can be shared with other agencies that may wish to implement a similar work culture.

BRINGING THE BEST PRIVATE SECTOR BUSINESS PRACTICES INTO GOVERNMENT

There are government agencies that implement effective business practices seen primarily in the private sector that lead to efficiency, productivity, innovation, and exceptional customer service on an ongoing basis. The San Joaquin Valley Air Pollution Control District has long been committed to establishing and maintaining a work culture that values and rewards efficiency, productivity, competition, innovation, and exceptional customer service as the bottom line.

EXCELLENCE in Government

- Outstanding customer service
- Great productivity and efficiency
- Doing more with less - Reducing cost and eliminating waste
- Innovation and creativity
- Entrepreneurial with competitive spirit - Be the first and the best
- Motivated and engaged employees

Excellence in government is accomplished through a management philosophy that places a greater focus and emphasis on attitude and positive behavior while setting high expectations and striving for excellence in quality of work and productivity. Achieving and maintaining a work culture like this requires day-to-day attention and ongoing commitment and effort from all levels within the organization.

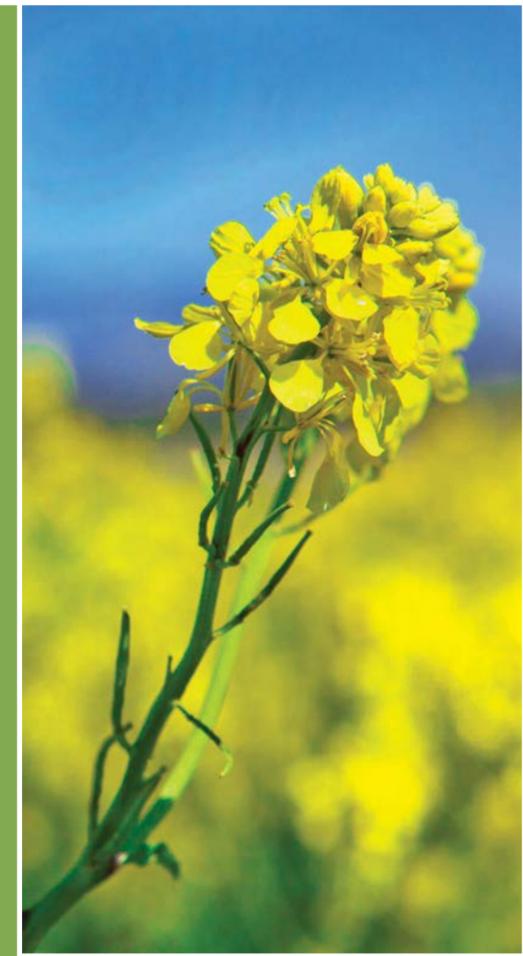
Successful implementation requires that the following beliefs, convictions and commitments be ingrained in the organization's DNA:

- Unshakable belief at all levels of leadership that employee welfare and well-being is essential to an agency's achievement of excellence
- Embrace change and have the entrepreneurial and risk-taking spirit to seek change
- Make delivery of great customer service to internal and external customers the top priority for the organization
- Always strive to be the best and the first in everything in which the agency endeavors
- Place a higher value on positive attitude and initiative over technical expertise in hiring and promotional decisions.

Once the organization has transformed to a point of complete acceptance of the above beliefs, convictions and commitments; success demands daily follow-through with a myriad of actions to build, strengthen and maintain the culture and monitor results.

- Work constantly through actions and words to demonstrate to employees that you value their welfare and well-being
- Communicate expectations clearly and routinely
- Use employee recognition to reward good behavior and to communicate expectations
- Build an environment where employees take pride in working for the agency
- Create a safe environment for employees to offer suggestions for change/improvement
- Follow through with addressing the employee suggestions in a timely manner
- Train employees and provide the necessary tools to meet and exceed expectations
- Hold employees accountable
- Infuse constant energy to keep it fresh
- Make it an intrinsic part of each employee's job
- Create an environment where employees are not put in silos and see themselves working for the agency as a whole – not for an individual department or division
- Provide freedom and encouragement to constructively critique the work of others
- Serve as a role model

If interested in learning about the District's STAR work culture the District now has literature and a video that can be obtained upon request.





Valley Advocacy at State and Federal Levels

In 2016, District has continued to advocate on Valley air quality and resource issues at both the state and federal level.

At the state level, this past year, the District advocated for Cap and Trade funding to come to the Valley. In particular, the District advocated for policies that would be beneficial to the Valley including priority funding for disadvantaged communities, funding to maintain a viable biomass industry to provide an outlet for agricultural waste, and for policies to better allow applicants to apply for funding through multiple state agencies.

At the federal level, the District continued to advocate, through Congress and EPA, for legislative and policy changes to address antiquated provisions of the Clean Air Act. The District educated members of Congress through a variety of methods including congressional briefings and testifying before congressional committees. Ultimately, a number of elements of the District's Clean Air Act Modernization proposal were included in legislation that passed the House of Representatives. The District also petitioned the federal government to do its fair share by adopting national standards on mobile sources that make up over 85% of the Valley's ozone and PM2.5 causing pollutants.

In the coming year, the District will continue to advocate on air quality issues that impact the Valley. Some of the priority issues include:

- FEDERAL** Seek common sense improvements to the Federal Clean Air Act
- FEDERAL** Support that will streamline and bring more certainty to the EPA exceptional events approval process
- STATE** Advocate for an increase in state subvention funding to help offset the impacts of inflation and increased responsibilities
- STATE** Seek revenue from the Cap and Trade program
- STATE/FEDERAL** Ensure that greenhouse gas emissions reduction programs are not at the expense of criteria pollutant programs
- STATE/FEDERAL** Ensure that disadvantaged communities are not "redlined" and that local control over resources to assist these communities is maintained
- STATE/FEDERAL** Seek adequate funding from state/federal government for the installation and operation of air quality monitoring instruments
- STATE/FEDERAL** Support efforts that provide for cost-effective alternatives to agricultural burning
- STATE/FEDERAL** Seek state and federal funding for technology advancement projects
- STATE/FEDERAL** Support for adequate resources/policies to reduce the air quality impact of wildfires

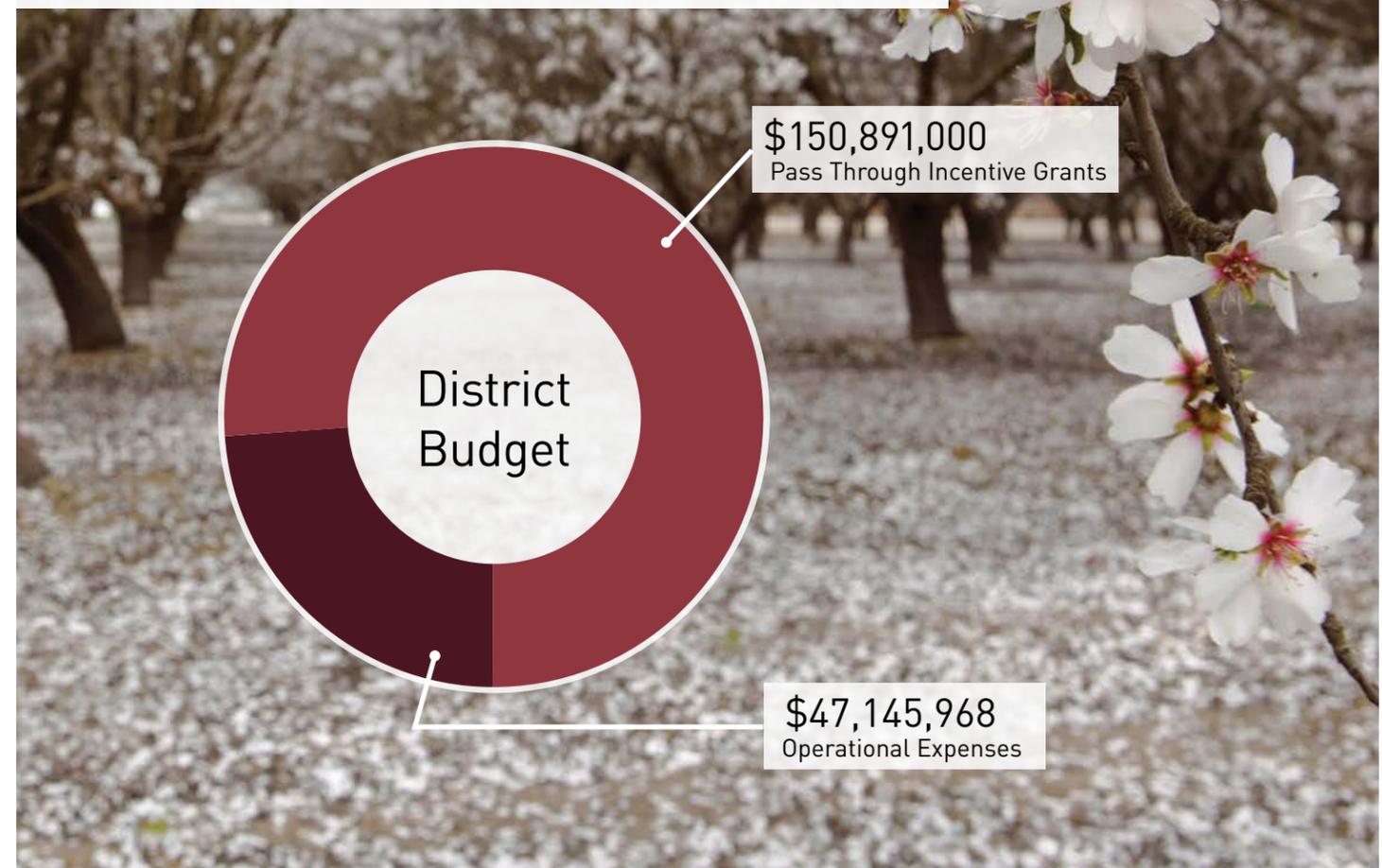


Overview of the DISTRICT'S OPERATIONS

Codified in the District's Core Values, accountability is one of the most important aspects of all of the District's operations, goals and strategies. The District is accountable to the public for every dollar spent and every regulation adopted. It is accountable for demonstrating quantifiable progress toward clean air, and it is accountable for conducting day-to-day business in the most effective, efficient and innovative ways possible.

The District's track record demonstrates these values. It is given the highest marks by auditors and other agencies. It consistently sets a high bar for air quality improvements that other air management agencies emulate. It also sets the gold standard for customer service.

In that spirit, the District offers you the following operational information about how it is cleaning the air, saving money and implementing continuous improvement in all of its undertakings, continuing the tradition of excellence that the Valley's stakeholders have come to expect.





Streamlining and Efficiency

PASPORT SYSTEM Consistent with its ongoing commitment to great customer service and continuous efficiency improvements, the District has developed an online tool for regulated facilities that provides quick, easy, “around the clock” access to their permit information and related documents from the District’s own Permit Administration System. The District calls this portal, “PASPort”. Regulated industry has wholeheartedly embraced the PASPort system, with over 1,400 registered users now signed up. For more information about PASPort, please refer to the article on page 22 of this report.

SERVICE TO LEAD AGENCIES IN THE CEQA PROCESS

When serving as a commenting agency under the California Environmental Quality Act (CEQA), the District provides comments on approximately 1,500 environmental documents every year. To streamline the commenting process while improving the quality of comments issued and enabling project proponents to better incorporate project design elements in their projects, the District has developed a new web-based tool, titled “CEQA Connected.” For more information about CEQA Connected, please refer to the article on page 22 of this report.

IMPROVED AUTHORITY TO CONSTRUCT AND PERMIT TO OPERATE ISSUANCE PROCESSES The District has continued to develop and improve internal procedures related to the issuance of Authority to Construct (ATC) permits. These efforts have allowed the District to

further streamline the permit application evaluation process and to eliminate unnecessary administrative steps. These streamlining efforts combined with the continued development of policies, guidelines, and templates have allowed the District to reduce the amount of time necessary to issue ATCs by 15% this past year. The District has also streamlined the issuance of revised or renewed Permits to Operate (PTOs) for facilities subject to Title V permitting requirements. In cooperation with the U.S. EPA, the District has developed and implemented procedures designed to improve the overall process and to expedite the issuance of revised Title V permits. By increasing its efficiency in this area, the District has also been able to significantly increase in the number of renewed Title V PTOs in 2016.

STREAMLINED IMPLEMENTATION OF NEW RISK ASSESSMENT REQUIREMENTS

The District has developed new streamlined tools to implement the revised California Office of Environmental Health Hazard Assessment (OEHHA) guidance. These tools allow District staff, facilities, and consultants to fully implement the revised OEHHA risk guidelines with streamlined health risk assessment processes, saving thousands of hours in District and business resources.

NEW TECHNOLOGY IMPROVES AIR MONITORING NETWORK

In 2016, the District fully implemented the new air quality data management system, called AirVision, which has brought numerous benefits to the in-depth process of validating and ensuring quality

control of the data being collected in the San Joaquin Valley’s air monitoring network. These benefits include the automatic validation of air monitoring data, automatic application of quality control flags, and the ability to monitor the health parameters of instruments throughout the network allowing for staff to be more proactive in conducting maintenance tasks before failures occur. This new system will continue to bring more efficiency to the program over this coming year. In addition, the District is planning for the deployment of new particulate matter monitoring equipment throughout the network, which is able to measure both PM10 and PM2.5 simultaneously within the same instrument in real-time. This deployment will allow the District to retire aging PM equipment in the network and will consolidate its monitoring activities into fewer pieces of equipment, creating even more efficiency within the air monitoring program over this next year.

HUMAN RESOURCE MANAGEMENT PROGRAM SOFTWARE

The District-created Human Resources Management Program continues to exceed our expectations with its continuous improvements. In effort to streamline the District’s recruitment process a new module was added. The recruitment module allows Personnel to track and record requisitions for position control accuracy. In addition, the recruitment module allows for a more streamlined approach during the recruitment exam process. Once exam scores are entered the exam scores are calculated in real time. By

doing so, we have been able to move through the steps in the recruitment process more efficiently which results in positions being filled at much faster pace. In addition to these enhancements, additional modules have been added to assist Managers and Supervisors with tracking and reporting of evaluations for staff, providing them information at their fingertips.

NEW GRANTS MANAGEMENT SOFTWARE

The Information Technology Services, Incentives, and Finance departments are working together to design a new and improved Grants Management software for managing and processing all District grants and incentives. This improved program will be implemented in early 2017 and will streamline the grant administrative processes which will provide more timely and accurate information and reports.

ACCEPTING ELECTRONIC PAYMENTS

The Finance department has fully implemented the option to receive online electronic funds via e-checks, debit, and credit cards. The enhanced District online portal allows permitted facilities to view their current outstanding invoices, submit a payment and receive their payment confirmation instantly. This new portal also provides further streamlining of the District’s billing and accounts receivable functions.



Plans & Regulations

AIR QUALITY PLANS

The U.S. Environmental Protection Agency (EPA) periodically reviews and establishes health-based national air quality standards (also referred to as NAAQS) for ozone, particulates, and other criteria air pollutants guided by the Clean Air Act. The District has adopted several air quality attainment plans over the years that identify measures needed in the Valley to attain EPA's increasingly stringent NAAQS. Leaving no stone unturned, the District has implemented these plans and adopted over 600 rules and rule amendments that have resulted in and continue to achieve significant emissions reductions.

The District's plans include emissions inventories that identify sources of air pollutants, evaluations for feasibility of implementing potential opportunities to reduce emissions, sophisticated computer modeling to estimate future levels of pollution, and a strategy for how air pollution will be further reduced. District plans also include innovative alternative strategies for accelerating attainment through non-regulatory measures such as incentive programs; technology advancement programs; the District's legislative platform; community outreach and education programs; and additional strategies such as energy efficiency, eco-driving, green purchasing and contracting, supporting urban heat island mitigation efforts, and encouraging cleaner methods of generating electrical energy and mechanical power.

Meeting EPA's increasingly stringent ambient air quality standards will require the development and implementation of transformative zero/near-zero emissions technology over the coming decades. While a daunting task, we are committed to developing and deploying the needed transformative measures as expeditiously as possible. The District continues to work with the federal EPA and California Air Resources Board to ensure that the most stringent measures are in place in the Valley.

In June 2016, the District adopted the 2016 Plan for the 2008 8-Hour Ozone Standard. This plan demonstrates attainment of the 2008 8-hour standard of 75 parts per billion by the attainment deadline of 2031 for "extreme" nonattainment areas.

In the fall of 2016, District staff proposed to engage in efforts to prepare an integrated plan that addressed multiple PM2.5 standards allowing for incorporation of additional control measures and greater opportunity for robust public participation. As a result, under Board direction, District staff has begun work on a single integrated PM2.5 plan that addresses the 1997, 2006, and 2012 PM2.5 standards (see pages 9-10 for more details).

REGULATIONS

The District has demonstrated leadership in developing and implementing groundbreaking regulatory strategies to reduce emissions. For over twenty years, the District has implemented several generations of emissions control measures for the stationary and area sources under its regulatory jurisdiction. These efforts represent the nation's toughest air pollution regulations and have greatly contributed to reduced ozone and particulate matter concentrations in the Valley.

Tough and innovative rules, such as those for indirect source review, residential wood burning, glass manufacturing, and agricultural burning, have set benchmarks for California and the nation. Despite the significant progress under these regulations, greatly aided by the efforts and financial investments of Valley businesses and residents, the District continues to adopt and modify rules to achieve ongoing emissions reductions and advance our progress toward clean air.

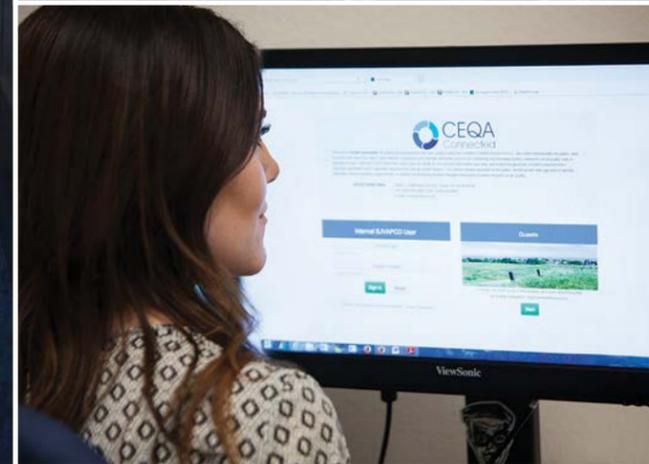
BOILERS, STEAM GENERATORS, AND PROCESS HEATERS (RULE 4307)

District Rule 4307 limits emissions of oxides of nitrogen (NOx), carbon monoxide (CO), oxides of sulfur (SOx), and particulate matter 10 microns or less in diameter (PM10) from gaseous or liquid fuel fired boilers, steam generators, and process heaters with total rated heat input of 2.0 MMBtu/hr up to and including 5.0 MMBtu/hr. This rule was amended in April 2016 to clarify the allowed use of LPG as a fuel in tree nut pasteurizers in addition to natural gas.

2016 Emission Reductions			
	Plan Commitments	Reductions Achieved	Performance
NOx	9.48 tons per day	16.36 tons per day	73% above target
VOC	40.46 tons per day	46.72 tons per day	15% above target
SOx	0.83 tons per day	4.79 tons per day	477% above target
PM2.5	6.95 tons per day	13.83 tons per day of PM equivalent	Exceeding reductions by 99% through PM precursors



Permitting



WORKING WITH BUSINESS The District works cooperatively with Valley businesses and assists them in complying with the Valley's air pollution regulations, which are some of the most stringent in the nation. To date, the District issues and administers permits, registrations, and plans for more than 38,000 stationary sources of air contaminants in the Valley.

AUTHORITIES TO CONSTRUCT & PERMITS TO OPERATE Stationary sources of air pollution, from dry cleaners and auto body shops to power plants and oil refineries, must obtain air permits from the District before constructing or operating. The permitting process involves two major steps:

1. The applicant must first apply for an Authority to Construct (ATC) permit. The application review process is an important opportunity for all interested parties – the project proponent, the District, and the interested public – to assess a project's compliance with federal, state, and local air pollution regulations prior to beginning construction. The requirements that must be met to obtain an air permit in the Valley are among the strictest in the nation, requiring the best available air pollution control equipment as well as mitigation of emission increases.
2. Once the source has properly installed the equipment authorized under the ATC permit and successfully completed an initial compliance inspection as well as any required emissions testing, when applicable, a Permit to Operate is issued.

FEDERALLY MANDATED OPERATING PERMITS (TITLE V) As of 2016, the District has issued Title V permits to more than 240 facilities considered to be "major sources" of air pollution. Federal law requires major sources to obtain Title V permits, which are designed to expand public and EPA participation in the permitting process for the largest emitters of air contaminants.

AIR TOXICS PROGRAM The District performs a number of tasks aimed at reducing the risks of toxic air pollution. The District implements state and federal air toxic control regulations, maintains an inventory of toxic air contaminant emissions from Valley sources, and assures that those emissions, and any proposed air toxics emission increases from new or modified sources, do not cause a significant risk to the residents of the Valley. Every year, the District publishes an extensive report of the air toxics program, and makes this report available to the public on the District's website.

SMALL BUSINESS ASSISTANCE (SBA) Exceptional customer service is not only one of the District's core values; it is ingrained in our work culture. A great example of this is the District's SBA program, whose mission is to provide dedicated assistance to Valley businesses who lack the resources or expertise needed to efficiently obtain air permits or otherwise comply with District requirements. Our SBA staff provides expert advice on technology options, application processes, cost efficient methods to comply with District requirements, as well as many other air quality issues. Interested parties can contact the District SBA staff through hotline telephone numbers in the Northern, Central, and Southern regions of the Valley.

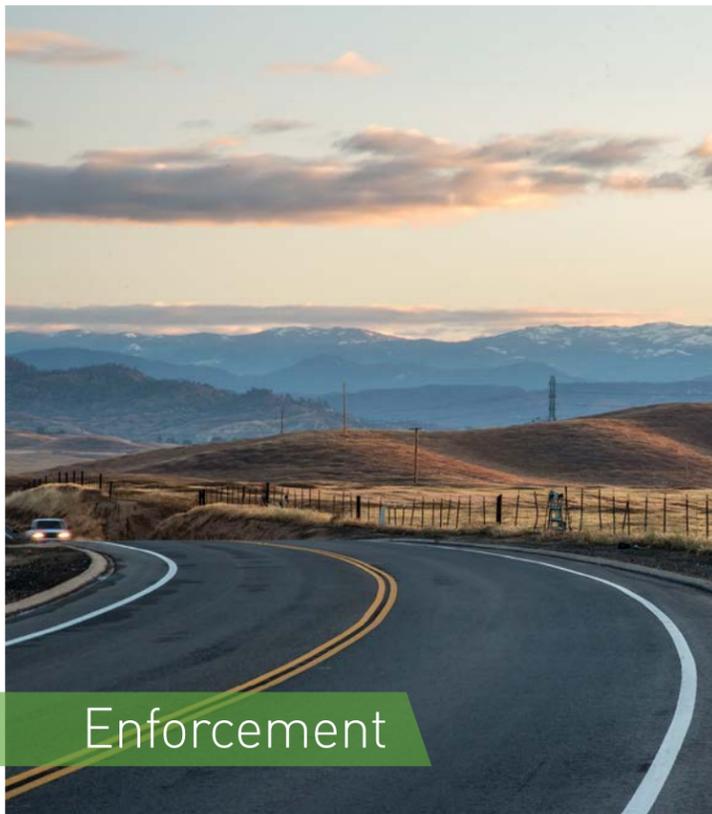
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) CEQA is the state law that requires projects' environmental impacts to be assessed and disclosed to the public, and that significant impacts be mitigated to a less than significant level when feasible. District staff carefully reviews land developers' project proposals, new stationary source permits, and attainment plans and rules, for compliance with CEQA requirements.

INDIRECT SOURCE REVIEW (ISR) Indirect sources are buildings or facilities, such as new residential housing or shopping center developments, that attract mobile sources of emissions but may not directly emit air pollution. The District's ISR staff analyzes project 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 measures are proposed by the applicant. Each year, the District publishes a report of ISR activity, and the emissions reductions generated by the program, and makes this annual report available to the public on our website.

REGIONAL GREENHOUSE GAS EMISSIONS INVENTORIES District staff has developed protocols and processes for preparing inventories of GHG emissions from local government operations and communities throughout the Valley's counties. These inventories are very important to cities and counties as they develop planning documents and climate change action plans. The District also offers a consistent, high quality, and low-cost emission inventory preparation service to agencies in need.

PERMITS by the Numbers 2016

2,708	Authority to Construct permits issued
55	New Permits to Operate issued
226	Permit-Exempt Equipment Registrations issued
301	New Title V permits issued to 3 facilities
5,002	Title V permit renewals issued to 69 facilities
641	Title V permit modifications
377	Conservation Management Practices plans issued
224	Emission Reduction Credit certificates issued or transferred
682	Toxic air contaminant risk-management reviews performed
5,607	Annual emissions inventory statements and surveys processed
2,036	California Environmental Quality Act (CEQA) review requests processed
338	CEQA comment letters sent
143	CEQA documents prepared
223	Indirect Source Review applications approved
371	Facilities subject to the Employer Trip Reduction Implementation Plans (eTRIP) Rule
279	Employer Trip Reduction Implementation Plans (eTRIP)



Enforcement



Compliance with federal, state and local air quality rules and regulations is ensured by operating a robust inspection program along with a full range of educational and compliance assistance activities.

INSPECTIONS The District routinely conducts detailed inspections and audits 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. Other emission-producing activities are inspected, 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 3,000 air pollution complaints from the public each year. These complaints are often the initial indicator of air quality issues in a community. As such, the District places the highest priority on responding to 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 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, emission inventory and technology advancement 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. This assistance and education is provided 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, the case may be transferred to District Counsel for more formal action. In 2016, the District processed more than 2,100 issued notices, transferred 206 cases to District Counsel, and collected more than \$5 million in settlements.

HEARING BOARDS The Hearing Boards are quasi-judicial panels that act independently of the District. They 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 2016, 105 variance petitions were heard at 52 hearings.

CONSERVATION MANAGEMENT PRACTICES PLANS The District is responsible for regulating and updating more than 6,000 CMP plans designed to decrease air pollution emissions from agricultural operations.

EMPLOYER-BASED TRIP REDUCTION (ETRIP) The District developed this innovative regulation that requires large businesses to develop strategies to promote and encourage carpooling and alternative transportation for their employees. To date, there are over 320 employers who have submitted and implemented eTRIP plans at their worksites. Valley employers have also developed, with the help of District staff, four new innovative eTRIP measures designed to encourage their employees to further reduce vehicle miles traveled (VMTs).

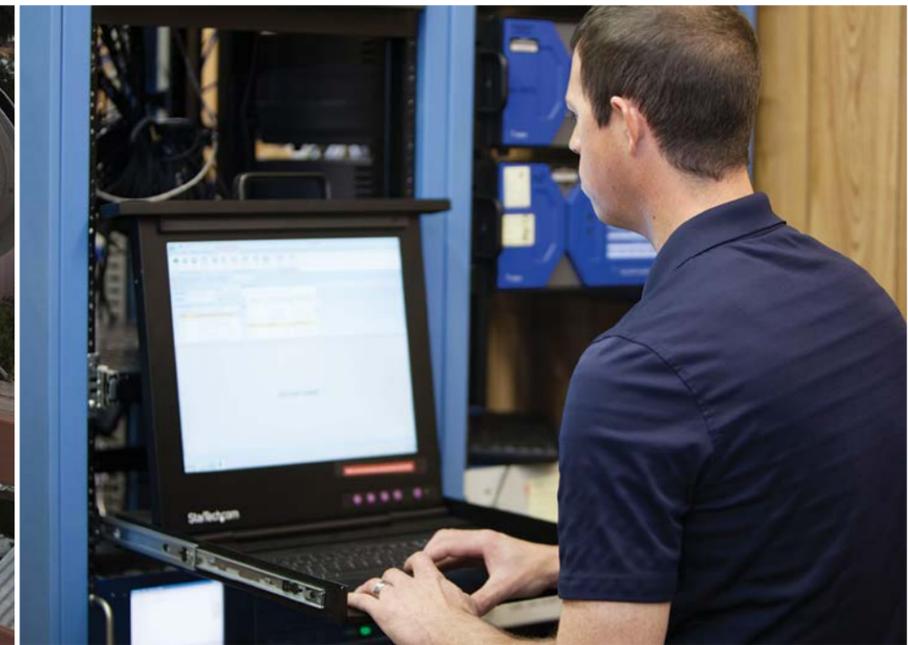
As an employer subject to the eTRIP rule, the District has been a role model for other facilities subject to the eTRIP rule. In fact, the District has implemented significantly more measures than required by the rule, significantly reducing VMTs. This experience has been critical in giving District staff valuable insight to provide the best possible customer service to help other employers implementing the rule requirements.

COMPLIANCE by the Numbers 2016

25,776	Units inspected
2,888	Public complaints investigated
1,172	Open burn sites inspected
2,765	Incentive funding units (i.e. trucks, engines) inspected
2,950	Asbestos projects reviewed and inspected



Air Monitoring



The District operates an extensive network of air quality monitors to support its mission of improving air quality and protecting public health. Using air quality readings from its real-time monitors, the District generates a daily Air Quality Index (AQI) forecast for each Valley county and hourly Real-time Air Advisory Network (RAAN) notices for schools and Valley residents. The District also 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 for remote diagnostics and monitoring equipment repairs. These advancements have and will further increase efficiency and reduce travel to distant monitoring stations. The District has completed its replacement of the air quality data management system with a more sophisticated program capable of automating the data review and validation process. This will continue to streamline quality control processes tremendously over the next year.

Monitoring equipment used to measure VOCs during the summer ozone season was recently updated to allow remote control and connectivity to the equipment from the District's office. This has greatly reduced required travel time to prepare the equipment needed for this special monitoring to occur during the summer months.

In addition, the District is planning for the deployment of new particulate matter monitoring equipment throughout the network, which is able to measure both PM10 and PM2.5 simultaneously within the same instrument in real-time. This deployment will allow the District to retire aging PM equipment in the network

and will consolidate its monitoring activities into fewer pieces of equipment, creating more efficiency within the air monitoring program.

The District is also in the process of establishing two near-roadway air monitoring stations in response to new federal mandates to measure nitrogen dioxide emissions. These stations will be located in Fresno and Bakersfield. The Fresno site was completed in 2015, and the Bakersfield site is planned to be online later this year.

AIRVISION DATA MANAGEMENT SYSTEM

In 2016, the District fully implemented the new air quality data management system (DMS), called AirVision, which has brought numerous benefits to the in-depth process of validating and ensuring quality control of the data being collected in the air monitoring network. This new system has continued to bring improvements to the District's processes in the following areas:

- Automation of quality assurance/quality control (QA/QC) data analysis using data validation protocols with suspect data warnings. Significant time was spent manually performing QA/QC data analysis as the existing DMS did not include the capability to automate portions of the process. The new DMS has allowed the District to remove the manual strip chart recorders, which has eliminated maintenance and manual QA/QC data analysis needs.
- Increased control and automation of station tasks (QC checks, calibrations, etc.) which has provided the ability to monitor the health parameters of instruments throughout the network, allowing for staff to be more proactive in maintenance tasks before a serious failure occurs.

- Allow for a quicker acquisition of air monitoring data from the latest hour throughout the network, allowing the District to provide data to the public in a more efficient manner through RAAN.
- The AirVision data acquisition system (DAS) accepts a digital signal from the analyzers in the network, as opposed to only analog with the previous system, which has improved the accuracy of the data being reported to the public and the EPA from the District's air monitoring network.

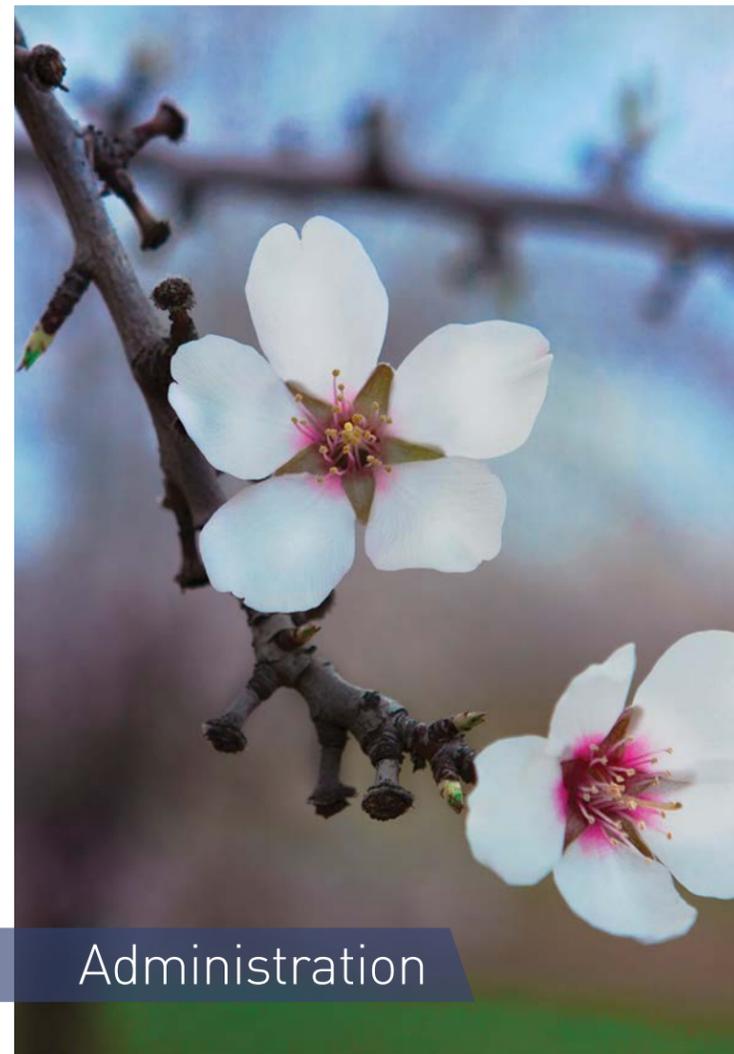
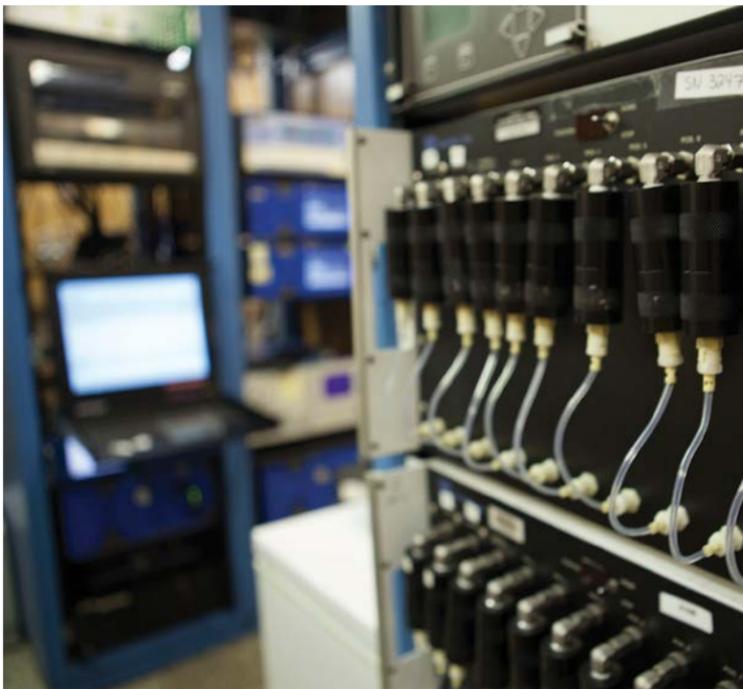
MODELING CENTER

In addition to the many attainment plans that the District has already developed and implemented, the District is also mandated under the federal Clean Air Act to develop and adopt several new particulate matter plans over the next year for inclusion in the State Implementation Plan (SIP), including the 2017 Integrated PM2.5 Plan.

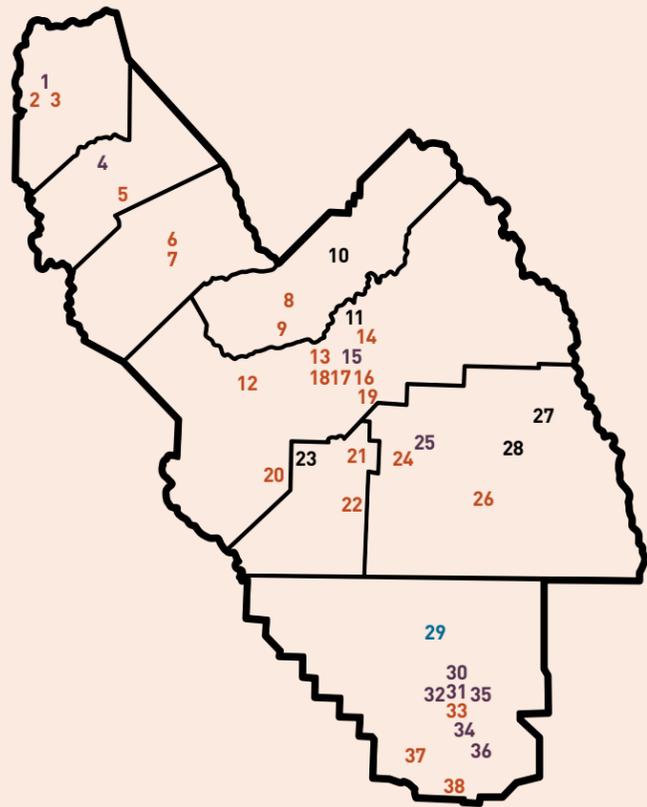
In the context of the District's air quality plans, modeling is necessary to provide estimates for the quantities of emission reductions necessary to attain the federal air quality standards. These models are also highly valuable for estimating the contribution of ozone and PM precursor emissions from outside the District. To support this important work, the District has designed, installed, and instituted the state-of-the-art San Joaquin Valley Air Quality Modeling Center. Through investment in extensive processing power, data storage capacity, and dedicated staff resources, the District's San Joaquin Valley Air Quality Modeling Center is one of the most advanced and powerful atmospheric photochemical pollutant modeling systems in the nation.

Air quality modeling uses highly complex computer programs, sophisticated computer hardware, and large databases to predict ambient pollution concentrations given future emission inventory and meteorological scenarios. These models bring together the science of emissions generation, meteorological transport, and atmospheric photochemistry in a "computerized laboratory" that can simulate air quality concentrations in the San Joaquin Valley. Many of the inputs and algorithms in these models were derived from the cutting-edge research performed through the San Joaquin Valleywide Air Pollution Study Agency.

The District will also be utilizing the modeling center to continue to develop and launch an updated version of RAAN that provides Valley residents real-time air quality information on a neighborhood by neighborhood level. The District has also made available and will continue to update the Web-based Archived Air Quality (WAAQ) System, which provides the public access to historical air quality information on a neighborhood by neighborhood level.



AIR MONITORING SITES IN OPERATION



SAN JOAQUIN COUNTY

- 1 Stockton-Hazelton: G,M,P,F,T
- 2 Tracy-Airport: G,M,P,F
- 3 Manteca: P,F,M

STANISLAUS COUNTY

- 4 Modesto-14th St: G,M,P,F
- 5 Turlock: G,M,P,F

MERCED COUNTY

- 6 Merced-M St: P,F
- 7 Merced-Coffee: G,F,M

MADERA COUNTY

- 8 Madera City: G,P,F,M
- 9 Madera-Pump Yard: G,M

Other¹: Chukchansi Indians

- 10 Picayune Rancheria: G,F,P,M

FRESNO COUNTY

Other¹: Monache Tribe/Foothill Yokut Indians

- 11 Table Mountain AMS: G,F,P,M
- 12 Tranquillity: G,F,M
- 13 Fresno-Sky Park: G,M
- 14 Clovis: G,M,P,F
- 15 Fresno-Garland: G,M,P,F,T,N,L
- 16 Fresno-Pacific: F
- 17 Fresno-Drummond: G,P,M
- 18 Fresno-Foundry Park Ave: G,M
- 19 Parlier: G, M
- 20 Huron: F, M

MONITORING OPERATION

- Sites operated by the District
- Sites operated by the District & CARB
- Sites operated by CARB
- Sites operated by other agencies:
1-Tribal, 2-National Park Service
- + Air Monitoring Station (AMS)

KINGS COUNTY

- 21 Hanford: G, F,M,P
- 22 Corcoran: F,M,P

Other¹: Tachi Yokut Tribe

- 23 Santa Rosa Rancheria: G,M,P

TULARE COUNTY

- 24 Visalia Airport: M
- 25 Visalia-Church St: G,F,M,P
- 26 Porterville: G,F,M

Other²

- 27 Lower Kaweah: A,G,M
- 28 Ash Mountain: A,G,M,F

KERN COUNTY

- 29 Shafter: G,M
- 30 Oildale: G,M,P
- 31 Bakersf-Golden/M St: F,P
- 32 Bakersf-Calif Ave: A,G,M,P,F,T
- 33 Bakersf-Muni: G,M
- 34 Bakersfield-Airport (Planz): F
- 35 Edison: G,M
- 36 Arvin-Di-Giorgio: G,M
- 37 Maricopa: G,M
- 38 Lebec: F,M

MONITORING DESIGNATIONS

- A Acid Deposition
- F Fine Particulate (PM2.5)
- G Gaseous
- M Meteorological
- P Particulate (PM10)
- N National Core
- T Toxins
- L Lead

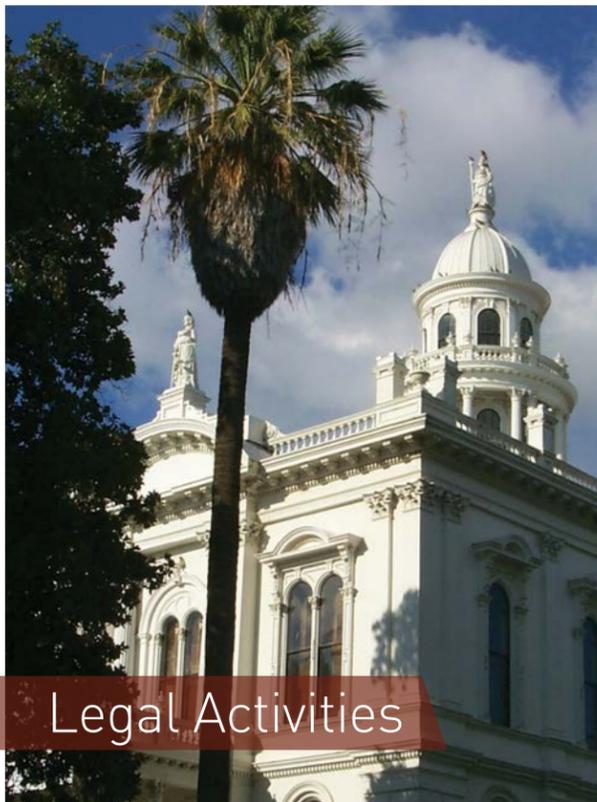
Administration

HUMAN RESOURCES

The District performs the full range of human resource support activities including recruitment, classification and pay, records management, legal compliance, labor relations, training and management/supervisory support. The District is responsible for minimizing risk through employee benefits, workers' compensation and wellness programs. In addition, the District administers and interprets human resources-related laws, rules and regulations in order to properly manage and direct its work force.

ADMINISTRATIVE SERVICES

The Administrative Services Division is responsible for all fiscal, grants administration, and general services related functions of the District. The fiscal services include preparation and control of the District's budget; responsibility for accounting and auditing all District revenues and expenditures; preparation of financial statements and related reports and incentive and other grant financial management, including state and federal grant reporting. The grants and incentive team is responsible for the development, implementation, and on-going administration of a variety of incentive grant programs. The general services functions of the Administrative Services Department include: responsibility for facilities management, fleet maintenance, purchasing, and risk management.



Legal Activities

The in-house District Counsel's office works cooperatively with the Compliance Department to enforce the District's rules and regulations designed to achieve and maintain healthy air quality for our Valley. Under state law, violations of a District rule by a business or individual residents can incur significant civil monetary penalties, and even criminal punishment. If the penalties for a violation are not settled through the informal mutual settlement process, the case will be transferred from the Compliance Department to the District Counsel's office for additional efforts to reach out to and try to communicate with the party who received the violation in an effort to resolve it without the need for court intervention. If the penalties for violating a District rule cannot be settled informally, the District Counsel's office will file a civil suit in Superior Court to seek the full measure of civil penalties.

If you receive a letter from the District's Counsel's office, don't be afraid to call! Most violations can be resolved informally for far less than if the case must go to court. In some cases installment payments of the penalty can be arranged.

FIREPLACE BURN VIOLATIONS GO TO SMALL CLAIMS COURT In 2016, the District Counsel's office initiated a new approach for pursuing civil penalties for violations of Rule 4901, which prohibits the use of wood burning fireplaces on days when wood burning is prohibited. Rather than filing these cases in superior court, the lawsuits for these types of violations are filed in small claims court. Doing so allows alleged violators a less intimidating forum for defending their case, and the District is able to take advantage of the forum for educating the public on the consequences if District rules are violated.

THE DISTRICT COUNSEL'S OFFICE REPRESENTS THE VALLEY'S INTERESTS IN STATE & FEDERAL COURT The District Counsel's office intervenes on behalf of the District where necessary to defend the District's rules, policies and attainment plans against legal challenges in state and federal courts, and to ensure that the District's unique circumstances are taken into account when courts reach decisions that impact the Valley's air pollution control strategies.

This past year, the District prevailed in *Medical Advocates for Healthy Air v. EPA*, a 9th Circuit court of appeal challenge to the District's attainment plan for the revoked 1-hour ozone standard. The District also joined with the South Coast Air Quality Management District to prevail in *WildEarth Guardians v. EPA*, a D.C. Circuit lawsuit which had the potential to impact the District's PM2.5 attainment plans.



Information Technology Systems

In 2016, the District once again focused on providing exceptional customer service through the use of latest information technologies in serving the public and improving the quality of life for Valley residents. In addition to the technology-based streamlining projects described elsewhere in this annual report, such as the "CEQA Connected" tool, the District initiated and completed many projects that not only introduced new technologies for internal District system improvements, but also improved services to the public and to the business community.

GRANT MANAGEMENT SYSTEM (GMS) UPGRADE

The District uses internally-developed GMS software to record, track, process and maintain about \$150 million in emission reduction incentive grant applications per year. This software allows the District to monitor the effectiveness of those grants. A new version was developed this year to provide more efficient service to District customers, the public and Valley businesses.

SAN JOAQUIN VALLEY AIR QUALITY MODELING CENTER

The District uses complex atmospheric air quality models to help understand the formation and dispersion of air pollutants throughout the Valley, and to help identify the sources of pollution that are impacting the health of Valley residents. In the past, the District has had to rely on the State of California to provide the most complex modeling services, causing delays in implementing important air quality modeling. This year, the District invested significant resources to improve the San Joaquin Valley Air Quality Modeling Center through substantial hardware and software enhancements.

ONLINE COMPLAINT SUBMITTAL

The District has developed an online air quality complaint submittal tool which allows the public to submit incidents of air pollution concerns or complaints via the Web from any smart phone (download the "Valley Air" app) or computer (www.valleyair.org). Upon submission, the system provides the complainant a confirmation email and automatically notifies the appropriate District staff for follow-up and investigation. The complainant can upload photos and request follow-up emails or phone calls. This new system supplements the existing manual complaint submittal, logging, and assignment systems, provides speedier response times, and is a more efficient way for the public to report air quality concerns.

ONLINE DUST CONTROL PLAN SUBMITTAL

District regulations require that businesses control the dust generated by construction and other operations. These plans must be submitted and approved prior to performing those operations. In keeping with the District's core value of providing the best possible customer service, the District has developed an Online Dust Control Plan submittal system for businesses. This new system can be found at www.valleyair.org, and replaced a paper-based process. The improved data-checking processes and electronic response systems have reduced dust control plan response time significantly and minimized business downtime as a result.

MAJOR TECHNOLOGY UPGRADES IMPROVE EFFICIENCY IN PROVIDING DISTRICT SERVICES

The District implemented three major technology upgrades this year to improve service to the public by speeding up District information technology systems. The first project was a significant upgrade to the District's core virtual machine server infrastructure, which doubled the overall performance and responsiveness of the system and its available resources. The second project upgraded all of the local area network switches in the District's central office, which removed performance bottlenecks from workstation connectivity and added high capacity links to server infrastructure. Finally, the District is in the process of updating its operating systems to Windows 10. These enhancements resulted in quicker network connections for District staff, faster District website connectivity for the public, and a more reliable and secure technology infrastructure for all of the District's needs.



Outreach & Communications

The District's Outreach and Communications Department is a comprehensive communications team staffed by individuals with unique talents and expertise. The OC team continues to set the standard for innovative, effective and efficient outreach strategies and campaigns. They proudly work closely with the media, public, and local businesses to educate, strategize, and communicate the District's vital message whether it is through bilingual messaging or through social media.

IN THE NEWS In 2016, the Valley Air District submitted a petition to the Federal EPA requesting that the EPA take regulatory action to reduce air pollution from heavy duty trucks and locomotives. This move was necessary as the District was beginning the public process to develop an air quality attainment plan to meet the latest health-based standards for particulates and ozone as mandated under federal law. The new federal standards require another 90% reduction in fossil fuel combustion emissions. With Valley businesses already subject to the toughest air regulations in the nation, the needed reductions can only come from mobile sources that fall under the EPA's legal jurisdiction.

As required by federal law, the Valley Air District also adopted an updated health-protective scoring system set in place by the EPA. EPA established an AQI scale nationally to provide a consistent way to report and understand air quality across the country. In October 2015, EPA lowered the federal 8-hour ozone standard from 75 parts per billion (ppb) to 70 ppb and in turn changed the AQI scale. Under the new EPA scoring system, days that previously were classified as "good" air days (0-50 AQI) may now be ranked as "moderate," and some "moderate" days may now be ranked as "unhealthy for sensitive groups." The formulas used for calculating AQI are tied to the national ambient air quality standards set by EPA for each pollutant. Therefore, as standards change, the calculated AQI changes accordingly.

OC by the Numbers 2016

190	Media calls
1085	Public calls
40	News Releases
131	Presentations/ Outreach Events

HEALTHY AIR LIVING SCHOOLS The District's mission to protect public health by improving air quality in the San Joaquin Valley relies on the public's awareness and understanding of the District's air-quality improvement programs. The District has been able to recruit hundreds of schools into the District's broad-based Healthy Air Living Schools program. The focus is on transitioning the schools from the retired Air Quality Flag program to the more health-protective RAAN program which notifies schools when air quality is not conducive to outdoor activity. The program educates school staff, students and even parents about maintaining and improving the health of the Valley's students. For several years now, the District has engaged schools across the San Joaquin Valley by providing educational materials, No-Idling signs and specific RAAN workshops to educate administrators and teachers on the health protective benefits of RAAN. Another beneficial tool for schools is the customizable RAAN widget, which allows schools to display their real-time, local air quality data on their school's homepage.

HEALTHY AIR LIVING KIDS' CALENDAR The free 2016 Kids Calendar was such a success that the District quickly exhausted its supply of 20,000 copies. Distributed to Valley schools, health care organizations, businesses, and individuals, the kids' calendar continues to set the standard for engaging the Valley's children in an ongoing discussion on how they can contribute to Healthy Air Living.

HEALTHY AIR HEROES The District's free, educational kids' activity book got a complete facelift in 2016. The newly named "Healthy Air Heroes" activity book contains coloring pages, word scramble, word search, and other kid friendly activities that make it highly interactive for children K-6. Designed to explain the struggles the Valley faces with air pollution, the book showcases four everyday common animals that explain how children can help make the air healthier. Crafted in-house, this creative activity book compels kids to want to be just like the Healthy Air Heroes. The District conducted a naming campaign through social media and four Valley children were selected as winners. The Healthy Air Heroes are Flash, Pollution Buster (PB) Jay, Chip and Sunny.

PRESS RELEASES, INTERVIEWS AND MEDIA APPEARANCES Effectively and accurately representing the District's position on virtually any subject or policy, with polish and professionalism, the OC team skillfully delivers public information through radio, TV and webcast appearances. In both English and Spanish, the staff contributes commentary for press releases and other materials that frequently are featured in the Valley's largest, most-read publications and websites.

PRESENTATIONS In addition to producing events on behalf of the District such as Bike to Work events and public workshops, OC staff attend hundreds of off-site events each year throughout the Valley ranging from school-based presentations on air quality, company health fairs, Chambers of Commerce and Rotary Club presentations, to large events attended by thousands of Valley residents. The outreach staff is consistently in demand for the most recent air quality news and information.





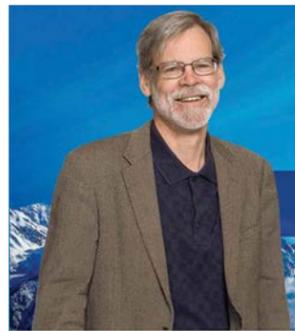
**BURN
CLEANER**
**GET
PAID**

Get up to
\$3,000
in Incentives!

Get paid to replace your old wood-burning stove,
fireplace insert, or open-hearth fireplace!

First-come, first-served – SO HURRY!

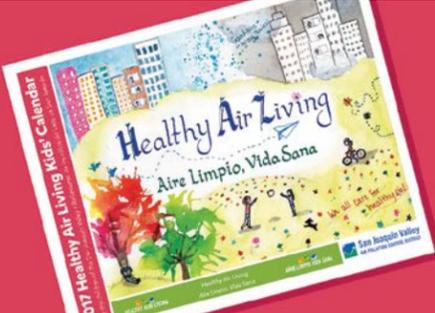
Visit www.valleyair.org/burncleaner
for program rules, information and list of participating retailers.

Check Before You Burn
1 800 SMOG INFO ValleyAir.org

Alexander Sherriffs M.D., Board Member





CALL for ENTRIES!
Students must submit artwork by Oct. 2, 2017!
www.valleyair.org/kidscalendar

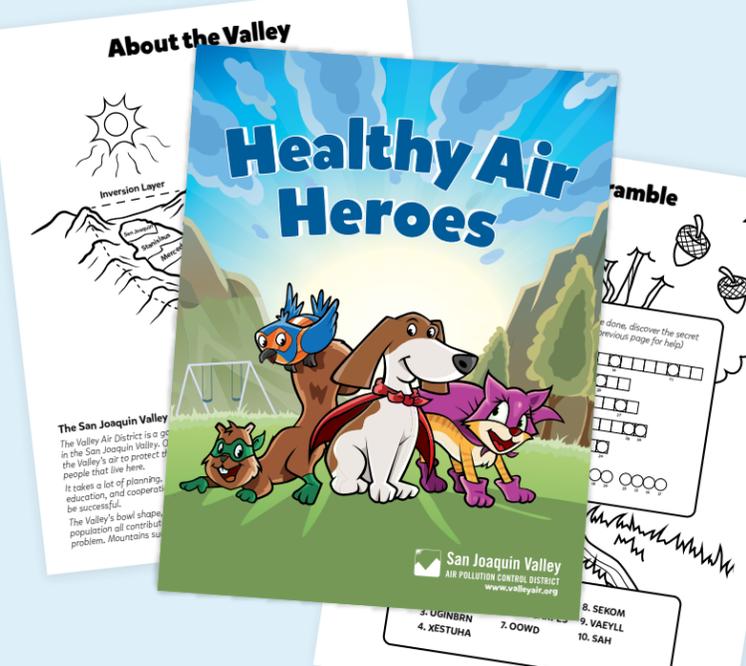



Start using electric cars to keep fresh air.
Empieza a usar autos electricos para seguir con aire fresco.

Become a Healthy Air Hero!

The District now offers a FREE activity book for students Kinder through 6th grade.

Request yours today by emailing public.education@valleyair.org.



About the Valley

Healthy Air Heroes

The San Joaquin Valley Air Pollution Control District is a great organization in the San Joaquin Valley. Our job is to protect the Valley's air so people that live here can breathe clean air. It takes a lot of planning, education, and cooperation to be successful. The Valley's bowl shape, population all contribute to the problem. Mountains...

San Joaquin Valley Air Pollution Control District
www.valleyair.org



The District funded 2,498 **CLEANER WOOD and GAS STOVES & INSERTS** with \$4,295,900

PUBLIC & PRIVATE INVESTMENT to Reduce Air Pollution Through Voluntary Incentives

In the past 10 years, funding for voluntary incentive grants has steadily increased. This reflects the ongoing commitment of the District, businesses, farmers, and Valley residents in making clean air investments that improve the quality of life for all.

Grant recipients are typically required to provide a significant match. For 2016, more than **\$141.2 MILLION** in District and private funding was invested in clean air projects that reduced more than **6,300 TONS** of emissions in the Valley air basin.

633 TRACTORS were replaced for a total of nearly \$29 Million




More than \$20 Million was used to replace 463 **HEAVY DUTY DIESEL TRUCKS**

The District funded 1,754 **CLEAN AIR VEHICLES** with over \$9 Million



The District issued over **4,300 REPAIR VOUCHERS** at 23 TUNE IN, TUNE UP Events



22,665 VANPOOL VOUCHERS were issued with \$1,363,140

INCENTIVES

BURN CLEANER PROGRAM

Since 2009, the District has offered incentives through its Burn Cleaner Program for the change-out of old, high-polluting open-hearth fireplaces or uncertified devices with new cleaner, certified units. It has provided the resources necessary for thousands of Valley residents to make positive changes in their residential wood-burning practices and is a significant part of the District's overall strategy to reduce harmful wood-smoke emissions that directly and adversely impact the health of Valley residents. Given the potential high cost to replace older units, the program includes a specific focus on low-income residents by providing higher incentives and expanded eligibility criteria that make the purchase of a new, cleaner unit more economically feasible. In 2016, the District awarded almost 2,500 vouchers for approximately \$4.3 million.

CLEAN GREEN YARD MACHINES PROGRAM

Old gas-fueled lawn mowers generate significant emissions in comparison to their electric counterparts. Valley residents are directly exposed to these harmful emissions since lawn mowers are often used within residential neighborhoods. Since 2001, the District has provided incentives to Valley residents to replace their old gas-fuel lawn mowers with new electric units through its Clean Green Yard Machines Program. The program has been widely popular and has given thousands of Valley residents the opportunity to get involved and be a part of the solution to improve the region's air quality. In 2016, the District has helped replace 200 old gas-fueled lawn mowers with electric mowers for over \$42,000.

DRIVE CLEAN! REBATE PROGRAM

In May 2014, the District adopted a comprehensive action plan promoting the use of clean passenger-vehicle technology. A central focus in this plan was to increase the adoption of electric and other advanced vehicle technology in the Valley where feasible through the San Joaquin Valley Plug-in Electric Vehicle Readiness Plan while recognizing that a one-size-fits-all approach will not work in the Valley. By providing significant incentives for Valley residents to purchase or lease these clean vehicles, the District is eliminating one of the key barriers toward greater acceptance and adoption of this technology: the up-front cost. The District's Drive Clean! Rebate Program provides Valley residents up to \$3,000 toward the cost of purchasing or leasing plug-in electric vehicles (PEVs), plug-in hybrid vehicles and other alternative fuel vehicles. The District's rebate, coupled with various other state and federal rebates and tax incentives, provide Valley residents with the most beneficial suite of incentives for clean passenger vehicles in the entire state. This program continued to be extremely well-received by the public in 2016 with more than 1,400 rebates issued in the Valley.



CHARGE UP! PROGRAM

To support the growing number of clean plug-in electric vehicles (PEVs) and plug-in hybrid electric vehicles (PHEVs) in the San Joaquin Valley, the District launched its Charge Up! Program on June 1, 2015 to fund the purchase and installation of publicly accessible electric vehicle chargers. The program offers Valley businesses and public agencies up to \$6,000 for a Level 2 charger and up to \$25,000 for a Level 3/DC Fast Charger. The goal of this program is to further strengthen the Valley's electric vehicle charging network to ensure the technology's sustainability in the region and ease "range anxiety" that concern many existing and potential electric vehicle owners. Through the program, the District strives to build a robust charging network throughout the San Joaquin Valley which will support the Governor's goal of 1.5 million electric vehicles in California by 2025. In 2016, the District awarded more than \$852,000 in incentives for the installation of 91 Level 2 and Level 3 electric vehicle chargers. The District is currently developing new ways to leverage its Charge Up! Program by working with several different Valley entities to take advantage of current funding opportunities with the California Energy Commission and the California Air Resources Board to further meet the electric vehicle goals in California.

AG TRACTOR REPLACEMENT PROGRAM

In 2009, the District, in partnership with the USDA Natural Resources Conservation Service (NRCS) replaced 118 old, high polluting tractors with new cleaner tractors. This pilot program proved to be a cost-effective way to reduce emissions from agricultural equipment and was extremely well received by the agricultural industry. Since 2009, with annual funding of \$20 to \$30 million and substantial investment from the agricultural industry, the District has replaced more than 3,250 high-polluting tractors in the Valley and has reduced more than 20,600 tons of harmful emissions. To ensure continued participation and success of the program, the program guidelines were amended in January 2017 to create new incentive levels for specialty agricultural equipment and adjust the incentive levels to up to 60% of the cost of the new equipment. In 2016, the District replaced 633 tractors for over \$28.86 million and reducing 3,114 tons of NOx emissions in the Valley.

TRUCK VOUCHER PROGRAM

The Board authorized the creation of the Truck Voucher Program on March 15, 2012 to ensure that Valley-based small truck fleets had ample access to incentive funding to replace their aging trucks prior to the rule compliance deadlines. The Truck Voucher Program operates as a partnership with local Valley truck dealerships. This program has been successful in facilitating the early replacement of over 1,250 small fleet trucks throughout the Valley. In late 2016, the Governing Board approved amendments that expand the program to any compliant truck or truck fleet located within the District as well as other administrative enhancements that will ensure that this program remains an effective and efficient option for Valley truckers.

SOURCES OF POLLUTION

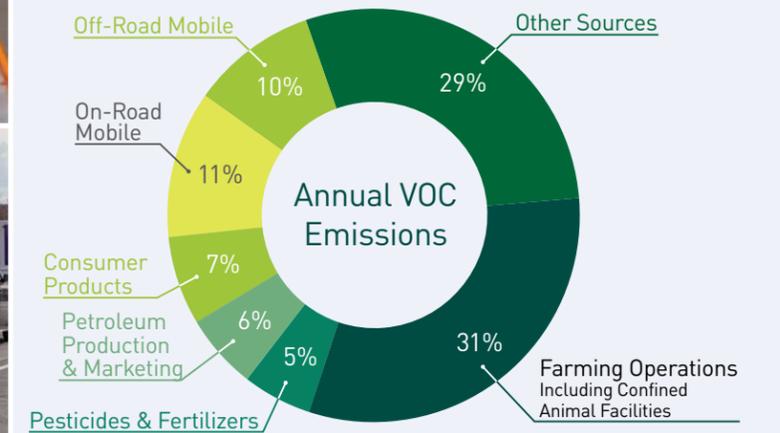
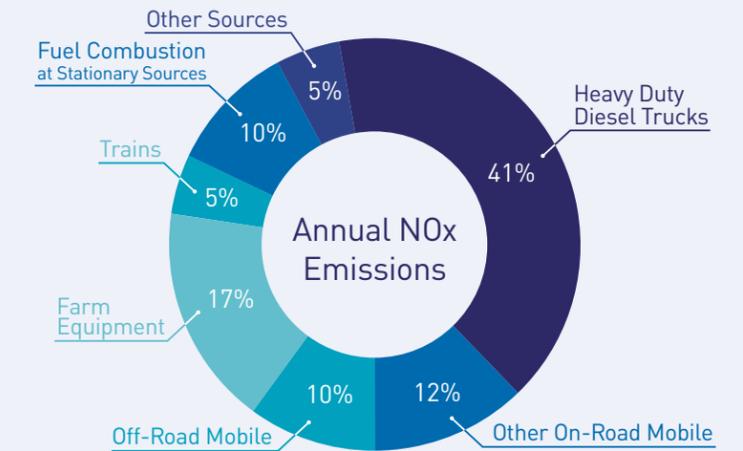
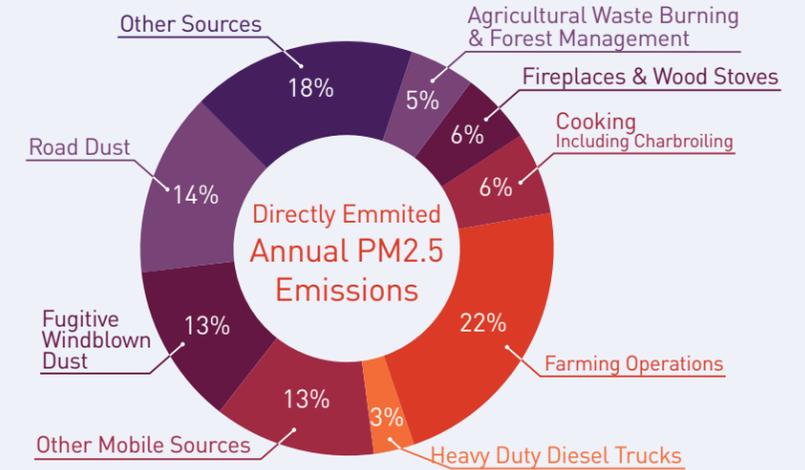
Each year, the District collects emissions and process data from more than 5,000 facilities and other information sources, calculates each facility's annual emissions, and reports the emissions to the California Air Resources Board. This emissions inventory is used to calculate total Valley emissions and acts as a cornerstone of the District's efforts to reduce air pollution through attainment plans and emission control strategies.

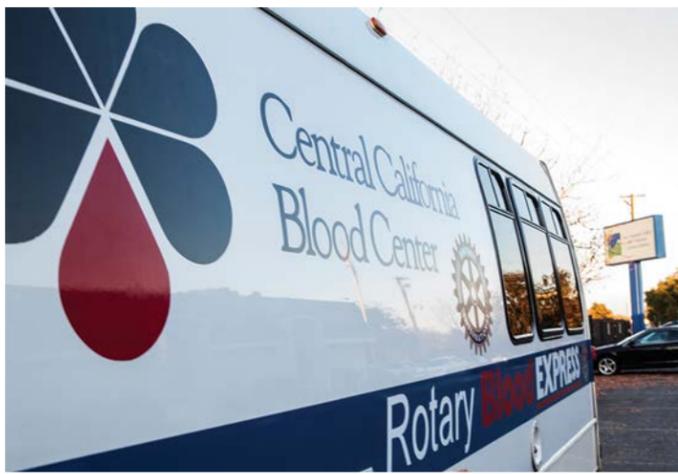
Despite major improvements in air quality, the Valley still faces significant challenges in meeting the federal, health-based, 8-hour ozone and PM2.5 standards. These challenges are the result of the Valley's unique geography, topography and climate, which create ideal conditions for forming and trapping 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.

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). PM can be emitted directly (primary PM, such as dust or soot), and can form in the atmosphere through photochemical reactions or 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 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 District's air quality plans, available at www.valleyair.org.





On the Radar

As we look to the future, the challenges ahead may prove to be the most difficult ones yet in our journey towards meeting the federal air quality standards. With the Valley implementing one of the strongest regulatory and incentive-based air pollution control programs in the nation, we have now reached attainment of the federal health-based standards for carbon monoxide, PM10 and 1-hour ozone. We have reached a point where the pollution from Valley industries, businesses, farms and vehicles are at historic low levels. Meeting the latest federal standards, however, requires enormous additional reductions in emissions from all sectors. Having already reduced stationary source emissions by over 80% and mobile source emissions by nearly 60% despite significant economic and population growth over the past two decades, obtaining additional reductions in the timelines prescribed in the federal mandates will be extremely difficult if not impossible.

The bulk of the District's energy and resources in the coming year will be spent on designing, adopting and implementing strong measures to reduce air pollution. Towards that end, the District will engage in a robust public participation effort soliciting input in recommendations from the Valley businesses and residents. The District working with Valley stakeholders will also leave no stone unturned in communicating the Valley's needs and challenges to our elected officials and policy makers at the state and federal level. As it is becoming more evident that the Valley cannot reach the federal health-based standards with local regulatory measures alone, these efforts will also include advocacy for funding and regulatory assistance from the state and federal government.

In the coming year, the District will also need to play an active role at the state level as the future of the state's Cap and Trade program will be deliberated and decided upon. To date the District has been able to successfully compete and receive significant dollars from Cap and Trade which have been invested in the Valley's communities with positive economic impact and with effectiveness in reducing local air pollution. Access to such funds can provide cost-effective reductions in emissions while minimizing the regulatory burden on Valley businesses. Valley elected officials and policymakers can play a key role in shaping the future of the Cap and Trade program.

Finally, we cannot underestimate the devastating impact on the Valley's welfare and well-being if federal sanctions are imposed due to failure to meet unreasonable mandates. Therefore, the District will continue to educate Valley residents and policymakers of the potential impacts and seek their assistance in bringing about necessary changes.

GIVING BACK

Southern Region District staff volunteered their time on August 5th to serve dinner at the Bakersfield Homeless Center. Employees also brought donations of school supplies and clothing for kids living at the center, in preparation for the upcoming school year. The Bakersfield Homeless Center provides shelter and resources to Kern County's homeless and at-risk population, providing warm beds for more than 2,000 residents. Additionally, staff held an office fundraising event, raising \$109 for Habitat for Humanity.

Central Region District staff had the pleasure of hosting a coat drive for the Poverello House in Fresno. Staff worked together to donate and individually gift wrap 150 new coats for families that would be needing services this winter through the Poverello House. Central Region District staff also held several blood drives throughout 2016 and contributed more than 52 pints of blood, saving the lives of 156 people.

The Emergency Response Team of the Stanislaus County Child Protective Services had just run out of "Comfort Kits" when volunteers from the District's Northern Region office presented the team with 48 new kits filled with nightlights, stuffed animals, socks, and other 'comfort' items for children who have been removed from their homes under traumatic circumstances. In May 2016 Habitat for Humanity welcomed our Northern Region volunteers to clear land for their newest housing project. Armed with shovels and rakes, District staff and their families set about removing overgrown weeds and garbage. After a day of hard work and fun the lot was cleared and ready for the build.



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

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