

EPA PROGRESS REPORT 2014

PACIFIC SOUTHWEST REGION



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

From the Regional Administrator



Dear Readers,

Communities are at the heart of EPA's work. Since our start more than 40 years ago, EPA has worked with local communities to produce astounding gains for public health and the environment.

In the Pacific Southwest, those gains include cleaner air in Los Angeles and Phoenix, a healthier San Francisco Bay, rising recycling rates in Nevada, better wastewater treatment in the Pacific islands, and safer drinking water on tribal lands.

We've achieved them by setting sensible standards and rules, vigorously enforcing them, and providing vital funding that allows states, tribes and communities to take needed action. But even with this progress, some communities are still underserved and under-protected.

Twenty years ago, we took an important step toward equity when President Clinton signed Executive Order 12898, which directed federal agencies to focus attention on disproportionate environmental and health impacts on low-income and minority populations. Today, environmental justice remains a fundamental principle that guides everything we do.

EPA's mission demands a local focus, even as we address global issues. Climate change is a global problem with local impacts – like worsening droughts, wildfires and floods. To protect public health and our shrinking water supplies, we must be serious about reducing the carbon pollution that fuels climate change, while simultaneously preparing communities to be more resilient.

The impacts of a changing climate vary depending on where you are – but they all demand local attention and local action. We hope you will join us in facing these shared challenges.

A handwritten signature in blue ink, which appears to read "Jared Blumenfeld".

Jared Blumenfeld
Regional Administrator
EPA Pacific Southwest Region

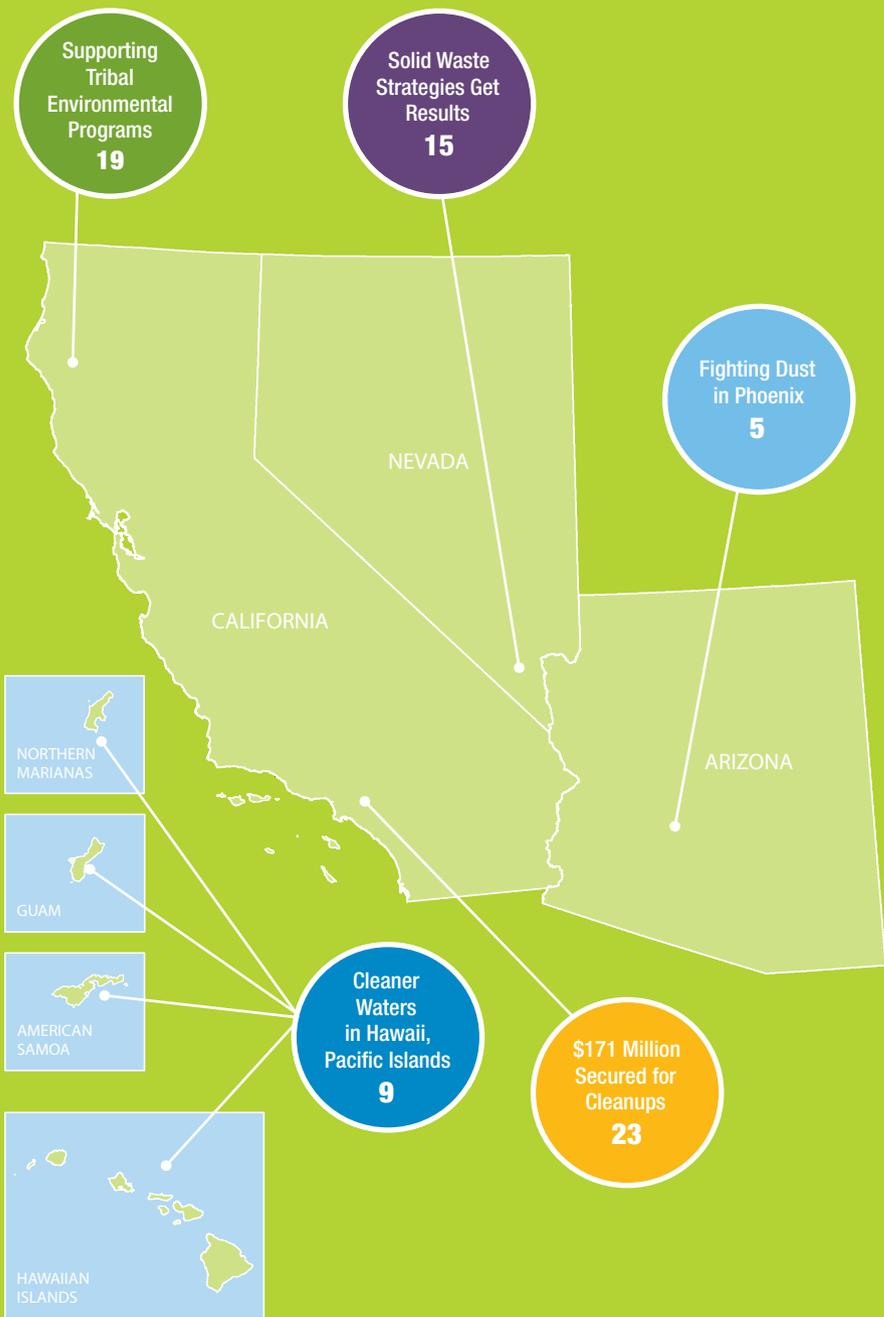


Table of Contents

Clean Air3



Clean Water7



Clean Land11



Climate & Communities17



Enforcement & Stewardship21



EPA Funding in the Pacific Southwest 24

Sustainable Communities Centerfold

Contact Information Inside Back Cover



Cleaner Skies in Southern California

More than 20 million Southern California residents are enjoying healthier air thanks to sustained effort by governments, businesses and individuals.

Milestones Met, Challenges Yet Ahead

After decades of work, California's Los Angeles and San Diego air basins have reached important clean air thresholds.

Los Angeles and the surrounding urban area has attained the federal health standard for coarse particulates, or PM₁₀, while San Diego has reached the 1997 health standard for ground-level ozone, or smog.

To meet the PM₁₀ standard, over the past 25 years the South Coast Air Quality Management District reduced particulate pollution by limiting dust from roads, streets and construction sites; livestock; gravel quarries; and smoke from wood burning in homes.

Meeting the PM₁₀ standard is a significant health benefit for millions of residents. Exposure to particle pollution is linked to a variety of health problems, from aggravated asthma to premature death in people with heart and lung disease.

Over the past 40 years, air quality in the South Coast air basin has improved markedly, with levels of ozone pollution (smog) dropping 60% since 1978 and PM_{2.5} levels also falling significantly (see charts, next page). Despite these improvements, the area is still working to meet federal health standards for these pollutants.

In San Diego County over the past decade, smog-forming nitrogen oxides and volatile organic compounds have been reduced by 25% and 15%, respectively. EPA also recently approved San Diego's plan to maintain compliance with the 1997 clean air standard for smog.

"This is a victory for San Diego County residents, who are now breathing the cleanest air in more than six decades," said EPA

60% decrease in ozone pollution in Los Angeles since 1978

Regional Administrator Jared Blumenfeld. “EPA will continue our collaboration with the state and the local air district to meet the challenge of the more protective 2008 ozone standard.”

www.epa.gov/region9/air/actions/ca.html

EPA Grants Fund Clean Technologies, Research

As California strives to meet health standards for air quality, investment in zero- and near-zero-emission technologies is critical to reducing air pollution from vehicles.

Investing in Cleaner Vehicles

Since 2010, EPA’s Clean Air Technology Initiative has awarded \$4.4 million in the San Joaquin Valley

and South Coast air basins to support the demonstration of advanced clean-air and alternative-energy technologies.

In July 2013, UPS deployed 40 new electric delivery trucks in San Bernardino to replace 40 old diesel trucks. The vehicles, funded by EPA (\$1.4 million) and the State of California, comprise Southern California’s largest fleet of zero-emission trucks.

In the San Joaquin Valley, EPA is supporting the demonstration of several technologies, including a battery-electric, robotic agricultural sprayer, which will eliminate harmful diesel emissions and operator exposure to toxic pesticides.

In December, EPA’s West Coast Collaborative announced \$2.2 million in Diesel Emission Reduction Act grants to partners in eight western states and Pacific island territories, leveraging an additional \$6 million from public, private and nonprofit partners. The funding will clean up or

EPA spotlight

MICHAEL FLAGG AND GREGORY NUDD

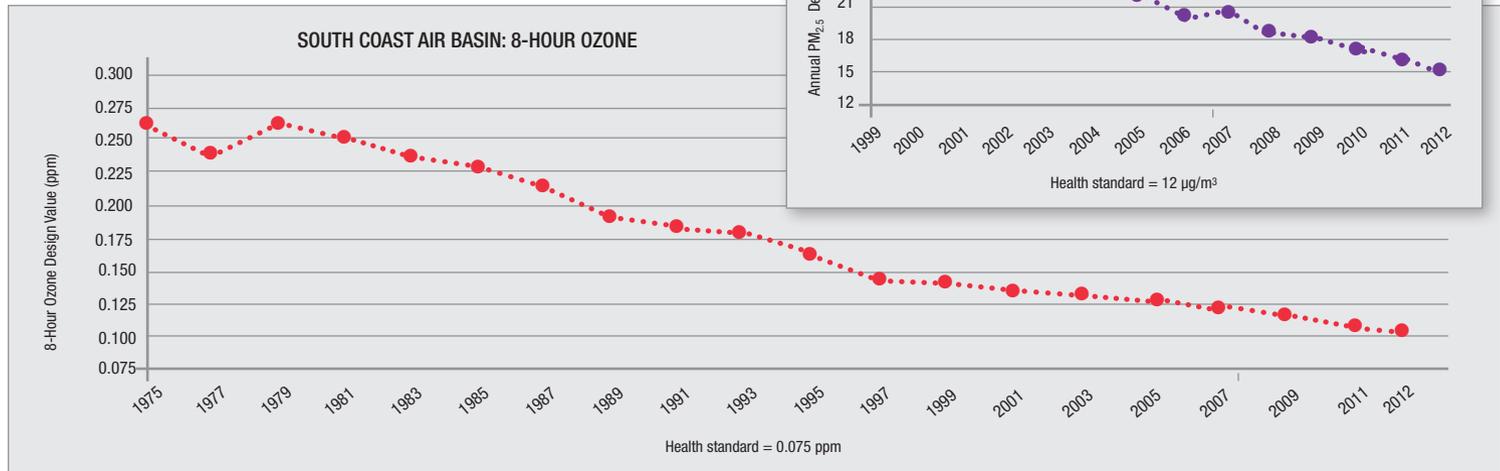


Michael Flagg and Gregory Nudd have worked closely with state and local air agencies in the Phoenix area to develop a plan that will enable the

area to attain the PM₁₀ standard for the first time.

Challenges included complex transportation plans and Arizona dust storms. Michael has become an expert in understanding how dust storms affect PM₁₀ levels in the Southwest. Greg has over 20 years of experience in air quality regulations at both the state and federal level.

Their expertise helped bring about a practical plan to reduce health hazards from particulate pollution through innovative regulatory and scientific approaches that are unique to the Phoenix area.



replace 93 medium- and heavy-duty diesel engines, ultimately reducing air pollution by 262 tons of smog-forming nitrogen oxides, 16 tons of particulates, and 8,317 tons of carbon dioxide.

This year's projects in the Pacific Southwest include:

- **Pima Association of Governments (Ariz.)** – \$150,000 to replace diesel school buses with compressed natural gas (CNG) and propane buses.
- **Sacramento Metropolitan Air Quality Management District** – \$391,614 to replace diesel garbage trucks with CNG from food waste, and cleaner tractors.
- **South Coast Air Quality Management District (Calif.)** – \$391,613 to replace diesel school buses with electric and CNG buses.
- **Port of Oakland** – \$415,932 to repower diesel gantry cranes with hybrid electric power.
- **Commonwealth Utilities (Northern Mariana Islands)** – \$26,677 to retrofit power plants to use ultra-low-sulfur diesel.

www.westcoastcollaborative.org / www.epa.gov/cleandiesel

Research Grants Fund Future Innovation

EPA also made \$4.3 million in grants to universities across the nation in 2013 for research on air pollution and its health effects, laying the groundwork for future advances.

Among these are grants of \$300,000 to UC Irvine and \$400,000 to UC San Diego to study how natural and man-made particles mix to form aerosols in the atmosphere, affecting air quality and climate change.

Focus on Arizona

Particulate pollution in Arizona impacts the health of urban residents as well as visibility of the state's scenic wonders.

Fighting dust pollution in Phoenix

In the Phoenix area, the problem is dust.

In January 2014, EPA proposed to approve Arizona's "Five Percent Plan" – a plan to meet the national health standard for coarse particulate pollution, or PM₁₀, by reducing emissions of the pollutant by 5% per year – in the Maricopa County Nonattainment Area, which includes Phoenix and the surrounding area. Final action is expected by June.

Enforcement is also vital to improving public health. Inspections by EPA and the Maricopa County Air Quality Department at three facilities operated by Fisher Sand and Gravel identified 17 Clean Air Act violations for failing to take measures needed to reduce PM₁₀ emissions. As a result, the company is paying a \$150,000 penalty and taking steps to minimize dust.

In the Phoenix area, PM₁₀ is mostly dust. Reducing PM₁₀ is essential because it can harm breathing and respiratory systems, damage lungs, and cause cancer and even premature death. The elderly, children, and people with chronic lung disease and asthma are especially sensitive to it. A 2009 study by Arizona State University showed that when PM₁₀ levels in central Phoenix were high, asthma incidents in children increased.

Maricopa County is also making progress on ground-level ozone, or smog. It is attaining the 1997 standard of 85 parts per billion but still violates the more protective 2008 health standard of 75 ppb.

www.epa.gov/region9/air/actions/az.html



Phoenix is working to reduce particulate air pollution.

Clearing Southwestern Skies

In September 2013, EPA announced a new alternative to reduce emissions from Navajo Generating Station (NGS), one of the largest sources of nitrogen oxide emissions in the U.S. The 2,250-megawatt coal-fired power plant is on the Navajo Nation, less than 20 miles from Grand Canyon National Park.

The new alternative was developed by a coalition of stakeholders, including the Navajo Nation and Gila River Indian Community, in response to EPA's February 2013 proposal to reduce by 73% the visibility impacts of NGS on 11 national parks and wilderness areas. The pollutants that impair visibility also affect human health. The alternative ensures greater emission reductions in exchange for greater flexibility in the compliance timeframe.

In 2014, EPA also proposed new pollution controls at six other industrial facilities in Arizona, including smelters and cement plants.



CLEAN WATER

Cleaning Up San Francisco Bay

For more than four decades, EPA has worked cooperatively with the San Francisco Bay Regional Water Quality Control Board and other agencies to address sources of toxics in the bay.

Taking Action on Toxic Threats

The vast watershed that drains into San Francisco Bay contains myriad sources of toxics that threaten the health of the estuary – some of them quite close to shore.

In last year's most visible project, EPA partnered with CalRecycle and the U.S. Coast Guard to raise and remove more than 40 sunken, abandoned boats from the Oakland Estuary, northern California's busiest port. The rusting hulks were not only a hazard to navigation, but threatened to leak fuel, oil and other toxics into the bay.

On November 4, 2013, EPA On-Scene Coordinators Will Duncan and Rich Martyn oversaw the raising of a 105-foot tugboat that had lain on the bottom for more than 10 years (photo at left). Toxics found on the larger boats included PCBs, lead contamination, loose hazardous materials containers, oily sediments, an oil tank, and bags of illegally dumped asbestos. EPA has been working to track down owners who abandoned their boats to make them pay for the removal.

The effort cost more than \$3.5 million. Of that, \$650,000 came from a civil penalty paid by the owners of the Cosco Busan – the ship that struck one of the Bay Bridge towers in November 2007, causing a major oil spill from its fuel tank.

Also in the East Bay, EPA is overseeing work by the Union Pacific Railroad to prevent PCB contamination of Oakland's Viejo Creek, which flows into San Francisco Bay. The railroad is investigating PCB soil contamination at its property, which borders the creek.



80% reduction in trash entering LA waterways due to local, state and federal efforts

Banned in 1979, PCBs are no longer produced in the U.S. However, they don't break down in the environment and are known to cause cancer and other adverse health effects.

On the Bay's western shore in southeast San Francisco, EPA has worked with the local community to restore tidal wetlands on the shores of Yosemite Slough, an urban inlet. EPA's goal is to remove a layer of mud on the slough's bottom that's contaminated with lead and other toxics. In the South Bay, EPA ordered NASA to take actions to address soil contamination at its Ames Research Center at the bayside Moffett Field Naval Air Station.



Workers remove a barrier to fish migration in San Francisquito Creek.

Investing in Water Quality

EPA provided about \$300 million in FY13 to protect and restore drinking water and surface waters in the Pacific Southwest.

Putting Dollars to Work Where Needed Most

Each year, the vast majority of EPA's regional grant funding goes to state governments – via the **State Revolving Fund** – to finance drinking water and wastewater infrastructure, reduce polluted runoff and protect coastal estuaries.

EPA places a high priority on ensuring these funds go to high-impact projects and are spent as expediently as possible. Over the past year, the agency has worked with the California Department of Public Health to ensure that EPA funding is used efficiently to bring reliably safe drinking water to customers of small public water supply systems in the San Joaquin Valley.

In addition to funding major infrastructure projects, in FY13 EPA invested over \$14 million to implement **state and tribal nonpoint source programs** to restore waters impaired by polluted runoff in the Pacific Southwest.

EPA also manages competitive grant programs and supports implementation of state programs directed at achieving water quality and ecosystem benefits.

In late 2013, EPA awarded over \$1.5 million in **wetland grants** to six tribes in California and Arizona and four California organizations. The awards fund projects and research to protect wetlands from pollution threats. The grant work being done ranges from enhancing computer programs to rapidly assess the health of wetlands to helping tribes develop programs to monitor and protect wetland health.

Since 2008, EPA has administered the **San**



EPA spotlight

PACIFIC ISLANDS CONTACT OFFICE

The Pacific Islands Contact Office in Honolulu – known as

PICO – serves as EPA's outpost in the Pacific, where a handful of place-based staff work first-hand with local communities, agencies and officials.

Hudson Slay, Wendy Wiltse and Susan Polanco cover a wide range of water issues – including watersheds, wetlands, coral reefs and water infrastructure.

Asia Yeary of the air program coordinates clean energy and transportation efforts, while Roseanne Sakamoto works with state agencies and others on data quality in both air and water programs.

Dean Higuchi manages the office and serves as EPA's longtime press officer and liaison to communities and elected officials.

San Francisco Bay Water Quality Improvement Fund, a competitive grant program for the protection and restoration of San Francisco Bay watersheds. To date, EPA has awarded over \$32 million in 25 grants supporting 53 projects. These projects involve 71 partners who have provided matching funds and leveraged over \$105 million.

One such project was the September 2013 removal of a concrete barrier in Palo Alto's San Francisquito Creek that cleared the way for threatened steelhead trout to reach 40 miles of upstream spawning habitat (photo at left).

Projects addressing the problem of marine debris are a high priority. Under EPA's Packaging Waste Source Reduction Pilot project, a grantee is helping five local governments reduce takeout food packaging that can end up in waterways.

In addition, a \$50,000 grant to the Monterey Bay Aquarium trained 100 K-12 teachers and shared the results of 40 student-led community action projects within coastal watersheds to help address the threat posed by marine debris.

Focus on Hawaii and Pacific Islands

States and territories in the Pacific face unique challenges in managing fresh and marine water quality.

Safeguarding Pacific Ecosystems

In Hawaii and elsewhere in the Pacific, EPA is working to protect coral reefs and nearshore waters from land-based pollution. Sediment-laden runoff, excess nutrients from sewage, and runoff from industrial activities all contribute to the declining health of water ecosystems.

In 2013, EPA developed a regional cross-program coral strategy to align funding, planning and regulatory programs to protect and restore coral reefs. Half of all coral in U.S. waters is located in EPA's Pacific Southwest region.

In Hawaii, a \$200,000 EPA wetland grant provided support to update Coral Reef Monitoring and Assessment Program data and to assess the linkage between coral health and watershed condition.

EPA also awarded the state of Hawaii about \$1.1 million to implement its Polluted Runoff Control Program aimed at restoring watersheds through the prevention of land erosion, which can degrade coral reefs.

In Maui, EPA worked with the Hawaii Department of Health (HDOH), University of Hawaii, and Army Corps of Engineers to show a connection between onshore sewage injection wells in Lahaina and groundwater seeps that could contaminate nearshore waters. EPA funding supported efforts to improve wastewater management in Maui County and to address polluted runoff from both agricultural and urban areas in West Maui.

In September, a molasses spill from a ship-to-shore pipeline in Honolulu killed thousands of fish and harmed corals. HDOH led the response to the



EPA helped fund construction of this wastewater treatment plant in Saipan.

spill, supported by the U.S. Coast Guard, EPA and other agencies. Earlier in the year, EPA and HDOH settled an enforcement case against Marisco Ltd. after inspections of its ship repair facility in Kapolei found leaking equipment and sandblast material discharged into the harbor. The company agreed to modify its facility to minimize discharges of copper, zinc, oil and grease, and is paying \$710,000, the largest Clean Water Act civil penalty ever levied against a ship repair facility.

Territories Improve Infrastructure, Health

In 2013, EPA awarded over \$30 million to Guam, the Commonwealth of Northern Mariana Islands (CNMI) and American Samoa for environmental protection work and improvements to drinking water and wastewater infrastructure.

Guam EPA received \$3.2 million, CNMI DEQ \$1.7 million, and American Samoa EPA

\$1.8 million to support inspections, beach and drinking water monitoring, permit writing, enforcement and other environmental programs, including on-the-ground conservation measures to protect priority watersheds and coral reefs. Drinking water and wastewater construction grants totaled \$8.2 million for Guam, \$6.9 million for CNMI, and \$8.3 million for American Samoa.

On Guam, EPA issued new permits for the Northern District and Agana Sewage Treatment Plants, for the first time requiring secondary treatment. In April 2013, Guam's Andersen AFB used the EPA trash tracking method to document the types of marine debris washing up on beaches. U.S. EPA and Guam EPA are using the data to identify sources of the waste.

www.epa.gov/region9/water/oc/coralreefs.html





CLEAN LAND

Revitalizing Communities

EPA has long focused on serving communities – not only in protecting public health, but in cleaning up and putting formerly contaminated properties into productive use, while partnering with others to support sustainable development.

Promoting Sustainable Communities

Since 2009, the Federal Partnership for Sustainable Communities – EPA and the Departments of Transportation (DOT) and Housing and Urban Development (HUD) – has been making grants and collaborating with state and local partners to advance redevelopment plans in Los Angeles, Fresno, the San Francisco Bay Area, Phoenix, and many more cities across the country.

In Los Angeles, HUD has provided a \$2.25 million grant to fund an innovative, interdisciplinary partnership called the Northeast Los Angeles Riverfront Collaborative. Under this grant, the City of Los Angeles is leading an effort to create a comprehensive strategy for sustainable development of the northeast LA community linking land use, economic development and workforce strategies.

In Fresno, EPA led a team of 12 federal agencies supporting the city's efforts to revitalize downtown Fresno under the Strong Cities, Strong Communities (SC2) Initiative. The team used federal resources to advance downtown revitalization, neighborhood redevelopment, home energy efficiency retrofits, planning for a High Speed Rail station, and a Bus Rapid Transit project that will reduce the region's greenhouse gas emissions and promote more transit-oriented development.

The Grand Boulevard Initiative brought together 19 cities along historic El Camino Real, the 43-mile highway linking San Jose and San Francisco, to redesign segments of the

Story continues, p. 14

Fresno, CA

53% less land

will be consumed (saving 10 square miles of farmland) and 31% fewer vehicle miles travelled (reducing air pollution) by 2035 compared to current projections if Fresno's Smart Growth General Plan meets its goals. EPA, working with other federal agencies to support economic growth and revitalization under the Strong Cities, Strong Communities Initiative, is supporting the mayor's goals of redeveloping downtown and reversing decades of growth into farmland.



Supporting Communities

EPA's work has always focused on communities. We have an ongoing commitment to listen to, support and work alongside local communities and stakeholders to protect public health and the environment.

Many communities in the Pacific Southwest are striving for sustainability through water- and energy-saving infrastructure improvements, green development around transit hubs, and other beneficial practices.

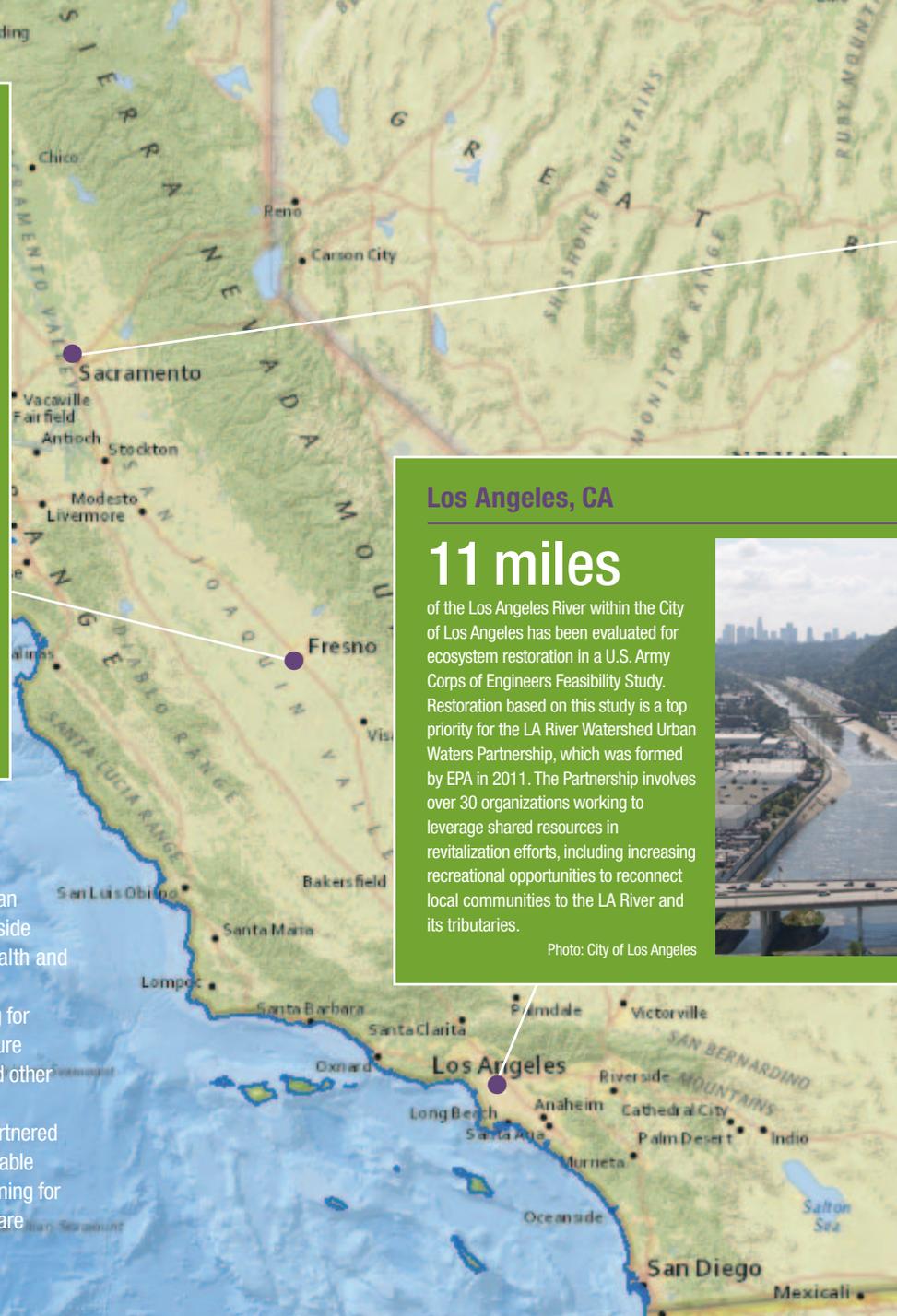
Highlighted here are four of the major cities EPA has partnered with and recognized in the quest for healthier, more sustainable communities. In all cases, environmental cleanup and planning for smart growth have opened the path to redevelopment and are helping revitalize local economies.

Los Angeles, CA

11 miles

of the Los Angeles River within the City of Los Angeles has been evaluated for ecosystem restoration in a U.S. Army Corps of Engineers Feasibility Study. Restoration based on this study is a top priority for the LA River Watershed Urban Waters Partnership, which was formed by EPA in 2011. The Partnership involves over 30 organizations working to leverage shared resources in revitalization efforts, including increasing recreational opportunities to reconnect local communities to the LA River and its tributaries.

Photo: City of Los Angeles



Sacramento, CA

81 units

of transit-friendly affordable housing have been built at Sacramento's La Valentina complex, the Built Projects winner of EPA's 2013 Smart Growth Achievement Awards. The complex – located directly on a light rail line on a once-neglected brownfield – provides housing and services for 170 residents. The development achieves goals of the Sacramento Region Blueprint, a 2004 EPA award winner, to accommodate growth while reducing greenhouse gas emissions.

Photo: Bruce Damonte



Phoenix, AZ

426 properties

were assessed for potential toxics along the first 13 miles of Phoenix's new light rail transit system, thanks to EPA Brownfields grants to Phoenix and Mesa, Ariz., helping clear the way for redevelopment along the light rail corridor. Phoenix is one of several cities in EPA's Greening America's Capitals program. EPA and HUD also convened stakeholders to plan for making downtown Phoenix's Lower Grand Avenue more pedestrian- and bicycle-friendly, and using green infrastructure to treat stormwater.



87% of leaking underground tanks in the Pacific Southwest have been cleaned up

roadway as “complete streets,” with safe access for pedestrians, bicycles, transit and cars, as well as green infrastructure – vegetated areas, cool pavements, recycled materials, and energy-saving lights.

In Phoenix, under EPA’s Greening America’s Capitals program, EPA and HUD convened city, state and community organizations to improve the downtown’s Lower Grand Avenue streetscape, making it more environmentally, pedestrian-, and bicycle-friendly, while planning for green infrastructure to capture and treat stormwater runoff.

www.sustainablecommunities.gov

Turning Brownfields Green

Funding from EPA and partners is revitalizing vacant, potentially contaminated properties across the Pacific Southwest. In **Brea** and **Grass Valley, Calif.**; four rural counties in **Nevada** (Nye,



Tijuana’s new compost center generated 153 tons of compost in 2013.

Esmeralda, Lincoln, White Pine); and Kaka’ako on **Oahu** in Hawaii, EPA’s 2013 Brownfields grants are funding assessments and cleanups of soil contaminated by fuel or toxics.

In Northern California’s Humboldt Bay, adjacent to Eureka, EPA’s Superfund Emergency Response program removed contaminated soil and asbestos-contaminated material from **Indian Island**, where the Wiyot Tribe is reclaiming its ancient Tuluwat Village.

The tribe purchased seven acres of the island in 2000 to reclaim the site, where they had performed their annual World Renewal Ceremony until an 1860 massacre in which Indian inhabitants were killed. By 1990, the land had been used as a boat repair facility for more than a century. In March 2014, after the cleanup, tribe members returned to the island to perform the first World Renewal Ceremony since 1860. They are restoring the island as a tribal cultural and educational site.

Reclaiming Waste in Border Communities

Through the binational Border 2020 program, EPA, the Border Environment Cooperation Commission, Mexico’s Ministry of the Environment, and the City of Tijuana funded two projects in Tijuana, Mexico, that recycle and reuse organic and inorganic waste that might otherwise have contaminated the Tijuana River Estuary, which is located in the United States.

The first project is an urban compost center operated by a nonprofit, Tijuana Calidad de Vida. This center – the first of its kind in the Mexico border region – has already produced 153 tons of compost from landscape cuttings in its first year of operation, planted hundreds of city trees and shrubs with the compost, and educated 800 people through public forums and workshops.



EPA spotlight

**JENNIFER
MACARTHUR
AND REBECCA
SUGERMAN**

Inspector Jennifer MacArthur has been

one of EPA’s most valuable assets in Southern California, where she’s been stationed for the past two years.

Jennifer has worked with the U.S. Customs Service to investigate cases of illegally imported vehicle engines and pesticides that fail to meet U.S. standards.

She has also helped prevent export of cathode ray tubes (CRTs) and other e-waste to countries without their knowledge, which can create environmental hazards.

EPA attorney Rebecca Sugerman has worked with Jennifer to pursue cases that range from breaches of export-import laws to violations of hazardous waste regulations by metal finishers, often in residential neighborhoods.

“Rebecca has been a remarkable partner in environmental enforcement,” says Jennifer.

The second project resulted in the beautification of a park and nature reserve just south of the border fence in a canyon known as “Los Sauces” (The Willows). The grant recipient, 4 Walls International, used over 4,000 discarded plastic soda bottles and 1,000 pounds of plastic and foam – all collected from trash in the Tijuana River watershed – as material for the construction of park benches and other infrastructure.

The project, which received additional support from the Tijuana National Estuarine Research Reserve, also resulted in replacement of invasive plant species by 1,100 native plants.

www.facebook.com/CentroDeComposteoUrbanoTijuana

Focus on Nevada

Urban areas in Nevada are improving waste prevention, while rural industrial sites are cleaned up.

Solid Waste Strategies Get Results

While Nevada has historically trailed other western states in recycling rates, the Silver State has recently made significant strides in preventing waste.

Between 2011 and 2012, Nevada's recycling rate rose from 25.3% of solid waste to 28.8%. Much of the gain can be attributed to major hotels and convention venues. The state's highest recycling rate, however, was 54.5% in Douglas County (near Carson City), where there are few casinos. Statewide, 242,000 tons of paper was diverted from landfills.

The Las Vegas Convention and Visitors Authority, whose convention center is one of the world's biggest and busiest, won an EPA Waste-Wise Award in 2013 for recycling 67% of its waste – 3,316 tons. In 2013, the University of Nevada, Las Vegas, received an EPA Food Recovery Challenge award for increasing food recovery from less than one ton to more than 159 tons.

At the Bellagio hotel and resort, managers reduced their food waste by more than doubling their food recovery from 1,522 tons to 3,445 tons. Overall, the five MGM Resorts properties in Las Vegas increased their food recovery an impressive 45.6%, from 6,549 tons to 9,537 tons.

Before significant recycling began in Las Vegas, from 1953 to 1993, the city dumped 18 million tons of waste in the 440-acre Sunrise Landfill. Since then, it was twice breached by rainstorms. Repairs were completed in 2013, at a cost of \$60 million. The landfill now has a stronger erosion-resistant cover made of a soil-gravel mixture.

Reno, northern Nevada's largest city, began single-stream curbside recycling in February



An old reduction furnace is one of the remnants of mercury mining near Eureka, Nev.

2014. The new bins, which no longer require residents to sort recyclables, are expected to increase recycling rates there.

Cleaning Up After Old Mines, Smelters

In Nevada's more remote reaches, EPA's Superfund Emergency Response Program recently completed two cleanups of abandoned mine and smelter sites that posed potential threats to residents.

More than a century ago, the central Nevada town of Eureka was home to several lead smelters. Before pollution controls, lead and arsenic from smokestacks settled on homes and yards. In 2013, when contaminated soil was found in 19 residential yards, posing a threat to young children,

EPA offered to clean them up at no charge to the homeowners. Fourteen homeowners accepted the offer, and EPA completed the work in 2013.

Two mercury mines once operated near the Fort McDermitt Paiute-Shoshone Reservation in northern Nevada. Recently, high levels of mercury and arsenic were found in the vicinity of 56 homes, including two on the reservation. EPA excavated about 10,000 tons of mine waste and soil, placed it in a repository, and capped it to prevent erosion. Near the McDermitt School parking lot, EPA found 5.5 acres of contaminated soil and capped it in place.





CLIMATE & COMMUNITIES

Taking Action on a Changing Climate

EPA works with states, tribes and communities to incorporate resiliency to climate change and reduce greenhouse gas emissions from infrastructure, water and energy use.

President Launches Task Force

In February 2014, EPA Administrator Gina McCarthy joined state, tribal and local leaders from across the country in Los Angeles for the second meeting of President Obama's Task Force on Climate Preparedness and Resilience.

That same week, the President visited California's drought-stricken Central Valley with Gov. Jerry Brown to pledge federal aid to struggling farmers and communities (photo at left).

Recognizing innovative work by state and local leaders, the President appointed six members to the task force from the Pacific Southwest: Hawaii Gov. Neil Abercrombie, Calif. Gov. Jerry Brown, Guam Gov. Eddie Calvo, Santa Barbara County (Calif.) Supervisor Salud Carbajal, Los Angeles Mayor Eric Garcetti, and Sacramento Mayor Kevin Johnson.

The task force is identifying best practices for improving the resilience of transportation, water and energy infrastructure in the face of climate change impacts like extreme weather and sea level rise, and how the federal government can support implementation of these practices.

As the task force was being formed in late 2013, EPA's Pacific Southwest office issued a draft Climate Change Adaptation Implementation Plan for public review. The plan commits to integrating climate change considerations into daily work such as grant management to improve the climate resiliency of agency partners.

130,000

contractors certified to meet new lead-safe building renovation rules in the Pacific Southwest

The plan focuses on three severe vulnerabilities in the Pacific Southwest as a result of a changing climate: 1) decreased water availability due to drought and loss of snow pack, 2) flooding as a result of more extreme weather events and sea level rise, and 3) degradation of coral reefs due to ocean acidification and bleaching. The regional plan features a number of strategies, including continued support of green infrastructure, which uses natural landscapes or engineered systems designed to mimic natural processes to improve urban stormwater management.

Promoting Sustainable Infrastructure

The extraction, treatment and distribution of water and the subsequent collection and treatment of wastewater require energy. Likewise,



Children are often more vulnerable to environmental contaminants than adults.

Previous pages: Photo by REUTERS/Kevin Lamarque

the production of energy – particularly power generated from non-renewable sources – often requires water. EPA provides technical support and coordinates funding options to state and local agencies to improve water and energy efficiency, and increase renewable energy development.

In the Pacific Southwest, EPA has so far funded or coordinated 38 energy audits and four water audits at water and wastewater utilities identifying annual savings of \$14 million, 80,000 megawatt hours, over 10 billion gallons of water, and 80 million pounds of greenhouse gas (GHG) emissions.

EPA also promotes the capture and utilization of biogas for renewable energy production at wastewater treatment facilities and other waste digesters. The agency's interactive Waste to Biogas Mapping Tool helps connect waste producers with digester operators to generate biogas and electricity.

Climate Leaders Show the Way

EPA also works to model best practices through the Climate Leadership Awards program, a public-private partnership that recognizes exemplary corporate, organizational and individual leadership in response to climate change.

This past year, one of the honorees was the Sonoma County Water Agency, which serves 600,000 people in Northern California's Marin and Sonoma counties. The water agency has led regional efforts to increase energy efficiency, develop renewable energy, and reduce GHG emissions.

The agency also leads the Sonoma-Marín Saving Water Partnership, a collaboration by 10 water utilities that won an EPA WaterSense Excellence Award for promoting water conservation and efficient irrigation.



EPA spotlight

**MICHELLE BAKER,
MARIELA LOPEZ
AND SECODY
HUBBARD**

Michelle Baker and

Mariela Lopez work on assessment, cleanup and closure of over 2,000 illegal dumps on tribal lands, as well as coordinating technical assistance to tribes and developing solid waste management plans.

They help coordinate the efforts of 14 EPA colleagues to assist more than 135 tribal grantees in the Pacific Southwest. In 2013 alone, tribes in the region cleaned up 41 open dumps – for a five-year total of 306 cleanups – and finalized 15 solid waste plans.

Secody Hubbard is a Community Involvement Coordinator in the Superfund program, working with people who live near abandoned uranium mines and contaminated water sources on the Navajo Nation.



A member of the Navajo Nation, Secody has a PhD in public policy and formerly served as National Program Manager for American Indians and Alaska Natives at EPA's Office of Civil Rights.

Other Climate Leaders in the Pacific Southwest include:

- Silicon Valley's **Cisco Systems** reduced GHG emissions by 38.7% in 2007-2012 by generating and buying renewable energy, improving energy efficiency, and reducing business travel.
- The city government of **Chula Vista**, Calif., reduced GHG emissions by over 19,000 metric tons per year, and plans to reduce the entire city's emissions by over 145,000 MTPY by 2020.
- **Caesars Entertainment** of Las Vegas increased its physical footprint by 18% in 2007-2011, but reduced its GHG emissions by 11.4%.

Protecting Children's Health

EPA backs community-based actions to protect children's health where they live, learn and play.

Because children are uniquely vulnerable to environmental hazards, EPA actively seeks out ways to support efforts by educators, nonprofits and health providers to protect children's health.

EPA is now partnering with California's Department of Toxic Substances Control on a pilot project to identify environmental health hazards facing students and staff at schools in Southern California. The Clean, Green and Healthy Schools Partnership aims to foster collaboration through technical assistance and improved communication.

EPA also funds two pediatric environmental health specialty units in the Pacific Southwest – at UC San Francisco and UC Irvine – part of a nationwide children's health network that provides training for health professionals, consultations to families and communities, and educational resources.

Three years ago, EPA awarded more than \$350,000 in grants to four nonprofits to support children's health in underserved communities in the Pacific Southwest. Since then, they've reached more than 10,000 parents, child care providers, farm workers, and children, providing training to reduce children's exposures to toxics in homes, child care centers, and communities.

One group, Farmworker Justice, worked with farmworker groups in California, Arizona and Florida to train 30 community health workers, or "promotoras," to recognize and reduce children's environmental health hazards. These promotoras reached 5,600 farmworkers. The project also strengthened ties between farmworker groups and community health centers.

www.epa.gov/region9/childhealth/child-health-grants.html

Focus on Tribes

EPA supports the environmental work of 148 Indian tribes in the Pacific Southwest through grants, technical assistance and training, and the enforcement of federal laws in Indian Country.

Supporting Environmental Management

The Yurok, who live along the Klamath River in California's far northwest, are the state's largest tribe, with about 5,000 members and more than 200 tribal government employees.

For 2014-15, EPA awarded the tribe a \$1.3 million Performance Partnership Grant to support their efforts to evaluate, improve and protect environmental quality in the lower 48 miles of the Klamath River basin – a watershed that spans two states and provides critical habitat for salmon, sturgeon, bald eagles, and other keystone species.

The tribe is working under this grant to enhance water quality monitoring and control pollution, restore and preserve 5,800 acres of wetlands, assess climate change impacts, close illegal dumps, provide community outreach, and train environmental staff.



The Klamath River runs through Yurok tribal lands before joining the Pacific on California's North Coast.

In the Four Corners region, EPA has long worked hand in hand with the Navajo Nation, whose lands rival the size of the state of West Virginia. Environmental challenges include air pollution, abandoned uranium mines, and lack of access to safe, piped drinking water.

EPA, the tribe and other federal partners have collaborated for several years on assessment, cleanup and closure of hundreds of abandoned mines. Last year, the first group of 20 Navajo Nation students graduated from EPA's Superfund Job Training Initiative – among the 200 graduates across the Pacific Southwest in 2013. They now have the skills and certification needed to safely work on cleanups.

Fulfilling the Promise of Safe Drinking Water

Drinking water on tribal lands is usually supplied by small public water systems operated by the tribal government, private utilities, or government agencies like the Bureau of Indian Affairs (BIA). They all must comply with the Safe Drinking Water Act.

In December 2013, EPA announced a settlement with BIA over violations of the Safe Drinking Water Act at the Keams Canyon Public Water Supply system, which serves about 2,000 residents of the Hopi Reservation in northern Arizona. BIA spent nearly \$1 million to install an arsenic treatment system to meet drinking water standards and paid \$136,000 in civil penalties.

In Riverside County, Calif., EPA in September ordered D&D Mobile Home Park to comply with the drinking water standard for arsenic on the Torres Martinez Desert Cahuilla Indian Reservation. Sampling showed arsenic levels as high as 0.059 milligrams per liter – almost six times EPA's maximum allowable levels for drinking water.





ENFORCEMENT & STEWARDSHIP

Achieving Environmental Results

EPA enforcement actions take away any financial advantage gained by violators, and often require them to make extra efforts to prevent future environmental impacts. EPA also encourages voluntary actions with programs like the Food Recovery Challenge.

Retailers Improve Practices

In two nationwide enforcement cases in 2013, Wal-Mart and Safeway paid penalties for failure to comply with environmental laws and took actions to ensure future compliance.

Wal-Mart Stores Inc. illegally disposed of hazardous materials at stores throughout the U.S. Combined with enforcement actions by the states of Missouri and California, the retailer is paying a total of \$110 million in penalties. The case was investigated by the EPA Criminal Investigation Division and the Federal Bureau of Investigation.

For years, Wal-Mart failed to train store employees on proper hazardous waste management and disposal. As a result, the wastes were either discarded improperly – solids in municipal trash bins, liquids poured into local sewers – or improperly transported to return centers without proper documentation.

Wal-Mart is now carrying out a nationwide compliance agreement to manage hazardous waste, and putting Environmental Management Systems in place at its stores and return centers. Also, to address the environmental harm, Wal-Mart has contributed to the San Francisco Bay Estuary Conservation Fund.

Safeway, the nation's second largest grocery chain, is reducing its emissions of ozone-depleting substances from refrigeration equipment at 659 stores nationwide, at a cost of about \$4.1 million. The company also paid a \$600,000 penalty. Through implementation of a Refrigerant Compliance Management System and reduction of its leak rate, Safeway must decrease refrigerant emissions

125
million

gallons of drinking water provided each day from Superfund groundwater cleanups in the region

by about 100,000 pounds over three years, which has a CO₂ equivalent of 82,100 metric tons.

Silicon Valley Grocer a Model

Meanwhile, Marina Food – a much smaller retailer – partnered with the city of Cupertino in California’s Silicon Valley to compost 520 tons of food waste last year, preventing the food from going to a landfill and emitting methane – a greenhouse gas about 25 times more potent than carbon dioxide – when it decomposes.

Cupertino received EPA’s national Food Recovery Challenge Innovation Award. The city worked closely with grocers and integrated food waste reduction goals into its partnership with waste hauler Recology, setting a goal to increase recycling and composting to 75% by 2015.

www.epa.gov/region9/mediacenter/cupertino-food-recovery



Turning food waste into compost reduces emissions of methane, a potent greenhouse gas.

Funding to Spur Innovation

EPA’s grants to businesses, local governments, and medical researchers are advancing the science and technology of environmental protection.

Small Business Innovation Research Grants

Six California-based projects received grants in 2013 from EPA’s Small Business Innovation Research (SBIR) program, which funds research into new products, processes and services that protect health and the environment.

Nationwide, 25 small businesses received grants totaling \$2 million. The California projects are:

HJ Science & Technology, Inc. (Berkeley) – Demonstrate a “lab-on-a-chip” capable of real-time detection of toxins in drinking water

Instrumental Polymer Technologies, Inc. (Westlake Village) – Develop water-based wood coatings using nanotechnology, soy-based biodiesel, and amino acids

RegeneMed, Inc. (San Diego) – Develop a 3-D human breast tissue model for screening carcinogens

ACEA Biosciences, Inc. (San Diego) – Develop cell lines and analysis methods to assess toxic effects of pollutants

KWJ Engineering, Inc. (Newark) – Develop an ultra-low power, low-cost CO₂ sensor for intelligent building ventilation systems

Verrix (Los Angeles) – Develop an automated method for testing the efficiency of wastewater treatment systems

EPA Grants Fuel a Wide Spectrum of Advances

In November 2013 in San Francisco, EPA demonstrated new graffiti removers that are safer for the environment and workers. The products are the outcome of a \$75,000 pollution prevention



EPA spotlight

**ALBA ESPITIA AND
VERNESE GHOLSON**

Between them, grant specialists Vernese Gholson

and Alba Espitia of the Pacific Southwest Region’s Grants Management Office manage 113 grants to states, tribes, local governments and nonprofits.

Vernese, a federal employee for 24 years, is responsible for administrative management of 62 grants, including grants to tribes and to programs helping restore San Francisco Bay ecosystems.

Alba, a 25-year veteran of the grants office, is an expert on EPA’s Integrative Grants Management System, which enables managers to track grant progress nationwide. In addition to managing 51 grants, Alba is testing a new system for eliminating paper files for grants in the region.

grant to the Los Angeles-based Institute for Research and Technical Assistance (IRTA).

Materials currently used to remove graffiti contribute to smog and may pose health threats to cleanup workers. The project focused on the development of less-toxic graffiti removal products and methods using alternative blasting media such as dry ice and recycled glass.

A three-year, \$499,000 Climate Showcase Communities grant to the Alameda County (Calif.) Waste Management Authority is reducing waste from packing materials (such as wooden pallets and cardboard) by helping businesses transition to sustainable, reusable alternatives. The project is reducing greenhouse gas emissions from raw materials, production, transport, and disposal of packaging.

EPA awarded an \$800,000 grant to Sanford-Burnham Medical Research Institute in La Jolla, Calif., for research on how chemical exposures affect brain development in children. The Institute hopes to better understand neurotoxicity, which will help in developing safer agricultural and industrial chemicals.

Focus on California

California is home to more than 35 million residents, most of whom live not far from contaminated sites or polluting industries. For more than 40 years, EPA has helped clean them up.

Helping Californians Breathe Easier

California has thousands of industrial facilities that must be carefully monitored by operators to protect nearby residents and workers from chemical releases, noxious odors, and smog. EPA recognizes that success requires vigorous enforcement to protect communities, innovation to improve compliance and reduce pollution, and strong partnerships with states and tribes.

After the Richmond Refinery Fire

In 2013, EPA's Pacific Southwest Emergency Planning and Prevention team completed inspections of 51 industrial facilities, including a comprehensive assessment of the Chevron Refinery in Richmond, Calif., in the aftermath of an August 6, 2012, fire there. The fire sent a giant plume of black smoke skyward that was visible all over the Bay Area. Thousands of Richmond residents went to hospitals seeking medical help for respiratory problems.

Chevron agreed to pay nearly \$2 million in fines and restitution to state and local agencies and pleaded no contest to charges of violating California's labor and health codes stemming from the fire. The agreement also required the company to make substantial changes to its business practices to ensure worker safety.

EPA notified the refinery in December 2013 that its inspection found 62 violations of federal environmental laws and regulations at the refinery. Some of the violations stemmed from the facility's failure to implement its Risk Management Plan,



Smoke from an oil refinery fire spread over Richmond, Calif., on August 6, 2012.

correct procedures after internal audits, and immediately inform proper authorities of the fire. EPA's investigation of the refinery continues.

San Joaquin Valley and South Coast

In the San Joaquin Valley, which has some of the poorest air quality in the nation, EPA conducted 98 inspections in 2013. In Modesto, an investigation of a cereal production plant owned and operated by Post Holdings, Inc., and Ralcorp Holdings, Inc., found that it was operating without pollution controls needed to reduce emissions of smog-forming volatile organic compounds (VOCs).

EPA and its co-plaintiff, the San Joaquin Valley Air Pollution Control District, resolved these Clean Air Act violations in a settlement requiring \$1.4 million in pollution control equipment to reduce VOC emissions by 95%, and \$635,000 in penalties.

In Ontario, Calif., EPA inspectors found that Ventura Foods LLC had had more than 24 releases of highly toxic anhydrous ammonia gas in five years, including one 288-lb. release that should have been reported immediately. The facility paid \$157,000 in penalties and has completed safety upgrades.

Most recently, the South Coast Air Quality Management District received hundreds of complaints about noxious odors, headaches, and

nosebleeds from neighbors of AllenCo, a small oil production facility in south Los Angeles. EPA inspectors found violations of the Clean Air and Clean Water Acts, and the agency is continuing its investigation.

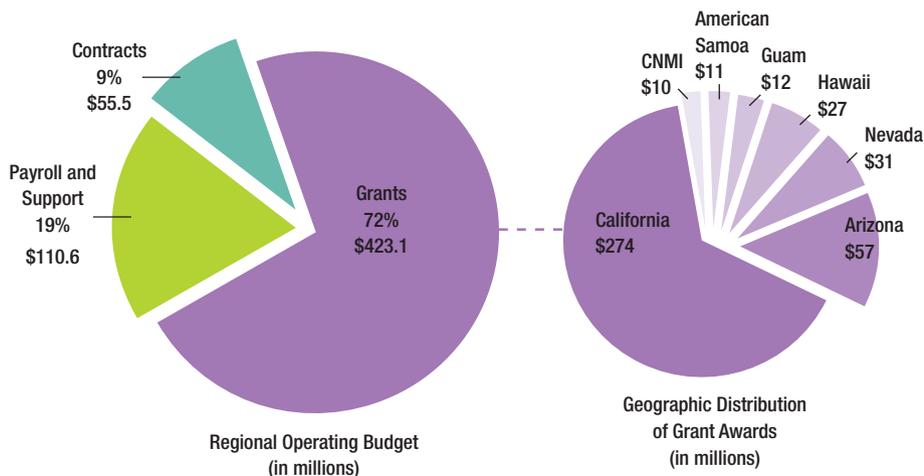
Settlements Secure \$171 Million for Cleanups

EPA's enforcement work also involves tracking down potentially responsible parties who once dumped waste at toxic sites, or are otherwise responsible, and getting them to pay their share of cleanup costs under the federal Superfund law.

This takes thousands of hours of examining paper records, and sometimes litigation, but it gets results. In 2013 these efforts secured \$171 million for cleanup work in the Pacific Southwest and recovered \$16 million in EPA costs. Over the next few years, this will pay for cleanup of 1.3 million cubic yards of contaminated soil and 131 billion gallons of groundwater – enough to provide water to 900,000 homes for a year.

Most of this will benefit communities in California. Sites that are affected include the B.F. Goodrich/Rockets Fireworks and Flares site (settled after nine years of litigation) in Southern California, and the Casmalia hazardous waste landfill in Central California.

EPA Funding for FY2013 for the Pacific Southwest Region



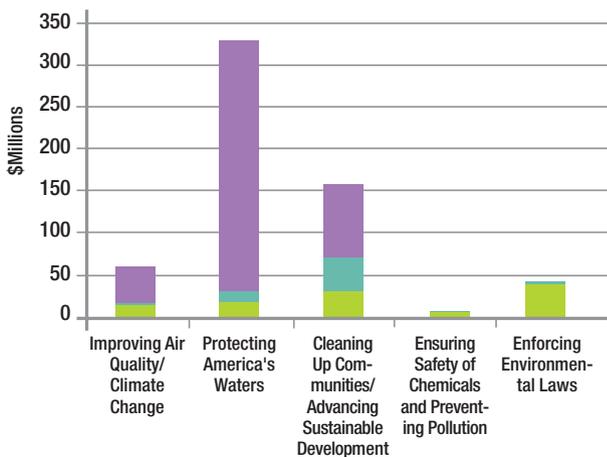
About 81% of the \$589 million operating budget appropriated by Congress for EPA's Pacific Southwest Region flows to state and tribal agencies, local governments, nonprofit organizations and private-sector companies in the form of grants and contracts.

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.

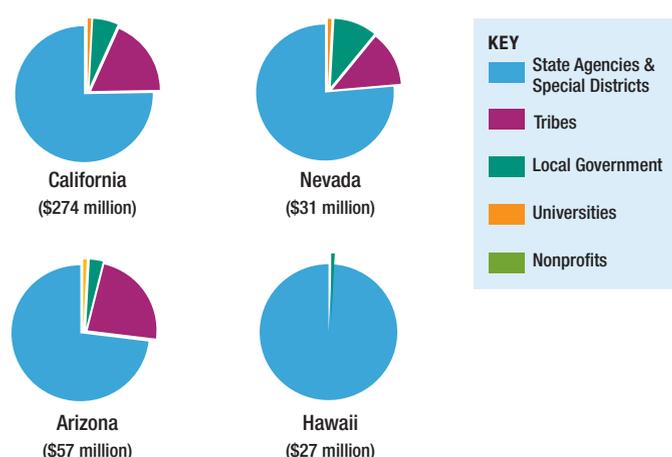
Regional Funding by Strategic Goal

All told, more than half of regional funding is applied toward the goal of Protecting America's Waters. Most of the \$300 million in grants awarded under this goal goes 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.



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

Offices

EPA Pacific Southwest Region

75 Hawthorne Street
San Francisco, CA 94105
415.947.8000

EPA Pacific Islands Contact Office

300 Ala Moana Blvd., Room 5-152
Honolulu, HI 96850
808.541.2710

EPA San Diego Border Office

610 West Ash St., Suite 905
San Diego, CA 92101
619.235.4765

EPA Southern California Field Office

600 Wilshire Blvd., Suite 1460
Los Angeles, CA 90017
213.244.1800

Phone Inquiries

415.947.8000
or 866.EPA.WEST
(toll-free)

Email Inquiries

r9.info@epa.gov

EPA Website

www.epa.gov

For Pacific Southwest Issues

www.epa.gov/region9

To Obtain This Report

Order from EPA's Environmental Information Center at **866.EPA.WEST** (toll-free), email **r9.info@epa.gov** or view in English and Spanish on the Web at www.epa.gov/region9/annualreport



Want to stay informed?

Keep up with EPA's work in the Pacific Southwest and other environmental stories by subscribing to our monthly e-newsletter at www.epa.gov/region9/newsletter



Printed on 100% recycled paper, 100% post-consumer content—process chlorine-free

U.S. GOVERNMENT PRINTING OFFICE:
2014-771-126



U.S. Environmental Protection Agency
Pacific Southwest/Region 9
EPA-909-R-14-001

We printed 3,200 copies of this report using soy-based inks on paper made with 100% postconsumer recycled fiber, processed chlorine-free. By using this paper, we saved:



5 trees



2,423 gallons
of water



2.8 million
BTUs of energy



162 lbs of
solid waste



447 lbs of
greenhouse gases

