

Placer County Air Pollution Control District

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Supervisor District 4
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Air Quality Specialist II

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Table of Contents

Mission & Goals	4
Introduction	5
Governance	5
The District	6
Finances	11
Highlights	13
Pollutants of Concern & Health Effects	16
Placer County Air Quality	19
Our Future	24

Mission:

The mission of the Placer County Air Pollution Control District is to manage the County's air quality in a manner to protect and promote public health by controlling and seeking reduction of air pollutants while recognizing and considering the economic and environmental impacts.

Goals:

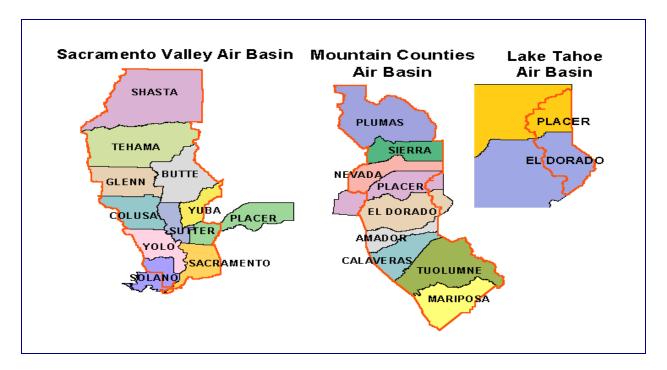
- Regulate air pollution emissions from stationary sources through the permit process, compliance inspections, and providing guidance to regulated sources.
- Seek quantitative reduction in the amounts of air pollutants through identification and regulation of new emission sources, alleviating toxic and nuisance emissions, providing economic incentives to reduce emissions, implementing mitigation measures, developing public education, modifying and/or incorporate new rules and regulations, and enforcing existing Rules and Regulations.
- Respond quickly to non-compliant events and sources of emissions by initiating measures to provide quality service, modifying/improving our enforcement process, and partnering with other agencies to assist in responses and investigations.
- Mitigate effects of growth through planning measures including initiating a data base collection system, prepare and update air quality plans, review development plans and mitigate air impacts, and develop and implement initiatives to address growth in the county with regards to air impact.
- Pool resources with other agencies in areas of mutual interest and cross jurisdictional boundaries, form alliances with other Air Districts to develop technical resources and gain needed assistance.
- Market and promote the positive impacts of the District.
- Reduce mobile source emissions through collaborative efforts with planning and transportation entities by supporting alternative/clean fuel vehicles and infrastructure and assist in the implementation/funding of Transportation Control Measures.
- Improve District business processes and internal operations so as to provide cost effective and quality service to the citizens and industry of Placer County.

Introduction

Placer County reaches from the eastern edge of California's Sacramento Valley to the crest of the Sierra Nevada Mountains and Lake Tahoe. Elevations range from near sea level in the rice fields of Lincoln to 9,000 feet in the mountains of the Sierras. The County is as diverse in economy as it is in geography. The eastern part of the county is sparsely populated while the western section of the county is heavily populated and rapidly growing. In fact, the City of Lincoln is one of the fastest growing cities and Placer is one of the fastest growing counties in California.

Placer County is the only county in the State that is within three air basins. The Sacramento Valley Air Basin extends from the Sacramento / Placer County line to just east of Auburn. The Mountain Counties Air Basin encompasses an area from just east of Auburn to the crest of the Sierra surrounding Lake Tahoe. The Lake Tahoe Air Basin includes the natural drainage area of Lake Tahoe. The counties that share each of these three air basins are shown in the maps below.

Managing air quality in an area so diverse in geography and economy creates unique air quality challenges. Additionally, since Placer County is situated on the eastern edge of the Sacramento Valley, the County is impacted by wind transported air pollutants and contributes to impacts upon downwind areas. Placer County also has Interstate Highway 80 running through it from east to west. This busy highway supports commuters that live in Placer and work in the Sacramento area. Interstate 80 is also a major transportation link for interstate travel and to the Sierras for recreation purposes.



Governance

The Placer County Air Pollution Control District is a "county" district with its jurisdiction being the County of Placer. In comparison with other county air districts, ours is medium in size with respect to budget and staffing. More urbanized county districts can be much larger than Placer's District, while there are a number of small, rural, county air districts with only one or two staff persons. Also, there are a number of large unified air pollution control districts and air quality management agencies (multi-county),

such as the Bay Area Metropolitan Air Quality Management District, the South Coast Air Quality Management District, and the San Joaquin Unified Air Pollution Control District.

As a county air district, the determination of the composition of the District Board of Directors and the administration of the District is established by statute. Prior to 1994 the Placer County Board of Supervisors served as the ex officio governing board of the District. Subsequently, Assembly Bill 75 mandated that air districts with an incorporated area population of greater than 35% of the total district population create a governing board membership composed of either mayors or city council members and county supervisors. Since 1994, by the agreement of Placer County and the City Selection Committee, the District's governing board has been composed of three (3) Placer County Board of Supervisor members and three (3) Mayors or City Council members representing three of the six incorporated municipalities in Placer County, in a rotation schedule adopted by the City Selection Committee.

As of January 2002, Roseville, Lincoln, and Auburn have seats on the Board. In January 2003, the three incorporated area seats should be filled by representatives from Lincoln, Rocklin, and Loomis in accordance with the City Selection Committee schedule.

The District's staff are Placer County employees who are ex officio employees of the Placer County Air Pollution Control District. The District Board of Directors provides policy and fiscal direction for the District.

As provided for by State law (§40750 HSC), the head of each local air district has the title of Air Pollution Control Officer (APCO). The regulatory authority of the District resides with the APCO. The APCO receives direction from and reports to the District Board on matters of District business. The District staff other than the APCO, receive their direction from and report to the District Board through the APCO. As to personnel type issues involving any District staff, including employee rights, privileges, and responsibilities, and as to matters related to County services, facilities, and policies, the APCO receives direction from and reports to the District Board and the County Executive Officer (CEO) jointly. Additionally, on personnel related issues, including employee rights, privileges, and responsibilities, District staff generally receive their direction from and report to the APCO, but additionally have access on these issues to other appropriate County staff, as do other employees of the County.

At the request of the CEO, the APCO will provide administrative or other support to the CEO on issues related to the County provided services, facilities, policies, or staff. Should the District enter into an agreement with any municipality for the provision of services, facilities, or staff, at the request of the City Manager the APCO will provide administrative or other support to the City Manager on issues related to the services, facilities or staff provided.

The District is provided technical and program development assistance by the Air Resources Board (CARB), which also has a consultation and oversight role with respect to the local air districts. CARB conducts periodic audits of district programs pursuant to *Criteria for Assessing District Enforcement and Permitting Program Adequacy*, which can be provided upon request. Audits of federal programs may be conducted by CARB and U.S. EPA staff.

The District

The Placer County Air Pollution Control District (District) one of 35 local air pollution districts in California. The District has responsibility for the control of air pollution from all local sources of air pollutant emissions except mobile sources (e.g. vehicles) which are the responsibility of the California Air Resources Board (CARB). The District is responsible for enforcing State and federal air pollution control laws, and locally adopted rules and regulations governing emission sources in Placer County. These responsibilities include the permitting of stationary sources, inspections for compliance, managing burn programs, the implementation of programs to reduce emissions, and monitoring and reporting upon air quality. The sources that the District regulates are particularly diverse, ranging from the typical industry

and business sources permitted by most air districts, to aggregate mines, lumber mills, and high tech electronic manufacturers. The burning managed by the District for the control of smoke includes agricultural burning (e.g. rice straw burning in the Sacramento Valley) and prescribed burning for forest management in the Sierra Nevada foothills and mountains.

To achieve its Mission, District activities are structured into major program areas. A brief description of some of these is provided below.

Stationary Sources:

Permitting: The District permits stationary sources of pollution. Approximately 744 permits are issued annually to more than 400 stationary sources in Placer County. Some of the types of businesses that require permits include dry cleaners, mills, mines, automobile re-finishers, gas dispensing facilities, wood processing businesses, print shops, and many manufacturing facilities. There are five (5) sources in Placer County which are considered "Major" sources and subject to permitting by the District under Title V of the Federal Clean Air Act. Major Sources have a potential to emit 25 tons or more of NOx or VOCs or exceed other established emission thresholds. In the table below, "Medium" sources emit more than 1 ton of any one pollutant per year, and "Minor" sources are less than 1 ton per year in permitted emissions.

PERMITTED FACILITIES FOR FY 01-02					
LOCATION	MAJOR	MEDIUM	MINOR	TOTAL	
AUBURN	0	4	85	89	
COLFAX	0	0	16	16	
LINCOLN	3	4	17	24	
LOOMIS	0	1	8	10	
ROCKLIN	2	1	39	42	
ROSEVILLE	0	14	107	121	
UNINCORPORATED	0	4	81	85	
TOTAL FACILITES	5	28	353	386	

Inspections: The District conducts periodic inspections of all permitted sources. Sources are inspected to verify compliance with equipment operating instructions and permit conditions. Permits are updated and enforcement action may be taken based on these inspections.

Vapor Recovery (Gas Stations): The District requires the control of gasoline vapors emitted during the transfer of gasoline from a tanker truck into a gasoline storage tank (Phase I) and from the storage tank into a vehicle (Phase II). These requirements are intended to reduce both the volatile organic compound emissions as well as benzene emissions, a California Air Toxic Contaminant. Approximately 185 gasoline facilities are permitted. In order to maximize the District's resources, a Memorandum of Understanding with the Placer County Department of Weights and Measures was developed and inspectors conducting weights and measures inspection also inspect vapor recovery equipment for compliance with District rules.

By April 1, 2005, all stations will need to change to the new "Enhanced Vapor Recovery" (EVR) equipment under a State program that seeks to fix existing problems with service station vapor recovery systems, as well as the phased implementation of new standards over a 4-year period. The changes should achieve a total of 25 tons per day in statewide VOC emission reductions over the performance of existing systems.

District Hearing Board: The District Hearing Board is a statutory body appointed by the District Board of Directors to hear petitions for variances or modifications from air pollution rules or permit conditions, including the denial, approval, or revocation of a permit and orders for abatement. Per HSC §40801, it is composed of five members with three year terms: 1 lawyer, 1 registered engineer, 2 public-at-large members, and 1 medical professional.

Burn Programs:

The California Health and Safety Code provides for what types of burning can be allowed under state law. Burning is divided into Agricultural and Non-Agricultural Burning. District Rules and Regulations further define these types of burning and the conditions under which each of them may be conducted.

All burning including residential burning must be done on a burn day. Burn Day information is provided daily on the District's voice mail in cooperation with state and local fire agencies to integrate fire safety/hazard information into the message, such as declaring no burn days because of high fire danger.

The District issues burn permits for all outdoor burning except residential burning. On an annual basis, about 130 burn permits are issued for Agricultural and Non-Agricultural Burning.

Agricultural Burning: Placer County has about 16, 000 acres of planted field crops including 14,000 acres planted in rice and 1,350 acres of orchards. (Crop information from the Agricultural Department's 2001 Crop Report.) Much of the residue from these crops was burned historically, however, in 1992, the state legislature passed the 1992 Rice Straw Reduction Act to reduce the smoke impacts from the burning of rice straw. This law mandated the reduction of the rice straw burning to 25% of historical levels and only that rice stubble which is certified (by the County Agricultural Commissioner) to have a certain percentage of disease can be burned.

The District staff works with CARB and the Sacramento Valley Air Basin Agricultural Burn Coordinator to allocate the amount of acres that can be burned daily under the expected meteorological conditions.

Additionally as part of the Agricultural Burning Program, the District Board of Directors adopted in 2001 the District's Smoke Management Program to manage burning activities that use fire as a management tool (also called Prescribed Fire). Those agencies, companies or individuals that plan to conduct a prescribed fire are required to work with the District to minimize air quality impacts from smoke.

Non-Agricultural Burning: Non-agricultural burning includes hazard reduction, fire training, right-of-way, land development and residential burning. These types of burning are done mostly in the unincorporated areas of the County, with residential burning within municipalities often governed by local ordinances. Beginning January 1, 2004, changes will occur in the Residential Burning Program as per an Air Toxic Control Measure (ATCM) adopted by the CARB. This ATCM mandates that burn barrels be eliminated for use in burning. Additionally paper and cardboard will no longer be allowed to be burned. This leaves only vegetation, which can be legally burned.

In FY 2001-2002 the District funded approximately \$25,000 for a chipper for the Placer County/CDF Chipper Program to reduce vegetation burning, particularly in residential areas.

Planning:

Air Quality Planning: District staff participates with the other Districts' in the Sacramento federal non-attainment area to prepare State and federal air quality attainment plans. These long range planning documents identify control strategies designed to bring those portions of the District that are out of compliance with State and federal health based air quality standards back into compliance. The failure to adopt and implement control measures, as well as the failure to meet air quality improvement goals, can result in significant federal penalties – such as the withholding of highway funds and restrictions upon industry.

Land Use Planning: The District provides technical assistance to local jurisdictions in Placer County during the development of long range planning documents, such as general plans and community plans.

District staff review lead agency environmental documents in compliance with the Californian Environmental Quality Act (CEQA). When requested, the District will attend predevelopment meetings and City/Town Council and Board of Supervisor meetings to explain the air quality impacts and mitigation measures recommended by the District.

Air Toxics:

The District evaluates the impact of toxic compounds emitted by new industry through the initial permitting process and evaluates the impact of existing facilities under the Air Toxic "Hot Spots" Program. The siting of new facilities near schools and the siting of new schools near existing facilities is of particular concern.

The "Hot Spots" Program (AB2588): The Air Toxics "Hot Spots" Information and Assessment Act of 1987 requires specific facilities to submit comprehensive air toxics emission inventory plans and inventories to the District. The District reviews the reports and determines which facilities must prepare risk assessments. Facilities with elevated risk will require public notification of affected areas, risk reduction audit, and the reduction of risks. The emission inventories are periodically updated. The District currently is contracting with the Monterey Bay Unified APCD for the expertise of one of their staff members for the "Hot Spots" evaluation work.

Air Toxic Control Measures: The District is responsible for ensuring compliance with State mandated Airborne Toxic Control Measures (ATCMs) and the Federally mandated Maximum Achievable Control Technology (MACT) standards. These are adopted to control known sources of air toxic contaminants. Among the ATCMS adopted are measures to control benzene from gasoline, hexavalent chromium from plating operations, and naturally occurring asbestos dust from mining, surfacing, and construction activities.

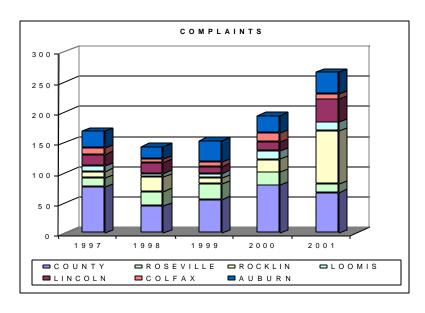
Air Monitoring:

Currently the District operates ozone and particulate matter air monitors in Auburn and Colfax, and a particulate matter monitor in Lincoln. The ozone monitors record hourly averages twenty-four hours per day. The particulate matter monitors run once every six days and records a 24 hour average to sample PM_{10} . In 2002 the District purchased two Beta Attenuation monitors that will run 24 hours a day and provide hourly PM_{10} averages. These twenty-four hourly PM_{10} monitors will be located in Meadow Vista and the Sunset Industrial Plan area just south of the City of Lincoln.

In addition to District run monitors, CARB operates a multi-pollutant monitoring site near the intersection of Douglas Boulevard and Sunrise Boulevard in the City of Roseville and a limited pollutant monitoring site located at Sierra College in the City of Rocklin.

Complaints:

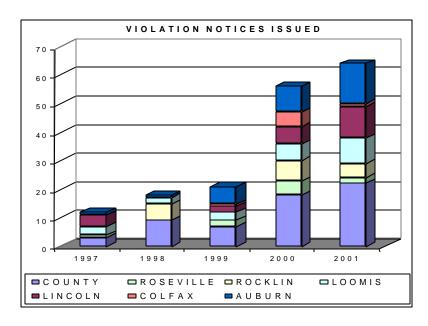
The District receives several hundred complaints a year from the public or other agencies regarding dust and smoke from burning, and odors. Although some of these complaints concern facilities or individuals who hold District permits, the majority of the calls are regarding burning by neighbors or construction dust. Each complaint is logged, investigated, and reviewed for completeness. To the extent allowable by law, the identities of the complainants are kept confidential.



Enforcement:

As a regulatory agency, the District enforces State and federal air pollution laws and regulations, and locally adopted rules and regulations, as well as permits, and orders.

Depending upon the nature and severity of a violation, violations may be addressed by disseminating information concerning applicable regulations (i.e. education efforts), issuance of a Notice to Comply, a Notice of Violation Warning, or a Notice of Violation. Penalties which may be levied pursuant to California laws range from administrative civil penalties of \$500 or less to a civil penalties of up to \$1,000,000 or criminal penalties of fines or imprisonment, or both. Each day during which a violation occurs would constitute a separate offense.



For FY 2002-2003 the District has budgeted for an extra-help Specialist to focus on field enforcement efforts, with a particular emphasis on investigating residential burning and off-regular business hours complaints.

Finances

The District receives funding from permit fees and recovered costs, State subvention, fines and penalties paid for compliance violations, grants, and Department of Motor Vehicle surcharges on registered motor vehicles.

The budget for fiscal year 2002-03 includes four different funds:

The Unrestricted Fund

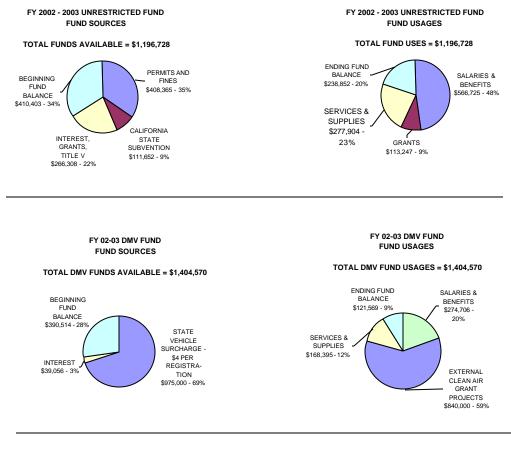
The DMV Fund

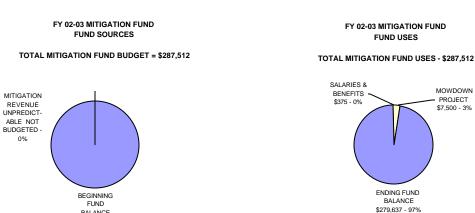
The Mitigation Fund

The Backup Generator Fund (BUG)

The charts on the following page provide an illustration of these first three funds.

PLACER COUNTY AIR POLLUTION CONTROL DISTRICT **BUDGET FOR FISCAL YEAR 2002-2003**





BALANCE

The Unrestricted Fund is used for the normal day to day operations of the District, which includes permitting, complaint investigation, inspections of permitted sources, supplies, services and administrative support. Some of these activities are funded by permit fees, fines for non-compliance, and state subvention monies. Other costs, such as responding to general inquiries and permit inquiries from new industry, which are services to the public, and the regulation of area emission sources (e.g. construction dust), are not directly recoverable. The District does not receive funds from the County or municipal jurisdictions within Placer County to assist in funding general operations.

The explosive growth of the County over the past several years, which is expected to continue for the foreseeable future, has increased the demand for services from the District. Although some costs, such as for permits, can be recovered, the service demand is often in areas that do not have matching funding streams or means for cost recovery. These unrecoverable costs place a financial strain on the Unrestricted Fund. A historical analyses of the District's budget indicates that there has been a continuing shortfall in the Unrestricted Fund which has been covered only to the detriment of funded programs.

The projected population growth within both the incorporated and unincorporated areas of the County has focused the need to secure an additional stable source of funding to sustain operations and maintain the delivery of services to the public.

The DMV Fund is funded by a \$4.00 surcharge per vehicle on registered vehicles in Placer County and the interest collected on those fees. The use of the DMV Fund is restricted to use for external clean air project grants, rule development, planning, emission inventories, air quality monitoring, modeling, technical studies, research, public education, and a 5% administrative overhead not chargeable directly to a specific district program. The District intends to award \$840,000 in clean air project grants, a 59% portion of DMV Funds available. In FY 2001-2002 the District's Board allocated \$699,378 to fund external Clean Air Grants to reduce vehicle emissions. The approved grants included \$100,000 to the City of Auburn for CNG fueling infrastructure; \$14,000 each to the City of Lincoln and the City of Rocklin towards the purchase of electric vehicles and charging stations; \$265,857 to the City of Roseville towards the purchase of two CNG buses and CNG refueling infrastructure; \$147,000 in matching funds to Placer County Fleet Services for diesel engine replacements and \$85,000 to Placer County to upgrade CNG refueling infrastructure; and \$20,000 to Placer County Transportation Planning Agency towards standby highway tow truck during peak hours.

The Mitigation Fund is funded through the District's "off-site" air quality mitigation program, which is applicable to development projects not yet identified and is therefore not budgeted. These funds are for programs that reduce emissions from sources of pollution not required to reduce their emissions. These include the re-powering of heavy duty diesel on-road and off-road equipment, alternative fueled buses, compressed natural gas infrastructure, lawn mower swap-outs (the MOWDOWN program), chipper purchases, wood stove replacements and other projects in accordance with the Board approved policy. In FY 2001-2002 the District Board approved approximately \$125,000 in mitigation funds towards the Tahoe Regional Transit (TART) compressed natural gas refueling facility for the Truckee/Tahoe region.

The Backup Generator Fund is from a one-time disbursement, (\$121,232), from the State that is tied to excess emissions and staff efforts resulting from the 2001 energy crisis. These funds will be applied towards emission reduction projects that meet the criteria for the intended uses of these funds. A pie chart is not provided for this fund because it will be fully expended in fiscal year 2002-03.

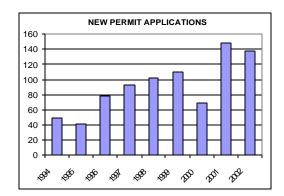
Highlights

Process Improvements: Beginning in 2000 the District embarked upon a comprehensive effort to maximize cost recovery for permitting activities, to utilize all the available sources for the funds necessary to accomplish the District's Mission, and to streamline processes in order to be more responsive to the District's customers and efficient in utilizing resources. This effort was called the "Operational Initiatives Plan". The overall objectives of the Operational Initiatives were to:

- ☐ Maximize the Effectiveness of Internal Operations
- ☐ Stabilize the District Finances
- Maintain Critical Functions
- ☐ Prioritize Work Within Resources
- ☐ Seek Cost Effective Solutions for Program Improvements

As a result of these efforts the District has made significant accomplishments, and the District continues to seek improvements on an on-going basis.

- Front Counter Business Operations: Front counter operations are more effective, increasing customer service and reducing technical staff requirements. Among the changes made were the implementation of a auto-attendant voice-mail system that directs calls to the appropriate individuals for program information.
- Residential Burning Regulation: The burn permitting process is now more consistent because of coordinated efforts with fire agencies. The District is working cooperatively with fire agencies to address common problems and to provide better outreach to the public on burning requirements. The District has entered into agreements with fire agencies to focus enforcement actions and education efforts on persons who are in violation of burn regulations. Fire agencies can refer incident reports for air pollution violations to the District for enforcement action and the possible recovery and reimbursement of fire response costs.
- Stationary Source Permitting: The stationary source permit renewals and application processing times have been reduced. The District has cost-effectively addressed a portion of its resource needs by utilizing contracted services to augment the District's one permit engineer. The previously existing backlog of Authority to Construct permit applications for new facilities and modifications has been reduced by half from an on-going backlog of approximately 80 applications to 38 applications in mid-September 2002 despite an increasing number of applications. As a result of industry growth in Placer County and continual efforts to identify emission sources that should be permitted, the number of annual applications has increased from 22 in 1990 to 117 in 2001, the last year for which there is complete data, as shown below.



- Identification of Sources: The District initiated an on-going effort to identify and permit sources that should have a District permit but do not. Some of these emission sources failed to obtain required permits when they began operation, but the majority have become subject to regulations that were adopted after they began operation. As of June 30, 2002, the District has identified and issued permits for 59 of these facilities. These efforts reduce emissions and improve compliance with District regulations while increasing District's revenue.
- Facility Inspections: Our process for inspection of permitted facilities has been reorganized to better utilize staff resources. The District is also working with other agencies to leverage off of their activities. For example, the Placer County Department of Weights and Measures is inspecting gas stations and fire districts are responding to illegal burns and referring air pollution violations to the District.
- **District Database:** In 2000 the District began development of a database program to retrieve invaluable information such as facility data, equipment data, permit conditions, emission data, and perform revenue tracking. The first module of the program became operational in January 2001 and

the District began billing and tracking revenue from 612 permitted sources. In June 2001 the District began issuing permits from the new database. In early 2002 work was completed on a complaint and violation tracking module and work is currently underway to create a module to assist in source inspections. The Database is improving the effectiveness and efficiency of District staff by eliminating repetitive data search operations, automating many permit issuance processes, and enhancing revenue collection through better data management.

• Enhanced Enforcement: The District has streamlined its internal enforcement processes and reemphasized the importance of enforcement in maintaining compliance with air pollution control laws and regulations. The District staff is working cooperatively with District Counsel and the Placer County District Attorney's Office to establish means to effectively prosecute both minor and serious violations.

As an indicator of the effectiveness of these efforts, fines and penalties which had averaged \$5,000 - \$6,000 in the previous decade, totaled \$28,455 in FY 00-01 and \$71,724 in FY 01-02.

The increased attention to enforcement, as well as the steady growth in population and the encroachment of residential areas upon industry, is also reflected in the District's complaint statistics. Complaints to the District increased almost 50% in 2000 and 2001 over the average for the three prior years. The District currently receives and investigates more than 200 air quality related complaints annually.

- **Web Page:** The District has developed a web page that is accessible through the County's web page or directly at www.placer.ca.gov/apcd. The web pages contain information regarding the District's programs such as stationary source permitting information, allowable outdoor burning information, alternatives to burning, downloadable forms, Clean Air Grant information, and the District's Rules and Regulations. This website is continuing to grow with the information modified when needed. The site as a whole gets more than 2000 hits monthly.
- Consumer Price Index Adjustment of Fees: On June 14, 2001, the District's Board approved amendments to the District fee rules to provide for an annual Consumer Price Index (CPI) adjustment of the majority of the District's fees. In the past, due to the passage of time between fee increases, the District's fees did not keep up with inflation and increased costs. The fees have been adjusted by increases of 3.7% for 2001-2002 and 3.9% for 2002-2003. District permit fees are now on par with those of other air pollution control agencies in the region.
- Services Contracts: The District has entered into a number of services contracts to cost-effectively provide needed resources. Typically the tasks are one-time tasks, require an expertise not possessed by District staff, or are more cost-effectively done by a contractor, or some combination. Among these contracts are the database development, Air Toxic "Hot Spots", and permitting contracts mentioned elsewhere. The District also has obtained services to assist in the drafting of Title V permits, GIS based emission inventory development, Tahoe area field response, and as-needed air sampling services to evaluate the health impact of complaint odors and to provide a compliance monitoring capability. The District has also obtained as-needed services for soil sampling and air sampling to assess sites with naturally-occurring asbestos.
- Increase in the DMV Vehicle Registration Air Quality Fee: Assembly Bill 2766 (Sher) authorized air pollution control districts and air quality management districts to impose a \$1 to \$4 motor vehicle registration fee to provide funds for air districts to meet new responsibilities mandated under the California Clean Air Act. On June 14, 2001, the District's Board of Directors approved an increase in the Department of Motor Vehicles (DMV) fee that goes to the District from \$2.00 to \$4.00 and a corresponding program for the future expenditure of the fees. The change in fees results in a total DMV fee revenue of approximately \$920,000 per year, which is expected to increase with increasing County population. The District committed to use no more than 50% of the DMV funds internally for air quality planning, control measure development, air monitoring, and other approved uses for these

restricted use funds. In addition, the District committed to utilize no less than 50% of the funds external to the District for external programs and for Clean Air Grants.

Other Highlights:

• Clean Air Grants: The District's Governing Board allocated \$699,378 to fund external Clean Air Grants to reduce vehicle emissions for the 2001-2002 fiscal year and \$840,000 in FY 2002-2003. These funds go toward mobile emission reduction efforts, such as funding compressed natural gas buses for transit services, clean fuel infrastructure, and diesel engine replacements. The funds are often used as match funds for other grant programs which leverages the benefits from each DMV dollar.

Separately or in conjunction with the District's Clean Air Grant program, public agencies and private companies can also receive financial incentives to offset the costs associated with purchasing new low emission on-and off road vehicles and equipment. The Sacramento Emergency Clean Air & Transportation (SECAT) program and the Carl Moyer program provide substantial financial incentives for owners of heavy duty diesel trucks to either re-power their equipment with lower emission engines or purchase new lower emission diesel or natural gas powered equipment. These programs are administered by the Sacramento Metropolitan Air Quality Management District, and available to fleet owners in Placer County.

- Mow Down Air Pollution: This is a regional program administered by the Sacramento Metropolitan Air Quality Management District, with partial funding from the District and jurisdictions within the County. The program offers residents within the Sacramento Valley Federal Non-Attainment area the opportunity to turn-in old gas powered lawn mowers and receive a substantial credit on a new electric mower. This program has been very successful in the past few years, with demand always greater than the amount of incentives available.
- Smoke Management Plan: On December 13, 2001, as a product of several years of cooperative effort by the air Districts of the Mountain Counties Air Basin and private and public prescribed burning entities, the District Board adopted a Smoke Management Plan for prescribed burning in Placer County. This plan lays out the requirements and guidelines for burners for agricultural and prescribed, other than rice burning in the Sacramento Valley, which is covered, in a regional plan. Smoke management is extremely important with the planned increases in forest fuels management, which often involves burning, to reduce wildfire hazards. The Smoke Management Plan was approved by the Air Resources Board on March 15, 2002.

Pollutants of Concern & Health Effects

The EPA and CARB have established national and state ambient air quality standards for pollutants generally known as "criteria pollutants." These pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, fine particulate matter (PM_{10}) and lead. For some of these pollutants, notably ozone and PM_{10} , the State standards are more stringent than the national standards. The different health effects studies considered during the standard-setting process and the interpretation of the studies generally explain the differences in the standards. In addition to the federally listed pollutants, the state has established standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. In general, the air quality standards are expressed as a measure of the amount of pollutant per unit of air. For example, the particulate matter standards are expressed as micrograms of particulate matter per cubic meter of air ($\mu g/m^3$).

Ozone: Ground level ozone, commonly referred to as smog, is greatest on warm, windless, sunny days. Ozone is not emitted directly into the air, but formed through a complex series of chemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_x). These reactions occur over time in the presence of sunlight. Ground level ozone formation can occur in a matter of hours under ideal conditions.

The time required for ozone formation allows the reacting compounds to spread over a large area, producing a regional pollution concern. Once formed, ozone can remain in the atmosphere for one or two days. Ozone is removed from the atmosphere through rainout, washout, and chemical reaction with plants.

Today, many people are aware that ozone can greatly impair visibility and create an unsightly haze. But ozone is also a public health concern because adverse health effects due to photochemical oxidants range from mild irritation of the eyes, nose and throat to possible impairment of lung functions. Other effects include aggravation of respiratory and cardiac diseases, and pulmonary dysfunction. Ozone, the primary constituent of photochemical smog, is a severe irritant to all mucous membranes and primarily affects the respiratory system.

A study funded by the Air Resources Board has revealed that exposure to high air pollution levels can slow down the lung function growth rate of children by up to 10 percent. The 10-year study is the nations first large-scale effort to explore the effects of long-term exposure to outdoor air pollution. "A 10 percent lung function reduction is important because it represents the level at which medical attention may be needed," said Dr. Alan Lloyd, CARB Chairman. The report on the study's first four years illustrates how nitrogen dioxide, particulate matter and airborne acids affect Southern California children. CARB's science advisor Dr. John Holmes states. "Considering the impact pollution has over a child's physical development it becomes even more vital that we take steps to limit their exposure."

Ozone can cause substantial damage to leaf tissues of crops and natural vegetation and can damage many natural and manmade materials by acting as a chemical oxidizing agent.

The principal sources of the ozone precursors (ROG and NOx) are the combustion of fuels and the evaporation of solvents, paints, and fuels. Motor vehicles produce over 70% of the NOx in the region.

Particulate Matter (PM): PM₁₀ refers to particles with an aerodynamic diameter of 10 microns or smaller. It is a mixture of substances that include elements such as carbon, lead, and nickel; compounds such as nitrates, organic compounds, and sulfates; and complex mixtures such as diesel exhaust and soil. These substances may occur as solid particles or liquid droplets. Some particles are emitted directly into the atmosphere. Others, referred to as secondary particles, result when ROG, NOx, and oxides of sulfur (SOx) are transformed into particles through physical and chemical processes in the atmosphere. PM₁₀ includes a subgroup of finer particles called PM_{2.5}. These fine particles have an aerodynamic diameter of 2.5 microns or smaller. They pose an increased health risk because they can deposit deep in the lung and contain substances that are particularly harmful to human health.

Area-wide sources account for almost 90 percent of the state wide emission of directly emitted PM. Area-wide sources are fugitive dust, especially from paved and unpaved roads, agricultural operations, construction, and demolition. Exhaust emissions from mobile sources contributes only a very small portion of directly emitted PM emissions, but are a major source of ROG and NOx that form secondary particulates.

The health effects of PM_{10} depend on the nature of the particulate matter. For example, health effects may be associated with metals, polycyclic aromatic hydrocarbons, and other toxic substances absorbed onto fine particulates or with fine dust particles of silica or asbestos. Generally, health effects associated with PM_{10} may result from both short-term and long-term exposure to elevated levels of PM_{10} . These effects may include increased mortality, reduced lung function, aggravation of asthma and bronchitis symptoms, and respiratory disease.

Carbon Monoxide: Carbon Monoxide (CO) is a colorless and odorless gas that is directly emitted as a product of combustion. The highest concentrations are generally associated with cold stagnant weather conditions that occur during winter months. In contrast to ozone, which tends to be a regional pollutant, CO problems tend to be localized and are mostly found near heavily congested intersections where vehicles spend a long period of time idling.

CO is harmful because it is readily absorbed through the lungs into the blood, where it binds with hemoglobin and reduces the ability of the blood to carry oxygen. As a result, insufficient oxygen reaches the heart, brain, and other tissues. The harm caused by CO can be critical for people with heart disease, chronic lung disease, or anemia, as well as for unborn children. Even healthy people exposed to high levels of CO can experience headaches, fatigue, slow reflexes, and dizziness. Health effects caused by CO can be more severe at high elevations where the air is less dense, aggravating the consequences of reduced oxygen supply.

Toxic Air Contaminants: A Toxic Air Contaminant (TAC) is defined as an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity and health risk poses a threat to human health even in small concentrations. There is no threshold below which health impacts may not occur. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the State and federal governments have set ambient air quality standards.

To date, the CARB has designated nearly 200 compounds as TACs. However, the majority of the health risk form TACs can be attributed to a relatively few compounds, the most important being particulate matter (PM) from diesel fueled engines. PM from diesel fuel differs from other TACs in that it is not a single substance but rather, a complex mixture of hundreds of substances. The CARB estimates that 70% of the health risk associated with TACs is from diesel particulate matter. CARB has identified the diesel particulate issue as one of the most important and difficult air quality problems to be addressed in this decade. CARB is evaluating sources of diesel particulate and will be promulgating Air Toxic Control Measures, among these will be a measure to reduce diesel particulate from stationary engines.

A recent study conducted by the National Environmental Trust (NET) calculated the cancer risk to children from TACs in five California air basins, including the Sacramento Valley Air Basin. The study shows that "a baby born in California will be exposed to such high levels of toxic air contaminants that the child will exceed EPA's lifetime acceptable exposure level for cancer at a very early age." The study estimates that an infant in the Sacramento Valley Air Basin will exceed the EPA's one-in-one million lifetime exposure level within 23 days of birth.

In 1999 the California Air Resources Board launched a Community Health Program to identify and reduce public exposure to air toxics and other pollutants. A primary focus of this program is the cumulative impacts of toxic air pollutants upon California neighborhoods and communities. While much of the program effort is currently directed at the evaluation of a limited number of communities, these studies will promote the development of more sophisticated technical tools for performing health assessments on a neighborhood scale. A stated objective of the Neighborhood Assessment Program is the development of guidelines, including technical assessment tools, for assessing cumulative exposure and health risks. The State's Community Health Program is promising to develop the knowledge base and the analysis tools that members of the Placer County planning community and the public have been seeking. Many of these programs and policies to better assess the impacts of toxic air contaminants upon the public are commitments that CARB has made in their guidance document, "Policies and Actions for Environmental Justice", adopted December 13, 2001.

The District is preparing to utilize the assessment tools being developed by CARB. Among these efforts is the feasibility and needs study in FY 2002-2003 for revamping the District's databases to have a geographic-based information system (GIS) functionality that can interface CARB developed systems for assessing health-based information within communities and correlating that information to air pollution and socioeconomic factors. The availability of these tools and the District's ability to use them is of particular importance because of the identification of air toxics as a serious health issue combined with the increasing population density in the County.

Among the District's many programs the District evaluates the relative health impact from toxic air emissions of individual facilities under the guidance of the Air Toxic Hot Spots Information and

Assessment Act of 1987 (AB 2588). Currently, these evaluations are conducted for our District by an air toxics expert on the staff of the Monterey Bay Unified Air Pollution Control District through a contract. This has been a cost-effective and efficient means of assessing the risk from facilities in accordance with program guidelines.

Placer County Air Quality

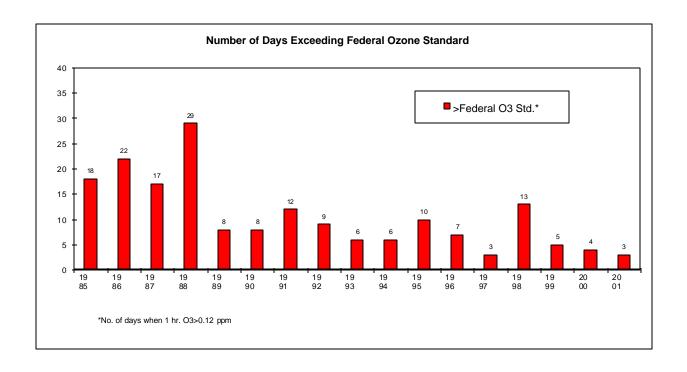
Placer County is currently designated as a non-attainment area for State and federal ozone standards and State particulate matter standards. For all other air pollutants in which there is a standard set, Placer County is either in attainment or unclassified. In relation to the federal ozone standard, Placer County is located within an area designated by the U.S. Environmental Protection Agency (EPA) as the Sacramento Federal Ozone Nonattainment Area. This area includes all of Sacramento and Yolo Counties, and portions of El Dorado, Solano, Placer, and Sutter Counties. For Placer County, the Nonattainment Area extends from the Sacramento / Placer County line east to the summit of the Sierra.

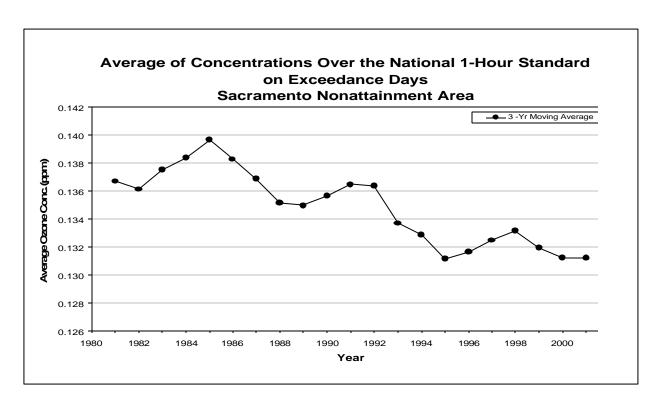
As the EPA nonattainment designation suggests, this region does not meet the federal health based ambient air quality standards for ozone. The standard was set by the EPA to help achieve one of the primary federal Clean Air Act goals, to "protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." The Nonattainment Area is required under federal law to meet the federal ozone standard by 2005, or face significant consequences that range from the imposition of financial penalties on job producing stationary sources to the adoption of even more stringent air pollution control requirements on stationary sources.

Although the Sacramento region currently does not meet the federal ozone standard, we have made significant progress towards attainment. The five Nonattainment Area Air Districts completed an assessment of our progress in the 1999 Milestone Report. The Report details the substantial progress already made, and reinforces the need to aggressively pursue the efforts laid out in the 1994 SIP.



The two graphics on this page show a steady downward trend in the number of days the federal ozone standard was exceeded and the overall ozone concentration over the past seventeen years.





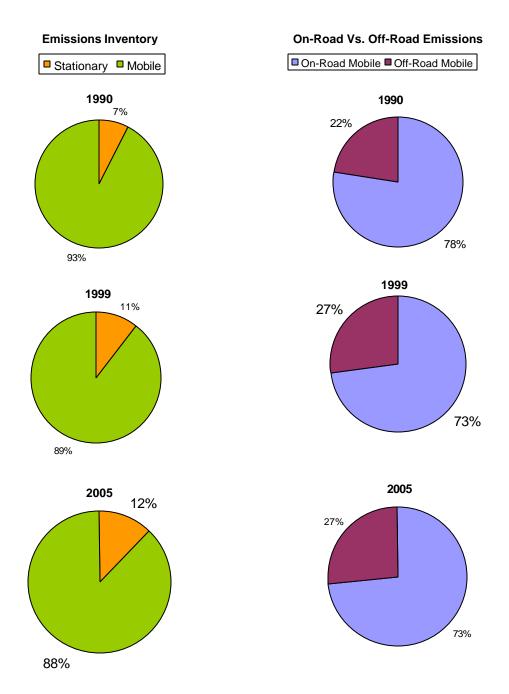
To determine to what extent various sources within the region are responsible for ozone precursor production, emission inventories have been developed for Reactive Organic Gas and Nitrogen Oxide emissions. These two pollutants are produced by stationary sources, such as industrial equipment, and mobile sources, which include cars and trucks. The baseline inventory represents actual emissions that are calculated using reported or estimated process rates and emission factors. Motor vehicle emission calculations include consideration of the fleet mix, vehicles miles traveled, speeds, and vehicle emission factors.

The baseline emission inventories are projected into the future based on expected growth rates of population, employment, industrial/commercial activity, and energy use. The emission forecasts also take into account the anticipated emission reduction effects from previously adopted control measures.

The emission reduction effort is currently focusing predominantly on Nitrogen Oxides emissions. The pie charts presented on the following two pages illustrate the 1990 baseline emissions inventory and the 1999 and 2005 emission inventory forecasts for Nitrogen Oxides. This inventory was used in the 1994 State Implementation Plan to determine which control measures were needed to bring the Sacramento region into attainment by 2005.

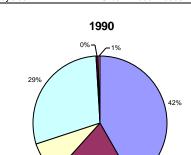
It should be noted that emission inventories are constantly being updated and improved to better reflect the conditions within the region and to better determine the contribution of various sources of air pollution.

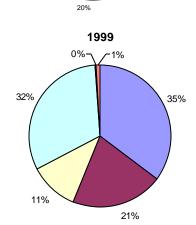
The pie charts clearly show that the Sacramento region emission inventory is dominated by on-road and off-road mobile source emissions.

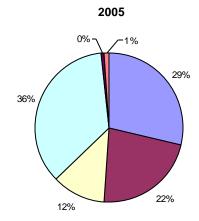


On Road Mobil Emissions

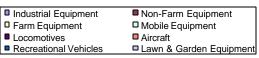
□ Automobiles □ Light/Medium Duty Trucks □ Heavy Duty Gas Trucks □ Heavy Duty Diesel Trucks ■ Motorcycles □ Urban Diesel Buses

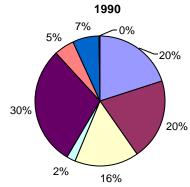


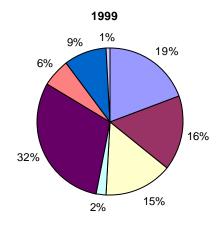


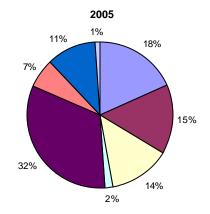


Off Road Mobile Emissions









Our Future

The future in air quality management is going to be both exciting and challenging as the Sacramento region works towards attainment of the State and federal health based ambient air quality standards. The Sacramento Area Council of Governments (SACOG) estimates that the Sacramento Region's population will increase by one million people over the next twenty years. This growth will challenge the region's ability to attain and maintain air quality standards

As shown above, the region's emission inventory is dominated by on-road and off-road mobile emissions. There are numerous financial incentive programs operating throughout the non-attainment region to get emission reductions from these sources. However, these programs are voluntary and lack sufficient funding to achieve the amount of emission reductions that may be needed to substantially reduce mobile source emissions. It should also be noted that local air pollution control districts have no direct regulatory control over mobile sources. The State and federal governments have exclusive authority over setting emission standards for mobile source emissions.

Another issue facing the region is transportation conformity. SACOG's regional Metropolitan Transportation Plan (MTP), which plans for regional transportation infrastructure improvements over a twenty year period, must conform to the motor vehicle emissions budget contained within the Sacramento regions State Implementation Plan (SIP). SACOG updated this MTP in 2002 and met conformity determinations at that time based on emission data and planning assumptions contained within the 1994 SIP.

The Federal Highway Administration has recently notified all metropolitan planning organizations like SACOG that any future conformity determinations after December 31, 2002 must be based on the most recent vehicle fleet and emissions data and planning assumptions for their region. SACOG's next conformity determination is due in October 2004 as part of their update to the Transportation Improvement Program (TIP). Without a new motor vehicle emissions budget updated into the SIP, SACOG will not be able to make the necessary transportation conformity determination and a "conformity lapse" will occur. Under a conformity lapse, all of the roadway construction projects contained in the Plan cannot proceed further than the current stage of development that they are in at the time of the lapse. This means that projects in the planning stage could not proceed to the construction stage until the conformity lapse expires. Exempt projects, primarily road maintenance and non-capacity increasing projects could proceed. A conformity lapse cannot expire until a new motor vehicle emissions budget is adopted into the SIP and SACOG then makes a conformity demonstration based on the new budget.

The air districts of the Sacramento region are working cooperatively with the U.S. Environmental Protection Agency (EPA), the Federal Highway Administration (FHWA), SACOG, and the California Air Resources Board to identify a strategy to prevent or minimize a conformity lapse.

There are two or three options that the region is pursuing to try and prevent or minimize a conformity lapse. The region is not required to update the SIP until 2005 at the earliest and 2007 at the latest. If the region were to develop an early SIP update now, and could not demonstrate attainment through photochemical modeling by 2005, the region would have to bump up to an "extreme" designation under the federal Clean Air Act. While this early SIP update would provide for a new emissions budget needed for conformity determinations, the extreme designation would result in immediate and long-term implications on the regions' stationary sources of emissions. In addition, EPA is developing implementation guidelines for the new 8 hour ozone standard. Regulatory requirements will be based on the classification of an area's non-attainment designation, with more regulatory requirements for areas with the worst designations.

The countdown to attainment begins in 2003. To demonstrate attainment of federal ozone standards, the region cannot have any more than three ozone exceedances at any one monitoring station averaged over a three year period between 2003 and 2005. If the region can demonstrate attainment, then a SIP maintenance plan, as opposed to a SIP attainment plan can be prepared and submitted to EPA for approval. This maintenance plan would also provide SACOG with the new motor vehicle emission budget needed to

demonstrate conformity. This option would require the region to endure a short-term conformity lapse of one to two years.

There are other SIP options being pursued by the air districts to resolve the conformity problem faced by SACOG and the region. The feasibility of some of these options will become clearer as issues are discussed and resolved with EPA. In the meantime, the districts of the region are preparing the necessary background studies and reports to be ready to submit a SIP update to EPA once a preferred option is chosen.

*** * ***

It is no surprise that the rapid and continuous growth within the county coupled with the increasing awareness of the air quality issues facing the region have increased demand for services from the District, primarily in areas that have no correlation to direct cost recovery. This can be seen by the steady rise in complaints and general inquiries from the citizens, and the corresponding expenditure of staff resources for investigation and response. There is also a continuous flow of both Federal and State mandated program requirements that are being placed upon the District for implementation, which do not have corresponding revenue streams. This has resulted in the need to secure new resources in addition to optimizing the use of the existing ones.

Over the past two years we have streamlined operations, maximized cost recovery efforts, and leveraged resources in innovative ways. Examples of this leveraging have been mentioned in previous sections of this report, but to reiterate include multiple service contracts for engineering support, air sampling, toxic screening assessments, and data base development in addition to numerous operating agreements with local agencies and departments in mutual aid and/or pay for service types of relationships. Additionally, the District is making excellent use of both extra help and student intern employees to aid in program delivery.

In spite of the process changes and operational improvements taking effect within the District, there remains a need to increase resources to meet existing and future demands. An analysis of air districts throughout California has indicated a nominal staffing ratio of 8.34 per 100,000 population served. The District is operating at a permanent staff ratio of 4 per 100,000 population served, less than half the statewide average. Through the leveraging of extra resources described above, the ratio improves slightly to an equivalent staffing ratio of 4.8.

A Resource Development Plan has been created by District management outlining needs through the year 2016 based upon population growth. This plan projects the need to increase resources over the next fourteen years to a modest 5.26 permanent staff to 100,000 population served ratio. It is the intent of District management to continue to search for cost effective program delivery methods, achieve full program cost recovery where applicable, and continually seek innovative operational and process improvements while keeping the internal costs associated with District operations at a minimum. This effort is reflected in the Goals listed at the beginning of this report and will continue to be a priority for the District into the future.