

California's Progress Toward Clean Air



A Report by the California Air Pollution Control Officers' Association

2015

CALIFORNIA'S AIR DISTRICTS

Air Pollution Control Officers and Air District Websites

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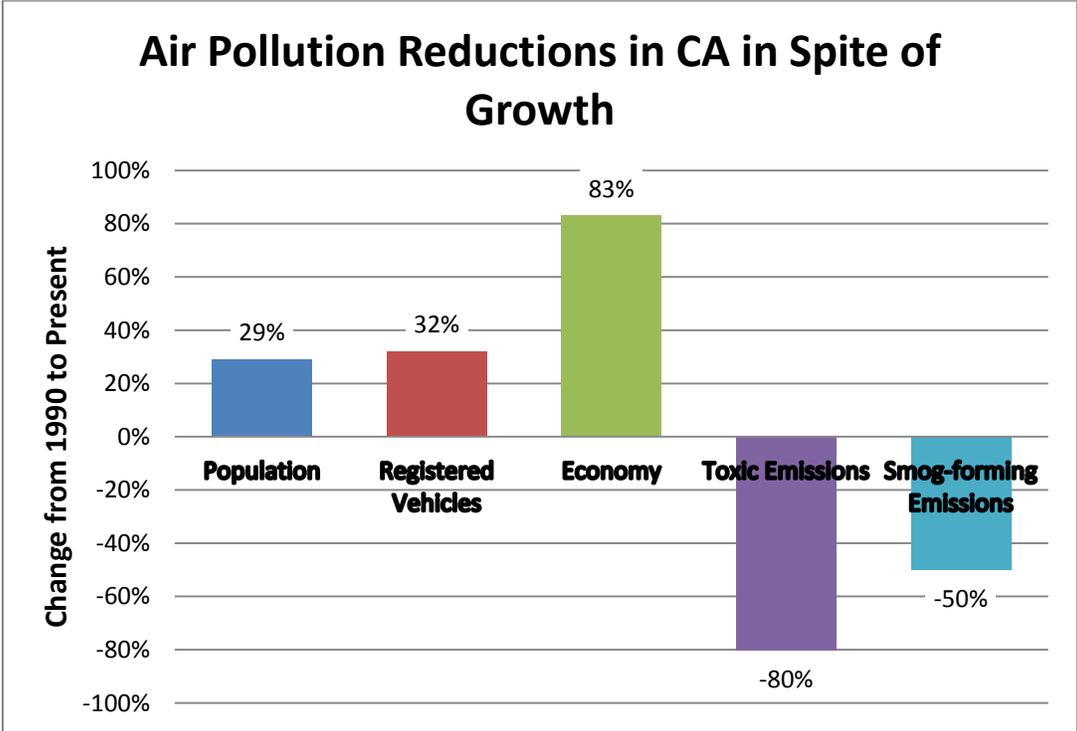
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EXECUTIVE SUMMARY

The California Air Pollution Control Officers' Association (CAPCOA) represents the 35 local air districts throughout California. This report provides information from these agencies on California's progress toward cleaner air in 2014 as well as challenges that remain in meeting health-based air quality standards in the future.

The activities of the local air districts along with the air quality statistics documented in this report demonstrate an ongoing trend of air quality improvement across the state. These improvements have occurred in spite of significant growth of the state's population, economy, and registered vehicles over the same time period. Since 1990, California's population increased by 29 percent, registered vehicles increased by 32 percent and the economy grew by 83 percent. During the same time span, statewide emissions of smog-forming pollutants decreased by over 50 percent. In addition, emissions of toxic air contaminants and the resulting cancer risk to residents have been cut by 80 percent since 1990. The California Air Resources Board estimates that 63 percent of Californians now reside in areas that meet the federal standard for ozone, compared to only 24 percent in 1990.¹



¹ <http://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm>

These substantial reductions in harmful air pollutants are the result of a comprehensive air pollution control strategy implemented by local air districts and the state of California. Thanks to California's strong vehicle emissions requirements and motor fuel standards, new cars and trucks emit only a small fraction of the pollution they did 20 years ago. Likewise, local air districts have adopted, implemented and enforced regulations that have reduced emissions from most industrial and commercial sources by 90 percent or more. Through state funding, local air districts also have provided hundreds of millions of dollars in incentives and grants to replace old, dirty diesel trucks and other equipment with cleaner-burning models.

Although the progress toward clean air has been quite remarkable, the quest for clean air continues. The challenges ahead seem daunting: California's current drought has significantly impacted levels of PM2.5; climate change threatens to undo years of clean air progress and ongoing medical research indicates that the health effects of air pollution have been previously underestimated. As a result, the federal government has proposed once again to strengthen the health-based standard for ground-level

ozone. Achieving this new standard will require further reductions of smog-forming pollutants on top of regulations that are already among the strictest in the nation. In areas with the highest level of air pollution, including Southern California and the San Joaquin Valley, achieving proposed air quality standards calls for a transformation of our combustion-driven society to zero- and near-zero emission sources of transportation and energy.

Unhealthful air quality causes myriad health problems for Californians, from increased hospital and emergency room visits to increased risk of heart attacks and a higher number of premature deaths. Conversely, as air quality improves, Californians are living healthier lives. A study just published in the *New England Journal of Medicine* showed that air quality improvements in Southern California were associated with stronger lung growth in youth. Earlier studies have shown that the economic benefit of these expected health benefits is greater than the costs of air pollution control.



AIR DISTRICTS' SUCCESSES IN 2014

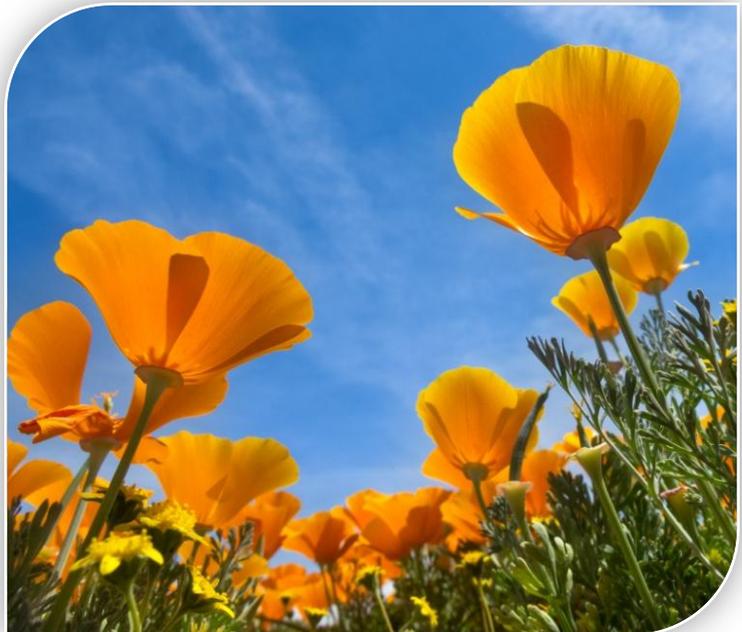
In addition to the overall long-term trend of improved air quality across the state, some air districts met air quality standards for PM_{2.5} and PM₁₀ in 2014. The Yuba City-Marysville area of the Feather River air district achieved the 2006 federal PM_{2.5} standard. For PM₁₀, the Trinity and Del Norte counties of North Coast Unified air district were designated in attainment of the federal PM₁₀ standard.

Some air districts also succeeded in meeting ozone targets. The Antelope Valley and Mojave Desert areas both attained the former federal 1-hour ozone standard. The Sutter Buttes area of the Feather River air district attained the federal 2008 8-hour ozone standard. For the San Diego area, 2014 was a record year as the county achieved its lowest ozone design value ever (79 ppb over an 8-hour period). For the second time in recorded history, the San Joaquin Valley experienced another full year in 2014 with no violations of the 1-hour ozone standard (second year in a row). Three counties came close to achieving the current ozone standard: San Luis Obispo area had three, Tuolumne County had two and Yolo-Solano had just one exceedance of the federal 8-hour ozone standard in 2014.

In 2014, the California Air Resources Board (ARB) reclassified Glenn County in attainment of both the state ozone and PM_{2.5} standards.

PUBLIC HEALTH BENEFITS OF CLEAN AIR

Air pollution has serious health repercussions for Californians. Exposure to fine particulate pollution causes myriad health impacts, particularly for the respiratory and cardiovascular systems. Exposure to fine particulates aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease (COPD). A broad body of scientific research has also linked



PM2.5 exposure to cardiovascular diseases.²

According to the most recent calculations from the ARB, exposure to current levels of PM2.5 is responsible for an estimated 7,300 cardiopulmonary-related deaths per year in California.³ The bulk of those deaths occur in the most polluted areas of the state: the South Coast air basin (4,300 estimated deaths per year) and the San Joaquin Valley (1,300 estimated deaths per year). Improving our air quality will save lives.

Cleaner air also reduces hospital visits. A 2010 study estimated that air pollution in the San Joaquin Valley and South Coast air basin was responsible for 30,000 hospital visits from 2005-2007. Statewide, the impacts of air pollution caused an estimate \$193 million in medical costs during that three-year period.⁴

A recent study by University of Southern California (USC) scientists responsible for the landmark Children's Health Study found that lung growth improved as air pollution declined during a 20-year-period for children aged 11 to 15 in five Southern California communities.⁵

Finally, there is a substantial economic benefit in cleaning up our air. A 2008 study estimated \$22 billion annually in monetary value associated with air pollution health effects in the South Coast Air Basin and \$6 billion annually in the San Joaquin Valley.⁶ The Bay Area AQMD's 2010 Clean Air Plan estimates up to \$1.5 billion in benefits annually in reduced medical costs, increased life expectancy and reduced impacts of climate change as air pollution control measures are implemented.⁷ Multiple studies have shown that the economic benefits of reduced medical costs, increased productivity due to improved health and decreased mortality rates far exceed the cost of pollution control measures.

² U.S. EPA. Integrated Science Assessment for Particulate Matter (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/139F, 2009 See: <http://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=216546>

³ "Estimated cardiopulmonary mortality by air basin associated with PM2.5 exposure." California Air Resources Board, Health and Exposure Branch. February 3, 2015.

⁴ RAND Corporation. "Dirty air in California causes millions worth of medical care each year, study finds." Science Daily. Science Daily, 5 March 2010. See: <http://www.sciencedaily.com/releases/2010/03/100302083456.htm>

⁵ "Association of Improved Air Quality with Lung Development in Children," W.J. Gauderman et al., New England Journal of Medicine, Vol. 372, No. 10, March 5, 2015

⁶ Hall, J., Brajer and F. Lurmann. (2008). Benefits of Meeting Federal Clean Air Standards in the South Coast and San Joaquin Valley Air Basins. California State University-Fullerton. See: http://publichealth.lacounty.gov/mch/AsthmaCoalition/docs/BenefitsofMeetingCleanAirStandards_11_06_08.pdf

⁷ Bay Area 2010 Clean Air Plan (2010). Bay Area Air Quality Management District. See: <http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans/Clean-Air-Plans.aspx>

CHALLENGES AHEAD

California's air districts will face additional challenges in 2015 as they continue working to reduce emissions and improve public health.



CALIFORNIA'S ONGOING DROUGHT

The persistent drought plaguing California affects our air quality. The absence of rain leads to drier ground surfaces, and thus vehicles kick up more fugitive dust on roads and strong winds blow loose soil from areas such as dry lakebeds and fallow fields. Fugitive dust can boost concentrations of both coarse and fine particulates. This problem is most acute in the more rural areas of California, where there are tens of thousands of miles of

unpaved roads.

The drought also increases the need for mechanical water pumping in lieu of natural irrigation, and many pumps throughout the state still operate on highly polluting diesel fuel. Drier conditions also reduce the natural cleansing effect of precipitation. And the lack of windy, unstable weather conditions during storms can result in longer episodes of stagnant air when particulate pollution builds up and reaches unhealthy levels.

Finally, the drought has been linked to increased frequency and intensity of wildfires throughout the state. Wildfire smoke contains toxic air contaminants and can quickly create high levels of fine particulates. In addition, large fires can also boost ozone production.

NEW SCIENCE OF TOXIC RISKS

California has successfully reduced risks from airborne toxic pollutants by 80 percent since 1990. But we are learning more about how toxic air pollutants affect humans.

Research analyzed by the state's Office of Environmental Health Hazard Assessment (OEHHA) has found that previous methodologies underestimated the health risk of cancer-causing air pollutants. While emissions of these pollutants have been ratcheted down significantly, the new methodologies suggest that continued efforts are vital to lower the risk of airborne toxics.

Individual air districts, CAPCOA and the ARB are working together to develop policies, rule amendments and outreach plans to address these new findings and better protect public health from toxic air contaminants.

TOUGHER FEDERAL OZONE STANDARDS

In November 2014, based on a wealth of scientific evidence, the U.S. Environmental Protection Agency (U.S. EPA) proposed lowering the federal 8-hour standard for ground-level ozone to make it more health-protective. EPA proposed changing the standard from the current 75 parts per billion (ppb) to a level in the range of 65 ppb to 70 ppb. Since most populated areas of California do not meet the current 8-hour ozone standard, attaining a lower standard will be even more difficult and the challenges numerous.

The new standard, expected to be finalized in October 2015, will demand that the U.S. EPA, the ARB and the air districts go even further to research the issues, analyze data and adopt



stricter emissions limits, develop incentive programs to achieve voluntary emissions reductions and inform the public of strategies to improve our air quality. Though compliance deadlines will be set years into the future, interim timelines for current implementation plans add to the pressure to move quickly.

IMPACTS OF CLIMATE CHANGE

The Earth's atmosphere is getting warmer due to man-made emissions of carbon dioxide and other greenhouse gases (GHGs). The increased atmospheric levels of greenhouse

gases along with other climate forcers such as black carbon are causing global warming that is already being experienced in California and throughout the world. We are now forced to adapt to climate changes including rising sea levels, disruptions in natural resource availability, increases in the frequency and intensity of wildfires, severity of droughts, extreme weather patterns and much more.

Climate change also has a direct impact on air quality in California, primarily through increasing atmospheric temperatures and changing weather patterns. Research suggests that global warming caused by world-wide emissions of GHGs impacts ozone levels through any and all of the following:

- higher temperatures;
- longer and more frequent heat waves;
- more frequent severe temperature spikes;
- increased length of the ozone season;
- increased VOC emissions from trees and other biogenic sources of VOCs, such as isoprene and monoterpenes, due to higher temperatures;
- increased evaporative emissions of VOCs from storage tanks, solvents, motor vehicles, and other sources;
- change in the ratio of VOC to NO_x in the atmosphere;
- increased atmospheric water vapor, higher humidity; and
- reductions in wind and vertical mixing that disperse pollutants.

All of these impacts will result in more frequent multi-day, high-ozone episodes.

Climate change is also likely to increase PM and other pollutants as well. For example, increased demand for air conditioning in buildings and vehicles may cause higher emissions of direct PM and PM precursors such as NO_x and SO₂ from power plants and vehicle engines. Drought may lead to higher emissions due to fugitive dust and mechanical irrigation. Increased wildfire activity could also make dangerous smoke impacts more common.

The impacts of climate change have the potential to slow or reverse the remarkable progress made by local air districts and the state to clean up our air.

AIR DISTRICT UPDATES

The following summaries are provided by California's local air districts and highlight the successes and future challenges facing the air districts in meeting air quality standards.



ANTELOPE VALLEY AIR QUALITY MANAGEMENT DISTRICT

In 2014, the Antelope Valley's air quality attained the 1-hour National Ambient Air Quality Standard (NAAQS) for ozone, after three consecutive calendar years of certified air monitoring data collected within the Antelope Valley Air Quality Management District's boundaries. Although the 1-hour standard was revoked by the U.S. EPA in 1997 and replaced by a more stringent 8-hour standard, many regions - including the AVAQMD - continued to have regulatory obligations under the former standard. Due to the continued impact of transport emissions on the region, the recently proposed 65 to 70 ppb federal ozone standard is likely to present a renewed challenge to the air district's attainment status.

The transfer of emission reduction credits required for the construction of the Palmdale Hybrid Power Plant remains entwined in litigation. Air quality permits were issued by the air district to BYD, an electric bus and battery manufacturer, and to Kinkisharyo International, a light rail car manufacturer for newly established manufacturing facilities in the Antelope Valley.

In response to increased solar development in the Antelope Valley, the AVAQMD partnered with First Solar, the Antelope Valley Resource Conservation District and the City of Lancaster to implement a Solar Array Dust Suppression Study which identified best practices and long-term stabilization strategies appropriate for High Desert photovoltaic solar developments.



The AVAQMD's Alternative Fuel Vehicle Incentive Program - which offers a rebate to Antelope Valley residents who purchase or lease an electric, plug-in electric, hybrid or compressed natural gas vehicle from a local auto dealership - continued to flourish. In 2014, 113 residents received rebates through the popular program, which represented a 71 percent increase from the eight vehicles sold in 2011 during the first year of the program.

In early 2014, the AVAQMD Governing Board voted to increase the amount of Mobile Source Emission Reduction Program funds allocated to the cities of Lancaster and Palmdale from \$75,000 to \$100,000 per year. The vote included a provision to allocate 50 percent of these funds toward improved traffic synchronization efforts.

In September, the Antelope Valley Transit Authority was presented with the Wm. J. "Pete" Knight Memorial AIRE (Achievement in Reducing Emissions) Award for introducing zero-emission electric bus technology to the Antelope Valley. The AVAQMD continued to bring STEM-based education resources to Antelope Valley educators through its collaboration with the Mojave Environmental Education Consortium (MEEC).



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

The Bay Area Air Quality Management District celebrated several firsts in 2014. In March, data from the air district's first of three permanent air monitoring sites located along major Bay Area freeways was made available online. The new air monitors were set up in an effort to better understand the health effects of traffic-related air pollution. This effort was an outgrowth of regulations amended by the U.S. EPA to require air districts in higher population areas to monitor pollutants near heavily traveled roadways.

The air district, working with ARB, Wind & Wing Technologies and others, launched in February a program to test a catamaran sailboat outfitted with a 40-foot tall rigid WingSail. The wind-assisted ferry demonstration project was designed to test the novel idea of using wind assistance to help propel passenger ferry vessels of the future – reducing fuel use and air pollution.

In August, the air district celebrated the one-year anniversary of Bay Area Bike Share, a last-mile commute solution system launched with 700 bicycles at 70 stations in San Francisco, Redwood City, Mountain View, Palo Alto and San Jose, within three counties along the Bay Area peninsula. In the first 365 days, 5,000 annual members and 28,000 casual members joined Bay Area Bike Share, pedaling a combined total of 630,000 miles – equivalent to 25 times around the earth.



The air district continued a comprehensive grant program to reduce mobile source emissions from heavy-duty trucks and funded an array of projects to improve air quality in the region. The focus in 2014 was on on-road trucks as well as other diesel-powered equipment.

The air district awarded its first grant for zero-emission equipment at a major Bay Area airport to Southwest Airlines for the purchase of three electric aircraft ground support tow/tugs that will operate at the San Jose Airport. Ground support tow/tug equipment is used to service aircraft between flights, to help move aircraft within the terminal area and facilitate loading operations for cargo and passengers.

As part of the air district's ongoing focus on refinery emissions, in October the Board of Directors adopted a resolution that outlines an ambitious approach to both track and further reduce refinery emissions through an aggressive implementation schedule. Included in the resolution is a goal to reduce refinery emissions by 20 percent or as much as feasible which will further protect Bay Area communities by committing the agency to develop a strategy to achieve further emission reductions from petroleum refineries. The air district will continue to prepare its Petroleum Refining Emissions Tracking rule, which will require updated health risk assessments and add further fence-line and neighborhood monitoring capacity, as well as require the compilation of an annual emission inventory. The air district will also continue to prepare a companion rule to set emissions thresholds and mitigate potential increases at refineries.





In March, the air district, in partnership with the Metropolitan Transportation Commission (MTC) approved the launch of the Bay Area Commuter Benefits Program, a joint pilot program that requires employers with 50 or more full-time employees in the Bay Area to offer commuter benefits to their employees. The program was developed in response to Senate Bill 1339, which was signed into law by Governor Brown in September 2012. The program goal is to reduce greenhouse gas

emissions and traffic congestion by using the federal tax code to encourage employees to commute via alternatives to driving alone. The law is designed to give employers various options for compliance, including simply offering their employees the ability to pay for transit or vanpooling with pre-tax dollars, which can save both employers and employees money through lower taxes. The program was modeled on commuter benefit ordinances established in 2009 in San Francisco, Berkeley and Richmond, as well as at San Francisco International Airport.

In April, the air district released the Community Air Risk Evaluation (CARE) Program summary report which outlined the results of a nearly decade-long effort to analyze the effect of toxic air pollutants on more highly impacted Bay Area communities and focus air pollution reduction measures in these areas. The report was an outgrowth of a close collaboration between air district staff and members of a task force that included environmental groups, community members, researchers, and local health and planning departments. Over the years, the CARE program has introduced many new approaches for understanding and reducing air pollution problems.

Wildfires continued to produce smoke and fine particle emissions that choked Bay Area skies. In September, three smoke advisories were issued due to heavy smoke from the Bully and Happy Camp Complex fires in Northern California.

The Bay Area Air Quality Management District Board of Directors approved a 10-Point Climate Action Work Program, designed to guide and focus the air district's climate protection activities and identify necessary resources for future action. This work program was called for in the air district's Climate Protection Resolution, adopted in November 2013 and set as a goal the reduction of greenhouse gas emissions to 80 percent below

1990 levels by 2050. The Bay Area climate protection work program includes measures for updating efforts for inventory, forecast, and monitoring GHGs, initiating development of rules limiting GHG emissions, expanding enforcement and working with state, regional, and local agencies as well as stakeholders to develop the Regional Climate Action Strategy.



BUTTE COUNTY AIR QUALITY MANAGEMENT DISTRICT

Butte County Air Quality Management District faces a wintertime challenge in reducing levels of PM_{2.5} due to wood stove and fireplace smoke. In response to this, the air district has initiated a voluntary county-wide curtailment program, Check Before You Light. The City of Chico, the largest municipality in the county, implemented a mandatory curtailment program beginning with the 2011-12 season. An increase in media attention and advisory notification requests indicate an increased public awareness of the problem. No Check Before You Light advisories were issued in 2014, indicating a combination of reduction in localized smoke impacts, public awareness and attention to the curtailment program, and mild weather conditions.



Additionally, the air district began implementation of a three-year wood-burning device change-out program in January 2014. A total of 321 change-outs have been completed to date, with nearly 50 percent of those upgraded to low-emission gas or pellet devices, and the remaining upgraded to U.S. EPA-certified wood-burning devices. One more round of funding remains in the program and is expected to begin in August 2015.

The air district participates in the Carl Moyer Memorial Air Quality Standards Attainment Program and continues funding off-road equipment replacement projects in addition to on-road and stationary source projects. Most of these projects occur within the agricultural community, which makes up the predominant economy in Butte County. The air district also continued accepting applications for Truck Improvement/Modernization Benefitting Emission Reductions (TIMBER) Log Truck replacements.

At their October 2014 meeting, the air district's Governing Board approved an update to its California Environmental Quality Act (CEQA) Air Quality Handbook, which includes enhanced discussion of analysis and mitigation of criteria air pollutants and toxic air contaminants and also expanded its discussion of the evaluation of greenhouse gases and mitigation. At this time, the air district does not have screening criteria for greenhouse

gases but the handbook includes a discussion based on AB 32, requiring reduction of these gases in California. The proposed amendments recognize projects that are consistent with the goals, policies and actions of an approved local Climate Action Plan. Emissions modeling has been updated to replace the previously recommended model (URBEMIS) to a newer, more comprehensive model (CalEEMod).



COLUSA COUNTY AIR POLLUTION CONTROL DISTRICT

Colusa County APCD is part of an agricultural region located in the Sacramento Valley, approximately 60 miles northwest of Sacramento. The air district continues its efforts to improve air quality and protect public health and safety by working with the agricultural industry and industrial businesses located within the air district. The air district is in attainment for the federal 8-hour and state ozone standard, as well as designated in attainment for the federal and state PM2.5 standards.

The air district continues to aid in the replacement of older stationary diesel agricultural engines and off-road diesel equipment with funding from the Carl Moyer Program, which includes the Off-road Equipment Replacement Program and the Off-road Voucher Incentive Program. Air district information is available at: <http://colusanet.com/apcd/>.



EASTERN KERN AIR POLLUTION CONTROL DISTRICT

Located in the eastern portion of Kern County, Eastern Kern Air Pollution Control District encompasses 3,700 square miles with a population of approximately 130,000. The majority of the area within the air district includes high elevation desert land with high wind conditions. Because of this, the air district is home to many renewable energy project developments, including wind and solar plants. A total of 2,950 megawatts (MW) of wind energy projects are currently in operation with an additional 900 MW being proposed. Additionally, 4,140 MW of solar energy projects are in or pending operation with a total of 770 MWs being proposed.

The challenge Eastern Kern air district currently faces is to achieve the federal PM10 and ozone standards, since the air district is designated as non-attainment for



these pollutants. However, the air district has achieved attainment of all other federal clean air standards including PM2.5. The table below shows the attainment status of these standards.

Pollutant	Designation/Classification			
	National Ambient Air Quality Standards (NAAQS)			California Ambient Air Quality Standards
	Indian Wells Valley	Kern River/Cummings Valley	Balance of Eastern Kern	
Ozone 1-hour	Attainment	Attainment	Attainment	Non-attainment
Ozone 8-hour	Unclassifiable / Attainment	Non-attainment/ Marginal	Non-attainment/ Marginal	Non-attainment
PM10	Attainment Maintenance	Serious Non-attainment	Unclassifiable/ Attainment	Non-attainment
PM2.5	Unclassifiable / Attainment	Unclassifiable/ Attainment	Unclassifiable/ Attainment	Unclassified

To help achieve and maintain federal PM10 standards, the ARB installed a PM10 monitor in Canebrake (Kern River/Cummings Valley Planning Area), operated and maintained by the air district. The data shows there have been no days exceeding the federal 24-hour PM10 standard since 2009. Therefore, the air district believes U.S. EPA will designate Kern River/Cummings Valley planning area as in attainment for PM10 in the near future. Additionally, the air district plans to further reduce PM10 emissions from construction of rapidly increasing solar energy projects by revising its Rule 402 – Fugitive Dust.

Although the number of days exceeding the federal 8-hour ozone standard fluctuates every year, a steady decrease in the 8-hour design values proves that the air district continues to make great progress towards meeting the federal 8-hour ozone standard.



The air district also participates in a variety of grant programs to reduce emissions, such as the Carl Moyer Program, School Bus Replacement Program (AB 923), and the DMV Grant Program (AB 2766). During 2014, the air district funded two emergency vehicles for fire stations with Carl Moyer Program funding. The DMV AB 2766 grant program provides funding for mobile source emission-reduction projects. Almost \$325,000 was awarded for a variety of emission reduction projects in 2014-2015.



EL DORADO COUNTY AIR QUALITY MANAGEMENT DISTRICT

El Dorado County air district is in the Mountain Counties and Lake Tahoe air basins. The Mountain Counties portion is non-attainment for the federal and state ozone standards. The western portion is nearing federal PM2.5 attainment. Mountain Counties and Lake Tahoe areas are non-attainment for the state PM10 standard.

The air district implements an *Online Burn Violators Training Course*. Course completion reduces penalties. Since implemented in 2013, over 100 residents have taken the course.

The course can be viewed at:

<http://edcapps.edcgov.us/AirQualityManagement/BurnRuleTraining/traininghome.html>



Air district staff conducts dust, odor and no-burn day patrols at priority sites and responds to complaints 24 hours a day, seven days a week.

Over 73 percent of the county is national and private forest. Prescribed burning and wildfires produce significant particulate matter. A three ton-per-day pilot biomass plant is planned for 2015.

The air district's Chimney Smoke Reduction program provides \$500 to \$1,000 to replace uncertified wood stoves with U.S. EPA-certified stoves and heaters. In 2014, 117 replacements were incentivized. The Tahoe Regional Planning Agency contributes funding and the Tahoe Fund Organization may also contribute funding.

AB 2766 funds various projects and a Drive Clean program. Projects funded in 2014-2015 include shuttle, bicycle, vehicle and electric vehicle service equipment (EVSE) charging stations. Drive Clean also provides \$1,000 toward battery and plug-in hybrid vehicles for residents commuting to work and school on sections of Highway 50 with carpool lanes, thereby reducing congestion.

The air district recently received Indian Gaming and California Energy Commission grants. The grants are funding Level 2 EVSE charging stations at Red Hawk Casino (10), Placerville (11) and South Lake Tahoe government centers (4). The air district is working with Tesla and Nissan to install Level 3 DC EVSE chargers at locations near Highway 50.

The air district received a Congestion Management Air Quality (CMAQ) grant. The grant will help fund 40 new county fleet vehicle replacements with plug-in hybrids and additional EVSE charging stations.

In 2014, the air district used AB 923 funds to retrofit 18 school buses and replace eight school buses. The air district will begin implementing the Carl Moyer program in 2015. Air district information is available at: <http://www.edcgov.us/AirQualityManagement/>.



FEATHER RIVER AIR QUALITY MANAGEMENT DISTRICT

The Feather River air district includes the counties of Yuba and Sutter in the Sacramento Valley Air Basin. During 2000-2002, the air district had two ozone monitors, one in Pleasant Grove and one in Yuba City. In 2012-2014, the air district had only one monitor in Yuba City that records both ozone and PM2.5, and a special-purpose ozone monitor located on top of the Sutter Buttes. This special-purpose monitor records transport emissions from the metropolitan areas northward into the Sacramento Valley. The monitor in Yuba City is indicative of air quality on both sides of the Feather River, so no additional monitor has been installed on the Yuba County side.

The pending challenges for the air district include reducing emissions of PM2.5, PM10, and ozone precursors in order to achieve and/or maintain federal and state air quality standards. The southern portion of the air district falls within the Sacramento federal non-attainment area for ozone. The air district has also been designated as non-attainment for state ozone and PM10 standards.

The air district recently made significant achievements in improving air quality. The Yuba City-Marysville PM2.5 non-attainment area has achieved the 2006 federal PM2.5 standard. In 2010, ARB changed the designation for Sutter and Yuba Counties from non-attainment to non-attainment-transitional, demonstrating that the air district is moving closer to attaining the state standard. Also, the Sutter Buttes non-attainment area has been designated in attainment with the federal 2008 ozone standard. Sutter Buttes has been designated as a separate non-attainment area since the location, at 2,000 feet above the valley floor, is not populated and not indicative of air quality conditions where the population of the county resides. The air district

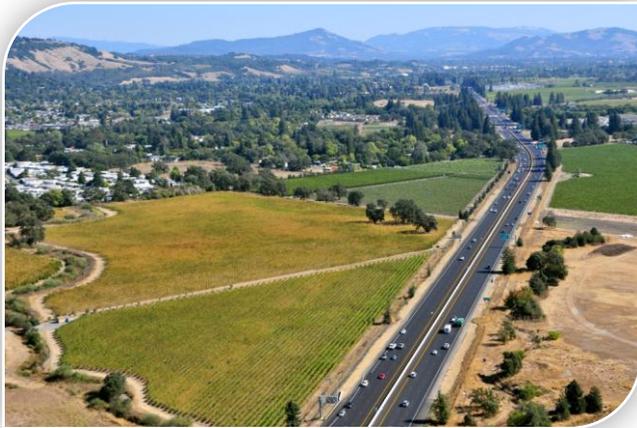


continues to work internally and with the Sacramento regional air districts to reduce ozone through planning, outreach and regulatory controls.



GLENN COUNTY AIR POLLUTION CONTROL DISTRICT

The Glenn County air district maintains jurisdiction over an agricultural county approximately 80 miles north of Sacramento. The air district is bordered by the Mendocino National Forest in the west, the Sacramento River in the east, and is bisected by Interstate 5. Challenges in this area include emissions related to freeway vehicles, wildfires, agricultural burning of crop residue, and soil preparation activities. The air district also faces the challenge of protecting public health and implementing all programs with a staff consisting of one manager, one inspector, and one part-time staff member.



The air district is proud of the recent change in attainment status for the area by ARB. The 2013 area designations for the state standards show Glenn County air district has been re-classified to attainment for both ozone and PM2.5.

The air district will continue to strive to protect the comfort, repose, health and safety of the residents and businesses of Glenn County. Outreach information, including Carl Moyer Program applications and contact information, is available in the air district's Willows office and on the air district's website at <http://www.countyofglenn.net/APCD>.



IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT

The air district continues its public outreach efforts by improving its air monitoring network. Aside from installing newer, more accommodating shelters, newer instruments have either been installed or will be installed during the first part of 2015 for ozone, NO_x, CO, and continuous PM monitoring. In addition to criteria pollutant monitoring, the air district is installing hydrogen sulfide (H₂S) monitors designed to help establish baseline emissions for the receding Salton Sea. Other measures are planned for capturing emissions affecting the northern section of Imperial County. To support data capture, a visual support system will be put into place by the end of the first

quarter of 2015. The overall strategic design follows a north-to-south, east-to-west placement to cover the entire county. Overall in 2014, the air district saw improvements in PM2.5 levels but PM10 levels remained unchanged.

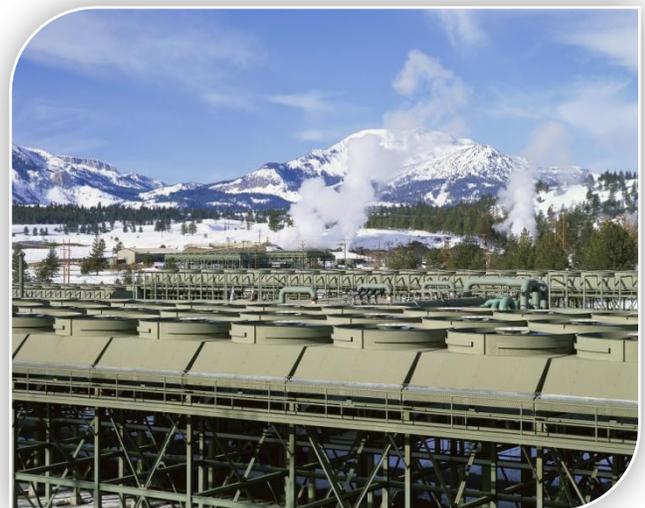
The air district continues to be intimately involved with studies conducted within Imperial County and along the international border to better understand emissions impacts from within the county and those associated with international transport. The active participation of the air district with local community stakeholder groups and the Border 2020 program remain essential. Under the cooperative direction of the Imperial County - Mexicali Air Quality Task Force, programs and studies are coordinated to better understand international impacts. Overall, the main goal of the task force is to collaboratively identify and prioritize air quality issues that affect the health and well-being of border communities.



LAKE COUNTY AIR QUALITY MANAGEMENT DISTRICT

The Lake County air district includes all of Lake County. This includes all of the Known Geothermal Resource Area (KGRA) in Lake County – the largest direct steam geothermal power generation installation in the world. Air monitoring stations are located in Lakeport, Glenbrook, Pine Summit, and Anderson Springs. The air district has been in attainment of all of the federal and state standards since 1990 and is the only air district and air basin in California to do so.

The air district's primary concerns are maintaining its clean air through a robust open burn permitting and enforcement program, maintaining its ozone and PM monitoring network, and conducting its stationary source permitting and enforcement program. Lake County was ranked the Cleanest County in the Nation for PM2.5 by the American Lung Association in its 2013 and 2014 State of the Air Reports. The air district has met and maintained this standard without the benefit of vehicle license fees or other grants that are commonly available for non-attainment air districts. Lake County is operating an additional four monitoring stations working in coordination with the county Public Health Officer regarding natural events in the City of Clearlake as well as localized odor impacts from geothermal operations.





MENDOCINO COUNTY AIR QUALITY MANAGEMENT DISTRICT

The Mendocino County air district lies between Sonoma County (Northern Sonoma County air district) to the south and Humboldt County (North Coast Unified air district) to the north, along the Northern California coast. As part of the North Coast Air Basin, the air district maintains some of the cleanest air in the state.

The air district remains in attainment for all federal ambient air quality standards and all state standards, with the exception of coastal PM₁₀, although continuous air monitoring shows improvement toward PM₁₀ attainment. The air district is actively involved with the evaluation and development of small-scale distribution systems utilizing woody biomass generated from the reduction of forest fuel loading, timber harvest residues, and defensible space clearing. There is an abundance of these resources available for the

production of biochar and black carbon, which are useful methods of carbon sequestering. Several demonstration projects including commercial biochar production, small scale electric generation, and biochar from open burning are planned for the coming year. These efforts will contribute to reducing greenhouse gas (GHG) emissions as well as particulate reduction and fire fuel loading.

The air district continues to provide grant funds for the replacement of older stationary diesel agricultural engines and off-road diesel

equipment, utilizing funding through the Carl Moyer Program.

Improvements to the air district website allow for more current information updates, easier access to air district information, and online access to permit applications. In addition to online burn permit applications, the ability to process payments utilizing GovPayNet greatly reduces the long drives for residents in remote corners of the county while at the same time increasing the likelihood that open outdoor burning regulations will be followed.

A large source of PM₁₀ emissions is unpaved roads, accounting for much of the air district's non-attainment status for PM. The air district has developed a pilot grant program that will provide reimbursement funds to Mendocino County residents toward the cost of applying dust suppressants to privately owned unpaved roads. Grants will be available for up to \$5,000 toward the cost of applying air district-approved dust suppressants on their property.





MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT

In 2014, the High Desert's air quality attained the federal 1-hour ozone standard based on three consecutive calendar years of complete, quality-assured, and certified air monitoring data collected within the air district's 20,000 square mile jurisdiction. Although the federal 1-hour standard was revoked by the U.S. EPA in 1997 and replaced by a more stringent federal 8-hour standard, many regions – including the Mojave Desert AQMD – continued to have regulatory obligations under the former standard, which could have imposed potentially crippling punitive fines on major sources in the region. Due to the continued impact of transport emissions on the High Desert, the recently proposed 65 to 70 ppb federal ozone standard is likely to present a renewed challenge to the air district's attainment status.



In late 2014, CalEPA selected the Mojave Desert communities of Victorville and Barstow to receive a portion of more than \$200 million of \$832 million in cap-and-trade proceeds earmarked for greenhouse gas-cutting projects, to be located within disadvantaged communities.

The air district traded out its TEOM and Hi-Vol particulate monitoring equipment for BAM units, with one co-located Hi-Vol retained in Victorville. Panoramic site cameras were installed and tested for use in viewing fine particulate formation/movement.

The Mojave Desert AQMD Governing Board approved a Reasonably Available Control Technology (RACT) revision to Rule 464 - Oil Water Separators and a 3.25 percent permit fee increase, effective January 2015. The air district's existing Dust Control Plan Guidance was expanded to include specific solar project fugitive dust control.

In fall of 2014, the air district released a Call for Projects for \$936,000 in AB 2766 grant program funds for projects reducing mobile source emissions within the air district boundaries. By the end of 2014, a total of 765 vehicles had been removed from the road since the 2006 inception of the air district's Voluntary Accelerated Vehicle Retirement Program.

In April, the Mojave Environmental Education Consortium (MEEC) was recognized by the San Bernardino County Superintendent of Schools with its prestigious Medal of Honor for

outstanding service and support to public education. This is the second Medal of Honor in a decade to be conferred on MEEC, whose lead agency is the Mojave Desert AQMD. The air district's annual Solar Cook-off for students was spotlighted in the November/December issue of the California Special District Association Magazine, a bi-monthly publication distributed to more than 20,000 Special District Board Members and staff throughout the state.



MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT

The Monterey Bay Unified Air Pollution Control District has local jurisdiction for air quality in the North Central Coast Air Basin, which covers Monterey, San Benito, and Santa Cruz counties. The air basin was designated in attainment for the federal 8-hour ozone standard in 2012; however, work still remains to achieve attainment of the state 8-hour ozone standard. The year 2014 was a clean one for the air basin as the ozone standard was exceeded only three times at the Pinnacles National Park monitor and once at the Hollister monitor. There were no measured ozone exceedances in Santa Cruz or Monterey counties. The air basin is also designated as attainment for the federal PM2.5 standard.

The air district is fortunate to experience good regional air quality, yet localized high PM2.5 concentrations continue to be a challenge. Special monitors in the San Lorenzo Valley (SLV) area near Santa Cruz continue to record exceedances of the federal 24-hour PM2.5 standard due to the topography of the area, the large number of homes heated with wood stoves and intermittent outdoor burning of yard waste. The mountainous terrain of SLV traps winter smoke, causing PM2.5 concentrations as well as smoke complaints to increase during the winter months. The air district continued funding for the Wood Stove Change-Out Program with the focus of the funding on SLV. The 2014 program successfully changed out over 50 old wood stoves in SLV. The air district also continued free yard waste recycling events for SLV residents, resulting in the recycling of approximately 700 tons of yard waste material. Implementing these programs will help to reduce the localized increases in PM2.5 concentrations experienced in SLV.





NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT

In general, the North Coast Unified Air Quality Management District has some of the healthiest air in the nation. Located along the rugged northern coast of California, the air district encompasses approximately 7,753 square miles within Humboldt, Del Norte and Trinity counties.

The terrain spans coastal, agricultural, forested, and mountainous regions, which creates hundreds of microclimates within the air district. Inversions and diurnal offshore wind patterns are common. To better examine those microclimates, the air district has increased the number of air monitoring stations from three to five since 2006.

Effective July 1, 2014, Trinity and Del Norte counties were designated as attainment of the federal PM10 standard.

Also earlier this year, the U.S. EPA granted approval to begin using continuous real-time PM10 monitors and discontinue the use of the filter-based monitors. There have been no exceedances of the ozone standards in all three counties.

Particulate matter from wildfires and wood stove smoke remain as challenges in the region. The air district continues to provide a district-funded wood stove change-out program as well as administering the Carl Moyer and TIMBER grant programs.



NORTHERN SIERRA AIR QUALITY MANAGEMENT DISTRICT

The Northern Sierra Air Quality Management District is comprised of the rural mountain counties of Nevada, Sierra and Plumas. Of these, Nevada County is the most populous, with nearly 100,000 residents (compared to Plumas with fewer than 19,000 and Sierra with approximately 3,000). All three counties are predominantly covered by U.S. Forest Service land, particularly Plumas and Sierra counties. Elevations in the air district range from a few hundred feet above sea level to over 9,000 feet.

The western portion of Nevada County (west of the Sierra crest) is non-attainment for ozone and occasionally experiences high ozone concentrations on hot summer days with wind out of the southwest. Most of this ozone is transported from the Sacramento region and the Bay Area. Ozone data from the past few years demonstrate an improvement in western Nevada County's air quality, although the summer of 2014 saw a few high ozone days associated with wildfire emissions to the south. The town of Truckee, in eastern Nevada County, occasionally experiences elevated wintertime particulate matter concentrations from wood combustion and road sand, but the situation has improved greatly over the past 15 years due to the town's successful Particulate Matter Air Quality Management Plan, adopted in 1999.

Plumas and Sierra counties are separated from Nevada County and the Sacramento area by vast canyons that disrupt the transport of ozone. PM2.5 is the main pollutant of concern in Plumas and Sierra counties and is mostly associated with residential wood combustion. The Portola area in Plumas County has recently been designated federal non-attainment for PM2.5. The air district maintains a proactive smoke management program for open burning and has administered several wood stove change-out programs, for which funding is an ongoing challenge. On a typical elevated PM2.5 day in Plumas County, temperatures are cold, residents are using their wood stoves and an atmospheric inversion is in place. The highest concentrations generally occur late at night (when wood stoves are damped down) and in the morning (when stoves are started up). November and December are historically the highest PM2.5 months.



NORTHERN SONOMA AIR POLLUTION CONTROL DISTRICT

The Northern Sonoma Air Pollution Control District includes the entire coast of Sonoma and areas north of the town of Windsor, as well as the lower Russian River valley. This includes all of the Known Geothermal Resource Area (KGRA) in Sonoma County, which is the largest direct steam geothermal power generation installation in the world. Air monitoring stations are located in Cloverdale, Healdsburg and Guerneville, as well as stations operated cooperatively with Lake County in the KGRA. The southern portion of the county (including the monitoring stations in the cities of Santa Rosa and Sonoma) lies within the jurisdiction of the Bay Area Air Quality Management District.

The air district is currently in attainment of all federal and state standards. One of the air district's primary concerns is residential and agricultural wood smoke, which the air



district regulates through a robust open burn permitting and enforcement program. The air district also provides grant incentives for clean air projects, and conducts stationary source permitting and enforcement. The air district works in partnership with other agencies, cities, and Sonoma County to achieve reductions in greenhouse gases called for in the Climate Action Plan adopted by the county and all of its nine cities.

In early 2014, the air district ran a Wood Stove Change-out Voucher Reimbursement program, which incentivized the replacement of uncontrolled wood stoves with U.S. EPA-certified wood-burning appliances. Also in 2014, the air district continued to award grants for heavy-duty diesel engine clean-up projects, primarily tractors and other agricultural equipment. In the months and years to come, the air district will be working with the Sonoma County Winegrowers Association to encourage limitation of open burning as part of the vineyards' move to becoming 100 percent sustainable by 2019.



PLACER COUNTY AIR POLLUTION CONTROL DISTRICT

The Placer County Air Pollution Control District continues to move forward with numerous projects and programs that are providing both quantitative and qualitative improvements in air quality.

Smoke filled the air in Placer County in late summer/early fall with the King Fire, along with other smaller wildfires. With multiple days of hazardous air quality throughout the region, air district staff provided extensive public outreach, along with real-time air quality data that provided air quality trends of the smoke impact. Together with the County Emergency Services and the County Health Officer, this information helped support planning efforts and decision-making for outdoor activities such as high school football games, athletic tournaments and school closures. Both Placer County and air district staffs also provided the International Ironman Triathlon officials with information that helped with the decision to cancel their event in Lake Tahoe due to hazardous air quality.



With the high PM2.5 data recorded from wildfires during both 2014 and 2013, the air district is working on two Exceptional Events Reports, one for each year, which will be submitted to the U.S. EPA. Each report, if approved, will allow the PM2.5 data recorded

during the wildfires to be excluded from the air district's attainment demonstration. The reports, when completed, will be available on the air district's website.

In the last decade, the frequency and intensity of the wildfires have resulted in the burning of over 100,000 acres, about 20 percent of the forested lands in the county. The air district continues to commit resources to the development and forward progress of a suite of forest-related initiatives. The air district has teamed up with other public and private stakeholders, through California's carbon market, to implement economically self-sustaining forest management activities to restore the forest land to a fire-resilient condition, which will help to reduce criteria pollutant emissions released from wildfires, prescribed broadcast burns, and open-pile burning.

Details of each of these initiatives have garnered significant visibility at both the state and federal level. In the last year, air district staff provided a briefing on its biomass-waste-to-energy, open burning and economic/air emission credit work to a delegation of forestry and agricultural officials from Bangladesh. The air district completed and released a short video describing some of its forest resource sustainability initiatives, which can be found on the air district website under the heading of Biomass Energy Initiatives. The video was produced in cooperation with the UC Berkeley Blodgett Forest Research Station.

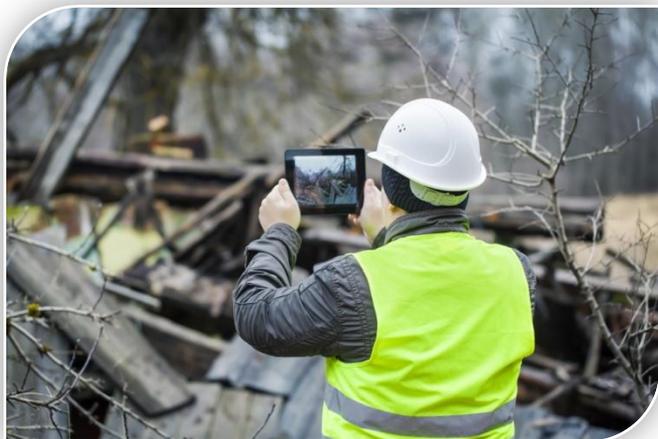
Additionally, after extensive work, the air district was able to release 2,156 metric tons of carbon credits for sale on the CAPCOA Greenhouse Gas Exchange, utilizing the air district's Biomass Waste for Energy GHG accounting protocol. These verified credits, which were created from one of its biomass for energy projects, will provide mitigation options for project developers and businesses in meeting CEQA obligations.

The air district's Board of Directors approved the federal PM2.5 Implementation/Maintenance Plan and Re-Designation Request for the Sacramento PM2.5 non-attainment area in February 2014. With the 2008 revised federal ozone standards, air district staff, along with ARB and the Sacramento region's other four local air districts, have begun work on a new State Implementation Plan to demonstrate the region's ability to meet the attainment deadline of 2027. The plan includes preparing the planning emission inventory, a list of feasible mitigation measures and modeling analysis. In addition, air district staff will begin working on the 2012-2014 Triennial Progress Report to assess progress towards attaining the state ozone standard.

The air district's extremely successful Clean Air Grant incentive program continues to reduce criteria pollutants from successful projects not otherwise required by law to lower emissions. This year, more than \$1 million is available for Clean Air Grants. Since 2001, approximately \$15 million for emission reduction projects resulted in a reduction of 1,074 tons of NO_x, Reactive Organic Gases (ROG) and PM. Additionally, the air district is administering a wood stove incentive program in the Tahoe region, in conjunction with

other air districts on behalf of the Tahoe Regional Planning Agency, to replace non-U.S. EPA-certified wood stoves.

The air district continues with more traditional programs in striving to reach attainment of air quality standards for both PM2.5 and ozone, such as stationary source permitting and



complaint investigation. In 2014, the air district continued to implement its Strategic Information Technology Master Plan. This is the start of an effort to identify technologies the air district can use to improve its operations, with the goals of improving staff productivity, the completeness of documentation, and reducing costs. With the combination of wireless computer technology, and the air district's database of permit and compliance information, staff has seen

improvements in the quality and quantity of inspections and investigations that are conducted in the field. Increases in inspection productivity enable fewer air district staff to conduct required inspections, reducing costs for inspections and freeing up resources for other programs. The air district has developed inspection forms that are automatically pre-loaded with data from the air district database for the permits to be inspected. The forms are then pushed out via the internet and wireless communications technology to Samsung Galaxy 8" tablets in the field (currently four tablets are in use). In 2015, the goal is to upload inspection results back to the database and fully integrate the field inspection process with the database.



SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

The Sacramento Metropolitan Air Quality Management District works with local, state and federal government agencies, the business community, and private citizens to achieve and maintain healthy air quality for Sacramento County. The air district's Board of Directors includes representation from the various cities within Sacramento County. These include: all five Sacramento County Board of Supervisors; four members of the Sacramento City Council; one member representing each of the cities of Citrus Heights, Elk Grove, Folsom, and Rancho Cordova; and one member representing the

cities of Galt and Isleton. Since 2004, Larry Greene has led the air district as its Executive Director.

The air district has completed its eighth *Check Before You Burn* season (as per Rule 421 - *Mandatory Episodic Curtailment of Wood and Other Solid Fuel Burning* – which prohibits burning when weather conditions trap wood smoke at ground level). Since 50 percent of the particulate matter emissions in the winter can be attributed to wood burning, this rule reduces the number of days the air district exceeds the federal PM2.5 health standard. Advertising, outreach, enforcement efforts and incentives to replace dirty wood burning devices are essential parts of Sacramento's attainment of the federal PM2.5 standard.

In 2014, the air district funded just under \$11.6 million in mobile on-road and off-road emission reduction projects, including modernizing 182 on-road heavy-duty trucks, upgrading over 36 pieces of off-road equipment, and performing 82 agricultural electric pump replacements. In addition, the air district reviews, provides guidance, and develops comments on land-use-specific plans, as well as local agency Climate Action Plans, General Plans, and regional Transportation Plans.

The annual *Spare The Air* program continues to encourage residents to change behavior and reduce air pollution, including focusing on reducing driving and using other means of transportation on *Spare The Air* days. Through multiple outreach efforts, the Communications Office recorded 15,873 Air Alert subscribers; 3,218 *Spare The Air*



business and community partners, and 1,775 *Check Before You Burn* partners who distribute air quality information to the public. In addition, social media efforts resulted in 1,395 Twitter followers, 1,140 Facebook followers, and 385 Instagram followers. The *Spare The Air* annual survey shows that in 2014, residents of the Sacramento region reduced .65 tons per day of ozone precursors by driving less in the summer to improve air quality.



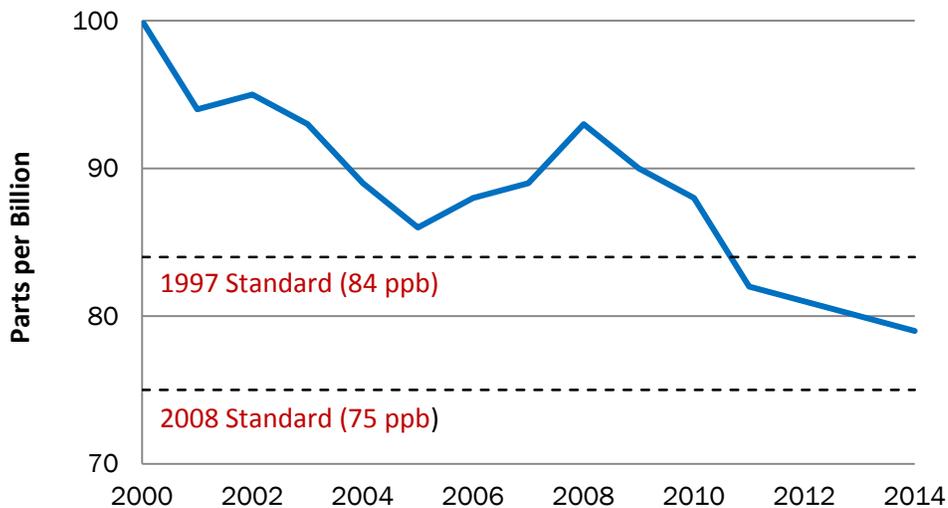
SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT

The San Diego County Air Pollution Control District is governed by its Air Pollution Control Board, composed of five members from the San Diego County Board of Supervisors. The Board adopts measures to control air pollutants from stationary sources. The Board also provides millions of dollars in grant funding to incentivize the reduction of air pollutants from diesel vehicles and equipment through the replacement of dirty, old equipment with cleaner, low-emitting equipment.

As a result of these efforts, the county continues to make great progress in overcoming what historically has been the region’s primary air pollution problem – ozone. In fact, 2014 was another record year as the county achieved its lowest ozone design value ever (79 ppb over an 8-hour period), as displayed in the chart below. The county continued to attain the 1997 federal ozone standard, although work still remains to meet the more health-protective 2008 standard. In addition, the county continued to meet all federal standards for PM2.5.



8-Hour Ozone Design Value Trend



In 2014, the air district launched its first-ever web-based services allowing customers to complete and submit an online application for an air quality permit or mobile-source project grant. Work is underway to expand the air district’s online services and improve convenience to customers.

Also in 2014, air district staff received classroom and in-field training from ARB after signing a Memorandum of Understanding with ARB to help enforce their mobile source air pollution regulations in San Diego County. These regulations apply to trucks, buses, and off-road equipment. Ensuring local compliance is important because three-fourths of all of the air pollution in the county comes from vehicular and other mobile sources of emissions.

The air district's mobile source incentive program continued to flourish in 2014, with the award of \$5.4 million for the replacement or re-power of heavy-duty on- and off-road vehicles and equipment. This funding provides early emission reductions and improves regional air quality and public health at lower costs to businesses.

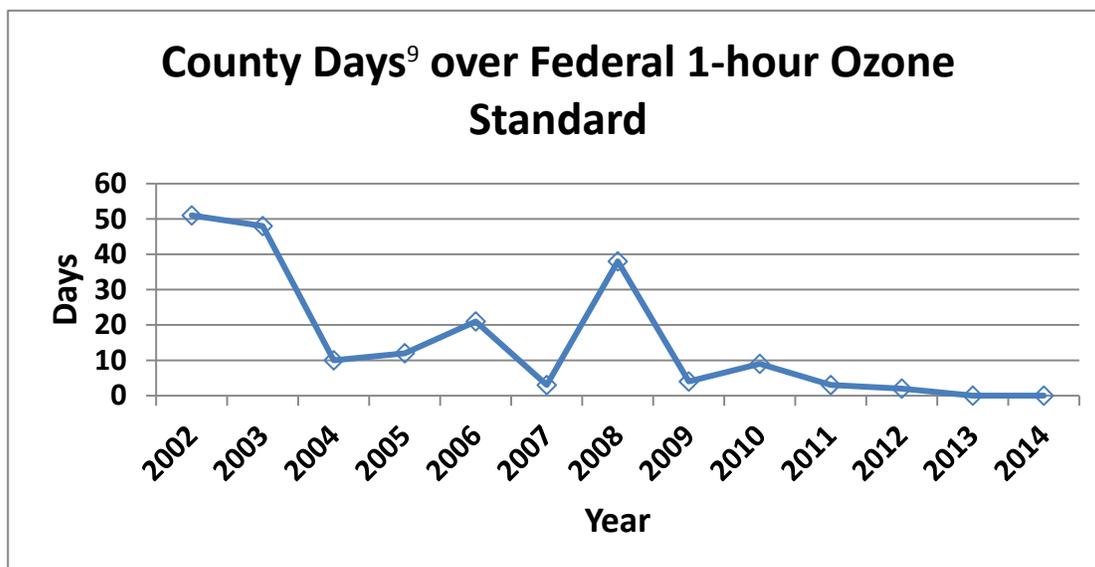


In the summer of 2014, the San Joaquin Valley experienced strings of triple-digit temperatures, wildfires, and continued air stagnation due to the ongoing drought. Overall, meteorological conditions during summer and early fall were extremely conducive to ozone formation. Despite these conditions, the San Joaquin Valley continued progress and experienced another record-setting good year for ozone, with no violations of the 1-hour ozone standard for the second year in a row.



Ozone

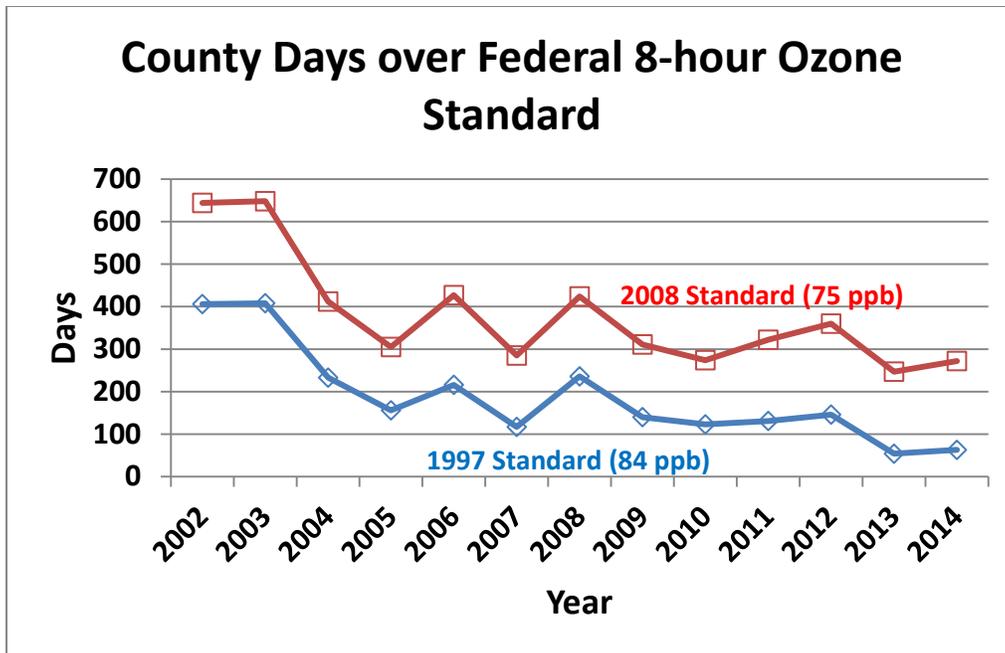
For the second time in recorded history, the San Joaquin Valley completed an ozone season with no violations of the federal 1-hour ozone standard. By contrast, in 1996 the San Joaquin Valley experienced 281 hourly exceedances of this standard throughout the eight-county region. In 2004, U.S. EPA classified the San Joaquin Valley as “Extreme” non-attainment for this standard, meaning that, at that time, technology did not exist to achieve the standard. The San Joaquin Valley is the first and only region in the nation with “Extreme” classification to attain the standard.



For the air district, 2014 was another historic year recording two consecutive years with zero exceedances of the federal 1-hour ozone standard.

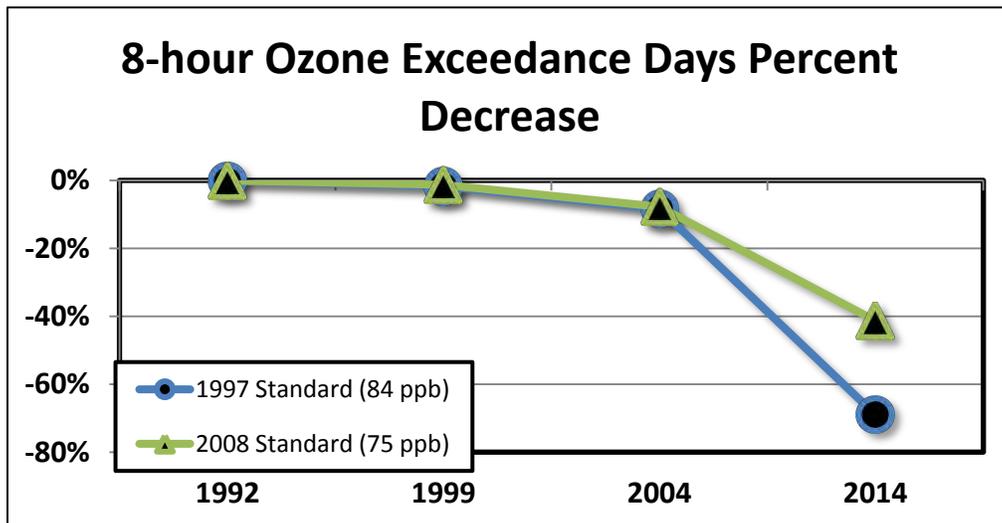
The San Joaquin Valley remains on track to meet the 84 ppb federal 8-hour ozone standard before the deadline (the “black box” plan component is no longer needed). San Joaquin Valley residents’ exposure to ozone concentrations above the health-based standards established by U.S. EPA, including the toughest 8-hour ozone standard, has been reduced significantly. For the three-year period from 2012 through 2014, with a neighborhood-by-neighborhood accounting for population exposure to ozone concentrations, on average, San Joaquin Valley residents were exposed to ozone concentrations above the standards for the fewest number of days on record.

⁸ Refers to the number of days over the standard among all of the eight counties in the air district



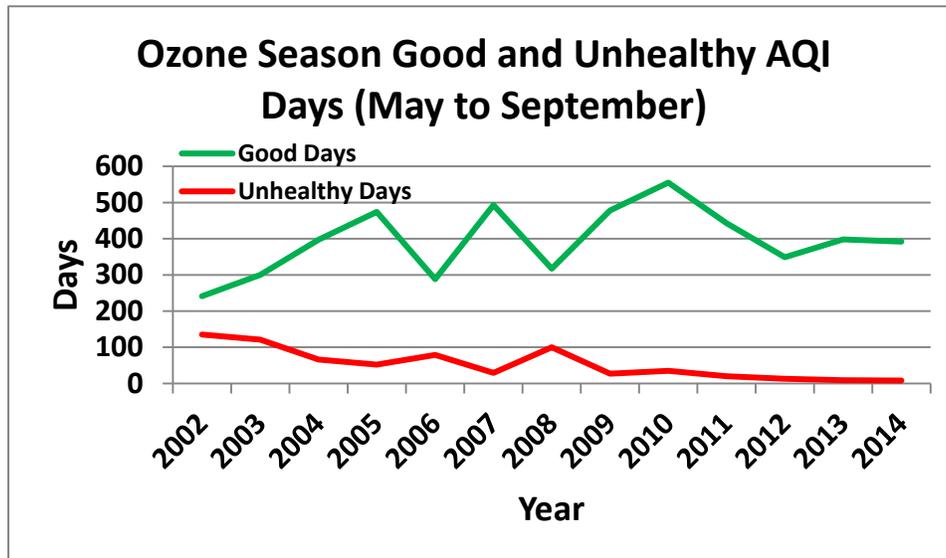
The San Joaquin Valley experienced the longest stretch of consecutive days in July and August on record without violating the 75 ppb federal 8-hour ozone standard, and the cleanest August on record: 17 days without an 8-hour ozone exceedance (75 ppb 8-hour ozone standard).

The number of days when the 75 ppb federal 8-hour ozone standard was exceeded anywhere in the San Joaquin Valley was the lowest during the typical peak ozone season of May through September.



A 41 percent decrease in days over the 2008 8-hour ozone standard since 1992, and a 68 percent decrease in days over the 1997 standard over the same time period.

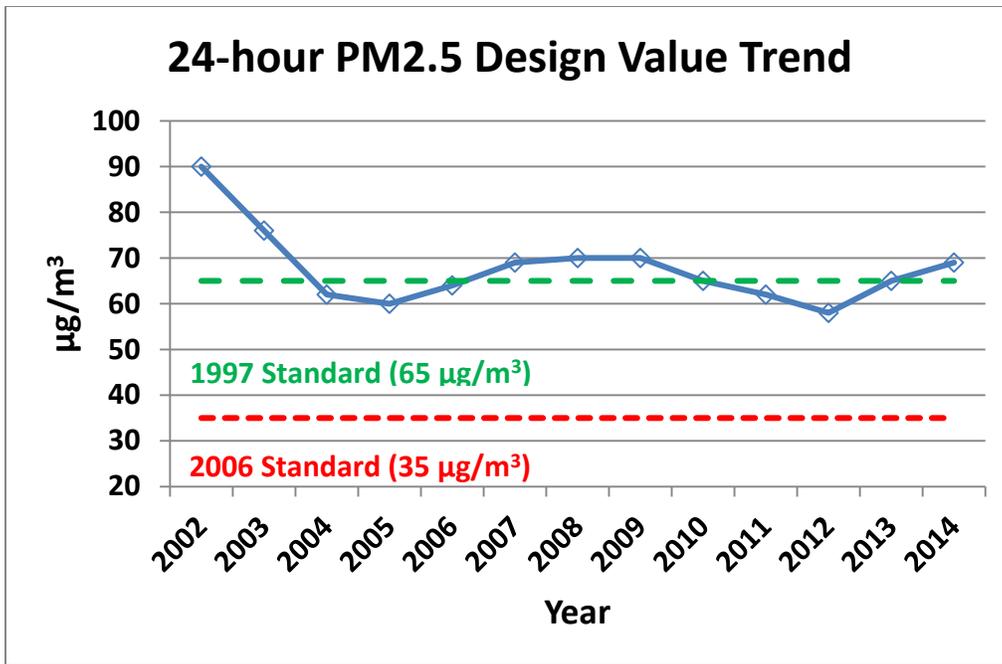
Due to improving ozone conditions in the Valley, the number of Good AQI days during the ozone season is continuing to increase while the number of Unhealthy AQI days is continuing to decrease.



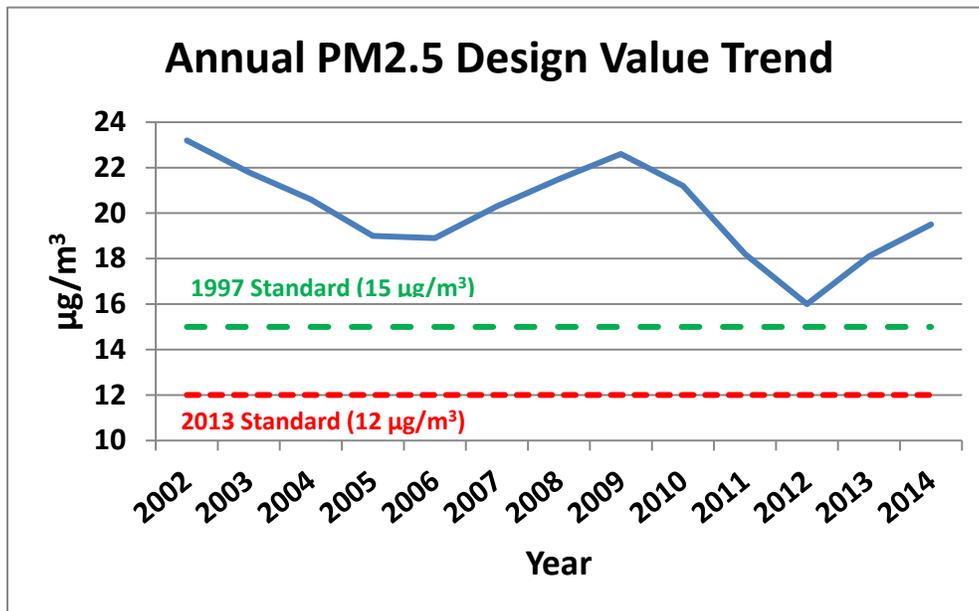
Continued decrease in the number of Unhealthy AQI County-Days during the ozone season of May to September.

Particulate Matter

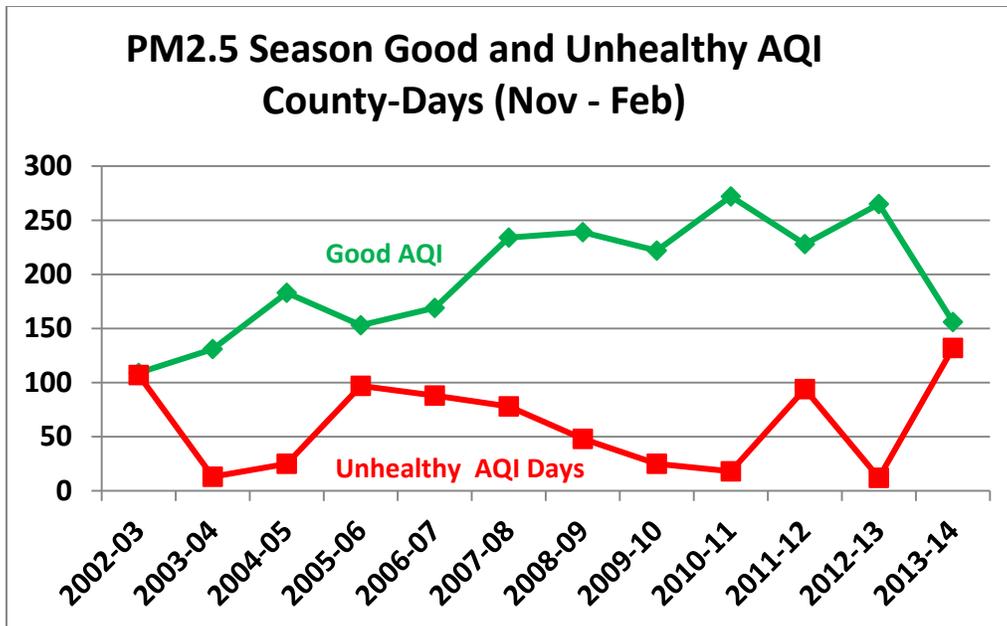
As was the case with virtually every air basin in California, the winter of 2013-14 in the Valley was plagued with unrelentingly stubborn atmospheric stagnation, strong inversions, and record low precipitation, resulting in an elevated number of Unhealthy air quality days. Due to these elevated numbers, both the federal 24-hour and annual average PM_{2.5} design values for 2014 have increased across the Valley, as displayed in the charts below. Despite exceptionally high peak PM_{2.5} concentrations in the winter of 2013-14 as a result of these factors, long-term trends in fine particulates continue to decline. Even with poor meteorology, the amendments to the air district's wood-burning curtailment regulation (Rule 4901) and associated grant program were effective at preventing PM_{2.5} levels from climbing even higher.



The 24-hour average PM2.5 design value is increasing due to current drought conditions, causing abnormally long periods of stagnation and trapping of pollutants near the surface.



The annual average PM2.5 design value is also increasing due to current extreme meteorological conditions, causing abnormally long periods of stagnation and trapping of pollutants near the surface.



Increase in Unhealthy AQI County-Days and decrease in Good AQI County-Days due to the extreme meteorological conditions experienced during the 2013-14 winter season.

The uncharacteristic trends for both Good days and Unhealthy days seen during this last winter were directly related to extreme weather and drought conditions.

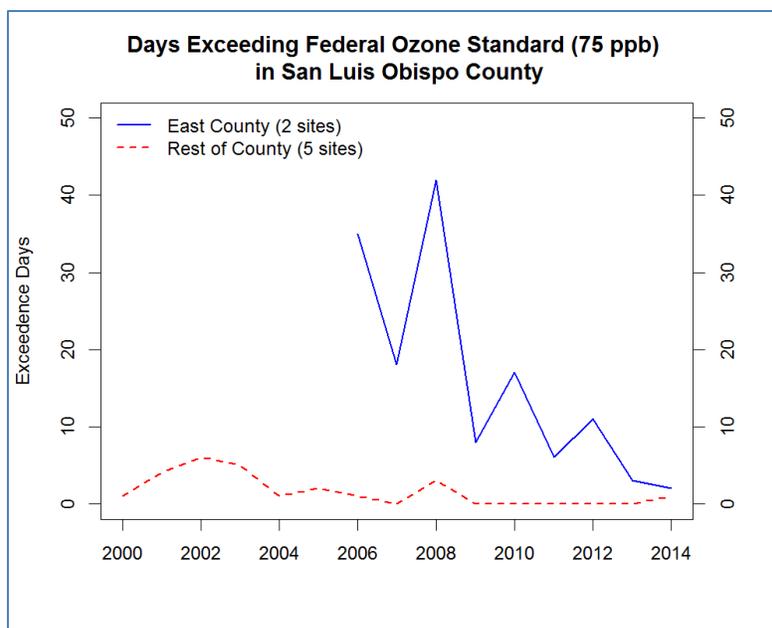


Air Pollution Control District
San Luis Obispo County

SAN LUIS OBISPO COUNTY AIR POLLUTION CONTROL DISTRICT

Located along the central coast of California, San Luis Obispo County encompasses approximately 3,299 square miles and a population of 273,231. The county is comprised of coastal plains, valleys, hills and mountains, resulting in a variety of air quality characteristics.

The sparsely populated eastern portion of the county is designated non-attainment for the federal ozone standard. This area experiences the highest levels of ozone in the county as a result of pollution transport from outside of the county. Data shows significant reduction in ozone exceedances in the eastern portion of the county over the last eight years; 2014 was the cleanest year with only three exceedances of the federal ozone standard, as shown on the following graph.



The ozone trends reflected in the appendices compare 2000-2002 data to more current data from 2012 - 2014. For San Luis Obispo County, that comparison shows an apparent increase in ozone levels opposite to the sharp decrease shown above. This is an artifact of the time periods chosen for comparison and a change in the monitoring network. A new ozone monitoring station was installed in the East County in 2006 where none was present prior to that time. Thus, the apparent increase in ozone levels is not due to deteriorating air quality, but rather, reflects the start of ozone monitoring in a new location. This artifact is reflected in the decrease in the number of Good air quality days shown in Appendix B; the increase in the percentage of days exceeding the NAAQS in Appendix D; and the design value trend in Appendix E. The chart above shows the actual ozone trend in SLO County, which has been decreasing significantly over the past several years.

The entire county is designated non-attainment for the state PM10 standard. Windblown dust from the Oceano Dunes State Vehicular Recreation Area (SVRA) in southern San Luis Obispo County impacts the Nipomo Mesa, where most of the PM10 standard exceedances are measured. Historical ambient air monitoring on the Nipomo Mesa has documented high levels of particulate matter compared to other areas of the county and other coastal areas of California. The air district conducted several comprehensive air monitoring studies, and concluded that off-highway vehicle activity in the Oceano Dunes SVRA is the major contributing factor to the high peak concentrations of PM on the Nipomo Mesa. The air district has been working to develop solutions to reduce PM from the SVRA that impacts downwind neighborhoods. In 2011, the air district Board approved the Coastal Dunes Dust Control Rule 1001 to require implementation of dust control measures on coastal dunes where vehicle activity occurs. As of 2014, reduction of ambient PM concentrations on the Nipomo Mesa has not yet been realized.

The decrease in the number of Good air quality days in Appendix C - AQI for Particulate Matter, is due to a change in the monitoring network, not due to deteriorating air quality. The number of official monitoring stations on the Nipomo Mesa has increased. As described above, Nipomo Mesa is significantly impacted by blowing dust, and a new monitor was placed closer to the source in 2010.



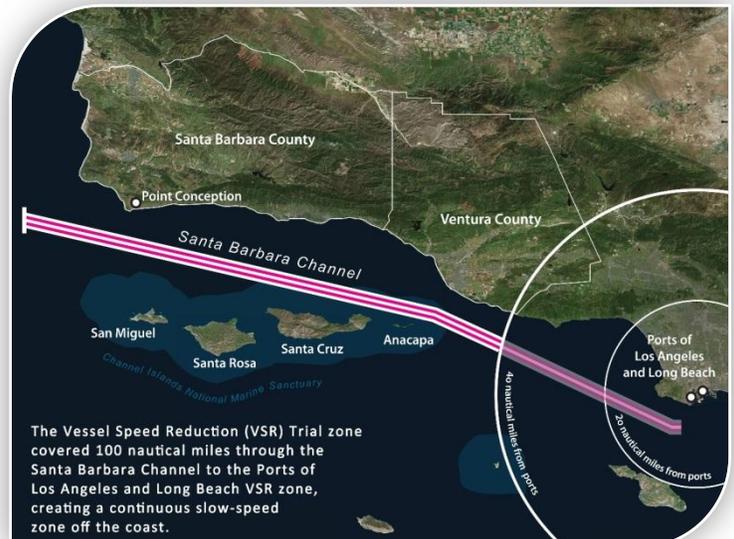
SANTA BARBARA COUNTY AIR POLLUTION CONTROL DISTRICT



Santa Barbara County is designated non-attainment for the state 24-hour PM₁₀ and ozone standards. The county remains in attainment of the federal PM₁₀ and PM_{2.5} standards, and the federal 8-hour ozone standard. In 2014, there were more exceedances of the state and federal ozone standards than in the preceding years, including a higher number of days in October.

Emissions from large ships going through the Santa Barbara Channel threaten the county's ability to continue progress toward attainment of the state ozone standard, and to maintain attainment of the federal ozone standard. In 2014, the air district worked with the Channel Islands National Marine Sanctuary and the Environmental Defense Center on the development of a program to slow ships down in the Santa Barbara Channel for whale-protection and air-quality benefits. A ship strike on a whale is up to 50 percent less likely to be fatal at speeds below 12 knots, and ship speed reduction increases fuel efficiency and reduces air emissions.

The Vessel Speed Reduction (VSR) trial incentive program, modeled after the successful VSR programs at the ports of Los Angeles and Long Beach, was implemented in the Santa Barbara Channel from July through November 2014. Seven global shipping companies participated; 27 transits through the Channel were slowed to 12 knots or less (from previous baseline speeds of 14 knots to 18.67 knots) for an incentive payment of \$2,500 per transit.



The VSR trial achieved a 50 percent reduction from baseline levels for these transits of ozone-forming NO_x emissions (16 tons reduced) and of greenhouse gas emissions (500 metric tons reduced). Most of the ship transits occurred from July through October, coinciding with the peak ozone season and the peak whale season.

The VSR trial was funded by the Santa Barbara Foundation, the Santa Barbara County Air Pollution Control District and the Ventura County Air Pollution Control District, with payments administered by the National Marine Sanctuary Foundation. In September of 2014, the air district and partners hosted a community forum titled “Protecting Blue Whales and Blue Skies” to share results from the VSR trial. The air district and partners are building on the success of the VSR trial and working towards establishing a larger-scale program.

In 2014, the air district also continued to support installation of public electric vehicle charging stations and participated in tri-county collaborative efforts to develop electric vehicle charging and hydrogen fueling infrastructure. The air district’s popular Old Car Buy Back Program retired 525 old cars in 2014, achieving 17.52 tons of emission reductions (NO_x, reactive organic compounds, and particulate matter). In 2014, the air district also continued to lead the award-winning Santa Barbara Car Free partnership, and to implement diesel engine grant programs and the Care for Our Earth teacher grants program. More information is available at www.OurAir.org, and www.twitter.com/OurAirSBC.



SHASTA COUNTY AIR QUALITY MANAGEMENT DISTRICT

The Shasta County Air Quality Management District encompasses the northernmost portion of the Sacramento Valley Air Basin. The air district is in attainment for all federal ambient air quality standards.

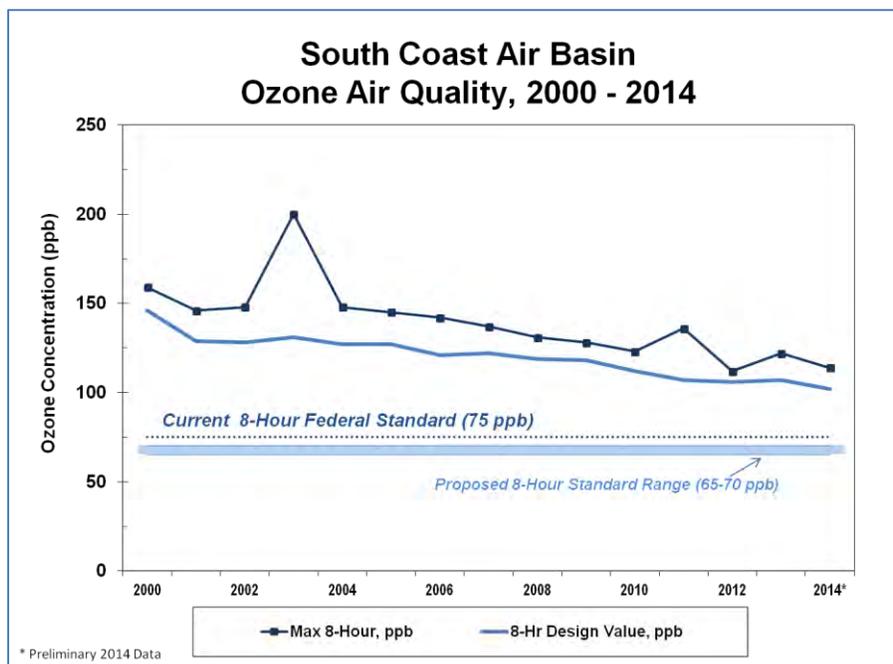
Efforts to enhance air quality within the air district include grant opportunities and public outreach. Grants continue to be available for the Carl Moyer Program and the Timber Log Truck Replacement Program. A wood stove upgrade program has been ongoing for the last eight winters. Air district public outreach includes utilizing the U.S. EPA’s Enviroflash service, which updates individuals on ambient air quality levels via e-mail. The air district also maintains a webpage which displays the AQI values for ozone and PM_{2.5} monitors located throughout the Sacramento Valley. A visibility camera is operated atop the air district’s western mountain range and can be viewed at http://www.co.shasta.ca.us/index/drm_index/aq_index/aq_webcam.aspx.



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Air quality in the South Coast region continues to improve over the long term, although the maximum concentration and number of days each year in which the federal ozone standard is exceeded fluctuates from year to year due to weather conditions.

In 2014, the South Coast region exceeded the federal ozone standard on 94 days, the second-lowest number ever recorded in the South Coast Air Basin. The maximum 1-hour ozone concentration of 0.142 parts per million (ppm) in 2014 was the lowest on record and the maximum 8-hour ozone concentration of 0.114 was the second-lowest recorded.

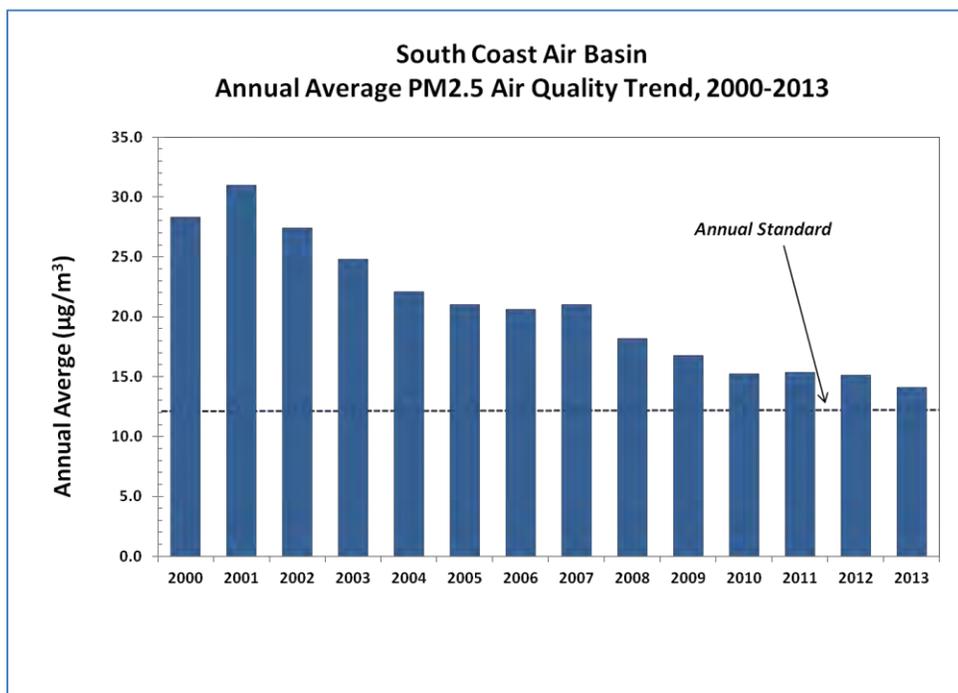
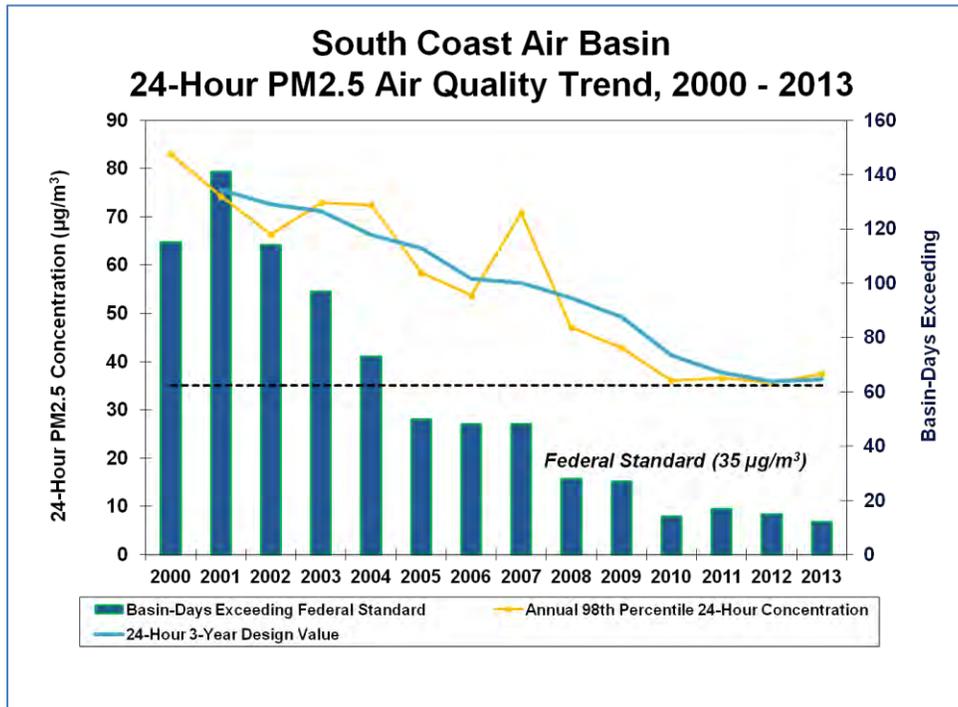


Air pollution controls have significantly reduced levels of PM_{2.5} across the region and data since 2011 show that the Southland is meeting the former 1997 annual PM_{2.5} federal standard of 15 micrograms per cubic meter.

U.S. EPA revised the annual average PM_{2.5} standard from 15 micrograms per cubic meter down to 12 micrograms per cubic meter in March 2013 and the South Coast region is continuing to make progress toward attainment of this new annual standard. The region came close but did not meet the 24-hour federal PM_{2.5} standard in 2014.

Severe drought conditions continue to have an impact on the number of 24-hour PM_{2.5} episodes in the region. The lack of storm events and associated rainfall reduced the

dispersion of pollutants, the atmospheric cleansing of particulates by precipitation, and the control of fugitive particulate emissions from the wetting of soil and road surfaces. The air district is now developing additional control measures to help meet the 24-hour PM_{2.5} federal standard deadline in 2015.



During the 2014-15 winter Check Before You Burn season, the air district issued 25 no-burn alerts. A total of 16 no-burn alerts were issued during the 2013-14 season and five no-burn alerts during the 2012-13 season. In 2013, the air district lowered the forecast threshold triggering no-burn alerts from 35 micrograms per cubic meter to 30 micrograms per cubic meter, which has increased the number of no-burn days.

The air district continues to face major air quality challenges, particularly in reducing mobile source emissions. Nitrogen oxide emissions must be further reduced by 65 to 75 percent or more to meet current federal health standards for both PM2.5 and ozone.

However, improvements in air quality are paying dividends. A recent study by USC scientists responsible for the landmark Children's Health Study found that lung growth improved as air pollution declined for children aged 11 to 15 in five Southern California communities. The study findings were published in the New England Journal of Medicine.

The air district achieved significant accomplishments in 2014, including:

- Releasing results of its fourth Multiple Air Toxics Exposure Study (MATES IV), which showed a steep decline in cancer risk to residents of the South Coast region;
- Establishing the nation's first Air Quality Sensor Performance Evaluation Center (AQ-SPEC) to test commercially available, low-cost air quality sensors to help evaluate the validity and overall performance of these personal air quality sensors;
- Successfully securing orders of abatement from the SCAQMD Hearing Board to require Exide Technologies, one of two lead-acid battery recycling plants in the South Coast region, to make substantial improvements to its air pollution control system before resuming operations at its plant. The two orders applied conditions on Exide that went beyond SCAQMD's already stringent rules regulating lead and arsenic emissions from battery recycling plants;
 - Adopting new, tougher requirements to control arsenic and other toxic emissions from the two lead-acid battery recycling plants in the South Coast region;
 - Kicked off the planning process for the 2016 Air Quality Management Plan (AQMP), which includes advisory groups and dialogues with stakeholders regarding development strategies. Also, for the first time the AQMP planning process includes a series of white papers that are being prepared to lay out the technical and policy issues concerning interlocking disciplines on air quality, climate, energy and transportation issues;



- Funding close to \$150 million for the replacement and/or retrofit of older diesel trucks and buses, as well as innovative clean-technology projects such as the demonstration and deployment of a zero-emission cargo container moving system in the ports using overhead catenary technology;
- Installing an air pollution monitor near the Sentinel power plant in the Desert Hot Springs area of Coachella Valley to better assess any potential emission impacts from the power plant on the Desert Hot Springs area;
- Expanding the near-road NO2 monitoring network next to busy Southern California freeways from two to four monitoring stations. Two stations have also been enhanced with PM2.5 monitors; another two stations were enhanced with CO monitors; and one station is now monitoring for black carbon;
- Launching a Green Gardener initiative to demonstrate new heavy-duty electric lawn mowers used by professional landscapers in parks, cities and other venues;
- Conducting a wide range of air toxics monitoring activities throughout the region, including odor investigations and near-source toxic metals monitoring; and
- Continuously monitoring hydrogen sulfide gas levels at the Salton Sea and issuing odor advisories when those levels are elevated.



TEHAMA COUNTY AIR POLLUTION CONTROL DISTRICT

The Tehama County Air Pollution Control District is located in the northern part of the Sacramento Valley. The air district spans 2,949 square miles and has an estimated population of 63,057. The county economy is predominantly based in agriculture, including production of walnuts, almonds, various fruits, and livestock. The air district operates three air quality monitors that were recently relocated from various locations throughout the county to the air district office at 1834 Walnut St. in Red Bluff.

The air district actively participates in many grant programs to help improve air quality in the air district's jurisdiction, including the Carl Moyer program, the TIMBER Log Truck Replacement Program, and AB 923 funding program. Through these programs, the air district has been able to reduce emissions from stationary diesel irrigation pumps, off-road mobile diesel tractors, and on-road mobile diesel vehicles. Expanding grant opportunities is an important task for the air district. In 2015, the air district hopes to introduce a wood stove replacement grant program.

The air district believes outreach and education on many topics will help to increase awareness about rural air quality problems and solutions. The air district strives to

continue to participate in projects that will benefit not only Tehama County but all of northern California's rural air districts, by participating in the Upstate Plug-In Electric Vehicle Readiness Project and the Rural Sustainability Fund. Outreach information and air district activities can be found at <http://www.tehcoapcd.net/>.



TUOLUMNE COUNTY AIR POLLUTION CONTROL DISTRICT

The Tuolumne County Air Pollution Control District is a small air district, serving approximately 55,000 people. Seventy-seven percent of the land within the air district is federal, comprised mainly of the Stanislaus National Forest and the northern half of Yosemite National Park. Major air quality concerns are particulate matter emissions from wildfires, opening burning and residential wood-heating appliances, and also ozone and ozone precursor emissions. Tuolumne County is designated non-attainment for the state ozone standard, but classified as non-attainment due to "Overwhelming Transport" of emissions into the air district.

Tuolumne County's air quality continues to improve. In 2014, air quality monitoring data showed only two exceedances of the 2008 federal 8-hour ozone standard. In 2012, the U.S. EPA determined that Tuolumne County had attained the 1997 federal 8-hour ozone standard and designated the air district as in attainment for the more stringent 2008 federal 8-hour ozone standard.



Tuolumne County continues to recover from the Rim Fire that began in August 2013 and burned over 256,000 acres. The air district is working with stakeholders to utilize unburned fuel within the Rim Fire boundaries to be used at local biomass energy plants. Preventing future large scale wildfires will take the effort of both land managers and air quality regulators to implement scientific and common-sense approaches to reducing fuel loading.

The air district continues to implement the Carl Moyer program with over \$1.6 million dollars allocated to local businesses and public and private agencies. In 2013, the air district implemented the TIMBER program to help log truckers comply with ARB's new On-Road Truck and Bus regulation; however, this grant program is falling short of expectations. The air district is completing its second very successful green waste voucher

program, giving residents within the county the ability to recycle up to four cubic yards of green waste that would most likely otherwise be burned.



VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT

Ventura County does not meet the federal and state ozone standards nor the state PM10 standard. Ozone levels in the county exceeded the federal 8-hour ozone standard seven days in 2014, which was the county's second cleanest year on record. Ventura County's cleanest year on record was 2013 with only four days over the standard. Weather conditions play a role in ozone formation, with hot summers (2014) leading to higher ozone levels, and mild summers (2013) leading to lower ozone levels.

2014 was far better than 1990 (117 days over the standard) and 2000 (57 days over the standard). Moreover, the county's long-term trend towards clean air continues and the air district anticipates meeting the current federal ozone standard by 2021, as required by the federal Clean Air Act. The following summarizes several of the air district's accomplishments during 2014.



In September 2014, the air district joined a coalition of four government, non-profit, and marine industry groups in a trial incentive program to slow down large cargo vessels transiting the Santa Barbara Channel. The purpose of the program was to reduce air pollution and help protect endangered whales. Air emissions from these vessels contribute approximately one quarter of the air district's ozone-forming nitrogen oxide emissions. They are also a significant source of sulfur dioxide, greenhouse gases, diesel particulate matter, among other toxic air pollutants.

The air district helped fund the Port of Hueneme's state-of-the-art shore-side electrification power project. The California At-Berth Ocean-going Vessels Regulation requires cargo vessels to use shore electrical power while in port. Shore power dramatically cuts air pollutants – nitrogen oxides, particulate matter, and greenhouse gases – from docked cargo ships.

The air district's 2014 Carl Moyer Program helped local farmers and commercial fishermen replace 78 high-emission diesel engines with new low-emission diesel engines

or electric motors. The program has achieved significant air pollutant reductions over the last 16 years by funding replacement of over 900 high emitting diesel engines with new, much cleaner equipment.

Another air district clean air program is the Ventura County Electric Vehicle (EV) Infrastructure Grant Program. This program helps fund new EV charging stations for fully electric vehicles and plug-in hybrids. Projects in 2014 included charging stations at the Ventura County Government Center, Oak Park School District, Camarillo Metrolink Station, and the Ventura County Office of Education.

The air district upgraded its entire particulate monitoring network from filter-based particulate monitors to continuous particulate monitors. These new monitors continuously measure airborne particulate concentrations giving county citizens near real-time information about particulate concentrations in their area.



YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT

Located on the west side of the Sacramento Valley, the Yolo-Solano Air Quality Management District boasts a rich agricultural heritage with seven incorporated cities and a plethora of innovative businesses. Encompassing all of Yolo County and the northeastern portion of Solano County, the air district is home to 330,000 residents.

Residents of the Yolo-Solano region breathed easy in 2014 as the air district experienced just one day of air quality that did not meet federal health standards. Yet Yolo-Solano remains out of attainment of the federal ozone standard due to its emission contributions to the wider Sacramento region. As such, air district staff works hard to ensure it will meet compliance dates while protecting residents from harmful air pollution in the immediate term.

To ensure Yolo-Solano's clean air future, the air district launched its Clean Agricultural and Municipal Equipment programs in 2014. The programs help fund projects to replace or retrofit off-road engines and lower emissions from mobile sources. The first project funded under the program, a new tractor for a local family farm, was completed in late 2014.

In order to protect residents against potential future episodes of unhealthy air quality, the air district adopted an Emergency Event Response Manual laying out procedures and standards in the case of hazardous conditions. The manual will help staff quickly assess and respond to emergency events such as wildfires, toxic releases and extreme heat episodes. The manual was created in close conjunction with county Public Health Officers.



APPENDICES

APPENDIX A - WHAT IS THE AIR QUALITY INDEX (AQI)?

The Air Quality Index (AQI) is a tool for reporting daily air quality levels. The index demonstrates how clean or polluted the air is using colors and a scale from zero (Good) to 500 (Hazardous). The AQI also indicates potential health effects associated with each air quality category, focusing on those effects that may be experienced within a few hours or days after breathing polluted air.

The AQI is calculated for the major air pollutants regulated by the federal Clean Air Act. For each of these pollutants, the U.S. EPA established a National Ambient Air Quality Standard (NAAQS) to protect health. An AQI value of 100 generally corresponds to the current NAAQS for the pollutant.

For particulate matter, an AQI value of 101 or higher corresponds to a measured concentration over the 24-hour PM_{2.5} NAAQS of 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). For ground-level ozone, an AQI value of 101 or higher corresponds to a measured concentration over the current 8-hour ozone NAAQS of 75 parts per billion (ppb).

Good (0-50)	Air Quality is considered satisfactory, and air pollution poses little or no risk.
Moderate (51-100)	Unusually sensitive people should consider limiting prolonged outdoor exertion.
Unhealthy for Sensitive Groups (101-150)	The following groups should limit prolonged or heavy outdoor exertion: <ul style="list-style-type: none">• People with lung disease, such as asthma• People with heart disease• Children and older adults• People who are active outdoors
Unhealthy (151-200)	The following groups should avoid prolonged or heavy outdoor exertion: <ul style="list-style-type: none">• People with lung disease, such as asthma• People with heart disease• Children and older adults• People who are active outdoors Everyone else should limit prolonged outdoor exertion.
Very Unhealthy (201-300)	The following groups should avoid prolonged or heavy outdoor exertion: <ul style="list-style-type: none">• People with lung disease, such as asthma• People with heart disease• Children and older adults• People who are active outdoors Everyone else should limit prolonged outdoor exertion.
Hazardous (over 300)	Indicates a health warning of emergency conditions. The entire population is more likely to be affected. Everyone should avoid all physical activity outdoors.

APPENDIX B – AQI FOR OZONE

This table shows the percent of days in each of the AQI reporting categories for each county, comparing the years 2000-2002 and 2012-2014, for the measured daily maximum 8-hour ozone concentration. For ozone, an AQI value of 101 or higher corresponds to the 8-hour ozone concentration exceeding the NAAQS of 75 parts per billion, indicated in the table by a percentage greater than zero in the ‘Unhealthy for Sensitive Groups’ or ‘Unhealthy’ or ‘Very Unhealthy’ categories.

The recent data may not be final or complete for some air districts and should be treated as preliminary and subject to change when validated. In addition, some air districts may have changed the number of stations or frequency of monitoring between 2000 and 2014. Please refer to your local air district for more specific information.

County	Air District	Good		Moderate		Unhealthy for Sensitive Groups		Unhealthy		Very Unhealthy	
		2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014
Percent of Days for Ozone											
Alameda	Bay Area	93.8	95.5	4.3	3.7	1.6	0.7	0.3	0	0	0
Alpine*	Great Basin Unified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amador	Amador County	73.4	85.2	20.1	14.0	6.2	0.8	0.3	0	0	0
Butte	Butte County	71.1	80.0	20.6	19.2	8.3	0.8	0.1	0	0	0
Calaveras	Calaveras County	70.5	86.7	20.7	12.8	8.3	0.5	0.5	0	0	0
Colusa	Colusa County	87.9	98.1	10.7	1.9	1.5	0	0	0	0	0
Contra Costa	Bay Area	90.8	95.3	7.0	4.2	2.0	0.5	0.2	0	0	0
Del Norte*	North Coast Unified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
El Dorado	El Dorado County	59.5	70.3	22.7	25.1	14.0	4.5	3.6	0.1	0.2	0
Fresno	San Joaquin Valley	41.9	55.6	20.8	26.6	24.0	16.2	12.0	1.6	1.3	0.1
Glenn	Glenn County	85.1	95.0	14.2	5.0	0.7	0	0	0	0	0
Humboldt*	North Coast Unified	NA	100	NA	0	NA	0	NA	0	NA	0
Imperial	Imperial County	69.0	77.1	23.8	19.2	6.2	3.7	1.0	0.1	0	0
Inyo	Great Basin Unified	70.5	83.3	26.6	16.6	2.9	0.1	0	0	0	0
Kern	Eastern Kern	58.4	62.9	24.1	28.2	16.4	8.9	1.0	0	0	0
Kern	San Joaquin Valley	48.9	53.3	17.9	29.4	22.2	16.4	10.3	0.9	0.7	0
Kings	San Joaquin Valley	60.4	67.6	21.6	27.8	15.8	4.4	2.2	0.2	0	0
Lake	Lake County	96.6	97.9	3.3	2.0	0.1	0.1	0	0	0	0

County	Air District	Good		Moderate		Unhealthy for Sensitive Groups		Unhealthy		Very Unhealthy	
		2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014
		Percent of Days for Ozone									
Lassen*	Lassen County	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Los Angeles	Antelope Valley	62.5	65.6	20.0	26.2	14.6	8.2	2.8	0	0.1	0
Los Angeles	South Coast	62.3	59.2	19.1	24.3	12.2	14.7	4.9	1.8	1.5	0
Madera	San Joaquin Valley	67.9	67.9	22.3	25.4	9.3	6.3	0.5	0.4	0	0
Marin	Bay Area	99.8	99.5	0.2	0.5	0	0	0	0	0	0
Mariposa	Mariposa County	61.2	70.4	24.0	27.3	14.3	2.3	0.5	0	0	0
Mendocino	Mendocino County	99.5	99.8	0.5	0.2	0	0	0	0	0	0
Merced	San Joaquin Valley	58.8	75.1	21.4	20.9	16.4	4.0	3.2	0	0.2	0
Modoc*	Modoc County	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mono*	Great Basin Unified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monterey	Monterey Bay Unified	97.4	98.9	2.5	1.1	0.2	0	0	0	0	0
Napa	Bay Area	98.5	99.0	1.3	0.9	0.2	0.1	0	0	0	0
Nevada	Northern Sierra	59.4	71.6	24.7	25.9	14.5	2.5	1.4	0	0	0
Orange	South Coast	85.6	90.0	12.0	8.7	2.3	1.3	0.2	0	0	0
Placer	Placer County	70.9	77.4	16.4	19.4	10.4	3.2	2.3	0	0	0
Plumas*	Northern Sierra	83.8	NA	14.8	NA	1.4	NA	0	NA	0	NA
Riverside*	Mojave Desert	NA	89.0	NA	10.0	NA	0.9	NA	0	NA	0
Riverside	South Coast	48.0	47.8	20.4	30.7	20.4	19.7	9.8	1.8	1.4	0
Sacramento	Sacramento Metro	70.2	78.3	17.2	15.6	10.2	5.7	2.4	0.5	0.1	0
San Benito	Monterey Bay Unified	81.9	91.3	14.4	8.6	3.7	0.1	0	0	0	0
San Bernardino	Mojave Desert	50.3	56.1	24.1	29.7	19.5	13.4	5.3	0.8	0.8	0
San Bernardino	South Coast	52.5	53.4	17.9	22.1	16.3	18.4	9.6	6.0	3.7	0.1
San Diego	San Diego County	64.8	70.1	24.3	27.3	9.5	2.7	1.4	0	0.1	0
San Francisco	Bay Area	100	99.9	0	0.1	0	0	0	0	0	0
San Joaquin	San Joaquin Valley	86.3	83.8	10.3	13.7	3.3	2.4	0.1	0.1	0	0
San Luis Obispo**	San Luis Obispo County	86.3	79.3	12.7	19.2	1.0	1.6	0	0	0	0
San Mateo	Bay Area	99.6	99.4	0.4	0.6	0	0	0	0	0	0
Santa Barbara	Santa Barbara County	74.5	91.8	20.2	7.6	5.2	0.6	0.1	0	0	0
Santa Clara	Bay Area	92.1	95.1	6.4	4.5	1.0	0.5	0.5	0	0	0
Santa Cruz	Monterey Bay Unified	96.7	99.5	3.1	0.5	0.2	0	0	0	0	0
Shasta	Shasta County	81.0	89.1	16.5	10.5	2.5	0.4	0	0	0	0
Sierra*	Northern Sierra	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Siskiyou	Siskiyou County	96.7	97.9	3.3	2.1	0	0	0	0	0	0

County	Air District	Good		Moderate		Unhealthy for Sensitive Groups		Unhealthy		Very Unhealthy	
		2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014
Percent of Days for Ozone											
Solano	Bay Area/Yolo-Solano	93.9	96.0	5.1	3.9	1.0	0.1	0	0	0	0
Sonoma	Bay Area	97.7	99.7	2.2	0.3	0.1	0	0	0	0	0
Sonoma	Northern Sonoma County	99.0	99.1	1.0	0.9	0	0	0	0	0	0
Stanislaus	San Joaquin Valley	74.9	71.8	16.7	20.7	7.4	7.2	1.0	0.3	0	0
Sutter	Feather River	83.0	94.7	13.0	5.2	4.0	0.1	0	0	0	0
Tehama	Tehama County	76.1	77.7	18.8	21.2	5.2	1.2	0	0	0	0
Trinity*	North Coast Unified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tulare	San Joaquin Valley	50.6	55.6	15.0	25.2	25.9	18.8	8.4	0.5	0.1	0
Tuolumne	Tuolumne County	60.3	81.1	26.2	18.3	12.9	0.6	0.6	0	0	0
Ventura	Ventura County	61.6	78.4	24.5	19.2	12.2	2.5	1.7	0	0	0
Yolo	Yolo-Solano	87.7	94.2	9.7	5.6	2.6	0.2	0	0	0	0
Yuba*	Feather River	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

* County did not contain official monitoring stations for ozone during one or both periods.

** See explanation on page 38 regarding apparent increase in ozone levels over the reference periods.

APPENDIX C – AQI FOR PARTICULATE MATTER

This table shows the percent of days in each of the AQI reporting categories for each county, comparing the years 2000-2002 and 2012-2014, for the daily maximum 24-hour PM2.5 measurement. For PM2.5, an AQI value of 101 or higher corresponds to the 24-hour PM2.5 concentration exceeding the NAAQS of 35 micrograms per cubic meter, indicated in the table by a percentage greater than zero in the ‘Unhealthy for Sensitive Groups,’ or ‘Unhealthy’ or ‘Very Unhealthy’ categories.

The recent data may not be complete or finalized for some air districts and should be treated as preliminary and subject to change when validated. In addition, some air districts may have changed the number of stations or the frequency of monitoring between 2000 and 2014. The data used in this report may include data flagged as being influenced by exceptional events, such as wildfire smoke or windblown dust, which are generally uncontrollable in spite of best emissions controls. In such cases, including several large wildfire events in Northern and Central California in recent years, the tables may indicate more days of unhealthy air quality than is typically seen in those counties. Please refer to your local air district for more specific information.

County	Air District	Good		Moderate		Unhealthy for Sensitive Groups		Unhealthy		Very Unhealthy	
		2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014
Percent of Days for Particulate Matter (PM2.5)											
Alameda	Bay Area	61.8	67.0	31.0	32.3	5.6	0.6	1.6	0	0	0
Alpine*	Great Basin Unified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amador*	Amador	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butte	Butte County	67.4	78.0	24.3	21.6	5.0	0.3	3.3	0	0	0
Calaveras	Calaveras County	83.7	88.8	15.2	11.1	1.1	0.1	0	0	0	0
Colusa	Colusa County	76.7	84.3	22.1	15.7	0.9	0.0	0.3	0	0	0
Contra Costa	Bay Area	67.4	69.6	24.7	30.1	6.0	0.3	1.8	0	0	0
Del Norte*	North Coast Unified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
El Dorado*	El Dorado County	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fresno	San Joaquin Valley	40.4	51.0	39.8	38.8	11.5	7.0	8.2	0	0.1	0
Glenn*	Glenn County	NA	79.6	NA	20.3	NA	0.1	NA	0	NA	0

County	Air District	Good		Moderate		Unhealthy for Sensitive Groups		Unhealthy		Very Unhealthy	
		2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014
		Percent of Days for Particulate Matter (PM2.5)									
Humboldt	North Coast Unified	81.7	88.0	18.3	12.0	0	0	0	0	0	0
Imperial	Imperial County	42.5	52.3	52.8	45.9	3.0	1.7	1.7	0	0	0
Inyo	Great Basin Unified	90.6	89.1	5.0	9.0	2.0	0.4	2.3	0	0	0
Kern	Eastern Kern	86.1	86.0	13.6	13.2	0.3	0.5	0	0	0	0
Kern	San Joaquin Valley	33.4	47.3	49.3	42.2	9.5	6.0	7.7	0.1	0.1	0
Kings	San Joaquin Valley	37.8	51.4	42.2	38.9	13.0	6.4	7.0	0	0	0
Lake	Lake County	96.6	95.8	2.2	4.2	0.6	0.0	0.6	0	0	0
Lassen*	Lassen County	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Los Angeles	Antelope Valley	76.2	97.3	23.5	2.1	0.3	0.7	0	0	0	0
Los Angeles	South Coast	12.1	44.4	67.0	53.5	16.0	1.8	4.9	0	0	0
Madera*	San Joaquin Valley	NA	41.3	NA	52.6	NA	4.6	NA	0	NA	0
Marin*	Bay Area	NA	77.1	NA	22.6	NA	0.3	NA	0	NA	0
Mariposa*	Mariposa County	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mendocino	Mendocino County	85.9	83.4	12.4	16.6	1.1	0	0.6	0	0	0
Merced	San Joaquin Valley	45.6	67.6	40.2	27.8	11.3	4.1	2.9	0	0	0
Modoc*	Modoc County	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mono*	Great Basin Unified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monterey	Monterey Bay Unified	87.0	93.1	13.0	6.9	0	0	0	0	0	0
Napa*	Bay Area	NA	62.0	NA	37.9	NA	0.1	NA	0	NA	0
Nevada	Northern Sierra	86.1	90.9	13.6	8.3	0	0.5	0.3	0	0	0
Orange	South Coast	28.3	75.3	59.7	23.6	9.3	1.0	2.7	0	0	0
Placer	Placer County	73.2	85.1	22.3	13.7	4.5	0.5	0	0.1	0	0
Plumas	Northern Sierra	63.6	60.1	31.1	32.7	5.1	7.0	0.3	0	0	0

County	Air District	Good		Moderate		Unhealthy for Sensitive Groups		Unhealthy		Very Unhealthy	
		2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014
		Percent of Days for Particulate Matter (PM2.5)									
Riverside*	Mojave Desert	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Riverside	South Coast	13.7	41.4	58.1	56.0	19.0	2.5	9.1	0	0	0
Sacramento	Sacramento Metro	68.0	75.0	25.7	23.4	4.1	1.6	2.2	0	0	0
San Benito*	Monterey Bay Unified	NA	96.3	NA	3.7	NA	0	NA	0	NA	0
San Bernardino	Mojave Desert	58.8	97.4	41.0	2.6	0.3	0	0	0	0	0
San Bernardino	South Coast	8.7	46.0	66.0	51.5	17.7	1.9	7.6	0	0	0
San Diego	San Diego County	26.9	51.8	66.5	47.6	6.2	0.3	0.4	0	0	0
San Francisco	Bay Area	60.2	80.2	32.9	19.5	5.2	0.3	1.7	0	0	0
San Joaquin	San Joaquin Valley	61.1	54.3	30.0	40.9	7.3	3.8	1.6	0	0	0
San Luis Obispo	San Luis Obispo County	77.4	56.6	19.9	42.6	2.2	0.8	0.5	0	0	0
San Mateo	Bay Area	68.2	80.5	27.4	19.2	4.0	0.3	0.4	0	0	0
Santa Barbara	Santa Barbara County	69.4	77.0	30.1	23.0	0.5	0	0	0	0	0
Santa Clara	Bay Area	55.1	75.6	36.2	23.8	6.4	0.5	2.3	0	0	0
Santa Cruz	Monterey Bay Unified	84.8	97.1	15.2	2.9	0	0	0	0	0	0
Shasta	Shasta County	79.4	86.2	17.6	13.8	2.9	0	0	0	0	0
Sierra*	Northern Sierra	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Siskiyou*	Siskiyou County	NA	84.8	NA	12.9	NA	1.2	NA	0	NA	0
Solano	Bay Area/Yolo-Solano	62.8	76.8	30.0	22.4	4.7	0.7	2.5	0	0	0
Sonoma	Bay Area	71.8	84.1	22.3	15.9	5.5	0	0.4	0	0	0
Sonoma*	Northern Sonoma County	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Stanislaus	San Joaquin Valley	54.4	59.6	34.0	32.4	6.7	6.4	4.9	0	0	0

County	Air District	Good		Moderate		Unhealthy for Sensitive Groups		Unhealthy		Very Unhealthy	
		2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014	2000-2002	2012-2014
		Percent of Days for Particulate Matter (PM2.5)									
Sutter	Feather River	70.0	80.1	27.0	19.5	2.0	0.4	1.0	0	0	0
Tehama*	Tehama County	NA	85.9	NA	13.7	NA	0.4	NA	0	NA	0
Trinity*	North Coast Unified	NA	96.3	NA	3.7	NA	0	NA	0	NA	0
Tulare	San Joaquin Valley	35.0	51.6	46.2	39.5	10.3	4.9	8.5	0	0	0
Tuolumne*	Tuolumne County	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ventura	Ventura County	35.4	58.3	60.6	41.6	4.0	0.1	0	0	0	0
Yolo	Yolo-Solano	77.9	89.2	20.4	10.8	1.2	0	1	0	0	0
Yuba*	Feather River	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

* County did not contain official monitoring stations for PM2.5 during one or both periods.

APPENDIX D- EXCEEDANCES: OZONE

This table shows the average percent of days in each county when at least one county monitoring station exceeded the level of the 8-hour ozone NAAQS (75 ppb) for the reporting periods of 2000-2002 and 2012-2014. Recent data may not be complete or finalized for some air districts and should be treated as preliminary and subject to change when validated. In addition, some air districts may have changed the number of stations or frequency of monitoring between each reporting period. Please refer to your local air district for more specific information.

County	Air District	Percent of Days Exceeding the 8-hour NAAQS (75 ppb)	
		2000-2002	2012-2014
Alameda	Bay Area	1.9	0.7
Alpine*	Great Basin Unified	No Data	No Data
Amador	Amador County	6.5	0.8
Butte	Butte County	8.3	0.8
Calaveras	Calaveras County	8.8	0.5
Colusa	Colusa County	1.5	0
Contra Costa	Bay Area	2.2	0.5
Del Norte*	North Coast Unified	No Data	No Data
El Dorado	El Dorado County	17.8	4.6
Fresno	San Joaquin Valley	37.3	17.8
Glenn	Glenn County	0.7	0
Humboldt*	North Coast Unified	No Data	0
Imperial	Imperial County	7.2	3.7
Inyo	Great Basin Unified	2.9	0.1
Kern	Eastern Kern	17.5	8.9
Kern	San Joaquin Valley	33.2	17.3
Kings	San Joaquin Valley	18.0	4.6
Lake	Lake County	0.1	0.1
Lassen*	Lassen County	No Data	No Data
Los Angeles	Antelope Valley	17.7	8.2
Los Angeles	South Coast	18.6	16.5
Madera	San Joaquin Valley	9.8	6.7
Marin	Bay Area	0	0
Mariposa	Mariposa County	14.8	2.3
Mendocino	Mendocino County	0	0
Merced	San Joaquin Valley	19.8	4.0
Modoc*	Modoc County	No Data	No Data
Mono*	Great Basin Unified	No Data	No Data
Monterey	Monterey Bay Unified	0.2	0

County	Air District	Percent of Days Exceeding the 8-hour NAAQS (75 ppb)	
		2000-2002	2012-2014
Napa	Bay Area	0.2	0.1
Nevada	Northern Sierra	15.9	2.5
Orange	South Coast	2.5	1.3
Placer	Placer County	12.7	3.2
Plumas*	Northern Sierra	1.4	No Data
Riverside*	Mojave Desert	No Data	0.9
Riverside	South Coast	31.6	21.5
Sacramento	Sacramento Metro	12.7	6.1
San Benito	Monterey Bay Unified	3.7	0.1
San Bernardino	Mojave Desert	25.6	14.2
San Bernardino	South Coast	29.7	24.5
San Diego	San Diego County	10.9	2.7
San Francisco	Bay Area	0	0
San Joaquin	San Joaquin Valley	3.4	2.5
San Luis Obispo**	San Luis Obispo County	1.0	1.6
San Mateo	Bay Area	0	0
Santa Barbara	Santa Barbara County	6.0	0.6
Santa Clara	Bay Area	1.5	0.5
Santa Cruz	Monterey Bay Unified	0.2	0
Shasta	Shasta County	2.5	0.4
Sierra*	Northern Sierra	No Data	No Data
Siskiyou	Siskiyou County	0	0
Solano	Bay Area/Yolo-Solano	0.6	0.1
Sonoma	Bay Area	0.1	0
Sonoma	Northern Sonoma County	0	0
Stanislaus	San Joaquin Valley	8.4	7.5
Sutter	Feather River	3.0	0.1
Tehama	Tehama County	6.6	1.2
Trinity*	North Coast Unified	No Data	No Data
Tulare	San Joaquin Valley	34.4	19.3
Tuolumne	Tuolumne County	13.6	0.6
Ventura	Ventura County	14.0	2.5
Yolo	Yolo-Solano	2.6	0.2
Yuba*	Feather River	No Data	No Data

* County did not contain official monitoring stations for ozone during one or both periods.

** See explanation on page 38 regarding apparent increase in ozone levels over the reference periods.

APPENDIX E- OZONE AIR QUALITY TRENDS

This table shows the percent above or below the current ozone NAAQS for each county over the comparison reporting periods of 2000-2002 and 2012-2014. This method uses the 3-year “design values” for each county, which is the metric used to assess attainment of the NAAQS. It takes into account both the level and the form of the federal standard for the county’s highest station, averaged over three years. A positive number means the county is above, or not in attainment of, the NAAQS and a negative number or zero indicates that the county is below, or in attainment of, the NAAQS for that period. The data in this table illustrate the changes that have occurred between the two reporting periods.

Data may not be complete or finalized for some air districts and should be treated as preliminary and subject to change when validated. In addition, some air districts may have changed the number of stations or frequency of monitoring between 2000-2002 and 2012-2014 averaging periods. Please refer to your local air district for more specific information.

County	Air District	Percent of Ozone Design Value Above/Below the 8-hour Ozone NAAQS (75 ppb)	
		2000-2002	2012-2014
Alameda	Bay Area	8	-4
Alpine*	Great Basin Unified	No Data	No Data
Amador	Amador County	17	-4
Butte	Butte County	19	0
Calaveras	Calaveras County	23	-5
Colusa	Colusa County	1	-20
Contra Costa	Bay Area	4	-11
Del Norte*	North Coast Unified	No Data	No Data
El Dorado	El Dorado County	41	12
Fresno	San Joaquin Valley	53	28
Glenn	Glenn County	-1	-12
Humboldt*	North Coast Unified	No Data	-40
Imperial	Imperial County	16	7
Inyo	Great Basin Unified	8	-7
Kern	Eastern Kern	27	12
Kern	San Joaquin Valley	49	21
Kings	San Joaquin Valley	32	12
Lake	Lake County	-15	-19
Lassen*	Lassen County	No Data	No Data
Los Angeles	Antelope Valley	23	15
Los Angeles	South Coast	51	31
Madera	San Joaquin Valley	21	15
Marin	Bay Area	-37	-25

County	Air District	Percent of Ozone Design Value Above/Below the 8-hour Ozone NAAQS (75 ppb)	
		2000-2002	2012-2014
Mariposa	Mariposa County	19	5
Mendocino	Mendocino County	-27	-32
Merced	San Joaquin Valley	35	8
Modoc*	Modoc County	No Data	No Data
Mono*	Great Basin Unified	No Data	No Data
Monterey	Monterey Bay Unified	-15	-21
Napa	Bay Area	-16	-23
Nevada	Northern Sierra	31	8
Orange	South Coast	7	-1
Placer	Placer County	35	8
Plumas*	Northern Sierra	-5	No Data
Riverside*	Mojave Desert	No Data	-7
Riverside	South Coast	51	25
Sacramento	Sacramento Metro	33	13
San Benito	Monterey Bay Unified	8	-7
San Bernardino	Mojave Desert	41	24
San Bernardino	South Coast	71	39
San Diego	San Diego County	27	5
San Francisco	Bay Area	-41	-37
San Joaquin	San Joaquin Valley	8	5
San Luis Obispo**	San Luis Obispo County	-3	1
San Mateo	Bay Area	-31	-25
Santa Barbara	Santa Barbara County	8	-7
Santa Clara	Bay Area	9	-7
Santa Cruz	Monterey Bay Unified	-12	-21
Shasta	Shasta County	4	-7
Sierra*	Northern Sierra	No Data	No Data
Siskiyou	Siskiyou County	-7	-17
Solano	Bay Area/Yolo-Solano	-4	-11
Sonoma	Bay Area	-16	-29
Sonoma	Northern Sonoma County	-16	-24
Stanislaus	San Joaquin Valley	27	13
Sutter	Feather River	9	-12
Tehama	Tehama County	11	0
Trinity*	North Coast Unified	No Data	No Data
Tulare	San Joaquin Valley	40	21
Tuolumne	Tuolumne County	21	-3

County	Air District	Percent of Ozone Design Value Above/Below the 8-hour Ozone NAAQS (75 ppb)	
		2000-2002	2012-2014
Ventura	Ventura County	29	5
Yolo	Yolo-Solano	11	-9
Yuba*	Feather River	No Data	No Data

* County did not contain official monitoring stations for ozone during one or both periods.

** See explanation on page 38 regarding apparent increase in ozone levels over the reference periods.

APPENDIX F- EXCEEDANCES: PM2.5

This table shows the average percent of days when at least one county monitoring station exceeded the level of the 24-hour PM2.5 NAAQS (35 µg/m³) for the reporting periods of 2000-2002 and 2012-2014. Recent data may not be complete or finalized for some air districts, and should be treated as preliminary and subject to change when validated. In addition, some air districts may have changed the number of stations or frequency of monitoring between the reporting periods. Some of the data contributing to exceedances of the PM2.5 NAAQS may be influenced by exceptional events, such as wildfires. Please refer to your local air district for more specific information.

County	Air District	Percent of Days Exceeding the 24-hour PM2.5 NAAQS	
		2000-2002	2012-2014
Alameda	Bay Area	7.2	0.6
Alpine*	Great Basin Unified	No Data	No Data
Amador*	Amador County	No Data	No Data
Butte	Butte County	8.3	0.4
Calaveras	Calaveras County	1.1	0.1
Colusa	Colusa County	1.2	0
Contra Costa	Bay Area	7.8	0.3
Del Norte*	North Coast Unified	No Data	No Data
El Dorado*	El Dorado County	No Data	No Data
Fresno	San Joaquin Valley	19.8	10.2
Glenn*	Glenn County	No Data	0.1
Humboldt	North Coast Unified	0	0
Imperial	Imperial County	4.7	1.9
Inyo	Great Basin Unified	4.4	1.8
Kern	Eastern Kern	0.3	0.8
Kern	San Joaquin Valley	17.3	10.6
Kings	San Joaquin Valley	20.0	9.7
Lake	Lake County	1.1	0
Lassen*	Lassen County	No Data	No Data
Los Angeles	Antelope Valley	0.3	0.7
Los Angeles	South Coast	20.8	2.0
Madera*	San Joaquin Valley	No Data	6.1
Marin*	Bay Area	No Data	0.3
Mariposa*	Mariposa County	No Data	No Data
Mendocino	Mendocino County	1.7	0

County	Air District	Percent of Days Exceeding the 24-hour PM2.5 NAAQS	
		2000-2002	2012-2014
Merced	San Joaquin Valley	14.2	4.6
Modoc*	Modoc County	No Data	No Data
Mono*	Great Basin Unified	No Data	No Data
Monterey	Monterey Bay Unified	0	0
Napa*	Bay Area	No Data	0.1
Nevada	Northern Sierra	0.3	0.8
Orange	South Coast	11.9	1.1
Placer	Placer County	4.5	1.2
Plumas	Northern Sierra	5.3	7.3
Riverside*	Mojave Desert	No Data	No Data
Riverside	South Coast	28.1	2.7
Sacramento	Sacramento Metro	6.3	1.6
San Benito*	Monterey Bay Unified	No Data	0
San Bernardino	Mojave Desert	0.3	0
San Bernardino	South Coast	25.3	2.5
San Diego	San Diego County	6.5	0.5
San Francisco	Bay Area	6.9	0.3
San Joaquin	San Joaquin Valley	8.9	4.8
San Luis Obispo	San Luis Obispo County	2.7	0.8
San Mateo	Bay Area	4.4	0.3
Santa Barbara	Santa Barbara County	0.5	0
Santa Clara	Bay Area	8.7	0.6
Santa Cruz	Monterey Bay Unified	0	0
Shasta	Shasta County	2.9	0
Sierra*	Northern Sierra	No Data	No Data
Siskiyou*	Siskiyou County	No Data	2.3
Solano	Bay Area/Yolo-Solano	7.2	0.7
Sonoma	Bay Area	5.9	0
Sonoma*	Northern Sonoma County	No Data	No Data
Stanislaus	San Joaquin Valley	11.6	8.0
Sutter	Feather River	3.2	0.4
Tehama*	Tehama County	No Data	0.4
Trinity*	North Coast Unified	No Data	0
Tulare	San Joaquin Valley	18.7	8.9
Tuolumne*	Tuolumne County	No Data	No Data

County	Air District	Percent of Days Exceeding the 24-hour PM2.5 NAAQS	
		2000-2002	2012-2014
Ventura	Ventura County	4.0	0.1
Yolo	Yolo-Solano	1.8	0.0
Yuba*	Feather River	No Data	No Data

* County did not contain official monitoring stations for PM2.5 during one or both periods.

APPENDIX G– PARTICULATE MATTER AIR QUALITY TRENDS

This table shows the percent above or below the current PM_{2.5} NAAQS for each county over the comparison reporting periods of 2000-2002 and 2012-2014. This method uses the 3-year “design values” for each county, which is the metric used to assess attainment of the NAAQS. It takes into account both the level and the form of the federal standard for the county’s highest station, averaged over three years. A positive number means the county is above, or not in attainment of, the NAAQS and a negative number or zero indicates that the county is below, or in attainment of, the NAAQS for that period. The data in this table illustrate the changes that have occurred between the two reporting periods.

Recent data may not be complete or finalized for some air districts and all data should be treated as preliminary and subject to change when validated. Some of the data contributing to exceedances of the PM_{2.5} NAAQS may be influenced by exceptional events, such as wildfires. In addition, some air districts may have changed the number of stations or frequency of monitoring in between the 2000-2002 and 2012-2014 averaging periods. Please refer to your local air district for more specific information.

County	Air District	Percent of PM _{2.5} Design Value Above/Below the 24-hour NAAQS (35 µg/m ³)	
		2000-2002	2012-2014
Alameda	Bay Area	40	-23
Alpine*	Great Basin Unified	No Data	No Data
Amador*	Amador County	No Data	No Data
Butte	Butte County	71	-26
Calaveras	Calaveras County	-26	-46
Colusa	Colusa County	6	-40
Contra Costa	Bay Area	37	-37
Del Norte*	North Coast Unified	No Data	No Data
El Dorado*	El Dorado County	No Data	No Data
Fresno	San Joaquin Valley	129	77
Glenn*	Glenn County	No Data	-31
Humboldt	North Coast Unified	-31	-34
Imperial	Imperial County	43	-11
Inyo	Great Basin Unified	46	-6
Kern	Eastern Kern	-34	-23
Kern	San Joaquin Valley	157	103
Kings	San Joaquin Valley	100	86
Lake	Lake County	-37	-63
Lassen*	Lassen County	No Data	No Data
Los Angeles	Antelope Valley	-34	-37

County	Air District	Percent of PM2.5 Design Value Above/Below the 24-hour NAAQS (35 µg/m3)	
		2000-2002	2012-2014
Los Angeles	South Coast	97	-9
Madera*	San Joaquin Valley	No Data	43
Marin*	Bay Area	No Data	-37
Mariposa*	Mariposa County	No Data	No Data
Mendocino	Mendocino County	-20	-40
Merced	San Joaquin Valley	57	49
Modoc*	Modoc County	No Data	No Data
Mono*	Great Basin Unified	No Data	No Data
Monterey	Monterey Bay Unified	-37	-63
Napa*	Bay Area	No Data	Insufficient Data
Nevada	Northern Sierra	-29	-9
Orange	South Coast	65	-23
Placer	Placer County	26	-34
Plumas	Northern Sierra	20	29
Riverside*	Mojave Desert	No Data	No Data
Riverside	South Coast	107	9
Sacramento	Sacramento Metro	71	-9
San Benito*	Monterey Bay Unified	No Data	-63
San Bernardino	Mojave Desert	-26	-66
San Bernardino	South Coast	94	-3
San Diego	San Diego County	19	-23
San Francisco	Bay Area	37	-34
San Joaquin	San Joaquin Valley	54	29
San Luis Obispo	San Luis Obispo County	11	-14
San Mateo	Bay Area	20	-34
Santa Barbara	Santa Barbara County	-40	-51
Santa Clara	Bay Area	80	-14
Santa Cruz	Monterey Bay Unified	-40	-63
Shasta	Shasta County	0	-37
Sierra*	Northern Sierra	No Data	No Data
Siskiyou*	Siskiyou County	No Data	20
Solano	Bay Area/Yolo-Solano	49	-26
Sonoma	Bay Area	14	-40
Sonoma*	Northern Sonoma County	No Data	No Data
Stanislaus	San Joaquin Valley	100	46
Sutter	Feather River	20	-29

County	Air District	Percent of PM2.5 Design Value Above/Below the 24-hour NAAQS (35 µg/m3)	
		2000-2002	2012-2014
Tehama*	Tehama County	No Data	-37
Trinity*	North Coast Unified	No Data	-57
Tulare	San Joaquin Valley	157	83
Tuolumne*	Tuolumne County	No Data	No Data
Ventura	Ventura County	11	-43
Yolo	Yolo-Solano	0	-54
Yuba*	Feather River	No Data	No Data

* County did not contain official monitoring stations for PM2.5 during one or both periods.

CALIFORNIA'S AIR DISTRICTS

