



2009 ENFORCEMENT REPORT EXECUTIVE SUMMARY

Office of the Secretary

Air Resources Board, California Air Pollution Control Officers Association, Department of Pesticide Regulation
Department of Toxic Substances Control, Integrated Waste Management Board
Office of Environmental Health Hazard Assessment, State Water Resources Control Board





ACKNOWLEDGEMENT

The following organizations and individuals deserve special recognition for their valuable contribution to the California Environmental Protection Agency's 2009 Environmental Enforcement Report.

- California Environmental Protection Agency (Cal/EPA)
Don Johnson, Assistant Secretary
- Air Resources Board (ARB)
James Ryden, Division Chief, Enforcement Division
- California Air Pollution Control Officers Association (CAPCOA)
Melvin D. Zeldin, Executive Director
- Integrated Waste Management Board (IWMB)
Ted Rauh, Program Director, Waste Compliance and Mitigation Program
- Department of Pesticide Regulation (DPR)
Nan Gorder, Branch Chief, Enforcement Branch
- Department of Toxic Substances Control (DTSC)
Gale Filter, Deputy Director, Enforcement and Emergency Response Program
- State Water Resources Control Board (SWRCB)
Reed Sato, Director, Office of Enforcement
- Office of Environmental Health Hazard Assessment (OEHHA)
Joan E. Denton, Ph.D., Director
- Unified Hazardous Materials Program (Cal/EPA)
Jim Bohon, Manager of the Unified Hazardous Materials Program
- United States Environmental Protection Agency (US EPA)
Kathleen Johnson, Director, Office of Public Affairs

Many thanks for their valuable contribution and dedication to the fruition of this annual report project is given to the Enforcement Report Steering Committee members:

Ada Scott (DPR), Caren Trgovcich (SWRCB), Carmen Milanes (OEHHA), Diane Trujillo (Cal/EPA), Joe Marade (DPR), Larry Woodson (Cal/EPA), Lorraine Van Kekerix (IWMB/CalRecycle), Mark Tavianini (ARB), Mary Wren-Wilson (Cal/EPA), Rafael Maestu (SWRCB), Rick Robison (DTSC), Robin Holloway (US EPA), Terry Dressler (Santa Barbara Co. APCD) and Vance Fong (US EPA).

**CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
2009 ENVIRONMENTAL ENFORCEMENT REPORT**

EXECUTIVE SUMMARY

TABLE OF CONTENTS

California Environmental Protection Agency Mission Statement	1
Public Health Indicators	2
Air:	
Air Resources Board Highlights	12
Air Pollution Control Districts Highlights	17
Hazardous Waste and Materials:	
Department of Toxic Substances Control Highlights	20
Unified Hazardous Materials Program Highlights	28
Pesticides:	
Department of Pesticide Regulation Highlights	36
Solid Waste:	
Integrated Waste Management Board Highlights	43
Water:	
State Water Resources Control Board and the Regional Water Quality Control Boards Highlights	49
Risk Assessment:	
Office of Environmental Health Hazard Assessment Highlights	55

The mission of the California Environmental Protection Agency (Cal/EPA)

is to restore, protect, and enhance the environment to ensure public health, environmental quality, and economic vitality. Cal/EPA's vision is of a California that enjoys a clean, healthy, sustainable environment, which enhances the quality of life for current and future generations, and protects our diverse natural resources. The goals of California's environmental laws cannot be achieved without compliance. To achieve compliance, Cal/EPA uses many tools including education, inspection and enforcement.

An important part of our efforts to protect the environment is the establishment and maintenance of viable environmental compliance and enforcement programs. To achieve compliance, and assure a level playing field for businesses in California, consistent and fair enforcement of environmental laws is necessary. Statewide consistency in the application of environmental laws is a must if we are to achieve Cal/EPA's vision of air that is healthy to breath, water that is safe to use and communities that are free from unacceptable human health risk from hazardous materials.

Following is a short synopsis of the programs within Cal/EPA including highlights showing how the efforts of California's environmental protections programs have benefitted the people of California. California's citizens and the environment are protected from harm through the efforts of an integrated family of independent regulatory programs within Cal/EPA and other agencies. The efforts of these programs are described in detail in the 2009 Consolidated Environmental Law Enforcement Report (2009 Report) and outlined in the following summary.

What this summary shows are robust programs at the local, state and federal government levels working together to reduce the risk to public health, from environmental factors, through continuing improvements in pollution prevention. Since the establishment of environmental protection programs in California, we have seen a consistent improvement in the environmental factors that impact our health and the quality of the environment. The air is healthier, the water is cleaner and people are exposed to fewer harmful chemicals as a result of the environmental enforcement programs within the Cal/EPA family of regulatory programs.

Cal/EPA and its regulatory programs continue to develop useful environmental performance indicators that are able to reflect the impact the efforts of the regulatory programs have on protection of public health and the environment. The 2009 Report Executive Summary provides highlights from the Cal/EPA Boards, Departments, and Offices (BDOs) accomplishments, addressing performance indicators to the extent possible. Indicator reporting over the various BDO highlights includes:

- Multi-year summaries of enforcement actions
- Specific enforcement case successes
- BDO status updates on performance indicator development
- A section (immediately following) on Public Health Indicators which reports public health trends, providing valuable context for environmental program efforts

PUBLIC HEALTH INDICATORS

Public health protection is the underlying basis for most of Cal/EPA's regulatory programs. A large body of scientific evidence demonstrates the linkages between many human diseases and chemical exposures. Environmental programs rely upon such evidence to set regulatory standards at levels intended to prevent harmful chemical exposures.

Over the years, environmental programs have achieved significant reductions in the levels of identified environmental pollutants—presumably leading to decreased human exposures and consequently lower incidence of adverse health conditions. Linking health outcomes with levels of environmental pollutants, however, is difficult given the complex, multi-factorial nature of disease. In addition to environmental exposures, many other factors—such as genetics, smoking, alcohol consumption, diet, exercise, and socioeconomic characteristics—can affect human health.

Nevertheless, tracking public health trends provides valuable context for environmental programs. These trends help characterize the overall health status of the populations that environmental programs aim to protect. In addition, tracking trends can add to our understanding of the relationships between environmental exposures and health outcomes.

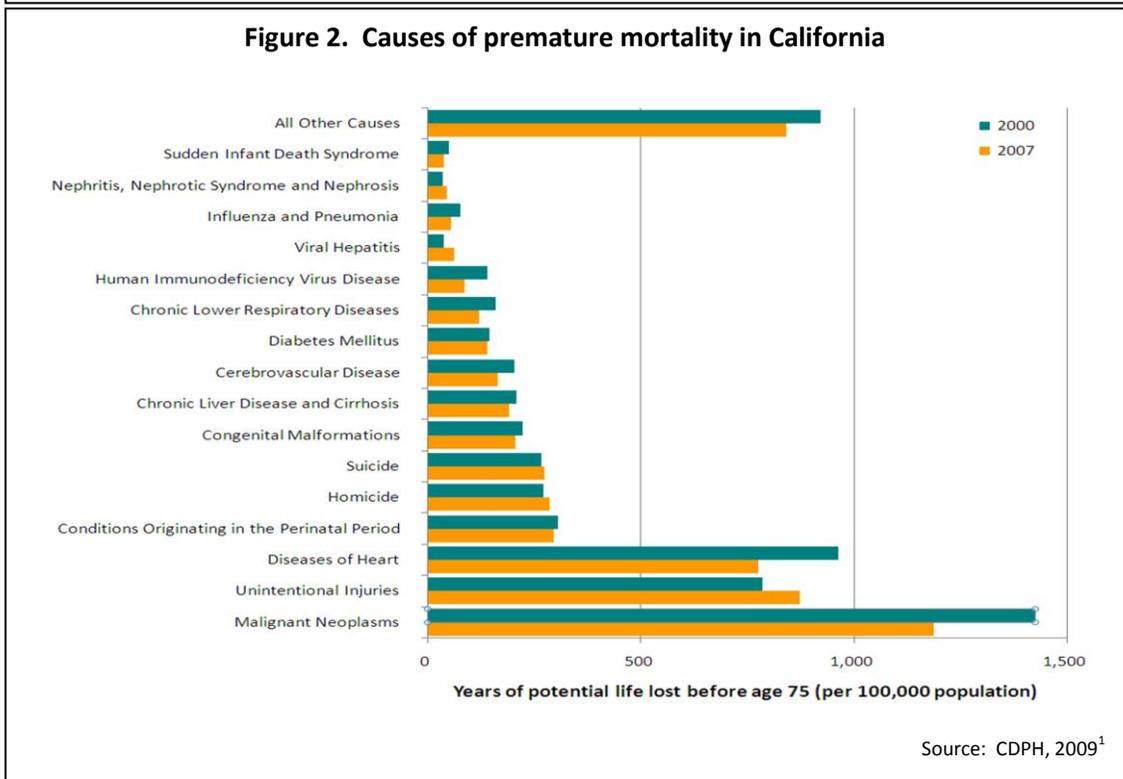
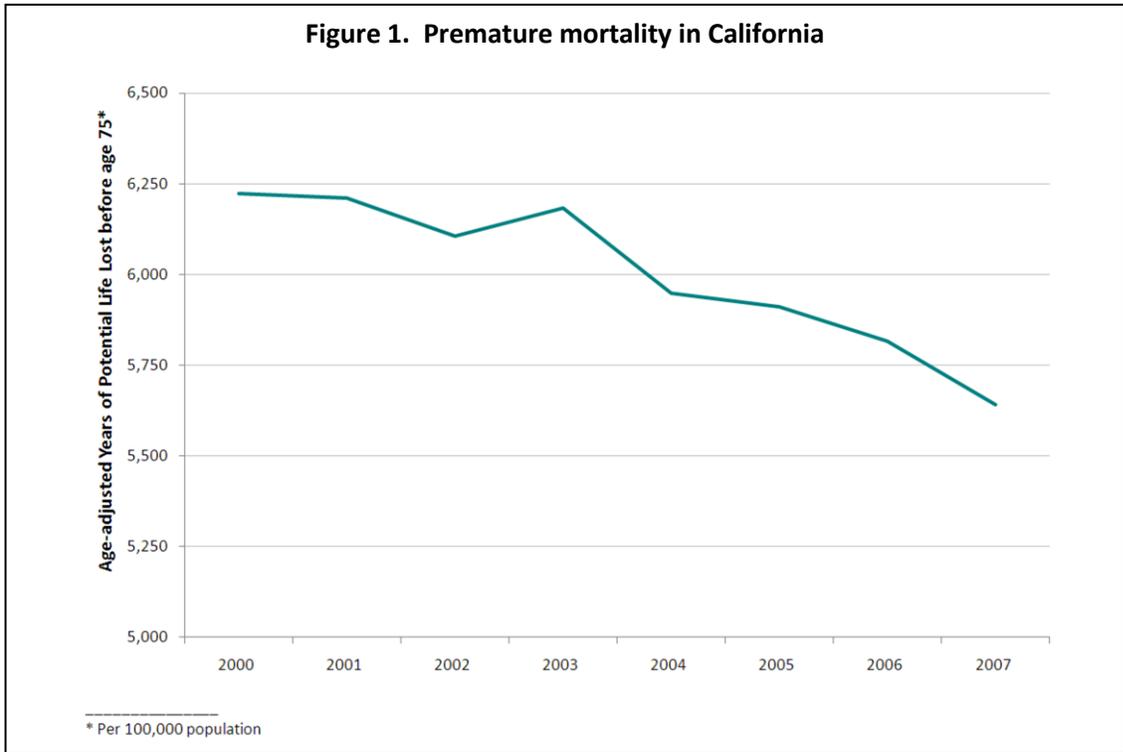
Finally, biomonitoring can yield data to better characterize population exposures to environmental contaminants from all sources. Biomonitoring is the measurement of chemicals or their metabolites in body fluids, tissues or excreta. Biomonitoring data at the national level for contaminants of public health concern are collected by the Centers for Disease Control and Prevention's National Health and Nutrition Examination Survey. With the passage of legislation that established the California Environmental Biomonitoring Program in 2006, California is beginning to lay the foundation for collecting state-level biomonitoring data. At this time, however, no statewide biomonitoring data are available except for lead.

Selected Indicators

Overall, the health of Californians has been improving, as indicated by commonly used measures to describe overall population health: mortality and life expectancy. (It should be noted, however, that the statewide trends presented may not be representative of trends for certain geographic areas, racial groups, or income levels.) These measures reflect the cumulative effects of biological, social and environmental factors.

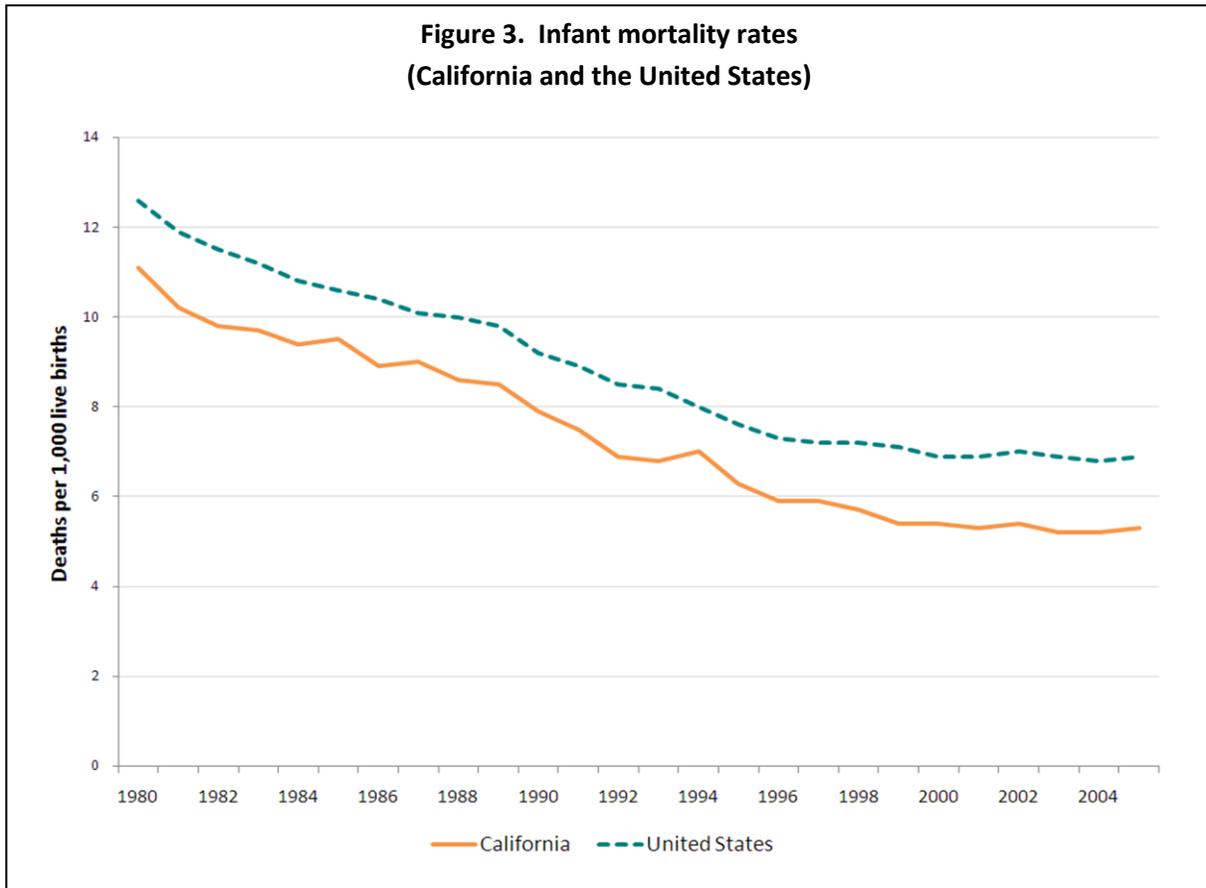
Premature Mortality

Premature mortality rates have been decreasing in California (Figure 1)ⁱ. Premature mortality is measured as the number of years of potential life lost due to premature death (before age 75). Premature mortality rates reflect deaths that are more likely attributable to preventable causes. Malignant neoplasms (cancers), unintentional injuries (accidents) and heart disease are the leading causes of premature deaths in the state in both 2000 and 2007 (Figure 2). By contrast, the top three causes of general mortality are heart disease, cancers and cerebrovascular disease (stroke). General mortality rates are driven by deaths among older age groups.ⁱⁱ



Infant Mortality

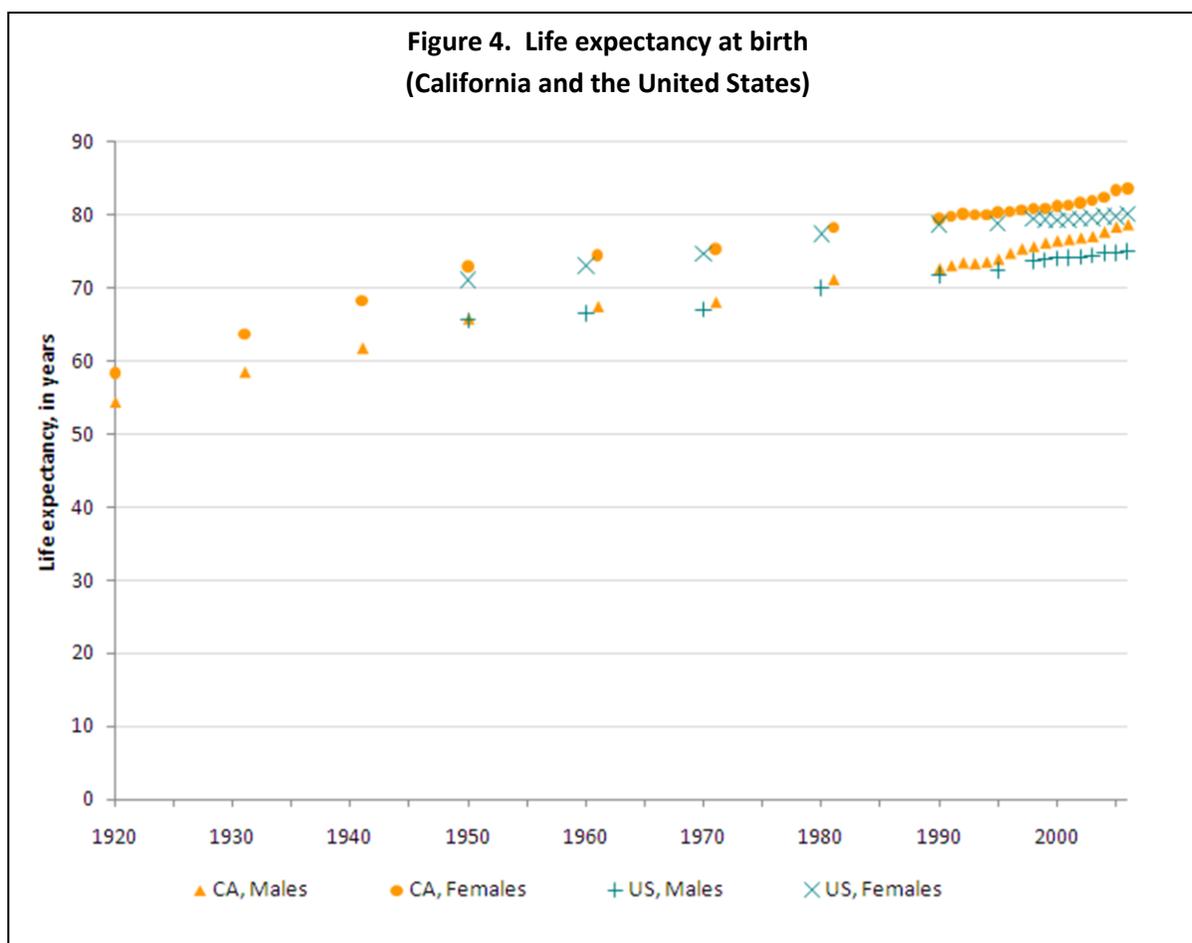
Infant mortality (death from the time of live birth to age 1) rates indicate the current health status of the population and predict the health of the next generation.ⁱⁱⁱ California’s infant mortality rates have historically been lower than the national rates. In 2005, there were 3.6 infant deaths per 1,000 live births in the state, compared to 4.5 infant deaths per 1,000 live births in the United States as a whole (Figure 3)^{iv}.



Life Expectancy

Life expectancy, another key indicator of overall health, is influenced by a society's ability to control and prevent serious diseases or other potentially life-threatening conditions. It represents the average number of years at birth a person could expect to live if current mortality trends were to continue for the rest of that person's life. Life expectancy for California continues to increase (Figure 4). In 2005, the life expectancy for Californians is 78.5 years for males and 83.3 years for females, compared to 75.2 years and 80.4 years for males and females, respectively, for the country.^{v,vi}

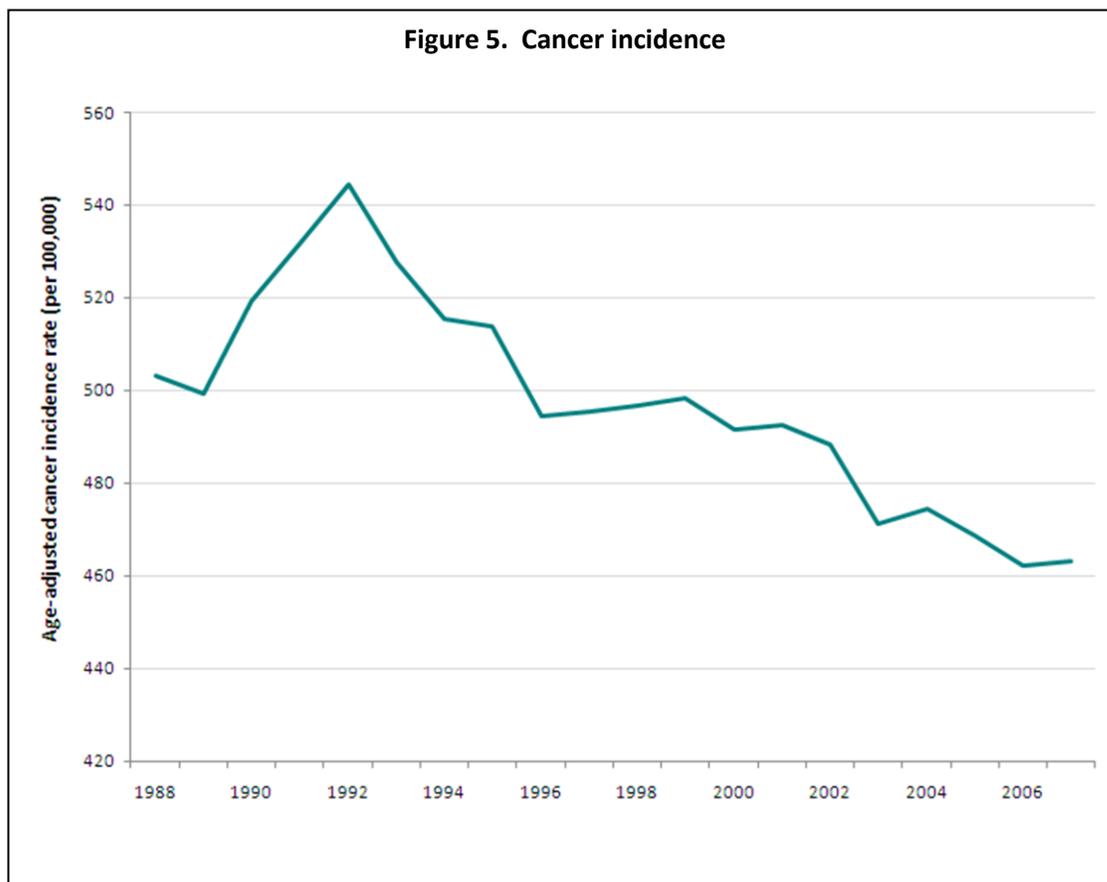
Certain diseases have well established associations with exposures to environmental chemicals. These include cancer, cardiovascular disease, respiratory diseases and adverse birth outcomes. Trends in cancer and asthma are presented below. As noted earlier, these and other diseases are known to be influenced by many other factors that can act alone or, more often, in combination.



Cancer Incidence

Cancer refers to a large group of diseases characterized by uncontrolled growth and spread of abnormal cells. It is the leading cause of premature deaths and the second leading cause of all deaths in the state. Many cancers can be cured if detected and treated promptly; many others can be prevented by lifestyle changes, such as avoiding the use of tobacco. In fact, majority of cancer deaths are associated with smoking, diet and obesity.^{vii}

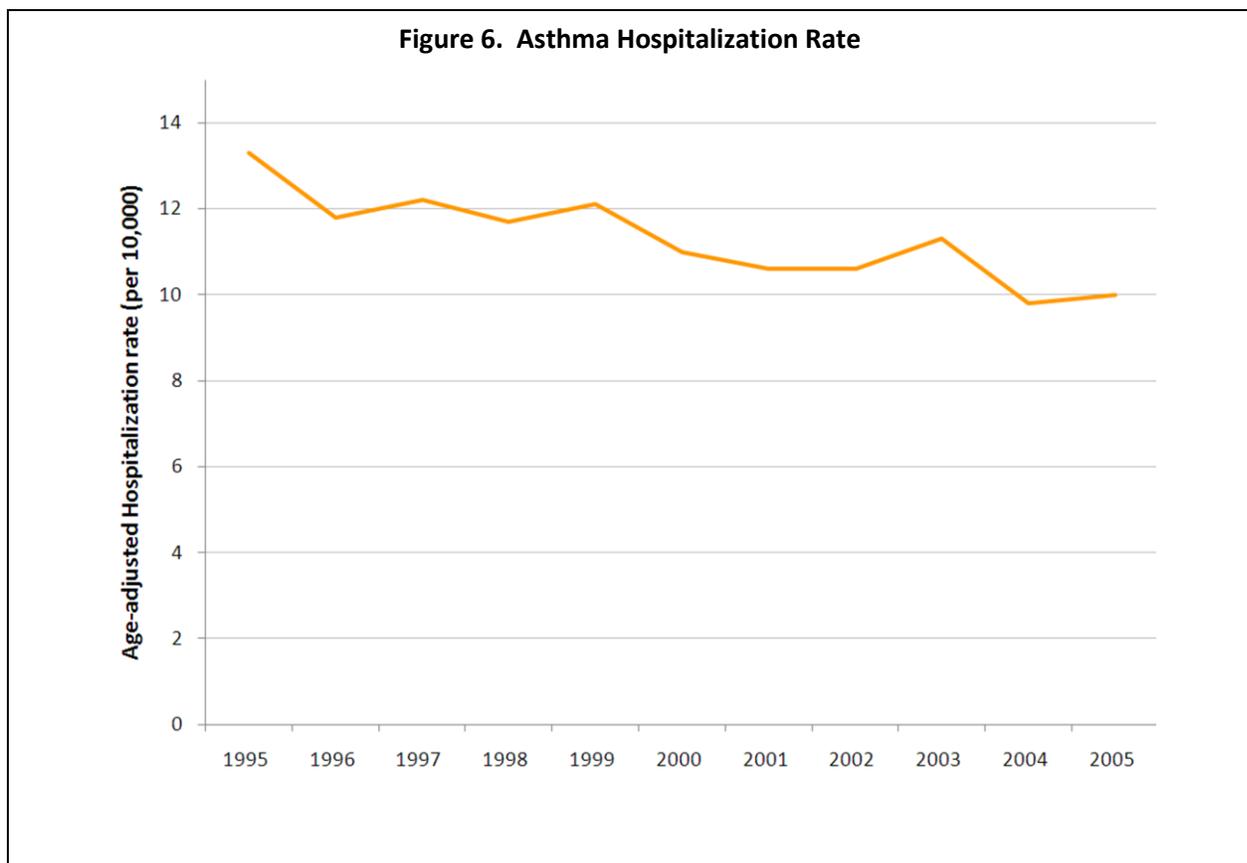
Exposures to environmental contaminants have been clearly linked to certain types of cancers, such as radon and lung cancer, asbestos and mesothelioma, arsenic and skin cancer. Linkages between ambient environmental exposures and most cancers in humans, however, are less definitive. In California, the overall incidence of cancer has decreased by about 10 percent over the past two decades (Figure 5), while mortality from cancer has decreased by about 20 percent (not shown in graph).^{7,viii}



Asthma Hospitalizations

Asthma is characterized by inflammation of the airways and lungs. It is the most common chronic disease among children in the United States, and its prevalence both nationally and in California has been increasing. Approximately 3.7 million adults and 1.7 million children in California have been diagnosed with asthma in the state. Lifetime asthma prevalence in California is higher than the national prevalence by about one percentage point.^{ix}

The causes of asthma are unknown, although both genetic and environmental factors can influence its development. Certain agents are known to trigger asthma. A multitude of symptoms can occur, including wheezing, breathlessness, chest tightness and coughing, ranging from mild to life-threatening. Asthma triggers include environmental tobacco smoke, dust mites, mold and air pollutants. Of the latter, ozone, particulate matter (PM_{2.5}, and PM₁₀) have been shown to contribute to an increase in asthma-related emergency room visits and hospitalization.^x Hospitalizations occur when the symptoms are so severe as to require medical care. A recent study found increased hospital admissions, especially for asthma, during heavy smoke conditions associated with the 2003 wildfires in southern California.^{xi} Statewide, hospitalizations have decreased gradually since 1995 (Figure 6). These rates have been consistently lower than the rest of the United States.

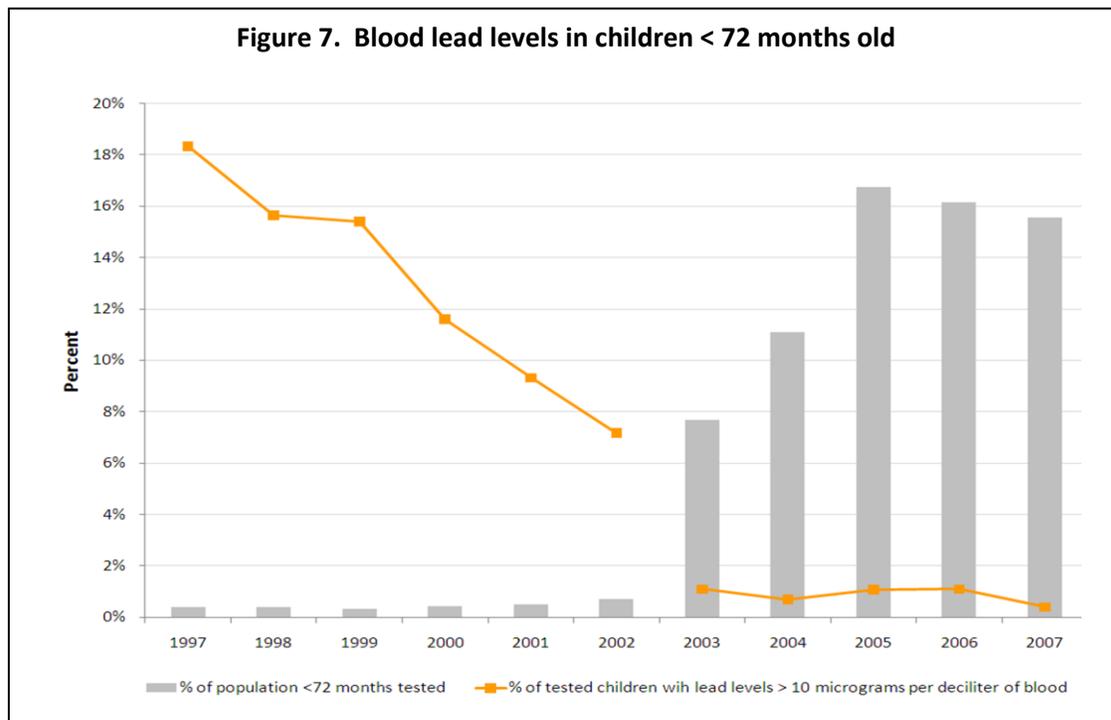


Blood Lead Levels

Lead is a naturally occurring metal used in a variety of products, including batteries, metal alloys, and solder. Due to health concerns, it is no longer used in gasoline and is in house paints only at much lower levels. Lead is perhaps the most notable environmental success story. Maximum ambient air levels of lead in the state have decreased dramatically, from around 10 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$) in the mid-1970s, to 0.05 $\mu\text{g}/\text{m}^3$ in 2007.^{xii}

Infants and young children are particularly sensitive to the effects of lead. Children are commonly exposed from hand-to-mouth activities involving paint chips or contaminated dust and soils around older (pre-1978) homes with lead-based paint. Less common sources of lead exposure include folk medicines, ceramic and metal cookware and imported toys. While no safe level has been identified, the Centers for Disease Control and Prevention considers lead levels at or above 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$) in children as elevated for purposes of intervention. However, lower intelligence and reading ability, learning disabilities, impaired hearing, reduced attention spans, and many other cognitive and physical problems in children have been found, even at blood lead levels below 10 $\mu\text{g}/\text{dL}$.

Over the past two decades, the percentage of children under 72 months old (age 6) tested for lead who were found to have **blood lead levels** at or above 10 $\mu\text{g}/\text{dL}$ has decreased (Figure 7) from more than 7.5 percent in 1997 to less than half a percent in 2007.^{xiii} This trend, however, may not be representative of levels found in children throughout the state as lead testing is targeted towards children at risk of lead exposure. The marked increase in the number of children tested for lead starting in 2003 is due to new screening requirements for children enrolled in publicly funded health care and nutrition programs.



Conclusion

Collectively, the trends presented here provide a statewide snapshot of the health of California's population as a whole, as well as a focused—albeit limited—view of diseases or health conditions known to be associated with exposures to environmental contaminants. This overview of indicators is not intended to be all-inclusive. It is worth noting that statewide trends are not necessarily representative of trends at the county-level or regional levels, nor do they portray difference among different races or income levels.

Technical note: Some of the graphs above present age-adjusted rates. Age adjustment statistically removes the influence of age from data on health outcomes that occur at different rates in different age groups, making it possible to compare populations.^{xiv}

REFERENCES

- ⁱ California Department of Public Health, 2009. *Premature Mortality Trends 2000-2007, Table 1, YPLL-75 Rates for Selected Causes of Death*. Accessed March 1, 2010. Posted at: <http://www.cdph.ca.gov/programs/ohir/Pages/YPLL2007Main.aspx>
- ⁱⁱ California Department of Public Health, *Death Statistical Data Tables, Table 5-8. Thirteen Leading Causes of Death by Race/Ethnic Group and Sex, California, 2007 (By Place of Residence)*. Accessed March 1, 2010. Posted at: <http://www.cdph.ca.gov/data/statistics/Documents/VSC-2007-0508.pdf>
- ⁱⁱⁱ United States Environmental Protection Agency, 2008. *U. S. EPA's 2008 Report on the Environment (Final Report)*. Washington, D.C., EPA/600/R-07/045F (NTIS PB2008-112484). Posted at: <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=190806>
- ^{iv} California Department of Public Health, *Vital Statistics and Population Summary Tables. Table 1-4. Comparison of Vital Statistics Rates, California and United States, 1980-2005 (By Place of Residence)*. Accessed March 1, 2010. Posted at: <http://www.cdph.ca.gov/data/statistics/Documents/VSC-2005-0104.pdf>
- ^v California Department of Public Health, *Vital Statistics and Population Summary Tables. Table 1-14. Life Expectancy at Birth and Average Years of Life Remaining at Age 65 by Selected Years and Sex, California, 1919-1920, 1929-1931, 1939-1941, 1950, 1959-1961, 1969-1971, 1979-1981, 1990-2007*. Accessed July 7, 2010. Posted at: <http://www.cdph.ca.gov/data/statistics/Documents/VSC-2007-0114.pdf>
- ^{vi} National Center for Health Statistics, *Health, United States, 2009. With Special Feature on Medical Technology, Table 24, Life expectancy at birth, at 65 years of age, and at 75 years of age, by race and sex: United States, selected years 1900-2006*. Hyattsville, MD. Posted at: [http://www.cdc.gov/nchs/data/09.pdf](http://www.cdc.gov/nchs/data/hus/09.pdf)
- ^{vii} American Cancer Society, California Department of Public Health, California Cancer Registry. *California Cancer Facts and Figures 2010*. Oakland, CA. September 2009. Posted at: <http://www.ccrca.org/PDF/ACS2010-9-29-09.pdf>
- ^{viii} California Cancer Registry, 2009. *Cancer Incidence/Mortality Rates in California*. Retrieved March 4, 2010 from <http://www.cancer-rates.info/ca>
- ^{ix} Millet M, Tran S, Eatherton M, Flattery J, Kreutzer R, 2007. *The Burden of Asthma in California: A Surveillance Report* Richmond, CA: California Department of Health Services, Environmental Health Investigations Branch, June 2007. Posted at: <http://www.californiabreathing.org/images/stories/publications/asthmaburdenreport.pdf>
- ^x California Department of Public Health, 2009. *The California Environmental Health Tracking Program: Data and Information, Asthma*. Accessed May 13, 2010. Posted at: http://www.ehib.org/page.jsp?page_key=24
- ^{xi} Delfino, R.J., S. Brummel, J. Wu, H. Stern, B. Ostro, M. Lipsett, A. Winer, D.H. Street, L. Zhang, T. Tjoa, D.L. Gillen. *The relationship of respiratory and cardiovascular hospital admissions to the southern California wildfires of 2003*. *Occup. Environ. Med.* 2009(66):189-197. Published online November 18, 2008.
- ^{xii} California Air Resources Board, 2009. *The California Almanac of Emissions and Air Quality, 2009 Edition*. Posted at: <http://www.arb.ca.gov/aqd/almanac/almanac09/almanac09.htm>

^{xiii} Centers for Disease Control and Prevention, 2009. *CDC's National Surveillance Data (1997-2007): Lead. Number of Children Tested and Confirmed EBLs by State, Year, and BLL Group, Children <72 Months Old.* Posted at: <http://www.cdc.gov/nceh/lead/data/national.htm>

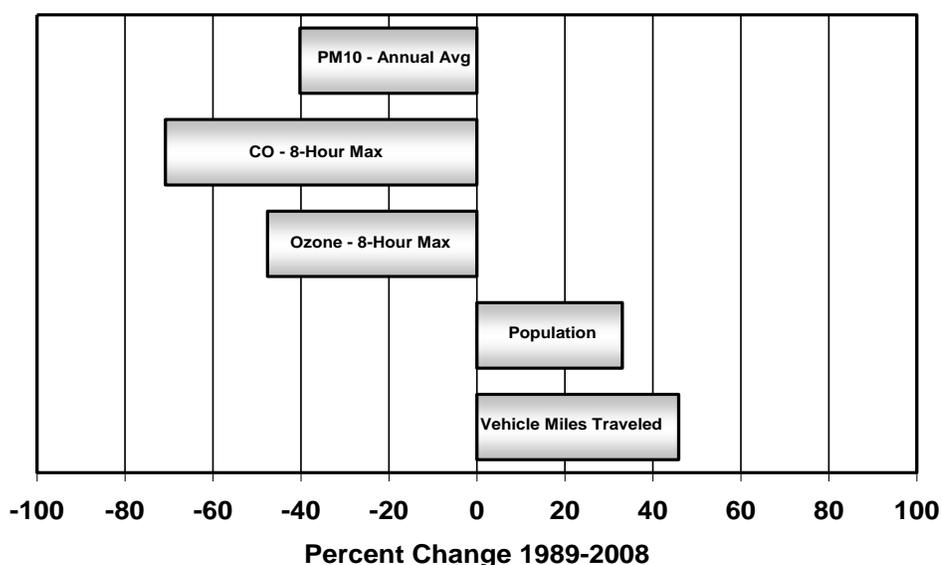
^{xiv} Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. *Healthy People Statistical Notes*, No. 20. Hyattsville, MD: National Center for Health Statistics. January 2001. Posted at: <http://www.cdc.gov/nchs/data/statnt/statnt20.pdf>

AIR RESOURCES BOARD HIGHLIGHTS

ARB Mission Statement:

To promote and protect public health, welfare and ecological resources through the effective and efficient reduction of air pollutants while recognizing and considering the effects on the economy of the state.

For over 40 years the Air Resources Board (ARB) has worked aggressively to improve California's air quality. Through its multifaceted programs of planning, research, air monitoring, regulation, and enforcement, the ARB, in collaboration with the state's 35 air districts, has succeeded in significantly reducing Californian's exposure to air pollution. This progress has been dramatic despite considerable growth in population, motor vehicles, and vehicle miles travelled as shown in the following chart:



The Board and the local air pollution control districts (air districts) continue to enact progressive regulations for new and existing sources of air pollution, resulting in significant reductions in emissions. California's laws require stationary sources and passenger vehicles to use the best available air pollution control technology. Over the past 40 years, emissions from passenger vehicles have decreased by over 95% through the use of clean engine, vehicle and fuels technologies spearheaded by ARB regulations.

Unfortunately, even though California's air is much cleaner, over 90% of Californians, or approximately 33 million people, still live in regions with unhealthy air. According to the American Lung Association, in 2009 California had 12 of the top 25 cities with the highest ozone pollution in the nation, 5 of the top ten cities with the highest year round particulate matter pollution, and 11 of the top 25 cities with the highest short term particulate matter. Thus, clean air efforts by ARB, the air districts, industry, and all citizens must continue.

ARB regulates a growing universe of diverse pollution sources in the fight for clean air. These sources range from diesel big rigs to tricked-out motorcycles; from cargo ships to jet skis, from motor vehicle fuels to hair spray; from locomotive engines to the family car. While the sources are numerous and diverse, the fact remains that a high compliance rate is crucial to achieving the air quality goals promised in each regulation.

To this end, ARB's Enforcement Division "...seeks to protect public health and provide safe, clean air to all Californians by reducing emissions of air contaminants through the fair, consistent and comprehensive enforcement of statutory and regulatory requirements and by providing training and compliance assistance" (from Enforcement Division Mission Statement). Enforcement Division (ED) staff inspects and investigates places and situations throughout California where non-compliance is most likely, as well as those areas where excess emissions have the largest adverse impact on public health. Recently added to these responsibilities is the challenge to address the enforceability of climate-change regulations. Even with last year's fiscal challenges, the program achieved a sizeable increase in the number of enforcement actions closed and penalties assessed and collected in 2009.

The following statistics highlight the achievements of ARB's Enforcement Program in 2009. Please refer to the body of this report for details on these statistics:

- 4,054 cases/citations closed; 3,928 for mobile source programs and 126 for stationary source programs;
- Over \$16.3 million in penalties collected;
- 4,041 of these cases/citations were closed administratively for over \$14.7 million;
- 13 of these cases were closed via civil litigation for over \$1.6 million; and
- Funded 272 Supplemental Environmental Programs (SEP) totaling over \$1.9 million from penalties collected from these enforcement actions.



Mobile Source Enforcement

California has long been a world leader in combating air pollution emitted from motor vehicles and other mobile sources. Because of its severe air quality problems, California is the only state authorized to set and enforce its own mobile source emissions and fuels standards. In fact, a number of other states have actually adopted ARB's mobile source control program as their own. ARB's Mobile Source Enforcement Program is structured to ensure that regulated engines and vehicles meet California's standards from the design phase through production, from the point of sale through their useful life and retirement from the fleet.

Mobile sources under ARB's authority fall into two major groups. One group includes passenger cars, motorcycles, off-road recreational vehicles, jet skis and other watercraft, lawnmowers, and chain saws. These sources contribute significantly to the state's ozone problems, particularly in populated areas.

The other group includes heavy-duty diesel vehicles and engines used by public agencies and private companies. Enforcement of the growing number of heavy-duty diesel regulations is one of the most rapidly expanding areas for the ED. Although heavy-duty diesel vehicles comprise only two percent of California's on-road fleet, they produce about one-third of the nitrogen oxides and approximately two-thirds of the particulate matter emissions attributed to motor vehicles. The exhaust emissions from these vehicles are of special concern, particularly in populated areas, because of the toxic nature of the sooty particles found in diesel exhaust.



ED staff inspects heavy-duty diesel vehicles for engine certification compliance, smoke emissions, and tampering. All diesel-powered trucks and buses operating in California, including those that cross the Mexican border, are subject to these inspections. It also enforces regulations designed to keep diesel-powered school buses and delivery vehicles from idling too long or too close to children's developing lungs. The ED ensures that the highest level of particle controls are installed on construction, public and utility, and trash hauling vehicles, and on urban/transit buses. In 2009, the mobile source enforcement program conducted almost 70,000 inspections, closed 3,928 cases, and collected over \$13.3 million in penalties.

Stationary Source Enforcement

The stationary source enforcement program is responsible for 1) enforcing regulations for motor vehicle fuels, cargo tank vapor recovery certification, consumer products, and portable fuels containers; 2) conducting special and joint investigations of cross-media environmental cases (i.e., cases involving multiple environmental areas such as air, water, toxic wastes, regular waste, or pesticides); and 3) conducting inspection, investigation, and compliance functions in conjunction with the 35 local air districts and for overseeing air district enforcement programs.



Stationary sources contribute substantially to emissions of criteria and toxic pollutants. Between one-quarter and one-half of the ozone-forming pollutants emitted are from stationary sources.

In 2009, the stationary source enforcement program collected over 4,100 samples of fuels and consumer products, conducted over 26,600 inspections, closed 126 cases, and collected over \$3 million in penalties.

Greenhouse Gas Enforcement

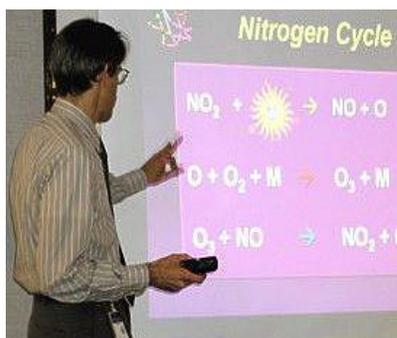
In 2009, the primary focus of the Greenhouse Gas (GHG) Enforcement Program was providing input on writing enforceable regulations, particularly those written pursuant to AB 32, the California Global Warming Solutions Act of 2006. Program staff provided specific input on effective enforcement strategies for ARB's mandatory reporting regulation, cap and trade (including offsets), and the many stationary source related regulations identified in ARB's Climate Change Scoping Plan

(<http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>)

Over the next few years the focus will shift to enforcement and oversight of these regulations.

Training and Compliance Assistance

Ideally, businesses that are faced with new or tighter regulations comply voluntarily. The ED provides training and materials to these businesses, as well as to local, state, and federal enforcement staff, for improving enforcement and promoting compliance.



ED's nationally-recognized training courses provide current, practical, usable and cost-effective information for both new and experienced environmental professionals working in California. Course content ranges from the basics of air quality to advanced topics in air quality compliance and enforcement. In 2009, the program focused on developing and delivering diesel-related compliance courses to meet the demand created by new ARB diesel emission control

regulations through traditional classroom delivery and through webcasting to reach a much wider audience.

The Compliance Assistance Program (CAP) develops and distributes a variety of practical, rule-specific publications, technical manuals, and web-based information. This information is aimed at a diverse audience, including process operators, air quality specialists in small and large businesses, inspectors, and the public. One-page outreach flyers and pamphlets explain key elements of compliance with new air quality regulations, self-inspection handbooks go into more detail and provide checklists so operators can be proactive in compliance, and technical manuals provide in-depth, source-specific information.



In 2009, the Training Program conducted 275 classes, with more than 9,100 students attending. The Compliance Assistance program distributed over 9,000 publications and counted over 215,000 webpage views on the CAP resources website.

Environmental Justice

Staff participated in agency enforcement efforts in Environmental Justice (EJ) communities. This involved vehicle inspections for compliance with ARB emissions requirements as well as collaboration on multi-media pollution issues. Staff participated in Cal/EPA coordinated community “toxic tours” and “community workshops”. They worked with community members to address specific air pollution concerns and enlist the assistance of the local air districts, as applicable. In the future considerable focus will be directed at air emissions from ports and distribution centers in the EJ communities.

Enforcement Actions Table

Formal Enforcement Actions	2005	2006	2007	2008	2009
Civil Cases Closed	0	5	6	4	13
Administrative Actions Closed	1,576	1,986	3,436	2,593	4,041
Criminal Cases Referred/Pending	6	4 (closed)	3	3	1
<i>Cases Closed</i>	1,576	1,994	3,442	2,597	4,054
Penalties *	\$11,839,508	\$6,686,227	\$29,850,475	\$11,979,812	\$16,381,158

* Includes supplemental environmental projects, early compliance costs, etc.

AIR POLLUTION CONTROL DISTRICTS HIGHLIGHTS

I. EXECUTIVE SUMMARY

Air Pollution Control programs for stationary sources in California are implemented and enforced by thirty-five local air pollution control and regional air quality management districts. As part of an ongoing effort to characterize enforcement programs at the local level, the California Air Pollution Control Officers Association (CAPCOA) surveyed 20 of the 35 member districts, the combined populations of which contain over 95% of the state's population. Due to resource constraints, not all 35 districts were able to expend the effort to compile and report the data requested in the survey. The latest data available is enforcement and compliance information for Calendar Year 2008.

Enforcement of, and compliance with, air pollution control requirements is undertaken and measured through a variety of activities, approaches, and tools. This report reviews selected program elements and data. Overall, the data describe a robust enforcement and compliance assistance program with substantial funding and staff resources that achieve a high degree of compliance with applicable requirements. Compliance assistance and outreach programs proactively prevent violations from occurring, but when violations do occur, enforcement actions bring about a prompt return to compliance.



Asbestos Inspection

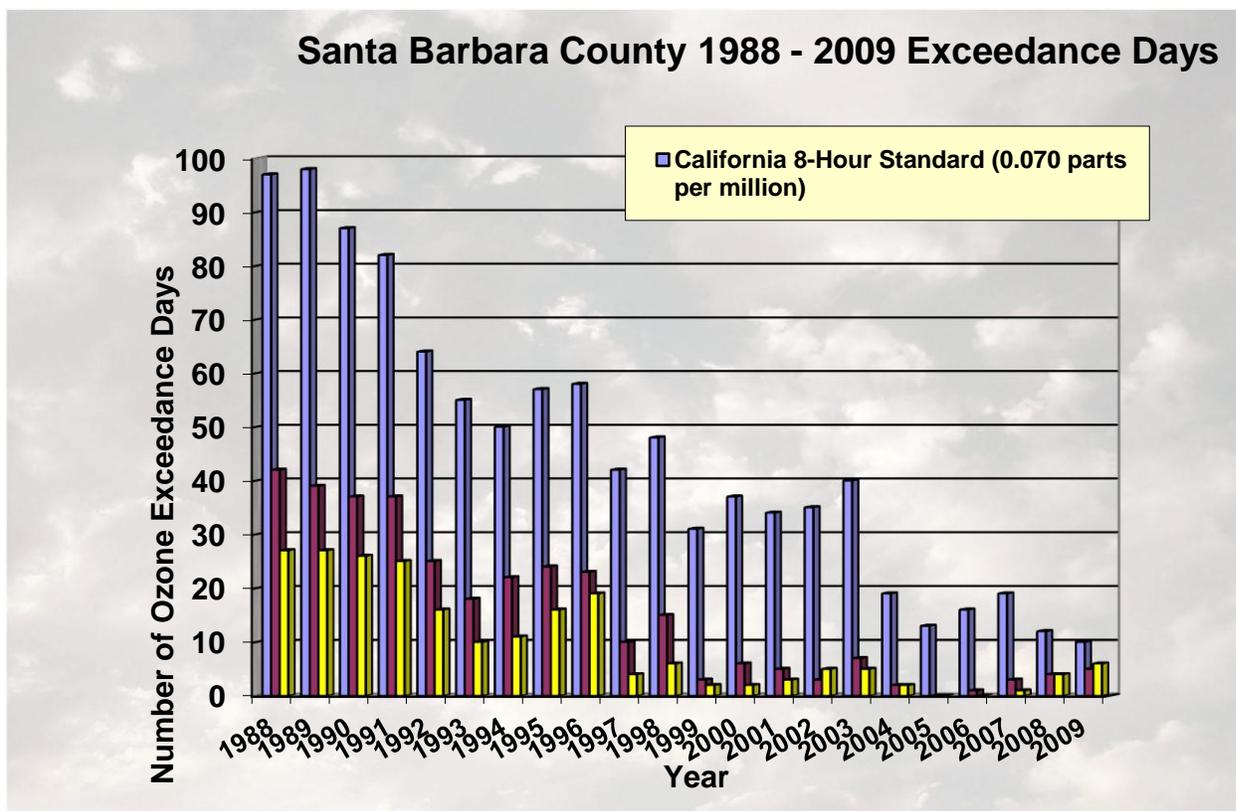
Major Program Highlights

The following statistics measure performance of selected enforcement and compliance program elements at the twenty local air districts for activities conducted during Calendar Year 2008. These districts include within their jurisdictions over 95% of California's residents. As described in greater detail below, these data were gathered through an extensive survey process. They describe a robust and effective enforcement and compliance program for stationary sources of air pollution. Program achievements during Calendar Year 2008 include:

- Over 56,000 inspections at traditional stationary sources,
- Over 7,000 inspections of Major Permitted Sources (a.k.a. Title V Facilities);
- Nearly \$19 million in monetary violation settlements;
- More than \$6.5 million in non-monetary violation settlements;
- Nearly 24,000 special purpose inspections and/or investigations;
- Over 7,500 inspections for asbestos pursuant to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asbestos;
- More than 3,700 inspections of CARB registered portable equipment;
- More than 550 full time employees (FTE) involved primarily in compliance and enforcement of air pollution control laws;
- Approximately 24% of total district budgets dedicated to enforcement.



Stationary Source Inspections



Exceedances of Ozone Standards for Santa Barbara County over twenty years

AIR DISTRICTS ENFORCEMENT ACTIONS

Enforcement Actions	2005 (11 of 35 Districts)	2006 (11 of 35 Districts)	2008 (20 of 35 Districts)
Number of Violations Discovered	5203	4213	13,840
Number of Violations Settled	4880	4511	10,157
Cash Value of Violations Settled	\$71,777,534	\$24,834,097	\$18,897,700
Non-Cash Settlement Value of Violations*	\$28,414,620	\$1,667,600	\$6,527,585

*Non-cash settlements reflect in-kind or other benefits by the violating facility in the community in which the facility may be located

DEPARTMENT OF TOXIC SUBSTANCES CONTROL HIGHLIGHTS

The Department of Toxic Substances Control (DTSC) is responsible for restoring the safety and health of communities by: 1) cleaning up sites contaminated by toxic substances from the legacy of California's industrial past; 2) ensuring that hazardous materials generated in California's present industrial economy are managed safely so they do not pose a threat to people or the environment; and 3) preventing pollution to ensure a safe and healthy future for California. These responsibilities are implemented by four core programs: Site Cleanup, Hazardous Waste Management, Enforcement and Emergency Response, and Pollution Prevention.

The mission of the Enforcement and Emergency Response Program (Enforcement Program) is to promote a healthier environment for all Californians through fair, consistent, and timely enforcement. The Enforcement Program is comprised of multiple program components which conduct inspections and take enforcement actions at facilities for which permits have been issued by DTSC, against transporters, some generators of hazardous waste, and electronic waste handlers. The Enforcement Program conducts Certified Unified Program Agency oversight, leads Environmental Justice activities, implements the Toxics in Consumer Product Laws, provides compliance assistance, and has the only sworn peace officer criminal investigators in Cal/EPA. In addition to these enforcement activities the Enforcement Program is responsible for various emergency response activities such as certain emergency off-highway and illegal drug lab clean-ups. This program component is not discussed further in this report.

The collaborative efforts of Department of Toxic Substances Control (DTSC) staff culminated in several significant enforcement actions in 2009. These actions not only helped stop illegal hazardous waste management practices throughout California, but they also brought numerous companies back into compliance with the state's hazardous waste laws. They included the following:

- DTSC reached a \$285,000 settlement with the University of California settling violations found via a complaint investigation at the Richmond Field Station. The University of California was cited for illegal storage, treatment, transportation, and disposal of hazardous wastes generated under a site cleanup order issued by the California Regional Water Quality Control Order. The University of California agreed to pay \$285,000, of which \$142,500 is penalty to DTSC and \$142,500 is for the Richmond BUILD Pre-Apprenticeship Construction Skills & Solar Installation Training program, a DTSC-approved Supplemental Environmental Project (SEP).
- DTSC reached settlement with Zeneca, Inc., for violations found via a complaint investigation. Zeneca was cited for illegal storage, treatment, transportation and disposal of hazardous waste. Zeneca agreed to pay \$225,000, of which \$112,500 is penalty to DTSC and \$112,500 is for the Richmond BUILD Pre-Apprenticeship Construction Skills & Solar Installation Training program, a DTSC-approved SEP.

- DTSC received a Judgment to Collect Administrative Penalty against BMG Oil Services, LLC, signed and filed by the Orange County Superior Court. The penalty was \$128,290 for violations observed during a transporter inspection. These violations included: unauthorized transportation and storage of hazardous waste, deficient manifesting, and quarterly and annual reporting. The facility is a registered transporter of hazardous waste.
- DTSC received a Proposed Amendment to Final Judgment and Permanent Injunction Pursuant to Stipulation (Injunction) against Joslyn Sunbank Company, LLC, signed by the San Luis Obispo County Superior Court. The penalty was \$75,000. The Injunction resulted from Sunbank's failure to reassess their cyanide wastewater Permit by Rule treatment unit after replacing an acid dribble tank – a violation of the March 28, 2007, Final Judgment and Permanent Injunction Pursuant to Stipulation (also filed with the Court). The new settlement included new injunctive conditions to send staff and management to California Compliance School and to pay for DTSC to inspect the facility once a year for the next three years. The AG's Office, on behalf of DTSC, filed the Injunction with the Court on August 6, 2009.
- DTSC received a Judgment to Collect Administrative Penalty (Judgment) against Sina Environmental, signed and filed by the San Bernardino County Superior Court. The penalty was \$60,000. The case originated from the Denova Environmental case when it was discovered that Sina Environmental had stored six cargo trailers full of hazardous waste from Denova for a period of several months at its yard in Fontana. Hazardous waste manifests had also been falsified to hide the fact that the trailers had been at the yard for such a long time. DTSC pursued Margaret Salter, the former President of Sina Environmental, as an individual, and entered into a Stipulation and Order on July 1, 2004, to have her make penalty payments over time until a total of \$41,000 was paid (\$19,000 would have been suspended had the payments been made on time). Since none of the penalties were ever paid, a Judgment for the full amount of \$60,000 was signed by the Court. The facility is a registered hazardous waste transporter.
- DTSC and Superior Processing settled violations from a June 18, 2008, inspection. These included unauthorized hazardous waste storage and treatment, mixing incompatible wastes, and failure to: provide an internal communication or alarm system; maintain spill equipment; have tank assessments; conduct inspections of tanks and containers; perform waste determinations and have a Waste Analysis Plan; have a complete closure plan; place Universal Waste lamps in proper containers; submit a biennial report to DTSC; establish a training program; operate the facility to minimize the possibility of fire or release; and submit copies of manifests to DTSC. Of the \$272,684 penalty, \$3,600 is reimbursement of DTSC's costs. As part of the settlement, Superior Processing must send at least three employees to California Compliance School without a reduction in penalty.

2009 Enforcement Data

- 377 core work inspections
- 210 inspections by DTSC as the CUPA in Imperial and Trinity Counties
- 2084 Mexican Border truck stops
- 57 complaint investigations closed
- 70 enforcement cases settled
- \$1,988,170 total settlement dollars
- Approximately \$1.9 billion of financial assurance funds managed
- 29 training classes provided resulting in more than 350 CUPA inspectors, governmental officials, and industry personnel trained
- 258 criminal cases initiated
- 192 criminal cases completed
- 1 arrest (8 arrest-assists with the contractors board)

Compliance Assistance Team

The Compliance Assistance Team (CAT) was developed to provide education and outreach to specific industry sectors to improve compliance with California's hazardous waste requirements. During Calendar Year 2009, the CAT developed and implemented a project proposal to provide assistance and outreach to new car dealers involved with vehicle service repair with review and input from the California New Car Dealers Association (CNCDA) and the California CUPA Forum. The CAT plans to conclude implementation of the proposal in 2010 and conduct a self-assessment to evaluate the effectiveness of the first project and prepare recommendations for any future team projects.

Toxics in Consumer Products Enforcement

The Toxics in Consumer Products Team (Team) is located within Office of Criminal Investigation (OCI) and is composed of hazardous substances scientists. The goal of the Team is to establish an all-encompassing strategy for the implementation and enforcement of all regulated consumer products requirements within DTSC's purview. Laws such as the Toxics in Packaging Prevention Act and the Lead in Jewelry statutes define the regulated consumer products. The Team works to ensure effective internal and external communication and coordination with affected programs and stakeholders as new products become subject to regulation.



DTSC Enforcement staff screen a child's doll for lead.

Lead in Jewelry

OCI conducted monitoring and investigations of retailers and distributors of jewelry. Health and Safety Code section 25214.2 makes it illegal to manufacture, ship, sell, or give away children's jewelry that contains lead above 600 parts per million. In 2009, OCI investigated fifteen retailers, wholesalers, and importers. Fourteen of these businesses were selling, distributing, or importing jewelry that exceeded regulatory levels for lead. From the fifteen, six cases (three importers, three retailers) were referred to the Los Angeles County District Attorney or the Los Angeles Office of the City Attorney. Two jewelry cases (one manufacturer, one retailer) were referred to the California Office of the Attorney General. Five of the cases are still under investigation and the remaining two cases were closed with no further action. As part of EERP's efforts to educate and protect the public from exposure to lead-containing products, EERP staff tested items at a variety of lead screening events. Using an X-ray Fluorescence device, EERP staff tested children's jewelry, religious jewelry, toys, and even home remedies in community events in Oakland, Fresno, and Pacoima.



DTSC staff screens jewelry for lead

Environmental Justice Initiative

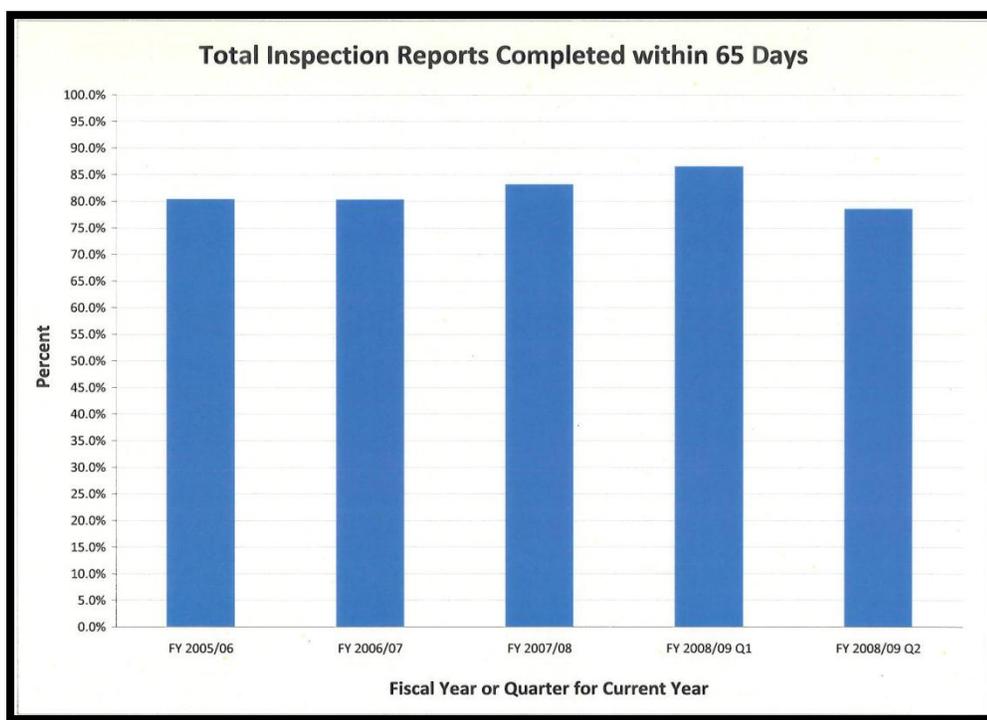
The Environmental Justice (EJ) Initiative begun in mid-2007 continued in 2009 with the addition of work in East Oakland and San Bernardino and Riverside Counties. Work in Fresno, Imperial, and Los Angeles Counties continued with community task forces formed in Imperial and Fresno, and an Interagency Collaborative continuing in Los Angeles County. The application for a US EPA grant to enhance Environmental Justice (EJ) work in Los Angeles was successful. California was one of five states across the country to receive \$160,000 in Grant funding. Monies from the Grant will be used to fund work in the cities of Wilmington and Maywood, California. Los Angeles communities will also benefit from monies coming from a Showcase Communities Grant given to US EPA Region 9. Monies from this grant will fund projects recommended by community leaders that are a direct outcome of DTSC's Environmental Justice Initiative.



Imperial County residents discuss environmental issues during a DTSC- sponsored EJ bus tour.

Performance Measures

DTSC continues to work on development of performance measures for its core programs. The Enforcement Program's performance measures are also under development. As found in DTSC's Strategic Plan, an objective of EERP is to streamline the inspection process. Consequently, DTSC adopted the following Performance Measure: The percentage of inspection reports completed within 65 days. Current data shows DTSC is meeting the 65-day deadline about 80 percent of the time.



Below is a table showing the number of formal enforcement actions taken by DTSC during the past four years:

Formal Enforcement Initiated	Fiscal Year			
	2006	2007	2008	2009
District Attorney/City Attorney Referral	0	0	1	1
Administrative Orders				
Inspections	64	57	30	46
Complaints	16	6	10	22
Total	80	63	40	68
Referrals to Attorney				
General	5	2	0	4
Referrals to Other Agencies	0	1	0	1



DTSC Enforcement Program in action

CAL/EPA UNIFIED HAZARDOUS MATERIALS PROGRAM HIGHLIGHTS

The Secretary of the California Environmental Protection Agency is directly responsible for coordinating the administration of the Unified Hazardous Materials Program “Unified Program.” The 83 Certified Unified Program Agencies (CUPAs), which are generally part of the local Fire Department or Environmental Health Department, carry out the responsibilities of six environmental programs that were previously handled by approximately 1,300 state and local agencies. The goal of the Unified Program is to reduce the impact of hazardous materials on public health and environment by achieving greater statewide and cross-program consistency for the over 140,000 businesses regulated by the CUPAs. CUPAs have authority to enforce regulations, conduct inspections, administer penalties, and hold hearings.

Unified Program Regulated Universe:

Hazardous Waste Generators

CUPAs implement the hazardous waste generator and onsite tiered-treatment program as part of the Unified Program. The hazardous waste generator program prevents releases of hazardous waste by ensuring that those who generate, handle, transport, store and dispose of wastes do so properly. Enforcement actions are taken against those who fail to manage their hazardous wastes appropriately. In addition, the program also promotes pollution prevention and reuse and recycling of hazardous materials and waste. Local CUPAs conducted 40,325 hazardous waste site inspections in 2009.

California Accidental Release Prevention Program (Cal/ARP)

CUPAs determine and enforce at those facilities which are required by law to prepare and submit a Risk Management Plan (RMP) based on the significant likelihood of regulated substance accident risk. The risk management program requirements go beyond emergency planning and reporting; they require a holistic approach to accident prevention and mitigation. Elements required under the risk management program regulations vary for individual stationary sources, but generally include a hazard assessment, a prevention program, an emergency response program, and a management system. The compliance rates for inspections at Cal/ARP facilities have risen from 20% for those inspected in 2003 to approximately 63% at inspected facilities in 2009.

Underground Storage Tanks

CUPAs oversee and regulate state and federal regulations that set operating requirements and technical standards for tank design and installation, leak detection, spill and overfill control, corrective action, and tank closure. The CUPAs underground storage tank program ensures that the tank contents (petroleum or other hazardous substances) do not seep into the soil and contaminate California’s groundwater and waterways which are a source of drinking water.



Above Ground Storage Tanks

In 2007, the California Legislature transferred the responsibility for the Above Ground Storage Tank Inspection Program to the CUPAs. In 2009, the Unified Program used grant monies to conduct a series of aboveground storage tank inspector courses that provided 16 workshops statewide for over 600 CUPA inspectors in order to prepare them to implement the program.

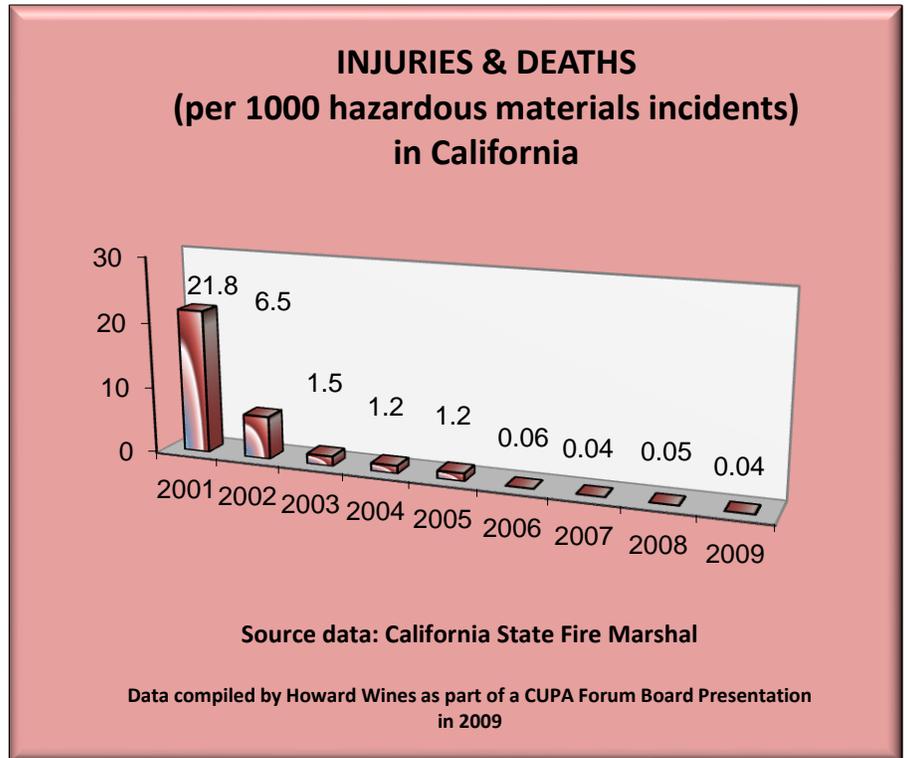
Electronic Reporting

Assembly Bill 2286 which requires Unified Program electronic reporting was entered into law in 2008. It requires the electronic submittal of Unified Program data from regulated businesses to CUPAs and the state by 2013. The web based reporting programs will allow the regulated community to submit data directly to their local Unified Program Agency (UPA) who will share it with Cal/EPA. Alternatively, multi-jurisdictional businesses will be able to exchange data with Cal/EPA who will in turn share the data with the UPA. Cal/EPA will serve as a virtual data warehouse and have the ability to exchange data with US EPA and create a public access website. The California Environmental Reporting System (CERS), was launched in September 2009. Selected UPAs and businesses began using it as the first step of a three-year transition plan to ensure all UPAs and regulated businesses meet the reporting requirements of AB 2286.

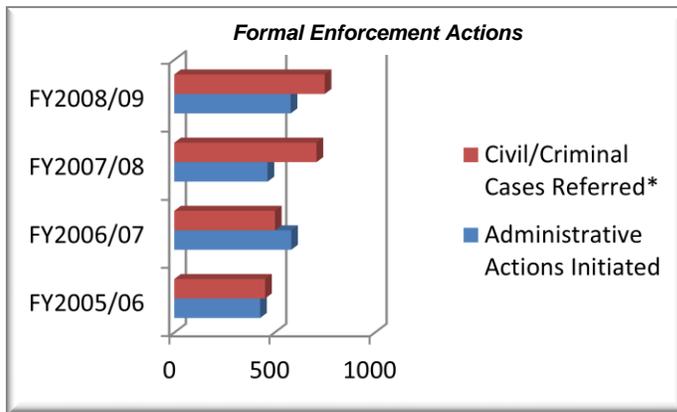
Hazardous Materials Release Response Plans and Inventories (Business Plans and California Fire Code)

CUPAs collect and annually update chemical and site information from over 119,000 businesses. The information collected is utilized by local, state and federal emergency response agencies in responding to hazardous materials spills and natural disasters. Its purpose is to prevent or minimize the damage to public health and safety and the environment from a release or threatened release of hazardous materials and to satisfy community right-to-know laws. In 2009, CUPAs continued to conduct extensive outreach to agricultural businesses to obtain chemical information from growers who had not previously been reporting under the business plan program.

The state of California began to aggressively regulate the storage and handling of hazardous materials in 1986. In 1994 the creation of the Unified Hazardous Material Program was mandated with most of these new programs beginning operation by 1998. It is very likely the development of the Unified Hazardous Materials Program contributed significantly to the decrease in deaths and injuries reflected in the graph.



Enforcement



*Beginning Fiscal Year (FY) 2007/08, Criminal and Civil cases referred are submitted in combination as part of a recently adopted reporting form

In state fiscal year 2008/2009 (July 1, 2008 thru June 30, 2009), the CUPAs initiated a total of 580 administrative enforcement orders (AEOs) against regulated entities or individuals that were in violation of environmental laws. This is significant because the statutory law that provides authority to CUPAs for taking such action was enacted only five years ago.

Each year through 2008 has seen growth in the use of this enforcement tool, from less than 200 actions the first year to 580 actions in 2009. The total amount of fines collected has also increased: Total fines collected in fiscal year 2009 rose to \$9.2 million, an increase of over \$1.6 million from the \$7.6 million that was collected in 2008.

Highlighted 2009 Enforcement Cases

- K-Mart Corporation (K-Mart)** - A civil law enforcement action was filed and settled against the Kmart Corporation, who own and operate over 100 retail stores in California. Investigations conducted by Riverside, Ventura, and San Joaquin County District Attorneys and by the Ventura County Environmental Health Division determined that hazardous wastes had been disposed of in storm drains and compactors.

The complaint alleged that Kmart stored, managed, transported and disposed of hazardous waste items at and from its California stores in violation of California laws. Without admitting or denying liability, Kmart agreed to the final judgment settling the complaint and imposing a permanent injunction prohibiting future violations of California's environmental protection laws. Under the final judgment, Kmart also agreed to commit funds totaling \$8,650,000 (http://da.countyofventura.org/09-047_000.htm).

- **U-Haul Company of CA (U-Haul)**– A civil law enforcement action was settled against U-Haul, who own and operate 179 regulated facilities across the state. U-Haul's hazardous materials practices first came under scrutiny in November 2004 following an explosion and two-alarm fire at a Santa Rosa facility, which resulted in flash burns to an employee. The emergency response team that arrived on the scene had difficulty assessing the situation due to the lack of information about stored hazardous materials. The facility had no site map indicating where hazardous materials were stored as required by law, and employees had failed to properly label flammable materials including gasoline. The building was damaged in the fire and ultimately closed.

Subsequently, the CA Attorney General's Office, joined by the District Attorneys of Sonoma, Alameda, Sacramento, San Joaquin, Solano, San Francisco, Santa Clara and Riverside, launched a 2-year statewide investigation into U-Hauls' handling of hazardous materials and training of employees. The investigation revealed violations at almost all of U-Haul's California regulated facilities. Despite being repeatedly notified of the violations, U-Haul did not address them. A suit was filed in 2006 seeking penalties and a permanent injunction to enforce compliance with hazardous materials and hazardous waste laws. The agreement reached in 2009 resolved the lawsuit and required U-Haul to: complete and maintain statutorily mandated hazardous materials business plans and emergency response plans for regulated facilities; Train its employees how to properly handle hazardous materials; Retain an environmental coordinator who will oversee, monitor, and submit annual reports on the companies compliance; Inspect hazardous waste storage areas at regulated facilities on a weekly basis; Properly transport hazardous waste; and pay \$2,000,000 in costs and penalties (http://ag.ca.gov/newsalerts/print_release.php?id1787).

Program Performance Outputs and Outcomes

In 2009, the Unified Program Administration and Advisory Group worked on developing a set of outcome measures for the Unified Program. Since there are no outcome metrics defined across the Unified Program, this limits the state's ability to only measuring outputs, such as the number of facility inspections and the types of violations, rather than compliance improvement across the Unified Program. In February 2009, a process was formalized that compares the number of businesses *without* violations from year to year, using the percentage as an outcome measurement. In 2010, Cal/EPA will continue meetings of its' performance measures team/steering committee as an effort to develop additional enforcement program outcome measures that relate program activities of Cal/EPA, state agencies, and local partner's progress in achievement of program strategic plans.

FY 2008/2009 Compliance Percentage

Sector, facility type, or program focus	Total number of regulated facilities	Number of regulated facilities inspected	Number of inspected facilities with no violations	% of total facilities in compliance*	% of facilities that returned to compliance within 90 days ***
HMRRP- Hazardous Materials Release and Response Plan	119533	55351	37209	67	55
CalARP- California Accidental Release Plan	2337	1097	695	63	46
UST- Underground Storage Tank	15104	13447	5121	38	62
AST- Aboveground Storage Tank	10807	2911	2574	88	30
HWG- Hazardous Waste Generator	84382	38608	18931	49	60
LQG- Large Quantity Generator	1963	823	358	43	45
HWT- Hazardous Waste Treatment	1769	728	404	55	40
HHW- Household Hazardous Waste	278	166	95	57	24

*This percentage assumes that the compliance rate is the equivalent for the total number of regulated facilities as it is for facilities inspected during the reporting year.

***This percentage reflects only those facilities where a Class I or Class II (non-minor) violation was noted during a routine inspection.

Outreach Efforts to Local Agencies, Businesses, and Community

CUPAs post environmental compliance newsletters that highlight environmental requirements and opportunities relating to pollution prevention to regulated businesses. In addition, CUPAs conduct site visits to help regulated businesses plan compliance strategies and pollution prevention opportunities at their facility. CUPAs provide vital assistance to local business owners/operators in completing their permits, Hazardous Materials Business Plans or renewal documents. Examples include:

- The Kern County CUPA conducts several public workshops each year to assist the businesses they regulate on achieving compliance. The goal is to educate businesses on what the requirements are for compliance. The CUPA has found that many businesses with violations (especially record keeping and other types of paperwork) are unaware of what is required of them. By providing them with the information they need to comply, compliance is achieved with minimal enforcement and a good relationship is established between the agency and the regulated businesses. Due to the outreach that the CUPAs conduct, many facilities that had previously not been correcting violations, updating equipment, or removing unused USTs have since been brought into compliance. Compliance was achieved by either providing better information to the business owner, persistent calls and visits by staff or, as a last resort, by enforcement. Public outreach and training activities include:
 - Up-to-the-minute information on Face Book or Twitter on events, emergencies and workshops available to the public.
 - Internet access to most forms and guidance documents
 - Monthly workshops to assist business with applications, questions with one-on-one assistance by staff. These workshops are provided free to the public.
 - Periodic workshops/training held in the Bakersfield area and in outlying areas of the county. These workshops include sessions for UST compliance issues, and business plan requirements.
 - CalARP training including: Management of Change, PSM/Compliance Audit, RMP Oil and Gas industry specific training, sponsored with industry ammonia training by ASTI and met individually with many of the companies in the desert area to cover compliance issues.
 - CalARP staff is involved with development of the annual Chemical Safety Day in Fresno. Primary focus is on safe use of ammonia. There were over 500 attendees the first year and expect an even larger attendance this coming year.
 - Daily public assistance (phone duty). Each CUPA staff member is on a rotation for phone duty, where their time is dedicated for the entire day assigned to walk-ins, phone calls or any other public assistance that might be required.

- The Orange County CUPA provides at least one business assistance workshop for its regulated community every year. In 2009, two workshops were conducted: an Electronic Reporting Workshop for the City of Brea regarding hazardous materials disclosure and also an Underground Storage Tank Workshop. The CUPA also provides annual presentations to the California Waste Association and bimonthly updates at the Industrial Environmental Coalition of Orange County. In addition, the CUPA has a daily duty officer assigned to answer inquiries from the regulated community and general public.

- The City of Roseville Fire Department CUPA maintains an excellent outreach program for the public and regulated community. Examples of this program are included below:
 - **Discretionary Assistance-** The Roseville Fire Department Standard Operating Procedure allows engine company captains or battalion chiefs to charge up to \$50.00 on a department credit card to provide for a critical need or to purchase merchandise to assist in rendering an essential service for and at no cost to the citizen. In one recent situation, the Life Safety/Hazardous Materials Officer was informed of a situation in which an 80 year old widow who was unable to drive had a variety of chemicals in her garage that needed proper disposal. After ascertaining that she had no family members or neighbors that could use the chemicals or help address the disposal need, he used the department's utility truck to haul them to the Western Placer Waste Management Authority for proper disposal.

 - **Educational Materials-** The CUPA provides outstanding outreach and educational materials to the public and its regulated community. In addition to the standard Unified Program Consolidated Forms, fact sheets and guidance documents are available on the CUPA's Web site. The CUPA also provides, on its Web site, local guidance on the spray application of flammable finishes, guidelines on storage of incompatible materials, hazardous warning signage (based on National Fire Protection Association [NFPA] requirements). Additionally, the CUPA also sent two-page outreach letters to its businesses on November 5, 2009, regarding requirements of the Aboveground Petroleum Storage Act (APSA) program.

 - **Quiz-** The CUPA seeks to improve relationships with all customers through education. One way to relieve stress and educate the owner or operator of a site upon introduction, is to provide a short five-question quiz. The quiz provides a light-hearted exercise for the customer to focus conversation in the here and now. It often results in laughter and greater open-mindedness for suggested improvement during a stressful time for customers.

American Public Works Association Project of the Year

An explosion and fire occurred in May, 2009 at an industrial building in the City of Salinas due to an unpermitted business experimenting with a new paint emulsifier that resulted in a major explosion. The fire department's response to contain the fire resulted in hazardous materials flowing from the property onto the street and into the nearby storm drain that ultimately discharged into Reclamation Ditch, which is a major waterway that collects runoff from Salinas and Salinas Valley. The effected stretch was 4 miles long with approximately 5 million gallons of contaminated product (water and toxic materials).



The response to the Dayton Water incident was a collaboration of Monterey County, the City of Salinas, numerous state and federal agencies, and several private contractors and consultants acting together to ensure contaminated water did not end up in the Monterey Bay National Marine Sanctuary. During the course of the clean-up, over 10 million gallons of water was treated to remove contaminants.



Monterey County, the City of Salinas, Mark Thomas & Company, and Rain for Rent will receive an American Public Works Association (APWA) Public Works Project of the Year national award for the handling of this 2009 incident.

These awards are presented annually to promote excellence in the management and administration of public works projects, recognizing the alliance between the managing agency, contractors, consultants and their cooperative achievements.



Pictures and information courtesy of the Monterey County Department of Health, Hazardous Materials Management Services

DEPARTMENT OF PESTICIDE REGULATION HIGHLIGHTS

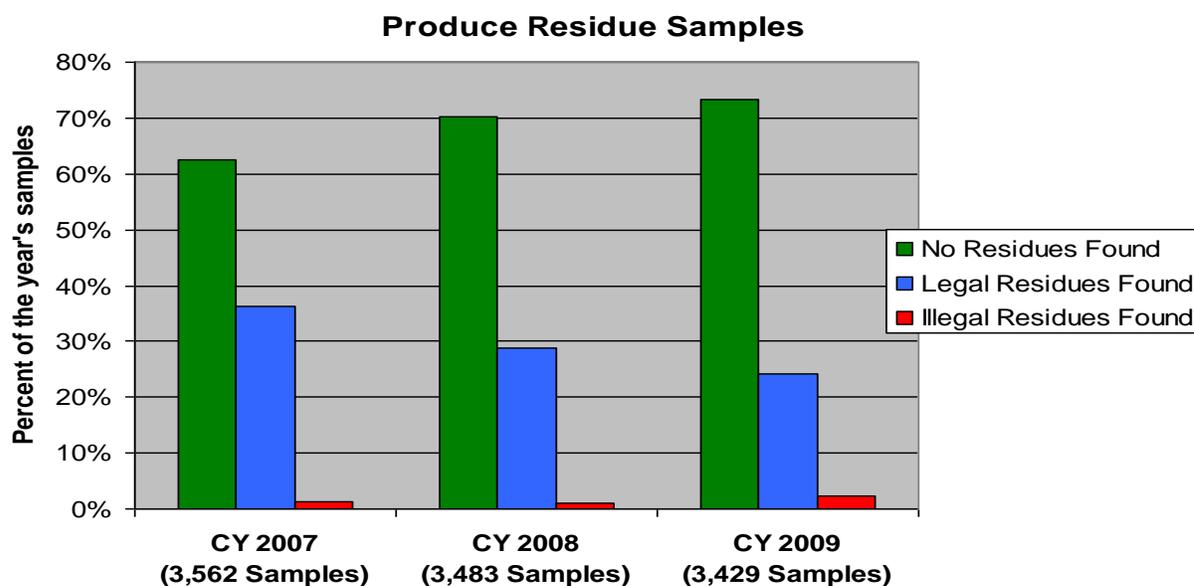
The California Department of Pesticide Regulation's (DPR's) mission is to protect human health and the environment by regulating pesticide sales and use and by fostering reduced-risk pest management. For more information about our programs please visit our website at: <http://www.cdpr.ca.gov/>. Since its creation in 1991, DPR has made significant strides to:

- Enhance worker and environmental protections.
- Strengthen uniformity of enforcement in the field while maintaining local discretion and flexibility.
- Streamline the regulatory process to encourage registration of safer materials.
- Encourage the development and use of reduced-risk pest management practices.
- Use existing and new statutory requirements to ensure the completion of an up-to-date toxicological database for all pesticide active ingredients.
- Strengthen exam and certification processes for commercial pesticide applicators to ensure they are knowledgeable about safe pesticide use.

Food Safety

DPR collected more than 3,400 produce samples for residue analysis in 2009. Of the total, 73.4% had no pesticide residues detected and 24.2% had residues within legal tolerances. The remaining 2.4% had illegal residues. When illegal residues are found, DPR responds immediately to prevent consumption by the public. If the illegal produce is still in the channels of trade, DPR removes it from sale.

This graph indicates a general increase in the proportion of produce in California that has no detectable pesticide residues.



Source of Data: DPR's Pesticide Residue Database

As reported last year, DPR contacted the Guatemalan exporters' association and United Nations officials to request action on a series of problems with illegal residues in snow peas from Guatemala. DPR's 2009 monitoring indicates substantial progress. Last year, the two-year combined data showed 21.7% of Guatemalan snow peas with illegal residues. This year, that has dropped to only 4.3%. A portion of that decline was likely due to DPR's outreach.

In recent years, Mexican fruits and vegetables have accounted for nearly half of all illegal residues detected by DPR. This is partly due to the high volume of produce imported from Mexico, but also because a relatively high proportion of Mexican imports carries illegal residues. In 2009, approximately 3.5 percent of the 864 samples of Mexican produce had illegal residues. Most notably, in 2009 DPR detected substantial residues of acutely-toxic insecticides in both papayas and long beans from Mexico. DPR is now exploring outreach options to address these problems.

Agricultural Inspections

California's county agricultural commissioners together have more than 225 biologists in the field to enforce pesticide laws. No other state has a similar system of local enforcement. Counties conducted more than 13,000 agricultural inspections in 2009 to assess compliance with state laws and regulations related to field worker safety, pesticide use applications, mixing and loading pesticides, and commodity and field fumigation. Nearly 220,000 criteria were assessed with a compliance rate of 97.8%.



Structural and Landscape Maintenance Inspections

California's pesticide enforcement programs oversee more than just production agriculture. It also ensures that licensees are using pesticides safely in and around the home and surrounding landscape.



Slightly over 4,500 inspections were performed that evaluated approximately 101,000 criteria. Ten percent of the inspections in 2009 revealed one or more violations with an overall compliance rate of 99.3%.

Monitoring the Marketplace

DPR routinely conducts inspections at hardware stores, home and garden stores, retail and wholesale nurseries, landscape material suppliers, pet suppliers, restaurant and hospital suppliers, and pool and spa centers to check that pesticide products being offered for sale are



registered in California. This is to ensure that the products have been evaluated and will not cause health or environmental problems.

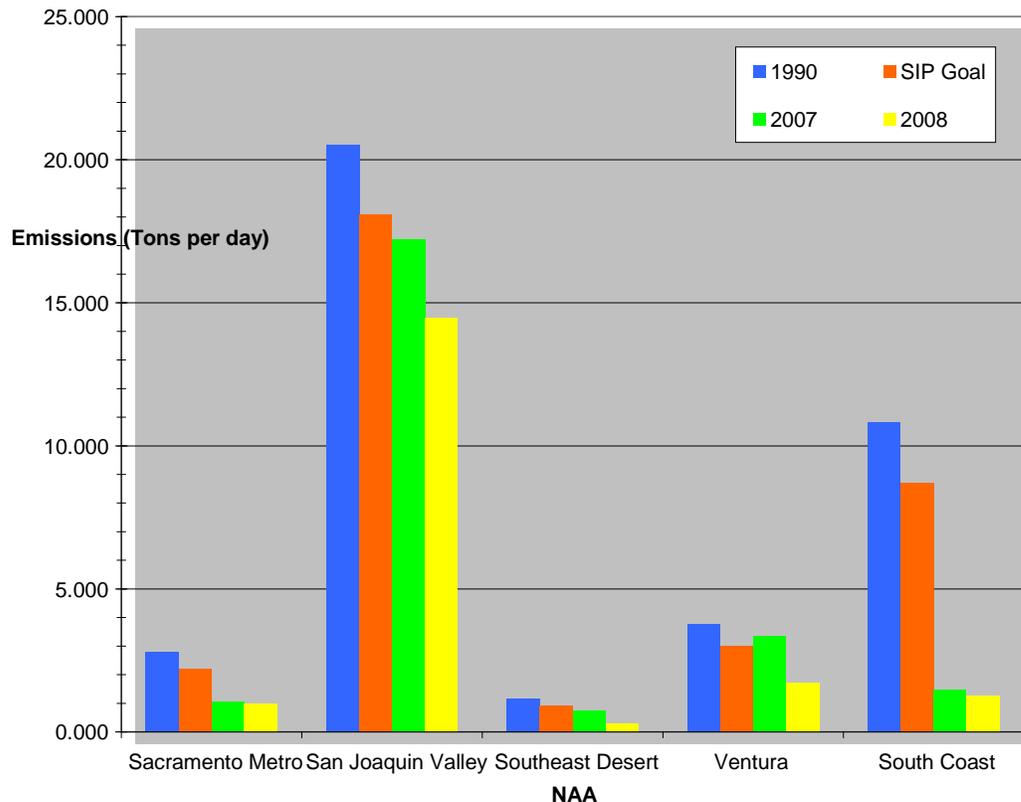
In 2009, DPR conducted about 400 inspections and 80 audits. Close to 500 unregistered and misbranded pesticide products were identified as a result of these investigations and were removed from the marketplace. DPR completed legal proceedings on 99 cases, which resulted in over \$1.1 million in penalties to violators.

Improving Air Quality

DPR implemented stringent volatile organic compound (VOC) fumigant emission controls in areas of the state facing air quality challenges and capped pesticide emissions in Ventura County beginning in January 2008 to meet State Implementation Plan (SIP) goals under the Federal Clean Air Act.

Under DPR's regulations, the Department evaluates fumigant usage from the previous year, prepares an annual report, and uses the report findings to set goals for the current year. In early 2009, DPR evaluated the results of the various controls and limits on the use of fumigants in 2008 and set 2009 standards for the five non-attainment areas based on their analyses of the data. In summary, reductions in 2008 VOC emissions were realized in all five NAAs and in all cases were well below the SIP goals.

- Sacramento Metro NAA (5,602 square miles): Pesticide VOC emissions in 2008 were 64 percent lower than the 1990 base year and remain well in compliance with the SIP goal and the VOC regulation benchmark. In 2008, 94 percent of emissions were derived from nonfumigants.
- San Joaquin Valley NAA (27,466 square miles): Pesticide VOC emissions in 2008 were 30 percent lower than the 1990 base year and comply with the SIP goal and VOC regulation benchmark. Approximately three-quarters of pesticide emissions are derived from nonfumigants.
- Southeast Desert NAA (10,604 square miles): Pesticide VOC emissions in 2008 were 75 percent lower than the 1990 base year and comply with the SIP goal and VOC regulation benchmark. Emissions from fumigants account for less than one half of the total.
- Ventura NAA (1,842 square miles): The SIP goal and VOC regulation benchmark is phased in over several years for this NAA. VOC emissions have decreased and meet the SIP goal for 2008 as well as the final goal to be met beginning in 2012. Pesticide VOC emissions in 2008 were 54 percent lower than the 1990 base year. More than 70 percent of emissions are derived from fumigants. The cap on pesticide emissions continued in 2009.
- South Coast NAA (6,405 square miles): VOC emissions decreased and remain well below the emission targets. Pesticide VOC emissions in 2008 were 88 percent lower than the 1990 base year.

May - October (Ozone season) adjusted pesticide VOC emissions and goals

Source of Data: Annual Report on Volatile Organic Compound Emissions from Pesticides: Emissions for 1990 – 2008

Implementing integrated pest management (IPM) practices in schools and child day care facilities

Regional school IPM training workshops for school district employees in 2009 brought DPR's total outreach in this arena up to 739 public school districts. Since the 2000 passage of the Healthy Schools Act, personnel from nearly 75% of California's public school districts have been trained, representing about 4.5 million students.

These workshops enable school district IPM coordinators to go back into their districts to train school maintenance and operations staff, including groundskeepers and custodians, on reduced-risk strategies to control cockroaches, ants, rodents, weeds, and other pests.

DPR adapted its school IPM pest fact sheets for use in child-care settings, distributed child-care oriented IPM publications in English and Spanish to community care licensing offices, and wrote an article on the Health Schools Act for the California Childcare Health Program newsletter.

Outreach efforts to farm worker communities and families

State and county compliance activities include participation in over 30 community meetings, health conferences, and other events to promote pesticide safety to over 50,000 people; radio and television interviews regarding pesticide safety on Spanish language stations to a viewership estimated at 22,000; training county inspectors on techniques to interact on a more positive basis with immigrant workers (introduction to the Spanish language, Hispanic culture, and social behavior).

Continuing Education

State and county pesticide officials gave more than 1,450 presentations and workshops on pesticide laws and regulations to audiences totaling an estimated 45,000 people in 2009.

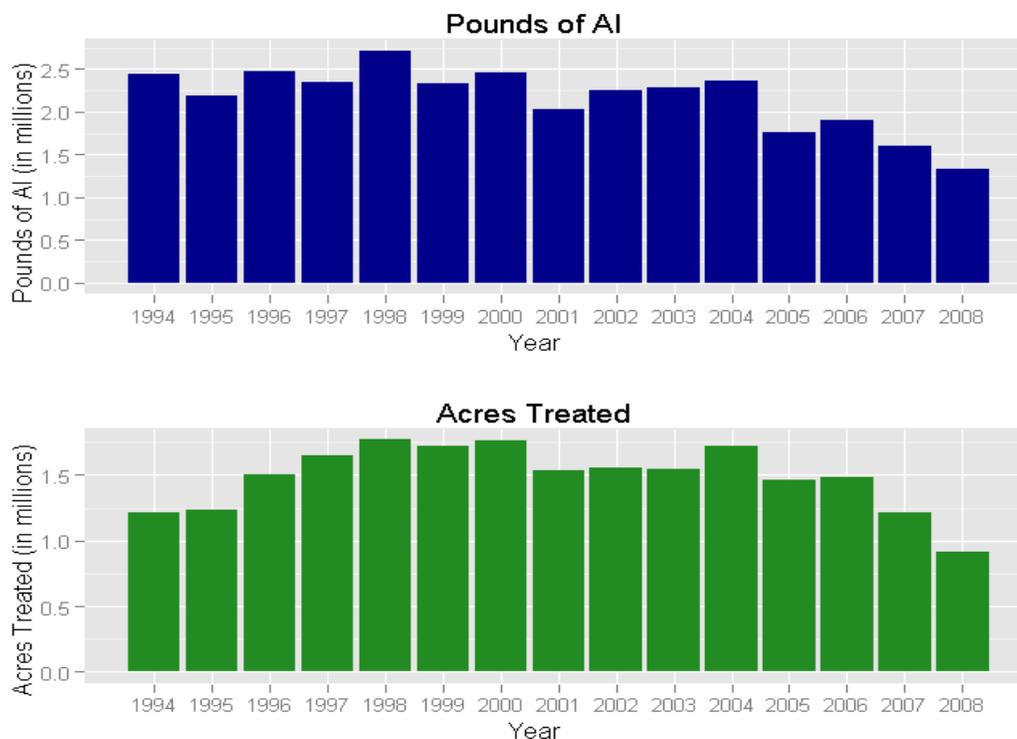


Use trends of Pesticides on DPR's Groundwater Protection List

DPR's system to collect and track pesticide use is recognized as the most comprehensive in the world. With the exception of home and most industrial and institutional uses, all pesticide applications have been reported to DPR since 1990. DPR uses its pesticide use reports to track use trends for pesticides on its groundwater protection list, as well as other categories of pesticides.

In 2004, DPR implemented the ground water protection areas (GWPAs) and went from approximately 300,000 acres under regulation to approximately 2.5 million acres. As can be seen in the charts below, the use of regulated GWPA chemicals has decreased since the program was adopted in 2004. DPR has undertaken an analysis of the pesticide use data to determine what impacts the regulatory restrictions have had not only on the use of these chemicals, but if use of other less toxic chemicals has changed during this time period.

Use trends of pesticides on DPR's groundwater protection list. These pesticides are the active ingredients listed in the California Code of Regulations, Title 3, Division 6, Chapter 4, Subchapter 1, Article 1, Section 6800(a). Reported pounds of active ingredient (AI) applied include both agricultural and reportable non-agricultural applications. The reported cumulative acres treated include primarily agricultural applications.



Source of Data: DPR's Summary of Pesticide Use Data - 2008

Summary of DPR & CAC Enforcement Program - Outcomes	2007	2008	2009
Administrative Enforcement Actions	0	0	0
CAC Civil Penalties	0	0	0
Number of Cases Referred to District Attorney	2	2	3
Number of Closed Cases	1,113	845	713
Number of Violations in Closed Cases	1,617	1,196	1,007
Penalties Assessed	\$613,800	\$437,400	\$328,900
DPR Penalties for Unregistered & Misbranded Products			
Number of Cases	117	94	91
Number of Unregistered Products in Case	535	583	259
Settlements			
Penalties Collected	\$1,776,293	\$1,414,191	\$1,024,131

INTEGRATED WASTE MANAGEMENT BOARD HIGHLIGHTS

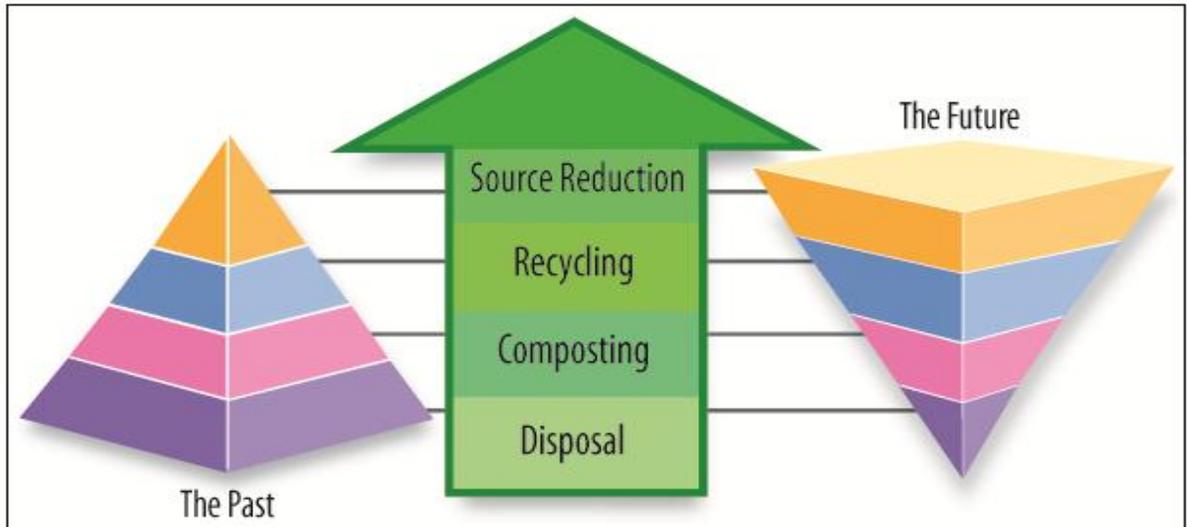
Legislation effective on January 1, 2010 eliminated the Integrated Waste Management Board (IWMB) and Board Member structure under the California Environmental Protection Agency (CalEPA) and moved all existing solid waste responsibilities and functions to the Department of Resources Recycling and Recovery (CalRecycle) under the Natural Resources Agency. This report refers to the IWMB for activities in 2009, and refers to CalRecycle for 2010 and future activities.

The IWMB has a dual mission to protect public health, safety and the environment from the negative impact of solid waste and to reduce solid waste disposal by promoting recycling, composting and waste prevention programs.



Californians have made “reduce, reuse, and recycle” part of their daily lives and are moving towards zero waste to protect and conserve resources for the future.

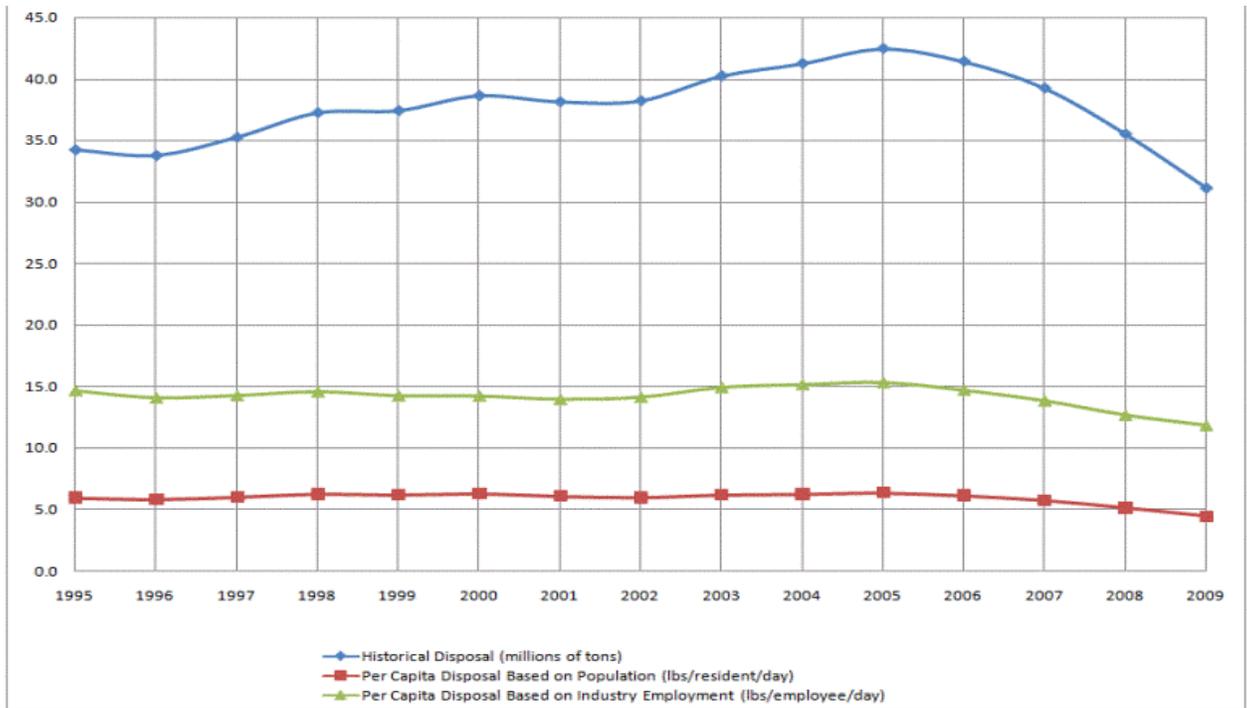
Technical assistance and training are critical to help the California's waste management industry, millions of businesses, thousands of schools and hundreds of state agencies and local governments to comply with waste management laws. When compliance is not achieved, the IWMB emphasizes enforcement.



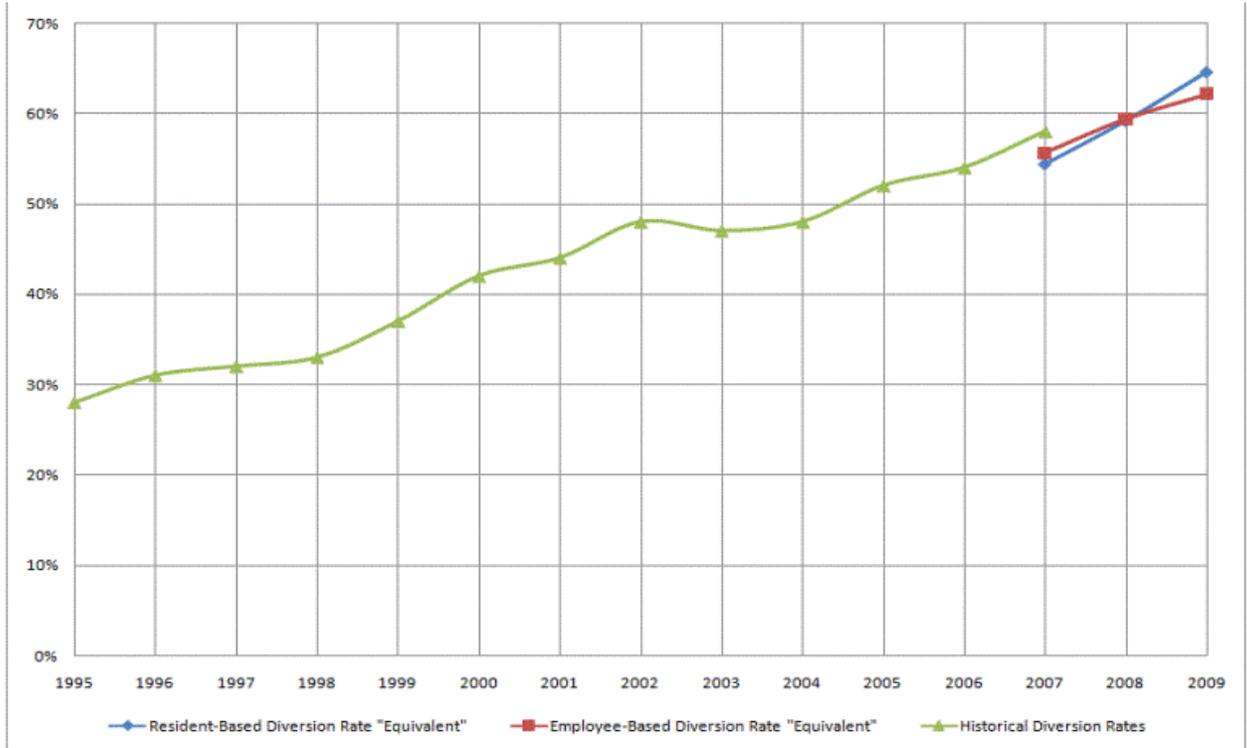
Statewide diversion increased to 59% in 2008, the latest year for which data is available. This exceeds the 50% diversion requirement. Changes in the law now focus on achieving a disposal target, rather than measuring diversion.



California's Statewide Per Resident, Per Employee and Total Disposal Since 1995



California's Estimated Statewide Diversion Rates Since 1995



This graph shows historical statewide estimated diversion rates for California. 1995 through 2007 diversion rates are calculated using the [Adjustment Method](#) (old system). 2007 and later diversion rate equivalents are from the new [Per Capita Disposal and Goal Measurement system](#).

California's local governments have aggressively implemented almost 16,000 programs to help all Californians divert waste from landfills.

Only 11 of 414 local governments were under IWMB scrutiny for poor performance and of these only 1 received an enforcement fine. Recent changes in the law will change the IWMB's focus in reviewing local government performance to implementing diversion programs to meet a disposal target. The next reviews of local government progress will be in either 2010 or 2012.

Solid waste processing and disposal must be handled safely to protect public health, safety and the environment. IWMB oversees local government enforcement agencies that regulate solid waste facilities such as landfills and transfer stations, and lists those facilities that are chronic violators. IWMB provides compliance training and assistance to operators. In 2009 75% of the facilities that were notified they would be listed as having a significant violation came into compliance before they were listed. The 2006-2009 review of local enforcement agency performance showed a 64% increase in local enforcement agencies fulfilling all their responsibilities and a 50% decrease in local enforcement agencies on corrective action plans. Only 3 of the 55 local enforcement agencies are still on a corrective action plan and each is meeting the terms of its plan.



Illegal waste tire disposal poses fire risks and public health risks including providing breeding ground for mosquitoes that carry the West Nile virus. IWMB tracks reuse, recycling or disposal of waste tires through a manifest system and together with local enforcement partners inspects tire dealers, haulers and waste tire facilities. After extensive industry

compliance training and technical assistance IWMB adopted a zero tolerance compliance policy and a streamlined penalty process. Implementation of these programs resulted in a five-fold increase in tire hauler and tire manifest enforcement actions in 2009 since the programs were implemented.



Year	Solid Waste Facility Enforcement Action Type		
	Notice of Intent to List on Inventory	Listed on Inventory*	Enforcement Orders*
2000	21	6	54
2001	22	6	43
2002	40	13	48
2003	28	9	52
2004	34	11	51
2005	51	11	41
2006	28	9	51
2007	14	8	33
2008	22	6	17
2009	23	6	12

* Significant Violation

Table 1. Solid Waste Facility Enforcement Actions, 2000 to 2008



Mountain View Sanitation District Flushing Ponds (Treated Wastewater)

STATE WATER RESOURCES CONTROL BOARD HIGHLIGHTS

The State Water Resources Control Board and its nine Regional Water Quality Control Boards (Water Boards) protect the waters of the State by ensuring compliance with clean water laws, issuing permits and by taking enforcement actions against illegal discharges of waste in surface and ground waters. The Water Boards also regulate and enforce California's water rights.

Calendar year 2009 was a significant year for the Water Boards' enforcement programs. The State Water Board adopted two important policies: the updated Water Quality Enforcement Policy and the Statewide Policy on Supplemental Environmental Projects (SEPs). These policies guide quality enforcement in California, recognize the needs of small communities, establish a methodology for assessing penalties, and outline the use of penalty monies for local environmental improvements. Water Boards assessed \$20 million in penalties in 2009. The Water Boards have an active enforcement program, and work in collaboration with the rest of the enforcement programs at the California Environmental Protection Agency and with local regulatory and law enforcement agencies.



Sacramento River, Sacramento County

2009 Water Quality Enforcement Highlights¹

	2009	FY 2007-2008	FY 2006-2007
Regional Board enforcement staff:	62	64	78
Regional Board compliance staff:	82	94	96
State Board enforcement staff ² :	23	18	15
Number of regulated facilities:	39,704	39,692	41,156
Inspections conducted:	6,129	3,763	3,839
Violations documented:	12,378	15,177	9,801
Facilities with one or more violations:	2,733	2,970	2,527
Informal enforcement actions taken:	3,001	2,706	1,915
Formal enforcement actions taken:	303	283	180
Administrative Civil Liability actions:	174	106	107
Penalties assessed:	\$20 million	<i>\$19 million</i>	<i>\$12 million</i>
Violations receiving enforcement:	6,668	8,643	5,485

The Water Boards are committed to meeting internal and external data management needs. During 2009, the Water Boards launched improvements to its water quality database, known

¹ This table only includes Water Quality related information.

² Does not include staff from the Division of Water Quality

as California Integrated Water Quality System (CIWQS). The enhancements improve public access to water quality and enforcement data, increasing accountability and transparency. Additionally, the Water Boards produce 7 enforcement reports a year, including the “Baseline Enforcement Report” and the “Annual Enforcement Report.” These reports and other information regarding the Water Boards is available at the public website at www.waterboards.ca.gov.

Program Statistics

This report, covering calendar year 2009, highlights the resources available for core regulatory program enforcement and the enforcement actions achieved with those resources.

The five core regulatory programs are:

- National Pollutant Discharge Elimination System (NPDES), Wastewater
- National Pollutant Discharge Elimination System (NPDES), Stormwater
- Waste Discharge Requirements (WDR)
- Land Disposal
- Wetlands and 401 Certification

General information on these programs is shown below, including actions taken by the State Water Board’s Office of Enforcement and the Division of Water Rights.

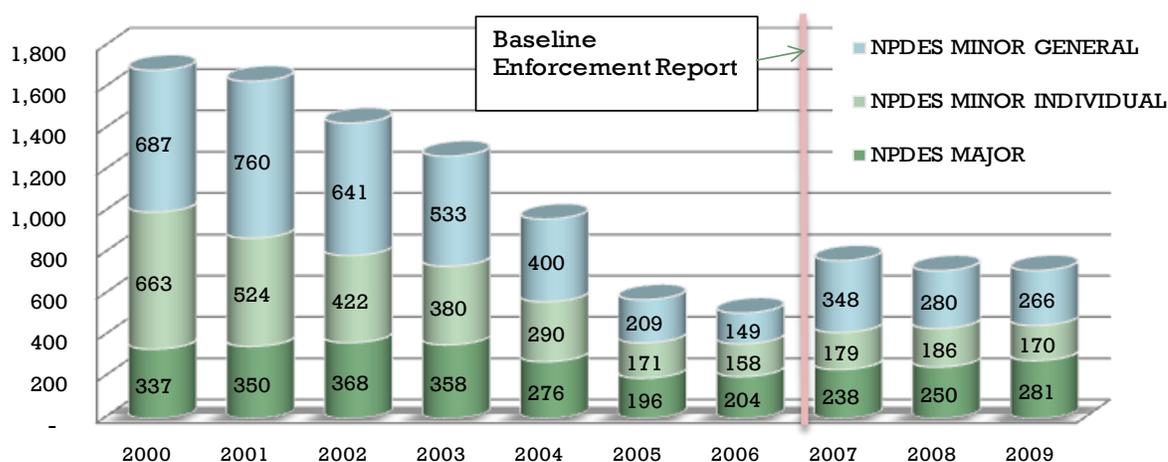
NPDES Wastewater Program

Discharges from specific point sources to surface waters (rivers, lakes, oceans, wetlands, etc.), such as municipal waste treatment plants, food processors, etc.

- Facilities regulated: 1896
- Inspections conducted: 717
- Facilities with one or more violations: 530
- Violations documented: 5449
- Percentage of violations with enforcement actions: 50%
- Enforcement actions issued: 532

NPDES Wastewater Program Inspection Trends 2000-2009

Inspections by Year



NPDES Stormwater Program

Stormwater discharges generated by runoff from land and impervious areas such as paved streets, parking lots, industrial and construction sites during rainfall events.

- Facilities regulated: 24,374
- Inspections conducted: 3510
- Facilities with one or more violations: 1230
- Violations documented: 1512
- Percentage of violations with enforcement actions: 93%
- Enforcement actions issued: 1836

Waste Discharge Requirements Program

Discharges of wastewater from point sources to land and groundwater, waste generated from confined animal facilities and all other pollution sources that can affect water quality not covered by other programs.

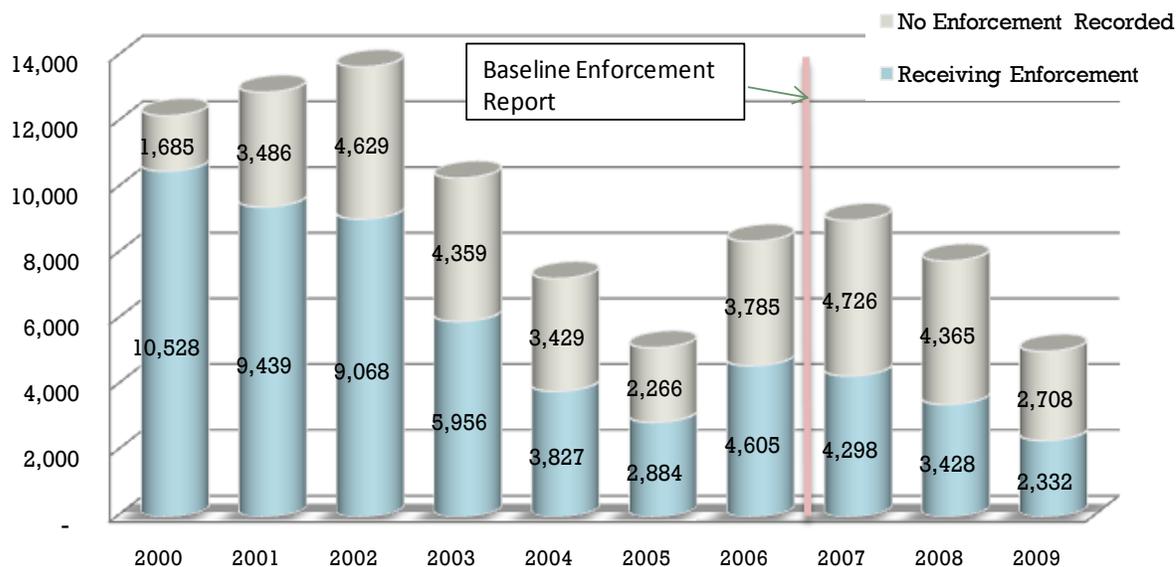
- Facilities regulated: 6640
- Inspections conducted: 1069
- Facilities with one or more violations: 822
- Violations documented: 5040
- Percent of violations with enforcement actions: 46%
- Enforcement actions issued: 770



Stormwater discharge, Alameda County

WDR Program, Violations Trends

Violations by Year



Land Disposal Program

Discharges of waste to land that need containment in order to protect water quality, including landfills, waste ponds, waste piles, and land treatment units.

- Facilities regulated: 782
- Inspections conducted: 577
- Facilities with one or more violations: 118
- Violations documented: 231
- Percentage of violations with enforcement actions: 46%
- Enforcement actions issued: 107

401 Certification*/Wetlands Program

Impacts from dredging and disposal of sediments, filling of wetlands or waters, and any other modification of a water body.

- Facilities regulated: 4859
- Inspections conducted: 219
- Facilities with one or more violations: 33
- Violations documented: 74
- Percentage of violations with enforcement actions: 59%
- Enforcement actions issued: 51

Office of Enforcement

The Office of Enforcement at the State Water Board provides coordination and oversight of Regional Water Board enforcement activities, through policy adoption, training and investigative assistance. The Office of Enforcement also takes independent enforcement actions where authorized.

- Cases investigated: 53
- Cases referred to District Attorney: 2
- Enforcement actions issued: 19
- Penalties assessed: \$5,055,000

Note: Data represents activity from July 2008 – December 2009



Typical activated sludge basin at a wastewater treatment plant.

Water Rights

Allocates water rights through a system of permits, licenses and registrations that grant individuals and others the right to beneficially use reasonable amounts of water. Water rights permits help to protect the environment from impacts that occur as a result of water diversions and include conditions to protect other water users and the environment.

- Facilities regulated: 24,151
- Inspections conducted: 144
- Violations documented: 9255

*Under federal Clean Water Act (CWA) **section 401**, every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification (Certification) that the proposed activity will comply with state water quality standards. Most Certifications are issued in connection with U.S. Army Corps of Engineers (Corps) CWA section 401 permits for dredge and fill discharges.

- Percentage of violations with enforcement actions: 6%
- Enforcement actions issued: 542
- Cases closed: 407
- Penalties assessed: \$33,980

Performance Measures

With the adoption of the Strategic Plan Update: 2008-2012, the Water Boards continued the transition to becoming performance-based organizations where clear and measurable goals, objectives, and targets for improved performance are established and reported. Goal 5 of the Strategic Plan establishes that the Water Boards will improve transparency and accountability by ensuring that our goals and actions are clear and accessible; by demonstrating and explaining results achieved; and by enhancing and improving accessibility to data and information. The Annual Performance Report is part of the Water Boards' efforts toward

developing as performance-based organizations. The Performance Report is available at: http://www.waterboards.ca.gov/about_us/performance_report/performance_based.shtml

Categories of Performance Measures for Enforcement

Measure Name	Measure Description
Self-Monitoring Report Evaluation	Number of self-monitoring reports due, received and reviewed and percentage of reports reviewed
Inspection Monitoring*	Number of inspections and percentage of facilities inspected
Compliance Rates*	The percentage of facilities in compliance based on the number of facilities evaluated
Enforcement Response*	Percentage of facilities in violation receiving an enforcement action requiring compliance
Enforcement Activities*	Number and type of enforcement actions
Penalties Assessed and Collected*	Amount of penalties assessed and collected, SEPs approved and injunctive relief
MMP Violations Addressed*	Number of facilities with MMP violations receiving a penalty at or above the minimum penalty assessed
Recidivism	Number and percentage of facilities returning to non-compliance for the same violation(s) addressed through an enforcement action
Environmental Benefits (as a result of an enforcement action)	Estimated pounds of pollutants reduced/removed through cleanup (soil or water), and wetlands/stream/beach/creek/river miles protected/restored (acres, etc.)

CIWQS currently supports reporting on six* of the nine performance measures described in the *Baseline Enforcement Report* and in this report.

OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT HIGHLIGHTS

California has a long tradition of leading the nation in public health and environmental protection. The state has enacted laws, promulgated regulations, and set standards designed to protect its residents when federal provisions are non-existent or inadequate. In many cases, these efforts to protect against harmful human exposures to environmental contaminants are based upon evaluations by the Office of Environmental Health Hazard Assessment (OEHHA).

OEHHA plays a critical and unique role in environmental protection. Although OEHHA does not have an enforcement role, it performs many of the scientific assessments used by Cal/EPA boards and departments, the California Department of Public Health (DPH) and other regulatory agencies as the basis for standards, regulations and other risk management decisions. OEHHA is also the lead agency for the implementation of Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986).

OEHHA's core responsibility is to evaluate the health impacts of environmental chemicals. OEHHA's assessments support a broad array of environmental programs, including those that are responsible for actions to protect human health and the environment:

Air Quality

OEHHA makes health-based recommendations for ambient air quality standards, identifies toxic air contaminants, and develops guidelines for assessing them. In 2009, OEHHA adopted and finalized new cancer risk assessment guidelines under the Air Toxics Hot Spots Act. The new guidelines include procedures that account for the increased susceptibility of infants and children.

Drinking Water Quality

OEHHA develops "public health goals" (PHGs) for drinking water contaminants. The Department of Public Health (DPH) uses these values as the health basis for the state's primary drinking water standards. Over 80 PHGs have been developed, including nine in 2009.



Board (which became part of the Department of Resources, Recycling and Recovery or Cal/Recycle on January 2010) and local government entities.

In 2009, OEHHA finalized its assessment in support of the health-based statewide cleanup standard for methamphetamine; this standard was adopted into legislation (Assembly Bill 1489, Chapter 539, Statutes of 2009). OEHHA also reviewed health risk assessments for 58 contaminated sites in 2009.

Emergency Response

OEHHA aids in emergency situations by providing emergency personnel with information on the health effects of chemical agents and characterizing the risk to the public and environment from chemical releases. In 2009, OEHHA updated toxic endpoint values for 205 chemicals for the California Accidental Release Program.

Beginning in 2009, state law requires OEHHA to assess potential health impacts from consuming fish and shellfish following oil spills greater than 42 gallons in marine waters. Following the Dubai Star oil spill (October 2009), the State adopted OEHHA's recommended closure of fish and shellfish harvesting along the East Bay shoreline from the Bay Bridge to the San Mateo Bridge.

NEW DIRECTIONS AND ENVIRONMENTAL POLICY

The environmental challenges now confronting California and the global community require novel approaches founded on reliable scientific tools and information. OEHHA will continue to play a role in providing the scientific foundation for environmental policy in several areas, including:

Green Chemistry

OEHHA is evaluating hazard traits, toxicological endpoints and other relevant data to be included in California's Toxics Information Clearinghouse. This information will be incorporated by the Department of Toxic Substances Control into criteria for evaluating toxic chemicals and safer alternatives.

Biomonitoring

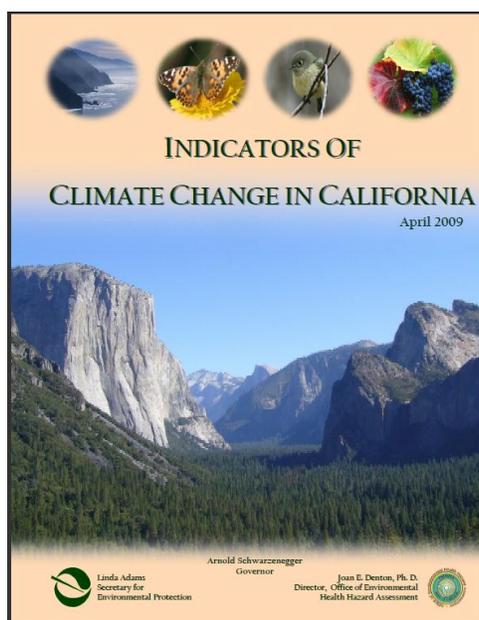
The California Environmental Contaminant Biomonitoring Program, a collaborative effort of DPH, OEHHA, and the Department of Toxic Substances Control, is designed to measure levels of environmental chemicals in biological samples from statewide participants and establish trends over time. In the start-up phase, the program is identifying priority chemicals for biomonitoring and is planning pilot studies to develop laboratory and field methods.

Environmental Justice

OEHHA is leading an agency-wide effort to develop a framework and guidance for assessing cumulative impacts and incorporating precautionary approaches, as an outgrowth of Cal/EPA's Environmental Justice Action Plan. These will be used by Cal/EPA in addressing the cumulative impacts of environmental pollution from multiple sources in California communities.

Climate Change

OEHHA evaluates the impacts of increasing temperatures on human health. In its capacity as lead agency for the Environmental Protection Indicators for California Project, OEHHA published in April 2009 a compilation of about 25 indicators describing trends in the multiple facets of climate change and its impacts on the state.



Ecotoxicology

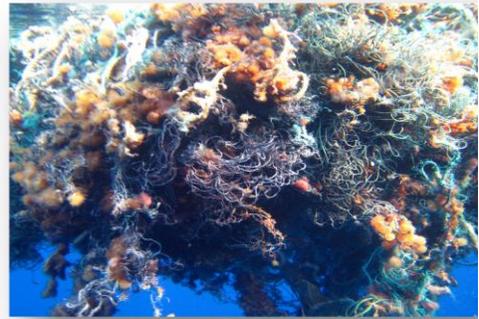
OEHHA develops tools and technical resources to assess the impacts of chemical, physical, and biological stressors on ecosystems. The current focus of its work is on aquatic ecosystems. OEHHA is developing a tool to estimate imperviousness, a key stressor in most urban watersheds and is testing a tool for using physical habitat data to estimate stream channel vulnerability to erosion.

Investigating the impacts of marine debris

In 2009, OEHHA participated in a research expedition (Project Kaisei) in the North Pacific Ocean to study marine debris accumulation and potential effects on ecological and human health. In addition to large floating debris, including derelict fishing gear, researchers documented widespread distribution of fragments (1-5 mm) of plastic debris in ocean surface waters. OEHHA will continue to investigate the role of marine debris in contaminant transfer in the food web. OEHHA's efforts support the California Green Chemistry Initiative, the Department of Toxic Substances Control, and the State Water Resources Control Board in reducing marine debris and developing new non-hazardous materials and processes.



*The S/V Kaisei
(A. Neal, Ph.D.)*



*Part of a giant mass
of derelict fishing gear
(A. Neal, Ph.D.)*

