EPA PROGRESS REPORT 2013

PACIFIC SOUTHWEST REGION

EPA

U.S. Environmental Protection Agency
Pacific Southwest/Region 9

From the Regional Administrator

Dear Readers,

EPA's work in the Pacific Southwest spans thousands of miles – from landfills on Pacific islands to gold mines in Nevada, ports and freeways in California to power plants on tribal lands in Arizona.

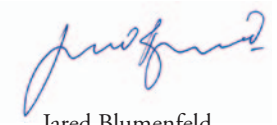
In California's Central Valley, 25 percent of the nation's table food is produced on just one percent of U.S. farmland. In its southern half, nearly four million San Joaquin Valley residents suffer from some of the nation's worst air quality and high rates of childhood asthma. Polluted rivers and groundwater pose public health, ecological and economic threats.

EPA has focused on the San Joaquin Valley as a top priority in our work with other agencies and community partners to achieve healthy air, safe drinking water and clean, flowing rivers. These efforts are detailed throughout this edition of our annual Progress Report, as well as on our website at www.epa.gov/sanjoaquinvalley.

EPA doesn't just work with our partner agencies – we also fund their environmental programs and enforcement efforts. In fact, that's where most of EPA's $631 million budget for the Pacific Southwest Region goes – to states, tribes, local governments and nonprofits, as shown on p. 24.

EPA's own enforcement programs in the Pacific Southwest have been consolidated in a new Enforcement Division, established in February 2013. The move strengthens our robust regional enforcement and compliance efforts in air, water, waste, toxics and pesticides by integrating our enforcement team and facilitating strategic targeting.

Securing a healthy environment is an ongoing mission that no agency can manage alone. We welcome your input and collaboration in tackling these challenges.



Jared Blumenfeld
Regional Administrator
EPA Pacific Southwest Region

Cover: Almond orchard in California's San Joaquin Valley

Table of Contents

CLEAN AIR

Clearing the Haze in the Southwest

The magnificent vistas of the Southwest are often obscured by air pollution – but new requirements and technologies are helping to restore their grandeur.

Cleaner power plants to lead the way

In November 2012 and January 2013, EPA took action to clear the haze from four coal-burning power plants in Arizona, benefiting residents of Arizona, the Navajo Nation, and more than 11 million visitors to 24 national parks and wilderness areas each year, including the Grand Canyon, Saguaro National Park and the Petrified Forest.

Air pollution from these power plants has reduced visibility in the Grand Canyon and other parks in the region for more than 40 years. Ninety percent of the time, the Grand Canyon's air is impaired by pollution.

In the first action, EPA approved Arizona's air quality plan to control sulfur dioxide and particulate matter from three power plants in eastern Arizona – Cholla Power Plant, Apache Generating Station, and Coronado Generating Station. In addition, EPA approved a federal plan to reduce smog-forming nitrogen oxide (NOx) emissions by a total of 22,700 tons per year at these three facilities.

In January 2013, EPA proposed air pollution limits for Navajo Generating Station (NGS – see photo at left), one of the largest sources of NOx emissions in the country. The 2,250-megawatt power plant is on the Navajo Nation, less than 20 miles from the Grand Canyon.

EPA's proposal would reduce NOx emissions from NGS by 84%. It will also help protect public health, since NOx reacts with other chemicals to form ozone and fine particles, which aggravate asthma, bronchitis and emphysema.

The proposal is the result of extensive federal engagement with local tribes, the Salt River Project, the Central Arizona Project, the agricultural community and other stakeholders regarding impacts on power and water costs. EPA has considered more than 6,700 comments on NGS since 2009 and will be holding public hearings to collect additional input on the proposal.

The emission limit can be achieved by installing an effective, available technology – Selective Catalytic Reduction. In combination with low-NOx burners the facility voluntarily installed between 2009 and 2011, the proposal would reduce emissions by 28,500 tons per year by 2018.

www.epa.gov/region9/mediacenter/ngs

EPA spotlight

SCOTT BOHNING

Scott Bohning has more than 20 years of experience as an air modeler at EPA. Air modelers use computer programs to determine how emissions of air pollutants affect air quality. These models simulate atmospheric conditions using inputs such as meteorology, terrain and atmospheric chemistry.

This past year, Scott's modeling provided the scientific underpinnings of many regulatory actions, including those aimed at reducing haze and protecting visibility in our treasured national parks and wilderness areas.

Fighting Mobile-Source Pollution

National emissions standards for vehicles and small engines have given us healthier air to breathe. In the Pacific Southwest, EPA is targeting those who profit by defying the rules.

Manufacturer bypassed diesel soot filters

A Utah-based company paid a $500,000 penalty for making and selling more than 9,000 electronic devices allowing owners of diesel pickup trucks to disable their particulate matter (PM) filters. These filters remove about 90% of the PM from a truck's exhaust. Without them, trucks spew dark black smoke.

This online video shows how an illegal product can bypass pollution controls to produce clouds of black diesel smoke.

Diesel particulates are associated with lung and heart disease, chronic bronchitis, and a higher risk of lung cancer. Edge Products LLC's devices caused an estimated 158 tons of excess PM emissions – equivalent to 422 new long-haul semi trucks operating for 29 years.

Under Edge's settlement with EPA, the company must offer to buy back the devices and spend at least $157,600 to offset the excess emissions. Edge plans to do this by offering rebates to owners of old wood-burning stoves who replace them with new, cleaner-burning stoves.

www.epa.gov/enforcement/air/cases/edgeproducts.html

Port inspections reveal illegal imports

Two Southern California companies paid penalties totaling $140,000 for importing generators, dirt bikes and all-terrain vehicles (ATVs) through the Port of Long Beach without required emission controls.

All Power America LLC paid $60,000 and Maxtrade LLC paid $80,000. The companies must also export the generators, ATVs and dirt bikes out of the country.

EPA inspectors found that All Power imported 80 generators without the required catalytic converters. Maxtrade imported 2,481 off-highway motorcycles and ATVs with improper carburetors and catalytic converters.

Equipment or vehicles without proper emission controls emit excess amounts of smog-forming gases, adding to harmful ozone pollution. The Clean Air Act bans importation or sale of new engines or vehicles unless they are EPA-certified to meet federal emission standards.

EPA enforcement actions have targeted the importing of engines that lack proper air pollution controls.

Focus on the San Joaquin Valley

Mountains surrounding the San Joaquin Valley trap air pollution, creating some of the worst air quality in America. EPA, state regulators and local partners are collaborating on solutions.

Air pollution poses tough challenges

Fine particulate matter – known as $PM_{2.5}$ – causes a wide range of health problems, from asthma to premature death. EPA supports California's efforts to reduce $PM_{2.5}$ levels in the valley through regulatory action, clean-vehicle programs and effective enforcement. The state's goal is to attain the national annual and daily $PM_{2.5}$ health standards by 2015 and more stringent standards by 2019.

In 2012, EPA continued its work with the California Air Resources Board, the San Joaquin Valley Air Pollution Control District and the Central Valley Air Quality Coalition on measures to reduce $PM_{2.5}$. In December, the air district adopted a plan with new restrictions on wood burning and other sources. EPA will also be working with the state, air district and communities to develop an updated plan to reduce ozone pollution (smog), which is expected in 2015.

Enforcement cases cut emissions

EPA completed several Clean Air Act enforcement cases in 2012 that will result in substantial emission reductions in the valley. Three of the facilities – a Lodi bakery, a biomass electric power plant in Tracy, and the Manteca landfill – will pay a total of more than $4.5 million in penalties and measures to reduce air pollution.

In addition, EPA has supported local groups in forming reporting networks to assist in identifying facilities that violate environmental and public health regulations (see page 19).

Heavy truck traffic through the San Joaquin Valley adds to particulate pollution and smog in Fresno.

Grants fund research, cleaner trucks

EPA has provided $500,000, which will leverage an additional $3.4 million, for the valley air district's Technology Advancement Program, a competitive grant program to spur the deployment of innovative clean air technologies. A $1 million EPA grant funded a UC Berkeley/Stanford study on connections between children's asthma and prenatal and childhood exposure to air pollutants in the valley.

EPA has also provided $8 million to UC Davis' San Joaquin Valley Aerosol Health Effects Center to study the effects of chronic childhood exposures to particulate pollution. Results were published in 36 articles in scientific journals.

In addition, EPA funding will result in replacement of at least 35 heavy-duty diesel waste-hauling trucks in the valley with new ones that reduce emissions by up to 97%.

www.epa.gov/sanjoaquinvalley

Photo: ©Michael Macor/San Francisco Chronicle/Corbis

CLEAN WATER

Cleaning Up Southern California Waterways

EPA and California have been longtime partners in the quest for cleaner surface waters in the Los Angeles region.

Trash, bacteria, chemicals targeted

Over the past 14 years, EPA and the Los Angeles Regional Water Quality Control Board have established pollution reduction plans to clean up 175 waterways in Los Angeles and Ventura counties.

These include beaches, harbors, creeks, lakes, rivers and wetlands that are used for swimming, surfing, and fish and wildlife habitat. EPA has been working with the Los Angeles Regional Water Board to set site-specific pollutant reduction plans known as TMDLs – Total Maximum Daily Loads – for each waterway impaired by pollution. Across the Pacific Southwest Region, EPA approved 426 TMDLs in 2012 alone.

The TMDLs established in the Los Angeles region call for reductions in the amount of trash, bacteria, nitrogen, phosphorus, mercury, pesticides and other toxic chemicals polluting the region's waters. More than 95% of the waterways will meet water quality standards once the TMDLs are fully implemented.

Reductions in bacteria levels in Santa Monica Bay already benefit millions of people who visit its beaches each year. TMDLs for trash in rivers and creeks have led 42 cities to capture trash from storm drains before it enters the LA River (at left), reducing trash in the river by 65%. In Calleguas Creek, a TMDL for nitrogen led to installation of advanced wastewater treatment, which reduced ammonia levels and resulted in documented water quality improvements in the Arroyo Simi watershed.

Other TMDLs established by EPA in 2012 include plans to reduce bacteria in the LA River and estuary, and beaches in Long Beach; DDT, PCBs and trash in Santa Monica Bay; sediment and invasive plants in Ballona Creek wetlands; toxics, trash, nitrogen and phosphorus in nine LA-area urban lakes; and toxic pollutants at the LA and Long Beach Harbors and Machado Lake.

www.epa.gov/region9/water/tmdl/progress.html

Wastewater Projects Advance

The completion of sewage treatment upgrades in Southern California and in Mexico south of the Arizona border marked the conclusion of a decade-long push for cleaner waters.

Upgrading sewage treatment

Orange County, Calif., just south of Los Angeles, has a population of more than three million. Its wastewater goes through one of two treatment plants to prevent pollution of the county's beaches and nearshore waters.

So it was big news in October 2012 when the Orange County Sanitation District finished expanding its Fountain Valley facility to full secondary treatment. The county's Huntington Beach treatment plant completed similar upgrades in 2011.

Secondary treatment injects air into churning concrete pools of wastewater to speed the growth of bacteria, which break down the sewage. Such treatment has been required by the Clean Water Act, but EPA can grant a waiver if a primary-treated discharge is not harming the environment.

The district had such a waiver, but by 2002 many residents opposed renewing it, and EPA encouraged an upgrade to full secondary treatment. The $3.4 billion project also included replacement of aging sewers and construction of anaerobic digesters that produce methane to generate most of the electricity the treatment plants use.

EPA spotlight

MELISSA SCIANNI

Melissa Scianni is EPA's lead for the San Francisco Bay interagency workgroup known as the DMMO. The Dredged Material Management Office works to streamline multi-agency permitting of dredging in San Francisco Bay, keeping vital shipping channels open while protecting aquatic ecosystems from chemically contaminated sediments.

In 2013, Melissa will help assess the DMMO's contribution to a healthier bay through a 12-year retrospective study and public process that will help shape the future of the dredging program.

Melissa joined EPA in 2007 as a Life Scientist and has a master's degree in biology from California State University at Long Beach.

Santa Cruz River revival

In the border city of Nogales, Ariz., sewage flowing from Nogales, Sonora (Mexico) – through the Nogales Wash and into the Santa Cruz River – had been overwhelming the capacity of the Nogales International Wastewater Treatment Plant for decades. EPA helped the Arizona city clean up the river by completing a $70 million upgrade of the plant in 2009.

The results were stunning. Where the polluted river was murky and had a foul smell, by 2010 the restored, clear, oxygen-rich waters became a magnet to fish, wildlife and people.

However, the river was still sometimes tainted by sewage spills and surges of stormwater mixed with sewage. In partnership with Mexico, EPA provided partial funding for projects in Nogales, Sonora, to replace broken, inadequate sewers and build the Los Alisos Wastewater Conveyance and Treatment Project, completed in 2012. These projects led to a significant reduction in sewage spills in the wash and river.

The sewer collection and treatment plant projects for the Ambos Nogales region, built with roughly $100 million in EPA funding, account for four of 102 drinking water and wastewater projects built by the Border Water Infrastructure Program with Mexican and U.S. partners over the past decade. Thanks to these projects, well over 500,000 homes have access to wastewater collection and treatment systems for the first time, and 60,000 homes have received safe drinking water. (See pages 12-13 for more on the border region.)

Far left: The Los Alisos Wastewater Treatment Plant, in Nogales, Mexico, was completed in 2012. Left: The Santa Cruz River near Nogales, Arizona, dramatically cleaner since 2009, now attracts fish, wildlife and people.

Focus on the San Joaquin Valley

EPA works with state and local partners to protect valley waters from contamination.

Protecting surface waters, groundwater

The San Joaquin Valley depends on both groundwater and surface waters, including rivers, creeks, canals and more than 575 community water systems.

Access to safe drinking water is a major challenge for small communities, in part due to contaminated groundwater (see page 19). The California Department of Public Health (CDPH) has targeted small non-complying community water systems with health-based violations throughout the state, of which over 50% are in the San Joaquin Valley. EPA, in partnership with CDPH and local stakeholders, continues to work with these communities to identify barriers to compliance and to develop long-term sustainable solutions.

Some of the most promising signs of progress to protect surface waters have come from the San Joaquin River. First, a 50-mile stretch that went dry part of every year due to dams and water diversions was re-watered. In November 2012, the state Department of Fish and Wildlife captured adult salmon and trucked them upstream to spawning areas, in hopes of restoring a San Joaquin salmon run for the first time in more than 60 years.

In June 2012, EPA awarded $59,000 in grant funds under its Urban Waters initiative to Revive the San Joaquin, a nonprofit in Fresno, to establish a citizen-based water quality monitoring and pollution prevention education program in the city's 15 miles of neighborhoods lining the riverbank.

Field scout Luis Gallegos uses a sweep net to search for insect pests on a San Joaquin Valley farm.

Also notable is the success of a 20-year effort to reduce levels of the pesticide diazinon in two stretches of the river, totaling 17 miles. Diazinon was being used on orchards, and runoff was washing the pesticide into the river.

Since 1994, a partnership including growers, the University of California, state agencies, and EPA have collaborated on the Biologically Integrated Orchard System (BIOS) project. Participating growers reduced their use of chemical pesticides, replacing them with biological controls, cover crops, and habitat for beneficial insects. By 2010, diazinon levels had dropped dramatically, and these stretches of the San Joaquin were removed from the state's list of waters impaired by diazinon.

www.epa.gov/sanjoaquinvalley

CLEAN LAND

Promoting Land Reuse for Renewable Energy

EPA and the Department of Energy's National Renewable Energy Laboratory (NREL) have provided new tools to identify prime sites for development.

Making degraded sites productive again

The federal government continues to encourage the growth of renewable energy, as underscored by President Barack Obama's visit to the Copper Mountain Solar 1 facility in Boulder City, Nev., in March 2012 (at left).

EPA and NREL have recently released two tools that help developers, communities, local governments and landowners site projects that can help revitalize degraded areas and reduce pressure on developing valuable agricultural and pristine natural lands.

The California Renewable Energy Siting Tool is designed to identify potential sites for utility-scale renewable energy development. It's a mapping tool and dataset that uses California Department of Toxic Substances Control data on contaminated and degraded land across the state with information key to the compatibility of sites for renewable energy. EPA has already used the tool to identify 75 potential sites in California.

The Solar and Wind Decision Trees can be used for more in-depth evaluation of the viability of installing solar or wind energy at sites large and small. Developed under EPA's RE-Powering America's Land Initiative, the decision trees include a detailed set of technical and economic criteria and other influential factors, enabling stakeholders to focus attention and funding on sites that meet the criteria.

Story continues, p. 14

Regional Administrator Jared Blumenfeld (left) and former EPA Adminstrator Lisa Jackson (center) are joined by the Pacific Southwest Region's U.S.-Mexico Border Team to launch the new Border 2020 Environment Program.

From Border 2012 to Border 2020

The U.S.-Mexico border region faces many environmental challenges. Some of these challenges include poor air quality in shared airsheds, thousands of homes lacking safe drinking water and wastewater treatment, and inadequate solid and hazardous waste management programs and services. Limited resources have also strained emergency response and enforcement capacity in border cities.

U.S. – MEXICO BORDER

However, significant strides have been made on both sides of the border. The map above shows a few of the U.S.-Mexico Environmental Program's accomplishments from 2010 to 2012. Border 2020 is the latest bi-national environmental plan approved under the framework of the 1983 La Paz Agreement between the U.S. and Mexico.

Border 2020's five main goals are reducing air pollution; improving access to clean and safe water; promoting materials and waste management, recycling, and clean sites; enhancing joint preparedness to respond to environmental emergencies; and enhancing compliance assurance and environmental stewardship.

The program emphasizes regional, bottom-up approaches for decision making, priority setting, and projects to address the most pressing environmental and public health problems in the border region, with ongoing participation from communities and local stakeholders.

www.epa.gov/border2020

Continued from p. 11

Targeted sites include potentially contaminated land, landfills, underutilized rooftops and parking lots, and abandoned parcels.

www.epa.gov/region9/climatechange/renewcontlands
www.epa.gov/renewableenergyland

Cleaning Up Industrial Sites

EPA's Superfund Program cleans up the nation's most contaminated sites. A recent cleanup in Oakland, Calif., utilized ground-up fish bones. At Nevada's Rio Tinto Mine, work is just starting.

Fish bones vs. lead in West Oakland

Near Oakland's AMCO Superfund site, a former chemical distribution business, EPA found lead contamination in the yards of eight homes on the same block. In 2007, EPA excavated and removed the contaminated soil. In 2009, however, lead contamination was found in the soil of five adjacent blocks with 151 homes.

Looking for the least disruptive remedy, EPA found that phosphate reacts with lead to form pyromorphite, which is not easily absorbed by the human body. Under EPA's direction, contractors brought in tons of phosphate-rich fish bones ground into powder – a waste product from Alaska canneries – to be rototilled into the soil of neighborhood yards.

This innovative method helped minimize impacts to local residents, and EPA engaged community members and local businesses as part of its cleanup effort.

The project was a model of sustainability, using electric and biodiesel vehicles and equipment, solar power for on-site offices, reclaimed water, native plants and recycled landscape material.

Workers use rototillers to blend fish-bone powder into topsoil of West Oakland backyards to neutralize lead contamination.

EPA spotlight

THE WEST OAKLAND TEAM

Lead-contaminated soil is widespread in cities around the world. The EPA team working in West Oakland, Calif., demonstrated an innovative, sustainable cleanup method (see story, this page).

This precedent-setting project also prevented air pollution that would have resulted from hauling soil to a distant landfill.

Project Officer Barbara Lee led local contracting efforts; On-Scene Coordinator Steve Calanog directed the cleanup; and Toxicologist Dr. Sophia Serda ensured that the project would protect people's health (top photo). Community Involvement Coordinators Leana Rosetti and Alejandro Diaz (bottom photo) conducted outreach to residents.

Taking on Rio Tinto Mine

Several abandoned mines in the Pacific Southwest are Superfund sites because they pose health threats to people, fish and wildlife. In 2012, four companies agreed to pay a total of $25 million to clean up an abandoned copper mine in northeastern Nevada.

In the agreement currently under court review, the Nevada Division of Environmental Protection would oversee cleanup of the Rio Tinto Mine with input from EPA and the Shoshone Paiute Tribes of Duck Valley. The companies, successors to the mine operators, agreed to remove mine tailings from Mill Creek, restore it to support native redband trout, and improve water quality in the East Fork Owyhee River.

Focus on the San Joaquin Valley

EPA oversees cleanup work at 14 Superfund sites in the valley, helps local governments assess brownfields to hasten redevelopment, and inspects pesticide facilities to prevent spills.

Brownfields assessment enables clinic expansion

The city of Visalia used an EPA Brownfields Community-Wide Assessment grant to target rundown properties for revitalization. In one case, a roofing business in an old, dilapidated building was moving to smaller quarters. The assessment showed that no cleanup was necessary, clearing the way for redevelopment.

The Family HealthCare Network, Tulare County's largest non-profit health care provider for low-income clients, bought the property. They razed the old structure and will begin to build a new medical-dental building with 44 exam rooms and 12 dental rooms that will allow the clinic to serve 4,500 more people.

In West Fresno, EPA and partners Fresno Youth Council for Sustainable Development and Center for Creative Land Recycling completed a plan for an urban garden near Edison High School. Students there were involved in choosing the site and planning the garden. Next, EPA will conduct a brownfields assessment of the site and make recommendations to ensure it's clean enough to grow crops.

West Fresno, which is separated from downtown Fresno by Highway 99, is one of the city's oldest neighborhoods. Its 35,000 residents, mostly low-income and minority, live alongside both agricultural and industrial operations.

www.epa.gov/region9/brownfields/fresnoW

A Brownfields site assessment cleared the way for expansion of this health clinic in Visalia.

Cleanup at Fresno County Superfund site

In the town of Malaga, a former oil recycling and refining site left behind extensive soil and groundwater contamination. Cleanup at the Purity Oil site included groundwater extraction and treatment as well as actions to neutralize and cap contaminated soils.

In 2007 the cap was completed, and by 2010, a soil vapor extraction system was removing the remaining soil contamination. By 2012, EPA found that soil and groundwater contamination had fallen to very low levels and will continue to drop through natural processes as groundwater monitoring continues.

Inspections to prevent pesticide spills

Pesticide producers store pesticides in tanks and containers that can hold more than 500 gallons. A new federal regulation took effect recently requiring containment around these tanks, so that spills won't flow onto streets or reach soil and groundwater.

EPA and the California Department of Pesticide Regulation are collaborating to inspect pesticide production facilities throughout the San Joaquin Valley to ensure compliance with the containment rule.

www.epa.gov/sanjoaquinvalley

Photo: Harry L. Foster


CHINA SHIPPING
EVERGREEN
LLOYD TRIESTINO

COMMUNITIES & ECOSYSTEMS

A Healthier I-710 Corridor

Los Angeles' I-710 corridor, which runs from the Ports of LA and Long Beach to East LA, has some of California's most pressing environmental challenges. EPA has been working with local agencies and community partners to reduce pollution.

Reducing exposures to environmental hazards

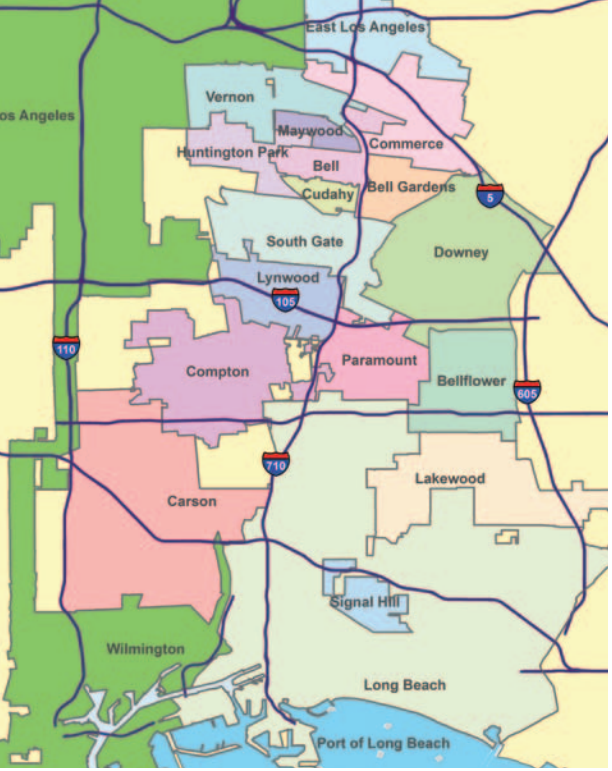
The I-710 corridor is home to more than a million people, most of whom are low-income and minority. In response to diesel pollution and other challenges posed by movement of goods from the ports, EPA has focused enforcement and cleanup authorities along the corridor and is working collaboratively with local partners to improve public health.

Over the past three years, EPA conducted 216 facility inspections and took formal enforcement actions against 45 facilities. Violators paid a total of $1.7 million in penalties and invested $580,000 to comply with regulations and prevent more than 60,000 pounds of air pollution each year.

EPA and California's State Water Resources Control Board have partnered to accelerate cleanup of more than 100 abandoned gas station sites in the corridor. The agencies issued cleanup orders to responsible parties at nine sites. By late 2012, tanks had been removed at 11 sites and 38 cases were closed, clearing the way for redevelopment.

In Southgate, EPA oversees cleanup at former industrial sites such as the Cooper Drum Superfund site, where treatment of contaminated groundwater began in August 2012.

Air quality along the corridor could worsen if extra lanes are added to the I-710, as proposed by CalTrans. EPA reviewed the draft environmental impact statement for the project and in September 2012 recommended that CalTrans



analyze a modified Zero-Emission Freight Corridor Alternative, with no I-710 widening, as a way to prevent increases in particulate pollution.

EPA has also partnered with and supported community organizations in addressing environmental challenges. For example, EPA's environmental justice (EJ) small grant funding has supported Community Services Unlimited in working with youth in South Central LA on healthy food and sustainable agriculture.

The Center for EJ and Community Action in Riverside used EPA children's health and indoor air grant funding to reach out to more than 1,200 students, parents and school staff; screen students for asthma and respiratory problems; and work with school staff on a curriculum for indoor air quality.

Addressing Uranium Contamination on the Navajo Nation

For the past five years, EPA has led a coordinated federal investment of more than $100 million to address uranium-related health risks.

Cleanups, job training and clean drinking water

EPA has spent more than $50 million over the past five years to clean up abandoned mines, provide safe drinking water, and demolish and replace Navajo homes contaminated by uranium. In addition to federal funds, EPA has used the Superfund law to compel responsible parties to spend $17 million on mine investigations and cleanups.

Cleanup work is still underway, and 20 Navajo Nation members who graduated from EPA's Superfund Job Training Initiative in December 2012 have been trained to help with the continuing effort. They were the first graduates from a tribal nation to participate in a Superfund Job Training program.

Work completed over the past five years has reduced some of the most urgent risks to Navajo residents by remediating 34 contaminated homes, providing safe drinking water to 1,825 families, and stabilizing or cleaning up nine abandoned mines. EPA also conducted field assessments of 240 water sources and 520 mines, while Navajo Nation EPA assessed nearly 800 homes and other structures.

The Navajo Nation encompasses more than 27,000 square miles in the Four Corners area of Arizona, Colorado and New Mexico. About four million tons of uranium ore was mined on the Navajo Nation from 1944 to 1986 for use in atomic weapons and nuclear power. Many Navajo people worked the mines, often raising their families close to the mines and mills.

There remain more than 500 abandoned mine claims and thousands of pits, trenches and holes with elevated levels of uranium, radium and other sources of radiation. Exposure to radiation can cause lung cancer, bone cancer and impaired kidney function.

EPA will continue to work with the Navajo Nation and the Bureau of Indian Affairs, Nuclear Regulatory Commission, Department of Energy, Centers for Disease Control and Prevention, and Indian Health Service to further reduce risks from uranium on Navajo lands.

www.epa.gov/region9/superfund/navajo-nation

Mapping low-level radiation sources around uranium mining and milling sites on the Navajo Nation.

EPA spotlight

SAN JOAQUIN PESTICIDES TEAM

Katy Wilcoxen and Fabiola Estrada (left and right) have conducted bilingual trainings for San Joaquin Valley communities on the use of soil fumigants, their health impacts, and how to avoid exposures. They also provide "Breaking Barriers" language and cultural training to help state pesticide inspectors communicate with farm workers who speak little to no English.

Patti TenBrook (center) lends her technical pesticide expertise on many projects. Recently, Patti worked with the regional Air Division to ensure controls were added to California's air quality plan to reduce pesticide emissions that contribute to ozone formation in areas like the San Joaquin Valley.

Focus on the San Joaquin Valley

EPA supports community-based problem solving through grants and technical assistance to address health threats posed by environmental hazards.

Working with communities

EPA's work in the San Joaquin Valley has been strengthened by engagement and support of a number of local efforts and organizations.

In Kern and Fresno counties, EPA partnered with Californians for Pesticide Reform and Fresno Metro Ministry, awarding a children's health grant and an environmental justice (EJ) grant to create Web-based systems to monitor, track and address environmental hazards: the Kern Environmental Enforcement Network (KEEN) and the Fresno Environmental Reporting Network (FERN).

These projects aim to improve enforcement of environmental health laws by creating partnerships between community members and local agencies, establishing task forces and removing barriers to reporting suspected environmental violations. To date, the KEEN and FERN websites have received nearly 80 reports of environmental violations.

Another EJ grant supported Greenaction for Health and Environmental Justice's project to reduce diesel emissions in Kettleman City and Avenal through an effort to stop unnecessary truck and bus engine idling. Among the results were the signing of "Good Neighbor" agreements by nine local businesses. Participants included community members, businesses, truckers, trucking companies, schools and bus drivers.

Photo: Roger Kintz, California Department of Toxic Substances Control

Participants in the Fresno Environmental Reporting Network took a bus tour of pollution sources in and around Fresno.

Drinking water challenges

In some parts of the valley, drinking water wells are contaminated with nitrate, arsenic and other chemicals. Under an EPA EJ grant, the Community Water Center's (CWC) *Protecting Groundwater from the Ground Up* project has provided assistance to 25 communities and worked with 141 residents from Fresno, Hanford, Modesto, Visalia, Delano, Merced, Lodi and surrounding areas to increase understanding of drinking water pollution and how it can prevented. It also trained 28 community members to participate in decision-making processes at various levels of government.

In addition, CWC leveraged additional funding to provide direct organizing, technical and advocacy assistance to 19 communities with water problems in San Joaquin Valley and Coachella Valley.

Revitalizing Fresno's Center

In Fresno, EPA has been working with a team of federal agencies to support the city's plans for economic growth and revitalization.

As the lead agency in the Fresno pilot of the *White House Strong Cities, Strong Communities* initiative, EPA is advancing its mission to protect public health and the environment by supporting the mayor's goals of redeveloping downtown Fresno and reversing decades of growth outward into some of the world's most productive agricultural land.

www.epa.gov/sanjoaquinvalley

ENFORCEMENT & STEWARDSHIP

Enforcement in Focus

Enforcement of environmental laws is the foundation of EPA's work. The Pacific Southwest Region has consolidated its civil enforcement activities to further strengthen these critical efforts.

Integrating environmental enforcement programs

In February 2013, EPA's Pacific Southwest Regional Office created a new Enforcement Division that brings together the compliance inspectors and data specialists formerly in its Air, Water, Waste, and Communities & Ecosystems Divisions. The move strengthens the Agency's robust regional enforcement program by integrating its enforcement team.

By consolidating the enforcement of key federal statutes, the Pacific Southwest Region will be better positioned to strategically target inspections and investigations, provide better training and coordination for enforcement staff, enhance field presence throughout the region, and collaborate more effectively on enforcement matters with states, tribes and the Department of Justice.

A sampling of significant enforcement actions over the past year include:

- **Three Nevada gold mines** owned by Barrick Gold Corp. will correct under-reported releases of cyanide, lead, mercury and other toxics; pay penalties of $278,000; and spend $340,000 to identify toxic metal compounds formed during milling at the Cortez/Pipeline gold mine, one of the world's largest. Barrick will also audit all seven of its U.S. gold mines to ensure correct reporting and pay up to $250,000 in additional penalties.
- At Honolulu's **Waimanalo Gulch Landfill**, decomposing trash emitted toxic gases, organic compounds and

methane, a potent greenhouse gas. The landfill will monitor gas to prevent fires, and pay a $1.1 million penalty. It has already built a gas collection system.

- In California's San Joaquin Valley, the Fresno County company JD Home Rentals spent $74,000 to replace windows that contained toxic lead-based paint at four of its properties with new energy-efficient windows. The company also paid a $7,500 penalty for failing to inform tenants about **potential lead hazards**. (For information on air enforcement cases in the valley, see page 5.)

EPA spotlight

ARLENE KABEI

Arlene Kabei has been doing environmental enforcement for more than 35 years – first as a manager for the Hawaii Department of Health, and since 1993 in EPA's Pacific Southwest Region, where she has overseen cleanup and permitting of hazardous waste sites.

Today, Arlene is Assistant Director of the new regional Enforcement Division, overseeing all water and pesticides enforcement programs. "Now we can ensure that our enforcement work is more consistent across different media – like air and water – and our states, tribal lands and Pacific islands," she says.

Growing the Food Recovery Challenge

Food is the largest single type of waste going to landfills – 21% nationally. EPA is working with 20 universities and 10 other institutions in the Pacific Southwest to reduce, reuse or recycle it.

Reducing waste on a large scale

On America Recycles Day, November 15, 2012, Regional Administrator Jared Blumenfeld joined University of California officials at UC Berkeley's Crossroads Dining Hall to see how the famed campus is participating in EPA's Food Recovery Challenge, a voluntary program that reduces food waste through donations to charity, reducing overproduction, composting, and anaerobic digestion.

In 2012, EPA recruited 22 new participating institutions in the Pacific Southwest, for a total of 30. A major university campus feeds thousands of students, typically disposing of tons of food waste every day. The 20 participating campuses, with a total of 460,000 students, have pledged to reduce wasted food over the next year.

Besides the 20 campuses, other participants include grocers and entertainment venues, such as the Los Angeles Dodgers Stadium and MGM Resorts.

Environmental impacts of food waste

Nationally, 33 million tons of food waste goes to landfills each year. Since food production and transport use enormous quantities of water and energy, reducing this waste can have a substantial environmental payoff. Another reason to keep food out of landfills: When it decomposes, it forms methane, a potent greenhouse gas.

Excess food can be donated to community food banks or recycled into valuable, nutrient-rich compost. Many California cities compost their greenwaste and food waste, producing a rich organic soil amendment that is used in vineyards, farms, parks and gardens.

The Food Recovery Challenge is part of EPA's Sustainable Materials Management Program, which seeks to reduce the environmental impacts of food and other widely used materials through their entire life cycle, from extraction of raw materials to recycling and disposal.

www.epa.gov/foodrecoverychallenge

Environmental Awards Recognize Trailblazers

EPA's Pacific Southwest office gives awards each year recognizing outstanding work to protect public health and the environment.

Innovative achievements cited

From Arizona to Guam, twelve individuals and organizations were recognized as role models in 2012 for their accomplishments. They include:

Children's Environmental Health: Dr. Jeanne Conry of Roseville, Calif., a practicing obstetrician, advanced children's environmental health by promoting better prenatal and preconception care. Prenatal exposures are a key risk factor for

Dr. Jeanne Conry of Roseville, Calif. (center) received a Children's Environmental Health Award from former EPA Administrator Lisa Jackson (left) and Regional Administrator Jared Blumenfeld (right).

infants and children. Dr. Conry has made environmental health a new emphasis for the obstetrics community, and helped make chemical exposures a priority for the American Congress of Obstetricians and Gynecologists.

Green Government Award: The Sustainable Cities Network, a collaborative program created by Arizona State University's Global Institute of Sustainability to increase regional dialogue and action among Arizona communities, has helped advance initiatives associated with green infrastructure, low-impact development, and streamlining solar processes. As one of the country's first university/community-based sustainability outreach programs, it serves as a successful model that can be replicated by other universities.

Sustainable Agriculture Champion: Organic walnut farmer Russ Lester of Dixon Ridge Farms in Winters, Calif., is a sustainable farming pioneer. Walnut shells fuel the farm's biogas-powered generator, reducing the need for outside power. The farm has 3,500 square feet of photovoltaic solar panels, with a planned 100,000-square-foot expansion. Dixon Ridge is also a leader in water conservation and reduced packaging.

Zero Waste Advocate: Adobe Systems Inc., collaborating with Cushman & Wakefield, the City of San Jose, Republic Services, and GCA, developed a world-class recycling program that diverts an astonishing 100% of solid waste from its headquarters facility. This model has been replicated by many other Silicon Valley companies. Adobe's complex has about 2,500 employees, a million square feet of space, a cafeteria and restaurant.

www.epa.gov/region9/awards

Dr. To'afa Viaiga'e, former director of the American Samoa EPA, at the agency's new green building.

Pacific Islands: Zero Waste, Green Building

EPA works with partner agencies on environmental issues in Pacific island territories and nations scattered across thousands of miles of ocean, from American Samoa to Guam and the Northern Mariana Islands.

Guam recycles, American Samoa builds green

In Guam, residents celebrated their biggest America Recycles Day on November 15, 2012. For the first time, the island's government announced Guam's recycling rate – 17.85% of municipal waste – which was more than 29,000 tons. This was quite an achievement, since the island only recently introduced a pilot program for curbside recycling.

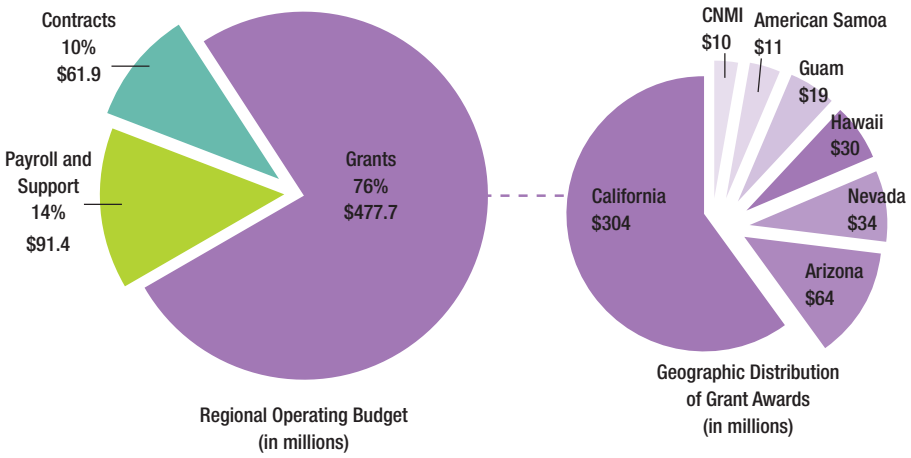
Governor Eddie Calvo announced plans to increase Guam's recycling rate in 2013 by 3%. His administration has also been working closely with EPA to develop a plan for Zero Waste.

EPA staff worked with Guam EPA, the Department of Defense, and island recyclers and disposal companies to establish the recycling measurement system used to track Guam's progress toward Zero Waste.

In October 2012, American Samoa's EPA moved into their new green office building, replacing the one damaged in the 2009 earthquake and tsunami. The new structure is designed to generate more renewable energy than it consumes. Its power bill went from $2,000 down to $5 in its first month of operation. It is expected to be the first building in the U.S. Pacific territories to achieve the highest "platinum" certification of the U.S. Green Building Council.

www.epa.gov/region9/newsletter/sept2012/amsamoa.html

EPA Funding for FY2012 for the Pacific Southwest Region



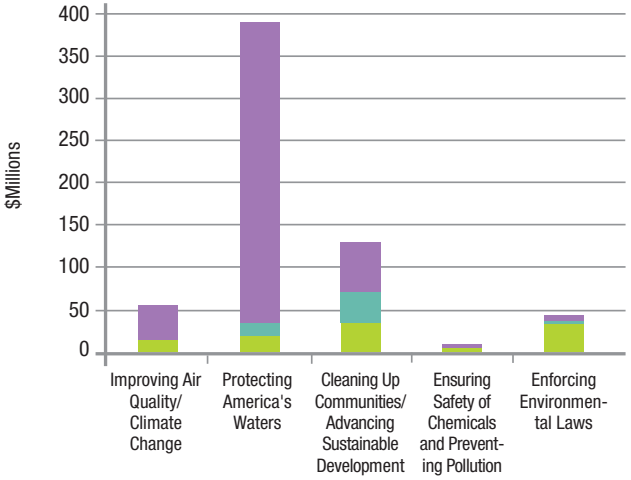
About 85% of the $631 million operating budget appropriated by Congress for EPA's Pacific Southwest Region flows to state and tribal agencies, local governments, nonprofit organizations and private-sector companies in the form of grants and contracts.

This funding pays for drinking water and wastewater infrastructure, clean air programs, Superfund site cleanups, rehabilitation of contaminated lands, and many other activities supporting communities and public health.

For more information on grants, visit www.epa.gov/ogd.

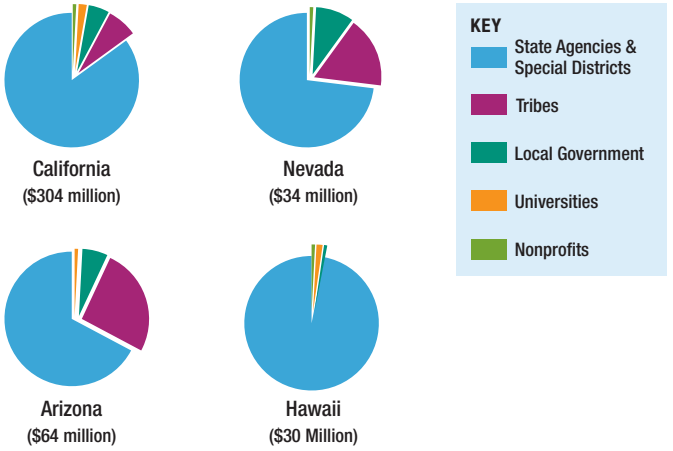
Regional Funding by Strategic Goal

All told, 62% of regional funding is applied toward the goal of Protecting America's Waters, with nearly $350 million in grants going to the State Revolving Fund, which supports drinking water and wastewater infrastructure as well as nonpoint source pollution and estuary protection programs.



Distribution of Grant Funding

The majority of EPA's grant funding goes to state and tribal agencies for environmental work. (In the Pacific islands, all of EPA's financial support goes to government agencies.) The charts show who receives funding in each of four major geographic areas.



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